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MESSAGE FROM THE DEAN

I am incredibly happy to write this message to the XXXVI Volume of the Delhi Law Review. The Delhi Law Review (DLR) is the Flagship Journal of the Faculty of Law, University of Delhi and one of the oldest law reviews. Since its first issue in 1972, DLR has been a trend setter in the field of legal scholarship by publishing thought-provoking research articles written by legal academia, judges, advocates, and research scholars. In its semicentennial journey, it has provided a platform to the serious thinkers of law to express their forthright views in different fields of legal arena.

This issue of DLR comes out with an array of research articles covering the fields of Criminal Law, Constitutional Law, Environmental Law, Intellectual Property Law, and an historical account of traditional justice system in Sikkim. Hon'ble Justice (Retd.) Ms. Manju Goel's article on victimology presents a trendsetting reform through restorative justice while dispensing criminal justice with live examples by reflecting on her own personal experience and rich expertise. The article by Poulomi Bhadra and Kanika Aggarwal on judicial gatekeeping of scientific evidence and experts in criminal adjudications provokes us with the problems involved in reliability of scientific evidence and expert opinions in the courts and their probative worth in the absence of proper legal guidance. Dinkar VR presents an engaging reading on the provisions of DNA Profiling Bill through the lens of Puttaswamy's case and its impact on privacy claims. Dulung Sengupta's article questions the issue of compensation for restoring religious properties damaged during civil disorders and probes if it violates Article 27 of the Constitution. Faustina Saran's piece on agricultural biotechnology provides a critical analysis of the regulatory issues surrounding genetically modified organisms. Lokesh's article on ground water governance presents the key challenges that need to be addressed to protect and effectively manage groundwater considering the Model Groundwater Bill. Ashutosh Mishra and Prakash Tripathi argue that Indian legislation and judiciary should promote environmental mediation so that stakeholders can choose the mediation process as an Alternative Dispute Resolution. Kislay Soni and Ashutosh Raj Anand revisit the conflict between patent rights and public health in the context of Covid-19 and analyses IPR regimes, TRIPS flexibilities and the relevance of Doha

Declaration in the pandemic context. Amid all these techno-legal discussions, Yalliwon Shangh reminds us of the child's first right i.e., the right to live with family through nuanced arguments in favour of children, arguing that alternative care is not a panacea. Adding flavour to the array of above articles, Tashi Palzor Lepcha traces the historical evolution of traditional legal system and administration of justice in Sikkim from 1642 to 1975 during Namgyal dynasty, British rule and the post-independent era. I am sure the readers will find these research articles extremely useful.

I hugely appreciate Prof. L. Pushpa Kumar for his leadership and guidance which encouraged the editorial board to work with utmost dedication and enthusiasm. Our Advisory Board Members Professor Upendra Baxi and Professor M.P. Singh are always a part of the Faculty of Law, University of Delhi. Their constant encouragement and support provide us great strength to achieve new heights. We are forever grateful to them.

Senior Professor Usha Tandon
Dean, Faculty of Law
Head, Department of Law

FROM THE EDITOR'S DESK

I am so happy to present the current issue of DLR to the legal fraternity. These are difficult times to run academic journals when the considerations of writing research articles are not primarily motivated by passion and development of legal thought but are largely triggered by Annual Performance Index (API) scores and other forms of incentives, exceptions apart. Furthermore, when I took over as the editor of DLR for the last issue, I did not expect COVID-19 pandemic shall emerge from nowhere and make us struggle hard to continue the work and to keep up with the deadlines. However, the unstinting support and cooperation of the successive Deans of the Faculty of Law and the current Head and Dean, Senior Professor Usha Tandon helped us to complete the task successfully. Besides this, the committed editorial board members and the trust of the authors who have submitted their manuscripts to DLR for consideration and waited long due to unforeseen development of COVID-19 gave us the courage to wade through the difficult times. We successfully published Vol. 35 last year and now present before you Vol.36 of DLR. Only we know against how many odds we worked and emerged successfully in bringing out the journal. Almost all our editorial team members got affected by COVID-19. My whole family got shattered by COVID-19 and I am still suffering from post-covid issues. However, we worked day and night to bring out the journal, though delays became inevitable due to unanticipated circumstances.

At this juncture, I thank the editorial board members for their untiring contribution that enabled me to edit Vol. 35 and Vol. 36 of DLR and serve as the Faculty Advisor for three issues of DLR (Student Edition) Vol. 6, 7 and 8 during these challenging times. I am very much grateful to the anonymous reviewers for providing insightful comments and constructive suggestions which helped authors improve their submissions. Nothing could have been possible, if the efficient team of student editors and faculty editors were not available to enlist themselves for the job. In this process, I gained huge knowledge on different subjects and was able to find out some faculty gems and brightest stars of our student fraternity.

I must acknowledge the highest level of professional commitment on the part of faculty editorial board members namely, Dr. Shachi Singh, Ms. Anumeha Mishra and Ms. Sumiti Ahuja. They spent numerous hours improving articles, helping authors to incorporate comments given by reviewers, and working continuously to improve the current volume. Student Chief Editor, Ms. Aakanksha Chandra needs special mention. She has always been meticulous and sincere throughout the editorial process. Aakanksha's editorial skills and her leadership qualities in working with editorial team members are admirable. Her contribution with the help of student editors, Krishnagopal Abhay, Aashita Sharma, Utkarsh Kokcha, Niket Khandelwal, Tanya Sharma, Tavishi Jain, Mili Budhiraja, Ria Yadav is praiseworthy. Krishnagopal Abhay's contribution, in particular, is commendable.

Above all, the faith and patience of all authors in the editorial process of DLR and all the anonymous reviewers who helped us in conducting double blind review of each article deserve special mention.

I am deeply indebted to our Advisory Board Members, the revered jurists Professor Upendra Baxi and Professor M.P. Singh, the beacon lights of legal education for their constant guidance and generous support.

I profusely thank the Dean, Faculty of Law and Head, Department of Law, Senior Professor Usha Tandon for her leadership and guidance which encouraged the editorial board to work with utmost dedication and enthusiasm.

Prof. L. Pushpa Kumar
Editor

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ARTICLES

VICTIMOLOGY: A JUDGE'S PERSPECTIVE

Justice (Retd.) Manju Goel∗

While the accused has all the constitutional and statutory right for a fair trial, the victim is a neglected entity. Victimology is a recent development in the study of criminal justice jurisprudence. The formal recognition of the victim's rights came with the UN Declaration of Basic Justice for Victims of Crime and Abuse of Power, 1985. The victim need not wait till the end of the trial to get justice. The empathy with the victim should come forth from the stage of the crime or wrongdoing. The present legal position in India does recognize the victim's rights in early registration of the offence and continues in recognition of his/her rights during the trial, in the evaluation of evidence and in compensation in various situations. For vulnerable witnesses, there are clear instructions for protection and encampment during the investigation and trial. The futuristic approach is restorative justice whereby wounds are healed and peace is restored. This includes making the wrongdoer appreciate and acknowledge the impact of his work and an opportunity to redress the damage done and make peace with the victim. Restorative justice primarily can be made good use of during the process of compounding of offences under the Criminal Procedure Code as also during the period of Probation if there is one. The present system is pregnant with all the possibilities of providing justice to the victim and restoration of peace in society. Let us turn into peace makers and make sense of the criminal justice system.

Keywords: *Victimology, compensation, restorative justice, criminal justice reform.*

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I acknowledge the assistance of Krishnagopal Abhay in finalizing the article.

I. INTRODUCTION

Victimology emerged as a discipline around the second half of the last century, to take care of a neglected area of criminology and to fill a serious theoretical void. The study of crime victims and criminal victimization is necessary for overhauling the traditional ideas of criminology. Historically, the criminal justice system aimed at establishing the guilt of the accused and providing an appropriate punishment to the convict when the guilt is proved. Fairness in the trial and punishment was based on the age-old principle, 'it is better that ten guilty persons escape than that one innocent suffer'.[1] The victim is merely a witness. The State or society is considered the aggrieved party when a crime is committed. The duty of the State is to establish the guilt of the accused. In our jurisdiction, the accused is vested with various rights, including the right to silence and the presumption of innocence. Plus, the State has to establish the guilt beyond reasonable doubt. While the Indian judiciary developed the jurisprudence of a fair trial to the accused, the court and the social activists paid attention to the welfare of the accused and the convicts during and after the trial, including jail reforms and rehabilitation on release. There was scant attention to the need to provide succour to the victim.

II. UNITED NATIONS DECLARATION OF BASIC JUSTICE FOR VICTIMS OF CRIME AND ABUSE OF POWER, 1985

The concern for the victims of crime got the attention of the United Nations in 1985 with the Declaration of Basic Justice for Victims of Crime and Abuse of Power.[2] The Declaration carried the four basic principles, viz. (a) access to justice and fair treatment; (b) restitution; (c) compensation; and (d) assistance. We can notice a few salient features enumerated in the four principles. Access to justice *inter alia* requires the establishment of an administrative mechanism to enable the victim to seek redress. Apart from the formal court system, the informal mechanism for resolution of disputes

[1] Sir William Blackstone, *Commentaries on the Laws of England* (J.B. Lippincott Co., Philadelphia, Vol. II, 1893).
[2] The Declaration of Basic Justice for Victims of Crime and Abuse of Power, 1985.

including mediation, arbitration, customary justice or indigenous practices should also be made available to the victim. Offenders and third parties responsible for their behaviour should make fair restitution to the victims and their families or dependents. Such restitution should also include return of property or payment for harm or loss suffered, reimbursement of expenses caused by the act of the victimization, and compensation for the bodily injury either from the offender or from the State. Assistance to the victim over and above those mentioned above requires provisions for material, medical, and psychological assistance to overcome the adverse impacts of the offence.

Access to justice is a broad term, which includes conditions conducive to victims approaching the establishments like police, courts and others; and their right to be heard at appropriate stages of investigation, trial, sentencing and thereafter. The attitude of all concerned authorities to treat the victim with dignity and empathy is basic to justice to the victim. Unless the victims are protected from actual or likely physical, material and emotional harm, they can't approach the police or court; and all legal provisions to provide access to justice to them will be frustrated. Till the emotional trauma is not healed and peace is not restored, the victim cannot be said to have received justice. Apart from the four dimensions of victimology mentioned in the Declaration of 1985,[3] a fifth dimension, viz. restorative justice needs to be recognized, which shall be discussed later.

III. VICTIM AND POLICE

Victimology means the study of the victims of crime, their experience, their suffering, and the response of the system to their needs. One relevant provision is Section 357 of the Code of Criminal Procedure, 1973 ('CrPC')[4] and the three sections added thereto by amendments.[5] Nevertheless, if there is concern about the welfare of the victims, the commitment must be shown from the very beginning, that is, as soon as the victim feels the impact of the crime. The first response of the criminal justice system is a report of

[3] *Ibid*.
[4] The Code of Criminal Procedure, 1973 (Act 2 of 1974), s. 357.
[5] *Id*., ss. 357A, 357B, 357C.

the crime to the police. This first encounter of the victim with the criminal justice mechanism is not always pleasant or satisfactory. The reluctance of the police to take a report is well known. Recording of an FIR in a cognizable case is often deemed discretionary. In *Lalita Kumari* v. *Govt. of U.P.*,[6] the Supreme Court considered two questions:

> Whether a police officer is bound to register a First Information Report (FIR) upon receiving any information relating to commission of a cognizable offence under Section 154 of the Code of Criminal Procedure, 1973 (in short 'the Code') or the police officer has the power to conduct a "preliminary inquiry" in order to test the veracity of such information before registering the same?[7]

The court held that an FIR in a case of a cognizable offence is compulsorily registrable without conducting any preliminary inquiry. If the information received does not disclose a cognizable offence but indicates the necessity for an inquiry, a preliminary inquiry may be conducted only to ascertain whether a cognizable offence is disclosed or not. If the enquiry discloses commission of a cognizable offence, an FIR must be registered. The Supreme Court advised action against erring police officers who do not register an FIR if information received by them discloses a cognizable offence. Nonetheless, the court identified cases where a preliminary inquiry could be conducted, viz. matrimonial disputes/family disputes, commercial disputes, medical negligence and corruption.[8]

And then, to which jurisdiction can the victim seek his justice? The Hon'ble Supreme Court in *Hemrajan* v. *State of U.P.*[9] held that if the victim has suffered at the hands of the accused in a foreign land, the victim can file a complaint at a place convenient to the victim.

Are the police stations friendly to the victims and complainant? An infrastructural change is required to put the victim in a surrounding in which they feel protected and comforted. This could mean some privacy while making a report; need to visit the toilet and be refreshed; wanting some water or tea; and if injured, needing first aid and an

[6] (2014) 2 SCC 1
[7] *Ibid*.
[8] *Ibid*.
[9] AIR 2005 SC 392.

expeditious visit to the hospital. Under Section 357A(6) of CrPC,[10] the Legal Services Authorities have been empowered to order immediate first aid or free of cost medical facility at the request of the officer-in-charge of the police station or the Magistrate of the area concerned. This provision provides the legal framework for such relief and should be put to good use. If these provisions are not implemented, it is time that attention is paid to these aspects.

Delay in lodging an FIR was often a ground to look upon the case of the complainant with suspicion. In *Ravi* v. *Badrinarayan*,[11] this approach was declared incorrect. It was opined that the delay can be explained and should not be treated to be fatal to the victim's/complainant's case.

IV. VICTIM AND TRIAL

In the traditional form of trial, the complainant/victim is a witness and nothing more. The provisions permitting the victim to engage a legal practitioner to assist the prosecution have been added to the CrPC only recently by an amendment in Section 24(8), effective from 30.12.2009, i.e. 2010.[12] This is an enabling provision only; the State is not required to provide the victim with any assistance. Victim's lawyer's role is limited to assisting the Public Prosecutor. This is apart from the entitlement of the victim under the Legal Services Authorities Act, 1987.[13] The contrast between the rights of the victims and the rights of the accused is apparent. The courts are duty bound to provide legal representation to the accused. In *Ajmal Kasab Khan* v. *State of Maharashtra*,[14] the Supreme Court has gone to the extent of saying that trying an unrepresented accused will be treated as a misconduct on the part of the Magistrate/Sessions Judge. However, no such duty is cast upon the court to provide legal aid or legal representation to the victim.

It is important to enable the victim to speak up and depose in the witness box. It is commonplace for the victim to be threatened and silenced by the wrongdoer. In a case

[10] *Supra* note 4, s. 357A (6).
[11] (2011) 4 SCC 693.
[12] The Code of Criminal Procedure (Amendment) Act, 2008 (Act 5 of 2009), s. 28.
[13] The Legal Services Authorities Act, 1987 (Act 39 of 1987).
[14] (2012) 9 SCC 1.

pertaining to the Maharashtra Control of Organized Crime Act, 1999,[15] the criminal had not only killed a witness to a murder case, but also another person who witnessed the murder of the former witness. Maybe, it is beyond the CrPC or the ability of the police to protect every witness/victim in every case. Yet a blind eye cannot be turned to the problem. In particular cases, the police may be more vigilant and active to protect the victims in their own interest to secure a conviction.

In the court, the vulnerable witnesses, particularly children, need special care. A child witness may be overawed why the very atmosphere of the Court. The presence of the accused, her tormentor, close by may make it worse and very difficult for her to speak up.

Various High Courts and Supreme Court judgments have given instructions to police, hospitals and courts regarding the recording of statements of child victims and women victims of sexual offences. Two judgments of the High Court of Delhi have put these instructions together, namely, *Court on its own motion* v. *State and Anr.*[16] and *Virender* v. *State of NCT of Delhi*.[17]

To say briefly, these instructions include the following:

a. A child victim shall not be kept in the police station overnight on any pretext whatsoever.

b. The investigating officer shall ensure that the victim is made comfortable before proceeding to record the statement.

c. The police officer taking the statement of the child should not be in police uniform.

d. Medical examination of a girl child victim shall be preferably conducted by a female doctor.

e. If practicable, a psychiatrist's help be made available before the medical examination.

[15] The Maharashtra Control of Organized Crime Act, 1999 (Maharashtra Act 30 of 1999).
[16] W.P. (Crl.) No. 930/2007.
[17] 2009 SCC OnLine Del 3038.

f. The Magistrate recording the statement of a child victim, in case the victim is in the hospital, shall do so in the hospital.

g. To create a child-friendly environment, separate rooms be provided within the court precincts where the statement of the child victim can be recorded.

h. Proceedings should be conducted in-camera and appropriate measures are taken to ensure that the child victim is not confronted with the accused.

i. Questions in cross-examination of the child witness be given in writing to the presiding officer of the court who may, in turn, put the questions to the victim or witnesses in a language that is clear and is not embarrassing.

These instructions now find enshrined in the Protection of Children from Sexual Offences Act, 2012 as Sections 36-40.[18]

In Delhi, there are courtrooms specially equipped for vulnerable witnesses in which the accused can be present during the trial but not visible to the witnesses. A child witness may be comfortably placed in a children's room with toys strewn around and their deposition is recorded by video conferencing. In *State of Maharashtra* v. *Bondu*,[19] the Supreme Court issued instructions for setting up such centres for examination of vulnerable witnesses all over the country. The government issued a Witness Protection Scheme in 2018. The Scheme is intended to extend various kinds of protection including monitoring telephone calls, installation of security devices in the witness' home, escorting the witness to and from the Court, etc. to witnesses who perceive a threat to life, property or reputation. The Supreme Court in *Smruti Tukaram Badade* v. *State of Maharashtra & Anr.*,[20] noticed that not only the children but others mentioned in the Scheme need the facility of a Vulnerable Witness Deposition Centre ('VWDC') and mentioned a few more categories like gender-neutral victims of sexual assault of various kinds, those with mental illness or those suffering from disabilities like impaired

[18] Act 32 of 2012, ss. 36-40.
[19] 2018 11 SCC 163.
[20] Criminal Appeal No. 1101 of 2019.

speech and hearing. Reiterating the need for VWDC, the Supreme Court constituted a committee presided over by a former Chief Justice of the Jammu and Kashmir High Court for devising and implementing an All-India VWDC training program as also for engaging with the High Courts for setting up of the VWDCs. One judge in Mumbai asked the child prosecutrix to stand in front of the dais, and the accused was called later with instructions to stay at the entrance of the courtroom. This ensured that the accused was not visible to the child standing before the judge. Very often it is the sensitivity of the judges that fills the gaps left in the legal and administrative provisions.

Infrastructural shortcomings exist in the court premises. While the victim waits for their turn to be called to the box, they are obliged to be the part of the same crowd that includes the accused and their supporters. There is generally no special provision for the protection of the victim while they wait. Very often, the witnesses are dejected because of the harassment meted out to them in the court precincts. This needs to improve.

V. VICTIM AND APPRECIATION OF EVIDENCE

At the end of the trial, we come to the judgment. Sections 357, 357A, 357B, and 357C[21] have gradually come into being in 1973,[22] 2008[23] and 2013.[24] These relate to relief to the victim. But before applying these provisions, there has to be a judgment against the accused. Once the conviction is secured, the compensation can be awarded out of the fine imposed or otherwise, and also from the fund set aside for the purpose regulated by the Legal Services Authorities. Conviction in a criminal trial depends on correct appreciation of evidence with a stern look at crime in the society, and with a sense of responsibility to provide a crime-free society. There are several judgments of the Supreme Court advising the courts to ignore minor discrepancies in the prosecution evidence. A reading of those judgments depicts how the trial courts have grabbed such discrepancies to acquit an accused. Minor discrepancies are bound to appear, particularly if the evidence is taken long after the incident in question.

[21] *Supra* note 5.
[22] *Supra* note 4.
[23] *Supra* note 12.
[24] The Criminal Law (Amendment) Act, 2013 (Act 13 of 2013), s. 23.

Some judges begin with a sceptic mind. What is the evidentiary value of deposition of the complainant or victim or the relatives and friends of the victim? The investigating officer, for example, will support the prosecution case. However, the Hon'ble Supreme Court in *Satbir* v. *State of U.P.*[25] and *State of M.P.* v. *Lakhan*[26] reiterated that it does not mean that these witnesses be disbelieved simply because they are 'interested witnesses'. The complainant may at times be the only eyewitness, and may also be the victim. If the judge is aware of the plight of the victim, he will not need rulings to evaluate the evidence of such witnesses, although there are many. Hostile witnesses are another example. Their entire testimony cannot be discarded only because on some point they differ with their statement given to the police under Section 161, CrPC.[27] As soon as the witness is declared hostile, the judge's mind is inclined towards acquittal. That, however, is not the correct approach. A thorough study on the subject has been made by the Supreme Court in *Gura Singh* v. *State of Rajasthan*.[28] The trial court convicted the appellant for murder of his father, relying upon the extra-judicial confession made before a stepbrother with a hope of some help or protection. The stepbrother lodged the FIR. The stepbrother is the star witness in the case. However, the Public Prosecutor sought permission to cross-examine the witness. The trial court convicted the accused relying on the evidence of this witness. Upholding the conviction, the Supreme Court said that the issue on which the witness deviated from the previous statement was not about the actual occurrence or the extra-judicial confession but was about the subsequent event of going to the police station and the SHO's initial reluctance to record the FIR. 'It is a misconceived notion', the Supreme Court said, 'that merely because a witness is declared hostile his entire evidence should be excluded or rendered unworthy of consideration'.[29] The concern of the victim should not be lost sight of while applying the usual practices of appreciation of evidence in a mechanical or cavalier fashion.

[25] (2009) 4 SCC 289.
[26] (2009) 14 SCC 433.
[27] *Supra* note 4, s. 161.
[28] AIR 2001 SC 330.
[29] *Ibid*.

True, the burden of proof is on the prosecution; nonetheless, the capacity to reason, infer and presume should not be compromised. In *State of West Bengal* v. *Mohd. Omar & Ors.*,[30] the Supreme Court observed:

> The pristine rule that the burden of proof is on the prosecution to prove the guilt of the accused should not be taken as a fossilized doctrine as though it admits no process of intelligent reasoning. The doctrine of presumption is not alien to the above rule, nor would it impair the temper of the rule. On the other hand, if traditional rule relating to burden of proof of prosecution is allowed to be wrapped in pedantic coverage, the offenders in various offences would be the major beneficiaries and the society would be the causality.

The offenders in the above case had kidnapped a businessperson who had refused to pay ransom. After a few hours of kidnapping, the dead body of the kidnapped victim was found. The Supreme Court took a presumption – allowed under Section 106 of the Indian Evidence Act, 1872,[31] and said that since it was only within the special knowledge of the kidnappers as to what they did after they had kidnapped the victim; unless they disclosed the same, the consequent presumption/inference would be adverse to them.

Conviction on the sole testimony of the prosecutrix is an expression of victimology. The first important case in this direction was *Bharwada Bhoginbhai Hirjibhai* v. *State of Gujarat*,[32] which has been followed in a large number of cases. Undoubtedly, the sensitivity displayed by the courts and by the legislature in recent years towards the plight of rape victims is very encouraging. The Supreme Court said that in the Indian setting, refusal to act on the testimony of a victim of sexual assault in the absence of corroboration, as a rule, is adding insult to injury.[33] The character of the victim is not of any relevance, and after the Supreme Court ruled on this point, the legislature followed by removing, in 2003, Section 155(4) of the Indian Evidence Act, 1872,[34] wherein the question regarding the character was said to be relevant if the witness was

[30] 2000 (8) SCC 382.
[31] The Indian Evidence Act, 1872 (Act 1 of 1872).
[32] AIR 1983 SC 753.
[33] *Ibid*.
[34] The Indian Evidence (Amendment) Act, 2002 (Act 4 of 2003), s. 3.

deposing about rape having been committed on her. Nor is previous sexual history of any consequences. In *State of U.P.* v. *Munshi*,[35] the Court has gone to the extent of saying that even if the prosecutrix is shown to have been promiscuous, she has a right to refuse to sexual approaches of anyone and sexual intercourse committed on her without her consent would be as much rape as in any other case. Section 53A has been added to the Indian Evidence Act by an amendment in 2013, which makes the questions relating to the character and previous sexual history of the prosecutrix irrelevant in certain cases.[36]

The expression of the Supreme Court regarding the impact of a rape on the victim, in the case of *State of Punjab* v. *Gurmit Singh & Ors.*,[37] is actually a lesson in victimology. The Court said:

> Rape is not merely a physical assault – it is often destructive of the whole personality of the victim. A murderer destroys the physical body of his victim, a rapist degrades the very soul of the helpless female. The Courts, therefore, shoulder a great responsibility while trying an accused on charges of rape. They must deal with such cases with utmost sensitivity. The Courts should examine the broader probabilities of a case and not get swayed by minor contradictions or insignificant discrepancies in the statement of the prosecutrix, which are not of a fatal nature, to throw out an otherwise reliable prosecution case. If evidence of the prosecutrix inspires (sic) confidence, it must be relied upon without seeking corroboration of her statement in material particulars. If for some reason the Court finds it difficult to place implicit reliance on her testimony, it may look for evidence which may lend assurance to her testimony, short of corroboration required in the case of an accomplice. The testimony of the prosecutrix must be appreciated in the background of the entire case and the trial court must be alive to its responsibility and be sensitive while dealing with cases involving sexual molestations.

[35] (2008) 9 SCC 390.
[36] *Supra* note 24, s. 25.
[37] AIR 1996 SC 1393.

It may be added here that trial by a lady judge has been advised by the Supreme Court in this case; not to undermine the caliber of the male judges, but to create an ambience for the victim to speak up.

VI. VICTIM AND SENTENCE

Now comes the stage of conviction, acquittal, punishment to the accused, and relief, if any, to the victim. Punishment as such does not benefit the victim. This, however, does not mean that punishment should be awarded casually. It has to be proportional to the offence. If the convict is left with a lenient penalty, the retributive and preventive aspects of the punishment will be lost. This in turn will harm society, including the victim. As it stands now, although the accused has a right of hearing on the question of quantum of punishment,[38] there is no provision for the victim being heard. Even the public prosecutor's attitude on the quantum of punishment is casual and they hardly ever put forth the side of the State or the victim on this issue. This certainly needs to change.

VII. VICTIM AND ATTITUDE

Much depends upon the attitude of the criminal law functionaries. The bare words in the statutes or rulebooks may go to waste unless the officers work with empathy and sensitivity towards the victim. Acid attack[39] and rape victims[40] are entitled to free medical assistance, and all hospitals are obliged to comply with the relevant provisions of Section 357C.[41] The provision would be mocked if the hospitals merely do superficial work and send the victims away. Certain things must be ensured, to be in compliance with the aforementioned provision. Is there a doctor around? Is there any arrangement for first aid, for rest or for being refreshed? Do the police help in obtaining legal assistance for the victim? How does the police treat the victim? No provision requires

[38] *Supra* note 4, s. 235(2).
[39] The Indian Penal Code, 1860 (Act 45 of 1860), s. 326A.
[40] *Id.*, ss. 376, 376A, 376B, 376C, 376D, 376E.
[41] *Supra* note 4, s. 357C.

the police to provide any special care to victims who have suffered severe bodily harm. A display of courtesy is of utmost importance.

Does the public prosecutor have any duty in providing moral support to the victim and the witness? They need to highlight minute details in the evidence. A good reading of the entire case is essential while conducting the trial, and not merely a mechanical reproduction of the statements under Section 161 of CrPC.[42] The presiding officer has several obligations under CrPC towards the accused. But they also need to take care to deal with the victims with compassion and protect the victims/witnesses against unnecessary browbeating or harassment by the defence.

VIII. VICTIM AND COMPENSATION

As far as a relief to the victim is concerned, the UN Declaration of 1985[43] mentions restitution and compensation. There is no specific provision in the CrPC on restitution, except in the case of return of the case property. However, compensation can be awarded to meet the loss suffered by the victim of an offence as provided in Sections 357, 357A and 357B.[44] Compensation can be awarded out of the fine imposed on the accused on convictions. Even if a fine is not a part of the sentence, compensation can be awarded from the pocket of the accused and in certain cases from the State.

Section 357A of CrPC,[45] requires the State Governments to frame schemes for providing funds for the crime victims. The Legal Services Authorities are entrusted with the work of assessing the compensation if so recommended by the court. The most endearing provision is Section 357A(4)which provides for compensation to a victim even when the offender is not traced or identified.[46] The schemes and the funds are now in place and are being used with profit.

[42] *Supra* note 27.
[43] *Supra* note 2.
[44] *Supra* note 4, ss. 357, 357A, 357B.
[45] *Id.*, s. 357A.
[46] *Id.*, s. 357A(4).

IX. VICTIM AND RESTORATIVE JUSTICE

This brings us to the futuristic approach of restorative justice. What can actually restore peace in the mind of the victim? How can justice be secured to the victim? We have two principal types of punishment – imprisonment and fine. Confiscation of property is provided in certain cases. Under the Representation of People Act,[47] an offender can be debarred from contesting elections for a certain number of years. Are these punishments capable of healing the wounds of the victim? We can award compensation to the victim. But it is the victim and the victim alone who can say what would if at all, heal the wounds. Hence, there must be a quest for restorative justice.

What will restore peace and tranquility between the victim and the offender may be very different from what the law can provide. A woman, who was a childless widow, kidnapped a newborn child in her neighbourhood. After the child was recovered by the police, the legal procedure of arrest and bail followed. Subsequently, the mother of the child and the kidnapper met and talked. It resulted in complete healing and peace; both wept for a long time understanding the agony of each other. In-group clashes, for example, a large number of criminal cases get registered. Peace comes only when the cause of conflict is removed. In cases of elopement marriages registered as kidnapping and rape, it is the parents of the 'offender' and of the 'victim' who need counselling to accept the relationship.

The story of one Kamla is worth narrating. She was persuaded by her husband to agree to his taking another wife, as she was unable to bear a child. She thought of the offspring who will come from the second alliance and the joy of having a child in the house. She accompanied her husband to the marriage and was a witness to the ceremony. However, she could not bear the sight of her husband being seated next to the new bride in the bus that was to carry them back home. The atmosphere that was created with the arrival of the new bride, who stole all the attention can be appreciated by anyone and need not be described in detail. Had she gone to an efficient lawyer, he would have promptly told her of the legal remedies, namely, (1) a suit for divorce; (2) a petition for maintenance; (3) a complaint to the police/court alleging bigamy; and

[47] The Representation of People Act, 1951 (Act 43 of 1951).

(4) complaint before the government, his employer for disciplinary action. She was not interested in any one of the four actions for good reasons. The new bride promptly delivered a child, which gave another angle to the story involving the second woman, innocent in her own way, and the newborn, needing the care and the attention of the same man. Unless her advisor or counsel had some idea of the benefits of mediation, they would simply have left her to her fate, expressing their inability to help her in any way. But, fortunately, she was taken through the process of mediation. The process helped her in soul-searching which revealed that she was interested foremost in her own security and a continued relationship with her husband and his family. Through the process of mediation, Kamla could get what she needed. But for the loss, which could not be undone, what she lost was a sense of security and stability for the future. She and her husband arrived at a settlement whereby the husband agreed to buy a house for her in her name. The husband also agreed to supplement the rental income from the property. The family members assured her that they would treat her with the same importance and affection as before. The husband also agreed to visit her at least twice a week. The solution may not be a textbook solution. A strictly legal mind may even refuse to see this as a solution. But if solution means peace between the estranged parties, it was a solution and a creative one at that. None of the legally available solutions could possibly help one woman without offending the other. The possibility that any legal action would have harmed both also cannot be ruled out. Thus, the legal action itself was something that was not welcome in this situation.

Very often the victims do not understand how their pain and suffering can be reduced. Again, the pain is in the mind of the person and the relief comes when pain is reduced. Many offences involve the loss of money or material things. Some offences lead to physical harm. There are then offences that cause harm to the life, liberty or social standing of a person. Defamation, for example, provides for a civil claim for compensation as also punishment for the accused by a criminal court. It may or may not be possible to restore the reputation of a person even after the trial of a case is over and the complainant wins the case. Once in a while, in the newspaper, we see instances where the rape accused offers to marry the rape victim. There is a huge uproar in civil society against such proposals. In one case it was reported that even the judge wanted

to know if the victim was willing to marry the accused. Will such marriage be fair or will it heal the victim? This question can only be answered by the victim and not by others. In our country, so far victimology is concerned, no one asks the victim as to what would they want by way of restoration.

Restorative justice attempts to restore peace between the victim and the offender, whereby both are healed – the victim of the loss and the accused of the pangs of conscience of having wronged. It is only in the process of restorative justice exercise that the victims may be asked as to what would be the appropriate relief for them. The victims and the accused are counselled, individually or together, in which the offender is helped to comprehend the impact of their acts and is made to repair the damage done. Peace for the victim may come from the reform of the offender, his understanding of the nature of the offence, by his acts of reparation, and maybe on account of forgiveness that these may generate in the heart of the victim. This kind of approach will be particularly useful where the victim and offender are parts of a close social circle, members of the same community, and they meet frequently.

It will be proper to make a reference to Section 320 of CrPC that provides for the compounding of offences.[48] In all, there are 55 offences on the list that can be compounded. Compounding of the offences are done by settlement between the victim and the offender whereby the victim exonerates the offender and makes a statement in this regard before the Court. The accused or the offender is thereafter acquitted of the offence. Such compounding very often takes place with the intervention of third parties, mostly at the initiative of the accused. What happens between the offender, victims and others in the process of the settlement are not brought to the court. The court is happy to record a settlement and the disposal of the case. The concept of restorative justice can be used with the profit for such compounding of offences. Restorative justice is not simply the disposal of a case, it is a process in which the offender is made to realize the damage or harm they have done, offering them an opportunity to repair the harm caused. At the same time, the victim also feels compensated for the harm done, and maybe healed of the pain of loss and suffering. Offences compoundable under Section 320, CrPC are often settled in Lok Adalat, where

[48] *Supra* note 4, s. 320.

the judges intervene to impress upon the parties the benefits of a settlement and suggest the amount of compensation that the victim should get to let the offender off the hook. The psychological counselling leading to the correction of the behaviour and realization of the far-reaching impact of the criminal acts does not form part of the process before the Lok Adalat.

The restorative justice concept offers a very different way of understanding and responding to crime. Instead of viewing the State as the primary victim in a criminal act and placing the victim, offender and community in passive roles, restorative justice recognizes crime as being committed against individual people. It is grounded on the belief that people most affected by the crime should have the opportunity to be actively involved in resolving disputes. Repairing harm plus restoring loss, allowing offenders to take direct responsibilities for their actions, and taking victims beyond vulnerability towards some degree of closure, stand in sharp contrast to the values and practices of the conventional criminal justice system with its focus on past criminal behaviour through ever-increasing levels of punishments, which must change. Various countries and judicial systems practised and experimented with the principles of restorative justice. In one tribal community in Canada, the accused who pleads guilty is sentenced by a circle court. The circle court consists of the victim, their kins, tribal elder, the public prosecutor, the defence counsel, the accused as well as the judge, who all sit in the circle and discuss the appropriate way to punish the accused and provide relief to the victim. In India, in the North-Eastern States, where the tribal courts function with the wholehearted support of the tribal communities, the justice delivery system is instantaneous as very little time is spent between accusation and decision. The accused is heard immediately after the accusation and if the trial judge finds them guilty, they are punished. In these tribal courts also, the victim and the community of the victim are parties to the proceedings and they may be heard and be satisfied with the outcome. The author is not citing this example to encourage tribal courts because there are various valid criticisms against them, which have resulted in the government trying to push the formal court system into tribal life.

Some countries have successfully experimented with community service as an alternative to incarceration. In India, it is only limited to academic discourse. Wherever

community service is so used, the idea is of reform of the offender. However, the same can also be used for restoration. For example, painting up a school building or tending to community gardens may provide a healing touch to the community. Depending upon the training and capability of the offender, appropriate community service can be awarded to them. Once we open the doors for this kind of punishment, we walk into a vast possibility of reformative and restorative processes.

X. LAW OF PROBATION AND RESTORATIVE JUSTICE

The provisions for the release of the offenders on probation have remained mostly under utilised. The Probation of Offenders Act, 1958[49] as well as Section 360 of CrPC[50] provides an alternative to imprisonment. The provisions enable the courts to release an offender on submitting a bond of good conduct, and the offender so released can be imprisoned if they violate the terms of the bond. The provisions also enable and require the courts to obtain a report of the Probation Officer about the socio-economic condition of the offender before making an order of release on probation, and also to keep the offender under the supervision of a Probation Officer during the period of probation. In order to give true effect to these provisions, it is necessary to have a robust organisation and scheme to deal with offenders released on probation. At the same time, a trained and efficient cadre of Probation Officers is required. Unfortunately, the administrative side of justice delivery on this aspect has not been developed as required. The law developed through judicial pronouncements encourages the use of probation as an alternative to punishment only in minor offences, and that too after due consideration of the nature of the offences and their impact on society. The general refrain of the Supreme Court with regard to sentencing is that the punishment should be proportional to the offence. In *State of Punjab* v. *Prem Sagar and Ors.*,[51] the Supreme Court set aside probation granted to an offender who was found carrying 2000 litres of rectified spirit in violation of Section 61(1) of the Punjab Excise Act.[52] In *Dalbir Singh*

[49] The Probation of Offenders Act, 1958 (Act 20 of 1958).
[50] *Supra* note 4, s. 360.
[51] 2008 CriLJ 3533.
[52] The Punjab Excise Act, 1914 (Act 1 of 1914), s. 61(1).

v. *State of Haryana*,[53] the Supreme Court said that probation should not be granted to a professional driver of a motor vehicle convicted of rash and negligent driving leading to the death of the accident victim.

Now, in the cases in which probation is the appropriate sentence, courts do nothing more than obtaining a bond with or without surety for keeping good behaviour for a period of one year or so. In effect, such an order for release on probation is equivalent to an order of acquittal. And the victim is altogether forgotten.

A cadre of Probation Officers not being available, no direction for supervision or training/education of the offender during the period of probation is ever made. With a properly developed and organised corrective mechanism using the services of trained, sensitised and motivated Probation Officers, a robust system of Probation can be secured. During this period of probation, the offender and the victim may be brought together and steps can be taken to heal the wounds inflicted by the accused and to restore goodwill between them. The offender and the victim can be brought together to resolve conflicts, legal, social and emotional and to bring about lasting peace in society.

XI. CONCLUSION

In the end, victimology requires the law-making body as well as the law-enforcing authorities and the courts to keep the concerns of the victim in mind. Much can be done within the present setup by proactive measures. Sudden and sporadic legislative measures enlarging the definitions of crime or enhancing the punishments are sometimes knee-jerk reactions to specific incidents. The role of the community in healing the victim also should not be overlooked. 'Blessed are the peacemakers for they shall have peace', says the Bible. The need of the hour is to enlarge the number of peacemakers in every organization, legislature, police, and court and maybe others.

[53] 2000 (3) SCR 1000.

JUDICIAL GATEKEEPING OF SCIENTIFIC EVIDENCE AND EXPERTS IN CRIMINAL ADJUDICATIONS

Poulomi Bhadra ∗ *and Kanika Aggarwal* ∗*

The Daubert trilogy stipulates a general criterion for the scrutiny of scientific evidence and has also been referred to by experts in many US Courts and other jurisdictions, including India. Yet, a similarly precedential judgement or explicit regulation is starkly missing from the Indian jurisprudence and related laws of evidence. Using some judicial decisions from various Indian courts, this paper analyses the discerning process by which Indian judges arrive at conclusions concerning the material elements of the case, specifically with regards to scientific evidence and opinion. With the help of certain judgments, the paper illustrates that in the absence of legal guidance, the approach adopted by judges to assess probative worth of scientific evidence is not scientifically correct. Although there are instances where Indian courts have credibly entertained science and scientific opinion in the courtrooms, assessment of the reliability of expert opinions is not uniform, and thus, found highly wanting in the present legal landscape. The paper makes a case for the judiciary to bear more responsibility than the adversarial parties in their gatekeeping function. While the main aim is to petition for developing guidelines to improve judicial approach to admissibility jurisprudence, this paper also highlights the challenges and limitations within which such reforms must be constituted.

Keywords: *Daubert Standards, Expert Opinion, Scientific Evidence, Judicial Gatekeeping, Admissibility Standards, Forensic Evidence.*

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I. INTRODUCTION

The role of science and law within the criminal justice system is vastly different. Law functions within limitations of time - cases must be decided within a certain span of time, on the principles of finality and relying on the best available scientific knowledge.[1] Science, on the other hand, is constantly evolving with time; existing knowledge continues to be in a constant state of revision as advances in research challenge, or even overturn, former scientific knowledge. As such there can be conflicts when the legal culture attempts to assimilate the scientific culture in the courtroom. Law bestows upon scientific evidence an ideology of certainty and accuracy that may not always be met. As new research develops, it may discredit previously consolidated scientific beliefs, or new advances in methodology may improve on the accuracy of existing techniques, drawing attention to the fallacies of previous methods. For example, the identification of people using their dentition was heuristically established and considered a reliable method in forensic practice until research proved that such identification was not immune to subjectivity, and such examinations had variable accuracy rate.[2]

In the wake of the National Academy of Science (NAS) reports,[3] the findings of the Innocence Project[4] globally and the incorporation of several changed science statute provisions in the legislation of some countries, it is often seen that legal decisions can be rendered invalid on the grounds that past scientific 'truths' that were presented as evidence were disrupted by later scientific discoveries. Thus, the nature of scientific evidence demands that the rules of admissibility adopted by the courts are pragmatic; that they appropriately accommodate 'established' knowledge in answering the

[1] Simon A. Cole, "Changed Science Statutes: Can Courts Accommodate Accelerating Forensic Scientific and Technological Change" 57 *Jurimetrics* 443 (2017).
[2] Gorza, Ludovica, and Scheila Mânica, "Accuracy of dental identification of individuals with unrestored permanent teeth by visual comparison with radiographs of mixed dentition." 289 *Forensic science international* 337-343 (2018).
[3] Committee on Identifying the Needs of the Forensic Sciences Community, National Research Council, "Strengthening Forensic Science in the United States: A Path Forward" (National Academies Press, 2009).
[4] The Innocence Project, founded in 1992 by Peter Neufeld and Barry Scheck at Cardozo School of Law, exonerates the wrongly convicted through DNA testing and reforms the criminal justice system to prevent future injustice, *available at https://innocenceproject.org* (last visited on Feb. 7, 2021).

questions of law while making allowances for re-evaluation when needed as the knowledge changes.

A. Legal Framework within which Forensic Evidence and Experts function in Criminal Adjudications

Since the last few decades, scientific evidence and expert witnesses have played a critical role in assisting the judiciary in determining culpability. As an increasingly integral part of criminal adjudication, forensic evidence provides assistance in both the investigation and trial of a case.[5] Naturally, the two stages employ forensic sciences differently; the standards involved in trial are generally more stringent than those used during the investigation. That is the reason why, in some instances, Deception Detection Techniques (DDTs) have been allowed during investigation, leaving it to the discretion of the judge to decide its admissibility at trial.[6]

Laws governing the screening of scientific evidence in court are generally linked by three closely connected concepts, namely – relevance,[7] admissibility[8] and weightage. For a piece of evidence to be eligible for consideration in decision making, it must pass through the above-mentioned stages, in this order. After evidence is found to be relevant and admissible, the question of weightage arises.[9] Admissibility in Indian proceedings is contingent on relevance (must prove or disprove an important fact of the case) and reliability (reliability of the source used as evidence).[10] In terms of scientific evidence, the concept of admissibility can be interchangeable with permissibility, and includes primarily of factors that define non-admissibility and exclusion from the case file, for example, problems with chain of custody, poor storage or packaging of evidence etc.[11] Weightage refers to the persuasive value that an evidence has in the decision making process which is, in turn, dependent on multiple factors - the correctness of the

[5] President's Council of Advisors on Science and Technology, "Report to the President Forensic Science in Criminal Courts: Ensuring Scientific Validity of Feature-Comparison Methods" (2016).
[6] *State of Gujarat* v. *Inayat Ismail Vohra*, Gujarat High Court, 2015; *Jaga Arjan Dangar* v. *State of Gujarat*, MANU/GJ/0824/2018.
[7] S. L. Phipson, J. H. Buzzard, *et.al., Phipson on evidence* (Sweet & Maxwell, 1982).
[8] J. Davies, "Admissibility of scientific evidence in courts" 24 *Med. & L.* 243 (2005).
[9] R. Glover and P. Murphy, *Murphy on evidence* (Oxford University Press, 13th ed., 2013).
[10] Anton Koshelev and Ekaterina Rusakova. "The problem of admissibility of evidence in Indian civil proceedings." *SHS Web of Conferences. EDP Sciences* 106 (2021).
[11] *Supra* note 3.

report, the reasons given in support of the conclusions,[12] exactness of the science, and expertise in the field.[13] The judge determines weightage when considering the final rulings of a case in terms of how compelling the evidence is, and how far it goes in proving the matter under question.[14]

B. The NAS Report 2009: Expose´ on Bad Forensics

In 2009, the National Research Council of the National Academy of Sciences, USA released a critical report, henceforth referred to as NAS Report,[15] on the use of forensic science in criminal trials in USA, which, among other things, highlighted the lack of scientific method and scientific validation prevalent in some forensic disciplines. The report is said to have been epiphanic to the end-users of the scientific reports – primarily lawyers and judges - who were confronted with persuasive evidence that expert witnesses had been overstating the significance and certainty of the scientific analyses in the courtroom.

Its main criticism had been against fields like tool marks, bite marks, fibres and hair analysis etc., which involved professionals with very little training in science.[16] Such techniques have unknown error rates and using them in determining criminal culpability is imprudent, especially when they are likely to have a huge influence on case findings.[17] Moreover, their continued admittance in courts snowballed into creating precedents that strengthened their credibility in courtrooms despite lack of scientific rigour in these techniques. There were no questions whether these branches of forensic science met the core values of scientific culture – 'empiricism, transparency and an ongoing critical perspective'.[18] The reason stated in the NAS Report for the Courts' failure to take note of shortcomings in forensic evidences are:

- rules that presently govern the admissibility of forensic evidence are lacking,
- rules governing review of admissibility decisions is lacking or missing,

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[12] *Malay Kumar Ganguly* v. *Dr.Sukumar Mukherjee*, AIR 2010 SC 1162.
[13] *Parappa* v. *Bhimappa,* MANU/KA/0059/2008.
[14] A. L-T Choo, *Evidence* (Oxford University Press, 2nd ed., 2009).
[15] *Supra* note 2.
[16] D. M. Risinger, (2010), "The NAS/NRC report on forensic science: A path forward fraught with pitfalls" *Utah Law Review* 225 (2010).
[17] *Supra* note 2 at 176.
[18] J. L. Mnookin, "The Need for a Research Culture in the Forensic Sciences" 58 *UCLA Law Review* 725 (2011).

- shortcomings of adversarial processes, and
- the lack of competency to handle scientific matter among both judges and lawyers.

The NAS Report reiterates eleven times that 'lawyers and judges often have insufficient training and background in scientific methodology, and they often fail to fully comprehend the approaches employed by different forensic science disciplines and the reliability of forensic science evidence'. The PCAST report found that there was need to attend to two important gaps– 1) clarity on the meaning of terms such as "reliable principles and methods" and "scientific validity" and, 2) evaluation of these methods.[19] These specific concerns raised by the NAS Report (2009), PCAST Report (2016), Silverman (2011)[20] and others on research and development in forensic sciences are universal concerns that are heavily tied in with the legal systems of all national and international jurisdictions. Scientific knowledge, especially as it pertains to forensic examinations, unlike law, does not change as a consequence of geographical changes.[21] Therefore, the concerns of the NAS Report are transposable to the Indian legal and forensic systems that derive from the same pool of scientific knowledge. The critique provided by the American, Canadian and Australian scholars referred to in this paper is crucial in informing on how to critically examine the limitations and deficiencies within Indian legislation and criminal adjudications in practice.

II. EVIDENTIARY STANDARDS IN INDIAN CRIMINAL ADJUDICATIONS

In this section, the evidentiary regime functioning within Indian jurisdiction is unpacked via existing legislation, case laws and case judgements. While the existing legislation enables the court to entertain scientific evidence and expert opinion, it can also be seen that the understanding of reliability and relevance of evidence is extremely broad and

[19] *Supra* note 2.
[20] B. Silverman, "Research and Development in Forensic Science: A Review", *Forensic Science Research and Development* (2011), *available at*: https://www.forensicdentistryonline.org/wp-content/uploads/2011/07/forensic-science-review-report.pdf (last visited on Feb. 05, 2021).
[21] C. P. Rajendran, "A day to embody the true spirit of science", *Hindu*, Feb. 28, 2022.

flexible among the judiciary, leading to non-uniform scrutiny of such evidence in their gatekeeping duties.

A. Legislative Guidelines

One of the primary legislations governing the evidentiary regime in India is the Indian Evidence Act, 1872[22] (hereinafter referred to as IEA); Section 45 of which deals with relevancy of expert witnesses' opinions –

> When the Court has to form an opinion upon a point of foreign law or of science or art, or as to identity of handwriting or finger impressions, the opinions upon that point of persons specially skilled in such foreign law, science or art, or in questions as to identity of handwriting or finger impressions are relevant facts. Such persons are called experts.

The list given above is not exhaustive but illustrative. In theory, as defined by the IEA, the standard of proof that is applied to the admission of scientific evidence and expert testimony is the same for both civil and criminal cases; however, in praxis, the degree of proof required might differ in civil and criminal trials.

Section 47 of the IEA states that the evidence pertaining to handwriting may be admissible from anyone who is not professionally trained, provided that they are acquainted with the handwriting in question. This implies that expertise is not necessarily guaranteed by academic qualifications, but also by acquisition of special skills which can come from informal training, experience, practice, observation etc.[23] Section 46 of the IEA extends upon the significance of expert opinion by stating that facts that are otherwise irrelevant, shall be considered relevant when found consistent with the opinion of experts. Section 51 of the IEA confirms that expert opinion is an exception to the rule against opinion evidence, but clarifies that such opinions do not go into evidence automatically without assessing reliability of the reasons on which such opinion is based, or examination of the expert.[24] Some statutory exceptions to this

[22] Indian Evidence Act, 1872 (Act 1 of 1872), s. 45.
[23] M. Sati, "Evidentiary Value of Forensic Report in Indian Courts" *Scholarticles* (2016).
[24] R. Ratanlal and K. T. Dhirajlal, *The Law of Evidence* (Wadhwa and Co., Nagpur, 23rd ed., 2010).

are stated in the Criminal Procedure Code,1973[25] in Section 509 (Medical Certificate) and Section 510 (Report of Chemical analyst).

In regard to the role of the judiciary in admitting evidence, Section 136 of the IEA says,

'When either party proposes to give evidence of any fact, the Judge may ask the party proposing to give the evidence in what manner the alleged fact, if proved, would be relevant; and the Judge shall admit the evidence if he thinks that the fact, if proved, would be relevant, and not otherwise. If the fact proposed to be proved is one of which evidence is admissible only upon proof of some other fact, such last-mentioned fact must be proved before evidence is given of the fact first mentioned, unless the party undertakes to give proof of such fact, and the Court is satisfied with such undertaking. If the relevancy of one alleged fact depends upon another alleged fact being first proved, the Judge may, in his discretion, either permit evidence of the first fact to be given before the second fact is proved, or require evidence to be given of the second fact before evidence is given of the first fact.'

Among other things, it is worthwhile noting that the IEA mostly illustrates specific provisions in regards to document and handwriting evidence, with a few forays into medico-legal and electronic evidences (Sections 39, 47A, 65A & B, 85, 88A, 90A of the IEA), but no other type of evidence is explicitly considered in cognizance.

Other legislations also have similar provisions regarding expert evidence, such as Section 169(3) of the Motor Vehicles Act, 1988, that enables the judicial tribunal to 'choose one or more persons possessing special knowledge of and matter relevant to the inquiry to assist it in holding the inquiry'.[26] Section 4 (1)(c) of the National Green Tribunal Act, 2010has placed the expert on a higher footing with regard to their role in decision making, by mandating the inclusion of an environmental expert within the judicial bench of the tribunal.[27]

Together, these laws highlight some crucial elements on how Indian courts look at experts: 1) the faith and trust that courts place on people with specialised knowledge

[25] Criminal Procedure Code, 1973 (Act 2 of 1973).
[26] Act 59 of 1988.
[27] Act 19 of 2010.

and skills of the facts concerning the case; 2) the reliance placed by courts on bonafide testimony of experts.[28]

B. Judgements Defining Admissibility Standards

The purview of IEA extends to defining what evidence may be received by the court, the manner in which it must be handled and presented, and who is eligible to offer their expertise. The language does not inform, with any clarity, about a comprehensive criteria of admissibility for scientific evidences or experts.[29] For most part, the judiciary relies heavily on the adversarial process to execute the gatekeeping role for scientific opinions. *State of Uttarakhand* v. *Akhtar Ali*[30] noted that

'No rules of evidence, as such, are in force in this country for accepting the expert evidence. It all rests upon the prosecutor as to how he introduces the expert, how he proceeds with the testimony of the expert, and, of course, it also depends upon the presiding judge, as to how he ensures that (the) truth is not suppressed.'

Using the case *State of Maharashtra* v. *Sharma*[31] as an example, Gaudet[32] has shown how questionable evidence can infiltrate the courtroom when admissibility standards fail to keep it at bay. In India, evaluation of expert evidence is generally limited to assessing the credibility and qualifications of an expert witness.

The authors concede that it is not possible to find one set of uniform standards that would apply to all scientific evidence as each technique is at a difference stage of scientific inquiry in terms of tools, assumptions, methodologies, goals etc.[33] However, the provision for guidelines on how to navigate such scientific dilemmas can help judges understand the nuances of the expertise and evidence analysis better, thus bridging the gaps in scientific literacy. There have been some attempts at establishing admissibility

[28] *Supra* note 24.
[29] G. K. Varghese and B. J. Alappat, "National Green Tribunal Act: A Harbinger for the development of environmental forensics in India?" 13(3) *Environmental Forensics* 209-215 (2012).
[30] MANU/UC/0918/2019.
[31] C.C., No. 508/07, Pune (decided on June 12, 2008).
[32] L. M. Gaudet, "Brain fingerprinting, scientific evidence, and Daubert: A cautionary lesson from India" 51 *Jurimetrics* 293 (2010).
[33] M. M. Kapsa and C. B. Meyer, "Scientific Experts: Making Their Testimony More Reliable" 35 *California Western Law Review* 313 (1999).

criteria by various Courts. In *Ramesh Chandra* v. *Regency Hospital,*[34] the Supreme Court categorically laid out the conditions that govern the admissibility of expert evidence as:

1. Expert must be heard unless s. 293 of CrPC[35] applies (This provides that senior government experts may not be summoned. Also, some cases wherein foreign experts have been given the permission to testify through video-conferencing (*Malay Kumar Ganguly* v. *Dr. Sukumar Mukherjee*);[36]
2. Area of expertise must be a recognised one;
3. The evidence must be based on reliable principles;
4. He must be qualified in the area of specialisation, either by education or by way of experience.

In *Anish Rai* v. *State of Sikkim*,[37] where an expert was asked to opine on the age of a person, the expert founded her opinion on the stages of fusion of the bone in the body, as was shown in the X-ray. While the Sikkim High Court conceded to the information, it criticised that the conclusion reached by the expert has not been elaborated with any further information – '(She) ought to have clarified and elaborated on what the various stages of fusion of bone signified and how consequently she has reached her finding of the bone age of the victim to enable the court to reach a decision with clarity and to appreciate her efforts'. This implies that an expert's opinion, given without adequately providing supplementary reasoning that is based in foundational scientific knowledge and illustrates how they arrived at the findings, is deemed to be of no value to the case. The evidence, although admissible, would be excluded from consideration in deciding the case as it does not carry enough information on which the judge can determine weightage. This also illustrates that although a judge can choose to not rely on an expert opinion, they are at no liberty to substitute it freely without grounds on which to question the reliability of the evidence. But if they do rely, it shall be done for reasons that are justifiable. This insistence on corroboration is a matter of caution and prudence (*Murali Lal* v. *State of M.P*).[38] For example, footprints (*Pritam Singh* v. *State of Punjab*)[39]

[34] (2009) 9 SCC 709.
[35] The Criminal Procedure Code, 1973 (Act 2 of 1974).
[36] (2009) 9 SCC 221.
[37] MANU/SI/0045/2018.
[38] AIR 1980 SC 531.
[39] AIR 1956 SC 415.

& tracker dog evidence (*Abdul Rajak Murtaza Dafedar* v. *State of Maharastra*)[40] are not backed by established science and therefore, were used as corroborative evidence in the respective cases i.e., with less weightage, only to reinforce the conclusion drawn from other evidence.

One of the laws that has attracted serious debate in terms of admissibility of evidence is Article 20(3) of the Constitution of India, that guards against self-incrimination by providing for *nemo tenetur seipsum accussare*. While the scope of the immunity explicitly includes oral and documentary evidence, in its constitutional essence, the clause is actually a safeguard against testimonial compulsion. The Bombay High Court in *Ramachandra Reddy and Ors.* v. *State of Maharashtra*,[41] upheld the legality of the use of narco-analysis, P300 brain-mapping, polygraph test on the grounds that in these tests, no statement is made involuntarily towards testimony, in oral or written form. In *Kathi Kallu Oguhad* v. *State of Maharashtra*,[42] the Apex Court limited the scope of Art. 20(3) by observing that self-incriminatory information is admissible if there is no compulsion. The presumptions defining the admissibility of such scientific evidence was eventually overturned in *Selvi* v. *State of Karnataka*,[43] where the Supreme Court held that the above-mentioned scientific processes were unconstitutional as they violated rights against self-incrimination, and cannot be conducted without the consent of the accused. It is interesting to note that the Supreme Court chose to discredit these scientific procedures on the grounds of constitutionality alone, but did not comment upon the reliability of such science or the accuracy of interpretation made by the expert. In contrast, collection of handwriting and signature specimens, evidence gathered from medical examination of the accused, voice samples, DNA, blood, pubic hair etc. was not considered violative of Art. 20(3) because these evidences were considered to be tamper-proof to manipulation or concealment.

C. International Admissibility Rules: Daubert Standards

One of the earliest frameworks for determining admissibility stemmed from the 1923 federal district court ruling in *Frye* v. *United States*, which held that expert evidence was

[40]AIR 1970 SC 283.
[41]Cr. W. P. (c) No. 1924 (2003).
[42] AIR 1961 SC 1808.
[43] AIR 2010 SC 1974.

admissible if it was produced by methods that were generally accepted by the scientific community to be reliable.[44] In 1993, the US Supreme Court, in its landmark judgment *Daubert* v. *Merrell Dow Pharmaceuticals, Inc.*,[45] *had* identified four non-definitive and non-exhaustive factors that were thought to be illustrative of characteristics of reliable scientific knowledge. They are –

- testability or falsifiability,
- peer review,
- a known or potential error rate, and
- general acceptance within the scientific community.

Essentially, *Daubert* requires that the judge shall delve into the scientific field concerned and examine its reliability,[46] assessing 'whether the reasoning or scientific methodology underlying the testimony is scientifically valid and whether that reasoning or methodology can be properly applied to the facts in issue.'[47] In *General Electric Co.* v. *Joiner*, the same Supreme Court held that the standards of review by appellate courts shall not differ unless the trial court is manifestly erroneous or if there is abuse of discretion.[48] In *Kumho Tire Co.* v. *Carmichael,* it was held that Daubert applies not only to scientific knowledge but also testimony based on "technical" and other specialized knowledge, such as engineering, blacksmith, etc.[49] The three rulings together are referred to as *Daubert* trilogy. Most scholars are of the opinion that the *Daubert* ruling increased judicial attention on reliability of science and experts, and led to a tightening of admissibility standards.[50] This is also the reason that in this paper, the Indian evidentiary jurisprudence is compared to the standards established by Daubert, and later incorporated into Federal Rule of Evidence 702 (1).

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[44] Timothy L. O'brien, "Beyond reliable: Challenging and deciding expert admissibility in US civil courts." 17(1) *Law, Probability and Risk* 29-44, (2018).
[45] 509 U.S. 579 (1993).
[46] Boaz Sangero and Mordechai Halpert, 'Scientific Evidence v. Junk Science' 431 *Alei Mishpat, Isr.* (2014).
[47] *Supra* note 12 at 592.
[48] 522 U.S. 136, 146 (1997).
[49] 119 S.Ct. 1167 (1999).
[50] Edward K. Cheng and Albert H. Yoon, "Does Frye or Daubert matter? A Study of Scientific Admissibility Standards." 91 *Virginia Law Review* 471-513 (2005).

D. Indian Courts on Daubert Standards

Often, Indian courts have taken help of legal transplants and international precedents from other jurisdictions, most predominantly, *Daubert*, to define admissibility criteria within Indian jurisprudence. *Mukesh and another* v. *State (NCT of Delhi) and others*;[51] *Dharam Deo Yadav Harjinder Kaur*; *Rajli* v. *Kapoor Singh*,[52] and many others.

In *Selvi*,[53] the Court looked closely at several US judgements on narco-analysis and brain-fingerprinting in pre-and post-Daubert era to inform itself on how to legally analyse the contentious issues in the case. *Dharam Deo Yadav* v. *State of U.P.*[54] held that, in addition to *Daubert* criteria, relevancy and reliability could be tested on the basis of additional factors – whether the technique used relies on methods whose reliability has been established, the qualifications of the expert witness testifying matches the methodology used, the non-judicial uses of the method, logical or internal consistency of the hypothesis, consistency of the hypothesis with accepted authorities and presumption of the hypothesis or theory. In *Harjinder Kaur* v. *State of Punjab*,[55] the Court reasserts the gatekeeping responsibility of the judges in encouraging a thorough evaluation of criteria determining admissibility of scientific evidence and expert opinions, and also recommended that such inquiry must not be influenced by the conclusions generated by such scientific analysis. In *Nnadi K. Iheanyi* v. *Narcotics Control Bureau*,[56] the Court exhibited a nuanced understanding of *Daubert* by excluding expert's testimony as it failed to explain sufficiently the reasons on which the conclusion was drawn.

Daubert itself emphasizes that the factors listed to assist judges in determining 'whether the reasoning or methodology underlying the testimony is scientifically valid' were neither exclusive nor decisive.[57] The non-exclusive checklist set forth by *Daubert* has come under great scrutiny for the lack of being "codified" into specific factors. As

[51] (2017) 6 SCC 1.
[52] (2014) 174(2) PLR575 (P&H HC).
[53] *Supra* note 44.
[54] (2014) (86) ACC 293 (SC).
[55] (2013) (2) RCR (Criminal) 146 (P&H HC).
[56] (2014) 145 DRJ 267.
[57] Edward K. Cheng and Albert H. Yoon, "Does Frye or Daubert matter? A Study of Scientific Admissibility Standards." 91 *Virginia Law Review* 471-513 (2005).

mentioned earlier, the scope for any legislative guideline to be specific enough to be applicable to all forensic evidence, existing and futuristic, is an irresolvable contention. Factors relevant for evaluating reliability of expert testimony will vary between different expertise, as they involve different methodologies and techniques, each operating on different assumptions and to different degrees of scientific development.[58] In the case laws above, it has been shown that in some cases, Indian judges have demonstrated high standards of admissibility of expert opinion grounded in an accepted body of learning or experience in the expert's field. However, this understanding of admissibility criteria is often non-uniform amongst the judiciary, exhibited more nuancedly at the higher courts than in the lower courts, where most cases are primarily dealt with. Secondly, courts tend to revere an idealistic assimilation of science in law, without considering the social, institutional, psychological constructs within which science and the scientific expert exists in the courtroom.

III. CRITIQUE OF THE GATEKEEPING FUNCTION OF THE JUDGES

In this section, few judgements involving different types of forensic evidence have been critically examined to deconstruct the potential oversights in judicial gatekeeping.

A. Brain Fingerprinting

In *Jaga Arjan Dangar* v. *State of Gujarat*,[59] where the use of brain-fingerprinting technology was being considered, the Court cited three sources to corroborate the worthiness of the technique, two of which were from the same expert, Lawrence A. Farwell, who had invented and patented the Concealed Information Test protocol P300+MERMER. Farwell's tutorial review points out that the P300+MERMER technique 'has 0% rate of error and 100% of the determinations have been correct'. Further along in the ruling, the Court explains 'that this is simply a report of the actual data to date; no science can be generally characterized as "100% accurate" without qualifications or reference to a specific data set.' Here, the Court shows clear understanding that claims that are scientifically indefensible, worded as

[58] *Supra* note 34.
[59] MANU/GJ/08/2018.

zero/vanishingly small/ essentially zero/negligible/minimal/microscopic or *virtually no error rates*, or as *100 percent certainty* or *proof to a reasonable degree of scientific certainty*; *identification to the exclusion of all other sources*; or *a chance of error so remote as to be a practical impossibility*, should never be allowed to influence the decision-making process.[60]

However, the Court also goes on to support the claims that brain fingerprinting surpasses the standard of reliability, set at less than 1% error rate overall, and less than 5% error rate in every individual study. This is based on the claim that "In brain fingerprinting using the P300-MERMER, all tests have resulted in a definite determination with a high statistical confidence. There have been no indeterminates. In brain fingerprinting using the P300 alone, in less than 3% of cases, the data analysis algorithm has concluded that insufficient information is available to make a determination in either direction with a high statistical confidence, resulting in an indeterminate outcome (not an error)." It is unclear which research literature the Court has relied upon to inform themselves about the accuracy of technique, but given the protocol mentioned, the conclusions and previous mention of Farwell's works, the authors assume that they have referred to either Farwell (2011)[61] or Farwell et. al. (2012).[62] Farwell's work has been critiqued by peers for being misleading and misrepresenting the scientific status of brain fingerprinting technology because it has selectively dismissed relevant data, presented conference abstracts (non-peer reviewed) as published data, and deliberately duplicated participants and studies.[63] The Court also claims that the P300+MERMER technique is resistant to usual countermeasures used, however, several scholars have challenged the use of P300 in real life as it may be vulnerable to learnable countermeasures[64] or maybe responsive to irrelevant

[60] D. M. Risinger "The NAS/NRC report on forensic science: A path forward fraught with pitfalls" *Utah Law Review* 225 (2010).
[61] L.A. Farwell, D. C. Richardson, *et.al.* "Brain fingerprinting field studies comparing P300-MERMER and P300 ERPs in the detechtion of concealed information" 48 *Psychophysiology* 385-388 (2011).
[62] LA Farwell "Brain Fingerprinting: A comprehensive tutorial review of detection of concealed information with event-related brain potentials" 6 *Cognitive Neurodynamics* 115-154 (2012).
[63] Ewout H. Meijer, Gershon Ben-Shakhar, *et.al.* "A Comment on Farwell (2012): brain fingerprinting: a comprehensive tutorial review of detection of concealed information with event-related brain potentials" 7 *Cognitive Neurodynamics* 155-158 (2013).
[64] G. Lukács, B. Weiss, Dalos, *et.al.*, "The first independent study on the complex trial protocol version of the P300-based concealed information test: Corroboration of previous findings and highlights on vulnerabilities" 110 *International Journal of Psychophysiology* 56-65 (2016).

information.[65] No peer reviewed data shows that Farwell's technique is highly resistant to these countermeasures.[66]

This illustrates that some courts struggle in engaging with novel and complicated science, such as brain-fingerprinting, and complex data-driven and/or statistically based opinions from experts or even with applying the *Daubert* guideline of general acceptance within the scientific community. This deficiency in judicial understanding of how to assess the value of an expert opinion, whether for admissibility or weightage, is a major stumbling block in correct comprehension and application of expert testimony.[67] While the court is not expected to read scientific literature as critically as experts; in order to essay their gatekeeping responsibilities well, the courts should pay more emphasis in referring to peer-reviewed sources of information whose assessments are independent and free from any prejudice.

B. Odontological Identification

In *Chellappan* v. *State of Kerala*,[68] the question in issue was whether the partial denture found at the scene of a homicide belonged to the accused. The prosecution presented three expert witnesses and their reports for consideration, of which two experts (PW24 and CW1) concurred in their opinion of match to the accused, whereas one, PW16, differed initially, but later revised their opinion to concur with that of PW24. This revision was made on the basis that PW16 had arrived at his conclusion prematurely without conducting the necessary procedures. Additionally, they also admitted that as an oral and maxillofacial surgeon, they did not have the adequate expertise (of CW1 who was a prosthodontist) to ascertain whether the artifact was used by the accused.

In this case, the prosecution had initially only presented the testimony by PW24-CW1 as that was the opinion that led to the arrest of the accused. When the report made by PW16 came into discussion, the Court was fortunately not made to choose between the two experts in order to decide whose expertise would be most apt in answering the

[65] R. Brandom, "Is 'brain fingerprinting' a breakthrough or a sham?" *The Verge* (2015).
[66] J. P. Rosenfeld "P300 in detecting concealed information" In B. Verscheure, G. Ben-Shakahar, *et.al.* (eds.) *Memory detection: theory and application of the concealed information test.* (Cambridge University Press, 2011).
[67] H. L. Korn, "Law, fact, and science in the courts" 66(6) *Columbia Law Review* 1080-1116 (1966).
[68] MANU/KE/2361/2012.

question in issue, as the issue resolved itself when PW16 retracted their contradicting opinion, leaving only the report by PW24 and CW1 in play. It is unclear how the Court would have decided between the two duelling experts if the situation had arisen, but seeing how they positioned the prosthodontist's testimony as fatal to determining whether the findings of the report are 'acceptable and conclusive', they seemed well informed on the aspect of expertise that was qualified to answer the questions being asked.

In their testimony, PW24, who professionally specialized as an oral pathologist and had been a forensic odontologist for 20 years, supported their opinion of match by stating that 'In this particular case, there was a loss of bone while extracting the tooth and there is a depression in the patient's mouth as well as the cast. This depression is seen as an elevated area in the denture. Similar depression and projection will never ever [be] see[n] in another person.' The Court witnessed considerable arguments from the defense regarding the acceptability of the evidence from this witness. The testimony of the prosthodontist CW1 was thus considered pivotal to determining the evidentiary value of the report and so they were invited for cross-examination by the Court.

When asked if it was possible for a similar depression in the edentulous space to occur in two persons, he noted that 'A depression may occur in such extractions. However, the depression will vary from person to person. It can never be similar.' This statement, however, was not supported by any evidence-based research. CW1 further offered that although he was not aware of the use of artificial dentures in identification of perpetrators, identification by dentures was known to be done for bodies in mass calamities. There was no consideration made by either the Court or the expert to understand the difference in standards of admissibility for evidence submitted for criminal adjudication versus humanitarian forensics. When the stakes are of life and freedom, as opposed to psychological closure and ethical practice, it is common practice for the Courts to demand high reliability and low error rates for the identification techniques used. CW1's testimony did not clarify if the technique met such stringent standards, nor did the Court make any attempts to inquire along those lines. However, the Court did concede that the lower court had confirmed that the method chosen to

arrive at the conclusion was appropriate, and they accepted the lower court's due diligence in the matter.

The Court also allowed the experts to express extremely confident opinions such as 'never been seen in another person' and 'can never be similar' without matching them with probabilistic likelihood ratios or providing any validated study or peer-reviewed and evidence-based research in support of their strong claims. Such exaggerated conclusions were proffered despite the fact that the denture could no longer be inserted in the mouth of the accused, due to mesial migration of the adjacent teeth. The slightest consideration of an alternative possibility where the denture might indeed be a mismatch to the accused was completely absent, this goes against prevalent practice amongst forensic practitioners.

Secondly, the Court's opinion relied heavily on that of the key witness, CW1, who, at the time of the examination, was undergoing his post-graduation degree at the Government Dental College, Kozhikode. There was no evidence that the Court had verified CW1's experience in the field of forensic odontology, or more specifically, in the ability to make accurate identifications based on prosthodontics. The court did not seem to assume any skepticism with regards to the accuracy of the expert's opinion, despite his limited experience and lack of information regarding ongoing critiques of the field of forensic odontology. Nor did the Court appear to consider the possibility that the assessment of a postgraduate student may not be objectively free from partisanship and motivational bias, especially when working in collaboration with an expert who was a senior faculty and principal of the same college in which the student was pursuing his degree at the time of examination, and subsequently was still in hierarchically senior position, at the time of the testimony (CW1 was working as Senior Lecturer, Department of Dentistry in the college where PW24 was Principal). It is unclear whether the lower court, in its assessment of procedure, had considered the provision of countermeasures to limit the influence of any such cognitive bias from affecting the conclusion.

Thirdly, in his testimony, CW1 also made claims that forensic odontology was a reliable discipline, which he supported by citing medical literature and research journals that have recorded its use for decades for unique identification. The court admitted the

expert opinion, supporting this decision by citing excerpts from popular scholarship in the field of medical jurisprudence and odontology, however, the research literature seems to have been limited to those affirming the expert witness' opinions. Both the Court and CW1 seemed to be unaware of that the discipline of forensic odontology was, even at the time of the appeal, under severe scrutiny within the scientific community post the NAS Report 2009. The uniqueness of individual dentition has been since revisited by the scientific community and is not considered a validated fact.[69] The scientific community, both within and outside of forensic odontology, are critical of the extent to which they can comment on individuality of dentition to be used as an identification tool. This concern is absent in the literature discussed by both the judge and experts themselves. Moreover, three of the four excerpts cited referred to the use of teeth in identification and did not specifically speak of (partial) dentures, which is the artifact in issue here. In this, the Court seemed to struggle to find the right kind of research to inform and support their gatekeeping responsibility. In accepting the expert's answers and the sources cited, the Court also failed to recognize that the standards for scientific evidence are more stringent for criminal than for humanitarian forensics; meaning that accepted procedures in mass-disaster identification may not necessarily hold up to scrutiny in criminal trials. Here, overt reliance on precedence of accepting ambiguous sciences has compromised the gatekeeping duty of the judiciary.

C. Fingerprints

The well documented and highly credential NAS Report 2009 has questioned the admissibility of evidence from forensic disciplines such as bitemark and fingerprints pattern analysis for evolving outside of a traditional scientific environment and lacking sufficient validation.[70] Despite all these criticisms, it is found that in *Sunil Kumar* v. *State N.C.T. of Delhi*,[71] the High Court of Delhi held fingerprint examination to an exalted evidentiary standard it did not scientifically merit.

[69] Gorza, Ludovica, *et.al.*, "Accuracy of dental identification of individuals with unrestored permanent teeth by visual comparison with radiographs of mixed dentition." 289 *Forensic science international* 337-343 (2018).
[70] D. M. Risinger, "The NAS/NRC report on forensic science: A path forward fraught with pitfalls" *Utah Law Review* 225 (2010).
[71] MANU/DE/0916/2010.

'Science of identification by thumb impression has advanced to a great leap. Supreme Court has regarded the said science "as an exact science and does not admit of any mistake or doubt" (vide *Jaspal Singh* v. *State of Punjab)*.[72] It was once thought that there must at least be 12 identical characteristics between the questioned finger impression and the standard one for reaching, a conclusion that both belong to the same finger. But, in later years, it was found that 6 points of identical characteristics between the two were sufficient for the conclusion regarding identity (vide *Mohan Lal* v. *Ajith Singh*)'.[73]

In forensic analysis of fingerprints, the point system of matching is subject to multiple factors, especially the quality of the print and experience of the analyst, and six points in agreement is no longer a universal minimum standard to establish a match.[74] The 2010 ruling referred to a 1978 judgment, but in doing so, reiterates scientific knowledge and process that are no longer valid. This is an example of how measuring reliability of science via precedence only can perpetuate obsolete or misinformed forensic knowledge amongst the decision makers.

In another instance, the Punjab and Haryana High Court in *Ami Chand* v. *Partap*[75] went on to claim that -

'The science of identification of fingerprints being absolutely reliable and almost perfect as compared to (the) imperfect nature of the science of the identification of handwriting and signatures, it cannot be disputed that it is permissible for the court to base conviction solely upon the opinion of an experienced fingerprint expert.'

Here, the Court misunderstands the long-held precedence of using fingerprint science for identification to mean reliability of the science. At the time of this judgement in 2002, there were not enough empirical studies conducted to measure the error rates in the field of latent print analysis to assess foundational validity and assess reliability, something that will later be highlighted as a concern in the NAS Report 2009 and

[72] AIR 979 SC 1708.
[73] MANU/SC/0127/1978.
[74] N. Singla, M. Kaur, *et.al.*, "Automated latent fingerprint identification system: A review." 309 *Forensic Science International* (2020).
[75] MANU/PH/0754/2002.

PCAST Report 2016.[76] Studies conducted since have found that the reliability of a latent print examiner lacks in reliability in about 10% of the conclusions. This means that the same examiner, looking at the same print, will arrive at a different conclusion 10% of the time.[77] Furthermore, the performance of Automated Fingerprint Identification Systems in caseworks also seems to be influenced heavily by the conditions in which prints were made.[78] The lack of understanding or research regarding the error rates of a particular analysis cannot, and should not, be interpreted as an 'absolutely perfect' science. When relying on single evidence towards conviction, the judge should take into consideration the reliability of both the science and the expertise when deciding upon the weightage to be placed on the expert opinion. *Daubert* standards highlights this aspect of reliability in the consideration of admissibility criteria better than is currently provided for under the IEA.

D. Comments

Through the analyses offered on the cases mentioned above, it is clear that Indian courts are largely unclear on how to independently assess the validity and reliability of the scientific technique employed i.e. is the method of analysis suitable for the purpose for which it is employed.[79] Judges and lawyers usually and expectedly lack training in science or statistics; the Indian law is not particularly clear or considerate of their limitations in dealing with criteria of admissibility of scientific matters.[80] Therefore, it is not unsurprising that in the lower courts, judges often adopt a practical/pedantic approach in the gatekeeping function by relying on precedents rather than being scientifically rigorous in their assessment of evidence. Where the rate of error of these techniques is not known or the technique itself is not based on reliable science, using

[76] Daniel C. Murrie, Brett O. Gardner, Sharon Kelly & Itiel E. Dror. "Perceptions and estimates of error rates in forensic science: A survey of forensic analysts." 302 *Forensic science international* (2019).
[77] Bradford T. Ulery, R. Austin Hicklin, JoAnn Buscaglia & Maria Antonia Roberts "Repeatability and Reproducibility of Decisions by Latent Fingerprint Examiners" 7(3) *PLoS ONE* (2012) https://doi.org/10.1371/journal.pone.0032800.
[78] Arent de Jongh & Crystal M. Rodriguez "Performance Evaluation of Automated Fingerprint Identification Systems for Specific Conditions Observed in Casework Using Simulated Fingermarks" 57 (4) *Journal of Forensic Science* 1075-1081 (2012).
[79] Aman Jantan, H. Arshad, *et.al.,* "Digital Forensics: Review of Issues in Scientific Validation of Digital Evidence" 14(2) *Journal of Information Processing Systems* 346-376 (2018).
[80] M. P. Kantak, M. S. Ghodkirekar, S.G. Perni., "Utility of Daubert guidelines in India" 26(3) *Journal of Indian Academy of Forensic Medicine* 110-112 (2004).

such techniques in courts, particularly when unsubstantiated by other forensic evidence, pose a danger of unduly influencing the case findings.[81] This demonstrates how Indian courts continue relying on outdated precedents, and risking wrongful convictions and miscarriage of justice. Under the current legislative provisions, the legal doctrine of finality makes it difficult for those wrongfully incarcerated to challenge unreliable science without new evidence.[82]

IV. NEED FOR IMPROVED ADMISSIBILITY STANDARDS

The 277th Law Commission of India Report took note of the present state of forensic science in the country and pronounced that chances of exoneration based on DNA technology in the country are very limited, given the fact that the use of DNA technology is not adequately advanced in Indian courtrooms.[83] Gupta (2016)[84] and Dinkar (2015)[85] assert that, compared to their counterparts in the US and UK, the Indian courts have failed to exhibit the confidence and scientific temper to deal with forensic evidence substantially and therefore, conveniently consider them as secondary evidence that help in corroborating other evidence, such as circumstantial evidence or eye-witness testimony. Even the judiciary rues the immediate need to include more scientific evidence in trial, especially in the light of the alarmingly high acquittal rate.[86] Thus, facilitating scientific literacy in the courtroom seems inevitable in the near future.

The gatekeeping function performed by Indian Courts based on current laws may share the same principles of relevance and reliability as *Daubert*, however they lack in definition and guidance towards application, and so may be leading to prejudiced decision making. In a country that dearly upholds principles such as 'the right to fair trial', material discrepancies can erode the credibility of the system. The courts are

[81] *Supra* note 2.
[82] *Ibid*.
[83] Law Commission of India, "277th Report on Wrongful Prosecution (Miscarriage of Justice): Legal remedies" (August, 2018).
[84] R. Gupta, S. Gupta, and M. Gupta, "Journey of DNA Evidence in Legal Arena: An Insight on Its Legal Perspective Worldwide and Highlight on Admissibility in India" 2(2) *Journal of Forensic Science and Medicine* 102 (2016).
[85] V. R. Dinkar, "Forensic Scientific Evidence: Problems and Pitfalls in India" 3(2) *Int J Forensic Sci Pathol* 79-84 (2015).
[86] J. N. Bhatt, "A Profile of Forensic Science in Juristic Journey" 8 *Supreme Court Cases* 25 (2003).

unwilling to bear the burden of overhauling the established *status quo* and pursue a rigorous agenda to confirm the evidentiary reliability of methodologies used in forensic disciplines. The rules of evidence designed decades ago are now inadequate in meeting the pace of scientific advancement,[87] and the legal community also supports the demand that appropriate provisions dealing with the legislative gaps in evaluation of forensic evidence be enacted.[88] This is the first step towards scientific literacy in courtrooms.

V. CHALLENGES AND LIMITATIONS

The challenges to improve overall judicial competencies in use of scientific evidence in courtrooms cannot be resolved simply by legislative reforms. It must be informed by an understanding of existing challenges and anticipated limitations of the legal system.

A. Lack of Awareness of Current Forensics Developments

A preliminary search of case databases from India revealed that reference to NAS Report 2009 or such similar works has never been broached by the judiciary nor the litigating counsels. The universality of such critiques and their implications for the Indian criminal justice system remains under-appreciated by legal practitioners in India. The Supreme Court in *Dharam Deo Yadav* v. *State of U.P.*,[89] has also raised the concern that, '…With emergence of new types of crimes and their level of sophistication, the traditional methods and tools have become outdated; hence there is necessity to strengthen forensic science….whereas forensic evidence is free from those infirmities [of power, observation, external influence, forgetfulness etc]. Judiciary should also be equipped to understand and deal with such scientific materials.' Although international jurisdictions have shown cognizance of the problems in forensic science that these reports have highlighted, not all countries have been able to fully upend the systemic problems. Even US courts have been restrained in their engagement with NAS recommendations,[90] thus, it is not surprising that concerns and critiques of forensics in *praxis* has not yet

[87] Government of India, "Report of the committee on draft national policy on criminal justice" (Ministry of Home Affairs, 2007).
[88] *Supra* note 68.
[89] (2014) 5 SCC 509.
[90] S. A. Cole & G. Edmond, "Science without Precedent: The Impact of the National Research Council Report on the Admissibility and Use of Forensic Science Evidence in the United States" 4 *British Journal of American Legal Studies* 585 (2015).

warranted much attention in India. Meanwhile, their continued admissibility in courts creates precedents that are being followed without adequate scrutiny, thus consolidating their use in courtrooms.

B. Competency of the Trier of Facts to Assess Scientific Evidence

Kapsa and Meyer (1999)[91] note that judges, in general, do not officially require any minimum standard of scientific qualification that is a *sine qua non* for evaluating scientific testimony. They differ amongst themselves in their respective level of scientific understanding, which is usually directly related to their professional experience. As seen from the case studies above, this makes one judge's comprehension of a scientific matter essentially different from another's. There are several instances where Indian judges have shown differently nuanced understanding of Daubert's admissibility guidelines as well. This could pose a serious problem in a legal system that demands application of uniform rules in the interest of fairness. Gatowski (2001) revealed that American judges also struggled in practically applying the explicit *Daubert* criteria, however the adoption of the criteria into Federal Rule 702 of Evidence has somewhat uniformized the interpretation of admissibility statutes.[92]

C. Shortcomings of the Adversarial System

In the adversarial system, the obligation to contest dubious science lies solely with the defense. Lawyers often fail to ask the right questions and uncritically accept scientific assertions, allowing bad science to perpetuate in court.[93] Garrett & Neufeld (2009) noted that defense counsels do not cross-examine experts adequately, and rarely are they able to obtain qualified experts for themselves to counter opinions presented by the prosecution.[94] In the Indian criminal justice system, many defendants do not have the adequate backing, resources or funds to hire scientifically literate defense counsels or procure expert opinions to counter the prosecution's. Forensic evidence are

[91] M. M. Kapsa, & C. B. Meyer, "Scientific Experts: Making Their Testimony More Reliable" 35 *California Western Law Review* 313 (1999).
[92] S. I. Gatowski, S. A. Dobbin, *et.al.,* "Asking the gatekeepers: A national survey of judges on judging expert evidence in a post-Daubert world" 25(5) *Law and Human Behavior* 433-458 (2001).
[93] F. I. Lederer, "Scientific Evidence--An Introduction" 25 *William & Mary Law Review* 517 (1983).
[94] B. L. Garrett, and P. J. Neufeld, "Invalid forensic science testimony and wrongful convictions" *Virginia Law Review* 1-97 (2009).

challenged primarily on procedural grounds (see narcoanalysis in IIA) and less often on technical matters, allowing for bad science or poor analysis to persist in the courtroom. Another problem with the adversarial process is that it leads parties to 'produce evidence favourable to their respective sides, regardless of the quality of that science'.[95] In the *Chellapan* case, a second opinion was sought from a different expert a year after the first expert had already issued an opinion of mismatch, the second opinion formed the basis of arrest and prosecution. The faults with the first testimony was only brought forth in the Appellate court by the defense, wherein it was withdrawn by the expert before being contested. This highlights a possibility of confirmation bias, where investigator and prosecution actively ignore evidence/opinion that does not align with their assumption of culpability. Also, in a majority of cases where an invalid evidence has been challenged in courts, judges hardly provide relief.[96] Studies also show that often the trial bench is exceptionally protective of evidence adduced by prosecutors, illustrating a pro-prosecution/pro-State bias.[97] It is difficult for the defense team to mount a promising appeal or counter-examination in the face of such institutional prejudices.

D. Legislations Inadequate for Changing Science

In some cases where problematic science has been used to determine an essential element of the case leading to incarceration, new scientific knowledge may later render the former verdict inaccurate. As such, the conventional forum to reverse conviction is to file an appeal based on 'new science' or 'false evidence' claim. This is not adequately provided for within the Indian legislative recourses. In cases where the Court may have to arbitrate between two or more duelling experts, they may be faced with a myriad of tricky questions regarding assessing scientific rigourwhich they have historically struggled with.[98]

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[95] E. H. Meazell, "Scientific avoidance: Toward more principled judicial review of legislative science" 84 *Ind. Law Journal* 239 (2009).
[96] J. L. Mnookin, "The courts, the NAS, and the future of forensic science" 75(4) *Brooklyn Law Review* 10 (2010).
[97] R. Dioso-Villa, "Is the Expert Admissibility Game Fixed?: Judicial Gatekeeping of Fire and Arson Evidence" 38(1) *Law & Policy* 54-80 (2016).
[98] E. H. Meazell, "Scientific avoidance: Toward more principled judicial review of legislative science" 84 *Ind. Law Journal* 239 (2009).

E. Systemic Resistance to Change

Despite anecdotal evidence from lawyers and judges that suggests that they are aware of the poor quality of science they receive in trials, they also admit that they are often too dependent on the superiority of scientific evidence to prove their case to acknowledge that the legal system is ill-equipped to correctly evaluate its deficiencies.[99] In some cases, the specific scientific research needed to answer the question in issue may not even be available, or the findings of such research may not have been adequately replicated or reviewed in order to be considered acceptable by the scientific community.[100] Even with funding and resources available, the time that the scientific community would need to conduct such validation and reliability studies for the lacunas observed in some forensic disciplines would have to come at the cost of ongoing and future trials.

F. Re-trial of Closed Cases

It is obvious that the revision of forensic disciplines and expert opinions will have the most acute bearing on verdicts where individuals have been condemned on the basis of presently discredited science. While this is in the interest of justice, the present legal system is legislatively unequipped to filter and prioritise re-visitation of such cases on their merits. It is also lacking in resources - money, time, scientific equipment and experts, legal professionals – to handle redressals on the scales of the Innocence Project. This potential Pandora's box might be another reason why courts are hesitant to disturb the *status quo* of quasi-established sciences.

G. Lack of Equality of Experts

The implication that forensic analysts and practitioners, as with any other professional, will get better at their expertise with experience means that there is always scope for their opinions to change retrospectively.[101] A younger novice may opine one way regarding a match for a particular evidence, and later in their career, opine differently

[99] *Supra* note 97.
[100] Abirami Arthanari, Nagabhushana Doggalli, Karthikeya Patil, H. P. Jai Shankar & A. Vidya. "Bite mark: Is it still valid??" 4(1) *International Journal of Forensic Odontology* 14 (2019).
[101] Jade Cascun, *Developing Fingerprint Examination Expertise using Simultaneous and Sequential Presentations of Interleaved Practice* (2020) (Unpublished Dissertation Thesis, University of Adelaide).

for a similar evidence. This shift in opinion is more prevalent when assessments are subjective, where the reliance is more on the expert's knowledge and experience in analysing or interpreting the evidence. This may be resulting from new knowledge becoming available to the expert in the course of their profession or from them improving in their capability to find nuanced differences where they could not earlier. This poses a worrying impasse between science and law in upholding equality–is the system willing to risk subjecting some defendants to less expert scientific analysis than other, based on whether they draw a 'novice' or an 'experienced' analyst.[102] It has also been noted that there is often an unequal disparity between the kinds of expertise that litigants have the capacity to produce. It is usually dependent on their resources and expenses, leaving the economically weakest party with limited access to a credible second opinion to support their case.

H. Cognitive Biases

Despite the fact that the scientific experts are supposed to opine objectively, the party-oriented approach of experts may make their testimony prejudiced. Forensic analysts are not immune to partisan bias or motivational bias.[103] Experts that work closely with police and prosecution may be more susceptible to the likelihood of bias; sensitive information such as confessions, identification by eye-witnesses etc. may be revealed to the experts by the police or the legal team, leading to presupposition of guilt and sacrificing the objective independence of the expert's opinion. As experts enjoy broad discretion in forming their opinions, they may depose in favour of the party hiring them and be able to rationalize their views in the courtroom without damaging their intellectually objective self-image.[104]

[102] S. A. Cole, "Changed Science Statutes: Can Courts Accommodate Accelerating Forensic Scientific and Technological Change" 57(4) *Jurimetrics* 443-458 (2017).
[103] Poulomi Bhadra, "Is Forensic Evidence Impartial? Cognitive Biases in Forensic Analysis." In S. P. Sahni, P. Bhadra (Eds) *Criminal Psychology and the Criminal Justice System in India and Beyond*. 215-227 (Springer, Singapore, 2021).
[104] O. Perez, "Judicial Strategies for Reviewing Conflicting Expert Evidence: Biases, Heuristics, and Higher-Order Evidence" 64(1) *The American Journal of Comparative Law* 75-120 (2016).

VI. SUGGESTIONS FOR REFORMS

The expectation that science exists objectively within legal jurisprudence is misleading, there exist socio-cultural, political, economic and psychological variables that influence scientific testimony and related decision-making. The intersection of law and scientific evidence is massively understudied in India, this paper focuses on the first steps that the legal profession can take to bridge the gap between the two disciplines. Once the gatekeepers are clear on how to assess for admissibility, only then can they further improve their understanding of how to allocate weightage to various scientific evidence. Some of the ways to guide the judiciary better in admitting science in the courtroom are listed below.

Existing legislation should be updated to keep up with current scientific dialogues on disciplinary critique and accepted practices within the field. In doing this, comparative analyses of global admissibility standards might guide the way, but it will have to be informed by relevant epistemology of Indian jurisprudence rather than acceptance of precedence or heuristics practices.

Another recommendation is to include exhaustive provisions within statutory reforms to entertain 'novel' or 'changed' scientific knowledge that challenges previous scientific forensic precepts. This will provide a definitive legal channel for revisiting the cases of miscarriage of justice, and also for filtering an overwhelming case load through various priority criteria.

Within the adversarial system of litigation, the provision for court-appointed experts should be made more prevalent, especially in cases where experts chosen or hired by the litigants do not endure against 'equality of arms' standards.[105] There are provisions for the employment of court-appointed experts u/s 135 of IEA in appropriate cases to play an active role in evaluation of scientific evidence.[106] The court may also have provisions that allows them to consult with experts even before trial, when deciding on admissibility of evidence. Murphy suggests that the assistance of court-appointed experts, supervised by the court, will provide more merit-based opinions and minimize

[105] S. Jasanoff, "What judges should know about the sociology of science" 32 *Jurimetrics* 345 (1991).
[106] Indian Evidence Act, 1872 (Act 2 of 1872), s. 135.

influence from any other agencies, financial or political.[107] This also does not undermine the safeguards of the adversarial system as both parties shall have the opportunity to cross-examine and present counter-evidence.

On a broader scale, there need to be additions and changes in the legal education system to train professionals to engage with other disciplines, especially science, from an early stage of their career. Judicial training should incorporate adequate forensic-centric modules. Apart from including demonstration of techniques, judges must also have a theoretical understanding of the scientific method and how to understand statistical inferences. This would include creating innovative pedagogical tools and curriculum that could be effective in training across disciplinary barriers.

In the long term, the legal and forensic capacities within the jurisdictions will need to be expanded and reviewing systems established to handle the extra workload that will come when revisiting cases potential miscarriage of justice.

VII. CONCLUSION

There are several studies and reports that demonstrate that an expert's report can no longer be presumed to be objective, which makes the responsibility of the judge to assess the credibility of the science presented in the courts more onerous. The situation is further impaired by the lack of statutory guidelines on evaluation of forensic evidence. While Indian Courts, on occasion, have referred to the *Daubert* standards, there is still a lack of proper understanding of scientific methods and validity/reliability assessments. Instead of adopting a cautious approach towards the use of forensic evidence,[108] the system needs to acknowledge this lacuna and support the judicial practitioners in fulfilling their roles.

The findings of the Innocence Project, now running in many countries, has aptly demonstrated the danger of not filling the holes in our criminal justice system.[109] The conviction of any innocent person would compromise the public's trust in the legal process. Society itself suffers harm from a wrongful conviction because the real

[107] R. Glover, and P. Murphy, *Murphy on evidence* (Oxford University Press, 13th edn., 2013).
[108] *Gutta Sriramulu Naidu And Anr.* v. *The State*,1963 CriLJ 546
[109] Boaz Sangero & Mordechai Halpert, "Why a Conviction Should Not be Based on a Single Piece of Evidence: A Proposal for Reform", 48 *Jurimetrics* 43-46 (2007).

perpetrator remains at large. In the name of closing cases, the objectivity and certainty lend by scientific evidence cannot be compromised. It is pertinent that the Indian legal system adopts changes that would help in incorporating latest scientific developments. This may be initially disruptive but opening this Pandora's box cannot be delayed further. It is time to save our prisons from turning into zoo - a place where innocents are kept behind bars.

IMAGING THE DNA PROFILING BILL UNDER PUTTASWAMY'S PRIVACY SCANNER

Dinkar VR[*]

It is a highly welcoming decision of the central government to introduce a consolidated and comprehensive Bill that regulates DNA profiling in India. In fact, it is also a need of the hour since compared to other jurisdictions, India has made an inordinate delay in enacting the law. The Puttaswamy decision rendered by the Supreme Court of India has become a constitutional touchstone for evaluating the privacy prongs associated with any form of individual profiling initiated by the state through legislation. The decision has explored various facets of privacy, including physical, mental, and informational, which has a direct bearing on the issues connected with DNA profiling. DNA being the blueprint of human life and abundant mystery of one's genetic predispositions, it is of utmost significance to give due care and caution while enacting legislation enabling the state to crack information from one's DNA. In the post-Puttaswamy era, the judicial review of the legislative action endangering the privacy of the citizens will be scrutinised using a balanced approach having state interest on one side and legitimate expectations of the stakeholders on the other. It is the constitutional duty of the state to establish that the objective of the legislation outweighs the privacy claims of the individual. This article analyses the DNA Technology (Use and Application) Regulation Bill, 2019 in light of the Puttaswamy decision.

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I. INTRODUCTION

Recently, the Supreme Court of India penned down its seminal decision *K.S. Puttaswamy (Retd.)* v. *Union of India*[1] (Puttaswamy) wherein it was observed that there is 'no reason to doubt that the right to privacy is part of the liberty guaranteed by our constitution'.[2] The Court has strikingly exposed varying facets of privacy and its probable violations in both public and private sphere. At the same time, with the same vigour, the court has observed that privacy is not an absolute right since it should be subjected to the limits and restrictions made by the state in order to protect its own interest and public interest respectively.[3]

The significance of the right to privacy is constantly increasing in the post-*Puttaswamy* (2) days, especially after the introduction of the new Bill in Lok Sabha i.e., 'The Personal Data Protection Bill, 2019' ('PDPB'). The long title of the bill encapsulates that its sole purpose is to 'provide for the protection of the privacy of individuals relating to their personal data' and the things incidental thereto. The purpose of this article is to analyse divergent privacy aspects of 'The DNA Technology (Use and Application) Regulation Bill, 2019' ('DTRB'), which recently got the green signal from the Lok Sabha, but, unfortunately, lapsed since it did not get the nod of the Rajya Sabha. Currently, the Bill is in the corridors of the Indian Parliament waiting for the report of the Parliamentary Standing Committee. Chapter V of the DTRB exclusively deals with the establishment of a DNA Data Bank for solving crimes as well as to identify missing persons. All at once, the succeeding Chapter VI incorporates the protection of information.

The threadbare analysis of the privacy claims in India and its application to the DTRB would be fruitful only if the divergent strata of the claims are subjected to comprehensive forensic exploration. In fact, the strata of privacy claims are ultimately

[1] (2017) 10 SCC 1.
[2] *Id.* at 528.
[3] *Id.* at 606.

entangled with (1) how much interest a person has in a particular form of privacy situation and (2) the present status of that person in the public domain. For example, the claim of a person who is involved in a grievous crime shall be lesser than that of ordinary citizens. For better understanding, it would be rational to classify the privacy claimants into two categories: (1) High Status Privacy Claimants (HSPC); (2) Low Status Privacy Claimants (LSPC).

II. ANALYZING DIVERGENT PRIVACY CLAIMANTS

A. High Status Privacy Claimants (HSPC)

The claims of the HSPC will be extremely high in contrast to the LSPC. HSPC's are primarily ordinary citizens with absolute privacy claims.

The privacy claims of some ordinary citizens are absolute in the sense that those claims are not amenable to state action even with the aid of the reasonable restriction doctrine which has been considered as the limitation of most fundamental rights. The finest example of such a claim is the testimonial privilege enjoyed by the spouses with regard to the conversation they make directly or over electronic devices, regardless of its relevance in a criminal investigation or trial. In such situations, the concerned citizens will have a higher expectation of privacy. The testimonial privilege has been permitted as a matter of public policy considering the importance of the preservation of the privacy of certain relationships in contrast with the interest of the state. The same is applicable in the case of the communication between a lawyer and the client.

B. Low Status Privacy Claimants (LSPC)

Low status privacy claimants are those ordinary citizens with reasonable restrictions. Insofar as ordinary citizens are concerned, *Puttaswamy* (2) has picturised three different facets of privacy claims: viz. (1) physical privacy; (2) informational privacy; and (3) privacy of choice.[4] The Supreme Court has made out a very functional and progressive constitutional interpretation while considering the observation made by the constitution makers regarding the requirement of privacy as a constitutional right.[5] The

[4] *Id.* at 188.
[5] *Id.* at 360.

court has completely negated the arguments rejecting the privacy as a fundamental right with great vigour arguing that in a more advanced society with the technological revolution, the right to privacy is the necessity of the age. It was firmly documented that the privacy claims though vague in nature could be identified and safeguarded whether it be a mere interest of an individual to let him be alone or extending to the higher degrees of claims like seclusion in his home, against unwarranted search and seizure, his/her own deliberate choices like abortion, living-in together, marriage, sex, contraception, data protection and so on. The list of privacy claims of ordinary citizens is non-exhaustive and it will be decided on a case-to-case basis. It is well-accepted that every bit of privacy claim shall be properly balanced with the competing interest of the state having the power to erode it. As and when the court penned *Puttaswamy* (2), it was specifically mentioned that the privacy claims could be overwhelmed only if there is a strong countervailing public or social interest.

One of the important elements of privacy claims is ingrained in the legitimate expectation of one's privacy. This element will be present only if the person who is claiming privacy has kept the same as private. For example, if a person has disclosed his private information himself to the public, later he cannot claim any legitimate expectation of privacy. It has been clarified through various judicial precedents that the privacy claims of individuals on abandoned or discarded property would be lesser than the others. For example, an individual will have only a lesser expectation of privacy on his body fluids like urine, saliva or mucus swab which has been abandoned by him and later collected for DNA-like tests. In the landmark case *Missouri* v. *McNeely*,[6] the U.S. Supreme Court has beautifully distinguished the degree of privacy claims by comparing the taking of the blood sample for analysis and administration of a breath test for blood alcohol concentration. The court was of the view that in the former, the physical intrusion beneath the skin and into his veins would affect his greater privacy interest comparing the latter one. Thus, the legitimate expectation of privacy against state intrusion almost depends on the degree or the level of intrusion. On the other hand, if a person has abandoned his saliva or any other bodily fluids, his legitimate expectation of privacy over that property will also abandon along with that property. Therefore,

[6] 569 U.S. 141 (2013).

people should be very cautious while throwing their personal belongings in the trash or expectorating on the streets since they will be losing their privacy claims over those discarded substances.

Apart from physical privacy, the other important facet of privacy of ordinary citizens is mental or informational privacy. As far as information relating to health is concerned, in India, the law is almost settled after the pronouncement of the decision in *Mr. 'X'* v. *Hospital 'Z'*.[7] The Supreme Court has brilliantly reconciled the issue by properly balancing the claim of public health against ones' medical information privacy. The court was of the view that no medical privacy claim would prevail if on the other side a higher interest is present which would affect the health and life of a person; the law insists a duty to disclose the information irrespective of its privacy importance.[8]

Similarly, in another significant decision rendered by the Supreme Court in *Selvi* v. *State of Karnataka*,[9] the Supreme Court has vehemently held that forcing a person to undergo the tests like Narco analysis, Brain Mapping and Polygraph would be an intrusion into his mental privacy. In sum, the court has concluded that any of the aforementioned tests administered either voluntarily or not as part of any investigation or other process shall not be admissible as evidence, except to prove any substance discovered under section 27 of the Indian Evidence Act.[10]

Here, it is submitted that corresponding to Art. 20(3) of the Indian Constitution which safeguards an individual against involuntary self-incrimination, Fourth and Fifth Amendments of the U.S. Constitution[11] protect a person from the government's involuntary use of divergent techniques for extorting the data from one's brain. But

[7] (1998) 8 SCC 296.
[8] *Id.* at 309-310.
[9] (2010) 7 SCC 263.
[10] *Id.* at 383.
[11] Constitution of the United States, 1789, amendment IV: The right of the people to be secure in their persons, houses, papers, and effects, against unreasonable searches and seizures, shall not be violated, and no warrants shall issue, but upon probable cause, supported by oath or affirmation, and particularly describing the place to be searched, and the persons or things to be seized.
Amendment V: No person shall be held to answer for a capital, or otherwise infamous crime, unless on a presentment or indictment of a grand jury, except in cases arising in the land or naval forces, or in the militia, when in actual service in time of war or public danger; nor shall any person be subject for the same offence to be twice put in jeopardy of life or limb; nor shall be compelled in any criminal case to be a witness against himself, nor be deprived of life, liberty, or property, without due process of law; nor shall private property be taken for public use, without just compensation.

when we interpret these two constitutional provisions, it is perceptible that though both are conveying similar meaning, Art. 20(3) is so vigorous than its counterpart since the combined reading of Fourth and Fifth Amendment clauses allow one to conclude that the government can decode the information from one's brain if they could obtain warrant showing probable cause.[12] In sum, the wording of Article 20(3) is in all sense absolute than its counterpart. The analysis of the old judicial precedents in the U.S. shows that the safeguards under the Fourth and Fifth Amendments were limited to physical intrusion into a person's body like collecting blood or other body fluids, which was later extended to mental information. For receiving a thorough epistemic background of the development of mental privacy in the U.S., one has to start his journey from *Katz* v. *the United States of America*,[13] wherein the U.S. Supreme Court has observed that a person has a reasonable expectation of privacy which would be well protected against government's interest, if he had, at the relevant time in question, an actual or subjective expectation that the society would recognise as reasonable. Thus, the Court has charmingly balanced the interests of both the individual and the government when the question of privacy arises.

The magnificence of *Selvi*[14] dictum in fact lies in the way in which the court has interpreted Art. 20(3). The court has further observed that even if the mind-reading techniques were allowed voluntarily, the evidence collected from those could not be used for any proceedings since the person who was subjected to the same was not in a position to control his mind while undergoing the test.[15] It is also submitted that this observation is very much relevant, especially in a situation like India where there is no legal protection of one's personal data. *Selvi* and its descendant *Puttaswamy* (2) make clear that in India the law does not allow anyone to intrude and manipulate the mental and intellectual belonging of a person even if the science and technology achieve a cent percent technological advancement in future. The observations made by the different

[12] Francis X. Shen, "Neuroscience, Mental Privacy and the Law" 36 *Harvard Journal of Law & Public Policy* 653, 693-694 (2013).
[13] 389 U.S. 347 (1967).
[14] *Selvi* v. *State of Karnataka*, (2010) 7 SCC 263.
[15] *Id.* at 383.

judges in both of these decisions have a far-reaching effect so far as mental privacy is concerned.

In this regard, a very informative observation has been made by Marcello Lenca in his writing which states that: 'While these advances have a great potential for research and medicine, they pose a fundamental ethical, legal, and social challenge: determining whether, or under what conditions, it is legitimate to gain access to, or to interfere with another person's neural activity.'[16] Here, it is worthwhile to quote his observation which has a direct bearing with the observation in *Selvi*:

> Breaches of privacy at the neural level could be more dangerous than conventional ones because they can bypass the level of conscious reasoning, leaving individuals without protection from having their minds involuntarily read. This risk does not apply only to participants in predatory neuromarketing studies and disproportionate uses of neurotechnology in courts, but to general individuals as well. With the growing availability of Internet-connected consumer-grade brain-computer interfaces, more and more individuals are becoming users of neuro-devices.[17]

If one diligently reads the wording of *Selvi* then one would easily find out the far-reaching sway ingrained in it. The decision is significant not only for protecting the privacy of the individual, but also it has expanded the horizon of cognitive liberty as a whole. Same as our decision-making of our own private matters and our family, we need undisturbed freedom of our personal thoughts. If that freedom is not possible, anyone can easily interfere with one's thought process and influence and manipulate his/her ideas. Now due to the advancement in technology especially neuroimaging and brain-computer interfaces, it is possible to enter into the cognitive function of an individual and even decode and manipulate the order of his neuron signals. In fact, this is the technological accomplishment of our old adage 'Brain Washing'. Nowadays, most of the companies, especially social media platforms, are depending on voice analysis technology using Artificial Intelligence (AI) to know the behavioural pattern of their

[16] Marcello Lenca, "Do We Have a Right to Mental Privacy and Cognitive Liberty?" *Scientific American*, (2017), *available at*: https://blogs.scientificamerican.com/observations/do-we-have-a-right-to-mental-privacy-and-cognitive-liberty/ (last visited on February 14, 2021).
[17] *Id*. at 8.

customers. Using this technology, they can easily identify the taste, attitude, traits, and so on. While telling something to a machine or typing on a gadget, we may not be conscious what would be the far-reaching consequences of such communications. It has already been declared that the Google Assistant's and Amazon's Alexa's third eye is always behind you when you talk to your gadget.

In the same vein, it is essential to analyse the issues of privacy and the strata of privacy claims related to genetic tests. Same as cognitive privacy, it is vital to protect the genetic privacy of an individual. Currently, genetic materials of individuals are being used by the government for health-related matters and forensic purposes and DNA typing has been widely used by all countries for solving forensic cases. The tests are conducted by both private and public laboratories. These laboratories may routinely obtain bodily samples from the persons involved in crimes and from the parties in civil cases. Moreover, in countries like the U.S.A., the U.K., Canada, and Australia, they have legislations permitting the law enforcement authorities to obtain bodily samples from convicts for creating a DNA database for identifying culprits. In the U.S., the database system is known as the Combined DNA Index System (CODIS).[18] Similarly, they have the local DNA Index system and State wise DNA Index system. Both the local and the State DNA index systems provide the DNA database to the CODIS. The systems collect bodily samples for DNA analysis from convicted offenders, crime scenes, unidentified human remains, and also from the relatives of the missing persons.[19] Similarly, in England, the Forensic Science Service controls the working of the National DNA database and it contains three indexes - the suspects, serious offenders, and the unknown samples.

In Australia, the DNA database system was started in 2003 and they have two level systems viz., the National Criminal Investigation DNA Database System (NCIDD System) and the Disaster Victim Identification Database. Both the systems are operating by a separate agency named *CrimTrac*.[20] In addition to these systems, the Australian

[18] FBI, "Combined DNA Index System (CODIS)", *available at:* https://www.fbi.gov/services/laboratory/biometric-analysis/codis (last visited on Feb. 14, 2021).
[19] *Ibid*.
[20] Australian Criminal Intelligence Commission, "Biometric and Forensic Services", *available at:* https://www.acic.gov.au/our-services/biometric-and-forensic-services (last visited on Feb. 14, 2021).

Federal Police is also operating one DNA Database system. As a result of the rapid development and success of the DNA database system, policy makers in most of the nations have thought about its application to the entire population known as Universal Database System which has raised serious issues based on the genetic privacy.[21] The privacy issues are resting on the collection, storage, disposing of the bodily material and creation of DNA profile after DNA typing. In the U.S., almost all stages of the forensic DNA identification were challenged on constitutional aspects especially under the Fourth and Fifth Amendment. As previously discussed, almost all states in the U.S. have enacted legislations permitting the government to collect the DNA for database. The legislations were challenged arguing that involuntary collection of blood for DNA typing would violate the unlawful search and seizure under the Fourth Amendment and the right against self-incrimination guaranteed under the Fifth Amendment. However, courts have upheld the legislations permitting law enforcement authorities to collect DNA samples for the database. The courts opined that the actual physical incursion was minimal and once a person was convicted for an offence, his privacy rights would be reduced.

In *Patterson* v. *State*,[22] the Indiana Court of Appeals addressed the issue: 'whether the DNA test conducted on the blood collected from the appellant without a warrant would violate the Fourth Amendment of the U.S. Constitution?' After referring to various decisions, the court concluded that State '…has a substantial interest under the Fourth Amendment in promoting the use of DNA testing, not only in creating a database but also in conducting criminal investigations and exonerating the innocent. Although the State intruded upon Patterson's privacy by analysing his blood for DNA evidence, his privacy was outweighed by State's interest in protecting the citizens.'[23] In the same manner, the U.S. courts rejected the arguments made by the defendants on constitutional issues like Fifth Amendment challenge on self-infringement. However, courts cautioned that the States 'diminished right to privacy of the prisoner' argument should not in any manner affect the prisoner's family members' reasonable expectation

[21] Kirsten Dedrickson, "Universal DNA Databases: A Way to Improve Privacy?" 4 *Journal of Law and The Biosciences* 637-647 (2017).
[22] 742 N.E. 2d 4 (2000).
[23] *Id.* at 11.

of privacy under the Fourth Amendment. It is very difficult to predict what the court would say if any of the family members of the prisoner apply for a stay against the conducting of genetic testing of the prisoner since they have a similar DNA composition as that of the prisoner. Here, the prominent question is how far the State could retain the DNA samples collected from the prisoner for DNA typing?[24]

As far as biological sample collection and DNA profiling are concerned, most of the courts in the U.S., the U.K., and Australia have already a given green signal provided the individual should be a convicted person, especially in violent crimes. Now, it is high time to analyse the different strata of privacy claims that would arise in future in the light of *Puttaswamy* (2) and The DNA Technology (Use and Application) Regulation Bill, 2019.

III. ANALYZING THE SCOPE OF PRIVACY CLAIMS

A. Physical Privacy and the DNA Technology (Use and Application) Regulation Bill, 2019

As far as DTRB is concerned, Chapter IV specifically deals with the precautions to be taken by the DNA laboratories while collecting bodily samples for DNA typing. The analysis of the physical privacy claims of the stakeholders as specifically mentioned in the long title of the DTRB like victims of crimes, offenders, suspects, undertrial prisoners, missing persons, and unknown deceased persons can be accomplished on the basis of the language of this Bill read with the language of the relevant provisions of the Criminal Procedure Code, 1973. It is also noticeable from various provisions of DTRB that apart from the aforesaid stakeholders, privacy claims of their relatives may also arise in the forensic DNA sampling. The Bill is also silent regarding the bodily sampling for DNA typing in civil disputes like parental disputes or pedigree issues. The descending order of the stakeholders' privacy claimants shall start from the stakeholders' relatives, victims, missing persons, unknown deceased persons, suspects, undertrial prisoners, and offenders, respectively. This being the order of the privacy

[24] Marika R. Athens & Alyssa A. Rower, "Alaska's DNA Database: The Statute, Its Problems, and Proposed Solutions" 20 *Alaska Law Review* 389, 395 (2003).

interests, utmost care should be given from the side of the authorities beginning from the sample collection up to the DNA profiling results. Among the stakeholders, relatives, victims and missing persons visibly have a higher expectation of privacy than others.

The privacy claims of the suspects and undertrial prisoners under DTRB can be discussed only in light of the relevant provisions of the Criminal Procedure Code. Section 21 of the DTRB mandates that no bodily sample shall be collected without a person's written consent if he/she has been arrested for an offence for which the punishment is below seven years. At the same time, Section 53 of the Cr.P.C. states that 'any arrested person' can be examined with the help of a registered medical practitioner irrespective of the quantum of punishment. Thus, Cr.P.C. as the general law that regulates the procedure to be followed by the investigating officers at the time of arrest may in all possibilities be followed in future also since there is no special provision in the DTRB declaring that its provisions have overriding power above other Statutes. The explanation appended to sub-section 1 of section 53 clarifies further that the examination shall also include DNA profiling. The procedural safeguard guaranteed in section 21 of the DTRB is a welcome one, but its strength will be emasculated if the wording of section 53 Cr.P.C. remains as such. Therefore, considering the various privacy fears in connection with forensic bodily sampling and analysis, it is submitted that it is essential to incorporate an overriding clause in DTRB.

Here it is sensible to clarify the privacy claims of divergent stakeholders coming under the DTRB since their status is different. For example, the privacy claim of a mere suspect in a crime is not at par with the claim of an offender. The degree of the claim of different stakeholders can be measured only with the help of the judicial standard known as the 'maximum expectation of privacy'. Probable cause for obtaining the forensic sample justifying with reasonable minimum intrusion into the body of a person should be rigorously conserved by the judiciary and investigating authorities. The implied meaning that one gets from the wording of section 21 of DTRB is that 'reasonable cause' will be scrutinized by the Magistrate only if the offence committed by the arrestee is below seven years, and for the specified offences, it is the discretion of the investigation officer to decide whether the bodily samples should be collected or

not for DNA typing. In sum, if the offences fall under the category of specified offences, the investigating officer can straight away invoke section 53 of the CrPC. The other significant shortcoming of the DTRB is that despite being a law for individual identification in both civil and criminal cases, section 21 is silent regarding the matter of consent and the legal consequences of its negation in civil disputes, especially in paternity matters. This has far-reaching implications since the law is blurred as far as civil cases are concerned. In the limelight, one may reach the conclusion that in the interest of justice, the civil court can compel a person to undergo a DNA test against his wishes, however, in India, it is apparent that no law enables the civil court to issue an order for collecting samples from an individual for DNA typing. The issue would be more complicated if the person is not voluntarily consenting to the same. Here is the scope of the analysis of the horizons of privacy facets of the person, especially his physical privacy and its impact. If one goes through the web of various decisions rendered by the Supreme Court as well as High Courts could be able to reach the conclusion that in civil cases, especially in paternity disputes, as a matter of course, no court can forcibly conduct the DNA test except taking an adverse inference against him.[25]

In so far as the forensic procedure in criminal cases is concerned, the comparative jurisdictional analysis shows that 'informed consent' of the suspect is mandatory irrespective of his status and the seriousness of the offence levelled against him. For example, in Australia, section 23WD of The Crimes Act, 1914, as amended in 2017, states that 'a person is authorised to carry out a forensic procedure on a suspect with the informed consent of the suspect.' The most significant thing to be considered here is that the Crimes Act also insists the concerned police officer who seeks consent for forensic procedure shall before that 'balance the public interest in obtaining evidence tending to confirm or disprove that the suspect committed the offence concerned against the public interest in upholding the physical integrity of the suspect'.[26] The safeguards to be included to protect the minimum physical privacy of the suspect during the forensic sampling or other procedure incidental therewith are missing in

[25] *Goutam Kundu* v. *West Bengal*, AIR 1993 SC 2295.
[26] The Crimes Act, 1914, s. 23WI(2)(b).

DTRB. At the same time section 23XI of the Crimes Act insists that no forensic procedure shall be carried out without ensuring reasonable privacy to the suspect, including the exclusion of the opposite sex, avoiding the presence of an extraneous person, and maximum privacy to be followed while removing the clothes and visual inspection of the bodily parts. Further section 23XN warrants that a person of the same sex shall carry out the intimate forensic procedure, except taking a blood sample.

Serious privacy concerns will also arise from the forensic samples retained by the authorities. Retained forensic samples are like the Damocles sword hanging above the head of the stakeholders. Therefore, the authorities shall ensure the destruction of the samples immediately after the purpose has been met. Unfortunately, DTRB contains no provision regarding the destruction of the forensic samples. Section 64ZA of the Police and Criminal Evidence Act, 1984 of U.K. mandates that 'a DNA sample… must be destroyed as soon as a DNA profile has been derived from the sample or… if sooner, before the end of the period of 6 months, beginning from the date on which the sample was taken.'[27] Therefore, considering the seriousness of the issue, necessary provisions shall be incorporated in the DTRB mandating the authorities for the destruction of the samples immediately if any of the following situations arises:

1. If the FIR lodged against him has been quashed by the superior court;
2. The accused has been discharged by the court having jurisdiction;
3. The accused has been acquitted by the court having jurisdiction and no appeal has been preferred by the state against the acquittal;
4. If the accused has been acquitted by the appeal court and the same has been confirmed by the Supreme Court;

[27] See also The Protection of Freedoms Act, 2012 (U.K.) which contains ample provisions for securing the privacy of the stakeholders especially the time frame within which the authorities are bound to destroy the biological samples collected and DNA Profile of the convicted and non-convicted persons. The Act, further stipulates that the maximum time for the destruction of the biological sample in any case shall not exceed 6 months except in the case of its requirement as evidence in court as per the provisions of the Criminal Procedure and Investigations Act, 1996. It also mandates that the sampling, profiling and retention of the same is possible only if any of the offences committed by the accused is a recordable offence, one for which the police are required to keep a record. In the U.S., Canada and Australia also have corresponding safeguards in their laws: The Violent Crime Control and Law Enforcement Act of 1994 (U.S.); The Justice for All Act, 2004 (U.S.); DNA Identification Act, 1998 (Canada); Crimes (Forensic Procedures) Act, 2000 (Australia).

5. If the sample has been collected from the offender immediately after the conviction of the trial court for the purpose of DNA database and the conviction has been quashed by the appellate court and later confirmed by the Supreme Court.
6. After the completion of the investigation, the officer in charge is of the opinion that the suspect shall be excluded from the accused array.

The other major flaw in DTRB, which can be easily identified and highlighted, is the lack of safeguards to protect the body surface privacy during the forensic procedures of the stakeholders. Though section 23 of DTRB exclusively and very widely deals with the sources and manner of collection of samples for DNA testing, it has failed to mention the precautions to be taken by the authority during the forensic examination. For example, sub-section 2 (a) and (b) insists that intimate forensic procedure shall be performed only by a medical practitioner and non-intimate procedure by a technician under the supervision of a medical doctor or scientist. However, there is no mention about the sex of the concerned person who is authorized to perform the same. In other jurisdictions, it is mandatory that the forensic procedure be performed by the person of same sex.[28] Similarly, the DTRB is also silent regarding the number of persons who are permitted to be present during the time of examination.[29] These shortcomings are categorically going to affect the bodily privacy of the subject.

B. Informational Privacy and the DNA Technology (Use and Application) Regulation Bill, 2019

Informational privacy, also known as data privacy, is something directly connected with the private affairs of an individual which he/she is not ready to disclose to anyone. It is also having direct nexus with his mental autonomy. As a result of the revolution in information technology, information privacy is facing multifarious attacks since, it is

[28] For example, section 51 of the Australian Crimes (Forensic Procedures) Act, 2000 mandates that the intimate forensic procedure shall be if possible to be carried out by the person of the same sex as the suspect.

[29] Crimes (Forensic Procedures) Act, 2000 has a Division 4 that specially mandates the persons who can be permitted during the conduct of forensic procedures.

possible to expose a person's minute details about his physical and mental faculty to the whole world within a fraction of seconds. Here, it is fruitful to discuss the privacy that comes under the constitutional edifice (also known as decision-making privacy) and that comes under the tort (informational privacy). As far as data privacy violations are concerned, both have wider implications. The Supreme Court's contribution through the *Puttaswamy* (2) case has made a sea change in the approach of public and private stakeholders in conceptualising the perspectives of the decision-making privacy. Though the origin and growth of decision-making privacy have their roots in information privacy, as part and parcel of the constitutional order, now, it has achieved independent status and existence after the *Puttaswamy* (2) case.

The informational privacy concern in connection with the DTRB is almost related to the DNA database (DNA Data Bank), which the Central government is empowered to establish under section 25 of the DTRB. The Bill does not contain the definition of DNA Data Bank; however, section 2 (vi) states that a DNA Data Bank means a Data Bank established under sub-section (1) of section 25. Therefore, it is essential to search other jurisdictions to get the exact meaning of the same. As per section 23YDAC of the Crimes Act, 1914 of Australia, 'DNA database system means a database (whether in computerised or other form and however described) that is managed by the Commonwealth and that contains…indexes of DNA profiles'. Now the most relevant question is, what is there in a DNA profile of a person? Is it only a mere profile like a fingerprint, or does it contain other vital information about an individual? A DNA profile simply means the biological profile of a person which has been isolated from an interested portion of his DNA, commonly known as Short Tandem Repeats (STR). The STRs are short stretches of DNA that are repeated head to tail and come under the designation of 'junk DNA'.[30] Database entries consist of a set of numbers that represents the summed-up STR repeats in each allele for a particular set of loci.[31] However, the

[30] Dinkar V.R., *Justice in Genes: Evidential Facets of Forensic DNA Fingerprinting* (Asia Law House, India, 1st edn.,2008).

[31] The term 'loci' is the plural form of the word locus, which means the position in a chromosome of a particular gene. Locus is the polymorphic region of a chromosome that helps to identify the genetic uniqueness of a person. If we use more number of loci, then the accuracy of the identification of a person will increase.
National Human Genome Research Institute, *available at:* https://www.genome.gov/genetics-glossary/Locus.

possible future discovery of the potentiality of the junk portion of the DNA used for forensic purposes cannot be completely discarded. Therefore, as a matter of caution, it is suggested that more stringent rules should be incorporated into the concerned law so as to protect the information privacy of a person in his DNA Database. As a precaution, section 33 of DTRB states that the DNA profile contained in any DNA Data Bank shall be used only for facilitating the identification of a person and not for any other purpose. The other important flaw which is apparent in the DTRB is that along with criminal proceedings, section 34 made mandatory that DNA profiles shall be made available for the investigation connected with civil disputes or other civil matters. In fact, this will affect the very purpose of the DNA Data Bank. However, as a step to legitimise it, one proviso can be added stating that in any civil case or dispute, the concerned authority can refer to the database with the prior informed consent of the party. Here, it is commendable to analyse the relevant part of the Law Commission of India Report on Human DNA Profiling.[32] The opening part of Chapter IV, 'Constitutional and Legal Aspects of DNA Profiling', highlights the relevant provisions in various laws including articles 21 and 20(3) of the Constitution, and legitimises at the outset that 'Parliament is competent to undertake legislations which encourage various technological and scientific methods to detect crimes, speed up the investigation and determine standards in institutions for higher education and development in technical institutions.' The discussion in Chapter IV seems to be very fragile in nature since various facets of privacy associated with DNA profiling are untouched. The Commission ought to have realized the potentiality of DNA samples and profile different from other scientific techniques like voice identification or Narco-analysis. The privacy concerns are very high in the case of DNA samples retained by the laboratories, and most of the legislations in other jurisdictions have adequate safeguards regarding retaining of DNA samples and DNA profiles. Though the Commission had an extensive analysis of the laws in various other jurisdictions, examining the law relating to the privacy and DNA typing is futile. However, in its concluding remarks, Commission had rightly observed that:

[32] Law Commission of India, "271st Report on Human DNA Profiling – A Draft Bill for the Use and Regulation of DNA – Based Technology, 2017" (July, 2017).

> DNA Profiling and use thereof involves various legal and ethical issues and concerns are raised, and apprehensions exist in the minds of the common man about its misuse which unless protected may result in disclosure of personal information, such as health-related data capable of being misused by persons having prejudicial interests, adversely affecting the privacy of the person.[33]

In fact, when the Commission was drafting the report, the members were in a dilemma regarding 'whether privacy is an integral part of the Constitution of India' since the *Puttaswamy* case was decided by the Supreme Court subsequently. In its concluding remarks, with complete confidence, the Commission has observed that in India, for the purpose of DNA profiling, only 13 CODIS loci will be used and the same would not violate, in any way, the privacy of a person.[34] It is not accurate since 13 CODIS loci are markers identified and uniformly used in the U.S.A. for creating their index system, and apart from that, there are various other DNA markers available in the market which are in common use in Europe and other nations. For example, the locus like SE33 or Amelogenin used by some Kits[35] are not included in the 20 CODIS Core Loci (Effective from January 1, 2017)[36] as well as the Chromosome location of each locus will also be different. The Promega Corporation in India is using SE33 locus. The corporation has published on their official webpage that their 27 loci in the PowerPlex® Fusion 6C System include all the expanded CODIS core loci as well as the European Standard Set. Therefore, as far as privacy matters are concerned, it is necessary to ensure that the locus used for a particular DNA profiling contains only the genetic information relating to the identification of an individual and nothing more. As observed by the Commission, there is no guarantee that in India, the forensic DNA laboratories will strictly adhere to 13 CODIS loci or 20 CODIS loci unless and until the law insists upon the same. However, it is a policy matter of each lab to decide which Kit they have to use and law cannot insist them to use a particular Kit. Now, it is time to analyse the

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[33] *Id.* at 40.
[34] *Id.*
[35] Promega, "STR Amplification", *available at:*https://www.promega.in/products/forensic-dna-analysis-ce/str-amplification/#ShopAllProductGrid (last visited on Feb. 14, 2021).
[36] F.B.I., "Combined DNA Index System (CODIS)", *available at*: https://www.fbi.gov/services/laboratory/biometric-analysis/codis (last visited on Feb. 14, 2021).

information privacy violations that may arise due to forensic DNA profiling in the light of the law developed in *Puttaswamy* (2) case.

At the outset, it is quite worthy to quote the observation made by Y. Chandrachud J., in the introductory part of his judgment:

> In understanding the interface between governance, technology and freedom, this case will set the course for the future. Our decision must address the dialogue between technology and power. The decision will analyse the extent to which technology has reconfigured the role of the state and has the potential to reset the lines which mark off no-fly zones: areas where the sanctity of the individual is inviolable. Our path will define our commitment to limited government. Technology confronts the future of freedom itself.[37]

As per the wording of *Puttaswamy* (2), reasonable expectation of privacy is a constitutional aphorism that any individual can use as a touchstone to check state action which droops his privacy. From the observation made by different judges, it is clear that the concept of privacy is nothing newly invented through legal fiction but discovered from the existing natural law principles. Currently, the right to privacy, being a fundamental right enshrined by Article 21 of the Constitution, any state invasion of the same shall be subjected to a litmus test as mandated by *Puttaswamy* (2) as follows:

> In the context of Article 21, an invasion of privacy must be justified on the basis of a law which stipulates a procedure which is fair, just and reasonable. The law must also be valid with reference to the encroachment on life and personal liberty under Article 21. An invasion of life or personal liberty must meet the three-fold requirement of (i) legality, which postulates the existence of law; (ii) need, defined in terms of a legitimate state aim; and (iii) proportionality which ensures a rational nexus between the objects and the means adopted to achieve them.[38]

The first prerequisite is that any invasion of privacy is possible only through a valid law. As per the second prong, the valid law can be invoked only if there is a legitimate

[37] *K.S. Puttaswamy (Retd.)* v. *Union of India*, (2019) 1 SCC 1, para. 665.
[38] *Supra* note 1 at para. 509.

state interest. Here, the test of reasonableness under Article 14 will operate to check whether any form of arbitrariness is present in the state action. Finally, the state is bound to justify the proportionality, i.e., its encroachment action involves only a minimum degree necessary to achieve its legitimate interest.

Apart from the aforesaid three prongs, considering the potentiality and importance of the concept of privacy, Chelameswar J., had imported one more additional requirement from the U.S.A. which mandates weighing the 'compelling state interest'.[39] He was of the view that only in privacy claims which deserve the strict scrutiny; the standard of compelling state interest shall be used. It is also clear from the judgment that the material collected from any individual shall be duly preserved and not used for any extraneous purpose.

Here, the author intends to make an appraisal of the provisions of the DTRB in the light of the three prongs as applied by the Supreme Court in *Puttaswamy* (1)[40] to check the constitutionality of the Aadhar Biometric identification. When we compare Biometrics and DNA, the former does not have as much potential as DNA since DNA will provide more genetic information about an individual as well as his or her family members. The scope of the provisions enumerated in DTRB can be analysed with the help of the various factors as identified by the Court in *Puttaswamy*.

IV. ANALYZING PRIVACY CLAIMS IN THE LIGHT OF PUTTASWAMY DECISION

A. The Matter of Consent for Sample Collection and Question of Access to the Metricized Information

In *Puttaswamy* (1),[41] the court was of the view that the collection of the biometrics of individuals impacts their privacy and dignity, therefore, 'informed consent' is crucial to the validity of a state-mandated measure like the collection of biometric data. Court mandates that any encroachment into the privacy of an individual shall be based on

[39] *Id.* at paras. 45-46.
[40] (2019) 1 SCC 1.
[41] *Id.* at para. 902.

the authority of a valid law[42] enacted by the Parliament, and mere executive order will not suffice and the informed consent obtained for collecting biometric samples even though it was voluntarily made could not be accepted as per valid law. Court has given utmost importance to consent and found that before the enactment of the Aadhar Act there was no valid law ensuring informed consent, the confidentiality of information collected, restrictions on the use of the data and penalties and offences for violation. The comparison of the provisions of the Aadhar Act and DTRB is not more viable when the question of consent comes into the picture since the objectives of both laws and their stakeholders are different. If the very objective of the Aadhar Act is to assign unique identification numbers for the delivery of subsidies, benefits and services, the objective of DTRB is to establish the identity of a certain category of persons, including the victims, offenders, suspects, undertrials, missing persons and unknown deceased persons. Similarly, the status of the stakeholders is extremely different in the sense that the Aadhar Act targets only an ordinary citizen but in the case of DTRB, stakeholders are either connected with crime or having some mysterious state of affairs in life. Therefore, the role of consent cannot be expected to be the same under these two laws. However, the stakeholders coming under the DTRB cannot be put in an identical position. For example, the status of the victim in a crime is not the same as that of the offender. Therefore, the degree of the legal safeguards in obtaining consent before collecting the biological samples should also change accordingly.

In the light of the discussions made by various judges in *Puttaswamy* (1), it is apparent that prior consent is essential for validating the collection, storage, process and use of the bodily materials of the stakeholders. However, the legitimate expectation of privacy will not be the same for the ordinary citizens coming under the Aadhar Act and those persons mentioned in the DTRB. The expectation of privacy of the offenders, undertrial prisoners and suspects will be lesser than that of ordinary citizens without a criminal track record. On the other hand, the victim of a crime, though included along with the individuals involved in the crime, has different status and higher expectation of privacy. Similarly, children coming under the category of *doli incapax* shall also be treated as ordinary individual with higher expectations of privacy.

[42] *Supra* note 40 at para. 606.

Under the DTRB, Section 21 exclusively deals with the mandatory written consent to be obtained from a person arrested (other than specified offences) for collecting bodily substances. Similarly, the proviso appended to sub-section 2 of section 23 mandates that written consent shall be obtained from a victim of crime and the parent or guardian of the minor or disabled person. Apart from the aforementioned provisions, section 22 welcomes voluntary consent from any person who was present at the crime scene, questioned in connection with the investigation of a crime or anyone who intends to find the whereabouts of his relatives who went lost or missing in a disaster or otherwise. As per section 13 of the Indian Contract Act, 1872, 'two or more persons are said to consent when they agree upon the same thing in the same sense'. We can infer from section 13 that no proper consent can be obtained from a stakeholder for satisfying the provisions of the DTRB unless and until it is informed consent. It is also vital to emphasize here that written consent, as mandated by the DTRB, is not on par with informed consent. Since the subject being an ignorant person as far as the scientific procedure and consequences of forensic DNA typing are concerned, the law should make it mandatory to obtain the informed consent. This should be followed mandatorily before collecting samples from the victims of crime and children since their status is the same as the ordinary citizens', with higher expectations of privacy. On the other hand, in the case of refused consent, sub-section 2 of section 21 and sub-section 2 of section 22 state that the concerned investigating officer shall apply before the Magistrate having jurisdiction, and if he is satisfied that there is reasonable cause for taking bodily samples, he can issue an order for the same. In such situations, it will be the same as the forcible collection of samples as mandated by section 53 of the Code of Criminal Procedure, 1973. Similarly, the implied meaning from section 21 and 22 of DTRB is that in the case of persons coming under the specified offences, section 53 of the Criminal Procedure Code will be applicable i.e., there is no need for consent. At the same time, in civil cases, the state cannot show any special interest in collecting the bodily samples and no judicial order will suffice against the voluntary informed consent of the subject. The only option in such cases is to take an adverse inference against the subject who has refused the direction of the court for DNA profiling.

Another prominent action of the state for which express consent of the stakeholder is essential is regarding access to the metricized information stored in the DNA databank. At the outset, logically, it is not tenable to accept the claim of the state for including the DNA profile of any of the crime victims or individuals involved in any civil disputes in the DNA databank since the legitimate expectation of privacy of these persons is very high as the ordinary citizens. Therefore, there is no question of consent with regard to the depositing of their DNA in the DNA databank. Section 34 of the DTRB states that the information stored in the databank shall be made available for investigation relating to civil disputes or other civil matters cannot be accepted without getting the special written informed consent of the stakeholder.

1. The Legitimate State Aim

In most nations where a Universal DNA database was recommended, experts and law enforcement officers argued that it would be justified by reducing the social cost of crime. Here, of course, it is essential to address two major issues: Primarily, is there any legitimate state aim in creating a DNA database. Secondly, if the answer to the first question is affirmative, then what would be the direct relative benefits of the same? One can reach a rational conclusion only after properly weighing the state's interest on the one side and the civil liberty issues of the individual on the other. The state interest should extensively outweigh the civil liberty side. Here, it is worthwhile to analyse the propositions from two divergent angles, viz. 1) Seeing through the lens of the constitutional values and 2) considering the state's economic outreach by weighing the expenditure in successfully implementing the project with a margin of reduction of future law enforcement expenses.

Since civil liberty is a prominent issue involved in collecting and creating DNA databank, it is wise to turn directly towards the justifications that may arise in the future based on the legitimate state aim and its constitutionality. The discussion would not be utterly productive without checking the 'legitimate state aim' doctrine as applied by the Supreme Court in *Puttaswami* (1) case for biometrics. In *Puttaswami* (1), the Supreme Court has discussed in detail about the role of the state under Parts 3 and 4 of the Constitution, especially the viability of Part 4 in conjunction with Part 3 with the help of the doctrine of 'harmonious construction'. The social security policies of the

state were explained quite a little and it was observed that in a social welfare state, it is the constitutional duty of the state to implement the directives incorporated in Part 3 of the constitution at a maximum possible level so as to achieve the maximum social justice.[43] The court has also reasoned that the state should ensure that the economic and other resources reach all sections of society.[44] The Court has further emphasised that 'the State has a legitimate aim to ensure that its citizens receive basic human facilities'.[45] In connection with Aadhar, Court was of the view that though it has no direct nexus with the social security measures, it will facilitate the functions of it. Court held that 'as an instrument for verifying identity, Aadhaar seeks to ensure that social welfare benefits are obtained by persons eligible to do so and are not captured by the ineligible'.[46] The message one gets from the analysis of the Majority decision is that there is a well-established state interest in ensuring that the welfare benefits which the state provides reach those they are intended for. Thus, the identity authentication of an individual as per the provisions of the Aadhar Act has close nexus with the object sought to be achieved by the state i.e., to ensure that its resources are reaching the right hands.

Similarly, the legitimate aim of the state of creating a DNA databank can be analysed. No doubt, law enforcement is one of the formidable duties of the state, and it incurs financial liability too. Crime-solving and prevention are vital as much as law enforcement is concerned. The experience from other jurisdictions shows that reasonable use of the DNA databank for crime-solving and prevention will justify its establishment. Therefore, one can safely conclude that creating a DNA databank will be a legitimate state aim 'unless its purpose has been distracted for some other use'.

Since the creation of a DNA Databank initially incurs huge financial liability, its implementation can be justified only on the basis of cost-effective analysis. Research studies in the U.S.A. show that the marginal cost to create the DNA databank is comparatively lesser than the marginal cost of crime detection and prevention. As per Jennifer Doleac's rough analysis:

[43] *Id.* at para. 797.
[44] *Id.* at para. 521.
[45] *Id.* at para. 798.
[46] *Id.* at para. 801.

> DNA databases result in dramatic savings. Each profile resulted in 0.57 fewer serious offences, for a social cost savings of approximately $27,600… extrapolating from that estimate, in 2010 state and federal governments spent approximately $30.5 million adding 761,609 offender profiles to DNA databases, but saved $21 billion by preventing new crimes.[47]

Another research report published by John K. Roman *et. al*. concluded that DNA is more effective than traditional investigation in solving high-volume property crimes. He has also established the following information making the expansion of the DNA database for more property crime investigation:

- Property crime cases where DNA evidence is processed had twice as many suspects identified, twice as many suspects arrested, and more than twice as many cases accepted for prosecution as compared to traditional investigation;
- DNA was at least five times as likely to result in a suspect identification compared to fingerprints;
- Suspects identified by DNA had at least twice as many prior felony arrests and convictions as those identified by traditional investigation;
- Blood evidence results in better case outcomes than other biological evidence, particularly evidence from items that were handled/ touched. Evidence collected by forensic technicians and police officers are equally as likely to result in a suspect identification.[48]

From the above analysis, it is safe to conclude that the state's interest in creating the DNA databank is reasonable in all sense, and it will unquestionably satisfy the mandate of Article 14 of the Constitution of India. The encroachments from the side of the state against the liberty of the individual are nominal as compared to the existing third-

[47] Jennifer Doleac, "First Cost-Benefit Analysis of DNA Profiling Vindicates 'CSI' Fans", *UVA Today*, Jan. 10, 2013, *available at*: https://news.virginia.edu/content/first-cost-benefit-analysis-dna-profiling-vindicates-csi-fans (last visited on Feb. 14, 2021).

[48] John K. Roman, Shannon Reid, *et. al.*, "The DNA Field Experiment: Cost-Effectiveness Analysis of the Use of DNA in the Investigation of High-Volume Crimes" 3 (April 2008), *available at*: https://www.ncjrs.gov/pdffiles1/nij/grants/222318.pdf (last visited on Feb. 14, 2021).

degree methods from the side of the law enforcement officers for crime detection and maintenance of law and order.

2. Proportionality

Proportionality is the third vital constituent to be satisfied by the state while intruding into the privacy of an individual. In *Puttaswamy* (1), the doctrine of proportionality was explained by the court as the 'guarantee against arbitrary State action because it ensures that the nature and quality of the encroachment on the right is not disproportionate to the purpose of the law'.[49] As far as the DNA database is concerned, the only enquiry to be made under the head of proportionality is whether the extent of the state interference is proportionate to the need for such interference. In *Puttaswamy* (1), the court was of the view that the best criteria to be adopted to find out a proper balance between the two facets, viz. the rights and limitations imposed upon it by a statute, is to discern its proportionality. The court, in *Puttaswamy* (1), analysed the constitutionality of the constituents of the Aadhar Act on the basis of the following proportionality sub-components:

a. Legitimate goal stage;
b. Suitability or rationale connection stage;
c. Necessity stage; and
d. Balancing stage.

(i) *Legitimate goal stage*

If, in the Aadhar case, the legitimate goal of the state, which was successfully established, was to ensure the reasonable and equitable allocation of its economic resources to the marginalised and deserving section of the society; DTRB aims to establish the identity of certain individuals who are in conflict with the law so as to ensure their presence during the criminal investigation and criminal trial. Though the target of both legislations is the identity of certain individuals, the difference is that the former touches the ordinary citizens, and the later covers someone connected with crimes. The goal of the state in initiating legislation like Aadhar is very apparent due

[49] *Supra* note 40 at para. 286.

to the necessity of identifying the right person to deliver the benefits promised by the state. As emphasized by the court in *Puttaswami* (1), Rationing, Issuance of BPL Cards, LPG Connections and Cylinders at minimal costs, Old Age and other kinds of Pensions, Scholarships, and Employment for the Unemployed are some of the welfare schemes which can be properly implemented by identifying the deserving individuals. As far as the objects and reasons of the Aadhar Act are concerned, the court was of the view that they are well tuned to achieve the proper purpose of the state. In the same line, it is arguable that the restrictions on the right to privacy are justifiable if the object and reason of the DTRB will act as a means to achieve the very purpose of the state in proper criminal investigations and trials, thereby safeguarding society from heinous crimes. However, in the light of this sub-component of proportionality, it is submitted that the purpose which is mentioned explicitly in clauses (e) & (f) of section 34of the DTRB, i.e., regarding the making available of the information contained in the DNA databank for any investigation connected with 'civil disputes' or any 'other purposes' shall not come under the social interest, hence, it does not satisfy the legitimate goal of the state. Similarly, the purpose of clauses (e) & (f) of section 34 of the DTRB is not suitable for the primary objective as specifically mentioned in the long title of the Bill or can be assumed from the expression 'matters connected therewith or incidental thereto'. The infringement of a constitutional right is not possible in any sense if the public interest is not present.

(ii) *Suitability or rationale connection stage*

Each and every infringement of a constitutional right, like privacy, shall be justified with a suitable rationale with the object sought to be achieved by the state in establishing the identity of a person. A thorough reading of the sections of the DTRB, especially sections 21 to 23, 25, 26, 33 and 34, gives one a clear idea that the concerned sections except section 34 have the rational nexus with the objectives of the DTRB. The only purpose of the DTRB is to establish the identity of the individuals involved in crimes and not to establish their guilt. Since identity is the primary subject of both Aadhar and DTRB, Aadhar, as expressed by the court, gives identity to those persons who otherwise may not have any such identity, and it recognises them as residents of

this nation; on the other hand, DTRB establishes the identity of certain persons without disturbing the ordinary citizens.

(iii) *Necessity*

In the case of Aadhar, the court was of the view that due to the malpractices reported in the past several years in connection with the distribution of beneficiaries to the real persons, it was a necessity of the state to fix the unique identity and thereby the authentication of the real beneficiaries. Court opined that it has successfully achieved through Aadhar. The Court has also observed that the State had no alternative of implementing the Aadhar. Similarly, the objective of the state in enacting the DTRB is also based on the necessity of establishing the identity of the real culprits, which will change the old third-degree methods of crime investigation and reduce the possibility of false conviction. It will also equally benefit in crime prevention and save society from heinous crimes. The other major benefit is that the state can save more money on crime detection.

(iv) *Balancing stage*

The constitutionality of the Aadhar Act was based on striking the balance of two competing interests, viz. privacy of an individual and benefits which could be earned by the society directly through intruding into the liberty of individuals, reasonably and proportionally. It is the duty of the state to establish the judiciousness of the intrusion. In *Puttaswamy* (1), the court has severely countered the argument which arose from the side of the state that there was no reasonable expectation of privacy in parting the biometric and demographic information. Court went on enquiring whether the Aadhar measures from the side of the state have any disproportionate impact on the right holder. The court gave more importance to the fact that in the case of Aadhar, the right holders parted information was vested only with the public domain and not with any private enterprise. Finally, in *Puttaswamy* (1), the court applied the balancing test wherein it was found to be more suitable to weigh the social and public interest on one side and the privacy interest of an individual on the other. Court had realised that an individual would have a real claim of his privacy only if he had a reasonable expectation of it against the state's intrusion. The further discussion made by the court leads one to the conclusion that it is not possible to lay down a common parameter that outlines the

features of the 'reasonable expectation of privacy' of an individual since it depends on various factors like attributes of the claimants, the nature of the activity in which the claimant was engaged, the place at which it was happening, the nature and purpose of the intrusion, the absence (or presence) of consent, the effect on the claimant and the purpose for which information is taken. Court has asked various questions to be answered in order to decide whether a claimant has a reasonable expectation of privacy. The questions are as follows:

- What is the context in which a privacy claim is set up?
- Does the claim relate to private or family life, or a confidential relationship?
- Is the claim a serious one or is it trivial?
- Is the disclosure likely to result in any serious or significant injury and the nature and extent of disclosure?
- Is the disclosure related to personal and sensitive information of an identified person?
- Does the disclosure relate to information already disclosed publicly? If so, its implication?

Before analysing the reasonable expectation of privacy of the stakeholders coming under the DTRB, it is submitted that the information which would be carved up by him/her is in addition to the biometric and demographic information which was already parted with under the Aadhar Act. Therefore, instead of analysing the information coming under the Aadhar Act, one can directly analyse the proportionality of the information that comes under the DTRB. The information coming under the DTRB is purely biometric information and nothing else. In *Puttaswamy* (1), the court has held that the biometric information akin to fingerprints and iris scan is only minimal information required for identification, hence, collection and processing of such information is reasonable. In contrast, the information stored in a person's DNA is very sensitive and may lead one to claim private genetic data ownership in terms of proprietary rights. However, this claim is limited to his/her unique minutiae individualities which cannot be disclosed to anyone or cannot be used for any public benefit. The genetic information stored in DNA is very sensitive because it has implications of health-related issues, not only of the concerned individual, but also his

family members. Nevertheless, forensic DNA profiles being identified from small strands of noncoding DNA like STRs, there is no potential for any familial search. Federal Bureau of Investigation, on the FAQ web page, has disclosed that their DNA profile contains only the set of identification characteristics or numerical representation at each of the various loci analysed. One of the issues raised before the Supreme Court of the U.S.A. in the case of *Maryland* v. *King*,[50] was whether collecting buccal swabs inside the cheek of the arrestee for DNA profiling was 'reasonable search' under Fourth Amendment. The court was of the view that the reasonableness of any search must be considered in the context of the person's legitimate expectations of privacy. The court found that collecting swabs inside the cheek was only a 'minimal intrusion which does not affect either the life or health of the arrestee,' therefore, it could not attract the search under Fourth Amendment. Instead of going behind the assumptions relating to the possibility of predicting future diseases from the noncoding stretches of DNA, the court had argued that there are no such privacy concerns arising from the present forensic DNA profiling. After referring to the relevant provisions of the Maryland DNA Collection Act, the court held that the law ensures maximum privacy by including specific safeguards against unwarranted use and is limited only to identify the arrestee and nothing more.

V. CONCLUSION

A law that regulates the collection, storage, and profiling of one's DNA for determining his/her unique identity is the need of the hour for concluding the criminal investigation and criminal trial beyond any reasonable doubt. No doubt, it is the prerogative of the state to explore and apply the latest scientific and technological endeavours for solving the crimes in society thereby advancing peace, order and safety to the members. At the same time, individual liberty is also valuable, and when the state uses scientific techniques to intrude into the mystery of individual autonomy, the same can be justified only if it is minimal and warranted. A comprehensive enactment which targets the collection, storage and profiling of an individual's DNA can overcome the parameters of judicial review only if it has been drafted satisfying the constitutional

[50] 569 U.S. 1 (2013).

touchstone which has already been declared by the judiciary through *Puttaswamy*. More emphasis should be given to include the necessary safeguards to protect the privacy of the stakeholders. There is no state interest in using the DNA profile for any civil disputes without the written informed consent of the parties. The international experience shows that written and informed consent is mandatory for DNA profiling of any individual irrespective of his status or the quantum of punishment prescribed by the law. Therefore, classifying the offenders or suspects on the basis of quantum of punishment would be discriminatory and violative of article 14 of the Constitution.

COMPENSATION FOR RESTORING RELIGIOUS PROPERTIES DAMAGED DURING CIVIL DISORDERS: DOES IT VIOLATE ARTICLE 27?

Dulung Sengupta[*]

The steep increase in civil disorders has placed the Nation's focus on damage caused by riots and compensation awarded over the years. Several businessmen and property owners suffer huge losses due to the actions and vandalism of angry mobs and rioters. The objective behind such compensation is based on the theoretical principles of affording protection to innocent citizens from catastrophic losses and encouraging public officers to maintain the optimum level of law and order in society. Most of the time it is not possible to recover the losses from the rioters or the insurance companies which raises the essential question that in such a case does it become the duty of the State to compensate the victims for such losses. The question of compensation for restoration or reconstruction of properties damaged or destructed during civil disorders becomes more complex when the property in question is a religious property or property belonging to a religious denomination as Article 27 of the Indian Constitution specifies that no person shall be compelled to pay any taxes, the proceeds of which are specifically appropriated in payment of expenses for the promotion or maintenance of any particular religion or religious denomination. Therefore, this paper revolves around the duty of the State to provide compensation for restoration or reconstruction of religious properties and properties belonging to religious denominations that are destructed during civil disorders and the question of whether such compensation violates Article 27.

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Key Words: *Article 27, Religious Properties, Compensation, Secularism, Civil Disorders.*

I. INTRODUCTION

Justice Coke has portrayed the relationship between the Sovereign and subjects as that of a "mutual bond and obligation" where the subjects owe allegiance and obedience and the sovereign is bound to govern and protect his subjects.[1] In modern society, this protection can be ensured only through enforcement of rights and proper legal machinery and what it meant to be protected under the king in ancient times has changed its form to be protected under the law. If we look back to Locke's theory in the Second Treatise of Government, we infer that individuals are not naturally subject to the sovereign, but the natural state of mankind is the one where there is equality and individuals live independently without depending on the will of others and no one ought to harm the other in his life, liberty or possession.[2] In the present state of affairs, where the people are living in a social contract giving up their natural rights of self - preservation and are willingly regulated by the laws of the land, they along with the socio-economic rights are also entitled to the protection of their lives and property by the State from uncivilized actions such as civil disorders.

Article 19 of the Indian Constitution provides freedom of speech and expression to its citizens as a fundamental right and also empowers them to assemble peaceably without arms.[3] The right to protest and assemble peacefully is one of the pillars of Indian democracy.[4] However, this right is subject to reasonable restrictions mentioned in the Constitution itself and several laws and regulations such as the Indian Penal Code, Police Act of 1861, and the Criminal Procedure Code. These reasonable restrictions are of utmost importance when these rights are misused and lead to disturbance of public order and threat to national sovereignty.[5] In a country like India, which is home to a diverse population belonging to several religions, ethnic origins,

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[1] Steven Heyman, "The First Duty of Government: Protection, Liberty and The Fourteenth Amendment" 41 *Duke Law Journal* 507 (1991).
[2] John Locke, *Two Treaties of Government* Everyman. London, England, 1993.
[3] The Constitution of India, art. 19.
[4] Kriti M Shah, "Dealing with Violent Civil Protests in India", Observer Researcher Foundation (2017).
[5] *Ibid*.

languages, castes, and socio-economic backgrounds, large-scale protests often lead to riots and mass civil disorders.[6] These often take a violent turn and lead to large scale destruction of public as well as private properties including religious properties. The chances of protests turning into violent riot-like situations have increased in recent times. During such civil disorders especially communal violence, the religious properties or properties belonging to the religious denominations in conflict become the primary targets. Religious properties are vandalized during the civil disorders due to failure of the state machinery which leads to uncontrolled violence. Payment of compensation for damages caused to religious properties becomes an issue of major conflict as it is often challenged to be in violation of Article 27. The lacunae in the existing statutory framework paves way for lot of ambiguities and conflicting opinions in this regard. Lack of a proper legal framework results in further harassment for the helpless victims of civil disorders.

In the absence of any specific legislation, the courts have issued guidelines in several matters which dealt with compensation for damage and destruction to religious properties and Article 27, and mostly we have to rely on those for interpretation of Article 27 in this regard. Recently, in *Prafull Goradia* v. *Union of India*[7] the Court held that at the time of interpretation of Article 27, we come across two views about it. Firstly, Article 27 can be attracted only in situations where the statute through which the tax is being levied specifically states that the proceeds of the tax will be directed towards the promotion or maintenance of a particular religion.[8] Secondly, it is attracted when the statute is a general one like the Income Tax Act or the Central Excise Tax Act etc. where the purpose for which the proceeds will be utilized is not specified, and a substantial part of the proceeds are utilized for a particular religion.[9] Here we also come across the concept where it is opined that if a relatively smaller part of these taxes is spent towards maintenance or promotion of these religions from the state funds, it would not violate Article 27 but a substantial part of these taxes cannot be used for such purpose. 25% of the total amount of taxes collected shall constitute a substantive

[6] *Ibid*.
[7] *Prafull Goradia* v. *Union of India*, (2011) 2 SCC 568.
[8] *Ibid*.
[9] *Ibid*.

portion in this regard as held by the Court.[10] Any attack on the places of religious worship is an attack on the religious symbolism of the people who believe those places to be sacred and is a threat to the secular fabric of the country. The destruction of these properties causes humiliation to religious denominations and infringe their rights guaranteed under Article 26 of the Constitution which provides them with the right to hold, acquire, and administer their property in accordance with the law as well as Article 300A. However, these rights become meaningless in the absence of proper remedies.

The State has a primary obligation to protect the properties of individuals and communities including religious properties. Therefore, the very basis for which the state should be awarding compensation for destruction caused to a collective property or any individual's property is the principle that there has been a failure on the part of the State to fulfill its primary obligation to prevent deprivation of property without the authority of law. The duty to protect minority rights is not just a constitutional obligation but is also a part of India's international obligations.[11] In *R.C. Cooper* v. *Union of India*,[12] it has been held that each of the fundamental rights draws sustenance from the other and these rights cannot be compartmentalized in water-tight compartments. Articles 14, 21, 25, and 26 have to be woven together to give effect to each other. Justice Sawant in *S. R. Bommai* v. *Union of India*[13] opined that "religious tolerance and equal treatment of all religious groups and protection of their life and property and places of their worship are an essential part of secularism enshrined in our Constitution." India is a secular country and secularism forms one of the basic structures of the Indian Constitution. Article 14 ensures equality of law and equal protection of laws to all individuals and imposes an obligation on the State to protect all religious places of worship which are sacred to every section of people. Failure on part of the State to prevent the mass destruction of religious places belonging to the weaker sections of the society and minorities results in gross violation of their fundamental rights to equality, religion, and life. Such a failure also amounts to a

[10] *Ibid*.
[11] Manoj Kumar Sinha "Minority Rights: A Case Study of India" 12 International Journal on Minority and Group Rights, 355–374 (2005).
[12] (1970) 2 SCC 298.
[13] AIR 1918 SC 1944 SCC (3) 1.

violation of public law. In the case of *Kamla Devi* v. *Government of NCT of Delhi & Anr*,[14] where the State failed in the prevention of a terrorist attack, it was sufficient to highlight the inefficiency of the agencies of the state for protecting citizens. Payment of compensation by the State should not be limited to instances where there has been a violation of the Right to Life.

Therefore, the pertinent question here is that although Article 27 prohibits compelling people to pay any tax whose proceeds would be specifically appropriated towards financing the expenses for the promotion and maintenance of any religion or religious denomination, can it curb the State from spending public money for administrative purposes per se? Will the payment of compensation for reconstruction or repairing religious properties or properties belonging to religious denominations violate Article 27 or will they help the State to preserve the secular fabric of the nation and fulfill its duties towards the different religious groups? After providing the background in the first part, the second part of this research paper shall highlight the right of the citizens and religious communities to hold, manage and dispose of their property and be safeguarded by the State against any kind of deprivation without the authority of law. In the third part, the duty of the State and its failure to protect religious properties from destruction during civil disorders has been discussed which justifies the payment of compensation in such cases. The conflicting opinions and judicial trends regarding payment of compensation for restoration and reconstruction of religious properties in the light of the violation of Article 27 have been discussed in the fourth part. The author finally concludes that the State should award compensation for restoration and reconstruction of religious properties that are damaged during civil disorders and such payment will not be violative of Article 27. Rather, it will help the State to protect the secular fabric of the country.

II. RIGHT TO PROPERTY IN INDIA

Right to property in India has always been a focal point of debate and it has witnessed several phases and undergone many transitions and interpretations. India is a mixed economy and the right to property forms the foundation of many of our socio-economic

[14] *Kamla Devi* v. *Government of NCT of Delhi & Anr*., 114 DLT (2004).

and fundamental rights. The traces of property acquisition and holdings can be spotted from the very ancient times and the right to property has gained shape and prominence with the changing times. Jawaharlal Nehru in the Constitutional Assembly Debates mentioned that firstly, no person shall be deprived of his right to property except by authority of law, and secondly, the law should provide for the property and should either fix the amount of compensation or specify the principles under which or the manner in which the compensation is to be determined.[15] He also mentioned that it is presumed that the Parliament which represents the entire nation will not commit fraud on the Constitution and while enacting laws in relation to this will be very much concerned with doing justice to the individual as well as the community.[16] Property has been a very important determinant of a person's economic wellbeing since ages and its importance just continues to grow with time. The laws, ownership patterns, and even the very conception of the term property have been extremely dynamic in India.

India after gaining independence drafted a set of fundamental rights into its Constitution for its citizens which included the right to free speech and expression, peaceful assembly, to move freely throughout the country, association, to reside, and settle down in any part of its territory, to acquire, hold and dispose of property, to practice any profession or to carry on any occupation, trade or business.[17] Of all these rights, the right to property has been persistently attacked by the executive.[18] It was contended that the fundamental right to property would act as a hindrance in the path of socio-economic reforms and this was addressed and resolved during the tenure of the Janata Government by the 44th amendment of the constitution.[19] Pursuant to the amendment, Right to Property provided under Article 19 (1) (f) was removed from Part III of the Constitution and was placed in Part XII under Article 300A. Article 300A provides that "No person shall be deprived of his property saved by the authority of

[15] 'Constituent Assembly Debates on 10th September 1949, *available at*: http://cadindia.clpr.org.in/constitution_assembly_debates/volume/9/1949-09-10 (last visited on July, 10th 2022).
[16] *Ibid*.
[17] Sony Pellissery, Benjamin Davy, *et. al.* (eds.), *Land Policies in India* (Springer Nature, Singapore, 2017).
[18] Jaivir Singh, "(Un)Constituting Property: The Destruction of the 'Right to Property' in India" Centre for the Study of Law and Governance, Jawaharlal Nehru University, New Delhi, CSLG/WP/ 05 (2004).
[19] *Ibid*.

law".[20] It is pertinent to note that despite this amendment, it was ensured that the rights of religious minorities to establish, hold, manage their properties remained unaffected and continued to find their place in Part III of the constitution. The Right to property enshrined under Article 300A of the Constitution is a constitutional right which affords it higher degree of protection than statutory rights. However, as Right to property has been brought outside the ambit of Part III of the Constitution, it is no longer a part of the basic structure or the fundamental rights that are guaranteed under the Constitution of India. In this case, if a person's right to property is violated, he is no more competent to file a petition directly to the Supreme Court under Article 32 rather he shall be entitled to a remedy under Article 226 of the Constitution or any other civil court. Article 300A of the Indian Constitution states any person shall not be deprived of his property except by the authority of law. Hence, a person can be deprived of his right to property only by the authority of law and nothing else. The term 'law' which has been used under Article 300A shall mean a valid law and such law will be subjected to the other provisions of the Constitution.[21] In an ordinary sense, it should be interpreted as a positive or state-made law made in conformity with the other provisions of the Constitution.[22] In the case of *Jilubhai Nanbhai Khachar* v. *the State of Gujarat*, the Supreme Court held that the word 'law' used in Article 300A must be an "Act of Parliament or State Legislature, rule or statute having the force of law." Article 300A does not expressly confer the right to acquire, hold or dispose of the property but it states that if a person has already acquired or holds the property, he cannot be deprived of it without the authority of law.[23] The law which would be authorizing any deprivation of property must be passed by the proper authority of law and it should be affecting adversely any of the fundamental or constitutional rights in any manner which is not specified by law.[24] The right to property under Article 300A not just safeguards citizens but it is available to all persons which include both natural as well as legal persons.[25] The law authorizing deprivation of property in this regard shall be fair and

[20] The Constitution of India, art. 300A.
[21] *Ibid*.
[22] *Ibid*.
[23] *Ibid*.
[24] *Ibid*.
[25] *Ibid*.

just and as per the decision of the Supreme Court in *Maneka Gandhi* v. *Union of India*, the term 'law' as interpreted under Article 21 shall be the guiding star for the Supreme Court for determining the validity of any law under Article 300A.[26] Public purpose is a pre-condition for deprivation of a person from his property under Article 300A and the right to claim compensation is also inbuilt in that Article.[27] Therefore, it is absolutely an undeniable fact that deprivation of property without satisfying these restrictions should be reasonably compensated for ensuring justice and equity in society.

Further, Article 26 under Part III of the Constitution also provides the right to hold, acquire and administer their property in accordance with the law to the religious denominations. Article 26 is the right of an organized body like a religious denomination. According to Webster's dictionary, 'denomination' means a "collection of individuals, classed together under the same name." It generally means a religious sect or body having a common faith and organizations and designated by a distinctive value. Under clauses (c) and (d) of Article 26, the right has been given to the religious denominations to acquire and own property in accordance with the law. Although the right to administer its property by a religious denomination can be regulated by law for improving the administration of property and better utilization of the endowment property but it cannot be destroyed or taken away completely. Article 30(1)(a) of the Constitution of India states that in case of any compulsory acquisition of property which belongs to an educational institution or a linguistic minority, the compensation paid in such cases should in no way restrict or infringe the rights which have been guaranteed to that minority under Article 30(1).

As opined by Jaspat Roy Kapoor during the Constitutional Assembly Debates, for successful realization of the right of free profession and propagation of religion, there must be a corollary right to establish and maintain religious institutions by the religious denominations.[28] It was also emphasized by Tajmul Hussain that this Article shall provide the right to have its own private institutions to everybody irrespective of what

[26] *Ibid*.
[27] *K.T. Plantation Pvt. Ltd. & Anr*. v. *State of Karnataka*, CA 6520 SC (2003).
[28] Constituent Assembly Debates on 6th December, 1948, *available at*: http://cadindia.clpr.org.in/constitution_assembly_debates/volume/7/1948-12-06 (last visited on July, 10th 2022).

religion that person belongs to or professes.[29] Article 26 provides in positive terms that every religious denomination or any section thereof shall have the right to own, acquire and administer property in the same manner as any other individual or person.[30] Their rights shall not be restricted except in the interests of public order, morality, and health.[31] Article 26 speaks of not only a religious denomination but also a section thereof, thus, religious institutions like 'maths' or the spiritual fraternity represented by it shall also fall within the ambit of this Article.[32] Article 25 (1) guarantees the freedom of conscience and the right to profess, practice and propagate religion and Article 26 is essential to give effect to such right.[33] It is complementary to the right guaranteed under Article 25 (1) of the constitution.[34] The right under Article 26 has been provided to religious denominations irrespective of whether it is a majority or a minority religious denomination.[35] Part III contains fundamental and inalienable rights which require the highest threshold of protection by the State and any violation of Article 26 would invoke the right to seek constitutional remedies for its restoration. India is a nation that is home to a very diverse population, therefore to give effect to Article 25 which guarantees the right to religion and for fulfilling the very basic objective of the State to maintain its secular character, preservation, and protection of rights guaranteed Article 26 becomes fundamental.

The 42nd Amendment Act, 1976 inserted the word “secular” in the Preamble of the Indian Constitution and it is one of the basic features of the Constitution.[36] It becomes the duty of the State to secure all its citizens liberty of thought, belief, faith, and worship. However, secularism doesn’t mean irreligious, but it simply means that the State shall remain neutral or unbiased in the matters of religion.[37] It should treat all religions equally and extend similar treatment towards churches, mosques, and

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[29] *Ibid*.
[30] *Laxminarayan Temple* v. *Laxman Mahadu Chandore*, 1968 SCC OnLine Bom 44.
[31] *Ibid*.
[32] *Subramanian Swamy (Dr.)* v. *State of Kerala*, 2011 SCC OnLine Ker 3692.
[33] *T.M.A Pai Foundation and Ors.* v. *State Of Karnataka and Ors*., (2002) 8 SCC 481.
[34] *Ibid*.
[35] *Ibid*.
[36] The Constitution (Forty Second Amendment) Act, 1976, *available at*: https://legislative.gov.in/constitution-forty-second-amendment-act-1976 (last visited on July 10th 2022)
[37] National Foundation for Communal Harmony, *Secularism and The Law*, (NFCH New Delhi, (2010).

temples. Therefore, while protecting religious property, the State must keep in mind that it must extend equal protection to the religious properties of each denomination. Moreover, protection of properties belonging to religious denominations is essential to maintain secularism and effective administration by the State by fulfilling its duties towards its citizens.

The Supreme Court reiterated in the case of *P.T. Munichikkanna Reddy* v. *Revamma* that Right to property is not merely a statutory right but it is also a Human Right.[38] The Declaration of the Rights of Man and of the Citizen 1789 enshrines the right to property under Article 17 as an inviolable and sacred right and no one should be deprived of his or her property unless there is a public necessity.[39] It is a legally ascertained right and no one shall be deprived of their property unless just and prior indemnity has been paid.[40] The Universal Declaration of Human Rights 1948 recognizes the right to property under Article 17(i) and (ii). It states that everyone has the right to own property alone as well as in association with others and no one shall be arbitrarily deprived of his property. India is a signatory to various international agreements and treaties on human rights. Article 51 of the constitution as a part of Directive Principles of State Policy requires the state to foster respect for international obligations. Right to property can be interpreted as a part of human rights as enshrined under Article 21.[41] Any act or legislation causing deprivation of such right would place the state under the obligation to provide full compensation to the aggrieved.[42]

Therefore, religious property is "property" in India and is entitled to the protection of the State like any other property. The State is under the obligation to protect and preserve the right to property of persons in India and take the liability for any failure on its part to do so. The state should provide compensation for damage caused to religious properties during civil disorders.

The rule of law is one of the basic structures of the Constitution of India which puts the State under a duty to ensure equality of law and equal protection of law to all its

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[38] (2007) 6 SCC 59.
[39] Declaration of the Rights of Man and of the Citizen, 1789, *available at*: https://avalon.law.yale.edu/18th_century/rightsof.asp (last visited on July 10th 2022).
[40] *Ibid*.
[41] 2007(2) SCR 980; 2007(10) SCC 448; 2007(3) SCC 349.
[42] *Ibid*.

citizens. It also enjoins responsibility upon the State to protect life and property of all citizens. In case, there is a failure on the part of the State in performing its duties, it must compensate the citizens and uphold the rule of law in the society. The State cannot be put over and above law and the supremacy of law and justice should prevail in a democracy like India. During civil disorders like riots and communal violence, if the religious properties or properties belonging to religious minorities are destroyed, it showcases a failure on the part of the State to provide protection and maintain law and order effectively. The State in such situations also fails to protect the human rights as well as the fundamental rights of the religious minorities. Therefore, India being a country which breathes secularism and where rule of law is considered to be a basic feature of its constitution, it should be the prerogative of the State to provide compensation to the citizens for the destruction or damage that is caused to the religious properties due to the failure on the part of the State to perform its duties.

III. FAILURE OF THE STATE MACHINERY DURING CIVIL DISORDERS AND COMMUNAL RIOTS

Article 355 of the constitution has the provisions for framing rules to empower the central government to take preventive action to check communal riots. India is a member of the United Nations and the United Nations Declaration on Religious Minorities proclaims that the persons belonging to the national, ethnic, religious, or linguistic minorities possess the right to enjoy their own culture and profess as well as practice their religion without interference or any form of discrimination.[43] India is a signatory to the Universal Declaration of Human Rights (UDHR) and it falls under the international obligation of India to respect and uphold the basic intrinsic human rights enshrined in the document. Article 17 of the UDHR mentions that "everyone has the right to own property alone as well as in association with others and no one shall be arbitrarily deprived of his property." According to the definition as provided under the Human Rights Protection Act, 1993, human rights refer to the "rights relating to life, liberty, equality and dignity of all individuals guaranteed by the Constitution or embodied in the international covenants and enforceable by the courts of India."

[43] United Nations Declaration on Religious Minorities, 1992, Article 2(1).

Therefore, it becomes the prerogative of the State to protect the properties including religious properties from getting damaged or destructed during civil disorders. Victims of communal violence and civil disorders in India suffer mass violations of globally recognized human rights including the right to life, property, and religion.[44] These violations result in not only violations of human rights but also fundamental, constitutional, and various legal rights which are guaranteed to the citizens of India under the constitutions and various other statutes.[45] Article 38(1) of the Constitution of India mentions that the state shall strive to promote the welfare of people by securing and protecting a social order in which justice – social, economic, and political, shall inform all institutions of the national life. These Directive Principles of State Policies are essential for good administration and governance. The state must adopt several means and measures for achieving these cherished objectives.

Chapter X of the Criminal Procedure Code, 1973 contains provisions for the maintenance of public order and tranquility. It puts every public servant under the duty to take all reasonable steps to prevent any act of communal and targeted violence including its build-up, incitement, outbreak, and spread.[46] It further mentions that every police officer and public servant shall act to the best of his or her ability, without delay and in a fair, impartial, and non-discriminatory manner to prevent the commission of all offences as mentioned under the Code of Criminal Procedure.[47]

Article 1 of the Code of Conduct for law enforcement officials reads that law enforcement officials "shall at all times fulfill the duty imposed upon them by law, by serving the community and by protecting all persons against illegal acts, consistent with the high degree of responsibility required by their profession." Further, in Article 2 of the code it is mentioned that while performing their duty, the officials shall respect and protect human dignity and maintain and uphold the human rights of all persons.

A working group of the National Integration Council was constituted by the Ministry of Home Affairs to study the reports of the Judicial Commissions and Inquiry

[44] AG Noorani, "Riots and State Responsibility Published" *Economic and Political Weekly* (2018).
[45] *Ibid*.
[46] Criminal Procedure Code, 1973 (Act 2 of 1974).
[47] *Ibid*.

Commissions on Communal Riots and prepare a detailed report in the year 2007.[48] The Report tried to ascertain the causes of riots, the effectiveness of action taken by the administration, and recommended remedial measures to prevent their recurrence.[49] A significant trend which was noticed regarding police action was that the strength of police was not adequate in numbers to combat the situations and they often used quite outdated equipment to tackle the situations.[50] It was also noticed that police officers and constables were not tolerant and did not have a secular attitude in adverse situations of communal violence.[51] Commissions of inquiry have also mentioned that the police stations did not keep an up-to-date record of communal goons and anti-social elements and failed to communicate with the larger proportion of the population for not being conversant with the local language.[52] In some cases, there was unnecessary delay and inaction on part of the Police.[53] The police administration in various cases has failed to set up the routes for procession such as Ganesh Chaturthi or Durga puja though safer areas where it would cause less inconvenience to traffic.[54]

The report further mentions that it is essential to improve intelligence inputs.[55] Generally, the organizational sources of intelligence form the primary source of intelligence, but this traditional intelligence gather approach has failed to keep with the changing dynamics.[56] Therefore, it becomes necessary for the District Magistrates and Police to develop their sources of intelligence to cope with the rising communal problems. These problems generally arise from the grass-root level and this calls for developing a system of joint intelligence machinery at the district as well as the State level by bringing together the officers of the revenue department, the police, and also the departments of the central government such as customs, post, and telegraphs, telecommunications, etc.[57] This will lead to effective surveillance at all levels and keep

[48] Report of Working Group Of National Integration Council to Study Reports of the Commission of Inquiry on Communal Riots (2007), *available at*: https://mha.gov.in/sites/default/files/NIC-W-Group.pdf (last visited on July 10th 2022).
[49] *Ibid*.
[50] *Ibid*.
[51] *Ibid*.
[52] *Ibid*.
[53] *Ibid*.
[54] *Ibid*.
[55] *Ibid*.
[56] *Ibid*.
[57] *Ibid*.

a closer check on the movement of commodities, people, funds, explosives, mail as well as frequency to telephonic messages.[58]

In a 2008 judgment issued by the Supreme Court in the case of *Harendra Sarkar* v. *the State of Assam*,[59] an instructive list of "broad principles" about state complexity was mentioned. These continue to be the common features of the experiences of minorities about communal violence in India. It was noticed that the police officers deliberately made no attempt to prevent the collection of crowds and only half-hearted attempts are made to protect the life and property of the minority community. It was further noticed that the police harassed the victims further instead of picking up the assailants and showed reluctance in registering cases against them. Mr. V.N. Rai, an ex-Indian Police Service officer in his study on the role of police in Hindu-Muslim violence during pre as well as post-independent India, found that on every occasion the police had failed in their primary duty, whether it was when Sikhs massacred all over the country in 1984 or when the Babri Masjid was demolished in 1992. The report presented by The National Human Rights Commission on the Godhra Riots in 2002 reiterates that the State's responsibility is not only to protect the rights of the citizens but also to prevent their violation.[60] The Commission found that there was a serious failure of intelligence and action by the state government and the onus of responsibility to explain these lapses lies with the State.[61] Also, the PUCL report which was presented to the National Human Rights Commission regarding the Godhra Riots mentioned that as an aftermath of the violence, poor and middle-class Muslim minorities had been rendered homeless, over 15 mosques, dargahs and Muslim monuments had been destructed in Vadodara alone and at least 100 Muslim shops and establishments were attacked, destroyed looted and burnt.[62] In the report by The SAHMAT, Delhi on the ethnic cleansing in Ahmedabad in 2002, they have highlighted the incident of mass looting, ransacking, and destruction of life and properties.[63] Muslim commercial and

[58] *Ibid*.
[59] AIR 2008 SC 2467.
[60] "From Right-Wing to Riot-Wing: Genocide in Gujarat" *available at*: http://www.unipune.ac.in/snc/cssh/HumanRights/07 STATE AND GENDER/25 (pages001to170).pdf (last visited on July 10, 2022).
[61] *Ibid*.
[62] *Ibid*.
[63] *Ibid*.

residential properties were exclusively selected, ransacked, and destroyed.[64] It was estimated that 70,000 Muslims were rendered homeless and there was extensive destruction of mosques, dargahs, and historical monuments. In Ahmedabad alone, 20 mosques were decimated and a 500-year-old masjid in Isanpur, which was an ASI monument was completely demolished.[65] Through all these reports and studies, it becomes evident that without serious lapses on part of the State administrative machinery, mass destruction of religious properties is not possible. There is complete breakdown of State machinery during civil disorders which not only deprives persons of their right to property, but also results in violation of basic human and fundamental rights of people belonging to various religious communities. This brings us back to our primary question as to why the State should compensate for such losses. In the case of *Nagendra Rao & Co and Common Cause* v. *Union of India,*[66] the Supreme Court observed that no legal or political system can place the State above law and it is highly unfair and unjust to deprive a citizen of his property due to the negligent act of the officers of state without providing him any remedy. With the changing times, more emphasis should be laid on liberty, equality, and rule of law instead of sovereign immunity.[67] There should be no watertight compartmentalization for classifying the functions of the State into sovereign and non-sovereign or governmental or non-governmental and in this regard, the rights of the citizens should not be overshadowed by the sovereign immunity of State.[68] The needs and functions of the State, the duty of its officials as well as the rights of the citizens are to be reconciled as a whole to maintain rule of law which is part of the basic structure of the State.[69] India, being a welfare state cannot claim immunity in the performance of primary and inalienable functions of the State such as administration of justice, maintenance of law and order, repression of crime, etc. Hence, the State should award compensation for its failure to protect the life and property of persons during civil disorders.

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[64] *Ibid*.
[65] *Ibid*.
[66] *N. Nagendra Rao & Co.* v. *State of A.P.*, AIR 1994 SC 2663.
[67] *Ibid*.
[68] *Ibid*.
[69] *Ibid*.

IV. JUDICIAL OPINION ON PAYMENT OF COMPENSATION FOR RESTORATION AND RECONSTRUCTION OF RELIGIOUS PROPERTIES IN LIGHT OF VIOLATION OF ARTICLE 27

The Draft Article 21, which is now Article 27 in the present Constitution, was introduced in the Constituent Assembly on the 7th of December 1948.[70] It was decided that making religious property and other aspects of promotion and maintenance of religion tax-free was crucial in maintaining equality among religions.[71] Article 27 clearly provides for the separation of religion and the State by prohibiting the imposition of taxes whose proceeds shall be specifically appropriated for promotion or maintenance of a particular religion. In other words, the State is barred from spending public money collected by way of taxes for the promotion or maintenance of any particular religion.[72] It prevents the State from discriminating against one religion or religious denomination over the other. The State can however spend public money for the promotion and maintenance of all religions or religious denominations.[73]

For understanding Article 27 and its objective, it becomes necessary for us to understand the relationship between religion and State in India. The concept of secularism in India is very different from the concept of secularism in western countries like the USA. The reason behind this is the religious and cultural diversity in India. The literal meaning of the term "secular" as per the Oxford Dictionary is "not related to religious or spiritual matters".[74] But can we use such an interpretation for a country like India? Rather in the Indian context, secularism is understood to mean "*Pantha nirapeksh*" which means neutral or unbiased towards all denominations. It means that the State should not discriminate between denominations on religious grounds.

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[70] Constituent Assembly Debate on 7th December 1948, *available at*: http://cadindia.clpr.org.in/constitution_of_india/fundamental_rights/articles/Article 27 (last visited on July 10, 2020).
[71] *Ibid*.
[72] Subrata Kumar Mitra, "Desecularising the State: Religion and Politics in India after Independence" 33 Comparative Studies in Society and History 755 (1991).
[73] *Supra* note 7.
[74] "Secular", Definition of Secular in English by Oxford Dictionaries https://en.oxforddictionaries.com/definition/secular.

Justice Jeevan Reddy opined that while the citizens of India are free to profess, practice, and propagate any religion, faith, or belief as they choose, for the State, the religion, faith, or belief of a person should be immaterial.[75] To it, all should be equal and all are entitled to be treated equally.[76] As per his views, secularism is thus more than a passive attitude of religious tolerance. It is a positive concept of equal treatment of all religions.[77] In the opinion of Lakshmi Kanta Maitra, secularism means that the state is not going to make any discrimination on the ground of religion against any person or any community professing any particular form of religious faith and the State should not deny any person the right to practice and propagate any religion.[78]

India is a secular state but it does not mean that the state has no say whatsoever in the matters of religion. In *S.P. Mittal* v. *Union of India*, it was held that laws can be enacted to regulate secular affairs of temples, mosques, *maths*, and other places of worship.[79] In S*.R. Bommai* v. *Union of India*, it was held by the Supreme Court that there cannot be a wall of separation between the State and religion in India as it is mentioned under the American Constitution.[80] In *Kidangazhi Manakkal Narayanam Nambudiripad* v. *State of Madras*, Justice Venkatarama Aiyar opined that it is difficult to adopt the theory of wall of separation between the State and religion as followed in America as in that case the State should have nothing to do with religious institutions and endowments and followed the approach as held in the S.R. Bommai case in this regard.[81]

For understanding the state's role and participation in the "matters of religion," we must understand what constitutes "matters of religion". There is no explicit definition of the term 'religion' in the Constitution. It is a term which cannot be provided with an exhaustive definition. Religion can be mostly regarded as a matter of faiths and beliefs of individuals or communities. It contains within its purview a system of beliefs, ideals,

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[75] *Supra* note 32.
[76] *Ibid*.
[77] *Ibid*.
[78] Constituent Assembly Debate on 7th of December, 1948 *available at* http://cadindia.clpr.org.in/constitution_of_india/fundamental_rights/articles/Article 27 (last visited on July 10th 2020).
[79] *Supra* note 32.
[80] *S.R. Bommai* v. *Union of India*, AIR 1918 SC 1994.
[81] AIR 1954 Madras 385.

observances, and ceremonies, rituals which are followed by the individuals or communities who practice such religion. The Constitution under Article 25 does not only protect freedom of religion but also protects the right to practice it.[82] Secularism in India doesn't only mean that the state will have no religion as the State religion but it also means that the state will not interfere with the fundamental right of the persons to practice and propagate any religion subject to public order, health and morality and it will in no way favour one religion over the other. [83] In the absence of clear and codified laws about award of compensation in matters involving the violation of Article 27, one has to rely completely on the Judiciary for justice. The interpretation of Article 27 by the judiciary becomes an important factor in the award of compensation by the State from the public funds for reconstruction or restoration of properties including religious properties.

The judgment in the matter of *The State of Gujarat* v. *I.R.C.G* dated 29th of August, 2017, the Supreme Court reversed Gujarat High Court's order to provide compensation to the aggrieved parties whose properties were destroyed in the Gujarat Riots as it found it to be violative of Article 27 of the Indian Constitution.[84] In this case, the respondent, i.e., I.R.C.G. had approached the Gujarat High Court for claiming compensation for the damage and destructions caused to the religious places of worship such as mosques, dargahs, graveyards, khankahs etc. during the Gujarat communal riots in 2002.[85] The respondent contended that there was a failure on the part of the State Government in maintaining law and order during that period which led to such massive damage and destruction of properties.[86] The Gujarat High Court passed an order directing the State government to award compensation in favour of persons in charge of all the religious places of worship which were damaged during the communal riot for the restoration of those properties to the original position as those existed on the date of destruction.[87] It also directed that the persons in charge of those

[82] The Constitution of India.
[83] *Ibid*., Art.25.
[84] *State of Gujarat* v. *Islamic Relief Committee of Gujarat*, (2018) 13 SCC 687.
[85] *Ibid*.
[86] *Ibid*.
[87] *Ibid*.

places should be reimbursed the amount spent for the restoration of those places on the production of evidence of the expenditure incurred by them.[88]

The State of Gujarat appealed against this judgment of the High Court and contended that such compensation will be against the concept of secularism.[89] The bench comprising of Dipak Misra, CJ, and PC Pant, J set aside Gujarat High Court's order to provide compensation to the persons who are in charge of all religious places including places of worship that were damaged or destructed during the communal riots for the restoration of those properties to their original position as those existed before the incident.[90] Additional Solicitor General Tushar Mehta argued that the state fund comprised of payments of various taxes by citizens and thus the Court cannot direct the State to spend any amount from it for the restoration or reconstruction of any religious places by issuing a writ under Article 226 of the Constitution.[91] He also contended that what is protected under the Constitution is the right to profess, practice, and propagate religion but that does not include the right to profess, practice, and propagate religion from any particular place.[92] Moreover, in case of the damage to properties, the alleged deprivation is that of "Right to Property" and thus such deprivation may give rise only to a civil cause of action for damages by aggrieved parties only and the High Court shouldn't have exercised its jurisdiction under Article 226 for awarding compensation, which is a public law remedy.[93] The issue of any writ having the effect of utilisation of the taxpayers money for the repair, restructuring, or reconstruction of any religious place of worship would be hit by Article 27 of the Constitution and offend the secular fabric of the Constitution.[94]

Looking deeper into this judgment, it makes one think whether the State can absolve itself from paying compensation for reconstruction or restoration of religious properties to their previous condition which were damaged and destructed during civil disorders? Does Article 27 places an absolute prohibition on the State from spending public funds or would payment of compensation for restoration and reconstruction of

[88] *Ibid*.
[89] *Ibid*.
[90] *Ibid*.
[91] *Ibid*.
[92] *Ibid*.
[93] *Ibid*.
[94] *Ibid*.

religious properties result in unjustifiable promotion and maintenance of a religious community and harm the secular thread of the nation? For further analysis on this subject matter, the following judgments pronounced over the years in matters pertaining to article 27 can be referred to.

In *Mahanagar Gaziabad Chetna Munch* v. *State of U.P*, the question arose whether Article 27 can limit the State's freedom in utilising its funds.[95] The Allahabad High Court was confronted with an issue regarding the legality of a decision of the State of U.P. to lease out a piece of land to the Haj Samithy of U.P. for a period of 30 years and also the payment of Rs 2 crores from the State fund for the construction of the Haj House.[96] It was held by the High Court that the promotion or maintenance of a particular religion or a religious denomination by the state and the "administrative exigency" to protect the interest of a citizen belonging to one religion of a secular state are two distinct features.[97] It is true that no person can be compelled to pay taxes for the promotion of any religion and the State cannot utilise funds for promotion and maintenance of any religion but there cannot be a bar on the State to carry out administration in a manner to protect the interest of the practitioners of one religion as they are the citizens of a secular state.[98] Administrative action cannot be regarded as religious action for its promotion and maintenance.[99] Therefore, the State can spend public money in cases which are justifiable and necessary to fulfill its administrative responsibilities and the State can't be prevented from doing so by invoking Article 27.

In the case of *Vijay Harishchandra Patel* v. *Union of India*, the Gujarat High Court observed that the State's endeavor to improve health, family welfare, safety, recreation and general wellbeing of the citizens of the minority community may indirectly impose a burden on the State exchequer but such actions of the state cannot be held to be patronizing any particular religion.[100] Funds utilised by the State for the improvement of basic amenities, infrastructural facilities, health, literacy, wellbeing, safety etc. would not violate Article 27 as the funds are not being used for "inculcating any religion

[95] 2007 (2) AWC 113.
[96] *Ibid*.
[97] *Ibid*.
[98] *Ibid*.
[99] *Ibid*.
[100] (2009) 3 GLR 2153.

or advancement of any particular religion affecting the constitutional requirement of neutrality."[101] The spending of money from the State exchequer on an activity which has a basis in some religion will not per se violate Article 27. To attract Article 27, the State action must be such that it would amount to intentionally and directly promoting or maintaining any particular religion or religious denomination. Thus, Article 27 cannot be a tool for restricting the State from fulfilling its welfare objectives.

In *Prafull Goradia* v. *Union of India*, it was observed that there can be two views about Article 27.[102] According to the first view, Article 27 gets attracted only when the statute by which the tax is being levied specifically mentions that the proceeds of the tax will be utilised for the promotion and maintenance of a particular religion.[103] As per the second view, Article 27 will be attracted even when the statute levying the tax is a general statute like the Income Tax Act or the Central Excise Tax Act, or the Sales Tax Act which specifically does not mention the purpose for which the proceeds shall be utilised but a "substantial part of such proceeds is in fact utilised for a particular religion".[104] The Supreme Court while considering the constitutionality of the Government of India's granting subsidy in the airfare of Haj Pilgrims specifically in the context of Article 27 in this case, held that Article 27 would be violated if the substantial part of the entire income tax, central excise tax, customs duty, sales tax or any other tax collected in India would be utilized for the promotion or maintenance of any particular religion or religious denomination i.e., suppose "25 percent of the entire income tax collected in India was utilized for promoting or maintaining any particular religion or religious denomination, that, in our opinion, would be violative of Article 27 of the Constitution".[105] This judgment tried to provide insights on the subject matter as to what amount of proceeds can be spent towards a religious denomination that would not be considered as violative of Article 27. Although, it is difficult to have a watertight formula for the same, but from the judgment it is clear that there is no absolute bar on the State for allocating funds towards a religious denomination as long

[101] *Ibid*.
[102] *Supra* note 7.
[103] *Ibid*.
[104] *Ibid*.
[105] *Ibid*.

as it is not substantial. The spending should be reasonable, unbiased and in tandem with the Secular culture of our country.

It was pointed out by the Supreme Court in *Ramana Dayaram Shetty* v. *The International Airport Authority of India* that "The constitutional power conferred on the government cannot be exercised by it arbitrarily or capriciously or in an unprincipled manner, it has to be exercised for the public good.[106] Every activity of the government has a public element in it and it must, therefore, be informed with reason and guided by public interest.[107] Every action taken by the government must be in the public interest; the government cannot act arbitrarily and without reason and if it does, its action would be liable to be invalidated."[108]

The petitioner in the case of *K. Reghunath* v. *State of Kerala and Anr.* filed a writ petition in the High Court of Kerala for the issuance of a writ of mandamus or other appropriate writ, direction or order directing the State of Kerala as well as the District Collector of Cannanore to abstain from spending any amount from the public funds of the State of Kerala to reconstruct the places of worship destroyed during the recent disturbances at Tellicherry and the villages nearby.[109] In the said disturbances between Hindus and Muslims, some shops, buildings, and places of worship of both the sects were destroyed.[110] As a result, the government started relief measures and a sum of Rs 25,000/- was sanctioned form the Distress Relief Fund for distribution of ad hoc grants to those who were rendered homeless and to those whose houses were damaged.[111] The government also made arrangements for the free supply of one week's ration to the affected families.[112] Ultimately, the government vide an order dated 13th January 1972 provided that the cost of reconstruction or repairs for the restoration of religious and educational institutions to the condition existing prior to the incident shall be met by the government and for this, an additional contribution of Rs 10,00,000/- was sanctioned to the Distress Relief fund.[113] The question arose whether such costs

[106] AIR 1979 SC 1628.
[107] *Ibid*.
[108] *Ibid*.
[109] *K Reghunath* v. *State of Kerala and Anr*, AIR 1974 Ker 48.
[110] *Ibid*.
[111] *Ibid*.
[112] *Ibid*.
[113] *Ibid*.

sanctioned by the government for the repairs and restorations of religious and educational institutions would violate Article 27 of the Constitution.

The State filed a counter-affidavit stating that the damage or destruction that occurred wasn't confined to the houses or places of worship belonging to the members of any one religion or religious denomination rather it was general and quite widespread.[114] It was also contended that the amount sanctioned by the state government was for the repair and restoration of the properties to the condition existing before the incident and in assessing the damage, the cost of such repair or restoration would act as a guiding factor.[115] And lastly, the Constitution under Article 27 prohibits the "specific appropriation" of the proceeds of any tax for financing the expenses for promotion or maintenance of any religion or religious denomination but in the present case "there is no question of favoring of one religion or religious denomination."[116] It does not preclude the application of the general revenues of the state in payment of expenses for the promotion of any religion or religious denomination.[117]

The Court also referred to the *The Commr. Hindu Religious Endowments, Madras* v. *Sri. Lakshmindra Thirtha Swamiar of Shirur Mutt* Case, where Justice Mukherjee observed that: "What is forbidden by the Article is the specific appropriation of the proceeds of any tax in payment of expenses for the promotion or maintenance of any particular religion or religious denomination.[118] The reason underlying this provision is obvious. Ours being a secular state and there being freedom of religion guaranteed by the Constitution, both to individuals and groups, it is against the policy of the Constitution to pay out of public funds any money for the promotion or maintenance of any particular religion or religious denomination."[119]

Therefore, summing up the guiding points provided by the judiciary in the abovementioned cases, we can say that what is forbidden under Article 27 is the

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[114] *Ibid*.
[115] *Ibid*.
[116] *Ibid*.
[117] *Ibid*.
[118] *Sri Lakshmindra Theertha Swamiar* v. *The Commissioner, Hindu Religious Endowments, Madras*, AIR 1952 Mad 613, IMLJ 557 (1952).
[119] *Ibid*.

"specific appropriation" of the proceeds of the taxes or compelling a person to pay a tax whose proceeds are "specifically appropriated" for maintaining or promoting a religion or religious denomination.[120] But, it does not per se prohibit the state from utilising its funds for the welfare of any religion or religious denomination.[121] In *Archbishop Raphael Cheenath S.V.D.* v. *the State of Orissa and Anr* the petitioners highlighted the failure on the part of the Government of Orissa in maintaining law and order and providing protection to innocent people from communal violence and human rights violations.[122] The NHRC visited the state and reported that if the deployment of the forces had been done proactively by the state, the damage to life and property could have been controlled.[123] The Supreme Court mentioned that the index level of civilization and the catholicity of a nation are very much determined by how far the minorities feel safe and are not subject to any discrimination and suppression.[124] The court thus emphasized the creation of an atmosphere where there shall be complete harmony between the groups of people and the State must have discussions with the various groups to bring about peace and provide the required help to the victims.[125]

The judiciary thus has not placed any fetters on the State to spend public money for fulfilling its duties as a welfare state even if it has resulted in upliftment of a religious or linguistic minority community or providing compensation where it has failed to protect the life and property of persons as long as it is within the basic structure of our Constitution.

V. CONCLUSION

Therefore, all persons and religious communities have the right to property and the State must protect their rights. The State fails in its duties when the persons and religious communities are deprived of their property owing to violence and destruction during civil disorders. There are conflicting opinions regarding payment of compensation from the State Funds for restoration and reconstruction of religious

[120] *K. Reghunath* v. *State of Kerala and Anr*., AIR 1974 Ker 48.
[121] *Ibid*.
[122] *Archbishop Raphael Cheenath S.V.D.* v. *State of Orissa and Anr*., (2016) 9 SCC 682.
[123] *Ibid*.
[124] *Ibid*.
[125] *Ibid*.

properties that get damaged or destructed during civil disorders. Although the Court has issued guidelines such as *In Re: Destruction to Public and Private Properties* v. *State of Andhra Pradesh*,[126] there is still a lot of vagueness and ambiguities in this area due to the absence of codified laws pertaining to the same. The compensation for damage and destruction of religious properties is often challenged to be violative of Article 27 of the Constitution. In such cases, the aggrieved parties have to rely on the interpretation of Courts and guidelines issued by it from time to time. However, the Court has made it clear through settled cases that any expenditure from Public Funds for religious purposes will not per se violate Article 27. What is prohibited under the provision is the levy of taxes whose proceeds shall be specifically appropriated towards the maintenance or promotion of any particular religion. Till the State is not discriminating between religious denominations or providing assistance for the welfare of religious denominations in its administrative capacity without utilizing a substantial portion of the taxpayers' money, Article 27 will not get attracted. Payment of compensation in these cases will not result in the promotion or maintenance of any religion or religious denomination. It will be paid for the restoration of properties to the condition in which they existed before the destruction or damage caused during the civil disorder.

Lacunae in the legal framework is always detrimental to the provision of justice and causes more hardships for the aggrieved parties. To provide effective remedies for the damage and destruction of public and private properties, especially religious properties that are ruthlessly targeted during civil disorders, there is a need for proper legal as well as institutional arrangements for expeditious disposal of these cases and a compensation regime. The State should devise a proper statutory framework and set up necessary institutions for dealing with the destruction of religious properties during civil disorders. It should bear the liability for failing to protect the life and property of persons during civil disorders and provide adequate compensation for restoration or reconstruction of the properties including the religious properties. All the three organs of the State should work collectively on the grey areas for eliminating the existing anomalies which are causing hindrances in the path of providing efficacious remedies

[126] *Destruction of Public & Private Properties, In re*., (2007) 4 SCC 474.

to the aggrieved persons. Payment of compensation is necessary for restoration and reconstruction of the properties and for providing justice to the persons who suffer hardships, losses, and vandalisms during civil disorders. Their rights under Articles 300A and 26 should be provided the highest degree of protection by the State. Compensation must be provided in any case of failure on the part of State administration and agencies which results in deprivation of the rights of persons, especially the rights that are categorized as basic and fundamental for human existence and find their place in the Constitution. Payment of such compensation shall neither be violative of Article 27 nor lead to any unreasonable promotion or maintenance of any religious community. Rather, denial of such compensation will create further agonies for persons and communities whose properties are damaged during civil disorders which is a great threat to the secular fabric of the country.

AGRICULTURAL BIOTECHNOLOGY: EXPLORING THE EXISTING LEGAL FRAMEWORK AND REGULATORY CHALLENGES IN INDIA

Faustina Saran[*]

Genetic engineering of plants is the latest technology to feed our burgeoning population. The demand for food is increasing, but arable land, water resources and soil quality are decreasing due to climate change, global warming, and pesticides use. The agricultural sector regularly needs technology to improve the quality and quantity of food supply. The modern agricultural biotechnology uses genetic engineering technology to improve nutritional value, crop productivity, and supports sustainable agriculture. The genetically modified (GM) crops have been engineered to contain traits from unrelated organisms that enable plants to be resistant to pests, extreme temperatures, drought, and diseases. However, it may also pose potential risks to human health, environment, and biodiversity. This article examines the myriad considerations of agricultural biotechnology that have become part of the aggrandized and trailblazing tool for plant breeding for a second green revolution in developing countries. It also evaluates the status of agricultural biotechnology in India, and the challenges faced by the Indian government, scientists, and farmer communities in implementing and growing GM crops in India. It also provides an extensive study of all the laws and regulations related to GM technology/crops in India and discusses the legal framework at the national and international level addressing concern on biosafety of newly developed GM crops and their impact on humans as well as animal health and biodiversity.

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I. INTRODUCTION

Climate change, world population, and pollution are the most significant challenges of today's world. The massive population on earth causes exploitation of renewable and non-renewable resources. Pollution causes a rise in greenhouse gas emissions[1] and an increase in the temperature. The global warming adversely effects physical environment and induces unpredictable rainfall, droughts, floods, new pests' infestation and diseases, which severely impacts agriculture sector and threaten food security. The world population is expected to exceed 10 billion by 2050,[2] and to feed such a huge world population and eradicate food insecurity, especially in the developing and underdeveloped countries, there is an exigency to promote sustainable agriculture.

Food production, affected by yield, especially in tropical and subtropical areas, declines due to an increase in average global temperature, which increases soil evaporation and soil erosion rate.[3] To eradicate hunger and strengthen food security, the current agricultural approaches need to be modified, and innovative agriculture techniques are needed for efficiently producing more food for the growing population.

The bio-technological development in the agriculture sector reduces the efforts and time involved in the production of the desired trait in the concerned crops, and increases the production of food, feed, and fibre. To thrive in extreme weather conditions and climate change, scientists developed stress-resistant plants with higher productivity in limited arable land and water resources. These genetically modified crops are produced by transferring desirable gene traits from one organism to another, where the

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[1] The primary greenhouse gases are- Carbon Dioxide, Methane, Nitrous Dioxide, Ozone, Chlorofluorocarbons (CFCs) and Hydrofluorocarbons (HFCs).

[2] World Population, *available at*: https://statisticstimes.com/demographics/world-population.php (last visited on July 10, 2022).

[3] Girija Prasanna Majumdar, *Vanaspati, Plants and Plant Life as In Indian Treaties and Traditions* 203 (University of Calcutta, 1927).

transferred gene may or may not be from the same or related species. The genetic modification of crops is an age-old technique known as selective breeding,[4] where only the best crops/animals are produced.[5]

In 1973, the first successful genetic engineering ('GE') or recombinant DNA ('rDNA') organism was developed, and after evaluating its pros and cons, the scientific community considered the need of regulating this novel technology. The meeting held in Asilomar, California in 1975 recommended the 'Voluntary Guidelines Regarding Biosafety of GE Plants /Animals'. Later in 1976, the 'Guidelines for Laboratory Work' issued by the US National Institute of Health ('NIH'), ensured that researchers are taking due care to 'contain' an organism that may pose risks to biodiversity and human health.[6]

The crop varieties developed using rDNA techniques in modern biotechnology are known as Genetically Modified Crops ('GM crops')/ Biotech Crops/ Transgenic Crops. The first commercial GM crops were planted in 1994, which are known as 'GM tomatoes flavr-savr'.[7] They were highly resilient and productive, even under abiotic/biotic stress and required fewer chemicals' sprays (pesticide and insecticide) in farming.[8] These GM plants can also be modified as alternative energy/biofuels resources and can be used for metals mining purposes (biomining of gold, copper) in the future.[9] The developing nations like India, Bangladesh, and Pakistan cultivate only a few GM crops and import a large number of GM-derived/processed foods and feeds, which raises various transboundary biosafety concerns because it is challenging to monitor biological science innovation and impossible to predict the future of live organisms. To address these biosafety issues, many international initiatives have been

[4] Nigel Halford (ed.), *Plant Biotechnology, Current and Future Application of Genetically Modified Crops* 6 (Wiley India Pvt. Ltd, Delhi Press, 2006).

[5] The wild varieties of cabbage domesticated and, by selective breeding, developed are kale, cabbage cauliflower, broccoli, and brussels sprouts.

[6] Contain or Containment means the action of keeping genetically modified organisms under control or within limits to prevent escaping.

[7] GM tomatoes are known as "Flavr Savr" or CGN-89564-2, It was produced by the Californian company Cal gene, and submitted to the U.S. Food and Drug Administration (FDA) in 1992, It has longer shelf life and stay fresh for a longer time than the regular tomatoes.

[8] Government of India, "Genetic Engineering Appraisal Committee" (Ministry of Environment, Forests & Climate Change) *available at:* https://geacindia.gov.in/ (last visited on July 10, 2022).

[9] Carlos A. Jerez, "Biomining of Metals: How To Access And Exploit Natural Source Sustainably", 10(5) *Special Issue: The Contribution of Microbial Biotechnology to Sustainable Development Goals* 1191-1193 (2017).

taken in the last two decades. The Food and Agriculture Organization (FAO) and the United Nations Environment Programme (UNEP) initiated various capacity building programs and developed biosafety regulations in developing countries.

India developed a separate Department for Biotechnology in 1986 and formulated the Rules in 1989.[10] India also ratified Cartagena Protocol on Biosafety ('CPB') for regulating the biosafety of Genetically Modified (GM) Organisms in 2003 with a set-up of a Biosafety Clearing House ('BCH') for facilitating the exchange of scientific, technical, environmental, and legal information. The Ministry of Environment, Forest, and Climate Change ('MoEF&CC') is a nodal ministry for regulating the biosafety of GMO/Biotech products along with the *Genetic Engineering Appraisal Committee* ('GEAC') and Cartagena Protocol under the Convention of Biodiversity ('CBD').

There are two schools of thought prevailing on GM/Biotech crops. The proponents support GM technology as a natural way to protect crops and biodiversity in extreme conditions, and against insects/pests with lower use of chemicals in agriculture with higher crop yield. In contrast, the other side has apprehension regarding this new technology and warns against the use of GM technology with a danger of tampering with nature and exploiting natural resources which might develop unknown and undiscovered risks in the distant future to biodiversity.[11]

II. THE APPROVED TRAITS OF GM CROPS IN VARIOUS COUNTRIES FOR FOOD, FEED, CULTIVATION, AND ENVIRONMENTAL APPROVAL

The GM crops were planted on a small scale in 1994 which increased to 191.7 million hectares in 2018.[12] There have been 4133 approvals granted by 67 countries (39 +EU 28) to GM crops for consumption and environmental release. The countries following the Cartagena Protocol on Biosafety only allow entry of approved GM events since some

[10] The Use, Import, Export and Storage of Hazardous Micro-Organisms/ Genetically Modified Organisms or Cell Rules, 1989 under the Environment Protection Act, 1986 (Act No.29 of 1986).
[11] Sandhya Anand, *Genetically Modified Crops Benefits at Glance* (Agrihortico CPL, 2017).
[12] ISAAA Inc., "Brief 54: Global Status of Commercialized Biotech/GM Crops in 2018: Biotech Crops Continue to Help Meet the Challenges of Increased Population and Climate Change" (ISAAA: Ithaca, NY, 2018) *available at*: https://www.isaaa.org/resources/publications/briefs/54/ (last visited on July 10, 2022).

countries have a lengthy and challenging process of approving unapproved GM crops (stacked events) for transboundary entry.[13]

Japan has approved the most significant number of GM events for import, followed by USA, Canada, South Korea. 231 events make maize the most approved crop in 30 countries, followed by 60 events for cotton in 24 countries, 41 events for canola in 15 countries, 48 events for potato in 29 countries, and 40 events for soybean in 29 countries.

The HT maize event NK 603 is the most approved crop (55 approvals in 26 countries +EU 28 countries), IR maize MON 810 (53 approval in 26 countries +EU 28), IR maize bt 11 (51 approvals in 25 countries +EU 28), IR maize TC 1507 (51 approvals in 24 countries +EU 28), HT maize GA 21 (50 approvals in 24 countries + EU 28),IR maize MON 89034 (49 approvals in 24 countries + EU 28), IR maize MON 88017 (42 approvals in 22 countries + Eu 28), herbicide-tolerant maize t 25 (41 approvals in 20 countries + EU 28), IR maize MIR 162 (41 approvals in 21 countries + EU 28). The HT soybean GTS40-3-2 (54 approval in 27 countries + 28 EU), HT soybean A2704 (43 approval + 28 EU), IR cotton MON 531 in (20 countries + EU 28). Brazil, Indonesia and Nigeria approved Beans, Sugarcane, and Cowpeas; Brazil also approved GM Eucalyptus.[14] In 2018, 191.7 million hectares of land and seventeen million farmers from 26 different countries[15] were involved in GM crop farming, with an 18.1 billion USD market turnover which is expected to be doubled in 2027.

The most dominant GM crops are soybean, maize/corn, cotton, and canola, soybean 52%, followed by corn 30 %, cotton 13% and canola 5%.[16] USA has the largest area in GM crop cultivation (38%), followed by Argentina, India, Canada, and China.[17] China ranks 5th in GM crops' commercialization, and it is expected to become the world's largest GM crops producer, since China has only 6% of fresh water and 7% of arable

[13] ISAAA Inc., "Pocket K No. 42: Stacked Traits in Biotech Crops" (ISAAA: Ithaca, NY, 2020), *available at*: https://www.isaaa.org/resources/publications/pocketk/42/ (last visited on July 10, 2022).
[14] progeny's means, descendant or the descendants of a person, animal, or plant or offspring.
[15] ISAAA Inc., "Pocket K No. 16: Biotech Crop Highlights In 2018" (ISAAA: Ithaca, NY, 2018), *available at*: https://www.isaaa.org/resources/publications/pocketk/16/ (last visited on July 10, 2022).
[16] Supra note 13.
[17] *Id.*

land globally, with 20% of the world population; and to feed all, it needs to develop its agriculture sector.

The first generation (1980) of GM crops were developed to reduce pests and pest damage. The insect-resistant IR technology (35%)[18] and herbicide-tolerant HT technology (65%)[19] are two types of commonly used GM traits in agriculture. The insect-resistant technology is based on reducing or controlling common pests of the crops by using the typical soil-based bacterium gene of *bacillus thuringiensis* (*bt*)where the bt genes control/reduce growth of European corn borer, the corn rootworm and different stem borers pests, and make these varieties of Bt cotton and Bt canola resistant to bollworm and budworm pests which are the predominant pests of tropical countries such as India, Pakistan, Bangladesh and Nepal.

Many traits like herbicide-resistant, viral resistant, pesticide-resistant, insect/pest resistant, drought tolerant, extreme temperature tolerant, and fortification with nutrients, vitamins and minerals are under research & development in GM technology.

[18] IR- Insect Resistant Technology.
[19] HT- Herbicide Tolerant Technology.

Table 1.[20] The Approved Traits of GM Crops in Various Countries for Food, Feed, Cultivation, And Environmental Approval

S.NO.	GM CROPS	TRAITS /USES	COUNTRIES WHERE APPROVED
1	Alfa-Alfa	Herbicide Tolerance (H.T.)	USA
2	Apple	Anti-Bruising and Anti Browning	USA
3	Beet Pepper	Virus Resistance	China
4	Canola	H.T. And Improved Protection Against Weeds	Canada, USA, Australia, Chile
5	Carnation	H.T. And Modified Flower Colour	Australia, Columbia
6	Cotton	H.T., Improved Insect Protection, And Improved Protection Against Weeds	Australia, USA, China, Mexico, South Africa, Argentina, India, Columbia, Burkina Faso, Sudan, Pakistan, Brazil, Myanmar, Paraguay, Costa Rica
7	Eggplant/ Brinjal	Insect Resistance (I.R.)	Bangladesh
8	Maize/ Corn	IR, H.T. For Efficient Weed Management	Canada, USA, Argentina, Brazil, South Africa, Uruguay, Philippines, Chile, Columbia, Honduras, Spain, Portugal, Cuba, Czech-Republic, Romania, Slovakia
9	Papaya	Virus Resistance	USA, China
10	Petunia	Modified Flower Colour	China
11	Poplar	IR	China
12	Potato	Improved Quality, Anti-Bruising and Anti Browning	USA
13	Soybean	Improved Insect Protection and H.T. For Efficient Weed Management	USA, Argentina, Canadá, Paraguay, México, Bolivia, Brazil, Chile, South Africa, Romania, Uruguay, Costa Rica
14	Squash	Resistance Against Viruses	USA
15	Sugar Beet	HT	USA and Canada

[20] ISAAA Inc., "GM Approval Database", *available at*: https://www.isaaa.org/gmapprovaldatabase/ (last visited on July 10, 2022).

16	Tomato	Delayed Ripening and Virus Resistance	China

III. THE REGULATIONS FOR BIOTECH/GM CROPS AT THE INTERNATIONAL LEVEL

The Biotech/GM crops are regulated by international bodies for research, trade, and transboundary transfer such as:

A. The World Trade Organization (WTO)

It controls barriers and facilitates international trade. It serves as a forum for negotiation, dispute settlement, and establishing trade rules. The Technical Barrier to Trade Agreement (TBT) and Sanitary and Phytosanitary Agreement (SPS) are two principal agreements related to GM crops.

B. The Codex Alimentarius

It is a subsidiary body of the FAO, WHO and a principal international body on food standards.[21] The codex' primary purpose is to guide, promote, and establish food rules to assist, harmonise, and facilitate international trade. The codex consists of a collection of food standards, guidelines, and recommendations. It also consists of a code of ethics that encourages food traders to adopt voluntary ethical practices to protect human health and ensure fair practices in the food trade.[22]

C. The Cartagena Protocol on Biosafety under the Convention on Biological Diversity (CBD)

It is a multilateral agreement covering the movement of LMOs across national boundaries that might harm biological diversity.[23] The protocol's main procedures are

[21] Carine Pionetti, "Transgenic Agriculture Reconsidered: Some Reflections" *Asian Biotechnology and Development Review* (2002).
[22] Food and Agriculture Organization, "Report on Codex Alimentarius International Food Standards" (United Nations).
[23] IISD Earth Negotiations Bulletin, "Summary of the UN Biodiversity Conference: 13-29 November 2018" (2018), *available at*: https://enb.iisd.org/events/2018-un-biodiversity-conference/summary-report-13-28-november-2018 (last visited on July 10, 2022).

advanced informed agreement procedure (AIA),[24] risk assessment, capacity-building, and public involvement, and biosafety clearinghouse for GMOs intended for direct use as food or feed.[25] This is the supplementary agreement to the Convention on Biological Diversity (CBD), adopted on 29 January 2000 and enforced on 11 September 2003. A total of 173 countries (2020) ratified or acceded to this protocol, including India which has been a party of CPB since 23rd January 2003. The CPB follows the rules and procedure for safe transfer, handling, focusing on regulating the transboundary movement of LMOs. The protocol consists of 40 Articles classified into four key elements of the procedure of transboundary movement of LMOs, risk assessment, risk management, handling, transport, packaging, identification, and information sharing. It comprises all the transboundary movement, transit, handling of LMOs (GM crops) that may harm biological diversity and human health. The LMOs are categorized in Cartagena protocol as:

1. LMOs used as a seedling, trees, animals for breeding, live fish, bacteria, or other micro-organisms (intentional use), including for direct use as food or feed, or the processing (corn, canola, and cotton agriculture commodities).
2. LMOs used in "contained use" are bacteria for a scientific laboratory experiment.
3. The LMOs used in the pharmaceutical sector for humans[26] or products derived from LMOs (like soyabean oil, corn flour) are exempted from the protocol (covered under other international agreements).

The specific procedure has been defined to introduce LMOs into the environment besides being subjected to an advanced, informed agreement (AIA) procedure, including direct use as food feed and processing (FFP). The documentation required for various LMOs, also all categories, required reference to a unique identifier code developed by the OECD (unique identifier code for the transgenic plant).

[24] Crop Life International, "Industry Engagement with Parties Contributes to Productive Negotiations Which Protect International Trade, Genetic Resources and Biodiversity" (2016), *available at*: https://croplife.org/wp-content/uploads/2016/12/MOP-8-Closing-Statement-FINAL.docx (last visited on July 10, 2022).
[25] Lim Li Lin, *Cartagena protocol on Biosafety* 407, (Tapir Academic Publishers, 2007).
[26] Product derived from LMOs are-processed food like Soya Bean Oil, Corn Flour.

The unique identification code can search biosafety clearinghouse for information about specific LMOs approved for commercial use. The unique identifier consists of an alphanumeric code along with transgenic plant developers, who are assigned a unique identifier code. The nine digits code is composed, separated by dashes (-), with 2 or 3 alphanumeric digits designated, applicant, and 5 or 6 alphanumeric digits to designate numerical digits for verification e.g., MON-008010-6M for MONSANTO YIELD-GRAD-MAIZE.[27]

D. The International Treaty on Plant Genetic Resources (ITPGR) on food and agriculture.

It is a multilateral agreement relating to any genetic material of plant origin of value for food and agriculture. In 2001 FAO adopted the International Treaty on Plant Genetic Resources for Food and Agriculture a legally binding instrument negotiated by the Commission and in 2010, the second report was published on the State of the World's Plant Genetic Resources, and it was adopted under the second Global Plan of Action (GPA) for Plant Genetic Resources for Food and Agriculture in 2011. In 2014, the State of the World's Forest Genetic Resources was published and the Global Plan of Action was developed for the conservation, sustainable utilization and development of forest genetic resources.

The FAO, with 197 members states has the principal role in developing international programs for the conservation and sustainable use of agriculture biodiversity on behalf of CBD.[28] The FAO plays a leading role in the conservation and use of PGRFA[29] for sustainable increases in agricultural production. It provides a forum for information exchange at international standards set in with technical assistance for the development of national laws, policies and legislation for the implementation of international regulatory frameworks with development and strengthening of seed sector.[30]

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[27] Government of India, "Report on Cartagena Protocol on Biosafety, Phase- II Capacity Building Project on Biosafety" (Ministry of Environment Forest and Climate Change in association with Biotech Consortium India Limited, New Delhi, 2015).

[28] Patrick Mulvany "TRIPs, Biodiversity And Commonwealth Countries"13, *ITDG Schumacher Centre Burton Rugby ¸CV23 9 QZ .UK*

[29] The International Treaty on Plant Genetic Resources for Food and Agriculture,2004

[30] Global Plan of Action

The GPA has provided a globally agreed framework for countries to adopt supportive policies and programs for harnessing plant genetic resources. The second global plan of actions was adopted in November 2011 to strengthen seed systems, a priority area of the second GPA. The main activity is to support the development of an enabling environment by developing appropriate seed policies and regulatory framework. The technical cooperation is provided to the supporting components of the international treaty on PGRFA through strengthening germplasm management plant breeding and the seed sector including appropriate biotechnology building capacities at the national level and increasing the effective implementation of the GPA.

E. Directives and Regulations by the EU on genetically modified organisms (GMOs).

The new regulation 2015/2283 on novel foods has been applicable from 1 January 2018. This Regulation improves conditions on GM food, so that businesses can easily bring new and innovative foods to the EU market while maintaining a high level of food safety for European consumers."[31] The authorization procedure has been centralized and simplified, and a faster and structured notification system for traditional foods from non-EU countries have been established. The General Food Law Regulation has been amended by a new Regulation on the transparency and sustainability of the EU risk assessment in the food chain (Transparency Regulation). The new Transparency Regulation was published in the Official Journal on 6 September 2019 and applicable from 27 March 2021.The key feature of the Transparency Regulation is the proactive disclosure of all studies supporting requests for scientific opinion, including authorizations, risk assessment process and it also makes clear that intellectual property rights (IPRs), data exclusivity rules and protection of personal data remain unaffected. It also provides that clear undertakings or signed statements are to be given by those accessing the relevant documents prior to their public disclosure, specifying that such disclosure would not constitute permission for further use or exploitation. In addition, the new Regulation foresees a series of measures to strengthen the reliability of industry studies, including pre-submission advice,

[31] Regulation (EU) 2015/2283

notification of commissioned studies at the pre-submission phase, public consultation of planned and submitted studies, fact-finding missions to laboratories and testing facilities and the possibility for the Commission to ask EFSA to commission verification studies in exceptional circumstances. Risk communication will also be further strengthened through the definition of objectives and principles of risk communication and the future development of a general plan on risk communication. The Commission and the European Food Safety Authority (EFSA) are closely cooperating to ensure the proper implementation of the new Regulation.

F. The Intellectual Property Rights on Seeds

The quality of the crop condition is dependent on the quality of the seeds. According to the estimation, the contribution of seeds in the agriculture sector is around 15-20% which may extend to 45%. The two most common types of intellectual property protection for plants and plant parts include Plant Breeder Rights (also known as Plant Variety Protection or PVP)[32] and Patents laws.

1. **Plant Breeders' Rights (PBRS**) are set out in the UPOV Convention, 1968. It has been revised many times. The UPOV (1991) grants 20 years of monopoly to the breeders over the novel, distinct, uniform, and stable plant varieties. All states who joined UPOV after 1999 are obliged to become parties to the 1991 Act.

2. **Patent of Rights holder** provides the right holder with 20 years monopoly over invention which involves an inventive step and is capable of industrial application. In plants, patents may apply to a few biological materials and processes (including seeds, plant cells or isolated DNA sequences). The right holders have control over the seed.

IV. THE STATUS AND FUTURE PROSPECTIVES OF AGRICULTURAL BIOTECHNOLOGY IN INDIA

India is the seventh-largest country with the tenth-largest arable land resource in the world. It has 20 types of agri-climatic regions, four hotspots out of 34 global biodiversity hotspots, alongside with largest producer of fresh fruits, fibrous crops,

[32] *Ibid*.

oilseeds, rice, cotton, wheat, coffee, dry fruits, pulses, sugarcane, and agriculture-based textiles raw materials.[33] The 58% of people are directly or indirectly linked with farming, predominantly the rural population, whose principal source of livelihood is producing and maintaining crops, farmland, agriculture, and livestock. Agriculture is the foundation of many industries in India, and it generates 20% of the country's GDP with a Compound Annual Growth Rate ('CAGR') of 3 per cent.[34] In 2020, total agricultural export was US$ 35.09 billion,[35] and it is aimed to increase India's agricultural export to Rs. 4,19,340 crores (US$ 60 billion) by 2022.[36] However, India has the largest number of hungry people (approx. 20 crores) in the world who are food insecure, malnourished (14%), with stunted rate (37.4%), and high child mortality (11.7%) under five years of age,[37] also India ranks 94 among 107 countries in the Global Hunger Index.[38]

The Bt cotton is the most crucial and only commercial approved GM crop in India with approximately 5.8 million cotton farmers and 40-50 million people involved in its production and trade.[39] The total cotton production accounts for 360.13 lakh bales in 2021 of cotton fibre,[40] equivalent to 25% of global fibre production.

To protect Intellectual Property Rights of Farmers, Indian government signed the TRIPS agreement in 1994 as one of the pioneered signatories. It enacted the Protection of Plant Varieties and Farmers' Rights Act, 2001 which covers all the issues related to farmers within the purview of IPR. India enacted the law and brought plant varieties

[33] Food and Agriculture Organization, "Report on India Country Programming Framework 2016-2017" (2016).
[34] Government of India, "Report on State of the Economy 2020-21: 01 A Macro View" (Economic Survey, 2020-21).
[35] GDP in the agriculture sector was 3.4% in Financial Year 2020.
[36] *Ibid*.
[37] Government of India, "Report on Infant Mortality Rate on Estimates of Mortality Indicators" (Census of India, 2017).
[38] TNN, "India Ranks 94/107 In Global Hunger Index", *Times of India*, Oct. 18, 2020, *available at*: https://timesofindia.indiatimes.com/india/india-ranks-94/107-in-global-hunger-index/articleshow/78727057.cms (last visited on July 10, 2022).
[39] Government of India, "Report on Cotton Sector" (Ministry of Textile, 2019).
[40] PTI, "CAI estimates cotton production at 360.13 lakh bales for 2021-22 crop year", *The Economic Times*, Oct. 30, 2021, *available at*: https://economictimes.indiatimes.com/news/economy/agriculture/cai-estimates-cotton-production-at-360-13-lakh-bales-for-2021-22-crop-year/articleshow/87417658.cms (last visited on July 10, 2022).

under the definition of IPR.[41] According to the TRIPS Agreement, countries should protect their plant varieties either by patent laws or by enacting specific laws (*sui generis* system) or both. So, India enacted sui generis system to protect plant varieties which came into existence in 2001 as the PPV&FR Act. The Protection of Plant Varieties and Farmers Rights Act, 2001 (PPVFR Act) was enacted by the Indian Parliament on 30 October 2001.[42] This Act grants IPR rights to the Indian farmers, breeders, and researchers who have developed new or extant varieties or denominations.[43] This Act also provides farmers to save, use, sow, exchange, re-sow, or sell their farm produce including seed of a registered variety only in an unbranded manner. This Act provides that farmer's varieties are eligible for registration, and farmers are exempted from payment of any fee in any proceedings under this Act. It gives the period of protection for field crops for 15 years, for trees and vines for 18 years, and for notified varieties for 15 years from the date of notification under section 5 of Seeds Act 1966. The annual fee must be paid every year[44] for maintaining the registration and the renewal fee must be paid for the extended period of registration. The farmers could claim compensation if the crop failure occurred of a registered variety.

The Ministry of Environment Forest and Climate Change in India has notified a new procedure for commercial release of Bt cotton hybrids under approval events called 'Event-Based Approval Mechanism (EBAM)'. This mechanism increased to 5 approved events from 2 approved events. It favours introducing new GM crops without violating national biosafety or environmental safety laws.[45] The compensation is also provided to the village or rural communities if any registered variety has been developed using any indigenous varieties of seeds.

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[41] Kaye Lushington, "The Registration of Plant Varieties by Farmers in India: A Status Report" 2(1) *Review of Agrarian Studies* (2012).
[42] The Protection of Plant Variety and Farmers Rights Act, 2001 (Act 53 of 2001).
[43] *Id.* at s. 2(g).
[44] *Id.* at s. 35.
[45] *Supra* note 12.

V. NATIONAL LEGAL REGIME FOR REGULATING GM CROPS IN INDIA

Indian government regulates the seed industry and seed trade in India by the Seed Act (1966), Seed Rules (1968), the Seeds Control Order (1983), the Seeds policy (1988), Plants Fruits and Seeds (Regulations and import into India) Order (1989), Protection of Plant Varieties and Farmers Right Act (2001), Essential Commodities Act (1955), National Seed Policy (2002), Seed Bill (2004), and a draft of Seed Bill (2019). These provided a statutory framework for seed variety release systems, seed testing, and seed certification.[46]

This legislative framework regulates the seed industry by monitoring and evaluating seeds for three years at multi-location field trials before cultivation. For public sector seed varieties, the notification of approved varieties is mandatory for certification, however, it is not obligatory for private seed varieties. However, Seed Policy (1988) allowed limited commercial varieties of seeds. The proposed Seed Policy of 2002 also allowed only imports and exports of seeds of all crops, but all the imported seeds are required to go through the process of registration.

The notification dated 21.09.2006, number GSR 584(E) to GSR 589(E), has been issued to empower seed inspectors/seed analysts/laboratories under the Seed Act of 1966, Seed Control Order 1983 under Environment Protection Act, 1986. The Plant Variety Protection and Farmer's Rights Act provides breeder's rights to the farmers and mandates extant and new plant varieties to be registered on the characteristics of novelty, distinctiveness, uniformity and stability.

The Trade-Related Aspects of Intellectual Property Rights (TRIPs) Agreement (1995) came into force for WTO member countries. This requires member countries to comply with fixed minimum intellectual property rights protection standards. As a result, India amended its Patent Act in 1999, 2002 and 2005.

[46] Government of India, "Report on Regulatory Framework of G.E. Plants in India, Phase- II Capacity Building Project on Biosafety" (Ministry of Environment Forest and Climate Change in Association with Biotech Consortium India Limited, New Delhi 2015).

The national biosafety framework to regulate the production and release of GMOs is considered essential in any country with a biotechnological program. The biosafety regulatory framework ensures that the safety of GE organism is comparable to the safety of conventional counterparts. The biosafety regulatory framework was established in several developing countries when the Cartagena protocol on biosafety came into force. The regulatory framework in India was initiated in 1989 in response to the commencement of research and development in biotechnology in India. The Indian Biosafety Protocol advises for Advance Informed Agreement (AIAs) for transboundary exporting and importing LMOs with proper labelling so importing countries accurately assess environmental risk associated with LMOs and it also expressly adopts the precautionary principle for importing countries to reject GE product due to lack of scientific studies and evidence.[47] However, micro-organism and microbiological processes are patentable, yet genetically modified organisms including animals, plants, human beings, and their parts are not patentable in India. Notwithstanding amendments of 1999, 2002 and 2005, it allowed patenting of specific biotech innovations like GMO and micro-organisms. The significant impact of these provisions has been to provide product patents in pharmaceuticals along with biotechnology innovations.

A. The Use, Import, Export and Storage of Hazardous Micro-Organisms/ Genetically Modified Organisms or Cell Rules, 1989

These Rules are notified under the Environment Protection Act, 1986. These are executed by the Ministry of Environment Forest and Climate Change, the Department of Biotechnology, the Ministry of Science and Technology, and State Governments. These cover all the activities of GMOs and their products including the sale, storage, export, importation, production, manufacturing, and packing.

Six competent authorities for regulating GMOs/LMOs in India are- rDNA Advisory Committee (RDAC), which is advisory in nature; Institutional Biosafety Committee (ISBC), Review Committee on Genetic Manipulation (RCGM); Genetic Engineering Appraisal Committee (GEAC) are Approval Committees; and State Biotechnology

[47] *Supra* note 46.

Coordination Committee (SBCC), District Level Committee (DLC) are monitoring committees.

These committees function as:

1. The rDNA advisory committee (RDAC) works as a review of biotechnology development and recommends safety regulations for recombinant DNA research use and application. This is governed by the Department of Biotechnology and the Ministry of Science and Technology.

2. The Institutional Biosafety Committee (IBSC) is responsible for ensuring safety guidelines for experimentation at the designated location. It governs all organisations engaged in GMO activities.

3. The Review Committee on Genetic Manipulation (RCGM) reviews all ongoing rDNA projects, approves experiments under risk category-III and above, as well as is responsible for bringing out manuals or guidelines for GMO research and use.

4. The Genetic Engineering Appraisal Committee (GEAC) is authorized to review, monitor, and approve all import, export, transfer, manufacture, use or sale of GMOs and their product taking environmental protection into consideration. This is governed by the Ministry of Environment Forest and Climate Change.

5. The State Biotechnology Coordination Committee (SBCC) monitors and supervises at the state level, and has the power to inspect, investigate and take punitive actions through the nodal department in case of violation of statutory provisions under the State Pollution Control Board/ Directorate of Health or Medical Services. The District Level Committee (DLC) supervises and complies at the district level. It is to be set up in the district, whenever necessary under the district collector to monitor the safety regulations. The Secretary of the Department of Agriculture in the state is a member of SBCC. In the District, Agriculture Officer is a member of DLC.

6. The State Agriculture Department monitors and complies with GEAC's conditions for commercial release, field trials, along GM crops' seed production. The State Agriculture Department has implemented the Seed Act, which contained seed laboratories. The sampling procedure has been notified to ensure uniform action by the field staff of the state agriculture departments. The analyst has been empowered to take punitive action. The field trials notified GEAC with copies of communication

addressed to the secretary and commissioner of agriculture. The State Agriculture Universities also play an essential role in monitoring and enforcing GM crops regulations.[48] For biosafety analysis, the Sub-Committees set up the RCGM on a case-to-case basis. It comprises experts from different disciplines to prepare and review guidelines on biosafety. The Central Compliance Committee is also set up to monitor the confined field trial on a case-by-case basis. The 1989 Rules ensure that no person shall import/ export/ transport/ manufacture/ store/ process/ use/ sell any GMO substance except with GEAC's approval,[49] and further permission is required for field trials or production facilities. Moreover, the unintentional release of GMOs is not allowed under any circumstances. The GEAC has the power to revoke approval if any new information or harmful effects or damage to the environment/biodiversity arise which is not present when approval was granted or in case of non-compliance with any conditions laid down by the GEAC.

The GEAC adopted an event-based approval mechanism (EBAM) for the Bt cotton hybrid since 2008. The bt cotton hybrid approved events and conventional backcrossing are exempted from biosafety studies, yet cases are referred to the Standing Committee under GEAC for any new events/ traits. On the basis of the performance and suitability of a particular Bt cotton hybrid variety, the Standing Committee grants the final approval to GM crops for a specific zone. Also, State approvals are required for the conduct of a confined field trial.[50] The GEAC supervise the implementation of terms and condition laid down in connection with approval by the State Biotechnology Coordination Committee (SBCC)/District Level Committees (DLC)/State Pollution Control Board or any person authorised by GEAC. In case of violation of conditions, the penalties are imposed through the SBCC /DLC, and damage is recovered from violating persons/parties.

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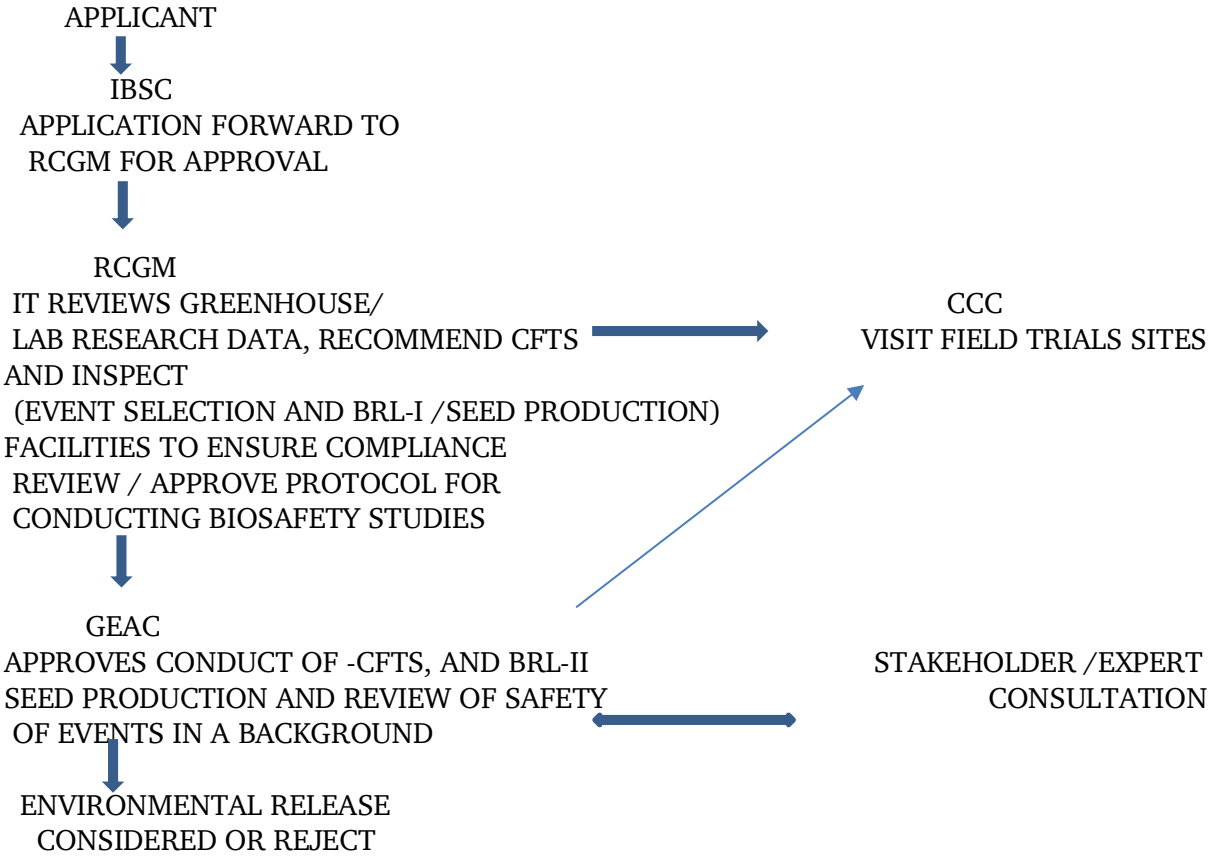
[48] Government of India, "Report on Handbook for Seed Inspectors Genetically Modified Seeds and Regulations Prepared Under Phase-II Capacity Building Project on Bio Safety" (Ministry of Environment Forest and Climate Change in Association with Biotech Consortium India Limited, New Delhi, 2019).

[49] Genetic Engineering Appraisal Committee, functions in the Ministry of Environment, Forest and Climate Change (MoEF&CC).

[50] *Ibid*.

The import and marketing of products derived from LMOs as drugs/Pharmaceuticals in bulk and formulation (therapeutic proteins) where the final product is not a GMO/LMOs are exempted under 1989 Rules.[51]

The following chart is a pictorial representation of the process of approval of GE/GM crops in India[52]



B. The Plant Quarantine Regulation for Import into India Order 2003

This applies to GM crops with the 1989 EPA Rules. It is governed by the Ministry of Agriculture and Farmer Welfare. It incorporates regulations on importing germplasm/ GMOs/ transgenic plant material for research purposes. The National Bureau of Plant Genetic Resources (NBPGR) is a competent authority to issue import permits of seeds

[51] The Manufacture, Use, Import, Export and Storage of Hazardous Micro-Organisms/Genetically Engineered Organisms or Cells, 1989, Sections 7-10, 20.

[52] i) The ISBC functions are – To Note, Approve Recommend and To Seek Approval Of RCGM.
ii) The RCGM functions are -To Note, Approve, Recommend Small Scale Field Trials (Less Than 1 Acres) And Generation of Appropriate Biosafety and Agronomic Data,
iii)GEAC functions are -To Approve Large Scale Field Trials (More Than 1 Acres) And Environmental Release, iv) The CCC functions are- To Monitor Field Trials Sites and Inspect Facilities to Ensure Compliance, of Prescribed Terms and Conditions.

for research purposes after obtaining permission under the 1989 rules along with receiving import material for quarantine inspection. The supplier must certify that the transiting/importing GM material has the same genes described in the permit; the particular changing materials do not contain any embryogenesis deactivator gene sequence/GURT/terminator genes.

C. The National Seed Policy 2002[53]

Ministry of Agriculture and Farmer Welfare stated that transgenic crops/ varieties need to be tested for at least two seasons by the Indian Council of Agriculture Research before the commercial release of any variety together with the monitoring of the performance of commercial release transgenic varieties for 3 to 5 years by the Ministry of Agriculture and the State Department of Agriculture. The packages containing transgenic seed planting material should carry a label indicating their transgenic nature, including the agronomic yield benefits, names of transients and all other relevant information.

D. The Regulations for Contained Use of GM Crops, the Recombinant DNA Safety Guidelines 1990 (updated in 2017)

These guidelines laid down safety measures for the research activities and large-scale use of GM products, their environmental impact during field applications. The Revised Guidelines for Research in Transgenic Plants (1998) includes the guidelines for a researcher regarding transgenic plants impact on soil, molecular-field evaluation, and the import/shipment of GM plants.

E. The Regulations for Confined Field Trials (CFTs) of GM Crops[54]

All the CFTs of GE/GM plants are conducted under the Guidelines of Standard Operating Procedure for CFTs of Regulated G.E. Plants (2008), which summarises the information, procedure/requirements used by the regulatory committees, RCGM and GEAC for evaluating /approving applications for confined field trials of G.E. plants. It

[53] National Seeds Policy, 2002.

[54] Government of India, "Report on Confined Field Trials of G.E. Plants, Phase- II Capacity Building Project on Biosafety" (Ministry of Environment Forest and Climate Change in association with Biotech Consortium India Limited, New Delhi, 2015).

provides guidelines for the transport/storage of regulated G.E. plant material, including harvest or termination/post-harvest management of confined field trials. To forbid chances of transgenic seeds or other planting materials entering the food chain, the isolation distance method is principally used for reproductive isolation, temporal isolation, pollen trap plant rows, bagging, flower detasseling, isolation distancing and a trial in-charge is designated for each trial site.

If not used for research purposes, the materials are incinerated and destroyed after completing the field trials. The records of all the activities, management, harvest disposition, transportation, storage, and post-harvest monitoring are maintained by permitted parties. In case of accidental or unauthorised escape of G.E. plant material, the regulator authority is to be informed within 24 hours. The RCGM is a regulatory authority for biosafety research level-I (BRL-I) trial, size limited to one acre per trial site location. The GEAC conduct further biosafety research of GE plants and is a regulatory authority for biosafety research level-II (BRL-II) with the trial size is generally limited to no more than 2.5 acres/one hectare /trial site location. The BRL-II trial is decided on a case-by-case basis for each plant species/ gene. A private person cannot do the CFT of any G.E. plant in India without RCGM & GEAC's prior approval. The minimum of three-season/ years CFTs are required for consideration of an application by GEAC for release of any trait/event, and two years per season of BRL-I and a one year per season of BRL- II. The scientific evaluation of all CFTs is monitored by the central compliance committee (CCCs).

F. The Guidelines for The Safety Assessment of Food Derived from G.E. Plants

The guidelines enacted in 2008 (updated in 2012) addresses the safety concerns related to human/ animal health. It also provides a further basis for reviewing GMOs on further availability of information. It is science-based research and comprised of risk assessment, risk management and risk communication.

G. The Regulations for Environmental Safety Assessment of GM Crops[55]

The guidelines related to Environmental Risk Assessment (ERA) of G.E. Plants (2016) provide a means to protect human health along with the environment from potential adverse effects of G.E. plants. The objective of the guidelines is to safely cultivate and use G.E. crops in India with a science-based approach for detecting possible risks from G.E. plants. The two more guidelines enacted for better understanding of risks are 'The Risk Analysis Framework, 2016' and 'A Guide for Stakeholders, 2016'[56] which emphasize risk management and risk communications of G.E. plants.

H. The National Biotechnology Development Strategy (2015-2020)[57]

This was issued by the Department of Biotechnology in support of the regulatory system through process reform. It facilitates safe processes by developing infrastructure for pre-clinical toxicology together with a clinical trial protocol with establishing a toxicology centre for testing toxicity safety in addition to biological contaminants, adulterants in GM food and customises experimental resources in strategic locations across the country.

VI. INDIAN CASE LAWS ON BIOTECH/GM CROPS

In Maharashtra and Vidarbha, which are cotton-growing areas (especially Bt cotton), the farmer suicide rate increased as a consequence of crop failure and indebtedness. The Bombay High Court, in the case of *The Secretary, All India Biodynamics and Organic Farming Association* v. *The Principal Secretary to The Government of Maharashtra and*

[55] Government of India, "Guidelines for the Environmental Risk Assessment of Genetically Engineered Plants, UNEP/GEF, supported phase II capacity building project on biosafety" (Ministry of Environment Forest and Climate Change, Department of Biotechnology and Ministry of Science and Technology, 2016).

[56] Government of India, "Environmental Risk Assessment of Genetically Engineered Plants: A Guide for Stakeholders, UNEP/GEF supported phase II capacity building project on biosafety" (Ministry of Environment Forest and Climate Change, Department of Biotechnology, and Ministry of Science and Technology, 2016).

[57] PTI, "National Biotechnology Development Strategy being drafted", *The Economics Times*, Mar. 18, 2015, *available at*: https://economictimes.indiatimes.com/industry/healthcare/biotech/healthcare/national-biotechnology-development-strategy-being-drafted/articleshow/46610826.cms (last visited on 10 July, 2022).

Others,[58] held that due to higher cost of cultivation of Bt cotton, the State needs to fix minimum support price and undertake price fixation for agriculture produce at the state level.

In *Seed Association of M.P* v. *Union of India*,[59] the question arose whether permission is needed for selling and producing Bt cotton seeds from the director of agriculture of the state government or from the state biotechnology coordination committee (SBCCs).

The High Court of Madhya Pradesh decided that under Rule 14 of 1989 rules,[60] the GEAC is the apex body to supervise the implementation of the terms and conditions, and the approval of GM seeds besides rule 14(2) does not envisage any independent power for SBCC.

The spirit and language of the 1989 rules gives pervasive control to the central body and state level, or the district level gives assistance for implementation of the provision of the 1986 Act and Rules.[61]

In *All India Crop Biotech Association of* India v. *State of Madhya Pradesh and Others*,[62] it was held that neither the SBCC nor any state government was competent to fix the Maximum Retail Price of the Bt cotton hybrid seeds and grants under either the 1989 Rules or The Environment Act, 1986. As stated, 'MRP, the seed value and license fee fixed by the Centre will be binding on all stakeholders, including the licensor and the licensee, notwithstanding anything contained in any contract or instrument to the contrary'.[63]

In *Aruna Rodrigues* v. *Union of India*,[64] a PIL was filed praying to conduct a scientific examination of all relevant aspects of biosafety before the release of any GMO into the environment and put a ban/moratorium on any open field trials of GM crops. The Court lifted the ban on an open field trial of GM crops, and in 2012 the Supreme Court

[58] Public Interest Litigation No. 164 of 2004, decided on: 05 May 2006.
[59] 2009(4) MPHT453.
[60] *Supra* note 51.
[61] *Supra* note 10.
[62] W.P. No. 3435 of 2008.
[63] PTI, "Centre to Control Bt Cotton Seed Prices by Fixing MRP", *Business Standard*, Dec. 13, 2015, *available at*: https://www.business-standard.com/article/pti-stories/centre-to-control-bt-cotton-seed-prices-by-fixing-mrp-115121300179_1.html (last visited on July 10,2022).
[64] Writ Petition (Civil) No. 260 of 2005, decided on 10.05.2012.

declined the recommendation of the Technical Expert Committee on the 10-year moratorium pending receipt for a more comprehensive report.[65]

VII. THE CHALLENGES OF BIOTECH CROPS PRODUCTION IN INDIA

Bt cotton was introduced in India in 2002. The earliest cultivation of Bt cotton was unfruitful to the farmer, but recent studies manifest that India became one of the leading producers of Bt cotton and earned one of the world's highest profit rates in 2020. The Bt cotton has been the only approved GM crop for commercial cultivation in India, the primary cotton-producing states are Karnataka, Andhra Pradesh, Madhya Pradesh, and Tamil Nadu. The Bt cotton covers more than 90% of total cultivated cotton in India, and it has increased from 0.05 million hectares in 2002 to 11.4 million hectares in 2017.[66]

India is one of the world's largest cotton producers (37.1 million bales in 2020-21)[67] and cotton mill consumption is expected to increase from 42.2% to 7.5 Mt[68] by 2027. India is the third-largest exporting country after the USA and Brazil. The public and private sectors both are engaged in the research and development (R&D) of GM crops in India, the field trials have been done for more than 20 GM crops, whereas eighty-five different species have been identified for research and development, which can be used for food, feed, fibre, fuels, and medical purpose.

A. Ethical, Moral and Religious Challenges in GM Crop

GM seeds are produced through the crossing between unrelated species. It violates the religious rights of some communities which is a dominant aspect in many countries and their religious values get violated due to gene transfer which can be considered

[65] Abhishek Kumar Tiwari, *Law Relating to Genetically Modified Crops and Environment* 196-198 (University Book House (P) Ltd., Jaipur).
[66] PTI, "Cotton Exports Likely to Jump 43% In 2018-19", *The Economics Times*, June 14, 2018, *available at*: https://economictimes.indiatimes.com/news/economy/foreign-trade/cotton-exports-likely-to-jump-43-in-2018-19/articleshow/64586458.cms (last visited on July 10, 2022).
[67] Government of India, "Report on First Advance Estimates of Production of Commercial Crops for 2020-2021" (Department of Agriculture, Cooperation and Farmers' Welfare, Ministry of Agriculture and Farmers welfare, 2020).
[68] Food and Agriculture Organization, "Report on OECD-FAO Agriculture Outlook" (United Nations, 2021).

halal/haram or kosher in Muslim/Jews communities.[69] In religiously and ethnically diverse countries, food is regulated not only by low price and environmental safety but also by religious, ethnical, and cultural concerns. For example, the vegetarian population could not accept the gene of animals in their food/crop in India[70] and the Mohammedan/Jews religion makes steep demarcation between haram/ halal/kosher food, also some food not considered clean food/forbidden food (in the Bible/Hindu religious texts). The Cartagena Protocol on biosafety on LMOs/GMOs does not cover the religious or moral implications of a new food product for the stakeholders.

B. Health Concerns and Challenges arises due to GM Crops

The GM crops produced through the insertion of unrelated species genes anticipated to cause human and animal health concerns, but many scientific research types prove that there are no adverse effects of GM crops. The studies show that cancer, chronic kidney, autism, obesity, type-II diabetes patient elevating in the USA have GM diet, but the number of incidence and pattern is like the population of UK and Europe having non-GM diets, so the risk of disease is not due to using GM crops, but other factors involved in elevating rise of disease.[71] The long-term data on livestock studies prove that there is no adverse effects of GM crops on livestock health.[72] Furthermore studies have found that Cry 1Ab fragments of Bt (GM) crops can pass into organs like other commonly consumed food item genes and no transgenes are found in milk ruminants in dairy products.

India only produces Bt cotton, as a cash crop since 2002, and other food crops like Bt brinjal and GM mustard DMH-11, are under moratorium period and not allowed for cultivation, so health concerns regarding food and feed are not known in India.

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[69] Terje Traavik and Li Ching Lim, *Potential Socio Economic, Cultural and Ethical Impacts of GMOs: Prospects for Social Economic Impact* (Biosafety First, Tapir Academic Publisher, 2007).
[70] Soutik Biswas, "The Myth of The Indian Vegetarian Nation", *BBC news,* Apr. 4, 2018, *available at*: https://www.bbc.com/news/world-asia-india-43581122; (Last visited July 10, 2022).
[71] National Academies of Sciences, Engineering, and Medicine, "Genetically Engineered Crops: Experiences and Prospects" (National Academics Press, 2016).
[72] *Id*. at 224, 233.

C. The Impact of GM Crops on Marginalized and Small Landholders /Farmers

In rural areas, small-scale farmers or labourers are one of the major concerns of developing and underdeveloped nations. Due to high population in these countries, the labourers are readily available for cheap farm work but GM crops varieties do not require any additional work regarding weeding or tilling or frequent application of pesticide/herbicides to the crops so, it may affect the employment of marginalized people.[73] Many GM trait–crop combinations of Bt cotton have been adopted by small-scale farmers of developing countries like India, China, and Pakistan that have large numbers of smallholder farmers.

The adoption of GM crops shows enormous gains from the adoption, by use of GM cotton crops and these countries became the world leader in cotton production.[74]

Studies show that GM cotton is not economically advantageous to small-scale farmers because of credit constraints and the massive amount of money and time spent on insecticide /pesticide applications. The existing GM crops have been beneficial to largescale farmers because of lower input and lower labour cost. Still unlike large scale farmers, small-scale farmers are generally financial weak and require access to credit, extension services and government assistance in ensuring an accessible seed price. Only when they receive these, cultivation of GM crops will be profitable to them.[75]

The Farmer's customary rights includes the right to save, use, exchange and sell saved seed and it is recognized, rewarded, and supported by the government for their contribution to the global pool of genetic resources as well as to the development of commercial varieties of plants. The Farmer's rights promote sharing along with exchanging material and knowledge. The concept of farmer's rights was developed to harmonise the expansion of PBRs and Patents, which threaten to restrict farmers' ability

[73] Supra note 45.
[74] M. Shahbandeh, "Global cotton production 2019/2020", *available at:* https://www.statista.com/statistics/263055/cotton-production-worldwide-by-top-countries/ (last visited on July 10, 2022).
[75] *Id.* at 334.

to maintain and develop agriculture biodiversity and fail to recognize farmers contribution to the breeding of plant varieties, now protected under IPRs laws.[76]

D. The International Market of GM Crops (Export/Import)

The price of agricultural commodities is highly fluctuating and dependent on supply and demand. The high yield of GM crops may boost the economy of developing and underdeveloped nations where the agriculture sector is impacted by extreme weather conditions, high pests, and lack of resources. The CPB mentions precautionary principle for the countries importing GM crops; they can deny importation on lack of scientific evidence that the products are not safe. Europe and Japan require proper labelling of GM commodities. The Latin American country Brazil is a leading exporter of GM soybeans, maize, and cotton worldwide with a 16.4-billion-dollar market, whereas China and the European Union are leading importers of GM cotton and soybeans. Brazil is exporting GM maize to Iran and Asian countries. Studies show that eight countries in Asia grow GM crops with USD 2.9 billion of economic benefits in 2016.

In India, the cumulative economic benefit from GM crops production has been estimated at $24.3 billion.[77] In Canada and the United States, GM crops' cumulative economic benefit between 1996 and 2015 is more than USD 80 billion. The Four European countries – Spain, Portugal, Czech Republic, and Slovakia – planted genetically modified maize on nearly 337,000 acres in 2016, where it is used primarily in livestock feed. The EU livestock farmers rely on imports for 70% of their grain needs including up to 34 million tons of GM soybean and GM feed imports to Europe resulting in 30 billion euros in economic losses annually. Latin American countries have economic benefits to farmers planting GM crops between 2003 and 2015 are USD16.4 billion. Despite difficulties in farming GM and non-GM crops together many countries are still producing and exporting both GM and non-GM or organic crops in the global market. The new testing techniques can detect deficient (low) levels of GM/GE content, and this may encourage national governments to reduce their tolerance. The presence

[76] *Ibid.*

[77] GMOs Around the World, *available at*: https://gmoanswers.com/gmos-around-world (last visited on July 10, 2022).

of unapproved HR traits in rice supplies of the US lead to the closure of the rice import market of the EU.

E. Impact of GM Crops Cultivation on Organic Farming

Three crop production methods are prevalent in the world. The first is the non-GE crops or conventional crops method and the second is the GE crops. They both use chemicals or synthetic fertilizers for production. In contrast, the third kind of cultivation is organic crops produced without the use of chemicals or synthetic fertilizers or following a set procedure. There is also a separate market for organic crops/foods according to the consumer's preferences.

In the USA there is co-existence of all three kinds of crops cultivations but problems arise where organic crops get contaminated by GMOs in countries where GM crops are commercially accepted like USA and Canada, there the prevention and managing the gene flow from GE or conventional crops to organic crops and managing the supply chain for organic crops is a challenge.[78] The studies show that organic crops' cost is 29 to 32 per cent higher than the other crops due to higher labour use and lower crop yields. USDA's Economic Research Service (ERS) reports on U.S. organic maize and soybean prices, shows that they are generally two to three times higher than the non-GE crop varieties.[79]

Organic farming is in a budding stage in India, and only 2 per cent of total farmland is cultivated under organic cultivation which is about 2.78 million hectares of farmland (March 2020).[80]

VIII. CHALLENGES IN OPERATIONALIZATION OF GM CROPS IN INDIA

In 2020, the Indian government spent 3700 crores rupees on insecticides to remove crop pests from non-GM crops, along with importing 4.84 lakh tonnes of mustard,[81]

[78] Graham Brooks and Peter Barfoot, *GM crops: global socio-economic and environmental impacts 1996-2018* (P.G. Economics Ltd., UK, 2017.
[79] *Id*. at 298.
[80] Agriculture and processed food products Export Development Authority, "Organic Products", *available at*: https://apeda.gov.in/apedawebsite/organic/Organic_Products.htm (last visited on July 10, 2022).
[81] Government of India, "Study on Cultivation of GM Crops" (Ministry of Agriculture & Farmers Welfare).

soybean-edible oils (Rupees 60,000 crores) and three million tonnes (Mt) of pulses (Rupees 14,000 crores). This could be reduced by encouraging GM crop cultivation instead of spending a considerable amount of funds on importing GM crop products; the import of food products causes an additional burden on the economy. Doing so shall eventually strengthen farming sector and help poor poverty-stricken farmers to become self-sufficient.

In India, Bt brinjal and GM mustard[82] (*Brassica juncea*, hybrid DMH-11 and parental events *Varuna* bn 3.6 and EH-2 modbs 2.99 developed by Delhi University) are only at the field trial stage and not allowed for cultivation. Farmers are still struggling to get benefits of Bt brinjal, due to a moratorium and political differences, whereas Bt brinjal is one of the successful crops in Bangladesh, with 49% increased profits with a 28% reduction in pesticide use. The 16 crops and 83 events of GM crops are in various stages of development in India and due to regulatory disagreement, they are still in the pipeline.

The black market of GM seeds thrives in India. With high demand and low supply of GM seeds in the market and increased farmers' dependency on black-market for bt cotton, bt brinjal, and HT soyabean seeds, the black-market turnover of bt cotton is itself worth $364 million.[83] It shows that farmers need GM seeds for their survival, but because of the government's non-consensus over GM seeds, ignoring the needs of our farmers, they have to resort to black market. The regulatory approval process of GM seeds needs to be hastened up significantly by states. The fast approval of new products will benefit our 16.6 million farmers, to have more choices to plant hybrids-biotech seeds according to market quality requirements.

Most of India's biosafety regulations are Rules, Policies, By-laws, and Govt. Orders, etc. which are not very fruitful in managing all the farmer's needs, and they scarcely harmonize farmers' rights with new technology. The present need is to develop and

[82] ET Bureau, "Genetically Modified Mustard gets Scientific Nod, Safe Tag from Green Ministry" *The Economic Times*, Sept. 06, 2016, *available at*: https://economictimes.indiatimes.com/news/economy/agriculture/genetically-modified-mustard-gets-scientific-nod-safe-tag-from-green-ministry/articleshow/54023322.cms (last visited on July 10, 2022).

[83] Radheshyam Jadhav, "Flourishing Trade in Spurious GM Seeds Adds to Farmers Woes" *The Hindu*, July 10, 2020, *available at*: https://www.thehindubusinessline.com/news/flourishing-trade-in-spurious-gm-seeds-add-to-farmers-woes/article32041101.ece (last visited on July 10, 2022).

enact specific and concise laws that will help resolve disputes quickly, with specific courts for I.P. protection.

The government needs to create awareness about GMO/biotech seeds. The dissemination of information in vernacular language and capacity-building programs need to be accelerated, with advanced knowledge on "refuge" crop methods given to the farmers for GM seed cultivation. Due to a lack of proper knowledge and training for new technology, farmers are not able to utilize the benefits of GM technology, as has been seen in recent years, crop failure and pest attack occurs even on the GM crops (Burkina Faso), which is due to lack of knowledge and bypassing essential steps in GM crop farming.

IX. CONCLUSION

The GM technology for crop improvement has been controversial since its inception, this is a new field of genetic manipulations with unknown and undiscovered risks. Most of the scientific studies are in favour of GM crop production but one should not forget the impact of chemical farming during the first green revolution and its harmful impact on our biodiversity, similarly, this technology has the potential to manipulate every living cell, and DNA of the living organism. The future of genetically modified organisms is unlimited, with inevitable dangers of accidental genetic mutations, and it is impossible to reverse the impact of GM technology on our biodiversity.

The GM crops are permitted for cultivation only after they have passed all safety assessments and pose no risk to humans, animal health and biodiversity. The safety assessment procedure for GM crops must be highly rigorous, and the Indian government followed a case-to-case basis for the safety assessment of GM crops. The requirement of information and analysis by a regulatory authority depends upon the developing stage of a particular product, and the data required may also vary with crop-specific trait and intended use.

India needs a second green revolution to feed its massive population and enable its farmer with the latest technologies. The seed scientist community requires support, trust to develop sustainable-green agriculture biotechnology, but not at the cost of the environment and biodiversity. The solution to eradicating world hunger does not only

lie in the high production of crops, but management is certainly a key factor. It is well known that the USA has the most significant production of GM crops in the world, but it still has 38 million hungry people, which is approximately 10.5 per cent of the population that is food insecure., To end world hunger and poverty, what is required is not just higher crop production but a proper administration on food storage, food distribution, minimization of food wastage together with legal protection for the conservation of biodiversity and the protection of farmers' rights with the rights to access and transfer genetic resources related to crop production.

GROUNDWATER GOVERNANCE IN INDIA: CHALLENGES AND THE WAY FORWARD

Lokesh[*]

Groundwater is the main source of India's agricultural and drinking water needs. The use of groundwater has been increasing since 1960, due to the advent of green revolution. Moreover, more than two-thirds of total irrigated land is irrigated by groundwater. Further, about eighty per cent of India's drinking water requirement is met by groundwater. Most industries also depend on groundwater for their functioning. Over the last few decades, overexploitation of groundwater has increased dramatically due to speedy growth in agriculture and related sectors. Total irrigated land has increased manifold in India due to over-exploitation of groundwater, particularly in Punjab, Haryana and Uttar Pradesh. All this has caused a severe depletion of the groundwater table resulting in an acute water crisis, which necessitates legal intervention.

Groundwater governance is becoming a significant challenge in India, where the groundwater table is declining rapidly. Groundwater governance encompasses the social, economic, political, and administrative mechanisms. Groundwater governance affects the development, management, and sustainable use of groundwater resources. It encompasses the enactment of the legislation, policy formulation, effective institutional framework and their proper implementation, which ensures their proper effective functioning. This article examines the existing groundwater legal framework and discusses the key challenges which are necessary to be addressed in order to protect and effectively manage the groundwater. It also brings out the lacuna in the present groundwater legal regime and advances

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some fundamental principles and approaches which are necessary to be considered to ensure effective and sustainable use of groundwater resources.

Keywords: *Water laws; Groundwater governance; Right to water; Sustainable use; Climate Change; Public Trust.*

I. INTRODUCTION

"Earth has enough to supply everybody's need but not everybody's greed."

\- Mahatma Gandhi

Groundwater is one of the important sources of water in India. Agricultural and domestic water requirements are fulfilled mainly by groundwater. It comprises the primary source of total freshwater used in India. Over the last four decades, India has witnessed a speedy rise in groundwater use due to the expansion of total irrigated land and ease of access to groundwater for domestic and drinking water use. Groundwater account for India's eighty-four per cent of the total irrigated land and more than eighty per cent of potable water needs are serviced by groundwater.[1] Industrial growth is also depending upon the availability of water, which is mainly met by groundwater. Over abstraction of groundwater by industry causes a severe drinking water crisis and further deteriorates the quality of groundwater in many parts of India. The dispute between the Coca-Cola Company and Perumatty Gram Panchayat in Palakkad district in the Southern State of Kerala is a well-known case of a dispute related to dominance over groundwater use.[2]

India is a groundwater-dependent nation; growing urbanization, inadequate infrastructure and civic facilities increase the demand for underground water. Many metro cities have easier access to surface water, but it is not so for medium or urban centres which is why they are dependent upon groundwater. A large part of the Indian economy comprises of agriculture and related sector, which mostly is dependent on rain and groundwater.[3] Due to irregular rain and lack of proper monsoon, more than

[1] Planning Commission, "12th Five-Year Plan (2012-2017) on Faster, More Inclusive and Sustainable Growth- Vol. 1" 145 (2013).
[2] *Perumatty Grama Panchayat* v. *State of Kerala,* 2005 (2) KLT 554.
[3] Infrastructure Development Finance Company, "India Infrastructure Report 2011 – Water: Policy and Performance for Sustainable Development" 90 (OUF, New Delhi 2011).

half of the total irrigated area entirely depends on groundwater for their survival. Besides these factors, the growing population increased the demand and changed consumption patterns, while changing climate further exacerbated the groundwater recharge potential.[4] Climate change affects key aspects of subsurface hydrology which includes confined and unconfined aquifers. It affects not only the quantity of groundwater but also its quality. Sea level rise can lead to salt-water infiltration into coastal aquifers, affecting groundwater quality and contaminating drinking water sources. Once saltwater has entered a freshwater system, it is difficult to reverse this process. Keeping in mind the strategic importance of aquifers for storage, the groundwater governance in India requires a major overhaul. A large part of India is already under the shadow, and economic development is also under stress due to the speedy decline in water resources. Despite all of this, there is a lack of concrete steps by the government at the local level. The depletion of the groundwater table due to its overexploitation in comparison to its recharge caused a severe water crisis in many parts of India, which leads to a severe drinking water shortage.

This article begins by outlining the existing constitutional and statutory framework for groundwater governance in India and further examines the role and functioning of the *Central Groundwater Authority*. It also analyses the shortcomings in the existing water laws. The second section discusses the decisions of the Supreme Court and several High Courts in India involving the issue of the *right to water* and its dominance over groundwater. In the third section of this Article, the researcher analyzes the Model Groundwater Bill which was circulated by the Central Government in 1970 and various subsequent revisions in its framework up to The Groundwater (Sustainable Management) Bill, 2017.[5] This Bill primarily recognizes the community's rights over the groundwater resources and provides a bottom-up approach for groundwater resources. The concluding portion attempt to highlight the emerging scenario and the way forward for a sustainable groundwater management framework.

[4] Tushaar Shah and Sujata Das Chowdhury, "Farm Power Policies and Groundwater Markets – Contrasting Gujarat with West Bengal (1990–2015)" 52(25) EPW 39 (2017).
[5] The Groundwater (Sustainable Management) Bill, 2017.

II. GROUNDWATER LAWS: CONSTITUTIONAL AND STATUTORY FRAMEWORK

The existing Indian legal system pertaining to groundwater has mainly two essential characteristics. First, the groundwater abstraction rights are governed by British common law. Many states in India enacted their separate groundwater Acts, which put some limits on the exclusive rights of landowners over groundwater resources on the sub-surface of their land. Second is the recognition of the doctrine of public trust in groundwater governance. This provides a significant paradigm shift in the way groundwater governance is treated. In this section, the author discusses various principles which governed the groundwater in India before and after independence in 1947.

A. Individual's Right to Use Groundwater and Land Ownership

Different people have different perceptions regarding the nature of water resources. Some consider it as a commodity while others consider it as a basic human right or as a sacred resource/ divinity. Those who consider water as a commodity are trying to deny the fact that water is a shared property as a common pool resource. Generally, people who are adherent to one aspect of water are often blind to the other dimensions. The truth is that water has multiple dimensions and there is a need to understand that what is true of one of the multiple dimensions of water does not hold for another. A landowner's absolute right over groundwater beneath his land is one such aspect that we have to understand in the light of the public trust doctrine of common law.

Because of the application of the common law principle of landowner's right in India, the legal character of groundwater is intimately connected with the landowner's right to use land and all the resources beneath it according to his wishes. A landowner has the absolute right to sink a well on his land and extract as much groundwater from his land as he desires.

The uncontrolled right of a landowner to enjoy the groundwater beneath his land is the facet of his right to enjoy property which is indirectly recognized by The Indian

Easement Act, 1882.[6] The Act provides that a landowner's right to abstract groundwater is by and large a personal negative right and is available against everyone (right in rem) and no one can infringe it without the prior consent of the landowner. A landowner can enjoy exclusive rights over his land, and he exercises these exclusive rights because he is the real owner of such land. A landowner's right to exploit groundwater from his land was first recognized in the nineteenth century in the common law, which borrowed it from Roman law. However, a distinction was being made between water flowing in a 'defined channel' and water percolated in deep aquifers, but the lack of proper mapping of water resources in India made this distinction redundant. Moreover, in the absence of such a distinction, the landowner's absolute right to abstract groundwater as he wishes prevailed.[7] Therefore, landowners are perceived to have an unrestricted right to abstract groundwater without any limitation.

Groundwater ownership to land ownership is linked by The Indian Easement Act, 1882, and the existing legal framework has more or less maintained the same since then. The Act defines 'Easement' as 'a right which the owner or occupier of certain land possesses, for the beneficial enjoyment of that land to do and continue to do something, or to prevent and continue to prevent something from being done, in or upon, or in respect of certain other land not his own'.[8] Illustrations of the above-referred rights in the Act states that, 'The right of every owner of the land to collect and dispose within his limits of all water under the land which does not pass in a defined channel and all water on its surface which does not pass in a defined channel'.[9]

The judicial pronouncements by the apex court and several High Courts in India recognized the common law principle of the landowner's exclusive to exploit groundwater beneath his land without any limitation. In the latest faceoff, the Kerala High Court, in the case of Perumatty Gram Panchayat faced a similar question.[10] When the matter came up before a Single Judge Bench of the Kerala High Court, the Hon'ble

[6] The Indian Easement Act, 1882.
[7] Planning Commission, "Report of Expert Group on Ground water Management and Ownership" (Government of India, 2007).
[8] *Supra* note 6, s. 4.
[9] *Id.*, illustration (g), s. 7.
[10] *Supra* note 2.

Court upheld the community rights over groundwater by extending the scope of the public trust doctrine regarding groundwater.[11] However, in appeal before the Division Bench of the same High Court, the decision and the findings of the Single Judge Bench were reversed and the supremacy of the common law principle of the landowner's exclusive right over the water beneath his land was upheld.

Thus, in India, the landowners have an unrestricted right to abstract groundwater from their land and exploit groundwater in as much quantity as they wish without any restriction. No one has any *locus standi* to take any legal action against the landowner for overexploitation of the groundwater resources which causes depletion of the groundwater table in adjoining lands. He can only dig his well deeper.[12] Though a landowner has the absolute right to extract the groundwater which is flowing in the 'undefined channels', he cannot do so over the water which is flowing in the 'defined channels'. 'Defined channel' means the natural path of flowing water, for example, in the case of canals or rivers. These defined channels of water are treated in the same as surface water. These provisions do not have any relevance until we have a proper system to map the groundwater flowing beneath the earth. In the absence of such a mechanism that provides the mapping of groundwater, the landowner's right to abstract groundwater as they wish even prevailed in the cases of water flowing in the 'defined channels'.[13]

In India, the legal position is still the same, and the Common law rule of right to land governs the groundwater beneath the land because of Article 372 of the Indian Constitution which provides a legal sanction to the pre-independence laws of British India unless they are repealed or amended by the Parliament. However, in recent years, many Indian states have enacted their groundwater laws, which seek to put some limits on the British Common Law rule of right to the land, which links with the right to abstract groundwater.

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[11] P. Cullet, A. Gowlland Gualtieri, *et. al.*, *Water Governance in Motion: Towards Socially and Environmentally Sustainable Laws* (Foundation Books, 2011).
[12] B.B Katiyar, *Law of Easements and Licenses* (Universal Publication, 2010).
[13] Sujith Koonan, "Revamping the Ground water Legal regime in India: Towards Ensuring equity and Sustainability", 12(2) *Socio-Legal Review* 45 (2016).

B. Constitutional Provisions and Groundwater

The Constitution of India, 1950 does not recognise water as a basic human right, but on several occasions the constitutional courts have attempted to define the right to safe and clean drinking water as an aspect of the right to life. The Supreme Court of India has expanded the scope of Articles 14 and 21 for accommodating the fundamental right to water.[14] The fundamental rights to equality, life and personal liberty have been held by courts to be violated by actions that adversely affect the availability of groundwater supplies.[15]

In the case of *Subhash Kumar* v. *State of Bihar*,[16] the Supreme Court has explained the basic jurisdiction of the right to life and held that:

> Article 21 of Indian Constitution encompasses right to water is a fundamental right and it includes right to enjoyment of pollution free water, air for full enjoyment of life' and that 'if anything endangers or impairs the quality of life, in derogation of laws, a citizen has a right to have a recourse to Article 32 of the Constitution for removing the pollution of water or air which may be detrimental to the quality of life.

The Constitution of India provides a federal form of government in India and strict provisions relating to the distribution of legislative power between the Centre and States. The constitutional provisions relating to the distribution of power are well defined in three broad categories in the Seventh Schedule, namely, (A) List I- Union List; (B) List II- State List; and (C) List III- Concurrent List.

According to the constitutional scheme, 'water' is a State subject as provided in entry 17 of the State List.[17] Entry 17 further states that any law made in pursuance of it shall be subjected to entry 56 of the Union List.[18]

The state legislatures are constitutionally mandated to enact laws in their respective states on subjects enumerated in the State List of 7th Schedule of the Indian Constitution, including laws to control and regulate the groundwater. The Parliament

[14] The Constitution of India, 1950, arts. 14 and 21.
[15] *Attakoya Thangal* v. *Union of India*, 1990 (1) KLT 580.
[16] AIR 1991 SC 420.
[17] *Supra* note 14, 7th Schedule, List I, entry 17.
[18] *Id.*, List II, entry 56.

can only make laws for the territory which is not included in any State and any Union Territory administered by the Union government in respect of any matters enumerated in the State List of 7th Schedule. In India, statutes that declare State sovereignty over water explicitly exclude groundwater. Irrigation and land revenue laws expressly omit the right of the states over sub-soil water resources and that is why it is still governed by the common law principles.

Directive Principles of State Policy ('DPSP') are provided in Part IV of the Indian Constitution. They are non-justiciable, notwithstanding, every State has the constitutional obligation to follow these principles while formulating policies. Indian Constitution was amended in 1976 to insert Article 48A which provides that, 'the State shall endeavour to protect and improve the environment and to safeguard the forests and wildlife of the country', and in pursuance of these obligations, the Government of India formulated the National Environment Policy, 1987 and the same was further revised in 2002 and 2012.

The Constitution (Seventy-third Amendment) Act, 1992,[19] provided the constitutional status to the Panchayati Raj institution and endowed them with specific powers and functions, which are necessary for them to function as the institution of local self-government at grass root level which is based on the principle of the bottom-up approach. In pursuance of this amendment, all the states in India enacted their separate Panchayati Raj Acts and empowered them to work as the government at the local village level.[20] It was the best step towards decentralization, and it is a known fact that participatory endeavours at the local level of the village have yielded outstanding results in India. Schedule XI of the Indian Constitution enumerates 29 subjects, which include minor irrigation, water management, and drinking water, and by doing so, responsibilities are devolved from the state to the village level. Accordingly, states in India enacted their Panchayati Raj Acts and empowered the Gram Panchayats to maintain and conserve their drinking water resources by using traditional methods and techniques.

[19] The Constitution (Seventy-third Amendment) Act, 1992.
[20] Tushaar Shah, *Groundwater Markets and Irrigation Development* (Oxford University Press, 1993).

C. Central Groundwater Authority (CGWA): Legal Basis

Fundamental rights enshrined in the Indian Constitution do not expressly provide environmental rights, and the fact that 'groundwater' is a state subject, leaves little room for the Centre to intervene in the depletion of the groundwater table. The judiciary in India is playing a significant role in protecting the environment and conservation of its resources. In many decisions, the Hon'ble Supreme Court issued numerous directions to the Central Government for the implementation of policies for the protection and conservation of the environment. In 1996, pursuant to a Supreme Court direction,[21] the Central Government constituted the Central Ground Water Authority ('CGWA') while exercising its power under Section 3(3) of the Environment (Protection) Act, 1986.[22] CGWA is a statutory body mandated with the task to control, regulate and manage the groundwater resources in India.

The CGWA is headed by a chairperson appointed by the Central Government for a fixed tenure, and the nominees of the Central Groundwater Board, Ministry of Water and Resources, Ministry of Environment and Forest, Central Water Commission, and Oil and Natural Gas Corporation are its members. CGWA has the power to issue directions and guidelines when required, under Section 5 of the Environment (Protection) Act, 1986.[23] In December 2018, CGWA issued a notification of the guidelines for the abstraction of groundwater in India.[24]

The main objective of CGWA is to control groundwater pollution, protect the environment and mitigate the impact of climate change which adversely affects the monsoon pattern in the Indian sub-continent. Climate change has badly impacted precipitation patterns around the world, thereby affecting water supply. In India, groundwater is key to the water-food-energy-climate change nexus.[25] Strategic

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[21] *Vellore Welfare Forum* v. *UOI*, (1996) 5 SCC 647.
[22] The Environment (Protection) Act, 1986, s. 3(3).
[23] *Id.*, s. 5.
[24] Ministry of Water Resources, River Development and Ganga Rejuvenation (Central Ground Water Authority), "Guidelines to Regulate and Control Ground Water Extraction in India" (Dec., 2018), *available at*: http://cgwb.gov.in/documents/New%20CGWA%20Guidelines%20Gezette%20Notification.pdf (last visited on July 09, 2022).
[25] Anthony J. Jakeman, Olivier Barreteau, *et. al.* (eds.), *Integrated Groundwater Management: Concepts, Approaches and Challenges* 98 (Springer Open, 2016).

adaptation to climate change should include flexible integrated groundwater management over many decades. Groundwater has been a historical buffer against climate variability and our dependence on groundwater resources is likely to increase as water supplies are further stressed by population increase, projected increases in temperature, and climate variability over much of the globe. The primary functions of the Central Groundwater Authority are as follow:

i) To notify the over-exploited blocks of groundwater for their regulation and management.

ii) To regulate the abstraction of groundwater by manufacturing and other industries.

iii) To issue directions to state governments when required for the control and regulation of groundwater resources.

iv) To exercise the power of issuing directions to Central and State Governments under Section 5 of the Environment (Protection) Act, 1986.

v) To take regulatory measures for the groundwater recharge for ensuring sustainable use of groundwater resources.

vi) To spread awareness among the people about the sustainable use of groundwater and its recharge.

Indeed, the State Government is constitutionally mandated with the power to regulate and protect the groundwater resources in India. The establishment of CGWA was the demand of time because many states were not responding to the Model Groundwater Bill, prepared and circulated by the Ministry of Water Resources, which necessitated the need for a central mechanism to control and regulate the overexploitation of groundwater resources at the national level.[26]

The major shortcomings of the Indian legal regime are that it exclusively emphasizes the regulation of groundwater and, at the same time, affirms the common law rule of right to the land of landowners. The regulatory mechanism also has its jurisdictional limitations. The role and effective functioning of the CGWA is getting affected because of the notification process, since the power to issue notification lies

[26] *Supra* note 2 at 4.

with the concerned state government. Hence, the notification process is a severe blow to CGWA because it ties its hands.

III. ROLE OF JUDICIARY IN REGULATION OF GROUNDWATER

The Indian Supreme Court has played a proactive role while expanding the scope of the fundamental right to life and personal liberty enshrined under Article 21 of the Indian Constitution. Over the last couple of decades, the judiciary is expanding the scope of individual and group rights of citizens in all walks of life, including civil, political, social, economic and cultural rights. The Supreme Court and High Courts are constitutionally mandated to strike down any Act, enactment, rule, regulation or notification which violates the fundamental rights of citizens recognised in Part III of the Indian Constitution. The Supreme Court in the case of *Francis Coralie Mullin* v. *The Administrator, UT of Delhi*,[27] observed that right to life encompasses the right to live with human dignity and all that goes with the right to have bare necessaries of life such as adequate nutrition, free and safe drinking water, clothing and shelter and the State is constitutionally bound to provide these rights to its citizens to the extent of its financial competency.

The Constitution of India is dynamic in nature; thus, it is mutable and an ever-changing instrument. Since its adoption in 1949, it has been changing according to the sentiments and aspirations of the Indian people. The Indian judiciary is playing an essential role by giving the humanistic interpretation to the DPSP according to the demand of the society and fulfilling the aspirations of the people of India. The Supreme Court through its judgments expanded the scope of personal liberty and included the right to health, pollution-free air and water, a clean environment, food, drinking clean water, education, etc. While deciding these cases, the apex court took up the human rights perspective of fundamental rights, and redefine them in the context of 21 century. The human rights approach of the Supreme Court, while interpreting the fundamental rights, necessitated the court to revisit the exclusive rights of landowners to abstract groundwater from their land. Adopting the doctrine of public trust in

[27] 1981 (2) SCR 516.

relation to groundwater is a new dimension of the Supreme Court for the protection of depleting water resources in India.

Article 21 of the Constitution of India recognized the right to life and personal liberty but did not recognize the right to water as a fundamental right. However, various judicial pronouncements of the apex court recognized that the right to safe and clean drinking water is a fundamental right included in the right to life enshrined under Article 21 of the Constitution. The apex court, in the case of *Subhash Kumar* v. *State of Bihar*,[28] observed that right to life is a fundamental right enshrined under Article 21 of the Constitution and it includes in its ambit the right of enjoyment of pollution-free air and water for full enjoyment of life. If anything, which brings the air or water into danger or peril that impairs its quality and nature, every citizen has a right to have judicial recourse to prohibit such activities or actions which may be detrimental to the full and proper enjoyment of life.

Under the Indian Constitution, the states are constitutionally duty-bound to fulfil both negative and positive aspects of fundamental rights contained in Part III. So, it is the primary duty of the state governments to provide clean and safe drinking water to every person in India. However, at the same time, the states have to strike a delicate balance between the right to water and the landowner's right to abstract groundwater beneath his land.[29]

The Supreme Court, while interpreting Part III of the Constitution from the human rights perspective, has opined that it is necessary to include the fundamental right to safe and clean drinking water as the principle of Indian water laws. Also, it is more important in the case of groundwater because it fulfils eighty-four per cent of the drinking water requirements. Therefore, deterioration of groundwater in terms of quantity and quality by individuals and industrial establishments may cause hindrances in achieving the goal of the fundamental right of water for current as well as coming generations.

Thus, the Constitution of India imposes the duty on the states to provide safe and clean drinking water to everyone and to mitigate the pollution of water by industries

[28] AIR 1991 SC 420.
[29] *Supra* note 11 at 6.

and other activities. Also, to regulate and control the overexploitation of groundwater by landowners to the realization of the right to water to everyone.

Similarly, the right to a clean and pollution-free environment requires that states shall take necessary steps to restrict the landowner's right to abstract groundwater because a pollution-free environment includes the right to safe and clean groundwater also. Overexploitation of groundwater results in depletion of groundwater resources and also affects the quality of water, which impedes the way for the realization of the fundamental right to a clean and pollution-free environment.

Indian judiciary has recognised groundwater as a common heritage and thereby tried to control the absolute right of the landowners over their land. By recognizing the right to water as a fundamental right, the intrinsic link between groundwater and the landowner's right to abstract groundwater from his land no longer sounds good in the 21st century. The Supreme Court recognized the predominance of human rights in many judicial pronouncements and evolved the public trust doctrine in relation to groundwater that requires the states to take necessary and effective steps to regulate and mitigate the speedy decline of groundwater in many parts of India. Change in the states' position from one of total control and ownership to trusteeship in relation to natural resources is very desirable for ensuring conservation of resources, intergenerational equity and ecological sustainability and for building a constructive and harmonious relationship between state and civil society; and that groundwater too must be brought within the purview of the public trust doctrine.[30]

The Supreme Court invoked the Doctrine of Public Trust in many of its decisions while dealing with environmentally sensitive issues. This doctrine provides a severe blow to the intrinsic link between land ownership and the groundwater beneath it. The Doctrine of Public Trust provides that the 'State' is the trustee of all the natural resources in the country and it is the prime responsibility of the 'State' to use such resources sustainably and for the benefit of the general public while keeping in mind the aspirations of the coming generations. It imposes the duty on the 'State' to protect and conserve the environment from its degradation and sustainably use such resources.

[30] Ramaswamy R. Iyer, *Towards Water Wisdom: Limits, Justice, Harmony* 158 (Sage Publications, New Delhi, 1st edn., 2007).

The invocation of this doctrine for the management and development of natural resources became necessary because if such invaluable resources are put in the private hands, a vast majority of people will be left out of the benefits of those resources for their development. It also became necessary for the overall development of human beings, and no one can acquire absolute ownership over them, and these resources are meant for the general public, and the same cannot be converted into private ownership.[31]

In India, the doctrine is applied for the protection and conservation of many environmentally sensitive natural resources, but there is no provision in any Indian act which provides its invocation in relation to groundwater. However, the Supreme Court through its numerous judicial decisions have extended the application of this doctrine to groundwater also. The Supreme Court, in the case of *State of West Bengal* v. *Kesoram Industries*,[32] held that groundwater belongs to the State in the same sense that the doctrine of public trust extends to it. The owner of land has only the right to use it according to the purpose for which the land is held by him. He cannot do any act which further affects the right to use water of other stakeholders.

Application of the doctrine of public trust in relation to groundwater would provide an impetus to distributive justice and access to groundwater to all even to the landless people. Similarly, the State as a trustee is obliged to provide water to everyone in such a way that no one would be deprived of it, be it an individual or group. However, the State, at the same time, has to ensure that it does not affect the environmental balance.

Water governance and water management/policy issues are inter-connected to each other and both cannot be separated. In fact, water governance encompasses proper water management and efficient water policy. Water governance needs to be reformed in the light of advancement in the area of science and technology, and the best available practices should be adopted. However, if we consider any water governance issue carefully, we will find ourselves led beyond governance from a narrow issue into larger issues (political, economic, social, ecological, legal, constitutional), and beyond the

[31] Chhatrapati Singh, *Water Rights and Principles of Water Resource Management* (N.M. Tripathi Pvt. Ltd., 1991).
[32] (2004) 10 SCC 201.

sphere of governments into the domains of water-users, private sectors agencies and civil society.[33]

The introduction of the public trust doctrine in the existing groundwater legal regime would be a significant step toward recognizing the positive and negative role of the State. However, this doctrine should be introduced with some specific safeguards to ensure that it does not become merely a semantic change that does not have any real impact on groundwater management. Thus, it is more important that trustees should exist at a multi-level institutional set-up and for that end, local self-government such as Panchayati Raj Institutions ('PRIs'), i.e., Gram Panchayats should be empowered with such power and authority to regulate and develop their water resources in a sustainable use with the principle of access to all.

IV. THE GROUNDWATER MODEL BILL 1970: A TOP-DOWN APPROACH

The development in the field of science and technology led to the invention of mechanized pumping devices, which led to an increase in groundwater use and results in a severe water crisis in many states in India. This necessitated immediate legal intervention, which led the Union Government to admit the need for a legal framework for groundwater governance, whose need has been felt over the past few years. However, the legislative competence of the Central Government is limited in enacting a groundwater law because groundwater is a state subject enumerated under entry 17 of the State List in Seventh Schedule of the Constitution of India. Although several attempts have been made by the Union Government to provide a Model Bill that individual states can enact in their groundwater laws accordingly. As a result, the Central Government, through the Ministry of Water Resources, prepared a Model Bill for groundwater and circulated the same among all states and Union Territories in 1970.[34] Since 1970, it has been revised several times, and new developments are added

[33] Ramaswamy R. Iyer, *Towards Water Wisdom: Limits, Justice, Harmony* 31 (Sage Publications, New Delhi, 1st edn., 2007).
[34] Model Bill to Regulate and Control the Development and Management of Ground Water, 1970/2005.

to its draft. Recently the CGWA prepared a new draft of the Model Groundwater Bill, 2017 for the conservation, control, and regulation of groundwater resources in India.[35]

The Model Groundwater Bill, 2005 contains the provision of the constitution of Groundwater Authority in the states to control and regulate the groundwater resources, in tandem with the CGWA. The authority is also empowered with the task to notify the areas which are severely exploited and formulation of restoration plans for the same.

The Model Bill was undoubtedly a significant step by the Central Government to attain uniformity in the institutional framework for groundwater governance. However, it has failed on multiple fronts to address the water crisis in the 21st century. Firstly, it failed to delink the relation between a landowner and his right to abstract groundwater from his land as he wishes without any restriction and, at the same time prohibit the landless people from access to water. Secondly, it failed to provide an aquifers-based control and regulation mechanism for groundwater resources because there is a mechanism in the Model Bill for the mapping of aquifers, which renders the aquifer-based control and regulation impossible. Thirdly, the bill failed to protect the overexploitation of the groundwater by introducing the system of 'license raj', where if any block is overexploiting, the Authority may allow the abstraction of groundwater from such block after obtaining the license from the authority, but there is no provision for its restoration. Fourthly, the Bill has no mechanism for the prevention of groundwater pollution by the industries.

Furthermore, the Bill exempted the agriculture sector from its purview, which is the primary user of groundwater in India. Fifthly, the bill provides a top to bottom approach for groundwater governance and PRIs are excluded from the institutional framework of groundwater governance. PRIs are an institution that are directly involved in the management of groundwater at the village level, and should be included in the institutional framework for groundwater governance in India.[36] According to Philippe Cullet, the proposed legal framework in the Model Bill, 2005 is also socially inequitable because, on one side, it gives landowners absolute control over groundwater abstraction; on the other side, it excludes all landless groundwater users

[35] *Supra* note 5.
[36] Philippe Cullet, "Groundwater Law in India- Towards a Framework Ensuring Equitable Access and Aquifer Protection" 26(1) *Journal of Environmental Law* 55-81 (2014).

from the purview of the framework, even where groundwater is their main source of water for drinking and livelihood purposes.[37]

A few states took some action, but in general, the response of State Governments by and large to the Central initiative was poor. Some states have attempted some degree of regulation for the management and distribution of groundwater under the various irrigation and land revenue Acts.[38] Except for the Tamil Nadu Act, there is no statute for regulation of rights by the states and even a declaration of the state's powers to control groundwater. The Central Model Groundwater Bill and State acts deal with 'groundwater users' without referring to ownership rights. These acts are generally in the form of restrictions on groundwater use in various ways.

V. MODEL GROUNDWATER (SUSTAINABLE MANAGEMENT) BILL, 2017: TOWARDS PARTICIPATORY APPROACH

Since groundwater is a state subject, and exclusive legislative competence with respect to water lies with the states, the Central Government circulated the Model Bill for groundwater. Furthermore, since 1970, more than half of the states have adopted the Model Groundwater Bill circulated by the CGWA with some modifications according to their local needs. However, it was found that it failed to achieve its desired result. By the time the government acknowledged the need for an effective mechanism based on the bottom-up approach and provided decentralization of power — the delinking of the landowner's right to abstract groundwater from his land. Planning Commission in its 12th five-year plan took up an initiative for 'new paradigm shift in the management and regulation of water resources' and drafted a model bill, namely, 'Model Bill for Conservation, Protection and Regulation of Groundwater, 2011'.[39]

The Groundwater (Sustainable Management) Bill, 2017 drafted by the Ministry of Water Resources, River Development and Ganga Rejuvenation gives a new model bill

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[37] *Ibid*.

[38] Ramaswamy R. Iyer, *Water: Perspectives, Issues, Concerns* 104 (Sage Publications, New Delhi, 1st edn., 2003).

[39] Draft Model Bill For The Conservation, Protection And Regulation Of Groundwater, 2011, *available at*: https://niti.gov.in/planningcommission.gov.in/docs/aboutus/committee/wrkgrp12/wr/wg_model_bill.pdf (last visited on July 09, 2022).

that states can adopt to address the growing water crisis in many states.[40] The Model Bill of 2017, affirms groundwater 'as a common heritage of people of India and held in trust' and makes it clear that 'it is not subject of ownership by the State, individuals or groups'.[41] This Bill expressly adheres to the fundamental right to water, as recognized in many judicial pronouncements of the apex court. The Model Bill, 2017, is an attempt to fix the shortcomings of the existing legal framework and bring a holistic change by replacing the common law rule of land-based groundwater rights with the contemporary principle of public trust doctrine and the human right to access to water.

The Model Groundwater Bill, 2017 recognizes groundwater held in public trust, and that the State is the public trustee, duty-bound to conserve, regulate, and manage groundwater. The acknowledgement of groundwater as a public trust is a revolutionary change. However, to ensure that in the guise of the public trust doctrine, no one can be dispossessed, the Model Bill introduced decentralization and the principle of subsidiarity with the doctrine of public trust.[42] The institutional framework of groundwater is divided between gram panchayats and municipalities, and a groundwater committee will be set up at the lowest level in villages and municipalities. Gram Panchayat Groundwater Committee is empowered to prepare the security plan, which shall 'provide for groundwater conservation and augmentation measures, socially equitable use and regulation of groundwater, and priorities for conjunctive use of surface and groundwater'.[43] In the protected zones, the abstraction of the groundwater is strictly prohibited, and the State Authority formulates the policies and restoration plans for the recharge of the groundwater, and this may also be done by artificial recharge if required.

Thus, groundwater protection zones are to be notified to 'protect the natural recharge and discharge areas of the aquifer from threats such as physical deterioration'. It will 'provide sufficient quantity of safe water to meet the basic water supply for human and animal needs. It will also be helpful in groundwater conservation and

[40] Philippe Cullet, "Model Groundwater (Sustainable Management) Bill, 2017, A New Paradigm for Groundwater regulation" 2(3*) Indian Law Review* 276 (2018).
[41] *Supra* note 11 at 6.
[42] S. Koonan, "Revamping the groundwater Legal Regime in India: Towards Ensuring Equity and Sustainability" 12(2) *Socio Legal Review* 45 (2016).
[43] The Groundwater Model Bill, 2011, s.15.

augmentation measures, based on socially equitable use and regulation of groundwater, and priorities for conjunctive use of surface and groundwater'. The validity of plans which are devised for protection zones are continuing for 5 years and are subject to change according to the situation of particular protection zones.

The Model Groundwater Bill, 2017 provides a robust and progressive model for state governments to adopt an advanced legal framework for groundwater governance. However, its real impact depends on the state governments as to till what extent they adopt and implement it in their respective states. It requires a strong political will on the part of the State Government to adopt this model in letter and spirit to address the current challenges concerning the water crisis in India.

VI. THE WAY FORWARD

Groundwater is a vital source of water for irrigation, drinking and industrial purposes in India. Over the past few decades, irregular rainfall in several parts of India has resulted in a severe water crisis, and this further deteriorated the quantity and quality of groundwater. This alarming situation requires a groundwater legal framework based on a holistic approach that ensures sustainability and access to water for everyone. Balancing economic interests with environmental concerns should be the guiding principle for 21st century's groundwater laws.

In the current scenario, the common law rule of land-based groundwater is unreasonable, and the new groundwater framework should be devised on the humanistic approach, and due consideration should be given to the fundamental right to water recognized by the Supreme Court of India in various judicial pronouncements. Equitable distribution of water resources is imperative for access to groundwater to the poor and landless people, which is necessary for their livelihood and sustenance, as mandated by the Constitution of India. The existing groundwater law, which is recognized as the land-based groundwater right, has plenty of opportunities to transform with a framework that would ensure sustainability, equity, and human rights perspective of groundwater laws. Supreme Court recognized that the right to water is included in the fundamental right to life. Thus, it is the constitutional obligation of the State to realize the right to water through groundwater laws. The expansion of

Environmental Laws also provides ample space to do away with the outdated common law rule of landowner's exclusive right to exploit water from their land with an advanced legal framework based on equity and human rights. Integrated groundwater management and planning for the future requires careful evaluation and understanding of climatic variability over periods of decades to centuries while considering the increasing stress on the groundwater resources due to population growth and rise in industrial, agricultural and ecological needs.

The level of the groundwater table varies from place to place in India, and, in this situation, it is not desirable to have a uniform groundwater law in India. For the assessment of groundwater, an aquifer should be taken as a unit. Moreover, at that level for effective control and regulation of groundwater, the legal framework must follow a bottom-up approach where local self-government such as gram panchayats in rural areas and municipalities in urban areas should be equipped with requisite powers to control and regulate groundwater at the aquifer level. Hence, decentralization and participation of all stakeholders are necessary for a comprehensive and advanced groundwater legal framework.

The distinction between surface and groundwater is untenable in the current scenario as most of our water requirements, such as irrigation, drinking, and industrial, are met by groundwater. Hence, the groundwater should be treated as surface water for effective and uniform control and regulation of water resources.

The efficacy of the Model Groundwater Bill, 2017 depends on the State Governments' will to adopt and implement this Bill in letter and spirit. The Bill seeks to revamp the existing framework by recognizing the groundwater as a 'common heritage of the people held in trust' and expressly endorses the fundamental right to water. Until now, only 19 States/UTs have enacted their respective groundwater acts, and many are in the process of enacting groundwater laws based on the principles contained in the Model Bill, 2017.[44] Strengthening transparency, accountability and public participation are more necessary than the legislation. There is a need to raise

[44] Karnataka Ground Water (Regulation for Protection of Sources of Drinking Water) Act, 1999, *available at:* www.ielrc.org/content/e9905.pdf.

public awareness regarding the effect of groundwater depletion and the ways in which this invaluable scarce resource could be protected.

MEDIATION IN ENVIRONMENTAL DISPUTES: AN INDIAN PERSPECTIVE

Dr Ashutosh Mishra Dr Prakash Tripathi***

Indian judiciary has witnessed a dramatic rise in environmental cases due to the active intervention of public interest groups, environmentalists, moral groups, minorities, indigenous communities, etc. who influence public policy through environmental conflicts. These environmental disputes are the result of threat to the access to land resources, safe drinking water, air pollution, health challenges, and loss of livelihood. Indian judiciary and its tribunals are facing very high litigation related to environmental issues. Multiple issues related to the justice delivery system delay environmental justice. Indian courts have more than 4.7 crore pending cases out of which more than 50,000 are related to environmental litigation in 2019. Environmental meditation has been proven as a very useful mechanism to settle environmental disputes amongst the government, corporate groups, and environmental groups. Environmental mediation can be advantageous in timely-delivered justice, harmonious dispute settlement between parties, environmental clearance, rehabilitation, distribution of compensation, and infrastructural developments. There is a need for academic discussion to understand the causes of the success and failure of environmental mediation in India, as mediation has a powerful and central role in the social, psychological, and political life of Indians.

I. INTRODUCTION

India's pursuit of economic development has created a need for larger industrial and infrastructural development along with energy security. These developmental blocks require land resources which are very limited due to its large population. The creation

of national parks and other protected areas also leads to dispossession of the land resources and ultimately leads to conflicts[1]. The spaces owned by the poor and marginalized people, which are also land with abundant natural resources, are found to be cost-effective and manageable. Developmental policies in developing nations, including India, have been more focused on the economic benefit with the least attention on environmental protection and poverty elimination[2]. Traditional and rural communities that rely primarily on the natural resources available in the surroundings for their sustenance face the outcome of these policies. These communities rarely participate in these policy formulations and therefore they do not have any say in compensation, displacement, employment, and any other socio-economic decisions.[3] They lose their natural habitat and socio-cultural values associated with it. The compensation and displacement are also delayed due to red-tapism and negligence.[4] These conditions provide appropriate ground for dissent and conflicts which are later politicized by the political organization and transformed into an environmental dispute.

Indian judiciary has witnessed a dramatic rise in environmental cases due to the active intervention of public interest groups, environmentalists, moral groups, minorities, indigenous communities, etc. who influence public policy through environmental conflicts[5]. The Indian government, sometimes, fails to address the aspiration of the diverse Indian population and find itself in a situation of policy paralysis. Increasing intervention by these groups in legislative, administrative, and

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[1] Asmita Kabra, and Buddhaditya Das, "Aye for the tiger: Hegemony, authority, and volition in India's regime of dispossession for conservation" 50 *Oxford Development Studies* 1 (2022).
[2] Sehrawat, Madhu, A. K. Giri, *et. al.*, "The impact of financial development, economic growth and energy consumption on environmental degradation: Evidence from India." *Management of Environmental Quality: An International Journal* (2015).
[3] Ashutosh Mishra and Prakash Tripathi, "Scheduled Tribes and Their Lost Forests: An Analysis of the Implementation of FRA, 2006 in India". 13 *Sodh Drishti* 22, (2022).
[4] Dandub Palzor Negi and E. P. Abdul Azeez, "Impacts of Development Induced Displacement on the Tribal Communities of India: An Integrative Review". 22 *Asia Pacific Social Science Review*, 58 (2022).
[5] Douglas James Amy, "Environmental mediation: An alternative approach to policy stalemates". 15 *Policy Sciences* 345 (1983).

judicial policy-making processes polarises the views and leads to a deadlock situation or to a phase that regenerates the conflict in future actions. Complex environmental disputes have become a major concern both at the local as well as global levels. Environmentalism has resulted in growing awareness of environmental challenges imposed by development, especially in developing nations. The general public, having bare minimum information of the facts and motivated by the environmental propaganda, considers that the developmental activities had turned down the ecology at a crisis level.[6] This has led to the rising of confrontation between the environmental protagonists and public and/or private organizations. Due to international ecological movements and media publicity environmental protests have aggravated and interest groups have confronted religiously. According to Hass et al (2020), the global population has increased from 1.5 billion to 7.5 billion since 1900. So, a burgeoning demand for land resources always persists for energy and material extraction and waste disposal which leads to Ecological Distribution Conflicts[7]. The Sustainable Development Goals have envisaged biodiversity conservation but also vouch for the economic growth which one or the other way threatens the scarce natural resources. This degradation of natural resources affects the poor disproportionately. That is why most of the environmental disputes are related to poor and indigenous people. They are the ones who reside in the natural resource-abundant areas or better to say that they are the ones who have protected the natural resources from economic industrialization. Therefore, when the extractive industries were introduced, their man-nature bonding get torn which ultimately forced them to move out from their historical natural habitat and also affect their livelihood and cultural practices. These environmental conflicts often overlap with gender, socio-economic class and caste, indigeneity, ethnicity, geopolitics, and policy and governance[8] and resulted in the 'environmentalism of the poor and marginal'. Chipko Movements of Himalaya[9] Chico

[6] Arnim Scheide, Daniela Del Bene, *et. al.*, "Environmental conflicts and defenders: A global overview". 63 *Global Environmental change* 2 (2020).
[7] Joan Martinez-Alier, "Mapping ecological distribution conflicts: The EJAtlas" 8 *The Extractive Industries and Society* 1 (2021), *available at*: https://doi.org/10.1016/j.exis.2021.02.003
[8] Pierre Charbonnier, "Abundance and Freedom: An Environmental History of Political Ideas" *Discovery* (2020).
[9] Ramchandra Guha, *The Unquiet Woods: Ecological Change and Peasant Resistance in the Himalaya* (Oxford University Press, Delhi, 1989).

Mendes of Brazil, Ogoni and Ijaw of Niger Delta[10], Narmada Bachao Andolan, Ganga Satyagraha, Kodaikanal, etc. are a few examples of the environmental disputes which are the result of industrialization, economic expansion, and policy negligence.

These environmental disputes, prevalent majorly in developing and third world nations, are the result of the threat to the access to land resources, & safe water and air pollution, health challenges, and loss of livelihood. However, the Western notion of 'post-materialistic' environmentalism[11] is believed to be originated from the cultural shift and is prioritized after the fulfilment of basic needs such as food, housing, and shelters.[12] Grass-roots environmentalism is different from the western 'cult of wildernesses and 'the gospel of eco-efficiency' and the ideology primarily rises in response to secure sustenance and livelihood of these nature-dependent communities. Most of these conflicts are ideological rather than factual[13] as this rhetoric is found to be a fundamental dispute over the beliefs and values[14]. These protagonists follow the *humanistic** ideology which believes that to achieve material comfort, the environment should not be put at risk and humans should live in harmony with nature[15]. These ideologists believe in nonmaterial goals which should be achieved through a decentralized and participatory approach to environmental decision-making.

The climatic and anthropogenic factors, combined with the urge for economic expansion and policy negligence, change the land use practices and alter the environmental resources resulting in the loss of habitat, over-exploitation, and a threat to the food, shelter, and health securities.

II. ENVIRONMENTAL DISPUTES IN INDIA

India is a developing nation, which aspires to become one of the largest economies in the world. To achieve the target of a 5 trillion economy, it needs to harness its natural

[10] *Id.* at 7.
[11] R. Inglehart, "Public support for environmental protection: Objective problems and subjective values in 43 societies" 28 *Political Science & Politics* 57 (1995).
[12] *Id.* at 7.
[13] D. Sills, "The environmental movement and its critics" 3 *Human Ecology* 1 (1975).
[14] A. Miller and W. Cuff "The Delphi approach to the mediation of environmental disputes" 10 *Environmental Management* 321 (1986).
[15] S. Cotgrove, *Catastrophe or cornucopia: The environment, politics and the future* (John Wiley and Sons, New York, 1982).

resources and commodify them for economic gain. Also, to fulfil the basic requirements of increasing Population, it needs natural resources and land resources for food security. To ensure economic growth and food security, technological advancement is a prerequisite that demands huge energy production, whether renewable or non-renewable energy. The economic expansion combined with the increasing population results in fragile-ecological conditions which not only challenge the sustenance of the economically poor people but also restrict the sustainable development. State also plays a vital role in deciding the environmental status of a nation. On one hand, it takes suitable measures to protect the natural biodiversity, as a part of the signatory of various international environmental accords, by creating protected areas and on the other hand, it manages ecological habitat for economic growth. In both cases, the economically poor and natural resource-dependent communities are forced to migrate from their native habitat to a completely new place or they find themselves highly insecure in terms of their fundamental needs such as food and shelter.[16]

Environmental disputes in India are more 'utilitarian' in nature, different from the western 'protectionist' model. Most of these protests and disputes are against the big dams, mining and other infrastructural projects, protected areas, land acquisition, water disputes, etc. These conflicts primarily involve a struggle for livelihoods, identity, culture, knowledge system, and most importantly right to a dignified life as provided in the Constitution. Environmental history suggests that industrial and economic expansions has played very integral role to the present problem of social inequality and oppression. The poor and economically backward population were the most affected ones who lost their livelihood and habitat due to the economic expansion. Policy negligence and political propaganda give fuel to the sentiments of the victims and they start opposing the government action.[17] Environmental policies are biased towards industrial and infrastructural development and very less or no participation from the inhabitants is sought.[18] They are informed by the administration that the government is acquiring this land piece for which some monetary compensation will be given. But,

[16] Arun Agrawal and Kent Redford, "Conservation and Displacement: An overview" 7 *Conservation and Society* 8 (2009).
[17] Gadgil, Madhav, *et. al.*, "Ecological conflicts and the environmental movement in India." 25 *Development and change*, 102 (1994).
[18] https://ccs.in/indian-government-favours-industry-over-environment.

how much time this compensation clearance will take is dubious. LARR Act 2013,[19] and Forest Rights Act 2006[20] have provided legal security to the people. Still, a large population of India (approx. 275 Million) relies on the forest for their daily needs.[21] According to Global Forest Watch,[22] India has lost approximately 376kha forest cover in between 2001 to 2021 primarily due to the change of forests for industrial, agricultural, and infrastructural activities. These activities force the inhabitants to dislocate to a new and alien place. Their socio-cultural fabrics are disturbed and traditional ecological knowledge which they learned over a long period of cohabitation with nature also vanishes.[23] These losses cannot be compensated by money or any other physical compensation.

According to the EJ Atlas,[24] India is a leading nation when it comes to environmental disputes. There are 347 environmental disputes documented in India. Although it is not an exhaustive list, it includes only those environmental incidences which are highlighted by media; social and news. The EJAtlas covered the social conflicts against the perceived negative social and environmental impacts with the following criteria.

1. *Economic activity or legislation with actual or potential negative environmental and social outcomes;*
2. *Claim and mobilization by environmental justice organization (s) that such harm occurred or is likely to occur as a result of that activity*
3. *Reporting of that particular conflict in one or more media stories.*

The Environmental conflicts are categorized into 10 domains which cover the community's struggles for their right to natural resources, food, clean air, and health that have been jeopardized due to developmental or any other reasons. In India, maximum disputes are a result of the water management which includes dams and hydropower projects.[25] Water conflicts are not restricted to the national level (such as

[19] The Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Act, 2013.
[20] Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006.
[21] https://www.cseindia.org/forest-in-india-7691.
[22] https://www.globalforestwatch.org/dashboards/country/IND/.
[23] Parrotta, John, *et. al.*, "Traditional knowledge for sustainable forest management and provision of ecosystem services." 12 *International Journal of Biodiversity Science, Ecosystem Services & Management* 2 (2016).
[24] https://ejatlas.org/country/india.
[25] https://ejatlas.org/country/india.

Cauvery, Krishna, Betwa, etc) but are also found to be a reason for international conflicts (Indus, Jhelum, Brahmputra, Teesta, etc). Most of these conflicts are related to water flow, salinization, water pollution, displacement due to hydro-projects, etc.[26] Conflicts related to 'fossil fuels, climate justice and energy' is the second major factor of environmental conflict in India. The built environment and infrastructural development led to conflicts coming next which are followed by disputes caused by industrial development. These conflicts are primarily 'subaltern or poor environmentalism' in which protagonists are the poor and marginalized people. It has been found that 40% of the global protagonists are 'Indigenous or ethnically discriminated population.'[27]

III. ENVIRONMENTAL JUSTICE AND ADJUDICATION IN INDIA

Environmental justice has been defined differently depending on the perception and context chosen for inquiry. Local communities see environmental justice as a sense of discrimination caused by developmental actions and policy negligence that causes environmental hazards. In contrast, when it is seen from the perspectives of the business and regulated agencies who are primarily responsible for ecological degradation, it focuses on the negligence toward the health and welfare.[28] The aspect of environmental justice is procedural justice which is ensured by the increased democratization of the decision-making process and transparency in environmental matters[29]. Access to environmental justice is the first step to the achievement of environmental justice goals by articulating in the language of equity the assurance of legal standing for all affected and interested parties; right of appeal or review; specialized environmental courts and other practical dispute resolution mechanisms.

Environmental law in India traces its history to the ancient texts such as the Vedas which see nature as an integral part of society. Economic development and technological advancement have degraded the environment to a great extent and

[26] *Ibid*.
[27] *Id.* at 7.
[28] R. R. Kuehn, "A taxonomy of environmental justice" 30 *Envtl. L. Rep. News & Analysis* 10681 (2000).
[29] O. W. Pedersen, "Environmental principles and environmental justice" 12 *Environmental Law Review* 26 (2010).

created 'environmental inequality' which means inequality in terms of access to the present natural resources. Environmental inequality led to the struggle for the environmental rights of the locals and resulted in environmental disputes. To address these environmental disputes environmental laws were formed to deliver environmental justice. Indian constitution clearly states in the article-48 which states that the duty of the state is 'to protect and improve the environment and safeguard the forest and wildlife of the country'. The right to live in a healthy environment is rightfully recognized under Article 21[30] which has been upheld by various judgments such as Dehradun Quarrying case and Oleum Gas Leak Case.[31] Legislation has enacted various laws and rules to protect forests on one hand and access to natural resources for the locals on the other hand.[32] However, Conceptual clarity on the nature, scope, and limitations of environmental rights and legal principles is essential for the advancement of environmental governance as environmental litigation and legal adjudication strive to address this challenge.[33] Due to rapid industrialization and urbanization demand for energy and land resources increased unexceptionally. The burgeoning population also put pressure on the natural resources and environmental conflicts became very common episodes. India enacted multiple laws to maintain a balance between the development and the environment[34] but due to misinterpretation or policy reasons, these laws could not serve the purpose.[35] Due to shortcomings of policy implementation and developmental pressure, judicial intervention became necessary for protection of environment and safeguarding of people's rights affected due to misappropriation of the environmental law.[36] Judiciary's intervention is not restricted to the interpretation

[30] The Constitution of India.
[31] Geetanjoy Sahu, "Public Interest Environmental Litigations in India: Contributions and Complications." *The Indian Journal of Political Science* 745-758 (2008).
[32] Sukhvinder Singh Dari and Rangam Sharma, "An overview of environmental jurisprudence in India" 1 *J. Gen. Manage. Res* 1 (2014).
[33] S. Ghosh, Indian Environmental Law: Key Concept and Principles (2019). (Abstract) retrieved from https://cprindia.org/books/indian-environmental-law-key-concepts-and-principles/ (last visited on 13 July, 2022).
[34] OECD, "Regulatory Management and reform in India" retrieved from https://www.oecd.org/gov/regulatory-policy/44925979.pdf (last visited 18 Aug., 2022).
[35] V K Agarwal, "Environmental laws in India: challenges for enforcement." 15 *Bulletin of the National Institute of Ecology* 231, (2005).
[36] Geetanjoy Sahu "Implications of Indian Supreme Court's innovations for environmental jurisprudence." 4 *Law Env't & Dev. J.* 1 (2008).

of environmental laws but it also monitors and implements executive actions whenever it is found necessary. The former Chief Justice of India K G Balakrishnan said:

> In its efforts to protect the environment, the Supreme Court and the Indian Judiciary, in general, have relied on the public trust doctrine, precautionary principle, polluter pays principle the doctrine of strict and absolute liability, the exemplary damages principle, the pollution fine principle and inter-generational equity principle apart from the existing law of the land.[37]

The courts in India, play a vital role in protecting the environment, forest, wildlife, and natural resources, but it sometimes lacks technical expertise which not only delays the legal processes but affects the verdicts. The Indian judiciary realized that the growing judicial awareness, deficiencies in environmental regulations and their enforcement, multi-layered corruption, contradiction, gaps in institutional mechanisms, etc. demand a separate institution that can address these problems effectively[38]. The Law Commission of India in its 186th report advocated for the constitution of 'environmental courts'.[39] The Supreme Court also emphasized establishing an environmental court in some of the cases such as M.C.Mehta vs. UoI and Indian Council for Environ-Legal Action vs. UoI.[40] Consequently, the Indian parliament passed the National Green Tribunal Act, 2010, and National Green Tribunal (NGT) was institutionalized in 2011 to handle techno-legal environmental cases and deliver 'green justice' by sharing the burden of the Apex court[41].

The preamble of the Act specifies the aims of the NGT as –

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[37] K. G. Balakrishnan, *Judicial activism and the role of green benches in India*, Asian Justice Forum Strengthening Court Capacity on Environmental adjudication, *available at*: https://www.highcourtchd.gov.in/sub_pages/left_menu/publish/articles/articles_pdf/judicial.htm (last visited on 14 July, 2022).

* Schedule I includes The Water (Prevention and Control of Pollution) Act of 1974, the Water (Prevention and Control of Pollution) Cess Act of 1977, The Forest (Conservation) Act of 1980, The Air (Prevention and Control of Pollution) Act of 1981, The Environment (Protection) Act of 1986, The Public Liability Insurance Act of 1991 and The Biological diversity Act of 2002.

[38] Gitanjali Gill, "The national green tribunal of India: a sustainable future through the principles of international environmental law" 16 *Environmental Law Review* 183 (2014).

[39] *Ibid.*

[40] *Ibid.*

[41] Usha Tandon, "Green Justice and the Application of Polluter-Pays Principle: A Study of India's National Green Tribunal" 13 *OIDA International Journal of Sustainable Development* 35 (2020).

> The National Green Tribunal has been established] for effective and expeditious disposal of cases relating to environmental protection and conservation of forests and other natural resources including enforcement of any legal right relating to the environment and giving relief and compensation for damages to persons and property and for matters connected therewith or incidental thereto.[42]

The NGT is a "quasi-judicial body" with constrained authority. It is not like a typical judicial court but has authority similar to law enforcement agencies. Indian courts can adjudicate all cases while the NGT has the authority to make administrative agencies follow the law. The NGT's action may be appealed in a court of law[43] which means the punishment recommended by NGT in a criminal offence can be challenged in the court of Law which is final authority

India, along with other nations, has promised to achieve the Sustainable Development Goals within the stipulated time.[44] Improved environmental laws, access to environmental justice and environmental dispute resolution are essential for achieving the SDGs targets and to accomplish this goal a dedicated court for environmental disputes was a pre-requisite.[45] The tribunal has jurisdiction over '*all civil cases where a substantial question relating to the environment (including enforcement of any legal right relating to the environment) is involved and such question arises out of the implementation of the enactments specified in Schedule I'*.[46] Since the establishment of NGT, the environmental justice has witness a rise and the NGT had pronounced various directions and rules for in the favour of environmental protection and delivered justice for the people affected due to environmental damage.[47] The NGT, in its decisions, highlights the right to development vis a vis right to environment and plays a crucial

[42] The National Green Tribunal Act, 2010.
[43] S. Rengarajan, D. Palaniyappan, *et. al.*, "National Green Tribunal of India—an observation from environmental judgements" 25 *Environmental Science and Pollution Research* 11313 (2018).
[44] https://sustainabledevelopment.un.org/memberstates/india.
[45] G. Pring and C. Pring, "Environmental Courts & Tribunals: A Guide for Policy Makers" UNEP, Published by UN Environment, Kenya, 120P. (2016).
[46] The National Green Tribunal Act. (2010), Section 14.
[47] *Id*. at 27.

role as a 'guardian of the environment'.[48] Rosencranz and Sahu (2014) analyzed the role of the NGT and mentioned,

> [A]nalysis of the NGTs role over the years suggests that it has been progressive in its approach towards environmental protection in general and the rights of marginalized people in particular. It has not only come down heavily against microstructures but has also challenged the big corporate sectors as well as the central and state governments for not adhering to environmental regulations.[49]

The Tribunal has faced jurisdictional criticism by many scholars and governing bodies such as MoEF&CC, GoI has termed it as '*power-hungry institution*'[50] while the Bombay high court has called it as "*some tribunal created under some law.*[51] The tribunal has also been criticized for overruling the government orders and expert committees' reports and giving arbitrary environmental clearances, compliance, and jurisdictional and application of environmental laws principles in the decision-making process.[52]

Indian judiciary and its tribunals are facing very high litigation related to environmental issues. Multiple issues related to the justice delivery system delay environmental justice. Indian courts have more than 4.7 crore pending cases[53] out of which more than 50,000 are related to environmental litigation in 2019.[54] In the apex court and NGT, the number of pending environmental cases was around 110 and 3573 respectively.[55] The increasing trend of environmental litigation has become a serious concern in the Indian judiciary.[56] Justice A H Benjamin of Brazil mentions, *"Environmental conflicts require quick action or response, which is incompatible with the slow pace of the court system that, due to its bureaucracy and technical rituals, eventually*

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[48] Gitanjali Gill, *Environmental Justice in India: The National Green Tribunal*. (Routledge, Delhi, 2016).
[49] Armin Rosencranz and Geetanjoy Sahu "Assessing the National Green Tribunal after four years" 5 *J. Indian L. & Soc'y* 191 (2014).
[50] Yukti Choudhary, "Tribunal on Trial" (Down To Earth, 11 June 2015).
[51] Rajeshwari Ganesan, "NGT and Bombay High Court Clash Over National Highway 7 Widening" (Down To Earth, 3 August 2015).
[52] *Id.* at 30.
[53] https://pib.gov.in/PressReleasePage.aspx?PRID=1786270.
[54]https://www.hindustantimes.com/environment/in-2019-50-000-environment-related-cases-remained-pending-in-courts-101614561261341.html.
[55] PIB, Case pending in Supreme Court and NGT, retrieved from https://pib.gov.in/Pressreleaseshare.aspx?PRID=1541784 (last visited on 18 July 2022).
[56] Arindam Basu, "Climate Change Litigation in India: Seeking a New Approach through the Application of Common Law Principles." *Envtl. L. & Prac. Rev.* 1 (2011).

becomes an obstacle to effective protection of the environment and economic progress."[57] Indian judiciary has started looking for an alternative dispute resolution mechanism that is apt for the present situation.

IV. ENVIRONMENTAL MEDIATION: A NEW PARADIGM OF DISPUTE SETTLEMENT

Environmental mediation (EM) is a non-judicial alternative dispute resolution mechanism in which the two parties, violators and victims, sit together under the observation and moderation of an expert mediator who is a third party and who brings both parties to a common agreement to solve the case. The EM uses an approach to resolve environmental and policy conflicts more democratically. EM has begun with the inception of Environmental activism and environmental laws in the 1970s.[58] USA was the leading nation to implement the EM and institutionalized environmental mediation services at the University of Washington.[59] Amy (1983) defines EM as, '*an ad-hoc policymaking process in which representatives from environmental groups and business groups sit down together with governmental officials and a neutral mediator to negotiate a set of binding policies to resolve a particular environmental dispute*.'[60]

EM is an attempt at dispute resolution by examining ecological ideas and practices which involve volunteer agreement of all the parties by re-establishing the process of negotiation and persuasion in the presence of a trained mediator. The mediator, unlike the arbitrator, has no authority to impose a settlement but s/he plays a significant role in diffusing resentment, reducing tension, clearing up miscommunication, minimizing misunderstandings, and integrating parties' demands into a commonly acceptable solution. Earlier, judicial litigation was believed to be the last solution to environmental disputes but EM has suggested a better option because it saves time and money, and

[57]Antonio Herman Benjamin, We, the Judges, and the Environment, 29 Pace Envtl. L. Rev. 582 (2012), *available at*: https://digitalcommons.pace.edu/pelr/vol29/iss2/8.

[58] John Harrison, "Environmental Mediation: the ethical and constitutional dimension." 9 *Journal of Environmental Law* 98, (1997).

[59] G. P. Soto, "Environmental Regulatory Mediation" 8 *Tex. Tech. Admin. LJ* 253 (2007).

[60] *Id.* At 5.

reduces the caseload of the courts[61]. Advocates of the EM also emphasize the greater satisfaction of the parties after a broad discussion on the environmental issue ends to a consensus. However, there is the possibility of the domination of one party over the other/s due to socio-political or economic advantage. The Mediation literature is also criticized for being dominated by those with strong normative commitments to the EM or it is too sketchy to support any conclusion.[62] EM has been found to have higher settlement rates by providing an outside force that moves parties to settle the disputes. Parties, before entering into the Mediation process, should evaluate the social, political, and administrative implications and also compare the traditional method of dispute settlement with EM. Depending on the objectives and goals of the stakeholders, the advantage and disadvantages of the EM, and the chances of success and failure of the EM, the parties should enter into mediation. According to Talbot,[63] Pioneer Mediator Gerald Cormick identified four factors that indicate successful mediation:

i. a stalemate in decision-making or recognition that stalemate is inevitable,
ii. voluntary participation,
iii. some room for flexibility, and
iv. a means of implementing agreements

A successful mediation is also created on cooperative relationships and an intention to settle the disputes. If parties have no intention to converge on a certain agreement then the entire exercise of mediation goes in vain. Presently, the world is facing an ecological crisis due to burgeoning pressure on the natural resources caused by rapid industrialization and increasing population which indicates more environmental disputes in the future. Mediation also provides a link between traditional and adversarial methods and the contemporary and emerging harmonious approach to resolve disputes[64]. The parties, who may be a corporate or public enterprise, state or

[61] Neil G. Sipe, "An Empirical Analysis of Environmental Mediation" 64 *Journal of the American Planning Association* 275 (1998). DOI: 10.1080/01944369808975985.
[62] J. Walton Blackburn, "Environmental mediation as an alternative to litigation". 16 *Policy Studies Journal* 562 (1988).
[63] A. R. Talbot, *Settling things: Six case studies in environmental mediation* (Conservation Foundation, Washington, DC, 1983).
[64]Jennifer L. Harder, "Environmental Mediation: The Promise and the Challenge" 19 *Environs: Envtl. L. & Pol'y J* 29 (1995).

central agencies, or government, must express their interest in dispute settlement. A trained mediator having knowledge of ecology and environmental laws who moderates the mediation exercise through his explanation and interpretation can be advantageous. A mediator who has a scientific understanding of the environment, mediation, and legal framework can plan out a holistic way out of the conflict.

Mediation can play a significant role in infrastructural disputes, Environmental Impact assessments, Environmental clearance for developmental projects, and climate change disputes which not only delay the developmental activities but also create a rift between the state and the public.[65] A developmental policy should include different stakeholders such as bureaucrats, judicial officers, industrialists, environmentalists, civil society activists, and a local representative who can put their words and moderate policy so that the developmental activities cannot be hampered. There must be environmental plans for the construction, demolition, disposal of waste, etc. so that minimum ecological damage takes place and the health of the locals is not compromised.

In an International Conference on Mediation organized in Delhi in April 2022,[66] a special session was dedicated to the Environmental Mediation in which different scholars and experts presented their views. It was found that most environmental disputes are the result of ignorance of laws and regulations. The demand for infrastructural development brings up new categories of disputes which warrants technical and scientific evaluation. The courts in India are already overburdened with pending cases. In this situation, mediation can act as the most effective tool to resolve the problems. It has been found that different governmental agencies are already successfully using mediation for resolving environmental disputes but in the absence of legal sanctity to the EM these settlements are not reached to a conclusion e.g. NHAI, NHPC has sorted out environmental and financial disputes through mediation.[67] NHAI used both formal and informal methods of ADR which classifies the proper arbitration

[65] Dhruv Shekhar, "Mediation for Environmental Dispute in India" (2017), *available at*: http://mediationblog.kluwerarbitration.com/2017/08/23/mediation-environmental-disputes-india/.
[66] DSPPG, 3rd International Conference, *Role of Mediation in Environmental and Infrastructural Disputes*. 2022, *available at*: https://www.youtube.com/watch?v=fHFvBXb1mEk&t=291s.
[67] *Ibid.*

process as the formal means of arbitration and dispute resolution.[68] Indian Government also has policies for Conciliation and settlement mechanism for contractual disputes in contract agreements with contractors, concessional, and consultants in respect of ministries' bodies.[69] NHAI has three conciliation committees and each committee has three members where the general structure of the conciliation committee is that of a retired judge from the High Court or Supreme Court, a retired Director-General of the ministry who has the adequate technical knowledge, and a retired secretary government official who has experimented in handling disputes of contractual matters across the sectors.[70]

In the case of International Environmental Disputes, the EM has played a significant role in settling the disputes. The Indus Water Treaty between India and Pakistan is one of the best examples of successful environmental mediation. Both India and Pakistan avoided past claims and settled with a new agreement that was based on the technical and functional grounds instead of the Political grounds. The mediation and technical support were provided by the World Bank. The World Bank gave several options to settle the dispute but no final consensus was made. WB divided the Indus Basin and allocated the western tributaries (Indus, Jhelum, and Chenab) to Pakistan and the eastern tributaries (Satluj, Ravi, and Beas) to India. India accepted the proposal while Pakistan agreed on qualified acceptance.[71] The Indus water treaty is a landmark of international environmental mediation which has survived in the strained and hostile political atmosphere. However, there are some disputes related to Kishanganga and Ratle hydropower projects, the hydro-power projects were constructed by India on Jhelum and Chenab rivers respectively. Pakistan claims that these projects violate the Indus water treaty by obstructing the river water.[72]

The environment, natural resources, wildlife, flora, and fauna should be protected. The scholars in the conference supported the formalization of the Environmental Mediation in India, because of its nature of the quick resolution of the dispute, cost-

[68] *Ibid.*
[69] *Ibid.*
[70] DSPPG, 3rd International Conference, *Role of Mediation in Environmental and Infrastructural Disputes*. 2022, *available at*: https://www.youtube.com/watch?v=fHFvBXb1mEk&t=291s.
[71] Asit. K. Biswas, "Indus water treaty: The negotiating process" 17 *Water international* 201 (1992).
[72] *Ibid*.

effectiveness, and addressing competing interests. Allan Tablot rightly concluded that EM has the capability to resolve environmental disputes more quickly and enduringly and it should be financially and administratively supported by the government and other organizations.[73]

David Schoenbrod questioned Talbot's view for ignoring the multiple factors and steps involved in the EM and the fear of litigation which discourages the stakeholders to enter the mediation process. He had fear that environmental mediation can be replaced by environmental compromise.[74] In a developing nation, such as India, government pressurizes legislation to formulate lopsided policies in favour of the industrial groups so that the government can achieve the developmental targets.[75] The stakeholders at the bottom level are ignored or rarely included in the policy formulation process.[76] Political pressure also pushes the stakeholders to compromise for the development.[77] The people who are directly affected by environmental degradation mostly rely on the political or community leaders who are influenced by the government and compromise the issue for their benefit.[78] NGT, the guardian of environmental protection has limited scope to address these problems and the judiciary is already overburdened with cases. Therefore, projects do not get environmental clearances at appropriate time. This causes either a financial burden on the government due to halting of the project or the misappropriation of the environmental resources by the corporate sector and harm to the locals if the project is running.

V. CONCLUSION

Environmental Meditation has been proven as a very useful mechanism to settle environmental disputes among the government, corporate groups, and environmental

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[73] Allan R. Talbot, *Settling things: Six case studies in environmental mediation*. Conservation Foundation, Washington DC, 1983).
[74] David Schoenbrod, "Limits and Dangers of Environmental Mediation: A Review Essay" 58 *N.Y.U. L. Rev.* 1453 (1983).
[75] World Bank, "The biases of development professionals." 2014, *available at*: https://www.worldbank.org/content/dam/Worldbank/Publications/WDR/WDR%202015/Chapter-10.pdf.
[76] *Id.* at 3.
[77] Bas Arts, and Verschuren Piet. "Assessing political influence in complex decision-making: An instrument based on triangulation." 20 *International Political Science Review* 412 (1999).
[78] *Id.* at 7.

groups. Environmental mediation can be advantageous in timely-delivered justice, harmonious dispute settlement between parties, environmental clearance, rehabilitation, distribution of compensation, and infrastructural developments. EM looks for the common grounds and highlights the common interests of both parties and resolves the issue harmoniously where both parties are in a win-win situation. The mediators or environmental lawyers should positively participate and encourage the parties to settle the dispute outside the court and avoid litigation so that time and money can be saved. The mediators should be trained and should know environmental laws and ecological terminologies so that they can explain things in a better way. Every skilled mediator must touch that nerve of the litigants by which it can make sense to them and the litigants could also feel that their case is in safe hands who understand the sensitivity of the case. The courts and the NGT are already overburdened and new litigations have to wait for a long time which affects both cost and time. Mediation is found to be the most efficient measure to reduce the heavy burden of litigation without compromising the standard of equity, justice, and good conscience. Indian legislation and judiciary should also promote environmental mediation and create a conducive atmosphere through policy and judgments so that stakeholders can choose the mediation process. The Indian public has psychological roadblocks against the Mediation and believes that court judgment is the only way of resolving the dispute. The academicians and legal experts are needed to find out why Environmental mediation could not succeed in India despite having such a great historical and cultural legacy? There is a need for academic discussion to understand the causes of the little success or failure of Environmental Mediation in India. Historically, Mediation has a powerful and central role in the social, psychological, and political life of Indians. In the villages disputes are still resolved through mediation.

American Chief Justice Mr. Warren Berger says "*People with legal problems want quick reliefs in an inexpensive manner*"[79] and Environmental mediation provides the most suitable, cost-effective, and amicable settlement. As Hon'ble Justice Mishra has advised Mediation committees should perceive a larger vision, in the tune of changing

[79] DSPPG, 3rd International Conference on Mediation". Quoted by Hon'ble Mr. Justice Dipak Misra in the Valedictory session of the 3rd International Mediation conference, 2022, retrieved from https://www.youtube.com/watch?v=MmpiFhEcWKc&t=2195s.

nature and character of the litigation, while they involve in the mediation process in a case.[80] The courts should encourage Environmental mediation at any stage of litigation because the result of mediation metamorphosizes the societal situation and establishes collective harmony which is absolutely essential. Academic institutions should also disseminate the vocabulary of Environmental mediation by publishing a bilingual glossary for the ease of the litigants. The Government should take progressive measures in the field of environmental mediation as there is a need for making the mediation more effective and accessible which can be achieved through collective efforts.

[80] *Ibid.*

REVISITING THE CONFLICT BETWEEN PATENT RIGHTS AND PUBLIC HEALTH IN THE WAKE OF COVID-19 PANDEMIC

Kislay Soni[*] and Ashutosh Raj Anand[**]

COVID-19 in its wake has stimulated renewed interest around pharmaceutical patents. The outbreak which has been declared a "pandemic" by the World Health Organization has engendered vigorous debate with regard to the current intellectual right regime vis-à-vis global health. Seen from the healthcare Industry's perspective, patent over drugs and health related technology becomes very crucial as it directly impinges on the cost of the medicines and associated medical equipment. Especially this is relevant in low- and middle-income countries where higher prices would preclude patients from accessing it. Drug patents have always created acrimonious contestation and constant deliberation. The patent over essential medicines has been a controversial issue even during the 'pre-covid circumstances.' The exorbitant costs of drugs create tremendous financial hardships for the patients. As a matter of fact, even developed economies are overwhelmingly burdened due to the high cost of patented drugs and equipment. There are various provisions under the TRIPS Agreement which pertain to events such as national emergency or other circumstances of extreme urgency, and thereby has stipulations for Compulsory Licensing, among other crucial provisions. This paper assesses the extant IPR regimes under WTO/TRIPS regime. TRIPS flexibilities, which are further entrenched by the Doha Declaration are being analyzed especially looking at them from the 'ground-reality'. Provisions such as Compulsory License, Voluntary License and Patent pool are being examined.

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I. INTRODUCTION

> Never in the past has our knowledge of science been so profound and the possibilities to treat all manner of diseases so great. Many sources of transmissible and non-transmissible diseases have been identified, and therefore prevention, including the fight against bacteria, viruses and parasites, has improved dramatically. New generations of medicines and their combinations are treating patients whose prognosis some years ago would have been fatal. The development of medical devices, the ability to combine new materials and use micro and even nanotechnology and computer science are increasing the safety of interventions and replacing natural functionalities. Progress in fundamental research is nourishing an exceptional phase of development of medicines, vaccines, diagnostics and medical devices.[1]

The aforementioned excerpt from the report prepared under the auspices of United Nations underscores the massive and unprecedented stride humanity has taken to repulse and survive from various fatal diseases and morbidities. Yet, despite the commendable progress, there lie arrays of global public health issues which grimly assail human life. These public health issues, as seen in the form of HIV (having claimed 36.3 million lives as of yet),[2] global influenza pandemic,[3] non-communicable diseases

[1] United Nations, Secretary General, "Report of the United Nations Secretary-General's High-Level Panel on Access to Medicines: Promoting innovation and access to health technologies" *United Nations*, Sep. 14, 2016, *available at*: http://www.unsgaccessmeds.org/final-report#:~:text=According%20to%20a%20High%2DLevel,improved%20the%20lives%20of%20millions (last visited on Mar. 5, 2021).

[2] World Health Organization, "HIV/AIDS", *available at*: https://www.who.int/news-room/fact-sheets/detail/hiv-aids (last visited on Mar. 5, 2021).

[3] World Health Organization, "8 Things to Know About Pandemic Influenza", *available at*: https://www.who.int/news-room/feature-stories/detail/8-things-to-know-about-pandemic-influenza (last visited on Mar. 5, 2021).

(also known as chronic diseases),[4] antimicrobial resistance,[5] high threat pathogens[6] to name a few present a humongous challenge.

As per the World Health Organization, most of the world's population does not have access to essential healthcare services as they suffer financial hardships[7] and are rampantly being pushed into extreme poverty as they have to bear the exorbitant cost of health care[8] and over 930 million people which constitute around 12 % of the world's population have to "spend at least 10% of their household budgets to pay for health care".[9] The recurring outbreaks of Ebola and the highly infectious Zika virus in its wake has brought about devastating consequences in terms of not only loss of human lives, but has also catastrophically overwhelmed the vulnerable sections of the society and less developed countries. The report by WHO states that in the very first two decades itself of the 21st century, the world has come to be reminded that many communities and countries continue to be vulnerable and threatened by infectious diseases, with HIV killing an estimated 35 million people, and Ebola resurfacing and causing 25 outbreaks in total. It was also enumerated in the report that this could further translate to the arrival of something even more lethal.[10]

The recent spurt of these outbreaks not only points out inadequacy in health security and the lack of preparation for epidemics or pandemics,[11] but also lack of infrastructure and timely availability of medicines, health technology and responses required especially during the public emergencies of international concern.[12] It is in this

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[4] World Health Organization, "Non-communicable Diseases", *available at*: https://www.who.int/news-room/fact-sheets/detail/noncommunicable-diseases (last visited on Mar. 5, 2021).
[5] World Health Organization, "Antimicrobial Resistance", *available at*: https://www.who.int/health-topics/antimicrobial-resistance (last visited on Mar. 5, 2021).
[6] World Health Organization, "WHO publishes List of Bacteria for which New Antibiotics are urgently needed", Feb. 27, 2017, *available at*: https://www.who.int/news-room/detail/27-02-2017-who-publishes-list-of-bacteria-for-which-new-antibiotics-are-urgently-needed (last visited on March 5, 2021).
[7] World Health Organization, "Universal Health Coverage (UHC)", Apr. 1, 2021, *available at:* https://www.who.int/news-room/fact-sheets/detail/universal-health-coverage-(uhc) (last visited on Mar. 5, 2021).
[8] *Ibid.*
[9] World Health Organisation, "Primary health care", Apr. 1, 2021, *available at*: https://www.who.int/news-room/fact-sheets/detail/primary-health-care (last visited on Mar. 5, 2021).
[10] World Health Organization, "Managing Epidemics: Key Facts about Major Deadly Diseases", *available at:* https://apps.who.int/iris/handle/10665/272442 (last visited on Mar. 5, 2021).
[11] Johns Hopkins, *GHS INDEX: Global Health Security Index: Building Collective Action and Accountability* 09 (2019).
[12] Nerina Boschiero, "*Intellectual property rights and public health: an impediment to access to medicines and health technology invocation?*" 22 *State, Chiese e pluralismo confessionale* 7 (2017).

context that the role of the current patent regime under TRIPS must be highlighted. Millions of people, as is evident, are unable to access medicines due to strict patent regimes. This regime turns out to be a major stumbling block precluding the access to those who need them the most. The magnitude of AIDS crisis as seen in late nineties brought to the foreground the harsh truth that despite the existence of medicines, millions of people died due to the medicines not being available due to the lack of affordability of the same.[13]

The high cost of medicines does establish an intrinsic relationship between patent protection and high drug prices.[14] In context of the treatment for non-communicable diseases also such as cancer and cardiovascular ailments, it is seen that these remain prohibitively costly; and this situation is further compounded by the unavailability of inexpensive tools for early diagnosis, which would support and boost preventive strategies.[15] It is merely "stating the obvious" that the high drug prices and health related technologies have a significant impact on health.[16]

As per the Constitution of the World Health Organization "the enjoyment of the highest attainable standard of health"[17] has been hailed as "one of the fundamental rights of every human being without distinction of race, religion, political belief, economic or social condition".[18] Under the 2030 Agenda for Sustainable Development; Sustainable Development Goal - 3 emphasizes on promoting good health and wellbeing and inter alia targets "access to quality essential health-care services and access to safe, effective, quality and affordable essential medicines and vaccines for all"[19] Essential

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[13] Ellen' T Hoen, *Private Patents and Public Health: Changing Intellectual Property Rules for Access to Medicines* 1 (Health Action International, Amsterdam, 2016).

[14] Ellen' T Hoen, *The Global Politics of Pharmaceutical Monopoly Power: Drug Patents, Access, Innovation and the Application of the WTO Doha Declaration on TRIPS and Public Health* xv (AMB Publishers, Netherlands, 2009).

[15] World Health Organization, *Report of the Commission on Intellectual Property Rights, Innovation and Public Health: Public health innovation and intellectual property rights* 44 (WHO Press, Switzerland, 2006).

[16] Hannah Brennan, Amy Kapczynski, *et al.*, "*A Prescription for Excessive Drug Pricing: Leveraging Government Patent Use for Health*" 18 (*YALE J. L. & TECH.* 2017).

[17] Constitution of the World Health Organization, *available at*: https://apps.who.int/gb/bd/PDF/bd47/EN/constitution-en.pdf (last visited on Mar. 5, 2021).

[18] *Ibid.*

[19] World Health Organization, "Delivering on the Global Partnership for Achieving the MDGs, Access to Affordable Essential Medicines", *available at*: https://www.who.int/medicines/mdg/MDG08ChapterEMedsEn.pdf (last visited on Mar. 5, 2021).

medicines aid people in leading a longer and healthier life. This comes in the backdrop of the fact that the exorbitant cost of medicines excludes those who need them the most. There are various diseases for which there is an acute crisis of medicines as these are either not manufactured as much or are not brought to the market due to the lack of profit incentives.

This systemic failure stems from the "way that innovation is currently rewarded through the patent system".[20] It is relevant to point out here, that the profits earned by large pharmaceutical companies 'are significantly higher than the non-pharmaceutical companies.[21] These pharmaceutical companies make huge profits owing to the restrictive patent-based incentive system. This incentive driven model impinges on research and development as well. As a matter of fact, the current model has influenced and boosted R&D in such a way that it has led to the underinvestment in diseases which are lower in significance due to lack of profitable market in cases such as Type II and III diseases.[22] These diseases predominantly scourge the low-and middle-income countries. Equally worrying is the fact that comparatively, there has been insignificant investment with regard to diseases for which treatment "needs to be preserved and that cannot be aggressively marketed, such as antibiotics".[23]

It would be worthwhile to point out here that cancer has become a huge money maker for the pharmaceutical industry which accounted for US$ 100 billion in 2015 and expected to rise phenomenally in the recent years.[24] Patent system as it exists currently devotes "most of the research and development for medicines, vaccines, diagnostics and related health technologies…on financial potential rather than the needs of the poorest and most marginalized communities."[25] It is evident that the access to medicines and healthcare today is no more a developing country issue as it deeply impinges the health system and burdens the budget of high-income countries too.[26] In

[20] *Supra* note 14 at 3-4.
[21] Richard Anderson, "Pharmaceutical industry gets high on fat profits", *BBC News*, Nov. 6, 2014, *available at*: https://www.bbc.com/news/business-28212223 (last visited on Mar. 5, 2021).
[22] World Health Organization, "Background Document Provided by the WHO Secretariat" 14 Nov. 2012, *available at*: https://www.who.int/phi/3-background_cewg_agenda_item5_disease_types_final.pdf (last visited on Mar. 5, 2021).
[23] *Supra* note 13 at 7-8.
[24] *Supra* note 14 at 107.
[25] *Supra* note 13 at 7.
[26] *Supra* note 14 at 114.

the current paradigm of intellectual property rights, which overtly dictates the term of availability of medicines, a disease outbreak of a pandemic magnitude, as is being witnessed currently, has acutely exacerbated the hardships of people, and that of countries as well.

II. THE ONSET OF THE COVID-19 PANDEMIC

The ongoing COVID – 19 has turned out to be a major global pandemic event.[27] The damning effects of the pandemic have been felt across countries - as more and more people lose their life. As is palpably visible that the affordability of drug treatment is the most overarching issue felt more acutely in the developing countries, with a shortage of medicines and equipment, along with a mounting burden on the healthcare system. Patent regime, as it exists, creates an unassailable burden when it comes to the affordability of essential medicine. Relevant questions also concern the distribution of medicine in an equitable manner. It is important to examine the extant of patent regime to understand how it deals with public health crisis. It is pertinent to assess the existing mechanism on pharmaceutical patents under the WTO/TRIPS. To understand some of the trenchant claims against WTO/TRIPS, it is necessary to examine the legal regime on patent.

III. PATENT RIGHTS: STIMULATING INNOVATION AND TECHNOLOGICAL PROGRESS

Patent is described as "a bundle of exclusive rights granted to an inventor whose invention satisfies certain prerequisites such as novelty, non-obviousness and utility."[28] As per the definition given by the World Intellectual Property Organization (WIPO), patent is defined as: "an exclusive right granted for an invention, which is a product or

[27] World Health Organization, "Diseases Outbreaks", *available at*: https://www.who.int/emergencies/diseases/en/ (last visited on Mar. 5, 2021).
[28] Shamnad Basheer and Mrinalini Kochupillai, "Exhausting Patent Rights in India: Parallel Imports and TRIPS Compliance", 13 *Journal of Intellectual Property Rights* 486 (2008).

a process that provides, in general, a new way of doing something, or offers a new technical solution to a problem".[29]

Therefore, patent is a form of intellectual property which confers legal rights. The respective government grants these rights to people for their invention which should be new, nonobvious and useful. These rights inter-alia mean that the patentee "can prevent others from making, using, importing, or selling their invention for a certain period of time without his or her consent. In exchange, the public is meant to benefit from the sharing of scientific advancements."[30] For an invention to get patented the prerequisites are primarily: a) novelty; b) inventive step or non-obvious; and c) industrial application; d) with subject matter acceptable as "patentable" under law; e)disclosure of the invention in its application for patent.[31] Patents as a matter of fact are territorial rights and therefore it is "only applicable in the country or region in which a patent has been filed and granted, in accordance with the law of that country or region". However, the same can be sought in a number of countries by an international patent application.[32] The purpose of patent is to enable to inventors to "recoup the costs of their research and development and to earn a profit by charging consumers".[33] Patent is justified on the ground that it spurs dynamic efficiency "by stimulating innovation and technological progress".[34] In the current context, and particularly with regard to pharmaceutical innovation, there has been a growth which disproportionately favours the patent holders.[35] Pharmaceutical companies resort to manipulating and exploiting patent regime to the hilt. As is seen even in a developed economy, to highlight an example, essential medicines such as insulin continue to be far costlier in America.[36] In the present patent set up, it is replete with examples that

[29] World Intellectual Property Organization, "Patents", *available at:* https://www.wipo.int/patents/en/ (last visited on Mar. 5, 2021).
[30] *Supra* note 14 at 4.
World Intellectual Property Organization, Frequently Asked Questions "Patents", *available at*: https://www.wipo.int/patents/en/faq_patents.html (last visited on Mar. 5, 2021).
[32] *Ibid*.
[33] Laurence R. Helfer, "The Contested Evolution of the Transnational Legal Order on Access to Medicines" *Transnational Legal Orders* 314 (Cambridge University, 2015).
[34] *Ibid.*
[35] *Supra* note 14 at 4.
[36] Sydney Ember, Bernie Sanders, "Heads to Canada for Affordable Insulin", *The New York Times*, Jul. 28, 2019, *available at*: https://www.nytimes.com/2019/07/28/us/politics/bernie-sanders-prescription-drug-prices.html. (last visited on Mar. 5, 2021).

pharmaceutical companies exert the patent regime and exact exorbitant profits and windfall gains all around the world.[37]

IV. THE WTO FRAMEWORK FOR REGULATING PATENT RIGHTS

The World Trade Organization was established in the year 1995. It works as a global international organization to bolster multilateral trading system, act as a forum for negotiating trade agreements and settling trade disputes.[38] The World Trade Organization instituted a new chapter in the field of patent law and has especially brought-in a marked change with regard to inventions in the pharmaceutical arena.[39] The WTO framework necessitates adherence to TRIPS and it is enforceable through dispute settlement as administered by the dispute settlement board. As has been seen, the mechanism under WTO has benefitted countries who seek large foreign markets but "ignores the heterogeneity of the world's population and especially the problems that confront developing nations".[40] It has been seen that the developed nation members of the WTO have successfully negotiated mandatory protection for pharmaceutical products by pitching the argument that the provisions provide necessary incentives for continued innovation in the development of medicines.

TRIPS agreement, since its inception, has been very controversial due to its objectives and consequences, which sought to establish global minimum standards for Intellectual Property. Developing countries have continuously raised their concern regarding the impact it would have on the production and supply of low-cost generic medicines. However, in this backdrop, TRIPS does provide various flexibilities. And these flexibilities are very relevant in the matter of public health. World Intellectual Property Organization (WIPO) secretariat has listed out various flexibilities such as: a) Compulsory licensing and government use; b) Exhaustion of rights (parallel

[37] Ezekiel J. Emanuel, "Big Pharma's Go-To Defense of Soaring Drug Prices Doesn't Add Up", *The Atlantic*, Mar. 23, 2019, *available at*: https://www.theatlantic.com/health/archive/2019/03/drug-prices-high-cost-research-and-development/585253/ (last visited on Mar. 5, 2021).

[38] World Trade Organization, "The WTO", *available at*: https://www.wto.org/english/thewto_e/thewto_e.htm (last visited on Mar. 5, 2021).

[39] Rochelle C. Dreyfuss, "TRIPS and essential medicines: must one size fit all? Making the WTO responsive to the global health crisis" *Incentives for Global Public Health: Patent Law and Access to Essential Medicines* 35 (Cambridge University, 2010).

[40] *Supra* note 41 at 36.

importation); c) research exemption; d) regulatory review exception as important flexibilities in the matter of public health under TRIPS.[41]

It is pertinent to point out certain relevant provisions of TRIPS. As per Article 1.1. of the TRIPS, it states that:

> Members shall give effect to the provisions of this Agreement. Members may, but shall not be obliged to, implement in their law more extensive protection than is required by this Agreement, provided that such protection does not contravene the provisions of this Agreement. Members shall be free to determine the appropriate method of implementing the provisions of this Agreement within their own legal system and practice.[42]

As stated before, the TRIPS agreement stipulates only minimum standards which implies that this agreement provides certain leeway for the member country to frame its laws, with regard to the prevailing national situation.[43] Article 8.1 of the TRIPS Agreement declares: "Members may, in formulating or amending their laws and regulations, adopt measures necessary to protect public health and nutrition, and to promote the public interest in sectors of vital importance to their socioeconomic and technological development, provided that such measures are consistent with the provisions of this Agreement."[44] It is conspicuously clear that TRIPS contains specific provision on public health. To address this issue of public health Article 31 of the TRIPS Agreement deals with various circumstances wherein the WTO members can make use of compulsory license. This article has the stipulation that the "efforts to obtain authorization from right holder on reasonable commercial terms and conditions"[45] within a reasonable period of time must be made before resorting to 'other use 'such as compulsory license. It however states that "this requirement may be waived by a Member in the case of a national emergency or other circumstances of extreme urgency, or in the cases of public non-commercial use."[46]

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[41] *Supra* note 14 at 80.
[42] Agreement on Trade Related Aspects of Intellectual Property Rights, art. 1.1.
[43] *Supra* note 14 at 81.
[44] *Supra* note 46, art. 8.1.
[45] Agreement on Trade Related Aspects of Intellectual Property Rights, art. 31.
[46] *Ibid.*

WTO Doha Declaration on the TRIPS Agreement and Public Health unequivocally affirms the right of member country to make use of the TRIPS flexibility to secure public health. Doha Declaration is a very significant development with regard to trade and health. It entrenched a new paradigm when it comes to the matter pertaining to patents and medicines. It advocated for reformulating intellectual property protection as a means to secure "the benefit of a society as a whole, rather than a mechanism to protect only limited commercial interests."[47] Compulsory license is very potent method which is further bolstered under the Doha Declaration. The Doha Declaration explicitly confirms that the WTO members may make use of Compulsory license in case of national emergency and other circumstances of extreme urgency. This declaration unambiguously underscores the right of the WTO members and the freedom to determine the grounds upon which such compulsory licensing can be granted for the purpose of protecting public health. As per Ellen 'T Hoen:

> The Doha Declaration was a pivotal point for the debate on access to medicines and intellectual property (IP). In its seven paragraphs, the Declaration: recognised the growing concerns over HIV and other diseases; firmly established the primacy of public health concerns over IP; firmly supported interpretations of TRIPS allowing governments to take action necessary to protect the health of their populations; and set out plans to cope with the particular plight of LDCs and countries lacking the capacity to make their own medicines.[48]

Doha Declaration acknowledged that the TRIPS Agreement "does not and should not prevent Members from taking measures to protect public health."[49] Paragraph 6 of the declaration recognized that "WTO members with insufficient or no manufacturing capacities in the pharmaceutical sector could face difficulties in making effective use of compulsory licensing under the TRIPS Agreement"[50] and called for finding expeditious solution to this problem. This issue was resolved by the "waiver of the export restriction" as negotiated for nearly two years and adopted on 30th August, 2003.[51]

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[47] *Supra* note 15 at xvi.
[48] *Supra* note 14 at 31.
[49] Doha Declaration, 2001.
[50] *Ibid.*
[51] World Health Organization, "WTO Decision on the Implementation of Paragraph 6 of the Doha Declaration on the TRIPS Agreement and Public Health", *available at*: https://www.who.int/medicines/areas/policy/wto_impl_para6/en/ (last visited on March 5, 2021).

The Doha Declaration undoubtedly "reaffirmed that the WTO members can make use of the public health related flexibilities of the TRIPS Agreement."[52]

V. COMPULSORY LICENSING: A TOOL TO SAFEGUARD PUBLIC HEALTH

Compulsory license is an umbrella term which entails variety of non-voluntary authorizations to use patent. These authorizations may be seen in the form of "ex officio licenses, government use, crown use, licenses to remedy anti-competitive practices, mandatory licenses, and statutory licenses".[53] Many countries have resorted to a variety of reasons for grant of compulsory license, which includes reasons such as high prices of medicines, lack of access to medicines, etc. The Government, as already stated, can decide to grant the license for government use or public non-commercial use. It must be noted here that the "government use license can also be used to authorize a third party to perform certain acts that otherwise would have constituted a patent infringement. This means that a government can issue a government-use license and authorize a procurement agent to purchase and supply medicines on its behalf."[54] Under the TRIPS Agreement, it stipulates various possible grounds for Compulsory License which includes "refusal to deal, emergency and extreme urgency, anti-competitive practices, non-commercial use, and dependent patents."[55]

It must be pointed out here that Compulsory Licenses leads to reduction in prices of medicines. The competition between generic medicine and proprietary medicine patent holder helps a great deal in affordability of medicines. It is worth noting that countries have explicit provisions with regard to compulsory licensing which can be used during national emergency or other circumstances of extreme urgency and "when the patent holder refuses to grant voluntary licenses on reasonable commercial terms"[56]

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[52] Policy Brief 7, "*T*he Doha Declaration on TRIPS and Public Health Ten Years Later: The State of Implementation," *South Centre* Nov. 1, 2011, *available at*: https://www.southcentre.int/wp-content/uploads/2013/06/PB7_-Doha-Declaration-on-TRIPS-and-Health_-EN.pdf (last visited on March 5, 2021).
[53] *Supra* note 14 at 50.
[54] *Id.* at 51.
[55] K D Raju, "Compulsory v Voluntary Licensing: A Legitimate way to Enhance Access to Essential Medicines in Developing Countries" 22 *Journal of Intellectual Property Rights* 23 (2017).
[56] *Ibid.*

within a reasonable period. It is important to note that Compulsory Licensing or the announcement by the government for the compulsory licensing since the Doha Declaration has been done for a variety of reasons such as for predominantly HIV/AIDS drugs, and for other communicable/non communicable diseases etc. This has helped various countries (especially developing countries) in price negotiation and in reducing the drug cost.[57] In developed economies such as in the European Union, Compulsory Licensing, though has not been frequently used but nevertheless has been used in instance such as for reasons for health and public interest.[58] India has also made use of compulsory license in 2012 for the cancer drug sorafenib tosylate which was marketed by Bayer as Nexavar[59] It would not be out of place that the governments in the United States and in Canada have used the threat of compulsory licenses against Bayer, who held the patent on the antibiotic drug ciprofloxacin (Cipro) in the wake of September 11, 2001 attack. In fact, Canada is the first country "to notify compulsory license to export generic drug".[60]

VI. ADVANTAGES OF VOLUNTARY LICENSING

Compulsory Licensing is not without its share of problems, as very often than not, it attracts lot of resistance and litigations. On the contrary, there are various advantages of Voluntary Licensing.[61] As Professor K D Raju has cogently highlighted that there are various factors that work in favor of voluntary licensing, such as: a) the negotiations pertaining to the patented medicines can be done smoothly and directly without any

[57] National Library of Medicine, "Trends in Compulsory Licensing of Pharmaceuticals Since the Doha Declaration: A database Analysis" Jan. 10, 2012, *available at*: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3254665/(last visited on Mar. 5, 2021).

[58] European Patent Academy, "Compulsory Licensing in Europe", available at: http://documents.epo.org/projects/babylon/eponot.nsf/0/8509F913B768D063C1258382004FC677/$File/compulsory_licensing_in_europe_en.pdf, (last visited on Mar. 5, 2021).

[59] Bureau, "India's first compulsory license granted to Natco for Bayer's cancer drug", *The Hindu Business Line*, Mar. 12, 2012, *available at*: https://www.thehindubusinessline.com/companies/Indias-first-compulsory-licence-granted-to-Natco-for-Bayers-cancer-drug/article20408026.ece (last visited on Mar. 5, 2021); see *Supra* note 14 at 70.

[60] World Trade Organization, "Canada is First to Notify Compulsory Licence to Export Generic Drug" 2007, *available at*: https://www.wto.org/english/news_e/news07_e/trips_health_notif_oct07_e.htm#:~:text=The%20notification%20informs%20WTO%20members,be%20exported%20under%20compulsory%20licence (last visited on Mar. 5, 2021).

[61] *Supra* note 60.

litigation or getting involved in the protracted time consuming process; b) smooth transfer of technology which bolsters economic development in developing economies; c) it's a win-win situation as it doesn't threaten the right of the pharmaceutical companies as the company rather gets a huge traction in the market, and the reputation for helping the developing economies through voluntary licensing.[62] This would however be beneficial mostly when these companies do not wholly divulge into profit making.

VII. ROLE OF PATENT POOLS IN ENHANCING ACCESSIBILITY TO MEDICINAL DRUGS

Access to new medicine can be effectuated via patent pools, wherein third parties acquire non-exclusive licenses for the concerned intellectual property so as to develop products.[63] It is pertinent to point out that the concept of patent pools has been in existence in other fields such as aviation,[64] automobile, digital technology, consumer electronics etc. Patent pools, as per WIPO, has been defined as an "agreement between two or more patent owners to license on or more of their patents to one another or to third parties".[65] Patent pool as it is seen is an "arrangement among multiple patent holders to aggregate their patents."[66] It enables the pooled patents to be available to each members and this arrangement facilitates in offering standard licensing terms to licensees and allocates licensing fees to each member "according to a pre-set formula or procedure".[67] Patent Pool constitutes a "one-stop-shop to the patented technology"[68]

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[62] *Ibid.*

[63] "Bulletin of the World Health Organization", *available at*: https://www.who.int/bulletin/volumes/97/8/18-229179/en/ (last visited on Mar. 5, 2021).

[64] Intan Hamdan-Livramento, "The Role of Patents in the History of Aviation", WIPO Dec. 2018, *available at*: https://www.wipo.int/wipo_magazine/en/2018/06/article_0007.html (last visited on Mar. 5, 2021).

[65] WIPO Secretariat, "Patent Pools and Antitrust- A Comparative Analysis", WIPO Mar. 2014, *available at*: https://www.wipo.int/export/sites/www/ip-competition/en/studies/patent_pools_report.pdf (last visited on Mar. 5, 2021).

[66] Robert P. Merges, Wilson Sonsini Goodrich & Rosati, "Institutions for Intellectual Property Transactions: The Case of Patent Pools", Aug., 1999, *available at*: https://www.law.berkeley.edu/files/pools/pdf (last visited on Mar. 5, 2021).

[67] *Id*. at 10-11.

[68] Noel Courage, Carmela De Luca & Aaraf Dewan, "Pooling Patent Rights to Combat COVID-19", May 15, 2020, *available at*: https://www.mondaq.com/canada/operational-impacts-and-strategy/934524/pooling-patent-rights-to-combat-covid-19 (last visited on Mar. 5, 2021).

and allows "third parties to obtain a single license to the group of patents through the pool, as opposed to having to negotiate multiple licenses between different parties".[69] The benefit of patent pool is enormous especially when it comes to accessibility and development of life saving medicines. This method, which existed for several decades in other fields, is relatively new in the area of public health. It would be pertinent to mention here that a similar sort of method in the form of Medicine Patent Pool (MPP) has been working to cater to the low- and middle-income countries in terms of enhancing the accessibility to the life-saving medicines. The Medicine Patent Pool has contributed in enhancing accessibility of medicine. It is a United Nations backed public health organization established by UNITAID[70] in the year 2010. It is "the first voluntary licensing and patent pooling mechanism in public health".[71] This organization works by adopting voluntary licensing and patent pooling model.[72] Accessibility to medicine which is also indispensable for the avowed goal of universal health coverage invariably becomes difficult due to unaffordable prices.[73]

Medicine Patent Pool, quite uniquely, has improved access with regard to healthcare for HIV/AIDS.[74] Through the endeavors of Medicine Patent Pool, the coverage and affordability of medicines against HIV/AIDS has increased manifold. It allowed the generic companies to produce and sell generic copies of medicines in low- and middle-income countries. It resulted in availability of antiretroviral treatment for the HIV disease needed in the low-income countries. This pool consequently expanded its scope to fighting diseases such as tuberculosis and hepatitis C. Researchers here would argue that the arrangement of patent pool must be further expanded to the new threats and public health risks. As a matter of fact, World Health Organization has recommended

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[69] *Ibid.*
[70] "UNITAID" Jan. 30, 2021, *available at*: https://unitaid.org/about-us/strategy/ (last visited on Mar. 5, 2021).
[71] *Supra* note 77.
[72] "Medicines Patent Pool" 1 Jun., 2018, *available at*: https://medicinespatentpool.org/uploads/2018/04/MPP-FAQ-EN.2018.06.06.pdf (last visited on Mar. 5, 2021).
[73] Esteban Burrone, Dzintars Gotham, *et. al.*, "Patent Pooling to Increase Access to Essential Medicines" 2019, *available at*: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6653814/ (last visited on Mar. 5, 2021).
[74] "The Medicines Patent Pool; Stimulating Innovation, Improving Access", *available at*: https://www.wipo.int/edocs/mdocs/mdocs/en/wipo_gc_lic_ge_12/wipo_gc_lic_ge_12_ref_factsheet.pdf (last visited on Mar. 5, 2021).

in 2016 that patent pool should be extended to all patented essential medicines on the WHO EML, i.e., Essential Medicines List.[75] Pertinent here would to point out that, in the present context, i.e., COVID – 19 pandemic, Medicine Patent Pool has "temporarily expanded its mandate to include any health technology that could contribute to the global response"[76] to this pandemic. Patent pool can be a robust mechanism to balance the interest of patent holders and simultaneously taking care of Global Health. Many researchers are of the opinion that the present health emergency crisis gives an ample opportunity for the various stakeholders to pitch in and collaborate through patent pool.

VIII. CONCLUSION

Pharmaceutical Patents have always been very contentious. The same is a subject matter which continuously draws consternation, protests and has never failed to drive the wedge between the supporter and detractors; who unflinchingly take the firm side vis-à-vis the patent framework. Especially in light of health issues, which as the pivotal concern of every country, be it developed or low- and middle-income countries, any patent on essential medicine or health technology inevitably becomes a serious public issue. Unprecedented development in the field of medicine and health technology has not benefitted the masses as it potentially could have, given the unparalleled capacity to produce and supply these essentials. To impute the patent regime for this failure (if not completely) definitely cannot be disputed. A point of relief is that the WTO/TRIPS provide various flexibilities. Public health emergency and health issue is conspicuously visible in the WTO/TRIPS. The concern regarding the public health has gotten further boost and support in the form of the Doha Declaration. Having regard to the specific provisions as enumerated in the declaration, and not abiding by its tenor would be a travesty which would play out against the interest of the global masses. Not to forget, various international covenants, documents and conventions which have sanctified

[75] "WHO Submission to the UN Secretary- General's High Level Panel on Access to Medicines" 7 Mar., 2016), *available at*: https://static1.squarespace.com/static/562094dee4b0d00c1a3ef761/t/56e746279f7266a586c2b893/1457997352055/WHO_HLP_Submission_7Mar2016.pdf (last visited on Mar. 5, 2021).

[76] "Medicines Patent Pool, Covid-19", *available at:* https://medicinespatentpool.org/what-we-do/our-work/covid-19/ (last visited on Mar. 5, 2021).

enjoyment of the highest attainable standard with regard to healthcare.[77] The ongoing Sustainable Development Goal avow and commit to improving health and strives to ensure "access to quality essential health-care services and access to safe, effective, quality and affordable essential medicines and vaccines for all".[78] Access to medicine is one of the pivotal factors in bolstering good health. Ensuring accessibility is fraught with challenges. Researchers here would like to point out that 'patent pool' along with 'voluntary licensing' should be encouraged through conducive policies which would facilitate accessibility. Promoting robust generic manufacture is second to none to check the abuses of big pharmaceutical companies. As Professor Shamnad Basheer has said "an 'abusive' working of patents in the pharmaceutical sector (such as charging excessive prices or not making a critical drug available to the patient population) can have deleterious public health consequences."[79] Pharmaceutical industry has a key role to set this right. To facilitate health, and supremely, global public health!

[77] *Supra* note 18.
[78] "Sustainable Development Goal 3"*, available at*: https://sustainabledevelopment.un.org/sdg3 (last visited on March 5, 2021).
[79] Shamnad Basheer, "Make pharmaceutical patents work in the public interest"*, The Hindu Business Line,* Feb. 2, 2018, *available at*: https://www.thehindubusinessline.com/specials/pulse/make-pharmaceutical-patents-work-in-the-public-interest/article22637313.ece (last visited on Mar. 5, 2021).

THE CHILD'S FIRST RIGHT: THE RIGHT TO LIVE WITH FAMILY

Yailiwon Shangh[*]

In December 2019, the United Nations General Assembly passed a resolution to promote and protect the rights of children by recognizing every child's right to grow up in a family environment for full and harmonious development. Acknowledging the harmful effects of institutionalization, the resolution calls to support families in order to prevent unnecessary separation. The Juvenile Justice (Care and Protection of Children) Act, 2015 similarly recognizes the family as the best place for nurturing children and for institutionalization to be only be used as a measure of last resort after alternative care arrangements such as adoption, foster care, and sponsorship have been explored. Although foster care is not a common practice in India, adoption remains a long and cautious process. Simultaneously, with the disintegration of the traditional family support system, numerous children land up in child-care institutions, though they are not orphans. International experts on childcare reform carried out a project that recognized the harm of institutionalization and identified evidence-based alternatives to it. Meanwhile, the unprecedented Covid-19 pandemic brought about rapid deinstitutionalization in India due to urgent safety concerns in crowded childcare institutions. However, it is not clear if this was done was for good or as a temporary arrangement. In light of this, this paper attempts to explore alternatives to institutions and recommends strengthening of child protection systems to promote children's right to grow up with families and in a familial environment.

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I. INTRODUCTION

Family is the basic unit of society where children receive love, care, support, nutrition, and protection. It is the first place of socialization that gives a child a sense of security and confidence. It is the primary source of love, care, attention, emotional, moral, and material support in a child's life where parents are primarily responsible for the child's protection, growth, and development. Children need permanent care that will ensure a lifetime commitment, continuum of care, and a sense of belonging that is vital for the child to learn the role of responsible parents and members of the community later in life. Therefore, strengthening families must always be a priority. Families exist in a community that consists of neighbours, local government, schools, associations, marketplaces, community leaders, and other local organizations. While childcare institutions (CCIs) provide all services within the institutions and thus isolate children from communities, in family care all these services are provided in the community, and therefore, they can cater to the needs of the child in a better way. Unfortunately, between 5 to 6 million children worldwide are estimated to live in institutions and denied the right to a family, although this might be an underestimate owing to scarcity of data.[1] In most cases, institutionalization is the result of a combination of factors like poverty, family violence, disability, mental illness, drug and alcohol abuse, loss of parental care, lack of access to education and health services.[2]

The Geneva Declaration of the Rights of the Child, 1924, for the first time, recognized children as right possessors and affirmed that adults should uphold and protect their rights. Later, in 1989, the United Nations Convention on the Rights of the Child ('UN CRC') brought a paradigm shift from a welfare approach to a rights-based approach. The UN CRC defines a child as every human being below the age of eighteen

[1] Chris Desmond, Kathryn Watt, *et.al.*, "Prevalence and number of children living in institutional care: global, regional, and country estimates," *The Lancet Child & Adolescent Health* (Mar. 2020).
[2] Berens AE, Nelson CA, "The science of early adversity: Is there a role for large institutions in the care of vulnerable children?" *Lance*t 386:388–98 (2015).

years[3] and stated that children should not be separated from parents;[4] that, parents are responsible for the upbringing and development of the child;[5] that in absence of parental care, the state should provide a family-based alternative care[6] keeping in mind the best interest of the child; and that every child has the right to an adequate standard of living.[7]

After two decades of the UN CRC, the United Nations General Assembly ('UNGA) issued Guidelines for the Alternative Care of Children, 2010 to enhance the implementation of the UN CRC and of relevant provisions of other international instruments to ensure the protection and well-being of children deprived of parental care or at risk of being so.[8] These guidelines had dual objectives of ensuring that children are not separated from their families unnecessarily, and if separated, the type and quality of out-of-home care provided is appropriate to secure the rights and specific needs of the children concerned. On the 30th Anniversary of the UN CRC in December 2019, the UNGA further passed a resolution on the Promotion and Protection of the Rights of Children. It not only reiterated the need for a child to grow up in a family environment for full and harmonious development but urges the State parties to progressively replace institutionalization with quality alternative care and redirect resources to strengthening family and community-based care keeping in mind the best interest of the child and the child's opinion.[9]

II. INSTITUTIONALIZATION AND ITS IMPACT ON CHILDREN

Institutionalization affects millions of children across the world and is a major source of developmental delay and mental ill-health during childhood and adolescence that substantially undermines human wellbeing and capital across their lifespan. The Lancet Group Commission recently published its project on the institutionalization and

[3] The United Nations Convention on the Rights of the Child, art. 1.
[4] *Id*., art. 9.
[5] *Id*., art. 18.
[6] *Id*., art. 20.
[7] *Id*., art. 27.
[8] Guidelines on Alternative Care, *available at*: https://bettercarenetwork.org/international-framework/guidelines-on-alternative-care (last visited on 28/10/2020).
[9] Promotion and Protection of the Rights of children: Resolution adopted by the General Assembly on 18 December 2019, *available at*: https://bettercarenetwork.org/sites/default/files/2020-01/A_RES_74_133_E.pdf (last visited on 27/10/2020).

deinstitutionalization of children in two parts: the first part concerning the effects of institutionalization on the development of children and the necessity of deinstitutionalizing,[10] while the second part detailed the policy and practice recommendations for global, national, and local actors towards deinstitutionalization.[11] The study was based upon more than 300 quantitative studies conducted across more than 60 countries (including India) relating to the development of children raised in institutions over the last seven decades. Altogether 308 such studies were included in their meta-analysis on institutionalization and deinstitutionalization.

The study established strong negative associations between institutional care and children's development, physical growth, cognition, attention, and brain development. According to the study, deinstitutionalizing children (who have disrupted growth in institutions) can promote developmental recovery significantly once they leave the institution and are being placed in foster or family-based care. The study pointed out two important factors for growth delays and other harmful effects of institutions viz. lack of continuum care and lack of skilled caregivers. There is a lack of continuous care that forms the basis of balanced development that leads to the formation of a lasting emotional bonding between the child and their caregiver because of the high frequency of staff turnover and the nature of working in shifts.[12] Further, in institutions, care is typically provided by poorly paid staff who are inadequately trained and with insufficient time to provide a basic standard of care due to the high child-caregiver ratio. There is also the risk of violence, neglect, and abuse children face in institutions which has a long-term negative effect. Besides, institutional care is more expensive per child than other forms of alternative care as it requires staffing and maintenance, and a whole lot of services. There would be variance in actual cost among countries and programs but comparisons consistently demonstrate that the cost of keeping a child in

[10] Marinus H Van Ijzendoorn, Marian J Bakermans-Kranenburg*et.al.*, "Institutionalisation and deinstitutionalisation of Children 1: a systematic and integrative review of evidence regarding effects on development"7(8) *The Lancet Psychiatry* (2020).

[11] Philip S Goldman, Marian J Bakermans-Kranenburg, *et. al.*, "Institutionalisation and deinstitutionalisation od children 2: policy and practice recommendations for global, national, and local actors"4(8) *The Lancet Child & Adolescent Health* (2020).

[12] John Williamson & Aaron Greenberg, "Families, not orphanages", *Better Care Network Working Paper* 6 (Sept., 2010).

an institution can be used to support many more children in family care.[13] Altogether, there is overwhelming scientific evidence of the negative impacts of institutionalization on children especially younger children who are at higher risk and therefore, they should not be institutionalized as far as possible.[14]

Hence, it was suggested that children's exposure to institutions must be minimized, proper gatekeeping to prevent and reduce the number of children from entering the institutions must be ensured, and the number of children leaving institutions should be maximized. Where an institution is considered absolutely necessary, the length of stay should be for the shortest time possible. Based on the findings, it concluded that: there is an urgent need to implement policies and practices to promote and strengthen family and family care, and progressively eliminate institutionalization of children.

In this regard, the International Covenant on Economic, Social and Cultural Rights, 1966, states that the widest possible protection and assistance should be accorded to the family which is 'the natural and fundamental group unit of society' particularly for its establishment and while it is responsible for the care and education of dependent children.[15] Within the family, the parents have not only the right but also the responsibility to care for and supervise their children. Besides, the UN Standard Minimum Rules for the Administration of Juvenile Justice 1985 (The Beijing Rules) also clearly state that 'no juveniles shall be removed from parental supervision, whether partly or entirely unless the circumstances of her or his case make it necessary.[16] It, therefore, requires that the separation of children from their parents be a measure of last resort and for the shortest period necessary.[17] Similarly, the Juvenile Justice (Care and Protection of Children) Act, 2015 [the Act]has the principles of 'best interest of the child', 'family responsibility, and 'institutionalization as a measure of last resort' among the general principles to be followed in the administration of the Act.[18] The Act provides

[13] David Topis, "Moving from Residential Institutions to Community Based Social Services in Central and Eastern Europe and the Former Soviet Union", *The World Bank* (2000).
[14] Kevin Brown, "The Risk of Harm to Young Children in Institutional Care" *Better Care Network & Save the Children, UK* (2009).
[15] The International Covenant on Economic, Social and Cultural Rights, 1996, art. 10 para 1.
[16] The United Nations Standard Minimum Rules for the Administration of Juvenile Justice 1985, Rule 18. 2.
[17] *Id.*, Rule 19.
[18] The Juvenile Justice (Care and Protection of Children) Act, 2015, Chapter II.

for rehabilitation and social reintegration of children staying in Children Homes or Special Homes to be carried out alternatively by adoption, foster care, sponsorship, and by sending the child to an after-care organization.[19]

III. EXPERT RECOMMENDATIONS ON PROGRESSIVE DEINSTITUTIONALIZATION

Based on their findings and in concurrence with the December 2019 UNGA Resolutions,[20] the Lancet Commission recommends- acknowledging the primacy of family care in the lives of children, preventing separation by strengthening families, protecting children without parental care with high-quality family-based care, recognizing the harm of institutionalization, and ultimately to eliminate them in a phased manner. To achieve these goals, they made specific recommendations to bring child care reform towards progressive deinstitutionalization at the global, national, and local levels.

Many institutions across the world are funded by philanthropists and foreign sponsors, which means the cost of these institutions is unknown or invisible to policymakers, and hence the seriousness of the issue is undermined.[21] Research in Haiti found out that an estimated USD 100 million per year goes into CCIs from international funders, that is approximately 130 times more money than the annual budget for the Haitian child protection agency.[22] In India, according to the National Commission for

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[19] *Id.,* s. 40.

[20] Key Recommendations for the 2019 UNGA Resolution on the Rights of the Child with a focus on children without parental care, *available at:*https://bettercarenetwork.org/library/social-welfare-systems/child-care-and-protection-policies/key-recommendations-for-the-2019-unga-resolution-on-the-rights-of-the-child-with-a-focus-on-children (last visited on Oct. 21, 2020).

[21] Elevate Children Funders Group. Nepal policy brief: Why Funding for Orphanages is Harming the Children it Aims to Help, (2017), *available at*: https://wordpress.foundationcenter.org/elevatechildren/wpcontent/uploads/sites/33/2018/12/Orphanages_Policy_Brief_NEPAL.pdf (last visited on Oct. 21, 2020).
Elevate Children Funders Group. Haiti policy brief: Why Funding for Orphanages is Harming the Children it Aims to Help (2017), *available at*: https://wordpress.foundationcenter.org/elevatechildren/wp-content/uploads/sites/33/2018/12/Orphanages_Policy_Brief_HAITI.pdf?_ga=2.188252392.1101635328.1580467543-581003638.1580467543(last visited on Oct. 21, 2020).

[22] Lumos, Funding Haitian Orphanages at the cost of children's rights (2017), *available at*: https://lumos.contentfiles.net/media/documents/document/2018/01/Funding_Haiti_Orphanages_Report.pdf (last visited on Oct. 21, 2020).

Protection of Child Rights ('NCPCR'), in 2018-2019 over 600 CCIs run by Non-government Organizations ('NGOs') housing 28,000 children received up to Rs. 6 lakh per child in foreign funds, although, the average expenditure per child per annum including all recurring expenses is just about Rs. 60,000.[23] Indicating that one of the reasons for an increasing number of children in institutions is for the receipt of donations and not the welfare of children, and that in actual life, children are being trafficked into CCIs for exploitation to elicit donations from foreign tourists. In this regard, the Australian government brought the Modern Slavery Act,2018 to prohibit trafficking and exploitation of children.[24]

As noted above, institutionalization is also more expensive than alternative care,[25] Government must also collaborate with service providers and civil societies to formulate a vision of a coherent system of child care that is family-oriented within a broader system of child protection.[26] Primarily, a political will should be generated because, without government commitment, nothing substantive can be achieved.[27] This should be followed by consultations with key national and international partners to ensure the process, timing, and phasing realistically based on a thorough assessment of the needs and rights of children and their families.[28]

There is a huge gap between theory and practice that acts as a barrier against change. To understand this, a thorough evaluation of the existing care system is needed which includes- collection of data on the number of children in institutional and other forms of care, and identifying the vulnerable families and those children at risk of separation. There is also a need to identify the provisions for family strengthening and barriers to family-based care, consider the existing policy and legislative framework, and understand public attitudes toward childcare. Besides, there should be an assessment of the capacity of the workforce and financial resources and the factors that

[23] "Over 600 NGO-run child care homes received foreign funds up to Rs 6 lakh per child in 2018-2019: NCPCR" *The Economic Times*, *available at*: https://economictimes.indiatimes.com/news/politics-and-nation/over-600-ngo-run-child-care-homes-received-foreign-funds-up-to-rs-6-lakh-per-child-in-2018-19-ncpcr/articleshow/79286758.cms (last visited on Oct. 21, 2020).
[24] *Supra* note 11 at 614.
[25] *Supra* note 13.
[26] Venelin Terziev, "Process of deinstitutionalization of children at risk in Bulgaria." V(13)*IJASOS-International E-Journal of Advances in Social Sciences*, 290-297(2019).
[27]*Supra* note 11 at 617.
[28] *Ibid.*

perpetuate institutionalization and obstruct care transformation, and finally make the case for reform care though investment.

Lastly, transitions from institutions will also involve financial investments and for that, resources could be redirected from institutions to family-based care with a long-term resourcing plan to make the reform sustainable. Strategies must be developed to deal with the opposition from the care institutions and their staff. They can be re-employed, as they possess essential personnel resources that can be used in any new system -whether as day-care staff or potential foster care givers or as support social workers.[29] They can also play an essential role in planning for care transition as they know the children and their family backgrounds, and can help in locating their parents and relatives.

In practice, many countries in the European Union (EU) have rapidly expanded efforts to promote family-based care for children and have reduced their reliance on institutions. They produced the 2012 Common European Guidelines on the transition from institutional to community-based care[30] and subsequently, the 2016 EU Guidelines for the Promotion of the Rights of the Child to promote alternative care for children and the related right to participate in community life.[31] They invest actively in deinstitutionalizing systems of care in countries such as Bulgaria by funding family support and alternative care placements.[32] Some EU members like Croatia, Greece, Latvia, Romania, Poland, and Serbia have also made progress in this regard. This was possible because of various factors like European Commission reviews of the evidence on child institutionalization, a growing global focus on the issue of children outside

[29] Jennifer C. Davidson, Ian Milligan *et. al*., "Developing family-based care: complexities in implementing the UN Guidelines for the Alternative Care of Children" *Eur J Soc Work* 13 (2017).
[30] "Common European guidelines on the transition from institutional to community-based care "*European Expert Group on the Transition from Institutional to Community Based-Care*¸ (2012), *available at*: http://enil.eu/wp-content/uploads/2016/09/Guidelines-01-16-2013-printer.pdf (last visited on Oct. 21, 2020).
[31] EU Guidelines for the Promotion and Protection of the Rights of the Child: Leave no child behind (2017) *available at*:
https://violenceagainstchildren.un.org/sites/violenceagainstchildren.un.org/files/documents/political_declarations/europe/eu_guidelines_rights_of_child_0.pdf(last visited on Feb. 3, 2021).
[32] UNICEF, "Deinstitutionalisation of children in Bulgaria: how far and where to? Independent review of progress and challenges" (2014) *available at:* https://bettercarenetwork.org/sites/default/files/attachments/Deinstitutionalization%20of%20Children%20in%20Bulgaria.pdf (last visited on Feb. 3, 2021).

family care, and strong advocacy from civil societies.[33] Another example of a successful child care reform is the case of Rwanda which has been discussed in the following section.

A. Successful Child Care Reform in Rwanda

The government of Rwanda with a serious commitment to bringing up all children safe and protected in families developed a program *Tubarerere Mu Muryango* (TMM) translated as 'Let's Raise Children in Families' through a collaborative process involving the National Commission for Children (NCC), the Ministry of Gender and Family Promotion (MIGEPROF), UNICEF and NGOs to reunify children in institutions with their families or arrange suitable family-based alternative care. Through their concerted reform efforts, 3142 out of 3323 children i.e., 95% of children in the institution were reintegrated with their families or placed in foster care between 2012 to 2017. This enhanced their lives in terms of stronger family relationships, reduced stigmatization, and gave them a greater sense of belonging and identity. Many of these institutions have closed down while others have been transformed into schools or centers for family support. It involved long-term planning and investment in terms of finance, human resources, and, most of all, political conviction and sincere commitment of the government. They also spend two years in mass media campaigns spreading awareness about the harms of institutions and the benefits of growing up in families. In the process, they have recruited professionals like social workers, psychologists, and many community volunteers who all play a crucial role and developed foster care on a significant scale.[34] As a result of their success, Rwanda is frequently acknowledged as a global leader in alternative care reform, hence a model for progressive deinstitutionalization.

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[33] "Opening Doors Celebrates Its Achievements Upon Closure", *available at:*https://www.eurochild.org/news/opening-doors-celebrates-its-achievements-upon-closure/ (last visited on Feb. 3, 2021).

[34] "Care reform in Rwanda Process and Lessons Learned (2012-2018) Tuberere Mu Muryango Let's Raise Children in Families", *UNICEF*, *available at*: https://www.unicef.org/rwanda/reports/documentation-child-care-reform-programme-rwanda (last visited on Feb. 3, 2021).

IV. CHILD RIGHTS IN INDIA

Children constitute almost 40% of India's population and thus their future depends on how well they grow up. The Constitution of India, 1950('the Constitution') gives a special status to children and encompasses most rights of UN CRC (having ratified in 1992);as Fundamental Rights and as Directive Principles of State Policy, thereby adopting positive discrimination by making special provisions for children as well as directing the States to take positive steps to ensure healthy growth and development of children. The Constitution guarantees certain rights specific to children such as the right to free and compulsory education for all children from 6 to 14 years (Article 21A), the right to be protected from any hazardous employment till the age of 14 years (Article 24), the right to be protected from being abused and forced by economic necessity to enter occupations unsuited to their age or strength (Article 39(e), the right to equal opportunities and facilities to develop in a healthy manner and conditions of freedom and against moral and material abandonment (Article 39(f)), and right to childhood care and education to all children until they complete the age of six years (Article 45). Right to life and personal liberty under Article 21 which the Supreme Court described as the heart of fundamental rights does not mean a right to the mere act of breathing but the right to a dignified life. It includes the right of every child to full development and the right to education. Apart from these rights, children also have equal rights provided in the Constitution as any other adult male and female.

V. ALTERNATIVE CARE UNDER THE JJ ACT, 2015

The Juvenile Justice (Care and Protection of Children) Act, 2015 (The JJ Act) recognizes the family as the best place for nurturing children; institutionalization as a measure of last resort; and if there is no other alternative, institutionalization has to be for the shortest time possible.[35] Alternative care, also known as non-institutional care can be largely practiced in four ways viz. adoption, foster care, kinship care, and sponsorship which are all family-based or community-based care.[36] The National Policy

[35] *Supra* note 18.
[36] "Foster care in India: Policy brief" *Centre for Law and Policy Research & Foster Care India* 5 (2014).

for Children, 2013 reaffirms that all children should grow up in a family environment, in an atmosphere of happiness, love, and understanding.[37] It commits to securing the rights of children deprived of parental care to family and community-based care arrangements including sponsorship, kinship, foster care, and adoption, and guaranteeing quality standards of care and protection for the best interest of the child with institutionalization as a measure of last resort.[38] The Integrated Child Protection Scheme (ICPS), initiated by the Ministry of Women and Child Development, Government of India (MoWCD, GoI) in its guiding principles stated institutionalization as the last resort and recognized the need to shift the focus of intervention from an over-reliance on institutions toward family and community-based alternative care.[39] Sadly, there are still many countries especially in the Global South, including India where child welfare is kept at the very margins of social policy. This means an over-dependence on institutions and residential care instead of adopting other effective methods such as early intervention, prevention, community, and family-based care where the outcomes are more likely to be long-term and therefore more difficult and less supported politically.[40]

According to the MoWCD report, there are 9,589 CCIs in the country with 3,77,649 children. Of these, 3,70,227 are children in need of care and protection, and 7422 are children in conflict with the law.[41] However, these numbers could be an underestimate. These CCIs consist of institutions such as Children Homes, Observation Homes, Special Homes, Places of Safety, Shelter Homes, Open Shelters, Specialised Adoption Agencies, and Fit Facilities ('Homes'). Children in CCIs consist of orphans, abandoned, surrendered children; child victims of sexual abuse, child pornography, and child marriage, children trafficked for domestic work, labour, and sexual exploitation; and

[37] National Policy for Children, 2013, s. 2.2.
[38] *Id*. at s. 4.10.
[39] The Revised Integrated Child Protection Scheme (ICPS)- A Centrally Sponsored Scheme of Government – Civil Society Partnership-India, Ministry of Women and Child Development, Government of India (2014).
[40] Maria Herczog, "Investing in quality care that will result in the deinstitutionalisation of children in Europe and globally Investing in children & families to avoid unnecessary separation" XXIV *Human Rights Council Side Event* 1 (22 Sept 2015).
[41] "The report of the Committee for Analysing Data of Mapping and Review Exercise of Child Care Institutions under the Juvenile Justice (Care and Protection of Children) Act, 2015 and Other Homes" 1 *Ministry of Women and Child Development Government of India* (Sept. 2018), *available at*: https://wcd.nic.in/act/2315 (last visited on Oct. 22, 2020).

homeless, mentally or physically challenged children amoung others. Orphans residing in CCIs are only 41,730 which is a mere 11% of the total children and so there is a huge pool of children living in CCIs who should be brought under non-institutional or family-based care.[42] The Report also stated that 91% of the CCIs are run by NGOs and only 9% are managed by the government.[43] Tamil Nadu has the highest number of CCIs with a total of 1,647 Homes, followed by Maharashtra with 1,284 Homes, then Kerala with 1,242 Homes. Together they have 4173 Homes, accounting for almost 44% of all CCIs.[44] The Report also highlights that only 46.7 % of the homes had an adequate number of caregivers per child and a dismal 28.7% of CCIs were able to tend to inmates showing signs of hunger or illness.[45] The report also shows that there is a lack of training on Child Protection Policy in most of these Homes. There are also numerous vacancies in the CCIs in different States: Tamil Nadu has 3178 and 1083 full-time and part-time vacancies respectively, followed by Andhra Pradesh which has 1133 and 580 respectively, and Orissa with 961 and 487 respectively.[46] Child care being the primary function of the CCIs cannot be effectively administered in absence of adequate staff with proper training. The following sub-section shall now provide an overview of the alternative care for children as enshrined under the JJ Act, 2015.

A. Adoption

The traditional practice of adoption was parent-centered and only male children were adopted as it was done mainly for religious purposes to perform certain rites and to preserve the continuance of one's lineage, and usually, it was done among the kinship. The orphans and abandoned children were taken to CCIs which resulted in deprivation of family life. However, with the recognition of the concept of child rights, the scope of adoption has now been extended to the rights of the child to a family regardless of gender and it is therefore child-centric. The right of the child to a family is a recognized right under international conventions such as the UNCRC, and India is a signatory to the convention**.** Adoption was a custom followed by Hindus and it was legalized

[42] *Id.* at viii.
[43] *Id.* at 40.
[44] *Id*. at 35.
[45] *Id.* at 91.
[46] *Id.* at 132.

through the Hindu Adoption and Maintenance Act,1956. Other communities such as Muslims and Zoroastrians oppose the idea of legalizing adoption as the practice is not acceptable to them. Among Christians, there are no restriction on adoption. The Juvenile Justice (Care and Protection of Children) Act, 2000 (JJ Act 2000) enabled adoption by persons belonging to all religions: Hindus, Muslims, Parsis, Christians, etc. Adoption, as defined in the Act, means the process through which the adopted child is permanently separated from his biological parents and becomes the legitimate child of his adoptive parents with all the rights, privileges, and responsibilities that are attached to the relationship.[47]

In *Shabnam Hashmi* v. *Union of India* & *Ors*.,[48] a civil rights activist moved the Supreme Court to recognize the right to adopt and be adopted as a fundamental right under Part III of the Constitution to enable the adoption of children by persons irrespective of religion, caste and creed, etc. The All-India Muslims Personal Law Board contended that Islamic Law does not recognize an adopted child to be at the bar with the biological child and that they profess the 'kafala' system under which the child is placed under a 'kafil' who provides for the wellbeing of the child but the child remains the true descendant of his biological parents and not that of the 'adoptive' parents. Furthermore, they contended that 'kafala' system is recognized by the UNCRC under Article 20(3) and is one of the alternative systems of child care contemplated by the JJ Act 2000 and therefore the Child Welfare Committees should be made to follow the Islamic law while giving a Muslim child in adoption under section 41(5) of the Act. However, the Supreme Court held that 'the JJ Act is a small step in reaching the goal enshrined by Article 44 of the Constitution and that personal beliefs and faith, though must be honoured, cannot dictate the operation of the provisions of the enabling statute'. The bench led by the then Chief Justice P Sathasivam observed that the Act which allows persons of any faith to adopt a child under the JJ Act will prevail till Uniform Civil Code is achieved, and the Muslim personal law will not stand in the way of such adoption.[49] The Supreme Court thus strongly endorsed a secular and modern

[47] *Supra* note 18 at s. 2(2).
[48] CWP No. 470 of 2005.
[49] "When it comes to adoption, religion no bar: Supreme Court" *NDTV, available at*: https://www.ndtv.com/india-news/when-it-comes-to-adoption-religion-no-bar-supreme-court-551405, (last visited on Feb. 3, 2021).

approach to adoption as a measure to rehabilitate and reintegrate children who are orphans, abandoned, and surrendered.[50]

With the prayer to declare the right to adopt and be adopted as a fundamental right under Article 21of the Constitution, the Court observed that:

"While it is correct that the dimensions and perspectives of the meaning and content of fundamental rights are in the process of constant evolution as is bound to happen in a vibrant democracy where the mind is always free, the elevation of the right to adopt and to be adopted to the status of the fundamental right, in our considered view, will have to await a dissipation of the conflicting thought processes in this sphere of practices and belief prevailing in the country...All these impel us to take the view that the present is not an appropriate time and stage where the right to adopt and the right to be adopted can be raised to the status of a fundamental right and/or to understand such a right to be encompassed by Article 21 of the Constitution."

At this, Prof Upendra Baxi expressing his displeasure, said, "judicial self-restraint stands commended; judicial activism stands downgraded".[51] He raised several questions like how long will Indian Muslim children have to wait till they can rightfully be adopted by other pious Muslims? How about India's own obligation under the UNCRC of the child? What happens to Indian law, policy, and administration in that context? Furthermore, "when all efforts to place orphaned children with their extended family have been exhausted, open, legal, ethical adoptions can be a preferable, Islamically grounded alternative to institutional care and other unstable arrangements".[52]

Younger children below six years of age are given preference for adoption as it will be easier to bring up an infant to suit the lifestyle, customs, and religions of the adopting family than it is for a child of older age.[53] The JJ Act, 2015 provides for both in-country and inter-country adoption, and it lays down the procedure for adoption in detail. Before the passing of this Act, a PIL was filed by Lakshmi Kant Pandey alleging neglect and malpractice by social organizations and private adoption agencies

[50] BB Pande, "Child Rights Annual Survey of Indian Law Institute" 120 (2014).
[51] "Perils of restraint", *The India Express*, *available at*: https://indianexpress.com/article/opinion/columns/perils-of-restraint/ (last visited on Feb. 3, 2021).
[52] *Ibid*.
[53] *Supra* note 41 at 222.

facilitating the adoption of Indian children to foreign parents. The Supreme court laid down principles governing the rules for Inter-country adoption so that the adoption by foreign parents would be in a manner that promotes child welfare and secure their right to family life.[54]

The process and agencies for adoption are regulated through Central Adoption Resource Authority ('CARA') a statutory body of the MoWCD, GoI. According to the 2015 CARA guidelines, the fundamental principles which shall govern adoptions of children from India are as follows- the child's best interest shall be of paramount importance while processing any adoption placement, preference of adoption shall be within the country, the adoption shall be guided by a set procedure and in a time-bound manner and there shall be a prohibition of any gain whether financial or otherwise through adoption.[55] According to another Governmental Report, there are a total of 336 Special Adoption Agencies ('SSA') out of which 20% are government-run and 80% are non-government-run SAAs.[56] The report shows that 52,793 adoptable children are staying in 9589 CCIs,[57] of which 5619 children are between 0 and 6 years, while the remaining 47174 are between the ages of 7 and 18.[58] However, data shows that there are just 3000-4000 adoptions on average in a year which is comparatively small considering the number of prospective parents eligible for adoption.[59] Recent data shows that for 2317 children available for adoption, there were 29,000 prospective parents, and this widegap may increase the waiting period in the adoption process.[60] The reason why there aren't enough children available for adoption is that the ratio of abandoned children to children in CCIs is lopsided and many children residing in unregistered homes are unaccounted. There is also a lack of social acceptance

[54] *Lakshman Kant Pandey* v. *Union of India*, AIR 1984 SC 496.
[55] "Guidelines for adoption" (CARA GUIDELINES), *available at:* https://mphc.gov.in/PDF/JuvenileJustice/j3-060314.pdf (last visited on Feb. 3, 2022).
[56] *Supra* note 41, at 217.
[57] *Supra* note 41, at 220.
[58] *Supra* note 41, at 221.
[59] Adoption statistics, *CARA, available at*: http://cara.nic.in/resource/adoption_Stattistics.html (last visited on Feb. 3, 2022).
[60] Sara Bardhan and Neymat Chadha, "The Challenges and Unaddressed Issues of Child Adoption Practices in India" *The Wire*, *available at*: https://thewire.in/society/challenges-issues-child-adoption-practices-india (last visited on Mar. 3, 2022).

accompanied by social stigma.[61] Therefore, in this context, the Centre for Law and Policy Research and Foster Care India noted that if the child's right to family and alternative care as envisaged in the CRC and the UN Guidelines for Alternative Care is to be attained, the present method of adoption alone is not adequate. To fill the gap, alternative care in the form of a robust foster care system must be developed by state governments based on the best interest of the child and the right of a child to family care.[62]

B. Foster Care

The JJ Act, 2015 defines 'foster care' as the placement of a child, by the Committee for the purpose of alternate care in the domestic environment of a family, other than the child's biological family, that has been selected, qualified, approved, and supervised for providing such care.[63] The Act defines 'foster family' means a family found suitable by the District Child Protection Unit to keep children in foster care.[64] Foster care is another form of alternative care but is different from adoption. While adoption is permanent, foster care is temporary and for a limited period after which the child goes back to his/her own family. Therefore, it does not involve any legal rights of the child unlike the case of adoption where the child is permanently separated from his biological parents and becomes the legitimate child of his adoptive parents with all the rights, privileges, and responsibilities that are attached to the relationship. There are three main kinds of foster care defined under the Model Guidelines for Foster Care (2016). "Kinship care" is family-based care within the child's extended or joint family, "Pre-adoption foster care" means a stage when the custody of a child is given to prospective adoptive parents, pending adoption order from the court as per Regulations Governing Adoption of Children, 2016 and "Group Foster Care" means a family-like care in a Fit Facility for children in need of care and protection who are without parental care with the aim to provide personalized care and a sense of belonging and identity.

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[61] Shreya Kalra, "The reasons for Low Levels of Adoption in India are Manifold" *The Wire*, *available at*: https://thewire.in/society/the-reasons-for-low-levels-of-adoption-in-india-are-manifold (last visited on Mar. 3, 2022).
[62] *Supra* note 36 at 2.
[63] *Supra* note 18 at s. 2(29).
[64] *Id.* at s. 2(30).

Kinship care, also known as non-formal kinship care is strong in India because of its joint family or extended family system. Where the child's relative is unavailable or unwilling to take care of the child, s/he is placed in the care of a willing family who shares the same cultural, tribal, or community connection. Such arrangement will remain outside the scope of the guidelines and in case financial support is required, then it will be considered under the sponsorship program provided under the JJ Act, 2015.[65] Foster care as alternative care in the domestic environment of a family could be arranged with an unrelated family for purpose of care and protection for a short or extended period depending upon the needs of the child.[66] Foster care for a short term would mean a period of not more than one year and an extended period may be for more than a year or until the child completes 18 years.[67] Group foster care involves fostering a group of children in need of care and protection and is also used as an intermittent arrangement for street children before they are finally placed in a family foster care. It is practiced in a family setting where a group of unrelated children is placed under the care of foster caregivers in a Fit Facility[68] and the number of children placed under group foster care shall not exceed eight children in one unit including biological children of the foster caregiver.[69]

Foster care services in India are mostly used as a pre-adoption trial,[70] otherwise, it is provided for children between 6 and 18 years of age. The concept of foster care is both ancient and modern in Asia. Informal care or the idea of caring for a child by kinship and extended families is a common practice but formal care or the idea of government's involvement and regulation of care is a modern concept in Asia and is often misunderstood.[71] Though in the West, foster care is considered less expensive than institutional care, it requires a considerable investment in terms of time, money, expertise, and a high level of support and skill. However, once invested, it is likely to show results in improved health and well-being, education, and life chances for the

[65] Model Guidelines for Foster Care, 2016, s. 3.
[66] *Supra* note 18, s.44.
[67] *Supra* note 66, s. 4.1.
[68] *Id.*, s. 4.1.2.
[69] The Juvenile Justice (Care and Protection of Child) Model Rules, 2016, Rule 23(11).
[70] "Alternative care for children: policy and practice", *The SOS Villages of India & TISS* 43 (2017).
[71] Ian Anand Forber-Pratt, "Promotion and support of foster care as part of family-based solutions in Asia, Investing in children & families to avoid unnecessary separation" XXIV *Human Rights. Council Side Event* 7.

child and break the cycle of deprivation.[72] There are challenges in the practice of foster care such as poor support from the state and the central governments, lack of adequate funds, and moral appreciation for foster parents.[73] Besides, there is an inevitable sense of loss in the process owing to its temporary nature. "Foster parents are expected to be warm and nurturing and to form a growth-promoting relationship with their foster children, but not too warm and nurturing to create a relationship that is too close that it makes it difficult for the children to return to their birth parents".[74] Despite this challenge, a major motivating factor is found to be altruism and for many foster mothers, the process of fostering has been more fulfilling than challenging.[75]

Foster care system in the modern sense has its beginnings in 1853 in the United Kingdom ('UK') and the United States ('US'), and since then it is accepted and practiced as the best alternative care for children with no family care.[76] In India, it was the State of Maharashtra that introduced the first non-institutional scheme in 1972 which was revised in 2005 and renamed as *Bal Sangopan Yojana* which remains an effective foster care scheme. It is meant for families facing crises through the support of relatives and neighbors.[77] Foster care was successfully practiced during emergencies and in times of natural disasters such as the earthquake in Maharashtra in 1993,[78] the earthquake in Gujarat in 2001[79] where many children were reportedly rehabilitated with their relatives and neighbours in their communities with some financial assistance. *Foster Care India* which started in Udaipur, Rajasthan focuses to promote non-institutional care, conducts various campaigns on a child's right to a family, and, identifies foster

[72] "User guide on foster care" *NCPCR and Centre for Excellence in Alternative Care (India)* 5 (2018).
[73] "Foster family renewed hope and a new life: A Study on the Practice of Foster Care in India," *BOSCO National Research and Documenting Centre* 20 (2013).
[74] Marc H. Bornstein (ed.) "Handbook of Parenting; Children and Parenting, Second Edition", 1 *Lawrence Erlbaum Associates*p. 314 (2002).
[75] Tuhina Sharma, "Alternative Care for Children: A Case for Foster Care" 56(16) *Economic & Political Weekly* ISSN (online) 2349-8846 (17 Apr., 2021).
[76] "Foster Family: A Study on the Practice of Foster Care for Children in India", *available at*: https://bettercarenetwork.org/library/the-continuum-of-care/foster-care/foster-family-a-study-on-the-practice-of-foster-care-for-children-in-india (last visited on Mar. 12, 2022).
[77] *Supra* note 71 at 45.
[78] "Children orphaned in a disaster need to be rehabilitated" *Times of India, available at*: https://timesofindia.indiatimes.com/city/mumbai/children-orphaned-in-a-disaster-need-to-be-rehabilitated/articleshow/1959662403.cms (last visited on Mar. 12, 2022).
[79] "India embraces children orphaned by earthquake "*Morning Journal*", *available at*: https://www.morningjournal.com/2001/02/24/india-embraces-children-orphaned-by-earthquake/ (last visited on Mar. 12, 2022).

families and foster homes. They also set up a 'Family Connection Centre' for family preservation, kinship care, and adoption and work in collaboration with different authorities under the JJ Act.[80] While countries like UK and US have quite developed foster care systems, Asian countries like Japan, Sri Lanka, and India are lagging behind.[81] A study was conducted by BOSCO on the practice of foster care in India wherein they collected data from nine Indian states according to which 10761 children had been placed with foster families during the study period. The study pointed out that foster care as alternative care is still at a nascent stage and there is a lack of research papers that can capture the foster care practices in India and their valuable benefits.[82] However, once it receives profound social acceptance and is firmly established and adopted as an alternative to institutional care, it can be a great success. Not long ago a woman's struggle to keep three children of her friend who succumbed to Covid-19 came to light. She has three children of her own and was running a tea stall to support these six children until the three children were taken away by the district authority and placed in a local shelter home despite her willingness to keep them under her care. Since then, she has been knocking on every door she can to get the children back. This shows how fostering has not yet gained currency as an established form of alternative care to institutionalization in India.[83] Unfortunately, there is a lack of information available on alternative care and an acute lack of awareness of foster care even among the authorities dealing with children.

C. Sponsorship

The JJ Act, 2015 provides for sponsorship wherein the state governments shall make rules to undertake various programs of sponsorship of children.[84] Guidelines for sponsorship emphasize the best interest of the child as the paramount consideration based on the fundamental principle of the child's right to grow up in a family. There are two types of sponsorships viz. preventive and rehabilitative. The former provides

[80] *Supra* note 71.
[81] "Foster Care: A Series on Alternative Care", *available at*: https://www.udayancare.org/sites/default/files/Foster_Care.pdf (last visited on 12/3/2022).
[82] *Supra* note 77.
[83] Vrinda Shukla, "Ties that bind: Why India must expand foster care", *available at*: https://indianexpress.com/article/opinion/columns/india-foster-care-children-death-covid-second-wave-7348473/ (last visited on Mar. 12, 2022).
[84] *Supra* note 18, s. 45.

financial support to families living in extreme poverty so that the child remains in the family while he/she continues education whereas, the latter applies to children who are in CCIs but who could be reunited with the birth family. According to the Juvenile Justice (Care and Protection of Children) Model Rules, 2016 the State Government shall prepare sponsorship programs which may include individual sponsorship, group sponsorship, community sponsorship, support to families, and support to Children Homes and Special Homes, and it shall be implemented by the District Child Protection Unit.[85] Children in CCIs are monitored, and family situations are assessed according to the individual care plan and when it is deemed fit, children are reintegrated with the family. Care plans are not static documents, but rather flexible, ones that evolve as a child's situation changes, and it should recognize that all children and families have strengths to contribute; and when appropriately supported, families and children can make well-informed decisions about a child's wellbeing and protection.[86] Sponsorship programs that provide supplementary support to families to meet the educational, medical, nutritional, and other needs of the children are an effective instrument for encouraging kinship care but are not a substitute for it.[87] Unfortunately, there are no data available indicating how many children are benefitting from this scheme thus far. It appeared in a newspaper article that children who were beneficiaries of sponsorship and foster care had been waiting for seven months for financial assistance and the reason for the delay was a shortage of funds.[88] Yet in another newspaper article, it was stated that the sponsorship program has not been implemented in Delhi as responded in the RTI.[89] However, subsequently, the Delhi government issued a standard operating procedure for family-based sponsorship through foster care or sponsorship for children who either lost their parents to Covid 19 or whose guardians couldn't take care of their

[85] *Supra* note 70 at rule 24.
[86] "Guidelines on Children's reintegration, Inter-agency on children's reintegration" p.18 (2016).
[87] *Supra* note 71.
[88] Parveen Arora "Seven months on, 324 kids await assistance", *The Tribune, available at*: https://www.tribuneindia.com/news/archive/haryana/news-detail-549589 (last visited on Mar. 12, 2022).
[89] Sukrita Baruah, "Fresh push to implement schemes that can help kids who lost parents to covid", *The Indian Express, available at*: https://indianexpress.com/article/cities/delhi/fresh-push-to-implement-schemes-that-can-help-kids-who-lost-parents-to-covid-7348447/ (last visited on Mar. 12, 2022).

financial needs.[90] On a similar note, a heartening move by the state of Madhya Pradesh is highly commendable, as the State's Department of Women and Child Development has roped in private sponsorship to help more than 4,600 children most of whom belong to distressed families due to the Covid-19 pandemic.[91] This is supposedly different from the sponsorship scheme under the JJ Act which had benefitted 351 children under foster care and 1689 under the sponsorship program in the state for the year 2021-2022.[92]

D. Family Strengthening

Family strengthening and promoting community-based care seems more complicated than institutionalizing however, it is highly beneficial and sustainable. Under such initiatives, not only children are more likely to thrive to become better parents when they grow up, but they will likely contribute more to their communities and their country's development.[93] *The Save the Children* policy brief on strengthening and supporting families affirms that financial and social support is crucial to enable immediate and extended families not only to provide adequate care and protection for their children but also to avoid family separation and abandonment.[94] Despite this, they also pointed out that governments often attach less priority to child care within families than to alternative care in residential institutions, as reflected by decisions on budget allocations. To strengthen family support and community-based care, protective mechanisms inherent in the community must be identified and activated. Social protection policies and programs should provide social assistance and family services such as training on positive parenting and conflict resolution skills, employment opportunities, and income generation. It should also provide child day-care, financial assistance, and services for parents and children with disabilities. Therefore,

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[90] Sweta Goswami, "Delhi government announces policy to support kids in distress", *Hindustan Times, available at*: https://www.hindustantimes.com/cities/delhi-news/delhi-government-announces-policy-to-support-kids-in-distress-101624136101634.html (last visited on Mar. 12, 2022).
[91] Sravani Sarkar, "MP ropes in private sponsors to help kids from Covid-hit families", *The week, available at*:https://www.theweek.in/news/india/2022/01/22/mp-ropes-in-private-sponsorship-to-help-kids-from-covid-hit-fami.html(last visited on 22/3/2022).
[92] *Ibid*.
[93] Jasmine Whitbread, "Keeping children out of institutions, why we should be investing in family-based care" *Save the Children* 4 (2009).
[94] "Family strengthening and support: policy brief", *Save the Children* 2 (2010).

communities play a crucial role in supporting parents and caregivers in childcare and child-rearing, identifying violence within families and responding to it, and preventing family separation.[95]

Organizations such as *Shishu-Adhar- 'For the Child'* and *Family Service Centre* has developed good practices of family strengthening and community-based care, adoption, sponsorship, aftercare, and prevention of institutionalization. They run family-based and community-oriented programs that aim to reach out to families in difficult circumstances through preventive and non-institutional services. They emphasize identifying the strengths of the family and building their capacities to handle the problems faced. Furthermore, they engaged all stakeholders such as, the family, peers, schools, community, and others to create a healthy environment for the child by intervening in the community health needs and creating community-based initiatives for infants and adolescents. Not only that, they also promote Self Help Groups for women in the community who are crucial stakeholders in the family as primary caregivers. Parent empowerment is ensured through training on parenting skills, mental health awareness, legal rights, individual and group counseling, etc.[96] *SOS Children's Villages of India* is a family-like model for children without parental care and aftercare. There are 32 villages in 22 states across the country and provide a family-like environment to 6700 parentless or abandoned children where every village has 12-15 homes and each home consists of 8-10 children. It also supports 16,700 children through the family strengthening program.[97]

VI. UNDERSTANDING DEINSTITUTIONALIZATION IN INDIA

Across Western Europe and North America, Australia, and New Zealand, the de-institutionalization of CCIs has been the policy and practice orthodoxy since the 1970s.[98] In the US, the number of children in institutions decreased tremendously between 1910 and 1960, while the number of adoption and foster care surged by 442%

[95] "Strengthening families Save the Children programs in support of child care and parenting policies", *Save the Children Sweden* 12 (2012).
[96] *Supra* note 71 at 41.
[97] "Basket of care solutions, *available at*: https://www.soschildrensvillages.in/ (last visited on Mar. 12, 2022).
[98] *Supra* note 29 at 3.

from 61,000 to 2,70,000[99] and by the end of the next decade, CCIs radically disappeared with the passage of the Adoption Assistance and Child Welfare Act, 1980. Other developing countries have also done well in this regard. Romania has witnessed a decrease in the number of children in institutions from 1,00,000 in 2000 to 7,353 in 2017,[100] so has Bulgaria which has an 80% decrease from 7,587 in 2009 to 979 in 2017.[101] These reforms were possible through measures including family-based care alternatives such as kinship and foster care, adoption, active involvement of civil societies, government commitment, proper funding, etc. Considering their progressive deinstitutionalization, one may argue that India had a different societal context in terms of socio-cultural, economic, and political settings and so a comparison may not be very helpful. However, it is a fact that research over decades has proven the harmful effects of institutionalization on children which called for a global movement for care reformation through family strengthening, adoption, foster care, and deinstitutionalization. The JJ Act in spirit follows the principle that the family is the best place for nurturing children, and institutionalization as a measure of last resort. However, in reality, the CCIs remain the first choice for children who are in need of care and protection without considering the options of alternative care which are family-based and this is a serious concern.[102] Deinstitutionalizing is only a part of the commitment to transform child care services to a family orientation, and unless a holistic approach is adopted, the process may put children at risk. Hence, proper analysis, thorough planning, and sincere commitment of all partners in the process are essential for minimizing the risk of harm to children and for the successful elimination of institutions.[103] It is a sad reality that although children constitute almost 40% of the country's population, they received a meagre 2.35% in the 2022-2023 Union budget,

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[99] "The Adoption History Project", *available at*: https://pages.uoregon.edu/adoption/topics/fostering.htm (last visited on Mar. 12, 2022).

[100] Dr. Kiran Modi "UnderstandingDeinstitutionalisation in India" *Counter Currents, available at*: https://countercurrents.org/2019/06/understanding-deinstitutionalisation-in-india/#_ftnref14 (last visited on Mar. 12, 2022).

[101] Opening Doors "Strengthening families. Ending institutional care" *available at*: https://www.openingdoors.eu/wp-content/uploads/2018/02/country-fiche-Bulgaria-2017.pdf (last visited on Mar. 12, 2022).

[102] *Supra* note 77.

[103] "Deinstitutionalizing and Transforming Children's Services: A Guide to Good Practice", (2007) *University of Birmingham* 44, *available at*: https://resourcecentre.savethechildren.net/node/5995/pdf/5995.pdf (last visited on Mar. 12, 2022).

which ten years ago was 4.64% in the 2013-2014 Union budget, and unfortunately, every year a steady decline is noticed in this regard.[104] The government's commitment to the cause of children must reflect in the budget most importantly.

At the outbreak of the Covid-19 pandemic in April 2020, the Supreme Court took a *suo moto* cognizance of the safety of children from the spread of the pandemic in crowded CCIs and directed the concerned authorities to consider whether children should be kept in the CCIs.[105] Thereafter, NCPCR the country's apex child rights body issued an advisory for the return of all children to their families, to ensure the right of every child to grow up in a familial environment, and for safety and security concerns.[106] Nearly 800 Civil Society Organisations and Child Rights Activists countered that the NCPCR's approach of 'one size fits all' is risky and may endanger children and argued that though deinstitutionalization may be the goal in the long-term, it cannot be achieved in a blanket manner without adequate precautions and steps being taken to protect the children and they urged to withdraw the order.[107] Thereafter, a consultation was held in November 2020 to assess the situation of children in CCIs and the Court directed that children should be restored to their families under section 40(3) of the JJ Act.[108] Since April 2020, 64% (1,45,788 out 2,27,518) of children in need of care and protection living in CCIs were restored to their families while 60% (5155 out of 8614) of children in conflict with law living in observation Homes also were restored to their families.[109] As their restoration was due to the risk of infection and not under

[104] "Budget for children 2021-2022 cast in shadows", *available at*: https://www.haqcrc.org/wp-content/uploads/2021/02/budget-for-children-2021-22.pdf (last visited on Mar. 12, 2022).
[105] *In the Matter of: In Re contagion of Covid 19 virus in children protection homes*, *Suo Moto* Writ Petition No. 4 of 2020, *available at*: https://main.sci.gov.in/supremecourt/2020/10820/10820_2020_0_4_21584_Order_03-Apr-2020.pdf (last visited on Mar. 12, 2022).
[106] "NCPCR Directs 8 States to Send Children in Child Care Homes Back to Their Families", *The Hindu, available at*: https://www.thehindu.com/news/national/ncpcr-directs-8-states-to-send-children-in-child-care-homes-back-to-their-families/article32702838.ece (last visited on 28/10/2020).
[107] "Child Rights Activists Urge NCPCR to Withdraw Order on Emptying Child Care Institutions", *The Wire, available at*: https://thewire.in/rights/ncpcr-child-care-institutions-activists-statement (last visited on Mar. 12, 2022).
[108] The JJ Act, 2015, s. 40(3).
[109] Nearly 64% children in child care institutions restored to families since SC order in April, *The Times of India, available at*: https://timesofindia.indiatimes.com/india/nearly-64-children-in-ccis-restored-to-families-since-sc-order-in-april/articleshow/79584157.cms (last visited on Mar. 12, 2022).

the statutory framework of the JJ Act per se, the court is concerned whether those children will be sent back to CCIs now that the situation has improved.

In December 2021, the Supreme Court Juvenile Justice Committee held a meeting with a focus on the care and protection of children, especially those who were orphaned, abandoned, or whose families cannot support them. Justice Ravindra Bhat, the chairperson of the Committee emphasized the need to sustainably continue supporting and monitoring the needs of children affected by the Covid-19 pandemic, while the secretary of MoWCD stated that "deinstitutionalization is the most important need of the hour and the child remaining within the society should become the norm". The Chief of Child Protection, UNICEF India went on to say that every crisis brings opportunity and this time it was the opportunity of a paradigm shift to build child protection systems that put families at the center and prevent institutionalization, especially due to poverty. The Chairperson NCPCR reaffirmed that it would continue to strengthen data collection and assessments of the needs of the children and provide support accordingly.[110] With will and commitment, and proper resourcing, one can surely hope for the best outcome.

VII. CONCLUSION

The right to a family is a basic right of every child because children thrive in a nurturing family environment. Alternative care is not a panacea and many steps can be taken before children lose parental care. That is why the UN guidelines highlight the importance of promoting parental care, the prevention of family separation, and the promotion of family integration to fight against the need for alternative care.[111] There is an urgent need to have proper gatekeeping to check children from entering institutions unless it is absolutely necessary. Family-based alternative care such as adoption, kinship care, foster care, guardianship, and sponsorship should be given

[110] "Need to continue supporting, monitoring needs of children affected by Covid: SC judge, The Times of India" *The Times of India, available at*: https://timesofindia.indiatimes.com/india/need-to-continue-supporting-monitoring-needs-of-children-affected-by-covid-sc-judge/articleshow/88412328.cms (last visited on Mar. 12, 2022).

[111] Saliman Issifou, "Investing in Children and Families to Prevent Separation in Accordance with the UN guidelines: Role of Civil Societyinvesting in children & families to avoid unnecessary separation", XXIV *Human Rights Council Side Event* 2 (22 Sept., 2015).

primacy, and only after all the alternatives are ruled out, the CCIs be considered as a measure of last resort in letter and spirit. Sponsorship schemes and family strengthening programs must be revived and intensified like it was done in the States of Delhi and Madhya Pradesh in the wake of the pandemic with a primary focus on families at risk to prevent separation in the first place.

Lack of data is a major setback to improving the child care system, therefore, efforts should be made to collect and maintain proper data that will come handy in making policies and programs. Having a good law but bad implementation is a major challenge facing the JJ Act, especially in regard to alternative care, so efforts should be made for proper implementation of the Act to enable maximum children to enjoy the right to family and a family environment while they grow up. Lack of awareness is another obstacle towards successful implementation of alternative care especially foster care. On this matter, efforts are needed to spread massive awareness, and positive message about foster care must reach individuals, communities, and faith-based groups to bring social acceptance. Simultaneously, adoption process should be simplified and the traditional mindset of parent-centric approach should give way to child-centric approach so that more children can find home with their families. Alongside, the CCIs must be improvised as that they can co-exist to accommodate those who genuinely require them, and where no suitable alternative arrangements are available. Finally, expert suggestions and recommendations at the global level must be taken seriously.

During the pandemic there was an urgent need to remove children from CCIs to prevent infection and they were reunited with their families without proper planning. Since then, the Governments have taken measures to ensure their needs are met and encourage them to remain to stay with their families. Therefore, reimagining their future in a post-pandemic life would require conscious planning and to adopt child-sensitive policy and budgetary measures. That should be accompanied by collaborative efforts of Governments, civil societies, local communities, and NGOs working with children. Though families and family-based care may not be perfect but overall, they are better than the CCIs for the child's healthy development, moreover, family care is the only permanent solution that can be sustained in the long run. Hence, the world

must strive to ensure every child the right to grow up in a family and a family environment.

"If we don't stand up for children, then we don't stand for much".

Marian Wright Edelman

TRADITIONAL LEGAL SYSTEM AND THE ADMINISTRATION OF JUSTICE IN SIKKIM: 1642-1975

Tashi Palzor Lepcha[*]

The roots of the present-day human institutions, including its legal system, lie deeply buried in the past. To understand it, many academicians and legal practitioners around the world have focused their study on the historical overview of the legal systems and the administration of justice, particularly regarding the past customs and practices in relation to legal institutions and justice delivery systems. Unfortunately, not much attention has been paid to the early legal history of the erstwhile Buddhist Kingdom of Sikkim, which it so richly deserves.

The present study takes an interdisciplinary approach to the authoritative accounts of Sikkim's early legal history to trace, the development of the judicial system right from the establishment of the Namgyal Dynasty in 1642 to the present day. Rather than focusing on a mere mechanical summation of the evolution of the Sikkim's judicial system, the researcher has attempted to give deep insight and intimate knowledge about the critical phases of development of judicial institutions in Sikkim. This paper attempts to provide a coherent account of the administration of the civil and criminal justice system *in the erstwhile Buddhist Kingdom was transformed to suit the changing needs of the Sikkimese society.*

Keywords: *Traditional Legal System, Administration of Justice, Article 371F, Constitution of India, Law codes.*

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I. INTRODUCTION

Sikkim, the erstwhile Buddhist Kingdom, is the 22nd state of the Union of India, uniquely positioned in the southern mountain ranges of the eastern Himalayas sharing international borders with Nepal, China, and Bhutan. It is the second smallest state after Goa, with an area of 7,096 square kilometers and is home to numerous ethnic groups distinct from each other in customs, traditions, religious beliefs, languages, and ways of life. The Parliament of India, at the time of Sikkim's historical integration, while recognizing the Distinct identity and the needs of the Sikkimese people, have accorded special Constitutional status to the state of Sikkim under Article 371F of the Indian Constitution vide the Constitution (Thirty-sixth Amendment) Act 1975.[1]

Among all other special provisions under Article 371F of the Constitution of India, two special provisions that are significant for this study are clause (i) and (j) of Article 371F. Clause (i) of Article 371F states that the existing High Court of the former Kingdom, which was then functioning as such, would be deemed to be the High Court for the State of Sikkim. Likewise, clause (j) of Article 371F states that all courts of civil, criminal, and revenue jurisdiction, all authorities, and all officers, judicial, executive, and ministerial, throughout Sikkim would continue to exercise their respective powers subject to the provision of this Constitution. On a plain reading of both the clauses, it clearly indicates the existence of formal legal institutions of justice in the former Buddhist kingdom, and the fact that the Government of India has allowed its continuation even after its incorporation with the Union of India only substantiates that such judicial institutions were well-established. Unfortunately, not much is known about the rich history of Sikkim's judicial system.

The truth is that traditions of the past have made our modern legal system what it is and we still live on it. Without a proper historical background, it may be difficult to appreciate why a particular feature of the system is as it is.[2] In this context, due to Sikkim's geo-political location, its political history with people from a diverse ethnic background, their customs and traditions have attracted much attention of scholars from around the world, who have completed several comprehensive studies on Sikkim.

[1] The Constitution of India, art. 371F.
[2] M.P. Jain, *Outlines of Indian Legal and Constitutional History* 2 (Lexis Nexis, Haryana, 8th edn., 2018).

However, there is hardly any research done to understand the legal history or the evolution of the administration of Sikkim's civil and criminal justice system before its incorporation with India in 1975. Thus, it is clear that much work remains to be done on this aspect.

The researcher has undertaken an interdisciplinary approach to explore, examine, and describe the early traditional legal system and the administration of justice in Sikkim before 1975 to fill the gaps in the existing literature. A sincere attempt has been made to seek answers to some of the pertinent questions relating to judicial institutions of Sikkim, such as who was the fountainhead of justice and law-making in Sikkim before Sikkim became a protectorate of the British government in 1889? What was the position of the Maharaja after the arrival of Britishers concerning the administration of justice? What were the reasons for establishing several courts such as Sikkim Durbar Court, the Court of the Political Officer's, Chief Court, Adda Courts, and the existing High Court? What was the courts' hierarchy in Sikkim, their functions, compositions, jurisdictions, and powers? Who were the officers empowered to dispense justice at the regional, local, and central levels?

For this study, the researcher has extensively used both primary[3] and secondary sources.[4] This research paper has been divided into four parts. The first part provides the background. The second part focuses on the judicial system of Sikkim under the Namgyal Dynasty. The third part centres on the narration of the far-reaching reforms introduced by the British Government of India in Sikkim's Administration of Justice from 1889 to 1947. Finally, the fourth part elaborates a series of subsequent changes introduced in the judicial system after the end of British Paramountcy which currently constitutes the foundation of Sikkim's present legal system.

[3] Primary sources mainly consisting letters of both private and official correspondence between the Government of India, the Political officer of Sikkim, and the His Highness the Maharaja of Sikkim including some of the important notifications and confidential file noting's which was all available in the National Archive of India, the Sikkim State Archives and the National Institute of Tibetology, Gangtok.

[4] Saul Mullard and Hissey Wangchuk, *Royal Records: A catalogue of the Sikkimese Palace Archive* (International Institute for Tibetan and Buddhist Studies, Gangtok, 2010).

II. ADMINISTRATION OF JUSTICE UNDER THE NAMGYAL DYNASTY: 1642-1889

At a given time, a country's legal system is not the creation of one man or one day; it represents the cumulative fruit of the endeavour, experience, thoughtful planning, and patient labour of a large number of people through generations. To appreciate the present judicial system adequately, it is necessary to acquire background knowledge of the course of its growth and development.[5] Similarly, the current judicial system of Sikkim was not an overnight creation. Instead, it has evolved as the result of a slow and gradual process, therefore, to understand the historical evolution of the judicial system of Sikkim, it becomes necessary to understand the political history vis-`a-vis the evolution of Sikkim's administrative structure.

The Modern History of Sikkim as an independent kingdom is considered to have come into being as a political entity only with the establishment of the Namgyal dynasty in the year 1642 A.D. with the consecration of Phuntsok Namgyal as the first *Chogyal*[6] by the three venerable monks from Tibet. Before the consecration of the first *Chogyal* of Sikkim, there was no singular ruler for Sikkim's entire territory. Apparently, there were only three ethnic clans, namely the Lepchas, Bhutias, and Limbus, ruled by their respective chiefs in their territories. H.H. Risley (1894) writes, "very little is known of the First *Chogyal's* reign, but in all probability, he was chiefly engaged in subduing or winning over the chiefs of the petty clans inhabiting the country east of the Arun River (a large portion of this territory is now part of Nepal)."[7]

The Historic Tripartite agreement between the three ethnic communities of Sikkim, also known as the *Lho-Mon-Tsong-Sum* Treaty of 1663, is the earliest document of legal nature wherein all the regional leaders[8] of the Lepcha, Bhutia, and Limbu communities came together to accept the singular authority of *Chogyal* Phuntsok Namgyal and his government. Subsequently, the *Chogyal* of Sikkim was the source of absolute power in

[5] *Supra* note 2.
[6] The title of the Chogyal means Dharma Raja, King of Righteousness having two-fold powers (Spiritual and Temporal).
[7] H.H. Risley, *The Gazetteer of Sikkim* 10 (Sikkim Nature Conservation Foundation, Gangtok, 1st edn., 1894).
[8] In total there were 24 regional leaders out of which 8 were Bhutia ministers, 12 were Tsong leaders and 4 were the Lepcha leaders.

Sikkim. All the executive, legislative and judicial authorities were vested in him, and his command was the supreme law of the land.[9] Like most kingdoms, there was no separation of powers between the executive, legislature, and judiciary, nor was there any independence of judiciary during this period. Therefore, the *Chogyal* was also the fountain-head of justice in Sikkim.

The traditional political system under the Namgyal dynasty had involved an intricate devolution of administrative powers and functions that have sometimes been characterized (inaccurately in certain respects) as "feudal."[10] It was *Chogyal* Phuntsok Namgyal who laid the foundation of a centralized administration by dividing the country into twelve districts (Dzong), each under a Lepcha *Dzong-pon* (Governor) and appointed twelve of his Bhutia braves as *Kalons* (Ministers). They were the ancestors of today's hereditary noblemen who were later known by the Nepalese title of Kazi.[11] The official administrative organization of the Government of Sikkim did not consist of any departments as such instead, there was a top-down distribution of administrative powers in a hierarchical order which consisted of eight ranks in total, namely, *Chogyal, Gyal-tshab/Ku-tshab* (Regent/Representative), *Drung-Yig* (Secretary), *Chak-zod* (Chancellor), *Dun-yer* (Prime minister), *BLon-po* (Minister), *Dzong-pon* (Governor of a district), *Pipon/Digpon* (Village headman), *Gyapon* (Assistant to the village headman), and *Chud-pon*.[12]

The administration of Sikkim at the Central level was called the Palace or Darbar, which was headed by the *Chogyal* with absolute authority, to whom (in theory) all the lands and territories of Sikkim belong to and that the government was operated as if the country were a private estate.[13] At the Central level, the Chogyal was assisted by *Lhadi-Medi*[14] and the Sikkim government officers designated above the post of *Dzong-*

[9] Government of Sikkim, "Administration report of the Sikkim State for 1930-31" (Police Headquarters).
[10] Leo E. Rose, "Modernizing a Traditional Administrative System: Sikkim 1890-1973" in Himalayan Anthropology, *available at*: https://www.semanticscholar.org/paper/Modernizing-a-Traditional-Administrative-System%3A-Rose/1eb57f8d57fc3306cabda19597740bea693f6d7d (last visited on Aug. 14, 2020).
[11] S.K. Datta-Ray, *Smash and Grab: Annexation of Sikkim* 25 (Tranquebar Press, New Delhi, 1st edn., 1984).
[12] These official titles are in hierarchical order and are in Tibetan language due to heavy Tibetan influence in the Sikkim Administration.
[13] *Supra* note 11, p. 2.
[14] It consisted of the members representing the monk body and members representing the general public of Sikkim. As for the monk body, it was generally represented by the head of the various monastery and

pons, whose function was to play the role of the Advisory Council. The Chogyal being the fountain-head of justice, his Court was the Supreme Court and disposed of all disputes of criminal and civil matters in consultation with his Advisory Council.[15] Whereas, at the regional level, it was the *Dzong-pons* (Governor of a District/District officer) who were vested with the responsibility of collecting taxes and were also bestowed with civil, criminal, and revenue powers to decide disputes arising within their respective jurisdictions/Estates. In theory, *Dzong-pons* were given land by the *Chogyal*, in return for which the *Dzong-pons* would collect taxes for the *Chogyal*, provide free transport services and accommodation for the king when required, maintain paths, bridges, forts, and staging posts in their estates and provide military support during war and conflict.[16]

Below the level of the *Dzong-pon* was the rank that included both *Pipon* (Village headman) and *Gyapon* (Assistant to village headman), who were part of the traditional system of local self-governance known as the *Dzumsa* system. It continued to function to this date in northern parts of Sikkim, namely, Lachen and Lachung villages and was officially recognized in 1985.[17] The Dzumsa Council consists of two Pipons elected by a local council made up of all the heads of every household in the village and assisted by two *Gyapons* in each of the two villages. It is to be noted that authorities like "*Gyen-mee*", the body of the elders formed by the elected *Pipons*, are vested with the jurisdiction to decide all the civil and criminal matters except murder cases. Both the judges and the parties take the Oath *-Dhang-na* (*Dhang* means honest and *na* means oath) by judges and *Gnen-na* (*Gnen* means to abide and *na*means oath) by parties in disputes. At the lowest level of the official hierarchy of the Sikkim government was the position of *Chud-pon*, a village-level official also known as *Tasa* (in Limbu villages, some Lepcha villages, and in the Sikkimese territories in Morang)[18] was vested with the

from the general public it was represented by the most knowledgeable and influential landlords of Sikkim. It was a larger and more representative group whose functions was to play the role of advisory council to His Highness the Maharaja of Sikkim.

[15] The decision of the Advisory Council was not binding on the Chogyals.

[16] *Supra* note 4, at p. 4-5.

[17] Sophie Bourdet-Sabatier translation Anna Balikci-Denjongpa, "The Dzumsa Of Lachen: An Example Of A Sikkimese Political Institution", *available at*: https://www.repository.cam.ac.uk/bitstream/id/637979/bot_2004_01_04.pdf/;jsessionid=3A201E7FDB2A506F9799CEDF99DF3B79 (last visited on Oct. 26, 2022).

[18] *Supra* note 6, at p. 5.

power of collecting the taxes in their respective villages and settling of minor civil and criminal cases.

It is pertinent to note that with Phuntsok Namgyal's consecration as the first *Chogyal* in 1642, His Holiness the Dalai Lama of Tibet had sent his greetings recognizing him as the ruler of the sacred land of the southern slopes.[19] After that, 'Sikkim had always considered itself a dependency or vassal state of Tibet and looked upon Tibet and ultimately China for protection."[20] It is with the assistance of the Tibetan government that Sikkim's boundaries were fixed, and at the whims of Tibet, her policies were formulated for almost two centuries; every affair, either bigger or smaller, was formulated with the consent of Tibetan government."[21] Further, apart from the linguistic and religious similarities, the political theories and practices are distinctly 'Tibetan'. Whether it be the concept of divine kingship, the unified system of religion and politics, or the writing of legal and administrative documents, all have Tibetan antecedents,[22] and the fact that the Tibetan expressions referred to all the designation of the Sikkim officers indicate the tremendous influence of Tibet on the early Sikkim Administration.

A. The First Sikkim Law Code

The Gazetteer of Sikhim (1894) states that the early Sikkim Laws are founded on those spoken by Raja Me-long-dong, who was from India before the time of Buddha (914 BC).[23] This Sikkim Law Code provides a rudimentary system of delivering justices based on simplicity and truthfulness. It consists of sixteen laws in total and has laid down the legal procedures to be adopted at the time of trial, the law of evidence, list of offences and punishments in both civil and criminal matters, including the general rules to be followed by the kings and government servants in the time of war. However, due to

[19] Kazi Dousandup, *History of Sikkim* 21 (Unpublished Book, 1908).
[20] Anna Balicki, *Lamas¸ Shamans And Ancestors: Village Religion in Sikkim* 48 (Brill, Netherlands, 2008).
[21] Rajen Upadhyay, *Peasants' Resentments and Resistance: A glimpse on rural past of Sikkim 1914-1950* 57 (Kalpaz Publications, New Delhi, 2017).
[22] Saul Mullard, *Opening the hidden land: State formation and the Construction of Sikkimese history* 1-2 (Brill, Netherlands, 2011).
[23] The Tibetan copy of early Sikkim laws was obtained from one Sikkimese officer known as Khangsa Dewan by H.H. Risley and since the language used on the manuscript was in Tibetan and was difficult to understand, Khangsa Dewan translated it into English with the help of other Sikkimese officers, namely, Phodong Lama, Lama Shorab Gyatsho and Ugen Gyatsho.

lack of other authentic sources, there is no information about the civil and criminal cases decided as per the First Sikkim Laws, nor do we know about the date of enforcement or the period in which it was prevailing in Sikkim. The Gazetteer of Sikkim 2013[24] also states that there was no codified law in Sikkim before 1890. Therefore, it is likely, that the First Sikkim Law Code, as mentioned in the Gazetteer of Sikkim (1894), is a clear case of legal transplantation from Tibet.[25]

B. The Second Sikkim Law Code Dated 1876

Contrary to the notion that there were no codified laws in Sikkim prior to 1890 as per the Gazetteer of Sikkim (2013), there seems to be another Law Code of Sikkim dated 1876[26] which is quite comprehensive and sheds an interesting insight on the early legal system of Sikkim. It consists of fifteen clauses in total and deals with several issues, such as mediation procedures to be adopted whenever there was a conflict amongst the various ethnic communities at the village level and that the village elders and landlords were empowered to adjudicate the disputes. Further, it emphasizes maintaining overall peace and order and prohibits using a religious specialist to perform harmful rituals against one another. In cases of disputes, the law provides the need for a transparent investigation and lays down punishment for the offences committed. The salient features of the legal system under the legal code dated 1876 are summarized as below:

1. Administration of Justice at the village level

i) Minor disputes: Concerning minor disputes arising between the three communities of Bhutia, Lepcha, and Limbus, the elders of the villages were empowered with the judicial powers to settle the case, and once the case was settled, it was the responsibility of the elder to make peace between the complainants. Also, while the elder was in the process of investigating a case, the landlords and representatives did not have the authority to veto the decision of the elder; therefore, the decision of the elder was final in such matters. There is no mention of punishment for the offence committed, but

[24] Sunita Kharel and Jigme Wangchuk, *The Gazetteer of Sikkim* 297 (Home Department, Government of Sikkim, Sikkim, 2013).
[25] Further studies need to be undertaken to explore the origin of the early Sikkim laws as mentioned in the Gazetteer of Sikkim (1894).
[26] *Supra* note 4, at p. 230.

clause 3 of the Code does forbid the practice of exile for those who commit minor crimes.

ii) Serious Crimes: In cases of theft committed by any person belonging to either of the three communities, namely, Bhutia, Lepcha, and Limbu, the respective landlords were vested with judicial powers to solve the case. It was the landlord's responsibility to address the issue in front of the Chogyal and the public. In such matters, the final decision was to be ratified by the Chogyal, and if the accused is found guilty, he or she would be exiled.

2. Administration of Justice at the Central level

If any problem arises, it was the duty of the parties to make the Chogyal aware of such issues so that he would conduct investigations and give punishment as per the report of the investigation conducted. Similarly, in substantial legal cases, the complainants were required to consult only with Chogyal and not those with a vested interest. Although the Chogyal had the final say in the country's overall administration but the public decision regarding land boundaries in a village/region was considered the final decision and could not be appealed to him.

3. Laws for Maintenance of Peace

Under clause 1 of the legal code, it appears that the estate's boundary disputes had been settled between the Chogyal and the landlords and that the landlords agreed that they would refrain from torturing ordinary people. As per the clause, the Lamas, Government, and landowners should not interfere in their taxpayer's lives, and if a small infraction arises, a thorough investigation should be carried out to prevent this small infraction from developing into a serious case.[27] Further, it states that if a person creates a problem between two groups, that person would be expelled from the region.

From the above-discussed laws, it is clear that the empowerment of judicial powers to the village elders and landlords to settle disputes provided access to justice to every citizen living in Sikkim's remotest area. However, no distinction was made between the executive and the judiciary, nor was there any provision for lawyers to represent the parties in the legal cases. Also, there is no mention of a set pattern of crimes,

[27] *Id.*, p.230-231.

punishment, and jails. Thus, the overall picture of the administration before British arrival was quite rudimentary and primitive.

Let us now examine in detail the series of reforms introduced by the British Government of India in Sikkim's administration of justice from 1889 to 1947, which resulted in the creation of various courts and the appointment of several judicial officers at the local, regional and central level.

III. ADMINISTRATION OF JUSTICE UNDER THE BRITISH RAJ FROM 1889 TO 1947

Sikkim's relationship with British India started with the Treaty of Titaliya in 1817 wherein Sikkim's territories previously annexed by Nepal were restored to Sikkim by the British Government after having won the war with Nepal in 1816 and with the signing of Treaty of Tumlong in 1861, Sikkim resulted in becoming a British dependency. In 1884, the British government of India, in pursuance of their desire to start trade with Tibet, decided to send the Macaulay mission to Tibet[28] but no sooner did the Tibetan Government came to know about the mission, they dispatched an expedition of 300 soldiers that crossed the Jelep La pass and occupied a place called Lingtu located well within the Sikkim's territory. This encroachment of Sikkim's territory by the Tibetan forces compelled the British government to postpone the Macaulay mission, and after exhausting all formalities of requesting the Tibetan Government to withdraw their troops from Lingtu, the Government of India had no other option than to send two thousand strong-arm forces under Brigadier General Graham, to expel the Tibetans from Lingtu on Mar.20, 1888, after a short fight.[29]

Following the evacuation of the Tibetan forces in 1888 and the restoration of peace on the frontier, it was thought necessary to appoint a resident Political officer to overlook Sikkim's administration and keep the Tibetan influence at bay.[30] Therefore,

[28] Macaulay Mission was headed by Coloman Macaulay who was responsible for the opening up trade negotiation with the Tibetan Government.
[29] Lal Bahadur Basnet, *Sikkim: A Short Political History* 50 (S. Chand Co. Pvt. Ltd., New Delhi, 1974).
[30] Anna Balikci-Denjongpa, "The British Residency in the Himalayan State Of Sikkim: A Heritage Building Restored to its Former Glory" 1-2 *Bulletin of Tibetology* (2008), *available at*: http://himalaya.socanth.cam.ac.uk/collections/journals/bot/pdf/bot_2008_01-02_10.pdf (last visited on July 1, 2020).

the Government of India proposed to appoint a permanent Political Officer to reside in Sikkim and assist the Raja in Council with his advice in the administration of affairs. Mr. John Claude White,[31] an engineer by profession, was appointed to the post in June 1889 and was to act under Mr. A.W. Paul, Deputy Commissioner of Darjeeling, who was earlier in control of Sikkim Affairs as the Political Officer residing in Darjeeling.

As per the Letter No.27P-D dated Jun. 12, 1889,[32] the Government of India had expressed their views on various aspects of the overall administration of Sikkim and that the newly appointed Political Officer was suggested to advise the Raja not to reside in Chumbi[33] rather he was to encourage the Raja to reside more in Gangtok and to take an active part in the administration of his country. Further, concerning Sikkim's internal affairs, it was to be conducted by a Council of leading monks and laymen in Sikkim, presided over by the Raja when present. If the Raja was unable to attend the Council meetings, all decisions of the Council were to be submitted to him, and if the Raja differs on any point from the Council, the matter should be referred to the Political Officer, and if he agrees with the Raja, the Council would be bound to yield. Further, it was suggested that in other cases, the decision of the Council should be carried out in the joint names of the Raja and that body until it may seem expedient to the government of India to allow the Raja to resume undivided authority.

So, with the appointment of Mr. J.C. White, the powers of the *Chogyal* were considerably reduced, and that it was the British Government of India who was in absolute control of reorganizing the administration, revenue collection, and the Judiciary of Sikkim. Consequently, the old existing administrative system was altered as per the convenience of the Political Officer, "rather than attempting to learn the structure of Sikkimese society, the British equated the various different ranks of Sikkimese society to titles found in the court of the Mughal empire."[34] It was only the

[31] He remained in Sikkim for nearly twenty years and is well remembered in Sikkim for having established an administration along with a simple form of law and justice.
[32] Letter No. 27P-D dated Jun. 12, 1889 from John Edgar, Chief Secretary to the Government of Bengal to A.W. Paul, Deputy Commissioner of Darjeeling, and Political Officer, Sikkim.
[33] A place located in the northern part of Sikkim which now falls under the territory of China.
[34] *Supra* note 4 at 6 [Gyal-tshab /Ku-tshab (Regent/Representative) became Vakil, mGrongnyer/ Dun-yer (Prime minister) became Dewan, BLon-po (Minister) became Kazi and by this time most of the Dzong-pon (Governor of a district) were using Kazi or one should ay newly created Dzong-pon and Pipon/Digpon (Village headman) became Tikhdar].

Dzumsa system that was continued because, according to Mr. White, "the system seems to suit the people and I allowed it to be continued with some small modifications."[35]

The Political Officer was to administer the affairs of the state in conjunction with a Council[36] composed of the Chief Dewans, Lamas, Kazis, and of which he was to be the President.[37] The primary function of the newly formed State Council was to act as a consultative body and had no direct administrative duties at the Central level, but since these Council members were of strong personality and character, who apart from being knowledgeable and influential, also had a tremendous experience as far the management of the administration of Sikkim was concerned, therefore, "the Political Officer was largely dependent upon them for the implementation of policy, and thus their concurrence was usually sought on important policy decisions."[38]

A. Court of His Highness the Maharaja of Sikkim and the Court of the Political Officer

Now coming to the central administration of justice in Sikkim, it appears unsatisfactory because the Maharaja of Sikkim was not paying attention to the trial of cases that came before him for adjudication and that the Palace officials were corrupt and were involved in extortion. This was reported to the Government of Bengal by the Rajshahi Division Commissioner when the Sikkim Administration Report for the year 1904-1905 was forwarded. Thus, due to the lack of interest shown by the Maharaja in the trial of cases and the unsatisfactory ways in which the Maharaja and his Council tried the cases, the Commissioner submitted to the Government of Bengal certain proposals for the reform of judicial procedure in Sikkim and suggested that the Maharaja of Sikkim

[35] J. Claude White, *Sikkim and Bhutan: Twenty-one years on the North-East Frontier1887-1908* 80 (Vivek Publishing House, New Delhi, 1971).

[36] The following new members were appointed to the Sikkim Council by the Political Officer and they were Khangsa Dewan, Phodong Lama, Shoe or Poorbu Dewan, Lari Pema, Gangtok Kazi, Tashiding Kazi, Entchi Kazi And Rhencok Kazi. As per Mr. White, these men were specifically selected as Council members because they were of good-natured and was always will to help to the best of their ability. However, in other secondary sources such as Leo. Rose, "Modernizing A Traditional Administrative System", Dousandup Kazi, History of Sikkim,1908. L. Bahadur Basnet (1974), Sikkim: A Short Political History 56, state that only those men who were ready to help the British Government of India in the implementation of their policies were appointed.

[37] *Id*. at p. 25.

[38] *Supra* note 11, p. 206.

should be deprived of any real authority in the trial of cases.[39] However, the Government of India was not in favor of such proposals and believed that the Sikkim state did not require an organization so elaborate and rules so precise as those proposed by the Commissioner. Instead, it is interesting to note that the Government of India was of the view that all the serious offence and heavy cases of a civil character should be enquired into at Gangtok, sometimes by the Council and sometimes by the Raja if the latter offences could be dealt with by local officials or by Panchayats. Further, the Government of India had bestowed the responsibility upon the Political Officer to introduce a simple legal system and was discouraged from importing any part of the intricate and difficult legal systems existing in India.[40]

As per Letter No.1482-P.D., dated Oct.31, 1900,[41] the Government of India had introduced certain general reforms in the Sikkim state, but it appears that these reforms failed to lead to any good results. Therefore, to understand the situation in this regard, the Government of India had called upon the Political officer of Sikkim to submit a report on the administration of justice as administered in the Court of His Highness the Maharaja of Sikkim. Consequently, while submitting his annual report of the Sikkim state for 1905-06, the Political Officer also reported that the 9th Maharaja Thutob Namgyal's attitude had completely changed for the good and was genuinely concerned about bringing reforms. It seems that the Maharaja had finally awakened and had felt that justice should be fairly and impartially administered. The Maharaja, in the interest of the state, drafted certain proposals that were considered and passed at the Council meeting. This positive attitude of both the Maharaja and Maharani Yeshi Dolma indicated that they were both eager in bringing reforms in the administration of justice, which convinced the Political Officer to request the Government of India through his Letter No. 2195, dated Aug.20, 1906, that the Maharaja should continue to try cases, which the Government of India accepted.[42]

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[39] Government of Sikkim, "Report on the administration of justice and the execution of decrees in Sikkim" (Foreign Department, Feb. 1907).
[40] *Supra* note 35, p. 3.
[41] Letter No. 1482-P.D, dated Oct. 31, 1900 (The General reforms introduced in the Sikkim's Administration of Justice was not mentioned in the letter).
[42] *Supra* note 39.

1. Reforms Introduced by His Highness the Maharaja of Sikkim in the Administration of Justice in 1906

With the Maharaja taking a personal interest in Sikkim's overall administration, he felt that it was essential to frame rules regulating the conduct of the business of the Council members and the Palace officials to check bribery and corruption prevailing in the Sikkim administration. Consequently, in the Council meeting held on July 9, 1906, attended by His Highness the Maharaja as the President of the Council, the Political Officer, and the other Council members,[43] significant reforms were introduced in the procedure of trying the civil and criminal cases in the Court of His Highness the Maharaja. Also, it defined the nature of cases that should be tried by the Maharaja's Court and those which should be tried in the Court of the Political Officer. The following proposals were introduced by His Highness and were adopted instantly.

(i) *Constitution of Sikkim Durbar Court.*[44]

- ***Council Members and Responsibilities*:** The total number of the Council members was six, and it was the responsibility of the members to help the Maharaja in the trial of cases in both civil and criminal matters.[45] To do away with the problem of bribery and corruption in the administration, it was proposed that every member must fulfill the duties assigned to them with utmost sincerity and abstain from taking bribes in any case which was under trial. Also, it was the responsibility of Council members to frame a few simple rules regarding the procedure related to civil and criminal cases for the guidance of His Highness and Council members. Furthermore, the Council members were to keep a proper record of all cases with the fines and fees realized and that the latter was to be paid into the Political Officer's office every quarter.
- ***Punishment*:** It pertinent to note here that if any member was found guilty of taking bribes, he would be liable to a fine ten times the value of the bribe taken or

[43] Other members who were present at the meeting were Jerung Dewan, Barmiak Kazi, Yangthang Kazi, Tasang Lama and Rinzing Kazi.
[44] Extracts from the minutes of the Council meeting held on the July 09, 1906.
[45] It was proposed that among the Council members, two members were to take it, in turn, to regularly attend His Highness's Court daily from 10:00 A.M. to 4:30 P.M. for two months straight and assist the Maharaja in the trial of cases. Also, it was proposed that the members of the Council were to attend all the state affairs regularly without any fail and that they were to be present in Gangtok for Tibetan New Year's Day and Worship of snowy range festival (Pang Lhabsol festival).

could be dismissed from the Council. Similarly, if any of the Council members were careless in undertaking the duties assigned to them, this would lead to detention for six months in Gangtok, and even after detention, if the performance of such members were found unsatisfactory, it would lead to dismissal from the Council.

(ii) *The Nature of Cases to be tried by the Maharaja's Court and the Political Officer's Court*

One of the significant impacts after the takeover of Sikkim's administration by the British Political officer was the substantial change in the Sikkim's demography by the early 19th century. Apart from the Lepchas, Bhutias, and Limbus, many people from Nepal started residing in Sikkim due to the British government's encouragement. Others, such as European and American travelers, Christian missionaries, including a substantial number of people from the plains of India mainly consisting of Marwaris, Biharis, and Bengalis, migrated into Sikkim for trade. In short, the demography consisted of three categories of people Sikkim Subject, British Subjects, and foreigners.

Earlier all serious criminal offences, such as murder, were tried by the Court of His Highness the Maharaja in Council, with the Political Officer present. In 1902, a person named Nagssing and Dowgay was accused of murder and was decided by the Maharaja and his Council members with the Political Officer being present. The court found Mr. Nagssing guilty of murder and sentenced him to be executed, whereas Mr. Dowgay was not guilty of murder but was guilty of abetting and sentenced him to penal-servitudes for life.[46] However, as per the extract from the Council meeting held on the 1st January 1906,[47] it appears that all serious criminal cases were to be tried in the Court of Political Agent.

Since there was no formal set of rules which defined the nature of cases that could either be tried by the Court of Maharaja or the Political Officer, therefore, on July 09, 1906, after a short discussion among the Council members, His Highness the Maharaja of Sikkim being the President of the Council in concurrence with the other members passed a resolution stating that the Maharaja and his Council would mainly try all civil

[46] Extract from the minutes of the Council dated the Jan. 17, 1902 (National Archive of India, New Delhi).
[47] Extract from the minutes of the Council dated the July 1, 1906 (National Archive of India, New Delhi).

and criminal cases relating to Sikkim subjects. As for the civil and criminal cases concerning the British subjects residing in Sikkim, the resolution passed was that in civil cases, the parties had the option of either being tried by His Highness or the Political Officer. If His Highness Court adjudicated a case pertaining to the British subject, then every punishment of a British subject had to be reported to the Political Officer, who also had the right to intervene at any stage as the representative of the Paramount Power.[48] In Criminal cases, it was to be tried exclusively by the Political Officer.[49] Further, no party who had a case under trial in the Maharaja's Court could transfer it to the Political Officer's Court until he had obtained a copy of the Maharaja's decision and could produce it before the Political Officer. However, if any of the parties were dissatisfied with His Highness's decision, he or she could appeal to the Political Officer and that His Highness could be present at the hearing of any appeal if he so desired.[50]

Concerning the Jurisdiction of the Courts in the offence committed by the European British subjects, Americans, Non-British Europeans, and other foreigners, it is to be noted that in criminal cases concerning the European British subject,the Political Officer of Sikkim was appointed as the Justice of Peace by the Government of India within the territories of His Highness the Maharaja of Sikkim[51] and was invested with powers to exercises all the powers of a Magistrate of the 1st class and the powers under sections 186 and 190 of the Criminal Procedure Code, 1898. Whereas in the proceedings against Americans and Non-British Europeans, the Political Officer was empowered with powers of a District Magistrate (1st class) and a Court of Sessions. The Political Officer in the exercise of the jurisdiction of a Court of Session[52] could take cognizance of any offence as a Court of original criminal jurisdiction without the

[48] This would act as a check on punishments levied on the British subjects.
[49] Letter No.318 I.B dated Feb. 17, 1909, from the Political Officer in Sikkim to the Maharaja of Sikkim, *available at*:
https://eap.bl.uk/archive-file/EAP880-1-1-77#?c=0&m=0&s=0&cv=9&xywh=588%2C313%2C1607%2C1586 (last visited on Aug.12, 2020).
[50] Letter No. 2343 (confidential), dated the Aug. 25, 1906 (National Archive of India, New Delhi).
[51] Foreign Department Notification No.1931-IB, dated Sep. 30, 1909, Foreign and Political Department Notification No. 319-D, dated Jan. 16, 1917 (National Archive of India, New Delhi).
[52] There was a High Court in Calcutta appointed in respect of offences over which the political officer exercises the jurisdiction of a court of Session, but in Sikkim, no cases had occurred over the years and the Government of India didn't think it necessary to appoint any High Court and allowed the continuance of the practice as it was prevailing.

accused person being committed to him by a magistrate, and shall when so taking cognizance of any offence to follow the procedure laid down by the Code of Criminal Procedure for the trial of warrant cases by magistrates.[53]

It is pertinent to note that earlier under Article IX[54] of the Treaty of Tumlong, 1861 all the British subject residing in Sikkim was liable under Sikkim's local laws and that His Highness and his Council had the power to try cases relating to British subject in Sikkim. However, European British subjects were not to be tried by His Highness Court; instead, such offenders were handed over to the British authorities. Thus, with the Sikkim Council resolution of July 09, 1906, the Sikkim Government formally authorized the Political Officer the exclusive right to try criminal cases relating to British subjects in Sikkim. This formal cession of criminal jurisdiction was for all practical purposes treated by the Government of British India as an abrogation of that portion of Article IX of the Treaty of 1861.

In civil cases concerning the European British subjects, Americans, and Non-British Europeans, the Sikkim courts may exercise their ordinary powers subject to the political officer's right, as the representative of the paramount power, to intervene at any stage in the trial of such persons. Further, other foreigners such as Chinese and Tibetans were amenable to the Sikkim Courts, and that the Japanese were treated on the same footing as are Americans and Non-British Europeans.[55]

B. Establishment of Adda Courts

One of the most important tasks of the Political Officer was to look for ways to start generating revenue for Sikkim[56] because, according to him, “the coffers were empty,

[53] Foreign Department Notification No. 1932-I.B, dated Sep. 30, 1909 (National Archive of India, New Delhi).

[54] Article IX states that The Government of Sikkim shall provide protection to all merchants, traders or travellers of all countries whether trading in, passing through or residing in Sikkim. With regard to violation of local laws of Sikkim; if the offender is a European British subject, the Sikkim Government shall not detain such offender but shall have to deliver such him to the British Authorities whereas; all other British subjects residing in Sikkim shall be liable under the local laws of Sikkim but shall be saved from grave punishment like loss of limb, maiming or torture.

[55] Letter No. 1802-I. B dated Aug.17, 1917 of Deputy Secretary to the Government of India in the Foreign and Political Department, to the Political Officer in Sikkim (National Archive of India, New Delhi).

[56] Revenue of the country was to be collected by the council, but it was the duty of the Political Officer to ascertain what would be the minimum amount required for administrative purposes and the remaining balance to be handed over to the Raja.

and the first thing to be done was to devise some means by which we could raise a revenue."[57] Therefore, he introduced a new land settlement program called the lessee system and divided the entire country into several Estates/Elakhas. There were 104 Elakhas in Sikkim, which were leased out to various lessees, and in some cases, it was managed by Managers appointed on commission by the state. Further, out of 104 Elakhas, 11 elakhas were managed by managers, 15 elakhas belonged to the Private Estates of His Highness the Maharaja, and five elakhas belonged to the important Buddhist monasteries and the revenue collected from monastery elakhas was kept for the upkeep of the monasteries.[58]

According to the new system, the traditional land grants administered by the Kajis[59] and by a large number of monasteries were replaced by fifteen-year leases given out to Kaji and Sikkimese landlords and ten-year leases to Nepalese landlords called Thekadar for which they paid a fixed rent to the government.[60] These Landlords were vested with the power to collect the house tax (Dhuri-khajana) and land tax (Zamin-khajana) from their tenants in their respective elakhas,[61] but within the Elakhas of the lessee-holders, there were many villages located at distant places, and due to poor road connectivity and transportation facilities during that period, it was a challenging task for the landlords to fulfill their duties. Therefore, for convenience, the Kazis and Thikadars were assisted by their subordinates like Mukhtiyars,[62] Mandals, and Karbaris.[63] The Mukhtiyars were also vested with judicial powers, which were akin to today's District Magistrate.[64] Since the Elakhas was divided into convenient blocks, each block came under the charge of a Mandal. The Mandals[65] (Village head) had the responsibility of collecting the tax from their respective villages and was to submit it to the Kazi's or Thickadar, who further had to deposit the revenue collected in the office of the Political Officer.

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[57] *Supra* note 10, p. 26.
[58] *Supra* note 9, p. 12.
[59] The land-owning nobility of Lepcha, Tibetan and Bhutia descent.
[60] *Supra* note 20, p. 48.
[61] Jurisdiction or Territory which are under the control of such Landlords are known as Elakhas.
[62] Mukhtiyars were appointed by some of the landlords, who had good knowledge about all the villages in the estate and were to serve as the link between the landlords and the villagers.
[63] *Supra* note 24, p. 98.
[64] *Id*. at 103.
[65] Nepali term for Village head.

Every lessee, Manager of the monastery holding an Elakha was ipso facto the court of original jurisdiction of that Elakha,[66] and their court was known as the **Adda Courts.** As per the Administration Report of the Sikkim state for the year 1930-31, there were 57 Adda courts in Sikkim,[67] but **t**he Judicial powers of the Landlords Kazis, Lamas, Thikadars, Mukhtiyars, and Mandals in civil and criminal matters were not clearly defined and were reported to "have rather crude notions of justice."[68]

1. Reforms introduced in the functioning of the Landlord Courts, which was also known as the Adda Courts

In the year 1906, it had come to the notice of the Sikkim durbar that the Kazis, Lamas, and Thikadars were in the habit of levying fines and illegal cesses and in various ways were oppressing the raiyats. Subsequently, an Order[69] dated July 28,1906 was passed by Maharaja in Council wherein it had clearly defined the landlord's powers in civil and criminal cases.

As per the Order, the word Kazi, Lama, or Thikadar meant the landlord or the person responsible to the Durbar for the realization of the rents, i.e., land tax and house tax. It is important to note that all the landlords could only try petty cases such as cattle trespass, minor land disputes, and debt cases of value not more than Rs.10 and with the power to fine up to Rs.5, in their respective elakhas, whereas all serious criminal offences were to be tried in the Court of the Political Officer.

This Order created a hierarchy among the landlords because as far as the imposition of fine and sentencing the prisoner was concerned, it was divided into four classes, and they were as follows.

- The 1st class Landlords[70] were empowered to fine up to Rs.100 only or imprisonment for one month. If the sentence of imprisonment was passed, the prisoner was to be confined at the Gangtok jail.

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[66] *Supra* note 9, p. 22.
[67] *Ibid.*
[68] Government of Sikkim, "Administration report of the Sikkim State for 1925-26" 19 (Police Headquarters).
[69] *Supra* note 39.
[70] All members of the council, Dallam Kazi, Rai Bahadur Ugen Gyatsho, Rhenok Kazi, Gangtok Kazi and Rai Sahib Lobzang Choden were given the judicial powers of the 1st class.

- The 2nd Class Landlords[71] had the power to fine up to Rs.50 only.
- The 3rd Class Landlords[72] were vested with the power to fine up to Rs.25 only
- The 4th Class Landlords[73] were permitted to fine up to Rs.15 only.

It is important to note here that the magisterial powers on the landlords were vested by the Sikkim Darbar, and only those landlords who were vested with higher judicial powers were permitted to try both the civil and criminal cases within their elakhas therefore if any person who in his capacity as the landlord had not been conferred with the judicial powers by the Durbar had no right to exercise any of the judicial functions.

2. Powers of the landlords in civil matters between the British subjects and Sikkim subjects

Further, as per the Maharaja-in-Council Order dated Aug. 22, 1906, only the officers of both the 1st and 2nd classes were empowered to try cases between kyahs[74] and ryots. They were empowered respectively to try debt cases of claims not exceeding Rs.500 and Rs. 250, including the interest. However, if any of the 1st and 2nd class Magistrate were in debt to the kyah filing a suit for the recovery of debt from any of their ryots, such officer would be disqualified to try such cases and that the case would be tried either by His Highness or the Political Officer. Additionally, it was the duty of such landlords to keep a careful record of all cases tried by them, the sentences passed, and the fees realized. Fifty percent of the fees and fines so realized must be paid into the Political Agent's office every quarter.

3. Appeals

If any person or party who was not satisfied with the landlord's judgment had the right of appeal to the Courts of His Highness the Maharaja and the Political Officer. Further, transfer of a case from His Highness Court to the Court of the Political Officer was not permitted, but if any party had obtained in writing the copy of His Highness's decision, then such party would have the right to appeal against such decision. But after the

[71] Bidur Kazi, Lutchmi Narain Pradhan, Tulsi Das Pradhan, Rhumtek Lama, Penchu, Ralang Lama, and Ragonundun Ram were empowered with the judicial powers of the 2nd class.
[72] Kabirhang Sabah, Sakyong Kurzang, Jongtook, Chobagya and Parsad Singh were vested with the judicial powers of 3rd class.
[73] Agam Singh, Sangchung and Sangay Dorje were vested with the 4th class judicial powers.
[74] Indian British subject were generally referred as Kyahs.

establishment of the Chief Court in the year 1915, the Chief Judge exercised supervisory and appellate jurisdiction over the Adda Courts.

4. Amendments in the Powers of the Landlords in Civil Cases

On Jan.12, 1909,[75] a Council meeting had taken place at the residency to define the powers of all the Sikkim Magistrates in the trial of Civil Courts with limited pecuniary jurisdiction and to decide whether or not to grant judicial powers of Class IV to all the Landlords. The State Council resolved that the powers of First-class Kazis, Thikadars, and Lamas in respect of money suits shall be subject to a maximum of Rupees 500/-, Second class Rupees 300/- Third class Rupees 200/- and Fourth-class Rupees 100/-.

In 1929-30, there were 21 first-class Adda courts, eight second-class, 11 third-class, and 17 fourth-class Addas in Sikkim.[76] Apart from the Landlords, in the trial of cases related to forest offences, The Maharaja Thutob Namgyal in the year 1914[77] had delegated the judicial powers of Fourth Class to the Forest Manager[78] to try forest-related offences and to fine up to Rs.15 in each case.[79]

5. Working of Adda Courts

From the available records, it appears that the landlords conducted all the trials related to civil and criminal cases in their own house, and as for the lamas dealing with the monastery estate, the cases were heard at their respective village monasteries. To adjudicate minor cases at the village level, some of the landlords had employed Kamdaris or Baidars whose primary task was to take down evidence, to write summons, and to do basic calculations of the total amount of money collected through court fees and fines realized by landlords while disposing of the cases. And usually, their servants were made to travel all over their *elakhas* to call in the parties and witnesses.

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[75] Extracts from the minutes of the council meeting held at the residency, at 11 A.M. on Jan. 12, 1909.
[76] *Supra* note 39 at p. 22.
[77] Office Order No. 15 dated Aug. 01, 1914, File No: 6/18/1914, S.No. 97 (Sikkim State Archives, Gangtok).
[78] Forest manager Mr. Dilay Singh.
[79] Letter No.1330/J dated Dec. 23, 1914.

6. Salaries

Since the landlords were taking a great deal of effort and employing people to carry the judicial function vested on them by the Sikkim Darbar, they were allowed to retain half the court fees and fines realized to meet the cost of their expenses and in no case where they allowed to take more than what was needed to meet their expenses. Thus, the magisterial powers conferred on all the landlords were purely Honorary, and they did not receive any fixed salary as such from the Sikkim government.

C. Establishment of Chief Court in 1915

From the available records, it appears that a discussion between the Maharaja and the Political Officer about the future administrative management of Sikkim had taken place particularly to establish the Sikkim Chief Court consisting of nine persons who would sit in benches of three each, on rotation for three months at a time and that the members of the Chief Court would be appointed from the leading and the most intelligent landlords of Sikkim because of their fine wisdom and experience. Further, it was decided that the Political Officer of Sikkim, as in the past, would constitute the final court of appeal in Sikkim.

Consequently, the Political Officer forwarded the proposal for establishing the Chief Court to the Government of India through his letter dated Jan.19, 1915[80] and the Maharaja was informed by the Political Officer through his letter dated Mar. 13, 1915 that "this proposal in which you concurred, has received the approval of the Government of India, and now I desire, with your keep, to bring into being."[81] Therefore, the list of persons who were to form the Chief Court members was forwarded to the Maharaja, and he was requested to give his views in this regard.

The Maharaja, in his reply,[82] expressed his views that it would be somewhat irregular for each bench to sit for three months at a time and instead proposed that each of these benches sit for two months straight in rotation throughout the year. It was also pointed out to the Political Officer that there was not a single person who

[80] Letter No. 7-E.C dated Jan. 19, 1915 from Political Officer, C.A. Bell to the Secretary to the Government of India, Foreign and Political Department, Delhi.
[81] Letter No. 267/J dated Mar. 13, 1915 from Mr. C.A. Bell (Political Officer) to Maharaja Tashi Namgyal.
[82] D.O. No: 170/J dated Mar. 15, 1915.

knew English in the list consisting of would-be members of the Chief Court. The Maharaja personally felt that it would be an excellent thing to appoint a person who was well versed in English as the President of each bench, and therefore, he suggested that someone with English knowledge may be appointed.

Further, His Highness also proposed that the Political Officer appoint the head clerk[83] of the Chief Court provided he is a good and reliable man who would be able to hold responsible for the account of the fees and fines recovered in the Court. The Political Officer was requested to inform the members officially for their appointment to the Chief Court bench and that the first bench was to be present in Gangtok on the Mar.28, 1915, to commence their work from Apr.01, 1915. Therefore, the revised list of members of the Chief Court, which the Council members approved along with the Constitution of the Sikkim Chief Court, was forwarded and approved by the Political Officer.[84]

1. Composition of the Chief Court:[85] The Sikkim Durbar decided to form a Chief Court in concurrence with the Political Officer consisting of twelve persons to sit in benches of four each, each bench to sit for two months in rotation. The names of members consisting of the first Sikkim Chief Court as per their order is as follows: -

- BarmiokKazi (P), Rai Sahib LobzangChhoden, Tassang Lama, Rathna Bahadur was to sit in First Bench (April, May, and October, November).
- Lasso Kazi (P), MallingKazi, RhencokKazi, R.S. Lachminarian was to sit in the Second Bench (June, July, and December, January).
- YangthangKazi (P), Kumar Palden, NorzangKazi, R.S. Lambodar was to sit in the Third Bench (August September, and February, March).

It must be noted that His Highness had always wanted that there should be at least one Paharia[86] member on each bench and that there should be one member who knows English.[87] The first name in each group above is the President of the Court. On every bench, one person was to act as the President of the bench and was to be elected by

[83] Babu H. Dikshit was appointed as the head clerk (Letter No. 290/J dated Mar. 20, 1915).
[84] Letter No. 290/J dated Mar. 20, 1915 from Political Officer C.A. Bell to His Highness Tashi Namgyal.
[85] Letter No. 289/J dated Mar. 19, 1915.
[86] Person belonging to the Nepali community.
[87] File No: II, S.No. 8, Sikkim State, Judicial Department 1929 (Sikkim State Archives).

the other members of the same bench. Later, the presiding officer of the Chief court was called the Chief Judge, and with the view to improve the judicial administration of the state, the Durbar acquired the services of a competent legal man named Mr. Rup Narayan[88] of Punjab and appointed him as the Chief Judge of the Sikkim Chief Court, who joined the Durbar service on the Jan.22, 1924.[89]

2. Original and Appellate Jurisdiction: The Chief Court's primary function was to try all the important cases arising in the state and exercise supervisory and appellate jurisdiction over the Adda Courts. On the Original jurisdiction, it was to decide cases that came up from the station area of Gangtok and those which were beyond the jurisdiction over the Adda courts or litigation between the residents of different estates. On the Appellate side, it heard appeals and references from the decisions of the Adda Courts. The Chief Court was also invested with jurisdiction to decide revenue suits. All cases were to be decided in Gangtok, the capital of Sikkim.

3. Procedure in Civil and Criminal Matters: The judicial work, on the whole, was simple and followed the law of British India as their guide and common sense in their procedure code. The technicalities of the procedure, the law of evidence, and a hard and fast limitation law were not observed.[90] Further, all applications, petitions, and complaints (Civil and Criminal) made in the Sikkim Chief Court by the public would only be considered if written on "Sikkim Darbar" watermarked paper from Apr. 01, 1929 and that even the landlords were directed to encourage the use of it by the public in the Adda Courts.[91]

It is pertinent to note that it was the Eleventh Chogyal, His Highness the Maharaja Tashi Namgyal, who to bring reforms in the Sikkim administration of justice created the Sikkim Chief Court in concurrence with the Political Officer wherein a whole-time judge was appointed. The purpose of establishing the Sikkim Chief Court was to replace the Maharaja's Court with the Political Officer, remaining as before, the Supreme Appellate Court in the initial phase. It is to be noted that the Maharaja's powers were

[88] He worked as the Chief Judge of the Sikkim Chief Court.
[89] Letter No. 29/J dated Jan. 09, 1925 of Judicial Secretary to General Secretary, (File No. 9 of 1923, Serial No. 145, 1923, Judicial Department, Government of Sikkim).
[90] *Supra* note 9, p. 23.
[91] Judicial Department, Notification No. 651-12/J dated Mar. 1, 1929, Sikkim Volume Code V, p. 9.

limited, and it was only in the year 1918, with Sir Tashi Namgyal's accession to the throne, that the British government restored all his powers. Consequently, the Maharaja's Court was the Final Court of Appeal and Justice in the Kingdom of Sikkim only after 1918.

As for the replacement to His Highness Court by the Chief Court, there could be two possible reasons for this. Firstly, due to the administrative workload, the Maharaja had less time to attend to the judicial affairs, and secondly, due to the lack of regular attendance shown by the Council members, in adjudicating the cases that came before the Sikkim Durbar because in 1912 the absentee Councilors were ordered and warned by the Political Officer's to attend His Highness Court regularly, and failure to do so would lead to punishment.[92] Therefore, it is possible that for the efficient administration of justice, the Maharaja wanted a new set-up with all the procedures laid down.

IV. POST INDIAN INDEPENDENCE: THE HIGH COURT OF JUDICATURE (JURISDICTION AND POWERS) PROCLAMATION OF 1955 AND ITS AMENDMENT UNTIL THE STATEHOOD OF SIKKIM

Soon after India's independence in 1947, Government of India sent Mr. J. S. Lal to take control of the Sikkim's administration as Dewan in 1949. A Judicial Committee was set up under the chairmanship of Mr. H. Pradhan, and on the recommendation of the Committee, the judicial powers conferred on the Landlords were abolished, thereby abolishing the institution of the Adda courts in Sikkim.[93] Although British India's laws guided all the Courts in Sikkim, it was only on July 10, 1953 that the Maharaja Tashi Namgyal officially considered adopting the Criminal law and the Indian Penal Code, which was to be enforced by all the Courts throughout Sikkim with some

[92] Letter No.165/J dated Jan. 02, 2012 from political officer to the councilors, i.e. Jerung Dewan, Lasso Kazi, Yangthang Kazi, Malling Kazi, Tasang Lama, Barmiok Kazi. File No.6/VII/1912, S.No. 5, Sikkim State Archives, Gangtok.

[93] A.P. Subba, "Historical Perspective of the Sikkim Judiciary", *available at*: https://hcs.gov.in/hcs/JudicialHistory (last visited on Jun. 30, 2020).

modifications.[94] Further, on Apr. 17, 1955, the Proclamation known as the High Court of Judicature (Jurisdiction and Powers) was issued by the Maharaja Tashi Namgyal, which led to the establishment of a High Court of Sikkim[95] in place of the Sikkim Chief Court. The High Court was considered the final authority in all judicial matters, civil and criminal, subject to the exercise of prerogative by the Maharaja to grant mercy, pardon, remission, commutation, and reduction of sentence in case of conviction. Further, under section 11 clause (b)[96] of the Proclamation, the Maharaja had retained his prerogative to set-up a Special Tribunal for the review of any case, civil or criminal, whenever the Maharaja felt that there had been a case of miscarriage of justice provided that the President of such Tribunal should be from amongst the Judges of the High Court. All courts and tribunals in Sikkim were subordinate to the High Court. Appeals and revisions against the decision of all subordinate courts and tribunal would lie to the High Court.[97]

It is to be noted that the Courts in Sikkim were dispensing substantive justice based on the principles of equity and a good conscience which were mainly according to the principles prevailing in India and customs prevalent in Sikkim. The technicalities of procedure and law of evidence were not allowed to defeat the purpose of justice, and the law of limitation was not rigid but elastic. But essential features of the Indian Constitution such as conferment of basic fundamental rights, written Constitution, the rule of law, equality before the law, separation of powers, and independence of judiciary was non-existent in the former kingdom. As a result of the long pending demand[98] of the Sikkimese people led to mass uprising against the Monarchy regime in 1973 which ultimately led to the merger of Sikkim with India vide the Constitution

[94] Notification No. 160/O.S. dated July 10, 1953, Sikkim Code Volume III, p. 19.
[95] It is likely that the High Court of Sikkim was established to replace the Chief Court but no information is found yet about the date of abolishment of the Sikkim Chief Court.
[96] Section 11 clause (b) reads as "Nothing contained herein shall affect the Maharaj's prerogative to set-up a special tribunal for the review of any case, civil or criminal, provided that the President of such Tribunal shall be a judicial officer of the status of a High Court Judge and provided further that such prerogative shall be exercised in only very special cases where, in the opinion of the Maharaja, there may be apprehension of miscarriage of Justice."
[97] Sikkim Code Volume II, p. 82.
[98] Agreement dated May 8, 1973, *available at*: http://www.siblac.org/laws.html (last visited on July 15, 2020) and The Government of Sikkim Act, 1974 available in Sikkim Volume Code IV, 86-96.

(Thirty-sixth Amendment) Act, 1975 and Article 371F a special provision under the Indian Constitution was inserted to meet the special needs and circumstance of Sikkim.

Soon after Sikkim's historic integration with India, the President of India vide Adaptation of Sikkim laws (No.1) Order 1975[99] amended the High Court of Judicature (Jurisdiction and Powers) Proclamation of 1955[100] and that with the insertion of clause (i) of Article 371F "The High Court of Judicature" of the erstwhile Buddhist kingdom of Sikkim became the "High Court of the State of Sikkim" under the Indian Constitution from Apr. 26, 1975 and continued functioning like any other High Court in the country having superintendence over all the subordinate courts within the state of Sikkim.

V. CONCLUSION

All societies in this world have started with some sort of law and legal system at their beginning and therefore the study of Legal history of a society must start from the very beginning of the society. However, the lack of availability of historical records of Sikkim's legal history has made it difficult to comprehensively present more material on the period prior to the arrival of Britishers in Sikkim. As a result, it becomes even more difficult to find whether the Britishers took every possible step to replace the existing legal traditions and institutions of the erstwhile Buddhist kingdom.

In conclusion, it can be stated that ever since the establishment of the Namgyal Dynasty in 1642, the Sikkim's traditional legal system and the administration of justice have been continuously evolving as per the changing needs of the Sikkimese society from a rudimentary judicial system to a much-enhanced modern, robust and transparent judicial system at present. It is no doubt, that this research paper has its own limitations particularly due to scarce primary sources, nonetheless, it has to a certain extent laid down the overall picture of transition of Sikkim's judicial system until Sikkim became an Indian state in 1975 and certainly, further in-depth research should be undertaken by scholars to investigate more on this subject to have a comprehensive understanding of the legal history of Sikkim.

[99] *Supra* note 97, p. 215-217.
[100] *Ibid*.

FORM IV

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