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ASSESSING POST-FACTO CLEARANCES UNDER ENVIRONMENTAL LAW IN INDIA

Sairam Bhat & Lianne D'Souza[*]

Abstract

A corollary of the State's duty to protect and preserve the environment is its power to regulate activities that pose environmental risks. Such regulatory powers are evident through the processes of granting clearances for activities that alter the environment or otherwise have disastrous ecological impacts. These clearances, be it in the form of forest clearance, mining approvals, CRZ clearance or general environmental clearances, are envisaged as *ex-ante* mechanisms which ensure proposed projects meet the legally prescribed environmental standards. However, past and recent trends indicate a system of granting *ex post-facto* approvals, where activities undertaken without requisite approvals are permitted to be brought into compliance through subsequent clearances. Such a *modus operandi* has also time and again been challenged before the courts, questioning its legality and environmental tenability.

In this context, the article explores the role of the Courts, including the National Green Tribunal in placing checks on executive discretion and opportunistic industrial behaviour vis-à-vis post-facto clearances under environmental laws in India. Specifically, the aim of this study is to identify the judicial dictum on retrospective clearances under environmental laws and the approach of the judiciary in deciding the outcome of cases involving a question of *ex post-facto* approvals.

I. Introduction

THE PUBLIC trust doctrine postulates that the state is a trustee of natural resources, enjoined with the duty to protect it from exploitation.[1] In India, the government exercises this duty by placing checks on unrestrained access to and exploitation of natural resources through the grant of approvals, permits or clearances. For instance, a project proponent who seeks to undertake a development project having implications for the environment must obtain environmental clearances in the manner provided under the Environment Impact Assessment ("EIA") Notification,

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1 *M. C. Mehta* v. *Kamalnath*,(1997) 1 SCC 388.

2006.[2] Similarly, under the Coastal Regulation Zone ("CRZ") Notification, 2011[3] prior approval for predicated projects in the CRZ is a pre-requisite. With respect to forest resources, the Forest (Conservation) Act, 1980 and the Wildlife (Protection) Act, 1972 contemplate the grant of prior approval for certain activities. While the former is broad requiring prior approval for diversion of forest cover for non-forest purposes,[4] the latter mandates prior approval for enlisted construction activities.[5] Pertinently, such clearances are regarded as *ex-ante* permits, which ought to be compulsory obtained before the commencement of a project or activity. Without such clearances or approvals, there is no question of implementing the proposed projects as the same are not deemed to be environmentally sustainable. This being said, in reality there are several instances where projects are undertaken in the absence of such approvals and are later sought to be regularised under the applicable laws.

Typically, any project or activity undertaken in violation of the law would warrant legal sanctions or punitive measure, liability for environmental damage and closure. But in a majority of such cases, the commencement of the project would have entailed huge investment costs, the closure of which would not constitute a viable course of action, taking into account the economic benefits of the project. Thus, to provide a window for reparation, recent trends depict that projects which have already commenced construction or operation without obtaining prior approval may be legitimised by securing clearance after the fact *i.e.* through *post-facto* approval.[6]

The issue of *post-facto* clearances has been a bone of contention for a long time. Particularly in the context of a legislative mandate, the concept of retrospective clearances has not found explicit mention in any environmental statute. Neither the Forest Conservation Act, 1980 ("FCA") nor the Environment Protection Act, 1986 ("EPA") make any express provision for the same. However, as these statutes bestow the executive with the power to make rules and take measures to fulfil the legislative objectives, the Government has rolled out subordinate laws that allow regularisation of activities commenced without prior approval. Over the past two

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2 Environment Impact Assessment Notification, 2006, Notification vide S.O 1533(E) dated 14.09.2006, Ministry of Environment, Forest and Climate Change.

3 Coastal Regulation Zone Notification, 2011, Notification vide S.O. 19(E) dated 06.01.2011, Ministry of Environment, Forest and Climate Change.

4 Forest (Conservation) Act, 1980, (Act 69 of 1980), s.2.

5 Wildlife (Protection) Act, 1972, (Act 53 of 1972), s.33(a).

6 Clause 11, Notification Dated 14/03/2017, Compendium of Gazette Notifications by the Ministry of Environment, Forest and Climate Change, *available a*t: http://www.harenvironment.gov.in/sites/default/files/14.03.2017.pdf (last visited on January 16, 2022).

decades, the government has issued a series of notifications and office memorandums, expressly spelling out procedures for deviant industries to seek clearances, thereby providing a window for rectification. For example, in 2010, the Ministry of Environment, Forest and Climate Change ('MoEFCC') issued an Office Memorandum for 'consideration of violations' of the EPA and its allied laws.[7] The office memorandum provided a 90-day window period for projects involving 'substantial physical progress' and 'significant investments' to apply *de novo* for environmental clearances.[8] This was followed by similar attempts in 2012[9], 2013[10] and 2017[11]. The latest attempt that created a window for regularisation under the environmental clearance regime was rolled out in the form of the Draft EIA Notification, 2020[12]. Through the draft notification, the Government sought to put in place an amnesty scheme for violations, on a more permanent basis.[13] While this move has drawn flak from various stakeholders, this has not prevented the government from resorting to similar measures. The most recent office memorandum permitting regularisation of violations under the CRZ Notification is a glaring example.[14]

From the above pattern it is clear that *ex-post facto* clearances have been recurrently adopted as a matter of administrative decision. In its stride for giving impetus to economic development and ensure compliance with the law, the government has been compelled to do so. This being stated, it is pertinent to check whether such clearances withstand the rigours of environmental law. In this regard, the observations of the judiciary hold significance. As the judiciary wields the power to review executive action on the touchstone of constitutional and legal norms, the judicial dictum on *post-facto* clearances will throw light on its position within the environmental legal framework. The judicial dictate in this regard has been explored in Section II of the article, through an examination of various expositions by the

7 Office Memorandum vide No. J-11013/41/2006-IA.II(1) dated 16.11.2010, Ministry of Environment and Forests, Government of India.

8 *Id.*. cl. 2, 4.

9 Office Memorandum vide No. J-11013/41/2006-IA.II(1) dated 12.12.2012, Ministry of Environment and Forests, Government of India.

10 Office Memorandum vide No. J-11013/41/2006-IA.II(1) dated 27.06.2013, Ministry of Environment and Forests and Climate Change, Government of India.

11 Notification vide S.O. 804(E) dated 14.03.2017, Ministry of Environment, Forest and Climate Change, Government of India.

12 Draft Environment Impact Assessment Notification, 2020, dated 12.03.2020, Ministry of Environment, Forest and Climate Change, *available at*: https://moef.gov.in/wp-content/uploads/2020/03/Draft_EIA2020.pdf (last visited on January 16, 2022).

13 *Id.*, cl. 22.

14 Office Memorandum vide F. No. 19-27/2015- IA.III dated 19.02.2021, Ministry of Environment and Forests and Climate Change, Government of India.

courts and the National Green Tribunal ('NGT'). Section III of the article further delves into these expositions to outlay the approach of the judiciary in deciding the outcomes of cases and the principles adopted by the courts to aid in its deliberation.

II. Judicial Expositions on the Legality of Post-facto Clearances

As a question of law, the process of granting retrospective clearances in matters concerning the environment has evoked mixed expressions from the judiciary. On one hand, the constitutional courts and the NGT have deprecated the notion of *ex post-facto* clearances holding it to be unsustainable in law.[15] While on the other hand the judiciary has considered competing non-environmental imperatives to occasionally allow the grant of *post-facto* approvals. Ordinarily, retrospective clearances in environmental law have been denounced by the courts on various legal counts. The following sub-sections highlight instances where this has been done so based on the rules of interpretation, the spirit of parent legislations and general principles of environmental law.

Interpretational Fallacies

From an interpretational perspective, the judicial dictum considers *post-facto* clearances to be a misnomer. A perusal of the law indicates that the requirement of seeking a clear chit from the authorities concerned is contemplated as 'prior' approval. In other words, the law envisages an *ex-ante* mechanism to deciding the eligibility of industrial or infrastructural projects, and any approach to the contrary cannot be countenanced. In many a case, the courts have maintained this position by adopting a literal interpretation of the law, stipulating that when the law requires a thing to be in a given manner, it must be done in the same manner or not done at all.[16] For example, in the case of *Rohit Choudhury* v. *Union of India*,[17] the NGT rejected the argument that the Forest (Conservation) Act, 1980 ("FCA") envisaged *post-facto* approvals. Relying on precedents of the Supreme Court,[18] the Tribunal noted that the word 'approval' stands in contradistinction to the words 'prior approval' and when a legislation has used the latter, the question of *ex post-facto* clearance does not arise. This sentiment has also been echoed by the Supreme Court, where in the case of *Common Cause* v. *Union of India,* the court simply and vociferously iterated that "there is no concept of a retrospective environmental

15 *Goel Ganga Developers India Pvt. Ltd.* v. *Union of India,* (2018) 18 SCC 257, para 47.

16 *VedireVenkata Reddy* v. *Union of India*, AIR 2005 AP 155, para 45.

17 2016 (6) FLT 391.

18 *Ashok Kumar Das* v. *University of Burdwan,* (2010) 3 SCC 616; *High Court of Judicature for Rajasthan* v. *P.P. Singh,* 2003 (4) SCC 239; *U.P. Avas Evam Vikas Parishad* v. *Friends Co-operative Housing Society Limited,* 1995 (Supp) 3 SCC 456.

clearance".[19] The plain meaning apart, what the court signified through this observation is that in principle, no person can benefit from a retrospective environmental clearance. The validity of every clearance – regardless of its form– will take effect from the date it is granted and every violation will be met with some punitive measures.

Non-alignment with objectives of the parent legislations

It is a settled principle of law that a subordinate legislation made in pursuance of a statute cannot go beyond the powers conferred by the parent legislation itself. As stated in the earlier section, environmental statutes in India do not make an express mention on the permissibility of retrospective clearances. Such clearances are primarily brought into force through executive orders or notifications. As such, in scrutinising the legality of such approvals, the courts have examined whether such delegated legislations are well within the confines of the parent Acts. For example, in *S. P. Muthuraman* v. *Union of India*,[20] the NGT regarded the MOEFC Office Memoranda dated 12 December 2012 and 27 June 2013 to be *ultra vires* the EPA, 1986 and the EIA Notification, 2006. The impugned memoranda sought to give a clean chit to proposals which stood in violation of the EIA Notification, EPA and the CRZ Notification. The tribunal noted that the Ministry lacked the inherent jurisdiction to pass the memoranda, that violated the sanctity of the parent legislation. While this observation is pertinent to the discussion, it is worthwhile mentioning that the dictum of the NGT does not hold water as the NGT does not have the jurisdiction to decide questions relating to the *vires* of a statute or a subordinate legislation.[21] In the case of *Vanashakti* v. *Union of India*,[22] the Bombay High Court decided on the validity of the Office Memorandum issued by the MoEFCC which *inter alia* laid down a procedure for dealing with violations under the CRZ Notification 2011. The impugned memorandum provided that projects that are otherwise permissible under the provisions of CRZ Notification, but have commenced construction without prior clearance, would be considered for prospective clearance.[23] Expressing disapproval for the manner in which illegalities are being regularised, the Court noted that the contents of the memorandum have the effect of diluting the rigours of the provisions of the EPA. Thus, the Ministry was restrained from granting any clearances or permission on the basis of the

19 (2017) 9 SCC 499, para 87.

20 O.A. 37/2015 (Decided on 07.07.2015 by NGT).

21 *Central India Ayush Drugs Manufacturers Association* v. *State of Maharashtra*, AIR 2016 Bom 261.

22 (04.10.2019 - BOMHC),MANU/MH/2758/2019.

23 Coastal Regulation Zone Notification, 2019, Notification No. G.S.R. 37(E), dated 01.02.2021, cl. 7.

impugned office memorandum. On a parallel note, the impugned office memorandum was also stayed by the Madras High Court stating that it would encourage 'wanton degradation of the environment' and would be 'completely opposed to the ethos of the EPA'.[24]

On similar lines and on a subsequent occasion, the Madras High Court had also expressed its disapproval of an amnesty scheme carved out through an MOEFCC notification issued on 15 July 2021.[25] Through the impugned memorandum, the Ministry permitted proponents who commenced projects without seeking prior clearance to seek clearance subject to a well-chalked out damage assessment, remedial plan and community augmentation plan provided by the proponent.[26] The Court stayed the notification holding that the notification was not only violative of the law and constitutional principles under articles 21 and 48A but was contrary to precedents laid down by the constitutional courts. Furthermore, the Court noted that since there was no limitation period or cut-off date for rectification of violations, the government was wrongly signalling erring proponents that illegalities were not viewed seriously.

Inconsistencies with fundamental principles

On the jurisprudential front as well, the courts and the NGT have recurringly reiterated the inconsonance of retrospective clearances with principles of environmental law. In the case of *Common Cause* v. *Union of India*,[27] the Supreme Court, while signifying its disapproval expressed that the resort to *post-facto* clearances is 'alien to environmental jurisprudence'. Though the process is a procedural formality mandated by law, the Apex Court has unequivocally stated that the grant of environmental clearance is not simply a 'mechanical exercise' akin to a checklist of sorts. It is a statutory prescription that ensures protection and preservation of the environment based on due diligence and reasonable care,[28] and this cannot be reduced to an *ad hoc* mechanism where the project proponent seeks to remedy its abject failure and then seek requisite clearance at a later stage.[29] If for compelling reasons *post-facto* clearances have to be allowed, it is not merely to cure a defect in procedural lapses, but to bring erring industries in line and keep them under the watchful eye of the regulatory authorities. In light of this, the Apex Court has

24 *K. Bharathi* v. *Union of India,* W.P 18829/2021 (Order dated 08.09.2021 – Mad. HC), para 4.

25 *Fatima* v. *Union of India,* WP(MD) No.11757 of 2021 and WMP(MD) No. 9241 of 2021.

26 Office Memorandum vide F. No. 22-21/2020-IA.III vide dated 07.07.2021, Ministry of Environment, Forest and Climate Change, Government of India, cl. 11.

27 (2017) 9 SCC 499, para 125.

28 *Id.*, paras 108, 125.

29 *Bengaluru Development Authority* v. *Sudhakar Hegde*, (2020) 15 SCC 63.

opined that *post-facto* explanations are inadequate to deal with a failure of due process in the field of environmental governance.[30]

In its most recent observation, the Supreme Court has expounded the inconsistencies of retrospective clearances with the fundamental principles of environmental law.[31] The court has specifically noted that:[32]

> The concept of an ex post-facto EC is contrary to the fundamental principles of environmental jurisprudence and is an anathema to the precautionary principle. The reason why a retrospective EC or an ex post-facto clearance is alien to environmental jurisprudence is that before the issuance of an EC, the statutory notification warrants a careful application of mind, besides a study into the likely consequences of a proposed activity on the environment.

A subversion of these crucial pre-clearance processes hits at the very core of guiding principles such as that of sustainable development and the precautionary principle.

While the judicial dictum suggests that retrospective clearance, as a matter of rule, are not acceptable, the Supreme Court has clarified that clearances cannot be rejected on pedantic rigidity. In devising a scheme of weighing and balancing of interests, the judiciary has also ingeniously adopted the doctrine of proportionality. First iterated by the Supreme Court in the case of *Lafarge Umiam Mining Pvt. Ltd* v. *Union of India*.[33] This principle postulates taking decisions by balancing competing interests. In expounding this principle, the Court has opined that:

> It cannot be gainsaid that utilisation of the environment and its natural resources has to be in a way that is consistent with principles of sustainable development and intergenerational equity, but balancing of these equities may entail policy choices. In the circumstances, barring exceptions, decisions relating to utilisation of natural resources have to be tested on the anvil of the well-recognised principles of judicial review.

Thus, there cannot be a hard and fast rule that clearances sought to rectify illegalities have to be rejected *in limine*.

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30 *Id*., para 71.

31 *Alembic Pharmaceuticals Ltd.* v. *Rohit Prajapati*, (2020) 4 MLJ 277.

32 *Id*., para 23.

33 (2011) 7 SCC 338, para 119.

III. Determining Outcomes of Cases

In principle, the courts have frowned upon the idea of retrospective clearances. However, when it comes to practically addressing cases warranting *post-facto* approvals, the courts are faced with competing non-environmental imperatives that vary across the facts and circumstances of cases. That apart, the courts must also delve into underlying factors such as the scale and scope of the project, nature of the project, extent of environmental damage, the possibility of reparation, the social benefits arising from the project, the*malafide* intent of the project proponent to transgress the law, the duration of violation and much more. Therefore, there has been no straight-jacket formula for determining the outcome of cases.

Courts have grappled with the legality of retrospective environmental approvals in cases, often tracing solutions to the classic dilemma of the environment – development trade-off. When projects have commenced without the requisite procedures of public consultations or environmental impact assessment, the court is left with the question of whether such projects are to be shut down or are they to continue with certain punitive measures. It is pertinent to note that though the impugned violations must be met with action for the disregard for the law as well as the environmental damaged caused, the courts cannot turn a blind eye to the possible economic loss arising from closure of the projects. While the protection of environment and prevention of environmental pollution and degradation are non-negotiable, the court cannot altogether be oblivious to the economy of the nation and the need to protect the livelihood of hundreds of employees employed in projects, which could otherwise comply with or can be made to comply with norms. In such cases the most appropriate course of action adopted by the court is to weigh the possible benefits of such project against the cost of environmental damage caused.

The following sub-sections discuss the three specific outcomes of cases *i.e.* (a) where *post-facto* clearance was permitted, (b) where post-facto clearance was permitted subject to punitive costs and (c) where post-facto clearances was denied and the circumstances underlying these outcomes.

Post-facto Clearance was Permitted

In many a case where the Courts or the NGT have given a green signal for the grant of *post-facto* approvals, the environmental concerns are outweighed by other larger interests which may be economic or social. These cases are evident where the proposed projects generate benefits to the public at large or where the cost of investment is significantly high to retract the clearance. Examples of these situations are discussed below:

Matters involving larger public interest

Typically, in matters where the project in question serves a larger public interest, the courts will not obstruct the benefits arising therefrom by ordering for closure or demolition. Especially in circumstances where a public service is at stake, the interest of the public *vis-à-vis* the project will generally prevail. For instance, in the case of *S.P. Muthuraman* v. *Union of India,*[34] the NGT deliberated on the *post-facto* clearance issued by the MoEFCC to the Public Works Department, Tamil Nadu for the formation of a flood carrier canal in certain drought prone taluks in the state. The tribunal noted that the project being one that benefited irrigation by streamlining the flow of surplus flood water, the stakes for the project being implemented were high.[35] Thus, the NGT found no extraneous circumstances to set aside the clearance, but since the proposed project included encroachment into some bio diversity areas as well, it directed the respondent department to establish bio diversity park in the project area to conserve and protect the bio diversity.[36] Similarly, in the case of *Md. Hayath Udin* v. *Union of India*,[37] the NGT's jurisdiction was invoked to decide the validity of the *post-facto* clearance issued for the construction of a multi-purpose river-valley project in the Godavari command area. The impugned clearance was on the grounds that it was granted after commencement of the construction and that such clearance was based on a deliberate suppression of material facts by the project proponent. The NGT observed that the clearance was manifestly fraught with legal infirmities, being sought ex *post-facto*. However, as the project sought to provide drinking water and irrigation facilities to improve agricultural productivity in an approximate area of 7 lakh hectares, the public had more to gain from the project. However, the NGT directed the MoEFCC to constitute an expert committee to formulate a remedial action plan for undertaking restoration, relief and rehabilitation measures for ecological damage caused.[38]

Therefore, when the community at large stands to benefit from the project or countervailing human right is in question, the Courts are more likely to approach impugned projects more favourably, albeit at the cost of certain sanctions.

Fait accompli situations

In many situations the courts may be faced with a *fait accompli* situation, where there is no option of bringing the industry or infrastructural project to a halt. Owing to the irreversibility of ecological damage, and in light of the investments incurred,

34 *Supra* note 20 at 5.

35 *Id*., para 13.

36 *Id*., para 17.

37 Appeal No. 20/2018, (20.10.2020 - NGT), MANU/GT/0281/2020.

38 *Id*., para 40.

denying the clearance may prove counter-productive. In such situations, permits are issued subject to certain conditions. For instance, in *Lafarge Umiam Mining Private Limited* v. *Union of India,*[39] the Supreme Court deliberated on whether the appellant was eligible to avail an *ex post-facto* site and forest clearance for limestone mining in East Khasi Hills of Meghalaya. The Court noted that since 21.44 hectares of the leased mine was already broken up, the Centrally Empowered Committee ('CEC') was met with a *fait-accompli* situation and had no option but to grant requisite clearances.[40] The Court saw no reason to interfere with this decision, thus upholding the validity of the clearance subject to a compensatory afforestation reclamation plan.

Another situation where a *fait accompli* condition compels the deciding authority to grant approvals is when the livelihood of a community is at stake. A case in point is that of *Him Privesh Environment Protection Society* v. *State of Himachal Pradesh*.[41] The case pertains to the construction of a cement plant in violation of the EIA Notification. The project proponents undertook the impugned construction by fraudulently under-representing the cost of the project, thereby circumventing mandatory EIA procedures prescribed by the law. However, the High Court of Himachal Pradesh refrained from quashing the EC granted considering the completion of the cement plant and livelihood of all the stakeholders involved. It specifically noted the negative impact of closing down the plant, on the livelihoods of truck drivers, plant workmen, owners of ancillary units as well as the local tea stalls.[42] However, in light of the deliberate falsehood, the Court imposed exemplary damages of 100 crores on the proponent, which amount was to be used only for improving the ecology and environment of the area and to ameliorate the sufferings of the people of that area by making hospitals, etc. The State was also directed to use Rs.10 crores of the damages so awarded to compensate the villagers for the mis-utilization of their village common land which was wrongly transferred from the common pool to the allottable pool.

The Supreme Court was met with a similar fate in *Goel Ganga Developers India Pvt. Ltd* v. *Union of India*[43]. This case pertained to an illegal construction of a building complex which housed 552 flats, 50 shops and 34 offices.Given that the owners of the flats and shops housed within the impugned construction building invested their life's earnings, the Court had no option but to permit the regularisation of the

39 *Supra* note 33 at 7.

40 *Id*., para 32.

41 CWP 586 of 2010, (Decided on 04.05.2012 - HPHC) MANU/HP/0687/2012.

42 *Id*., para 102.

43 *Goel Ganga Developers India Pvt. Ltd.* v. *Union of India*, (2018) 18 SCC 257.

violation. To ensure restitution of environmental damage caused, the court had imposed damages of 100 crores of 10% of the project cost, which ever was higher as cost of restoration. Taking into consideration the deliberate and manifest suppression of material facts by the project proponent in subverting the law, the Court also imposed a fine of 5 crores for contravening mandatory provisions of the law. Similarly, in the case of *Keystone Developers* v. *Anil Tharthare,*[44] the validity of an amendment to the EC granted for a residential construction project was challenged before the Supreme Court. The project proponent (appellant) sought to expand the ambit of the project, without adhering to the legally prescribed procedure for expansion of projects under the EIA Notification, 2006. Instead, it claimed that the expansion undertaken was merely a marginal increase and to that effect, an amendment to the project was sought from the SEIAA – which was granted. Rejecting the appellant's argument that the impugned expansion did not attract the procedure for prior approval, the Supreme Court held that the appellant clearly subverted the due process of the law. However, as the construction was complete, the Court found no merit in ordering for the demolition of the residential complex. The matter was dismissed with costs of one crore and directions for devising a remedial plan in response to the environmental damage sustained.[45]

Thus, the hands of the court are most often tied with the ultimatum that such projects be permitted to continue subject to certain conditions.

Post Facto Clearance was Permitted Subject to Punitive Costs

To prevent the grant of ex-*post-facto* clearances from becoming a habitual practice, Courts have resorted to impose punitive costs, which also include compensation for the environmental damage done. As the circumstances leading to the need for retrospective clearances are in fact some illegality or violation, courts have treated such violations with penalties. Such penalties are imposed to ensure that violators are not unduly favoured from any amnesty scheme and more importantly, to create a deterrent effect on future violations. One of the few legal recourses available is penalty under section 15 of the Environment Protection Act. While assessing these damages, Court takes into consideration the fact that damages should not bring the erring company to a halt but at same time the company should feel pinch of damages and that these damages act as a deterrent in future to each and every person.[46] The Supreme Court has noted that:[47]

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44 (2020) 2 SCC 666.

45 *Id*., para 18.

46 *Supra* note 41 at 11.

47 V.*Sankara Subramanian* v. *The State of Tamil Nadu* (21.01.2020 - NGT), MANU/GT/0143/2020.

> Merely because there is a possibility of granting regularization of project by the authorities, it will not absolve the project proponents, who have violated, from payment of environmental compensation as whatever damage caused to the environment on account of proceeding with the project without conducting necessary environmental impact assessment by the authority will have to be compensated.

Although the courts have not often resorted to drastic orders such as closure of the industry or subjecting the project proponents to imprisonment, it has viewed certain gross violations with disapprobation. In some cases, the Courts have clamped down on industrialists and given stern warnings by imposing high costs. In the case of *Forward Foundation* v. *State of Karnataka,* the NGT imposed a cost equating to 5% of the project cost, on two companies for raising constructions in a special economic zone unauthorisedly.[48] The cost amounting to a whopping 140 crores was merely the cost payable at first instance for their default, while the final amount for restoration of ecology would be determined by the Committee set up by the NGT. The order by the tribunal was further upheld by the Supreme Court, with a minor reduction in the cost imposed.[49] Similarly, in the case of *Common Cause* v. *Union of India*, the Court rejected the recommendation of the CEC which suggested that the defaulting industry should pay a fine amount to 70% of the price of illegally extracted ore. The Court noted that defaulting parties should not be allowed to benefit from their illegalities and fill their coffers at the expense of the state. Therefore, the Court ordered the erring industry to pay a sum equivalent to 100% of the price of extracted mineral.[50]

In many situations, the Courts have invoked the 'polluter pays' principle to impose penalties for erring industries. As laid down in judicial precedents, damages might be recovered under the provisions of the EPA to implement measures that were necessary or expedient for protecting and promoting the environment.[51] Therefore, the deviant industry may be penalised by an imposition of heavy penalty under the principle to defray the cost of restoration of environment. In the case of *Electrosteel Ltd.* v. *Union of India*,[52] the Supreme Court noted that clearances, which seek to remove technical irregularities, should not be declined with pedantic rigidity. However, the grant of revised EC to the industrial establishment cannot stand in

48 Original Application No. 222/2014, (07.05.2015 - NGT): MANU/GT/0089/2015, para 85.

49 *Mantri Techzone Pvt. Ltd* v. *Forward Foundation*, (2019) 4 SCALE 218, para 21.

50 *Supra* note 27 at 7, para 188.

51 *Indian Council for Enviro-Legal Action* v. *Union of India*, (1996) 3 SCC 212.

52 Civil Appeal Nos. 7576-7577 of 2021 (09.12.2021 - SC), MANU/SC/1261/2021.

the way of action against that establishment for contraventions, including the imposition of penalty, on the principle 'polluter pays'.[53] Therefore, it directed that an appropriate authority was empowered to take action for penalisation. Similarly, in the case of *Farook Shaik* v. *State of Gujarat*, the Gujarat High Court permitted the Central Government to consider a proposal submitted for approval under the FCA, 1980 although construction had commenced.[54] In the event the proponent would have made a case for clearance, the Central Government could impose penalty to the tune of 2.5 times the market value of the land in question and taking over possession of 110 hectares of land possessed by the proponent for the purpose of afforestation. And in the event, they did not receive a green signal, demolition was to be ordered.[55]

Post Facto Clearance was Rejected

Gathering from the pattern of condoning retrospective clearances, the judicial authorities seldom direct closure of a project or demolition thereof. That being stated, there are occasions where the courts have clamped down on gross violations, involving blatant disregard for the law. Furthermore, in situations where the trade-off between environmental degradation and economic development is not viable from an environmental point of view, there is no question of condoning illegalities. Following are the situations where Courts have taken stern action by rejecting the grant of *post-facto* clearances.

Damage beyond reparation

Although as a matter of common practice, a scheme of balancing competing interests is employed, in a few cases the Courts have been compelled to let economic imperatives take the back seat. Specifically in cases where the environmental risk cannot be remedied through adequate compensatory measures, the courts have found no merit in compromising the cause of ecological protection for economic development. For instance, in the case of *A. Chowgule & Company Ltd.* v. *Union of India*,[56] the Apex Court declared the mining lease issued to the Appellant null and void, despite *post-facto* approval having been accorded to it under the FCA. The Court opined that compensatory afforestation was too 'archaic and simplistic a solution' to compensate the loss of 3000 odd local trees that would have been destroyed. It categorically observed that in the guise of compensatory replantation,

53 *Id.*, para 95.

54 W.P.(PIL) 01/2013, (Decided on 03.05.3013 – Guj. HC).

55 *Id.*, para 45.

56 (2008) 12 SCC 646.

native wood-stock would be replaced by alien and non-indigenous varieties, which would not serve the purpose of the FCA.[57]

Another case in point is that of *Association for Environmental Protection* v. *State of Kerala.* In this case,the illegal construction of a hotel on the banks of the river Periyar, in the guise of beautifying the AluvaManalpuram park, was ordered to be demolished by the Supreme Court.[58] The impugned construction was predicted to adversely change the course of the river Periyar, consequently endangering the local inhabitants. Taking note of the disastrous effects, the Court saw no recourse of averting the possible damage and thus ordered for demolition of the project.

Flagrant violation of law

Other occasions where the grant of post-facto clearance has been discountenanced are in the face of blatant disregard for the law. Post-facto clearances have been contemplated with the objective of allowing projects that offer some economic or social benefits a chance of making reparations for violations – done intentionally or otherwise. However, where the proponent demonstrates disdain for legal procedures, the Courts have not shied away from taking stern action. For example, in the case of *Muneer Enterprises* v. *Ramgad Minerals & Mining Ltd.,*[59] the Supreme Court rejected a plea for renewal of a mining lease despite the grant of in principal approval under the FCA. The Court noted that non-compliance of the conditions mandate was not pardonable.[60] While the respondent placed reliance on the *T. N. Godavarman* v. *Union of India*,[61] case, the court noted that the case referred contemplated approvals as a one-time measure and statutory violators could not repeatedly benefit from this exception. Similarly, in *Meenava Thanthai K.R. Selvaraj Kumar Meenava Nala Sangam* v. *Union of India,*[62] the NGT held that the *post-facto* CRZ clearance[63] issued was unsustainable in light of the unauthorised construction undertaken within prohibited limits of the coastal regulation zone. Denouncing the flagrant violation by the erring company and the error in judgement by the regulatory authorities concerned, the Tribunal not only ordered for the demolition of the illegally constructed structures but also imposed a fine of Rs. twenty-five

57 *Id.*, para 24.

58 *Association for Environmental Protection* v. *State of Kerala*, (2013) 7 SCC 226.

59 (2015) 5 SCC 366.

60 *Id.*, para 101. (331 acres were directed to be handed over to forest authorities).

61 (2011) 15 SCC 358. The Supreme Court carved an exception to grant of retrospective forest clearances under the Forest (Conservation) Act, 1980.

62 Appeal No. 04/2019(SZ), (Decided 20.09.2020 – NGT) 2020 SCC OnLine NGT 880.

63 F. No. 11-18/2016-IA-III dated 08.03.2019, Ministry of Environment, Forest and Climate Change, Government of India.

lakhs on the former.[64] Interestingly, in this case, while recognising the validity of the office order permitting retrospective, the NGT noted that prima facie illegalities of substantive provisions cannot benefit from an amnesty scheme that allows otherwise permissible activities.

Another case is point is that of *Tanaji B Gambhir* v. *Chief Secretary, Government of Maharashtra.*[65] The factual matrix of this case is such that the respondent company had secured an environmental clearance for a construction project in 2008. However, the project was expanded beyond the scope of the EC and post-facto approval was sought in 2020. The State Environment Impact Assessment Authority gave a green signal, which was challenged before the NGT. The Tribunal held that since the construction was prima facie an illegality, the project ought to be demolished or environmental damage can be restored, the project can be permitted on payment of assessed compensation on polluter pays principle for restoration. Thus, it can be observed that in circumstances where the intention to transgress the law is clearly *malafide,* the erring proponent will not benefit to any extent under an amnesty scheme.

IV. Conclusion

The notion of granting *post-facto* approval in matters having environmental ramificationshas definitely posed many concerns. For one, it paves way for irreversible environmental damage for which no amount of reparation can compensate . Secondly, it vitiates the very tenets of the precautionary principle which postulates sound decision making taking into account possible environmental harm. And thirdly, it serves as bad precedent for project proponents implying a 'pollute and pay' regime where project proponents who have deliberately flouted environmental norms can make good their violations by paying fines. From an overview of the precedents discussed above, it is apparent that regularising projects through what can be considered as an escape hatch spells disaster in the realm of environmental governance. However, from an examination of the interventions by the constitutional courts and the NGT, one can say that there is a silver lining.

The intervention of the judiciary is laudable to the extent that it has plugged loopholes that were created by the otherwise poor regulatory design. Take for instance the role of the NGT in awarding damages for restitution and compensation. By the power vested under section 15 of the NGT Act, 2010, the Tribunal may have regard for damage caused through violations and order for restitution of the environment. This power is broad enough to be exercised even when the legislations

64 *Id.*, para 73.

65 Appeal No. 34/2020(WZ), (Decided 14.05.2021 – NGT).

requiring prior clearances do not have provisions for restitution or restoration. In exercising such power, the NGT may not only hold erring proponents accountable, but also impose costs which have a deterrent effect. Further, the role of the courts has been evident in arriving at sound decisions by weighing comparative hardships. Particularly where countervailing human rights are involved, the judiciary may step in as a vindicator of the citizens' environmental rights by upholding principles of environmental justice and allaying their fears of unabated environmental degradation. For instance, in the case of *Orissa Mining Corporation Ltd.* v. *Ministry of Environment and Forests*, the Court went beyond the environmental imperatives. The Court recognised the traditional and community rights of forests dwellers – including religious and usufructuary rights – as compelling factors to reject clearance for the mining project.[66] Such instances demonstrate that the interventions of the court is significant in addressing social issues associated with *post-facto* environmental clearances. Thus, the powers of the judicial bodies are crucial in not only remedying the wrongs committed but in ensuring ecological justice at a much broader level.

From a governance point of view as well, the judiciary has played a significant role in placing increasing pressure for accountability on the part of the executive. Executive decisions suggest a trend of erroneously condoning violations through the escape hatch of retrospective regularisation. Since the parent legislations confer the executive with the power to make subordinate laws, this power has appeared to be recurrently invoked in rolling out laws that permit retrospective clearances. The judiciary has however placed checks on such condonations by testing these decisions on the anvils of constitutional norms, legal mandates and fundamental principles of environmental jurisprudence. Through judicial review of administrative action, the constitutional courts have the power to ensure that this mechanism does not become a norm and non-compliance is not encouraged in any manner. Furthermore, in meting out ecological justice in its true sense, the Courts have gone beyond the mere requirement of procedural regularities. The formulation of the doctrine of proportionality as a mechanism to balance competing interests and the application of the polluter pays principle are striking testaments to the Courts' ingenuity. Another positive takeaway from judicial interventions is the assurance of accountability of the government by placing checks on its arbitrary and callous functioning. The power of the executive to exercise administrative discretion in granting clearances under environmental laws is a natural concomitant to its constitutionally mandated duty.[67] The Supreme Court has noted that when the regulatory authorities concerned abdicate their duty of taking prompt action

66 *Orissa Mining Corporation Ltd.* v. *Ministry of Environment and Forests*, (2013) 6 SCC 476.

67 The Constitution of India, arts. 48A, 51A(g).

of averting environmental damage – through connivance or negligence – the principles of accountability for restoration or compensation have to be applied.[68] Where the authorities have facilitated erring industries, the judiciary has played a pivotal role in clamping down on such dereliction of duty. In the case of *Goel Ganga Developers India Pvt. Ltd. v Union of India,*[69] the Supreme Court took note of the connivance of the Municipal Corporation in suppressing facts that were relevant to granting the environmental clearance. It upheld the NGT's order that directed the Corporation to take necessary action against the erring officials but also imposed a fine on the Corporation for conniving with the deviant proponent. Furthermore, the Court directed the Chief Secretary of the State to look into the conduct of the Principal Secretary (Environment) for the State for acting in a conceited and opaque manner.[70] Thus, to ensure that the executive is not using this an escapist route by cajoling industrialists with a green card, the courts have also denounced a cavalier approach to environmental governance.

68 *M.C. Mehta* v. *Union of India,* (2004) 12 SCC 118, para 47.

69 *Supra* note 43 at 11.

70 *Id*., at 59.

CLIMATE-INDUCED DISPLACEMENT AND INTERNATIONAL (NON) CO-OPERATION: A CASE FOR DUTY TO COOPERATE IN INTERNATIONAL ENVIRONMENTAL LAW

Anil G. Variath[*]

Abstract

Climate change is one of the most potent threats to humanity in this century. There is a constant sense of frustration amidst some quarters of the world community regarding the perceived inadequacy or speed of international action on climate change. The impact of climate change has a horizontal impact on the life of humanity and requires cooperation amongst political, economic and social actors to minimize its impact. The changing character of impacts of climate change also raises new problems and challenges for law, politics and economics. One such crisis that requires an interdisciplinary approach is the crisis of displacements that are primarily caused by environmental problems majorly related to climate change. While some find protection within their own country, some are forced to move beyond their country's borders. There is no doubt that these movements will increase in the coming years. Considering the internationality of the problem, the international actor's responses to these challenges are inadequate. Addressing the impact of climate change on displacement and subsequent refugee problems requires intervention from theories like neo-liberal environmental justice in global policymaking. The most important principle to address the issue in this context is the duty to cooperate. This paper focuses on how global environmental consciousness can address the invisible crisis of climate-induced displacement.

I. Introduction

ISSUES OF mass displacement find their mention in the history of world order during the period post World War II. According to UN reports "wars, violence

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or persecution forced 11 million people to flee their homes throughout the year,[1] mostly from low- or middle-income countries, creating a total displaced global population of almost 80 million."[2] The unprecedented current "refugee crisis", with millions of uprooted people, who are forcibly displaced, demands a new protection orientation and framework for refugees and other forced migrants.[3] However, displacement is not an issue of the past. Merely its nature and character have changed. Today, displacement is not limited to the traditional concept of "caused by the threat of persecution by home State". In common parlance, the term "refugee" refers to mean a person who has fled his home country due to a threat to his life due to fear of persecution. Considering the changing structure of global problems, climate change is also leading displacement of people. The term "environmental refugee" is used to identify this class of people who leave their home country due to natural disasters.[4]

The 1990 Intergovernmental Panel on Climate Change highlighted that "the gravest effects of climate change may be those on human migration as millions are uprooted

1 Johnny Wood, "This is how many people are forcibly displaced worldwide", *World Economic Forum*, https://www.weforum.org/agenda/2020/06/displacement-numbers-world-refugee-day/ (last visited on May 13, 2022); R Buxton R, "Reparative Justice for Climate Refugees" 94 *Philosophy* 193(2019); A Kentand S Behrman, "Climate Refugees: Is Litigation an Effective Strategy?" in Simon Behrman and Avidan Kent (eds.), *Climate Refugees: Global, Local and Critical Approaches* (Cambridge University Press 2022); M Scott , *Climate Change, Disasters, and the Refugee Convention* (Cambridge University Press, 2020).

2 UN refugee chief laments nearly 80 million people forcibly displaced, *UN News*, https://news.un.org/en/story/2020/06/1066492 (last visited on May 13, 2022).

3 K.J. Partsch, "The Protection of Refugees in Armed Conflicts and Internal Disturbances by Red Cross Organs", 2234 *Revue de droit pénalmilitaire et de droit de la guerre*419-438 (1983). See also, A. Edwards, "Crossing Legal Borders: The Interface Between Refugee Law, Human Rights Law and Humanitarian Law in the "International Protection" of Refugees", in R. Arnold and N. Quenivet (eds.), *International Humanitarian Law and International Human Rights Law: Towards a New Merger in International Law* (Leiden and Boston: MartinusNijhoff, 2008). For more specific case-studies focusing on the refugee definition or a particular country.

4 AH Westing, "Environmental Refugees: A Growing Category of Displaced Persons" 19 *Environmental Conservation* 201(1992); R Ramlogan, "Environmental Refugees: a Review" 23 *Environmental Conservation* 81(1996); MS Muscolino, "The Ecology of Displacement: Social and Environmental Effects of Refugee Migration," *The Ecology of War in China: Henan Province, the Yellow River, and Beyond, 1938–1950* (Cambridge University Press, 2014); P Gatrell, "Refugees and Refugee Studies" 45 *Nationalities Papers* 1189(2017); Awuku E Opoku, "Refugee Movements in Africa and the OAU Convention on Refugees" 39 *Journal of African Law* 79(1995).

by shoreline erosion, coastal flooding and agricultural disruption."[5] Over the past few years, threats of climate change are becoming more and more visible. Considering the globality of these problems and conceptualising the shared responsibility of humankind, former United Nations Secretary-General Kofi Annan talked about 'problems without passports'[6] to address problems which are universal or transnational. Climate change is one such frustrating transnational crisis that has drawn considerably insufficient action from the world community.[7] In the context of climate change, one of the most treacherous threats has been the displacement resulting from changes in climatic conditions. It is predicted that such movements will increase in the coming times, but the response to this challenge has been limited.

The neologism of "environmental refugees" or "climate refugees" has been a topic of deliberation since 1985, when the United Nations Environment Programme (UNEP) expert Essam El-Hinnawi defined 'environmental refugees' as:[8]

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5 Policymaker Summary of the IPCC Special Committee on the Participation of Developing Countries in "Climate Change: The IPCC 1990 and 1992 Assessments, IPCC First Assessment Report Overview and Policymaker Summaries and 1992 IPCC Supplement." See also Research Series No. 31 - International Organisation for Migration, 2007/2008 Human Development Report of the UNDP, "Fighting Climate Change: Human Solidarity in a Divided World" (2008); R. Bishop, 1999. Collaborative storytelling: Meeting indigenous people's desires for self-determination. Paper presented at the World Indigenous People's Conference, Albuquerque, NM, June 15–22; C. Callison, "How climate change comes to matter: The communal life of facts"(DukeUniversity Press, Durham, 2014); E. Cameron, R. Mearns, and J. T. McGrath, "Translating climate change: Adaptation, resilience, and climate politics" in Nunavut, Canada. Annals of the Association of American Geographers 105 (2) - 274–283 (2015); J Houghton, "Science and International Environmental Policy: the Intergovernmental Panel on Climate Change" in Richard L Revesz, Philippe Sands and Richard B Stewart (eds.), *Environmental Law, the Economy and Sustainable Development: The United States, the European Union and the International Community* (Cambridge University Press, 2000); DP Stone, "The Intergovernmental Panel on Climate Change (IPCC)," The Changing Arctic Environment: The Arctic Messenger (Cambridge University Press, 2015); J.P. Bruce, H. Lee and E.F. Haites, (eds.), *Climate Change 1995: Economic and Social Dimensions of Climate Chang - Contribution of Working Group III to the Second Assessment Report of the Intergovernmental Panel on Climate Change*, (Cambridge University Press, 1996).

6 Environmental threats are quintessential 'problems without passports', secretary-general tells European Environment Ministers, 23 June 1998, *available at*: https://press.un.org/en/1998/19980623.sgsm6609.html (last visited on May 13, 2022).

7 H Bulkeley, *et.al.*, *Transnational Climate Change Governance* (Cambridge University Press 2014); T Broude, "Warming to Crisis: The Climate Change Law of Unintended Opportunity" 44 *Netherlands Yearbook ofInternational Law* 111(2014).

8 Essam El-Hinnawi*, Environmental Refugees* 41 (Nairobi: UNEP, 1st ed. 1985); Owen D, "Differentiating Refugees: Asylum, Sanctuary and Refuge" in David Miller and Christine Straehle (eds), *The Political Philosophy of Refuge* (Cambridge University Press, 2019);S Behrman and A Kent (eds.), *Climate Refugees: Global, Local and Critical Approaches* (Cambridge University Press, 2022); R Buxton, "Reparative Justice for Climate Refugees" 94 *Philosophy* 193 (2019).

> Those people who have been forced to leave their traditional habitat, temporarily or permanently, because of a marked environmental disruption (natural and/or triggered by people) that jeopardized their existence and/or seriously affected the quality of their life. By 'environmental disruption' in this definition is meant any physical, chemical, and/or biological changes in the ecosystem (or resource base) that render it, temporarily or permanently, unsuitable to support human life.

In the present framework of Refugee law, "refugees" are people who have crossed international borders and are at risk or havebeen victims, of persecution in their country of origin. Refugees are protected by refugee law mainly by the principle of non-refoulment.[9] Article 1 of the Convention Relating to the Status of Refugees, as modified by the 1967 Protocol, defines a 'refugee' as:[10]

> Any person who owing to a well-founded fear of being persecuted for reasons of race, religion, nationality, membership of a particular social group or political opinion, is outside the country of his nationality and is unable or, owing to such fear, is unwilling to avail himself of the protection of that country; or who, not having a nationality and being outside the country of his former habitual residence as a result of such events, is unable or, owing to such fear, is unwilling to return to it.

Natural disasters induced displacement includes inhabitation of a place either permanently or temporarily due to events like hurricanes, floods, tornadoes,

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9 Krill, Françhise, "ICRC's action in aid of refugees", IRRC, No. 265, 328–350 (July-August 1988).; Jean-Philippe Lavoyer, "Refugees and internally displaced persons: International humanitarian law and the role of the ICRC", IRRC, No. 305, 162-180 (March-April 1995); International Committee of the Red Cross, "Internally displaced persons: The mandate and role of the International Committee of the Red Cross", IRRC, No. 838, 491-500 (June 2000).

10 United Nations Convention Relating to the Status of Refugees, Jul.28, 1951, 189 U.N.T.S. 150 (adoptedon July 28, 1951 by the U.N. Conf. of Plenipotentiaries on the Status of Refugees & Stateless Persons convened under U.N.G.A. Res. 429 (V) (Dec. 14, 1950),entered into force Apr. 22, 1954). United Nations Protocol Relating to Status of Refugees, Jan. 31, 1967, 606 U.N.T.S. 267 (adopted byU.N.G.A. Res. 2198 (XXI) (Dec. 16, 1966) entered into force Oct. 4, 1967).

earthquakes or any other geological events of like nature.[11] An example of a natural disaster that resulted in mass displacement of people was the 1995-1998 eruptions of the Soufrire Hills Volcano on the Caribbean island of Montserrat which forced 7000 residents to flee the island.[12] In 2020, climate change associated factors resulted in the displacement of around 16.1 million people.[13] It is estimated that by 2050, between 150 to 200 million people are likely to be displaced due to various natural calamities.[14]

II. International Law, Climate Crisis and Refugees

Refugees are protected through the Convention Relating to the Status of Refugees, 1951 and the Protocol Relating to Status of Refugees. The issue remains relevant to highlight that the Convention and the Protocol were drafted when environmental displacement was not considered a threat that needs special mention. Both these international instruments fail to account for those who are mass displaced on grounds of natural calamities. As a result, environmental refugees were excluded from the ambit of the international treaties meant for the protection of refugees. The disasters like hurricanes, floods, tornadoes, earthquakes and similar calamities affect human life disproportionately. There is also a need to develop and remodel how the international law recognises and defines environmental refugees.

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11 M Scott, "Refugee Status Determination in the Context of 'Natural' Disasters and Climate Change," *Climate Change, Disasters, and the Refugee Convention* (Cambridge University Press, 2020); M Scott, "Jurisprudence on the Determination of Refugee Status in the Context of 'Natural' Disasters and Climate Change," *Climate Change, Disasters, and the Refugee Convention* (Cambridge University Press, 2020); P Gatrell, "Refugees and Refugee Studies" 45 *Nationalities Papers* 1189(2017); PJ Govind and RRM Verchick, "Natural Disaster and Climate Change" in ShawkatAlam and others (eds.), *International Environmental Law and the Global South* (Cambridge University Press, 2015); S Boulter, *et.al.*, (eds.), *Natural Disasters and Adaptation to Climate Change* (Cambridge University Press, 2013); WJW Botzen, "Climate Change and Natural Disaster Risk Management," *Managing Extreme Climate Change Risks through Insurance* (Cambridge University Press, 2013)

12 Alan Taylor, *Soufriere Hills Volcano*, (2013) https://www.theatlantic.com/photo/2013/05/soufriere-hills-volcano/100509/ (last visited on May 13, 2022).

13 John Podesta, *The climate crisis, migration, and refugees*, Brookings Institution, https://www.brookings.edu/research/the-climate-crisis-migration-and-refugees/ (last visited on May 13, 2022).

14 Maram Ahmed, *How climate change exacerbates the refugee crisis – and what can be done about it*, World Economic Reform, https://www.weforum.org/agenda/2019/06/how-climate-change-exacerbates-the-refugee-crisis-and-what-can-be-done-about-it/ (last visited on May 13, 2022).

The United Nations Human Rights Committee in *Ioane Teitiota* v. *New Zealand* laid down a game changing decision on climate refugees.[15] In the case of *Ioane Teitiota*, a man from the Pacific island of Kiribati, it was observed that governments cannot return people to countries where their lives might be threatened by climate change. The Committee in its landmark ruling held that "without robust national and international efforts, the effects of climate change in receiving states may expose individuals to violations of their rights, thereby triggering the non-refoulment obligations of sending states." It was also argued before the Court in AF Kirtibati, was the legal fiction of "floodgate reasoning". According to which, wherein States contend that "if they accept a person who amounts to an environmental refugee, the same would open doors for millions who are facing similar deprivation, accepting whom would not be economically feasible for the State."[16] With the Court recognising the identity of climate refugees, the case is envisioned to be a potential game-changer for transnational environmental-climate action.

World Economic Forum estimated that, "by 2050, between 150 to 200 million people are at risk of being forced to leave their homes as a result of desertification, rising sea levels and extreme weather conditions."[17]According to the 2020 World Migration Report, at the end of 2018, there were a total of 28 million new internal displacements across 148 countries and territories. Sixty-one per cent of these new displacements were triggered by disasters, and 39% were caused by conflict and violence.[18] South Asian populations are particularly vulnerable to disasters related

15 *Ioane Teitiota* v. *New Zealand* (advance unedited version), CCPR/C/127/D/2728/2016, UN Human Rights Committee (HRC), 7 January 2020. See "The Committee takes note of the observation of the Immigration and Protection Tribunal that climate change-induced harm can occur through sudden-onset events and slowonset processes. Reports indicate that sudden-onset events are discrete occurrences that have an immediate and obvious impact over a period of hours or days, while slow-onset effects may have a gradual, adverse impact on livelihoods and resources over a period of months to years. Both sudden-onset events (such as intense storms and flooding) and slow-onset processes (such as sea level rise, salinization, and land degradation) can propel cross-border movement of individuals seeking protection from climate change-related harm. 27 The Committee is of the view that without robust national and international efforts, the effects of climate change in receiving states may expose individuals to a violation of their rights under articles 6 or 7 of the Covenant, thereby triggering the non-refoulement obligations of sending states. Furthermore, given that the risk of an entire country becoming submerged under water is such an extreme risk, the conditions of life in such a country may become incompatible with the right to life with dignity before the risk is realized."

16 AF (Kiribati) [2013] NZIPT 800413 at 39 (New Zealand).

17 How climate change exacerbates the refugee crisis – and what can be done about it, World Economic Forum (2019).

18 World Migration Report 2020, IOM's Environment Policy and Un Migration at 113-211 (2019).

to natural hazards and climate change.[19] The crisis of climate induced displacement has also exposed different intersectional issues.[20] The international community will have to find a common consensus to find solutions. The best approach to avoiding mass movements of people is to monitor the policies and measures adopted by domestic actors to curtail the catastrophic consequences that steer displacement. There is a need to enhance disaster preparedness policies, promote livelihood and preserve the environment.

It is estimated that by 2050, between 150 to 200 million people are at risk of being forced to leave their homes as a result of natural disasters such as desertification, rising sea levels and extreme weather conditions. While building consensus about the issue of climate refugees remain a difficult task, scholars have also argued about broadly interpreting the definition of 'refugees' to provide comprehensive protection to communities that are displaced due to climatic changes. The conventional refugee criteria of the 1951 Convention can also be widely interpreted to include within its ambit climate refugees. For example, in the case of "nexus dynamics"*i.e.,* drought-related famine is linked to situations of fleeing from the home state. Climate-related migration, both internal and external, is now a living reality.[21]

The First Assessment Report of the Intergovernmental Panel on Climate Change (IPCC) in 1990 warned about the impacts of climate change on human migration.[22]

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19 Kanta Kumari Riguad, et al., *Groundswell: Preparing for Internal Climate Migration*, World Bank Report 2018, available at: https://openknowledge.worldbank.org/handle/10986/29461 (last visited on May 13, 2022).

20 M Anastario, N Shehab and L Lawry, "Increased Gender-Based Violence Among Women Internally Displaced in Mississippi 2 Years Post–Hurricane Katrina" 3 *Disaster Medicine and Public Health Preparedness* 18(2009); R Piotrowicz, "Displacement and Displaced Persons" in Elizabeth Wilmshurst and Susan Breau (eds.), *Perspectives on the ICRC Study on Customary International Humanitarian Law* (Cambridge University Press, 2007); Mendoza MET, "The Gendered Impacts of Climate Change" in Mark W Rosegrant and Mercedita A Sombilla (eds.), *The Future of Philippine Agriculture under a Changing Climate: Policies, Investments and Scenarios* (ISEAS–Yusof Ishak Institute, 2018); BA Bee , "Lorena Aguilar Training Manual on Gender and Climate Change. San José, Costa Rica, Global Gender and Climate Alliance (GGCA), 2009." 29 *Hypatia*702(2014); J Ullman J*et.al.*, "Regulating 'Gender Climate': Exploring the Social Construction of Gender and Sexuality in Regional and Rural Australian Schools," *Understanding Sociological Theory for Educational Practices* (Cambridge University Press, 2015)..

21 JC Curry, "Climate and Migrations" 2 Antiquity 292(1928); RA McLeman, *Climate and Human Migration: Past Experiences, Future Challenges* (Cambridge University Press, 2013); L Thalheimerand CWebersik, "Climate Change, Conflicts and Migration" in Tim Krieger, Diana Panke and Michael Pregernig (eds.), *Environmental Conflicts, Migration and Governance* (Bristol University Press, 2020).

22 The First Assessment Report (FAR) of the Intergovernmental Panel on Climate Change (IPCC), 1990.

Many experts and intergovernmental agencies argue about the future flood of climate-displaced persons and how it will overtake all other refugee crises.[23] The 2016 intergovernmental consultations and negotiations on issues related to 'Global Compact for Safe, Orderly and Regular Migration' calls on member states of the United Nations to "better map, understand, predict and address migration movements" and "cooperate to identify, develop and strengthen solutions, including planned relocation and visa options for climate-induced migrants".[24] These problems demand if not a new legal convention, then at least a collective international consciousness to protect the vulnerable.

III. Duty to Cooperate and its role in advancing the protection for Climate-Induced Displacement

There is a growing recognition of the duty to cooperate in international legal theory especially considering how the legal system is shifting from an independent to cooperative sovereignty.[25] As Franz XaverPerrez argues in his work 'Cooperative Sovereignty: From Independence to Interdependence in the Structure of International Environmental Law':[26]

> In the late 20th century, it has become widely accepted that States need to cooperate in order to pursue effectively their interests within the increasingly interdependent world order. At the same time, the principle of sovereignty is still often invoked as a claim for independence and a justification for non-cooperation. Sovereignty is not a negative principle meaning merely State independence and freedom, but it also inherently includes a positive element which stresses a State's innate membership in the international community and its authority, its responsibility, and its duty to participate actively in that community. In short, sovereignty not only means independence, but it also means a responsibility to cooperate.

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23 Jahid Hossain Bhuiyan and M. R. Islam, *An Introduction to International Refugee Law* 215 (Brill, 2013).

24 J McAdam, "Global Compact for Safe, Orderly and Regular Migration" 58 *International Legal Materials* 160(2019); E Guild, "The UN's Search for a Global Compact on Safe, Orderly and Regular Migration" 18 German Law Journal 1779 (2017); V Chetail, "The Global Compact for Safe, Orderly and Regular Migration: a Kaleidoscope of International Law" 16 *International Journal of Law in Context* 253(2020); F Capone, "The Alleged Tension between the Global Compact for Safe, Orderly and Regular Migration and State Sovereignty: 'Much Ado about Nothing'?" 33 *Leiden Journal of International Law* 713(2020); TBloom, "When Migration Policy Isn't about Migration: Considerations for Implementation of the Global Compact for Migration" 33 *Ethics & International Affairs* 481(2019).

25 E Benvenisti and M Hirsch (eds.), *The Impact of International Law on International Cooperation: Theoretical Perspectives* (Cambridge University Press, 2004).

26 Franz XaverPerrez, *Cooperative Sovereignty* (Brill, Leiden, The Netherlands, 2021).

The principle of cooperation is one of the basic principles of international law adopted by the United Nations General Assembly in 1970. Article 1 of the UN Charter mentions "To achieve international co-operation in solving international problems" as one of its purposes. The principle became a part of International law concerning friendly relations and cooperation among states in accordance with the Charter of the United Nations. The principle of cooperation has also found reflections in International Humanitarian Law, International Water Law along with International Environmental Law. The role of cooperation and the duty to cooperate requires special emphasis in the context of its application in international environmental law. However, the context in which is the duty to cooperate is interpreted as an obligation is used is highly variable depending on the area of environmental protection.

In its true sense, International environmental law as a discipline developed between two principles: first 'States' sovereign rights over their natural resources' and second 'states should not cause damage to the environment.' Max Valverde Soto argues that" the principle of good neighbourliness places on states a responsibility not to damage the environment." He further states:[27]

> The principle of international cooperation places an obligation on states to prohibit activities within the state's territory that are contrary to the rights of other states and which could harm other states or their inhabitants. In order to achieve sustainable development, environmental protection shall constitute an integral part of the development process and cannot be considered in isolation from it.

Neil Craik argues in his article 'The Duty to Cooperate in International Environmental Law' writes" the duty to cooperate has been central to the protection of the global environment, it has received less attention than the (due diligence) obligation to prevent harm to the environment. On the one hand, the duty to cooperate is ubiquitous in international environmental law."[28] The duty to cooperate was recognized in Principle 24 of the Stockholm Declaration.[29] Similar recognition

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27 Max Valverde Soto, General Principles Of International Environmental Law (1986) 3(1) *ILSA Journal Of International & Comparative Law* 10.

28 Neil Craik, "The Duty to Cooperate in International Environmental Law: Constraining State Discretion through Due Respect" 30(1) *Yearbook of International Environmental Law* 22–44(2019).

29 Stockholm Declaration on the Human Environment, in Report of the United Nations Conference on the Human Environment, UN Doc. A/CONF. 48/14, at 2 and Corr. 1 (1972), Principle 24: "International matters concerning the protection and improvement of the environment should be handled in a cooperative spirit by all countries, big and small, on an equal footing."

of duty to cooperate was also reflected in Principles 7 and 27 of the Rio Declaration and also by international courts. This has also trickled down to the application of duty to cooperate even in the context of climate change governance. In climate change jurisprudence, the duty to cooperate has been interpreted to mean obligations and rights for states. Jason Rudall states that:[30]

> The duty to cooperate can oblige states to act collectively to develop the climate change regime as well as place individual states under a responsibility to mitigate emissions and adapt to the new realities that climate change induces. Further, still, cooperation impels developed countries to provide assistance for developing countries that do not have the resources to meet their mitigation and adaptation responsibilities. It is in this way that cooperation acts in consort with and is shaped by other principles of international environmental law, like the principle of common but differentiated responsibility.

The 2030 Agenda for Sustainable Development which also discusses cooperation states that the global nature of climate change calls for the widest possible international cooperation aimed at accelerating the reduction of global greenhouse gas emissions and addressing adaptation to the adverse impacts of climate change.[31] The International Court of Justice in the *Pulp Mills* case has said that "the obligation to inform allows for the initiation of cooperation between the Parties which is

30 Jason Rudall, *The Obligation to Cooperate in the Fight against Climate Change* 23(1) *International Community Law Review*2(2021). He adds: "The need for swift action has only been confirmed by the findings of the Intergovernmental Panel on Climate Change, which has called for immediate efforts to ensure that global warming does not exceed 1.5 degrees Celsius. In the international climate change regime, cooperation is referred to in all three of the principal governing instruments. The 1992 United Nations Framework Convention on Climate Change (UNFCCC) refers to cooperation in several provisions, including its Preamble as well as Articles 3, 4, 5, 6, 7 and 9. The 1997 Kyoto Protocol made reference to international cooperation in its Articles 2, 10, and 13, and the 2015 Paris Agreement8 refers to it in its Preamble, Articles 6, 7, 8, 10, 11, 12 and 14. As is evident from its provision in these instruments, cooperation between states and other actors should play a critical and multidimensional role in tackling the various challenges presented by climate change."

31 NS Rubin *et.al.*, "Psychology, Human Rights, and the Implementation of the United Nations' 2030 Agenda for Sustainable Development" in Neal S Rubin and Roseanne L Flores (eds.), *The Cambridge Handbook of Psychology and Human Rights* (Cambridge University Press, 2020); B Deacon, "SDGs, Agenda 2030 and the Prospects for Transformative Social Policy and Social Development" 32 *Journal of International and Comparative Social Policy* 79 (2016).

necessary in order to fulfil the obligation of prevention".[32] The crisis of climate induced displacement requires the international community to respond collectively and build upon the theme of cooperation through consensus.

IV. International (Non) Co-Operation and Neo-Liberal Global Justice

Thinkers like Plato and Aristotle argued that the idea of 'Earth's Guardians' led to a dilution of responsibility; "when everything belongs to everybody nobody will take care of anything." However, the protection of the ecosystem still remains a human responsibility. The deterioration of the condition of the environment also impacts human life. In the first half of the twentieth century, the world witnessed two world wars, countless civil wars, cold wars, mass expulsions and nuclear bombing. The second decade of the twenty-first century is a victim of more perilous and gnarly incidents ranging from climate change to pandemics and biosecurity threats. For years, climate change was considered an invisible threat to humanity. But over the past few years, treacherous threats of climate change are becoming more and more visible. Considering the globality of these problems and conceptualising the shared responsibility of humankind, former United Nations Secretary-General Kofi Annan talked about 'problems without passports' to address problems which are universal or transnational.

Diane C. Bates argues, "By refining how environmental refugees are conceptualized and by recognizing similarities and differences between refugee populations, researchers and policymakers can more clearly identify underlying causes and offer more helpful ideas to prevent and relieve the growing numbers of people displaced by environmental change."[33] The lack of clarity on pivotal issues like the environment, climate or terms like refugees and migrants also impacts how justice is made visible on the ground. The lack of definitional understanding also leads to confusion amongst the global diplomatic community to pin down a certain category of people as refugees. This calls for advancing the ideas of justice to issues that are

32 Pulp Mills on the River Uruguay (Argentina v. Uruguay), Judgment [2010] ICJ Reports 14, para 77; M Chidiak and JA Ocampo, "Investment Rules and Sustainable Development: Preliminary Lessons from the Uruguayan Pulp Mills Case" in Kevin Gallagher and Daniel Chudnovsky (eds.), *Rethinking Foreign Investment for Sustainable Development: Lessons from Latin America* (Anthem Press, 2009); "International Court of Justice (ICJ): Case Concerning Pulp Mills on the River Uruguay (Argentina v. Uruguay) Request for the Indication of Provisional Measures" 45 *International Legal Materials* 1025(2006); CR Payne, "Environmental Impact Assessment as a Duty under International Law: The International Court of Justice Judgment on Pulp Mills on the River Uruguay" 1 *European Journal of Risk Regulation* 317(2010).

33 Diane C. Bates, *Environmental Refugees? Classifying Human Migrations Caused by Environmental Change*, 23(5) Population and Environment 465-477 (2002).

34 C Jasparro and J. Taylor, "Climate Change and Regional Vulnerability to Transnational Security Threats in Southeast Asia", 13(2) *Geopolitics*232–256 (2008).

suffered by the subaltern community. The case of climate refugees can be used to influence the discourse on environmental justice. Scholars have pointed out that "livelihood and social systems will be pressured, while state and civil society capacity will be strained. This will intensify existing vulnerabilities to non-state security threats and raise the overall level of vulnerability and risk to both human and state security" if the international community fails to respond to fragile issues like climate-induced displacement.[34]

V. Global Governance Responses to the issue of Environmental Displacement

Climate change was earlier studied as a challenge for scientists and policymakers to react. With the ever-evolving and ever-growing threats of climate change, the idea of climate change is now studied through the prism of human rightsand international law. The integration of human rights and international law has also influenced the issues of refugees and climate-induced people to be brought under the ambit of climate change studies. The term "climate refugees" has now become a matter of debate in media and international forums. The debate is now more of a social movement especially considering that there is no conceptual form of climate refugees in the realm of international law.

On a very purposive interpretation of the Refugee Convention's definition of "Refugee" they may be categorised aspersons fleeing "events seriously disturbing public order". However, climate change causes major displacement internally within the country. UNHCR's "working legal analysis of the refugee definition in the 1951 Convention and the regional refugee criteria, particularly where conflict and/or violence interacts with disaster" mentions," There may be situations where the refugee criteria of the 1951 Convention or broader refugee criteria of regional refugee law frameworks may apply, for example, if drought-related famine is linked to situations of armed conflict and violence an area known as nexus dynamics."[35]

In the New York Declaration for Refugees and Migrants 2016, the States are concerned with "armed conflict, poverty, food insecurity,persecution, terrorism, or human rights violations and abuses, as well as adverse effects of climate change, natural disasters (some of which may be linked to climate change), or other environmental factors"[36] and "many move, indeed, for a combination of these

35 Refugee Law in a Time of Climate Change, Disaster and Conflict, UNHCR, PPLA/2020/01.

36 UN General Assembly, New York Declaration for Refugees and Migrants : resolution / adopted by the General Assembly, 3 October 2016, A/RES/71/1.

reasons that refugees are among such movements, and efforts are needed to strengthen their protection."

All these indications and factors direct that 'climate refugees' pose unique challenges to the refugee law system. The recent draft of the migration compact calls on U.N. members to "better map, understand, predict and address migration movements, including those resulting from sudden- and slow-onset natural disasters, environmental degradation, the adverse effects of climate change" and "cooperate to identify, develop and strengthen solutions, including planned relocation and visa options" for climate migrants."[37] There have been minimal efforts by the United Nations to respond to this problem. The 2011 Nansen Conference on Climate Change and Displacement in Oslo led Norway and Switzerland to commit to UNHCR Ministerial Conference in December 2011 to address problems faced by climate refugees.The meeting of 2030 Sustainable Development Goals (SDGs) will also address issues relating to migration. SDGs on climate action lays down goals to "strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries and integrate climate change measures into national policies, strategies, and planning". Effective rehabilitation of people affected due to climate crisis can also be strengthened with SGDs, since SDG calls for signatories to "facilitate orderly, safe, and responsible migration of people, including through implementation of planned and well-managed policies."[38]

VI. Conclusion

States raise issues and concerns of sovereignty as a justification to close boundaries to refugees. Under the current structure of international law, States often evade the principle of *non- refoulement*. The principle of *non-refoulment* guarantees that "no one should be returned to a country where they would face torture, cruel, inhuman or

37 J. McAdam, "Global Compact for Safe, Orderly and Regular Migration" 58 *International Legal Materials* 160(2019).

38 M Sanwal, "Global Sustainable Development Goals," *The World's Search for Sustainable Development: A Perspective from the Global South* (Cambridge University Press, 2015); ME Hilderbrand, "Good Governance and the Sustainable Development Goals: Assessing Governance Targets" in Bjorn Lomborg (eds.), *Prioritizing Development: A Cost Benefit Analysis of the United Nations' Sustainable Development Goals* (Cambridge University Press, 2018); P Katila, *et.al.*, (eds.), *Sustainable Development Goals: Their Impacts on Forests and People* (Cambridge University Press, 2019); I Espa, "Natural Resources Management in the Sustainable Development Goals Era: Insights from World Trade Organization Case Law" in CosimoBeverelli, Jürgen Kurtz and Damian Raess (eds.), *International Trade, Investment, and the Sustainable Development Goals: World Trade Forum* (Cambridge University Press, 2020); J Ebbesson and E Hey (eds.), *The Cambridge Handbook of the Sustainable Development Goals and International Law*,(Cambridge University Press, 2022).

degrading treatment or punishment and other irreparable harm."[39] The principle has now attained the status of customary international law and is a *jus cogens* norm. This makes it a binding norm. However, the exclusion of climate refugees from the Refugee legal system excludes their protection under customary international law. International refugee law has noformal definition and/or identification of climate displaced persons.

Intergovernmental Panel on Climate Change have warned that "the worst impact of climate change will be seen on human migration, as the number and intensity of disasters increase."[40] In 2018, the World Bank noted that "there will be more than 143 million internal climate migrants by 2050, in just three regions of the world (Sub- Saharan Africa, South Asia, Latin America), if no climate action is taken. South Asian populations are particularly vulnerable to slow-onset and rapid-onset disasters related to natural hazards and climate change."[41]According to the report, "a total of 3.3 million new displacements were estimated in South Asia, caused by the sudden onset hazards in 2018.

The 2015 UN Human Rights Committee's ruling stated that "without robust national and international efforts, the effects of climate change in receiving states may expose individuals to violations of their rightsthereby triggering the non-refoulment obligations of sending states"[42] and "Given the risk of an entire country becoming submerged underwater is such an extreme risk, the conditions of life in such a country may become incompatible with the right to life with dignity before the

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39 "Note on Migration and the Principle of Non-Refoulement: ICRC, 2018" 99 *International Review of the Red Cross* 345(2017); E Feller, V Türk and F Nicholson, "Non-Refoulement (Article 33 of the 1951 Convention)" in Erika Feller, Volker Türk and Frances Nicholson (eds.), *Refugee Protection in International Law: UNHCR's Global Consultations on International Protection* (Cambridge University Press, 2003); Gammeltoft-Hansen T, "Refugee Protection and the Reach of the Non-Refoulement Principle," *Access to Asylum: International Refugee Law and the Globalisation of Migration Control* (Cambridge University Press, 2011); E Feller, V Türk and F Nicholson, "Summary Conclusions: the Principle of Non-Refoulement, Expert Roundtable, Cambridge, July 2001" in Erika Feller, Volker Türk and Frances Nicholson (eds.), *Refugee Protection in International Law: UNHCR's Global Consultations on International Protection* (Cambridge University Press, 2003); J McAdam, "Protecting People Displaced by the Impacts of Climate Change: The UN Human Rights Committee and the Principle of Non-Refoulement" 114 *American Journal of International Law* 708(2020).

40 World Migration Report 2020, International Organization for Migration (2020), *available at*: https://publications.iom.int/system/files/pdf/wmr_2020.pdf(last visited on July 5, 2022).

41 John Podesta, The climate crisis, migration, and refugees, *Brookings* (2019),*available at*:https://www.brookings.edu/research/the-climate-crisis-migration-and-refugees/(last visited on July 5, 2022)

42 *Ioane Teitiota* v. *New Zealand (advance unedited version*), CCPR/C/127/D/2728/2016, UN Human Rights Committee (HRC), January 7, 2020.

risk is realized."[43] Regions in Asia are facing increased frequency and severity of disease outbreaks, thereby triggering displacement. There is a need to build an international consensus on the recognition of large-scale human migration due to extreme weather events, and other factors as a crisis that deserves international law's acknowledgement and response. This would require strengthening the norms of duty to cooperate to ensure wider coverage to protect persons displaced due to climate-related issues.

43 *Ibid.*

CIRCULAR ECONOMY: THE HOLY GRAIL OF NEXT GENERATION ENVIRONMENTAL LAW AND POLICY

Chiradeep Basak[*]

Abstract

In the verge of the global climate travesty and a never-ending charade of international negotiations, the vulnerable ones have learned new strategies to adapt and mitigate but unless a facilitating and incentive-driven traction is rendered to certain stakeholders, the lawmakers don't hesitate take a back foot and cite their techno-financial inabilities and in the midst of these hullaballoos, we have now tabled this emerging notion of circular economy, that envisions to, not only conserve and recycle materials but also contribute to new technological, financial, and environmental innovations.[1]The new and emerging institutional subsidiarity on circularity is affirmed in a new economic and social context in which public entities and individuals face many challenges related to the environment to search for new solutions on climate changes through relations between national, regional, and private levels.[2] In the enviro-legal history of mankind, several buzzwords have been enunciated over time to assure an incentive-driven economy that facilitates the upper hands on the table of geopolitics. In 2015, the United Nations Conference on Trade and Development (UNCTAD) in collaboration with the Ellen MacArthur Foundation initiated its work on circularity potentials of emerging economies like China and India.[3] According to UNCTAD, "a circular economy entails markets that give incentives to reusing products, rather than scrapping them and then extracting new resources"[4].

During April 15-16, 2021, The World Circular Economy Forum + Climate was organized with an ambition to apprehend the modalities of a just transition towards circular economy, which has now been perceived as a pre-requisite for attaining the climate neutrality and the cardinal goals of Paris Agreement (2015).[5] The Circularity

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1 Ira Feldman, Reid Lifset, Timothy Ellis, "Wayne Rifer & Roger D. Feldman, The Circular Economy: Regulatory and Commercial Law Implications" 46 *Environmental Law Reporter. News & Analysis* 11009 (2016).

2 Sandra Antoniazzi, "Transition to Circular Economy and Management of Public Services of General Economic Interest", 19 *Central European Public Administration Review* 61 (2021).

3 Circular Economy, *available at*:http://unctad.org/topic/trade-and-environment/circular-economy (last visited on December 10, 2021).

4 *Ibid.*

5 One of the prime objectives of the Paris Agreement is to limit the global rise in temperature to well below 2 degree Celsius, preferably to 1.5 degree Celsius, compared to the pre-industrial levels.

element of this emerging area, within itself carries several crucial aspects which involves effective measures and commitments. This paper intends to explore those emerging avenues by drawing some country specific and international endeavours. In the concluding part, the paper also aims to highlight some of the challenges pertaining to circular economy.

I. Introduction

TRANSITION TO a circular economy, enabling more efficient use of resources and driving sustainable consumption and production, as well as inclusive and sustainable industrialization, contributes significantly to combating and mitigating climate change and achieving climate neutrality, halting and reversing biodiversity loss and pollution; and creating enabling conditions for business and decent jobs.[6] From this standpoint, we are gauging for a resilient future that necessitates a resource-efficient and circular action.

In the socio-economic construct, the circularity of material is treated to be a measure to ensure the reduction of waste generation and conservation of natural resources. The adoption of circular economy aims to improve the strategy for sustainable development but it has not gathered the momentum it deserves and requires. In the artificial circularity of material flow, the material is changed by a series of material form and service functions, as well as the transfer of space and energy that produces the transformation and transfer.[7]

The European Environmental Agency has interpreted the circular economy as the core of a Green Economy perspective that extends the focus from waste and

6 World Circular Economy Forum + Climate Action Statement, *available at*: https://www.wcefplusclimate.com/about-wcef-climate/action-statement (last visited on December 4, 2021).

7 Jiansu Mao, Chunhui Li *et. al.*, *Circular Economy and Sustainable Development Enterprises* 3 (Springer Nature, Singapore, 1st edn., 2018).

material use to human wellbeing and ecosystem resilience.[8] The Agency believes that the circular economy cannot only be used to overlap the existing linear model of 'take, make, and dispose'. The Ellen McArthur Foundation has propounded three principles in this context:[9]

- 'design out waste and pollution'
- 'keep products and materials in use' and
- 'regenerate natural systems'

The plausible way for the future is to find alternative ways to resilience and the existing modes of the linear economy might not give all desired and suitable results of sustainable future. The products and material flow are inevitable and if a beneficial artifact can be provided in the realm of circular economy, we can arrest further degradation of environmental vitality. In this context, our engineering models and technological know-how will play a crucial role; only if the legislative framework facilitates so.

In 2017, the World Economic Forum came together with McArthur Foundation and World Resources Institute to launch a Platform for Accelerating the Circular Economy (hereinafter "PACE"). Moving the idea of the circular economy dictates urgent action that involves shaping business models as well as policy frameworks. In this direction, the PACE has slated three prime objectives, which includes:[10]

- Development of a blended financial model for projects promoting circular economy;
- Make necessary adjustments in policy frameworks to eliminate the barriers on the way to a circular economy; and
- Ensure more public-private partnerships to scale up the circular initiatives.

These core objectives will require strategic enviro-legal measures in all levels of governance.

II. International and Regional Initiatives to Promote Circular Economy

With the initiatives of the Government of Canada and Finnish Innovation Fund Sutra, the annual World Circular Economy Forum was organized to promote a

8 Idaho D'Adamo, "Adopting a Circular Economy: Current Practices and Future Perspectives" 8 *Social Sciences* 328 (2019).

9 *Ibid.*

10 Platform for Accelerating the Circular Economy- A global public-private collaboration platform and project accelerator, *available at*: https://www3.weforum.org/docs/WEF_PACE_Platform_for_Accelerating_the_Circular_Economy.pdf, (last visited on March 9, 2022).

transformational change by bringing key stakeholders together. This game-changing initiative is in its nascent stage and the future course of action has been articulated during World Circular Economy Forum in 2021. The participants called for stepping up ambition through circular solutions to achieve particularly: Sustainable Development Goal 8 on decent work and economic growth; Sustainable Development Goal 9 on inclusive and sustainable industrialization, resilient infrastructure and innovation; Sustainable Development Goal 12 on ensuring sustainable consumption and production patterns; and Sustainable Development Goal 13 on climate action.[11]

In addition, the participants were asked for enhanced actions on resource-efficient and circular solutions to attain the goal of the Paris Agreement and climate neutrality. Some of the outcomes of the said Platform are as follows:[12]

- Commitment to adopt, implement and enhance strategies, policies and solutions to endorse circular economy along with the continuing climate actions;
- Integrate the aspects of circular economy in national climate action strategies and plans such as nationally determined contributions, national adaptation plans;
- Recognize the significance of an inclusive approach in the just transition towards a circular economy by involving women, youth, and several other marginalized sections;
- The Global Alliance on Circular Economy and Resource Efficiency was launched to advocate for a global just transition towards a circular economy with the collaboration of several strategic partners such as McArthur Foundation, Platform for Accelerating the Circular Economy, World Circular Economy Forum and other regional integrated bodies such as African Circular Economy Alliance, Latin American and Caribbean Circular Economy Coalition;
- Furthermore, the Platform recognized the significance of stakeholders' involvement to design and deploy enhanced and environmentally sound waste management systems that involves the waste collection, recycling for end of use plastics and electronics; and
- Implication of financial mechanism to scale up the just transition to a circular economy.

11 Summary of Main Outcomes, *available at*: https://www.wcefplusclimate.com/about-wcef-climate/action-statement, (last visited on December 9, 2021).

12 *Supra* note 10.

The serious implications of a linear model have been proven[13] to be wasteful, leading to loss of biological diversity, climate change and several other adverse climatic events. This 'take-make-throw'[14] model has brought severe consequences to planetary health. In this context, the Stockholm Resilience Centre in 2009 identified nine processes that are responsible for the regulation of resilience and stability of the earth's climate system. Under the leadership of Johan Rockstrom of the Stockholm Resilience Centre, twenty-eight internationally celebrated scientists proposed the quantitative planetary boundaries within which humanity can endure to flourish and thrive sustainably but breaching these planetary boundaries would lead to large-scale irreversible and hasty environmental variations.[15]

These nine planetary boundaries include: Climate Change, Novel entities, stratospheric ozone depletion, Atmospheric aerosol loading, Ocean acidification, Biochemical Flows, Freshwater use, Land-system change and Biosphere Integrity.[16] Along with this, several other concepts are revolving around the centre point of circular economy. These concepts are inclusive in nature:[17]

- Servitization;
- Cradle to Cradle;
- Sharing Economy;
- Closed Loop; and
- Upcycling.

Nevertheless, the concept of planetary boundaries helps us better articulate our priorities and their respective limits. The present state of the aforementioned nine boundaries undoubtedly and visibly calls for urgent transformational actions. In consonance with this call for actions, the Platform for Accelerating the Circular Economy has opined several strategies that involve urgent actions and promising solutions:

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13 Contrary to the aspects of circularity, the Linear model referred here means the conventional mode of resource consumption and management in a linear economy.

14 Circular Economy: definition, importance and benefits, News- European Parliament, *available at*:https://www.europarl.europa.eu/news/en/headlines/economy/20151201STO05603/circular-economy-definition-importance-and-benefits, (last visited on March 12, 2022).

15 Planetary Boundaries, *available at*: https://www.stockholmresilience.org/research/planetary-boundaries.html, (last visited on March 12, 2022).

16 Lerwen Liu, Seeram Ramakrishna (eds.), *Mengmen Cui, Key Concepts and Terminology in An Introduction to Circular Economy* 20 (Springer, Singapore, 2021).

17 *Id.* at 18.

- By 2030, the circular economy aims to generate $ 4.5 trillion opportunities by avoiding waste generation and efficient business environment;[18]
- The circular economy can be an important tool and strategy to attain the Sustainable Development Goal 12 (responsible consumption and production) and other related Goals.[19] In consonance with the said goal, the policy makers should shift towards circular economy by developing competencies in circular design to implement product reuse, and recycling, and serving as trend-setters of innovative circular economy business models;[20]
- Reducing or even reusing one fourth of the present quantity of food waste can meet the needs of 870 million hungry people in the world;[21] and
- It aims to reduce water shortages and less consumption of virgin materials vehicular manufacture and transportation by 2050.[22]

These promising solutions can only see the light of the day, if necessary, policy measures are adopted in respective levels of governance. There are some bits and pieces of policy developments in this direction, such as:

- United Nations Environment Assembly has passed a resolution[23] in 2017 to address the issue of marine pollution (litter). To create a circular economy for plastic, three actions have been proposed by the Ellen McArthur Foundation, which involves: elimination of all problematic and unnecessary plastic materials; innovation to ensure the reuse, recycling and composting

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18 The Circular Economy Action Agenda, *available at*: https://pacecircular.org/action-agenda, (last visited on March 11, 2022).

19 SDG Goal 12, Ensure sustainable consumption and production patterns, *available at*: https://sdgs.un.org/goals/goal12 (last visited on March 10, 2022).

20 Draft Concept and Programme for the joint meeting of the Economic and Financial (Second Committee) of the 73, Circular Economy for the SDGs: From Concept to Practice, United Nations General Assembly and ECOSOC Joint Meeting, *available at*:https://www.un.org/en/ga/second/73/jm_conceptnote.pdf, (last visited on March 10, 2022).

21 Worldwide Food Waste, *available at*: https://www.unep.org/thinkeatsave/get-informed/worldwide-food-waste, (last visited on March 10, 2022).

22 The Platform claims that circular economy in India could lead to 82 per cent less consumption of the said materials in transport and manufacture of vehicles by 2050. *See* Platform for Accelerating the Circular Economy (PACE), *available at*:https://www.wri.org/initiatives/platform-accelerating-circular-economy-pace, (last visited on March 8, 2022).

23 United Nations Environment Assembly of the United Nations Environment Programme, Resolution on Marine Plastic Litter and Microplastics, UNEP/EA/4/Res.6, dated March 15, 2019, *available at*: https://wedocs.unep.org/bitstream/handle/20.500.11822/28471/English.pdf?sequence=3&isAllowed=y, (last visited on March 10, 2022).

of plastics and circulation of all plastic items that are used to economy and out of environment;[24]

- Task Force on Measuring Circular Economy- For the last twenty years, nations across Europe have been endeavouring to orient their waste management laws and policies towards an integrated and preventive measure (especially on life cycle and supply chains of products and materials). In this framework, several international organizations have joined hands to initiate the methodological work for quantifying circular economy. These organizations and their respective works are as follows:[25]

  - o European Environment Agency and Italian Institute for Environmental Protection and Research have initiated the 'Bellagio Process' which aims at constructing consensus on 'what to monitor' and 'how to monitor' several facets of circularity;[26]
  - o Eurostat espoused the methodological work on quantification of circularity rate by adopting European Union Monitoring Framework for the Circular Economy;[27]
  - o Organization of Economic Cooperation and Development's Expert Group on new Generation of Information on Waste and Materials in its work program for the year 2020-21 has encompassed the development of the conceptual frame for circular economy matrices for policymaking and capacity building indicators;[28] and
  - o The narratives on the circular economy have been taken up by the United Nations Committee of Experts on Environmental-Economic Accounting.

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24 Designing out Plastic Pollution, Ellen McArthur Foundation, *available at*: Designing out Plastic Pollution, Ellen McArthur Foundation, (last visited on March 9, 2022).

25 UNECE, Conference of European Statisticians, Terms of Reference for a Task Force on Measuring Circular Economy, ECE/CES/BUR/2021/FEB/7, dated January 18, 2021, *available at*:https://unece.org/sites/default/files/2021-02/07_ToR_TF_Circular_Economy_2021_appr.pdf, (last visited on March 8, 2022).

26 Bellagio Declaration on Circular Economy Monitoring Principles, *available at*: https://www.isprambiente.gov.it/files2021/notizie/bellagio-declaration-final.pdf, (last visited on December 8, 2021).

27 Circular Economy- Overview, *available at*: https://ec.europa.eu/eurostat/web/circular-economy#:~:text=A%20circular%20economy%20aims%20to,the%20better%20for%20our%20environment. (last visited on December 8, 2021).

28 United Nations Economic Commission for Europe, Conference of European Statisticians, Terms of Reference for a Task Force on Measuring Circular Economy, ECE/CES/BUR/2021/FEB/7, dated January 18, 2021, *available at*: https://unece.org/sites/default/files/2021-02/07_ToR_TF_Circular_Economy_2021_appr.pdf, (last visited on December 8, 2021).

The said Committee has three prime objectives that include- mainstreaming environmental-economic accounts and supporting stats; elevating the system of Environmental-Economic Accounts to an international statistical standard and advancing the implementation of System of Environmental-Economic Accounts in countries across the globe by integrating it in governmental policies.[29]

- A new Circular Economy Action Plan for a cleaner and more competitive Europe was adopted with a set of interrelated initiatives to establish a strong and coherent product policy framework that will make sustainable products, services and business models the norm and transform consumption patterns so that no waste is produced in the first place.[30] The centre point of this legislative initiative is to further widen the 'Eco-design Directive' to the broadest possible range of products and ensure its circularity.[31] The Action Plan emphasizes on certain product groups[32] that bears circularity potential and environmental impact as well. Moreover, the said Plan also strives to empower consumers by rendering them with cost-saving opportunities that will steer towards a circular economy with their enhanced participation.[33] Furthermore to enable enhanced circularity in industry, the European Commission will assess options for the promotion of circularity in industrial activities in the context of the review of the Industrial Emissions Directive.[34] The Commission will also:[35]

  - o Facilitate industrial symbiosis by adopting an industry-led reporting and certification system;
  - o Promote the application of digital technologies for mapping, tracking and tracing resources;
  - o Support circular bio-based sector by implementing the Bioeconomy Action Plan;

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29 *Ibid.*

30 The preamble, Communication from The Commission to The European Parliament, The Council, The European Economic and Social Committee and The Committee of The Regions, A new Circular Economy Action Plan For a cleaner and more competitive Europe, *European Commission*, Brussels 11.3.2020, COM(2020) 98, *available at*: https://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1583933814386&uri=COM:2020:98:FIN, (last visited on December 12, 2021).

31 *Ibid.*

32 *Id.*, para 2.1.

33 *Id.,* para 2.2.

34 *Id.,* para 2.3.

35 *Supra* note 30.

- o Promote the uptake of greener technologies by adopting a verification system under European Environmental Technology Verification Scheme; and
- o Promote SMEs to foster circular industrial collaboration.

The European Commission has also presented a 'Circular Electronics Initiative' to mobilize the existing and new electrical and electronic equipment. The same measure has also been adopted for sustainable batteries and vehicles by building it on the Batteries Directive and Batteries Alliance of the European Union. In this regard, the Commission also intends to revise the rules on end-of-life vehicles to encourage a circular business model. In this pretext, the amplitude of the upcoming Comprehensive European Strategy on Sustainable and Smart Mobility will be widened.

The concern of plastics and packaging has been addressed in the said Action Plan by setting in motion a Strategy for Plastics in the Circular Economy that will set in motion, a holistic set of targeted measures to scale down the consumption of plastics and mitigate the plastics pollution at the global level. The existing Circular Plastics Alliance[36] will also be taken into account while setting the said targeted measures. To reduce plastic litter, the European Commission will address the presence of microplastics in the environment by taking several measures.

The Textile Industry has a serious bearing in the transition to Circularity. Hence, the Commission proposed[37] to adopt a comprehensive EU Strategy for Textiles with an aim to strengthen industrial innovation and competitiveness in the textile sector. Similar circular initiatives have been taken to reduce the adverse impacts of resource extraction and restore biological diversity.

III. Some of the National Measures Towards Circular Economy

Several Countries like the Netherlands, France, Italy, Germany, Belgium, Spain etc. have preached for circular economy by promoting several business models.[38] These models include: recovery and recycling, supply-chain, product service, sharing

36 The EU Circular Plastics Alliance (CPA) is a collective endeavour aimed at taking actions to boost the EU market for recycled plastics to 10 million tonnes by 2025, a target set by the European Commission in its 2018 Plastics Strategy. Also *See* https://www.vinylplus.eu/circular-economy/circular-plastics-alliance/ (last visited on March 10, 2022).

37 European Commission, *Strategy for Textiles*, *available at*: https://ec.europa.eu/growth/industry/sustainability/strategy-textiles_en (last visited on March 9, 2022).

38 E Mazur-Wierzbicka, "Circular economy: advancement of European Union countries"33 *Environ Sci Eur* 111 (2021).

platform and product life extension. These models enable the corporations to cut costs, find new revenue streams, risk reduction and increase differentiation.[39]

The National Measure of People's Republic of China

The 13th five-year plan of People's Republic of China lists several policies that can enhance the sustainability of the economy by moving away from a linear economy.[40] One of the circular economy business models that shows the greatest promise in China is the 'sharing economy'.[41] The vehicular sharing services are the forerunners of the said 'sharing economy' and other products are also gradually aligning themselves in a similar direction. According to Bloomberg, 2017, "Sharing services were already estimated to be worth 500 BUSD in China in 2016 and the Chinese government expects that the sharing economy will grow quickly to account for 10% of GDP in 2020."[42]

China's strategic measures towards a circular economy carries several integrated components:

- *13th Five Year Plan*- there are five areas as regards sustainability and circular economy in China's five-year plan. These areas are regarded as the key to address the issue of environmental impact due to industrial activities.

o *Society-wide energy conservation measures*- six energy intensive sectors are under the radar of this measure which aims to comply with the international energy efficiency standards. They are: electricity; steel & iron; building materials; petroleum & petrochemicals; chemicals; and non-ferrous metals industries. In this regard, the five-year plan promotes for a comprehensive energy efficiency effort by 500 such major energy consumers.[43]

o *Conservation of Water*-The aforesaid five-year plan proposes to adopt a district metering area approach to upgrade water pipes and reduce any leakages in 100 cities in China. Thereafter, it aims to implement 100 trails for performance-based water conservation contracting. In this venture to conserve water, the plan also promotes for an upgradation of water conservation equipment in several industrial parks and sectors that are heavily

39 Circular Economy in China: Opportunities for Companies, Business Sweden, *available at*: https://www.swedenabroad.se/globalassets/ambassader/kina-peking/documents/csr-new/business-opportunities-within-circular-economy.pdf, (last visited on December 9, 2021).

40 *Ibid.*

41 *Id.* at 6.

42 China is the future of Sharing Economy, Bloomberg (2017), *available at*: https://www.bloomberg.com/opinion/articles/2017-05-18/china-could-be-the-future-of-the-sharing-economy-j2uyrh27, (last visited on December 6, 2021).

43 *Supra* note 23 at 7.

dependent on water (such as thermal power, textile, and petrochemical etcetera). Furthermore, the said effort also aims to launch projects on desalinization of seawater to address the needs of small islands.

- *Economic Intensive land use for construction activities*- Monitoring and evaluation techniques for intensive and economical land use for construction activities has been realized by the plan and to that effect, a national database of such inspection/evaluation has been brought in the pipeline.
- *Green Mining*- The innovation in mining techniques and adoption of contemporary and sustainable management has been encouraged. 50 key mining zones with rich natural resources will be utilized to develop demonstration zones for green mining.[44]
- *Circular Development*- China has identified 50% of its provincial level industrial parks and 75% of its national industrial parks to promote circular operations.[45] Thereafter, platforms have been realized to promote recycling of urban wastes and construct resource recycling demonstration centres in around 100 cities.[46]

Irrespective of these intentions of China, there are a number of existing national policies that act as barriers for the transition to circular economy. For example, one problem for companies in China is that recycled materials are often considered to be waste, rather than a resource, thereby restricting their use as well as import.[47] Besides this, the concerns pertaining to consumerism is another barrier to this transition. In absence of social acceptance for recycled and reused products, the entire endeavour to have a circular economy is simply meaningless. There is a dire need to promote marketing to indorse the social acceptance towards recycled and reused products.

It cannot be ruled out that sustainable endeavours often lack the economic plausibility to strive with more competitive resource-intensive substitutes. For example, in the textile industry, there are still some technical challenges that need to be solved before the recycling of fabrics can be an economically justified alternative to using virgin fibres. The reason for this is that separating mixed fabrics on a large scale is very complicated, where mechanical recycling will break fibres and they will become shorter than virgin fibres.[48]

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44 *Ibid.*

45 *Ibid.*

46 *Ibid.*

47 *Ibid.*

48 *Id.* at 9.

It is quite evident from the abovementioned activities that China has demonstrated its commitment to develop, enhance and implement circular economy strategies, policies and solutions. However, it is yet to overcome the existing barriers. In spite of these barriers, the continuing endeavour to harness the potential of a circular economy, integrated in the national measures of China is a constructive move towards the transition.

The National Measure of United States of America

The Save our Seas 2.0 Act of the United States defined circular economy as:[49]

> an economy that uses a systems-focussed approach and involves industrial processes and economic activities that:
>
> - are restorative or regenerative by design;
>
> - enable resources used in such processes and activities to maintain their highest values for as long as possible; and
>
> - aim for the elimination of waste through the superior design of materials, products, and systems (including business models)

Furthermore, the same Act also promotes innovation in production and packaging design that reduce the use of raw materials, increase recycled content, encourage reusability, and promote circular economy.[50] In addition, the said law also prioritizes projects that support the concept of a circular economy.[51]

Alongside, the Environmental Protection Agency of the United States has joined hands with several key stakeholders to develop and implement a plan for National Recycling Strategy 2021. This instrument is a critical effort in work to build a circular economy for all.[52] According to this Strategy, "A circular economy is an industrial system that is restorative or regenerative by design and it is a change to the linear model from which resources are mined, made into products, and then thrown away."[53] The goal of the circularity is to reduce the use of materials, redesign the same and make the products, less resource-intensive and regard waste as a resource/raw materials.

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49 Save our Seas 2.0 Act, Public Law No: 116-224, s. 2(1).

50 *Id.*, s. 122(a)(2)(B).

51 *Id.*, Ss 122 (a)(c)(2).

52 Environmental Protection Agency, National Recycling Strategy- Part One of a Series on Building a Circular Economy for All, *available at*: https://www.epa.gov/system/files/documents/2021-11/final-national-recycling-strategy.pdf, (last visited on December 10, 2021).

53 *Ibid.*

The Strategy emphasizes more on the recycling mechanism of United States by outlining five key objectives:[54]

- to improve the markets for recycled commodities- to attain this objective, the Strategy underscores market development that considers environmental benefits and resilience. It aims to increase the manufacturing utilization of recycled material feed stocks domestically and enhance the demand for the same through necessary policy measures and incentive-driven approaches. Additionally, continuing support for research and development of such environmentally sound technologies that indorses circularity;
- to improve materials management infrastructure and escalate collection strategies by understanding the existing recycling infrastructure and necessity and lay emphasis on awareness generation, public as well as private financing for research, development and implementation of effective strategies. It also targets to optimize processing efficiencies in materials recovery establishments and increase the collection of such recyclable materials;
- to reduce the contamination in the recycled materials stream by enhancing outreach and educational activities;
- to augment policy measures for boosting the circular economy by further strengthening the federal coordination in the recycling sector and engaging in studies that reflect social and environmental costs in product pricing. In addition, this objective also intends to increase awareness and private-public partnerships and share good practices on such legislative and policy measures with an effective domestic and international coordination; and
- to regulate measurement and intensify data collection by enumerating and implementing domestic recycling systems with quantified targets and performance indicators. To standardize measurement and improve data collection, the Strategy also aims to create recycled content measures, tracking & reporting plan by building coordination between national and international endeavours and ensuring transparency as well as increasing data availability.

One of the standing factors of this Strategy is to increase equity as regards accessibility to recycling services, stimulate economic welfare and reduce the adverse environmental impacts on underserved communities. In developing this instrument, the Environmental Protection Agency has engaged multiple stakeholders viz., tribal, local and state partners; Association of State and Territorial Solid Waste Management

54 *Ibid.*

Officials, Environmental Council of States, National Tribal Caucus, Tribal Waste and Response Steering Committee, Solid Waste Management Association of North America, Institute of Scrap Recycling Industries, Environmental Research and Education Foundation, GreenBlue Institute, Keep America Beautiful, so on and so forth.

IV. The Regulatory Implications of Circular Economy

The circular economy operationalizes the next generation of environmental law and policy.[55] The circular economy, with its systems approach, cross-media approach, and sector-specific approach, represents the path forward for the next generation of environmental law and policy.[56] Nonetheless, to give credit to this new economic approach would require positive legal and regulatory measures that are dynamic and different from that of the existing linear model. The business-as-usual approach in the existing trend of economic growth is not free from criticism. Not only the human-induced environmental factors but also the escalating demand for goods and services are equally responsible for ecosystem depletion. One of the overlooked factors in the background context is the recent volatility in commodity prices, which can have a devastating impact on companies that, due to high fixed costs, rely on economies of scale.[57]

With the emerging traction towards a circular economy which is well regarded as a new system of restoration and regeneration, there has been a relative change in the mindset of the business entities and policymakers as well, because corporations have started seeing the new approach of circular economy, as a viable option to strategically and successfully address the challenges pertaining to sustainability. The policy frames should encourage to treat the waste as valuable resources. Some of the abovementioned national strategies of developed and developing economies are already framed in the said direction. The rule of optimization in moving from linear to circular approaches is that the tighter the reverse cycle, the lesser would be the embedded energy and labour cost and more would be the materials preserved.[58]

The legal and regulatory challenges to achieve systemic transformation need to be identified, understood and reimagined to deliver outcomes that can lead to a world, which minimises the use of plastics and ensures that no plastic waste ends up in the

55 *Supra* note 1 at 11010.

56 *Ibid.*

57 *Ibid.*

58 *Ibid.*

environment.[59] To formulate regulatory measures for a circular economy, several guiding principles have been espoused:[60]

- embracing environmentally sound greener technologies with a focus on responsible use of natural inputs;

- maximising utilization rate of assets;

- circulating goods, product components and materials at the highest utility; and

- minimizing as well as gradually phasing out the negative externalities.

These guiding principles are a response to the environmental and socio-economic limits of the linear production system and represent the philosophical pillars of a more resource-efficient, environmentally neutral, and economically sound alternative for growth.[61]

Some of the real-time business examples of circular economy are as follows:

- Interface Inc. and the Zoological Society of London collaborated for an initiative called, Net-Works, to handle the rising issue of discarded fishing nets in the least developed countries. Net-Works established a communitarian supply chain for discarded fishing nets to improve the livelihood condition of local fishing communities by providing an interface with innovative source of recycled materials for carpet tiles.[62]

- The Heathrow Airport of London has adopted a new 'Heathrow 2.0' strategy. This strategy aims to become a role model on environmental stewardship and sustainable development. The said strategy is based on the idea of 'a world worth travelling', which involves bold environmental objectives like powering the airport operations with 100 percent renewable energy and operate carbon-neutral fixed assets by 2050.[63]

- Levi Strauss & Co. in 2014, the clothing manufacturer pioneered a programme for financially rewarding suppliers that would score best on a range of sustainability metrics, including those related to environmental

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59 Lovleen Bhullar , Philippe Cullet, Feja Lesniewska & Birsha Ohdedar, "Designing Law and Policy towards Managing Plastics in a Circular Economy" 15 *Law, Environment and Development Journal.* 90 (2019).

60 Marcello Tonelli and Nicolo Cristoni*, Strategic Management and The Circular Economy- Routlegde Research in Strategic Management* 49 (Routledge, New York, 2019).

61 *Ibid.*

62 *Id.* at 50.

63 *Ibid.*

performance. The programme was established by partnering with the International Finance Corporation (IFC) – a branch of the World Bank Group.[64]

- The leading fashion brand, H&M has adopted a sustainability performance assessment program (Sustainability Impact Partnership Programme) to ensure that the suppliers follow the core sustainability policy of H&M and also improve environmental performance.[65]
- Walt Disney's Orlando Park has adopted a good practice of looping by harnessing anaerobic digestion processes. The food waste is collected across the hotels, bars, and restaurants of the complex and then sent to an anaerobic digestion plant nearby, operated by Harvest Power, an organics management company to convert the same into biogas.[66] The plant can process up to 12,000 tons of organic waste annually producing 5.4 megawatts of combined heat and power.[67]
- An Italian based paper manufacturing firm named *Favini* has adopted a product line titled, '*Shiro*' which is manufactured by using recycled waste and non-tree biomass.
- Biopac, a UK based manufacturer and supplier of compostable food packaging and catering disposables have replaced plastics with biodegradable alternatives. Similarly, Tarkett devised an environmentally sound non-toxic carpet backing named 'DessoEcoBase' where it the company has used chalk (a by-product of water purification technique used by Dutch water companies).[68]
- Another example related to recycling is of Tarmac Aerosafe's joint venture in aviation, which dismantles aircrafts and further processes the remaining components for reuse.[69]

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64 *Id.* at 51.

65 *Ibid.*

66 *Ibid.*

67 Green Builder Staff, "Walt Disney World Using Biogas Technology for Food Waste". (March 27, 2016), *available at*: www.greenbuildermedia.com/energy-solutions/walt-disney-world-food-waste-biogas-technology (last visited on December 12, 2021).

68 Desso. n.d. "Cradle to Cradle® Carpet Company Desso Launches New Circular Economy Material Stream", *available at*: www.desso.com/news-events/news-overview/2014/11/cradle-to-cradler-carpetcompanydessolaunches-new-circular-economy-material-stream-of-up-to-20000-tonnes-of-chalk-from-local-watercompanies/ (last visited on December 12, 2021).

69 Partnering organizations include AIRBUS Group, SUEZ environment Group, SNECMA/SAFRAN Group, and Equip'AeroIndustrie.

The given list is inclusive because there are many such business strategies across the globe in recent times that aims to shift towards a circular economy. It is apparent from all these aforesaid activities that the concept of circular economy is very comprehensive because it covers wide a range of activities in and across several sectors which primarily adopts and promotes several exercises such as buy in schemes, reshuffling supply chain management, taking green initiatives such as reuse of trade effluents, providing incentives to customers, generating environmental awareness, recycling discarded products into base materials, refurbishing pre-owned hardware. As cited through several real-time instances, it is clear that strategic measures through multiple segments of regulatory and managerial intervention along with innovative technologies for closing the loop has turned out to be an effective way to attain a circular and resilient future.

Although incentive oriented mitigation measures under international and national laws on climate change have prompted several business entities to take several proactive environmentally sound measures but some countries have taken exclusive legislative approaches to promote a circular economy. China and United States are glowing example on the same. In 2008, the People's Republic of China has enacted the Circular Economy Promotion Law to facilitate, raise resource utilization rate and improve environment and sustainable development. The said law has several key features to promote circularity, which includes:

- Promotion on the premises of being feasible in technology, reasonable in the economy and conductive to saving resources an and protect the environment in accordance with the principle of priority decrement;[70]
- The promotion of circular economy is an important strategy for national socio-economic development which is based on comprehensive planning, reasonable layout, communitarian approach, market orientation, public participation, government promotion and market orientation;[71]
- People's government at and above the county level shall adopt a goal responsibility system for circular economy promotion and take necessary measures in all aspects of funding, investment, planning;[72]
- Enterprises and public entities shall establish a sound management system and take necessary steps to reduce resource consumption and the generation

70 Circular Economy Promotion Law, art. 4, *available at*: https://www.greengrowthknowledge.org/sites/default/files/downloads/policy-database/CHINA%29%20Circular%20Economy%20Promotion%20Law%20%282008%29.pdf (last visited on December 14, 2021).

71 *Id*., art. 3.

72 *Id*., art. 8.

and discharge of wastes and improve their level of recycling and resource recovery;[73]

- The citizens shall foster a better mechanism of resource conservation and environmental protection by ensuring reasonable consumption patterns.[74] In this regard, the said law encourages a reporting and transparency mechanism to ensure effective implementation of environmental norms;
- Furthermore, the said law also directs the State Council to formulate the national circular economy development plan in concert with competent environmental protection department and other related departments under the State Council.[75] The local self-governments shall plan and adjust the local industrial structures of the areas under their respective jurisdiction in consonance with the control objectives of main pollutants discharge, construction land and total water supply set by the people's governments at the next higher level to promote the development of circular economy;[76]
- The general administration for promoting circular economy under the State Council shall establish and improve an assessment index system for circular economy in concert with other relevant departments such as statistics and environmental protection under the State Council;[77] and
- The recycling and resource recovery mechanism has also been enumerated under the said national law. Under Article 29 of the said law, the People's governments above the county level shall formulate comprehensive plans of regional economic layout, reasonably regulate the industrial structure, promote cooperation in comprehensive use of resources between enterprises, and realize highly efficient use and recycling of resources.[78]

India has also adopted several business models in the direction of circular economy. These models include: circular supply chain management, recovery and recycling, product life extension, product as a service and sharing platform.[79] McArthur Foundation has given certain potential development paths for circular economy in India. They are as follows:

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73 *Id*., art. 9.

74 *Id*., art. 10.

75 *Id*., art. 12.

76 *Id*., art. 13.

77 *Id*., art. 14.

78 *Id*., art. 29.

79 FICCI, "Accelerating India's Circular Economy Shift, A Half Trillion USD Opportunity-Future proofing growth in a resource-scarce world" 8, *available at*: https://ficci.in/spdocument/22977/FICCI-Circular-Economy.pdf (last visited on December 15, 2021).

- A circular economy development path in India could create annual value of INR 14 lakh crore in 2030 and INR 40 lakh crore in 2050 compared with present development scenarios;[80]
- By adopting circular economy approaches businesses could achieve material cost savings and increase their profits;[81]
- A circular economy could deliver benefits for the Indian population, such as cheaper products and services and reduced congestion and pollution:[82]
- Leveraging digital technology to enable the circular economy could reinforce India's position as a hub for technology and innovation;[83]
- By actively leveraging and reinforcing circular economy opportunities now, India could move directly to a more effective system and avoid getting locked into linear models and infrastructure;[84] and
- High growth markets like India can achieve competitive advantage over mature economies by moving to a circular economy.[85]

India is one of the emerging economies with immense potential in the field of circularity. The said paper has discussed several strategies and legislative measures on circular economy that gives a clear picture of the transition, where India can also be a key player. However, there are certain practical challenges that can cause certain setbacks for India to adopt the circularity, wholly. These challenges can be addressed by necessary policy measures. On the way to the conclusion, this paper will subsequently identify these key challenges.

V. The Pathway to Circular Economy: Prospects for India

India's nationally determined contributions is on track with the present objectives of the Paris Agreement, 2015. However, the methodology to attain the same is not clear in its submissions. Quite recently, in 2019 India has notified a Draft National Resource Efficiency Policy (hereafter NREP).[86] The said policy document is a positive

80 Ellen McArthur Foundation, Circular Economy in India: Rethinking Growth for Long-term Prosperity, *available at*: https://unctad.org/system/files/official-document/ditc-ted-15112017-cop23-bonn-Circular-economy-in-India.pdf (last visited on December 15, 2021).

81 *Ibid.*

82 *Ibid.*

83 *Ibid.*

84 *Ibid.*

85 *Ibid.*

86 Ministry of Environment, Forest & Climate Change, Draft National Resource Efficiency Policy, 2019: Charting a Resource Efficient Future for Sustainable Development, *available at*: http://www.indiaenvironmentportal.org.in/files/file/Draft-National-Resource.pdf (last visited on December 16, 2021).

move towards circularity. The said Policy seeks to create a facilitative and regulatory environment to mainstream resource efficiency across all sectors by fostering cross-sectoral collaborations, development of policy instruments, action plans and efficient implementation and monitoring frameworks.[87]

The given instrument proposes to create a regulatory body named- National Resource Efficiency Authority that will draw power from the existing umbrella environmental law of India.[88]

The policy aims to implement resource efficiency across all resources including both abiotic and biotic resources, sectors and life cycle stages by drawing inputs from available sectoral studies and thereafter initiate sections on prescribed sectors for early take-up.[89]

Furthermore, the policy document underscores six key principles (6R Principles) to circularity: Reduce; Reuse; Recycle; Refurbish; Redesign & Remanufacture. The resources and materials under the radar of the concerned policy document includes water; land & soil; air; fossil fuels; non-metallic minerals; metals; and biomass. The sectors on the other hand includes: transport; plastic, packaging, electrical & electronic equipment; agriculture, construction; metal industry, renewable energy; textile; food and waste. The identified key indicators under the policy includes resource productivity; domestic material consumption; domestic material extraction and direct material input.[90] Thereafter, the policy also enumerates distinctive roles of government[91], manufacturers and service providers[92], civil society organizations[93], consumers[94], recyclers[95], academia.[96]

The element of extended producer responsibility and shared responsibility has been emphasized to reduce the cost of end-of-life management of the products that is borne by tax payers and municipalities, and also incentivise integration of sustainability measures into the design of products, including design for value recovery.[97] To create the resource efficient business models, India has referred to

87 *Id.*, Statement of Purpose.

88 Environment (Protection) Act, 1986.

89 *Ibid.*

90 *Id.*, Priority Resources, Materials, Sectors, Indicators and Targets.

91 *Id.*, para. 5.2.1.

92 *Id.*, para. 5.2.2.

93 *Id.*, para. 5.2. 3.

94 *Id.*, para 5.2.3.

95 *Id.*, para 5.2.5.

96 *Id.*, para. 5.2.6.

97 *Id.*, para. 6.5.

several country-specific practices (for example landfill tax in UK, Gravel taxation in Sweden, Life Cycle Assessment of the Netherlands). India has plans to design innovative market-based instruments to get the prices right through internalization of environmental costs. In this direction, India proposes certain taxation measures such as incorporation of the cost of externalities in taxes; exemptions of tac for components using recycled materials; tax sops for eco-labelled products; rationalization of tax regime to make secondary raw materials price-competitive; subsidies or tax holidays; disincentivize landfilling; and grants or financial support for environmental sound and resource efficient technologies.[98]

The policy also promotes a 'Green Public Procurement' mechanism that gives preference to procurement of products with lower carbon footprints.[99] To encourage circular procurement, a comprehensive and well-designed national level sustainable public procurement policy has been considered to promote resource efficiency.[100] To support recycling and recovery structure, a mechanism on Material Recovery Facilities has been planned that will be established with best available technology systems for efficient end-of-life collection, effective sorting after collection, and then the optimum suite of physical separation and metallurgical technologies for an economically sound viable recovery of metals from the sorted recyclables.[101]

Financial support is one of the key aspects behind the success of any climate actions. To create resource efficient business models, 'Viability Gap Funding' has been acknowledged. The said funding entails supporting projects till they can be financially self-sustaining, can enable firms to meet high initial costs and address long payback periods and also support scaling up or technology up-gradation.[102] Local governing bodies have been identified to provide seed funding for the circular business models that is viable for local needs.[103] A dedicated green fund and creation of green science parks in collaboration with other stakeholders have also been identified under the said policy instrument.[104] To implement the aspirations and targets of the said document, an Action Plan has been chalked out for the timeline of 2019-2022. While the Draft NREP (2019) is a step in the right direction, learning from the experience of countries spearheading the agenda of a circular economy

98 *Id.*, para. 6.2.

99 *Id.*, para. 6.3.

100 *Ibid.*

101 *Id.*, para. 6.4.

102 *Id.*, para. 6.6.

103 *Ibid.*

104 *Ibid.*

and designing, a resource efficient production system will help in smoothening the transition process further.[105]

VI. The Gaps That Need To Be Filled

The path to circularity in India is not going to be smooth because of its socio-economic, institutional, managerial and technological challenges. Although most of these challenges are quite common to several environmental issues but in the context of circular economy, the institutional challenges are quite prominent. For example, when it comes to the electronics and electrical waste, the major institutional loophole is in the real time application of collection centres. Rule 6 of E- Waste (Management) Rules, 2016 enumerates clear responsibilities of collection centres. According to the said clause, the collection centres are required to collect e-waste on behalf of producer or dismantler or recycler or refurbisher and recycler including those arising from orphaned products.[106] However, many of these designated collection centres are non-functional.[107] On the other hand, the recycling of electronic wastes are very rampant in the unorganized sector. Another crucial drawback is in lack of awareness. Although, there are legislations on waste management, which enunciates extended producers' responsibilities but there is no proper enforcement machinery to ensure its execution. The already burdened pollution control boards have been entrusted with the responsibility to scrutinize the records of e-waste handlers.[108] The need to generate awareness amongst consumers (including bulk consumers) is very necessary. Many educational institutions are oblivious of the very law that mandates filing to returns with respect to E-waste generated and recycled every year.

The buyback options are also not clearly emphasized upon in practice for some time. Mostly, because of the lack of awareness. Buy-back arrangement has been mentioned in laws[109] but the crystal-clear mechanism is yet to take a concrete shape. Government of Maharashtra took the lead in buy- back scheme by creating a buyback depository system which is prevalent in 40 countries across the world.[110] Similarly, Government of Himachal Pradesh has also decided to buy Non-recyclable

105 Amrita Goldar and Diya Dasgupta, "Material Effiiciency Approach towards Reducing Emissions: G20 Experiences and lessons for India" 2 *ICRIER Policy Brief* 22 (2021).

106 E-Waste (Management) Rules, 2016, rule 6.

107 Kuldip Singh Sangwan, "Wanted for India: a circular economy", *available at*: https://www.downtoearth.org.in/blog/economy/wanted-for-india-a-circular-economy-65355, (last visited on March 12, 2022).

108 E-Waste (Management) Rules, 2016, rule 6(5).

109 E-Waste (Management) Rules, 2016, rule 5(1)(d).

110 India's first plastic buyback scheme to come into force on Wednesday, *The Times of India*, July 9, 2018.

and Single Use Plastic Waste at the rate of INR 75 per kilogram through registered rag pickers and individual households.[111]

Under the Policy, the following type of waste plastic will be purchased by the Urban Local Bodies:[112]

a. All type of packaging plastic waste of items such as bread, cakes, biscuit, cookies, namkeen, kurkure, chips/ wafers, candies, mattresses, cheese puffs, ice cream, ice cream candies, noodles, cereals/cornflakes/breakfast cereals coated with sugar, confectionary items.

b. Cleaned and dry packaging, pouches/packets of liquids such as milk, oil, shampoo, hand wash, liquid soap, curd, butter milk, juice etc.

Furthermore, in 2019 a Bill titled, 'The Mandatory Buyback and Recycling of Packaging Material Bill' was proposed by Member of Parliament, Shri Vishnu Dayal Ram but the concerned bill was limited to the responsibilities of Fast Moving Consumer Goods (FMCG) with a view to reduce pollution and ensure a sense of accountability, responsibility and awareness in the individuals and companies.[113] On March 18th, 2021 the Niti Ayog released a note titled, 'Govt Driving Transition from Linear to Circular Economy'[114]. The said release was in line with India's *aatmanirbhar Bharat* endeavour for sustainable growth. To expedite the transition of the country from a linear to a circular economy, eleven committees have been formed—to be led by the concerned line ministries and comprising officials from MoEFCC and NITI Aayog, domain experts, academics and industry representatives—for eleven focus areas, namely:[115]

1. Municipal Solid Waste and Liquid Waste under Ministry of Housing and Urban Affairs;
2. Scrap Metal under Ministry of Steel;
3. Electronic Waste under Ministry of Electronics and Information Technology;
4. Lithium Ion Batteries under *Niti Aayog*;

111 Department of Environment, Science & Technology, Government of Himachal Pradesh, Buy-Back Policy, 2019, *available at*: http://dest.hp.gov.in/?q=buy-back-policy, (last visited on March 10, 2022).

112 *Ibid.*

113 The Mandatory Buyback and Recycling Packaging Material Bill, 2019, Statement of Objects and Reasons *available at:* http://164.100.47.4/billstexts/lsbilltexts/asintroduced/427LS%20As%20Int....pdf (last visited on March 12, 2022).

114 NITI Aayog, Govt Driving Transition from Linear to Circular Economy, *available at*: https://pib.gov.in/PressReleasePage.aspx?PRID=1705772, (last visited on March 12, 2022).

115 *Ibid.*

5. Solar Panels under Ministry of New and Renewable Energy;
6. Gypsum under Department for Promotion of Industry and Internal Trade;
7. Toxic and Hazardous Industrial Waste under Department of Chemicals and Petrochemicals;
8. Used Oil Waste under Ministry of Petroleum and Natural Gas;
9. Agriculture Waste under Ministry of Agriculture and Farmers' Welfare;
10. Tyre and Rubber Recycling under Department of Promotion of Industry and Internal Trade; and
11. End of Life Vehicles under Ministry of Road Transport and Highways.

These respective concerned line ministries have been encouraged to prepare comprehensive action plans for the said transition from linear to circular economy by highlighting necessary modalities to ensure the effective implementation of their findings and recommendations.[116] Therefore, we are yet to see the final outcomes from these concerned authorities in near future. It is now necessary for these ministries and departments to revolutionize the material flow in the chain of manufacturing and gradually shift towards a circular economy which can render multifaceted ecological and economic benefits.

VII. Conclusion

Irrespective of all the pro-active approaches towards circular economy, there are certain challenges for the implementation. There are inadequate possibilities for substitutes to empower organizations to generate fully recyclable products. There is a lack of awareness amongst consumers. For example, a substantial portion of customers are still unaware of second, third and even forth use of recycled and extended product lives of textiles. There is another major challenge in implementation of circularity, which is related to high prices for recycled resources (for example., recycled polymer). In many cases, governmental support is also absent to promote circularity.

Other challenges for the implementation of circularity also include finding suppliers who are eager to invest in the development of necessary substitutes. The promotion of research and development to ensure circularity has not attained that impetus. This has led to technological limitations. There is also a challenge of missing recycling infrastructure that ensures reuse and recovery in certain sectors. To mobilize the concept of circularity into practical application, there is a necessity to move from niche to mass market. The circular products have not been expanded in the markets

116 *Ibid.*

because of the preceding challenges. The circulatable resources are expensive in comparison to conventional products. In addition, the belief in the circular concept is not yet firm due to lack of policy and regulatory motivation. Although, there are some growing efforts but they are not sufficient to replace the conventional modes. Some organizations are facing difficulty in collaborations with suppliers because it is difficult to convince many suppliers to disclose the ingredients that use in manufacturing of products. Hence, there is a dire need for a systems approach that can encompass several industrial groups (cross-industrial collaboration) in it because circularity cannot be attained by a singular organization. The countries should reconsider and rethink the design of products now in a way that can be modular and easily re-engineerable. These aforementioned challenges are evolving incessantly and dynamic approaches are the need of the hour. The effective implementation is the only key, triggered by a stringent political will, which will emphasize more on obligations, rather than just privileges.

Some core suggestions in this regard may be considered from enviro-legal perspectives:

Firstly, there should be a critical evaluation of legislative interest by evaluating environmental hazards related to those eleven core focus areas mentioned by *Niti Aayog*;

Secondly, there should best practice documentation and a comparative approach to understand several aspects amongst other countries with respect to those focus sectors should be prepared;

Thirdly, India should focus more on converging industrial health, safety, environmental orientation with contemporary technological development;

Fourthly, the pre-existing recycling rules relating to waste already emphasizes upon extended producers' responsibility but it is not yet fully operational. Hence, proper legislative tools should be adopted to ensure collective responsibility of not only producers but also consumer and several major stakeholders;

Fifthly, there is a lack of harmonized definitions and at the same time conflicting interests among several stakeholders and counterparts. It is very necessary to ensure transparency by promoting right to information as regards environmental decision making; and

Lastly, the monitoring and controlling mechanisms are failing or absolutely lacking. It is also necessary to determine incurring costs that is to be internalized through recycling process and also improvise eco and circular design, with special emphasis on packaging industry.

Now the only question that remains is on credit strength that is required to support the necessity of the individual financial instrument for shifting towards circular economy because credit evaluation of individual players finally gets down to cash flow and unless there are government incentives, credits or even value added tax system, the transition is not possible. Government, after all, exists within the framework of an entire system or concept of how economies should operate: how collaboration will be enforced; how people will be forced or led by standards to do things; how a partially state-owned enterprise does or doesn't have to comply; or how a partially state-imposed process like an environmental impact statement will be imposed in the context of the application of the more encompassing life-cycle closed-loop concept.[117] The extent of government intervention in transactional and manufacturing activities is an appropriate activity when it extends beyond health and safety to resource efficiency and different concepts of equity.[118]

To ensure a circular and resilient future, we need to be dynamic and result-oriented but we are proceeding at a snail's pace and such slow progression will take a heavy toll on environment and the human rights associated with that environment.

117 *Supra* note 1 at 11023.

118 *Ibid.*

PROTECTION OF ENVIRONMENT DURING ARMED CONFLICT

Ananyo Mitra[*]

Abstract

Ignited oil fields in Kuwait, defoliated jungles in Vietnam, the depredations in Yugoslavia, emptied marshes in southern Iraq, and the recent deplorable damage in Syria - the environment is a victim and a tool of armed conflict. It is axiomatic that the environment suffers from warfare. The primary rule of environmental protection in armed conflicts may be deduced from the basic principles of distinction, proportionality, avoidance of suffering and humanity but international humanitarian law speaks very little on this issue. There are legal mechanisms to "prohibit, but not prevent".

New activities aimed at safeguarding the environment during armed conflict should focus on the re-affirmation of existing rules and their effective implementation. This article critically analyses the steps towards achieving the goal of prevention and prosecution of environmental destruction and addresses the question that, whether a state is liable to pay reparations to the affected State. The article strives to propose changes in the existing law designed to diminish environmental damage during warfare and how the prevailing rules can be modified to provide more effective and efficient protection of the environment during times of armed conflict.

I. Introduction

ENVIRONMENTAL DESTRUCTION during warfare is hardly new, and rules aiming at controlling the impact of warfare on the environment can be found from the earliest civilisations. While environmental damage during warfare is a perennial problem, extent and depth of public concern about it is a fairly recent phenomenon.

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There has been significant damage to the environment by state and non-state entities during armed conflicts and some wars have witnessed unprecedented environmental devastation. The Vietnamese war, the second Gulf Armed Conflict, wars and armed conflicts in former Yugoslavia are a few examples of conflicts that witnessed widespread destruction of the environment and use of it and its components as weapons. The development and codification of many new and additional rules of armed conflicts got their impetus from the widespread environmental damage which took place in Vietnam. Whether these developments were adequate to provide effective protection to environment and its components in armed conflicts were not seriously tested until the outbreak of hostilities in the second Gulf War which caused severe environmental devastation. The challenges facing international law rules in this area were so serious that many have expressed the view that such rules were not capable of protecting the environment in armed conflicts.

In fact, the international community faced the challenges posed by second Gulf War and dealt with it through collective security measures under chapter seven of the U.N. Charter.[1] Even environmental damage and the responsibility of Iraq in this connection were among the issues dealt with by the Security Council. The U.N. Compensation Commission was established to deal with claims against Iraq including claims for environmental loss. These developments reshaped the rules of international law concerning international responsibility for environmental damage as a result of warfare.

The object and purpose of this research, therefore, is to clarify the relevant rules of law, highlight the inconsistencies, if any, and suggest changes in the existing law designed to diminish environmental damage during warfare and how the prevailing rules can be modified to provide more effective and efficient protection of the environment during times of armed conflict.

The first part of the paper highlights a brief history of environmental damages due to war and the different methods of environmental warfare. Second, the paper providesan analysis of the applicable pre-eminent humanitarian law treaties and incidental laws. The third limb focuses on how international environmental law addresses wartime situations and applicability of environmental law treaties during warfare. The penultimate section delves into the issue of how effectively the current body of law can punish the perpetrators involved environmental warfare. Lastly, the final section addresses the current scenario along with recommendations and suggestions for environmental protection.

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1 Chapter VII of the UN Charter contains principal provisions regarding the UN Collective Security System. It empowers the UN Security Council to undertake coercive steps against threats to peace, breaches of peace, and acts of aggression.

II. History of Environmental Destruction During Warfare

Environmental warfare refers to the manipulation of the environment for hostile military purposes.[2] Throughout history, the environment has been a continuous victim of military strategy, often to thwart advancing troops or cause widespread damage to an enemy.

The first recorded use of environmental warfare was in the Persian-Scythian War of 512 B.C., in which the Scythians, as they retreated, practiced self-inflicted scorched earth policy in an effort to hinder the Persian advance.[3] Later, at the beginning of modern conflicts, during the Franco-Dutch War of 1672-1678, dikes and dams in the Netherlands were broken by the Dutch to create large scale flooding and impede the advance of the French forces.[4]

The use of environment as an instrument of war is also not uncommon to the United States (U.S.). In the U.S.-Navaho Wars of 1860-1864, the United States deliberately destroyed sheep and other livestock, as well as fruit orchards and other crops of the Navaho, as part of its successful strategy of subjugation.[5] During the United States Civil War, the Union army practiced a scorched earth policy in an attempt to starve the rebellious states.[6]

Destruction of dams was a common tactic in World War II. The British in May 1943 demolished two major dams in the Ruhr Valley, a major industrial and mining area in Germany, destroying 125 factories, twenty-five bridges, and power-stations; flooding coal mines; and killing 1,294 Germans.[7]

Probably the most extensive use of the environment as a tool of warfare occurred during the second Indo-China War of 1961-1975, also known as the 'Vietnam Conflict'. During this war, the U.S. utilised a strategy which included massive rural

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2 Silja Vöneky and Rüdiger Wolfrum, "Environment, Protection in Armed Conflict" in Wolfrum (ed), *Max Planck Encyclopaedia of Public International Law* 3(Oxford University Press,2016).

3 Stockholm International Peace Research Institute, *Warfare in a Fragile World: Military Impact on the Human Environment* 14(Taylor & Francis, 1980).

4 Katherine M. Kelly, "Declaring War on the Environment: The Failure of International Environmental Treaties During the Persian Gulf War" 7(4) *American University International Law Review* 921, 922 (1992).

5 *Supra* note 3 at 16.

6 Scorched earth policy is a warfare strategy through which armed forces destroy towns, croplands, transport routes, agricultural lands, and general infrastructure to deprive the belligerent forces of food, shelter, fuel, and other valuable resources.

7 Marc Ross, "Environmental Warfare and the Persian Gulf War: Possible Remedies to Combat Intentional Destruction of the Environment" 10(3) *Dickinson Journal of International Law* 518 (1992).

bombing, chemical and mechanical deforestation, large scale crop destruction, and intentional disruption of natural and human ecologies.[8]

As is evident, from the Persian-Scythian war to the second Indo-China war, states and armed forces have often more than seldom capitalised on the environment to win battles, which in turn has taken a huge toll on not only the environment, but also on the lives of those individuals who depend on it for their daily bread. However, due to the modernisation of munitions and warfare, the methods and ways states once employed are dated. Asymmetric and contemporary warfare has only prompted them and non-state entities to use innovative methods in environmental warfare, which will be discussed in the succeeding section.

III. Different Methods of Environmental Warfare

The uses of the environment for military purposes are abundant and involve polluting and damaging the air, water, and land in the area where war is waged. While some methods have been employed, such as burning croplands, killing livestock, and damaging dams, others are in the process of being developed. Modern conflicts engender states and non-state entities to update the ways through which they can damage their opponent the most. The most expedient military manipulations of the environment are those in which a relatively modest expenditure of triggering energy leads to a release of a substantially greater amount of directed destructive energy.[9]

The 5th session of the U.N. Environment Assembly, held between 28th February to 2nd March 2022, had a discussion on how the ongoing armed conflict between Russian Federation and Ukraine could have devasting effects on the environment. The representative speaking on behalf of the European Union and few other states remarked that the ecological consequences of the act of aggression by Russia are likely to have immediate and long term effects human lives and health.[10] Even before the recent Russian invasion of Ukraine, the armed conflict situation in Ukraine's eastern Donbas region had added a layer of significant and partially irreversible damage to local ecosystems, and had led to the destruction of thousands

8 *Supra* note 3 at 10.

9 *Supra* note 2.

10 United Nations Environment Assembly, United Nations Environment Programme, *Proceedings of the United Nations Environment Assembly at its resumed fifth session*, UN Doc UNEP/EA.5/28 (March 8, 2022).

of hectares of forests.[11] This has been due to the pollution from the combustion of large amounts of ammunition, and flooding of industrial plants and coal mines.[12]

Future environmental warfare could involve atmospheric modifications, including fog and cloud dispersion or generation, rain or snow making, and control of lightning and climate modifications. It could also involve modification of the oceans, which would include changes in the physical, chemical, or electrical parameters of the waterbodies, the addition of radioactive materials into seas and oceans, or the generation of large tidal waves. Other options of futuristic environmental warfare might entail the manipulation of the land masses and associated water systems, and use of animals in environmental warfare. Latter was the case in the first and second world wars where weapons such as the pigeon guided missiles, napalm bats, and explosive dogs were subjects of experimentation.[13]

IV. Conventional and Customary Laws to Protect the Environment in Armed Conflict

Rules specifically addressing the natural environment

The 1977 Additional Protocol I to the 1949 Geneva Convention

The rise of environmental concerns during the early seventies of the twentieth century and the international reaction to widespread and severe environmental damage caused by the war in Vietnam have influenced the formulation of the 1977 Additional Protocol to the Geneva Conventions of August 12, 1949 relating to the Protection of Victims of International Armed Conflicts (Protocol I). This Protocol includes provisions concerning the protection of the environment and environmental objects during armed conflicts.

Article 54 of Protocol I deals with the protection of objects indispensable to the survival of the civilian population; paragraph 2 of this article states:

> It is prohibited to attack, destroy, remove or render useless objects indispensable to the survival of the civilian population, such as foodstuffs, agricultural area for the production of foodstuffs, crops, livestock, drinking water installations and supplies and irrigation works, for the specific purpose of denying them for their sustenance value

11 Nickolai Denisov and Otto Simonett, "*The Ukraine conflict's legacy of environmental damage and pollutants*", April 2015, *available at*: https://ceobs.org/the-ukraine-conflicts-legacy-of-environmental-damage-and-pollutants/ (last visited on May 22, 2022).

12 United Nations Environment Programme, "*Ukraine's Donbas bears the brunt of toxic armed conflict*", July 25, 2018, *available at*: https://www.unep.org/pt-br/node/22944 (last visited on May 21, 2022).

13 *Supra* note 5 at 520.

> to the civilian population or to the adverse Party, whatever the motive, whether in order to starve out civilians, to cause them to move away, or for any other motive.

Although it appears that this provision offers a high-level of protection to the objects or targets stated in it, qualifications introduced in the same paragraph and other paragraphs in Article 54 severely weakens this protection. The first qualification was stated in paragraph 2 itself when it declared that the prohibition against the attack or destruction of the said objects applies "for the specific purpose of denying them for their sustenance value to the civilian population or to adverse Party"; therefore, if the purpose is not to deprive civilians of the sustenance value of such objects, then such objects may be subjected to any attack or destruction which would be legal unless proscribed by some other rules of law. The exceptions to the prohibition are stated in paragraphs 3 and 5 of the same article. Per paragraph 3, the object, otherwise protected, may be lawfully attacked or destroyed if used by the enemy as sustenance solely for the members of its armed forces or if used to directly support the enemy's military action. Similarly, per paragraph 5, the vital requirements of any party to an armed conflict in the defence of its national territory against invasion allows that party to attack or destroy objects, otherwise protected under paragraph 2, provided that such objects are located within territory under its control. Itmay be added to this exception that an attack against or destruction of such protected objects may be tolerated under the requirements of national self-defence even if attacked or destroyed object is located within the enemy's territory.

Article 56 of Protocol 1 provides for works and installations containing dangerous forces, namely dams, dykes and nuclear electrical generating stations; paragraph 1 of this article reads:

> Works or installations containing dangerous force, namely dams, dykes and nuclear electrical generating stations, shall not be made the object of attack, even where these objects are military objectives, if such attack may cause the release of dangerous forces and consequent severe losses among the civilian population. Other military objectives located at or in the vicinity of these works or installations shall not be made the object of attack if such attack may cause the release of dangerous force from the works or installations and consequent severe losses among the civilian population.

But an attack may lawfully be made against a nuclear electrical generating station "only if it provides electric power in regular, significant and direct support of military operations" provided that "such attack is the only feasible way to terminate

such support".[14] Additionally, dams and dykes may be subjected to a lawful attack if they are used for other than their normal functions and in "regular, significant and direct support of military operations" provided that such attack is "the only feasible way to terminate such support".[15]

Article 55 of Protocol I deals with the protection of the natural environment; it states:

> 1. Care shall be taken in warfare to protect the natural environment against widespread, long-term and severe damage. This protection includes a prohibition of the use of methods of means of warfare which are intended or may be expected to cause such damage to natural environment and thereby to prejudice the health or survival of the population.
>
> 2. Attacks against the natural environment by way of reprisals are prohibited.

In this connection, article 35(3) reads: "It is prohibited to employ methods or means of warfare which are intended, may be expected, to cause widespread, long term and severe damage to the natural environment". Hence, Protocol I protects the natural environment against only "widespread, long-term and severe damage".

It should be stressed that Protocol I did not define the terms "widespread", "long-term", or "severe". The travaux to the Protocol included an explanation of the term "long-term" as being the element of duration which was considered by some to be measured in decades. The travaux did not define or explain the other two terms. Additionally, it appeared to be a widely shared assumption that battlefield damage incidental to conventional warfare would not normally be proscribed by this provision.[16]

Therefore, one is inclined to accept the view that the definitions of these terms would be the same as the identical or similar terms included in the Understanding annexed to the Convention on the Prohibition of Military or Any other hostile Use of Environmental Modification Techniques (the En-Mod Convention).[17]

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14 Protocol Additional to the Geneva Conventions of 12 August 1949, and relating to the Protection of Victims of International Armed Conflicts (Protocol I), 1977, art. 56(2)(b).

15 *Id.*, art. 56(2)(a).

16 *Id.*, art. 56(2)(c).

17 Diplomatic Conference, Geneva, *Reaffirmation and Development of International Humanitarian Law Applicable in Armed Conflicts: Report of Committee III, Second Session*, CDDH/215/Rev. 1 (1974-1977).

"Widespread" would thus mean "encompassing an area on the scale of several hundred square kilometres"; "long-term" or "long-lasting" would mean "lasting for a period of months, or approximately a season"; and "severe" would mean "involving serious or significant disruption or harm to human life, natural and economic resources or other assets".[18]

According to the aforementioned, these conventional rules included in Articles 35(3) and 55 of Protocol I are binding upon all states and all parties to any war or armed conflicts irrespective of whether they have become parties to Protocol I as these rules constitute part of the general international law.[19] Additionally, the International Court of Justice (*hereinafter*" ICJ") seems to have accepted the view that the provisions of the Additional Protocols are being expressive of the Hague law and Geneva law and they, therefore, constitute part of customary international law.

Thus, it is evident that Protocol I, particularly Articles 35(3) and 55, as expressive of the general international law, bestows upon the natural environment in any war situation total and complete protection against the use or employment of any methods or means of warfare which are intended or may be expected to cause widespread, long-term and severe damage.

The 1977 En-Mod Convention

The En-Mod Convention is designed to combat the use of the environment as a method or means of warfare.

In order to achieve this aim, the En-Mod Convention stipulated in its first article that:

> 1. Each State Party to this Convention undertakes not to engage in military or any other hostile use of environmental modification techniques having widespread, long-lasting or severe effects as the means of destruction, damage, or injury to any other state party.
>
> 2. Each State Party to this Convention undertakes not to assist, encourage or induce any State, group of States or international organisations to engage in activities contrary to the provisions of paragraph 1 of this article.

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18 Convention on the Prohibition of Military or Any Other Hostile Use of Environmental Modification Techniques, 1978.

19 Carl Bruch, Cymie R Payne, and Britta Sjöstedt, "Armed Conflict and the Environment" in Lavanya Rajamani and Jacqueline Peel, *The Oxford Handbook of International Environment Law* 872 (Oxford University Press, 2nd edn., 2021).

Accordingly, the En-Mod Convention prohibits actions which have "widespread, long-lasting or severe effects as the means of destruction, damage or injury"; therefore it is enough for effect/s to satisfy one qualification only, either widespread or long-lasting, or severe. The meanings of these terms have already been discussed above.[20] In addition, the environmental modification techniques which are prohibited under the En-Mod Convention must be directed at achieving destruction, damage or injury; the element of "intent" must, therefore, exist in order to satisfy the requirements of "prohibition" under the En-Mod Convention.[21] As a result, the Convention does not prohibit or hinder the use of environmental modification techniques for peaceful purposes.

The term "environmental modification techniques" was defined in the second article of the En-Mod Convention to mean "any technique for changing through the deliberate manipulation of natural processes the dynamics, composition or structure of the earth, including its biota, lithosphere, hydrosphere and atmosphere, or of outer space".

In light of the aforementioned, the prohibition of military use of environmental modification techniques having widespread, long-lasting or severe effects as the means of destruction, damage, or injury to any other State Party serves three purposes; (a) environmental purposes, (b) arms control and disarmament, and (c) establishing the international responsibility of the violators during war. Thus if a state uses environmental modification techniques as a method or means of warfare to achieve war or military objective, that state would be internationally responsible for any destruction, damage or injury to the enemy state, or to any other state.

Other Relevant Treaty Law

A number of supplementary provisions provide indirect protection of the environment during armed conflict.

Protocol III on the Prohibitions or Restrictions on the Use of Incendiary Weapons Annexed to the Convention on Conventional Weapons, 1983

Article 2(4) of the Protocol provides that:[22]

> It is prohibited to make forests or other kinds of plant cover the object of attack by incendiary weapons except when such natural

20 Compare with art, 35 para. 3 and art. 55 of 1977 Additional Protocol I.

21 These definitions are included in the Understandings (Understanding relating to Article 1) embodied in the Annex to the En-Mod Convention.

22 Yoram Dinstein, *The Conducts of Hostilities under the Law of International Armed Conflict* (Cambridge University Press, 3rd edn. 2016).

> elements are used to cover, conceal or camouflage combatants or other military objectives, or are themselves military objectives.

This is a very limited provision, applying only to "forests or other kinds of plant cover" and granting protection only against incendiary weapons. If the forest is used in military operations for cover, concealment or camouflage,[23] it is a legitimate target. Even though this provision has a very narrow application, it is significant because it protects a specific portion of the environment from a particular type of weapon.[24]

The Chemical Weapons Convention 1983 ("CWC")

The seventh paragraph of the CWC's preamble recognises the prohibition of the use of herbicides in warfare, as embodied in agreements and relevant principles of international law.[25] The reference to the prohibition of herbicides in agreements is assumed to be an allusion to the En-Mod Convention and Protocol I.[26] What is of greater importance; however, according to Dinstein, is the reference to "relevant principles of international law" as this creates an "inescapable connotation" that the prohibition of herbicide use in armed conflict is now embodied in customary international law.[27]

Other Relevant Instruments and Provisions

Principle 21 of the Stockholm Declaration of 1972[28] and Principle 2 of the Rio Declaration 1992[29] express the common conviction of states concerned that they have a duty "to ensure that activities within their jurisdiction or control do not cause damage to the environment of other States or of areas beyond the limits of national jurisdiction". Similarly, principle 23 of the Rio Declaration states: the environment and natural resources of people under oppression, domination and occupation shall be protected.[30] Principle 24 provides that states are to respect international law conferring protection on the environment even during times of warfare.

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23 *Ibid.*

24 E. T. Jensen, "The International Law of Environmental Warfare: Active and Passive Damage During Armed Conflict" 38 *Vanderbilt Journal of Transnational Law* 174 (2005).

25 Convention on the Prohibition of the Development, Production and Stockpiling of Bacteriological (Biological) and Toxin Weapons and on their Destruction, 1972.

26 *Ibid.*

27 *Supra* note 22.

28 United Nations Conference on Human Environment, Stockholm, *Declaration ofthe United Nations Conference on the Human Environment*, UN Doc A/CONF.48/14 (June 16, 1972), principle 21.

29 United Nations Conference on Environment and Development, Rio de Janeiro, *Rio Declaration on Environment and Development*, UN Doc A/CONF. 151/26 (June 13, 1992), principle 2.

30 *Id.*, principle 23.

These statements are "a clear challenge for those States willing to embrace" them, and are often "quoted as authority for requiring compliance with various peacetime environmental rules during armed conflict".[31]

The ICJ in the *Nuclear Weapons Case*[32] made special note of the UN General Assembly Resolution on the Protection of the Environment in Times of Armed Conflict,[33] thereby affirming that environmental considerations must be taken into account in implementing the principles of law applicable in armed conflict.[34] The Resolution upholds that "destruction of the environment, not justified by military necessity and carried out wantonly, is clearly contrary to existing international law".[35]

Customary International Law

The Martens Clause

Martens Clause, that has been included in the second paragraph of Article 1 of Protocol I to the Geneva Conventions, 1977, provides that:

> In cases not covered by this Protocol or by other international agreements, civilians and combatants remain under the protection and authority of the principles of international law derived from established custom, from the principles of humanity and from the dictates of public conscience.

The importance of the Martens Clause is represented in the fact that it manifests the incorporation of customary international law rules protecting civilians and combatants into conventional norms and the application of such rules to States that have not adhered to treaties governing or regulating the laws of war. The applicability of principles emerging out of Martens Clause *vis-á-vis* the protection of the environment and international responsibility for environmental damage resulting from armed conflict follows below.

The Principle of Humanity

The principle of humanity prohibits the use, in the conduct of warfare or hostilities, of any weapon or tactic which causes unnecessary suffering to its victims "whether

31 *Supra* note 19 at 163.

32 *Legality of the Threat or Use of Nuclear Weapons (Advisory Opinion)* [1996] ICJ Rep 226.

33 This Resolution was adopted in 1993 through which the UN General Assembly urged all members states to comply with the existing international law applicable to the protection of environment during armed conflict, and to incorporate provisions of international law applicable to the protection of environment into their military manuals.

34 *Ibid.*

35 *Ibid.*

this by way of prolonged or painful death or is in a form calculated to cause severe fright or terror". The principle of humanity, as described above, has been recognised as rooted in customary international law binding upon all states. As a result, all forms of environmental warfare and deliberate environmental damage or destruction are contrary to the international humanitarian law as they are likely to cause unnecessary injury or suffering or severe fright or terror. Consequently, any state which engages in environmental warfare or causes deliberate environmental damage or destruction must be legally held in breach of customary humanitarian law and responsible for any such damage or destruction.

The Principle of Proportionality

In the context of warfare, proportionality means that weapons, tactics, methods or means of attack must be selected in type, size, and degree that is proportionate to the military objectives to be achieved; and excessive damage or destruction is prohibited and contrary to the customary humanitarian law. Any state violating this rule and causes damage or destruction to the environment of another state must, therefore, be held responsible.[36]

The Principle of Discrimination

According to the principle of discrimination, weapons, tactics, means and/or methods of attack or warfare employed by any of the parties to a military conflict must clearly discriminate between military and non-military targets as non-military targets are not legitimate objects of a military attack. Consequently, "indiscriminate warfare is illegal per se".[37] Thus, non-military targets including the environment may not be subject to military attacks. Article 48 of the 1977 Protocol I incorporated the principle of discrimination when it declared that parties to a military conflict "shall direct their operations only against military objectives". This Protocol proscribed attacks on the natural environment as it has been pointed out earlier.

The Principle of Necessity

The principle of necessity in the context of warfare differs from the requirements of necessity as one of the essential prerequisites of self-defence as illustrated earlier. The principle of necessity in the context of warfare refers to military necessities, thus, only weapons, tactics, methods and/or means of attack or warfare which are not prohibited by international law and without which military objectives cannot be accomplished are allowed to be used or employed. Any excessive use or

36 *Military and Paramilitary Activities in and against Nicaragua (Nicaragua* v. *United States of America) (Merits)* [1986] ICJ Rep 14.

37 *Prosecutor* v. *Galiæ (Judgement)* (2006) IT-98-29-A ICTY, para 130.

employment of such weapons and tactics which are not necessary to achieve the military objective is prohibited.

Article 23(g) of the Regulations Respecting the Laws and Customs of War on Land annexed to the 1899 Hague Convention (II) and the 1907 Hague Convention (IV) and Article 53 of the 1949 Geneva Civilians Convention (IV) include a codification of the customary law principle of military necessity. Thus it is prohibited to "destroy or seize the enemy's property, unless such destruction or seizure be imperatively demanded by the necessities of war". Moreover, any destruction by the Occupying Power of real or personal property belonging individually or collectively to private persons, or to the State or to other public authorities, or to social or cooperative organisations, is prohibited, except where such destruction is rendered absolutely necessary by military operations.

Consequently, any destruction of the environment or any use of any method or techniques of environmental warfare which is not absolutely necessary to repel and defeat the aggressor must be considered unlawful and prohibited.

V. Application of International Environmental Law

International environmental law (IEL) covers numerous cases of environmental damage that give rise to responsibility and potential liability during times of peace. The question is whether and to what extent these liability principles may apply for similar damage resulting from armed conflict. For example, if a power station is destroyed during a war or other military operation, should the subsequent oil spill trigger the liability regime of the International Convention for the Prevention of Pollution of the Sea by Oil? Would a regional seas agreement, such as the Barcelona Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean apply, and if so, how? Similarly, the World Heritage Convention protects sites of cultural and natural heritage, but does it apply during wartime? Would the Convention prohibit the burning of a national park containing a World Heritage site during the course of military activities? The question of the potential application of IEL during armed conflict is complicated by the fact that environmental law is still maturing at both the domestic and international levels.

In the place of formal actions, recent changes in the international perspective of whether IEL applies during armed conflict have occurred largely through scholarship and commentary on the subject. There has been a shift in the historic belief that laws designed to apply during peace and the law of war were mutually exclusive to the fact that there are areas where the two overlap, times when the law of war applies *as well as* some peacetime law.

The Application of International Environmental Law Treaties during Armed Conflict

It is unclear whether international environmental law treaties continue to apply in time of armed conflict.[38] In the *Nuclear Weapons* Advisory Opinion, the ICJ itself avoided giving a clear answer to the problem.[39] Only exceptionally do some treaties expressly regulate the matter. For example, Article 29 of the Convention on International Watercourses, 1997 limits itself to provide that:[40]

> international watercourses and related installations, facilities and other works shall enjoy the protection accorded by principles and rules of international law applicable in international and non-international armed conflict and shall not be used in violation of those principles and rules.

The treaty relations between belligerents *inter se* and between belligerents and neutral states must be dealt with separately. With regard to the latter, treaty obligations remain generally unaffected by hostilities. According to the general principles of international law provided for in the 1994 ICRC Guidelines for Military Manuals and Instructions on the Protection of the Environment in Times of Armed:

> obligations relating to the protection of the environment towards States not party to an armed conflict (e.g., neighbouring States) and in relation to areas beyond the limits of national jurisdiction […] are not affected by the existence of the armed conflict to the extent that they are not inconsistent with the applicable law of armed conflict.

As to the treaty obligations between belligerents, the 1994 ICRC Guidelines state that "international environmental agreements and relevant rules of customary law *may* continue to be applicable in times of armed conflict to the extent that they are not inconsistent with the applicable law of armed conflict". At least two categories of international environmental treaties may continue to apply between belligerents *pendente bello*. The first is environmental treaties the continued application of which is largely irrelevant for the conduct of hostilities, such as those protecting fragile habitats or endangered species:[41] for instance, during the 1980-1988 armed conflict, Iran and Iraq continued to participate in the works of the Regional Organisation

38 In 2004, the ILC decided to include the topic of the effects of armed conflicts on treaties in its programme of work and appointed Professor Ian Brownlie as Special Rapporteur.

39 *Supra* note 27 at para 30.

40 Attila Tanzi and Maurizio Arcari, *The United Nations Convention on the Law of International Watercourses* 68-73 (Kluwer Law International, 1st edn. 2001).

41 Michael N. Schmitt, "Green War: An Assessment of the Environmental Law of International Armed Conflict" 22 *Yale Journal of International Law* 41 (1997).

for the Protection of the Marine Environment in the framework of the 1978 Kuwait Regional Convention for the Co-operation on the Protection of the Marine Environment from Pollution.[42] Other treaties that survive the insurgence of armed hostilities between parties are those containing obligations *ergaomnes*or *ergaomnespartes*.[43]

To sum up, the question whether an environmental treaty continues to apply in time of armed conflict must be answered on a case-by-case basis, taking into account the parties involved in the conflict and the nature and content of the obligations therein contained.

Customary International Environmental Law and Soft-Law Instruments

Certain soft-law instruments explicitly refer to armed conflict. Other IEL principles and soft-law instruments may apply, although they do not address armed conflict directly. So-called soft-law instruments are not legally binding unless they rise to the level of customary IEL. An example is furnished by arguments discussing whether the precautionary principle and the right to a healthy environment constitute – or are emerging – customary IEL.

The Stockholm Declaration and Rio Declaration, as discussed above, not only have principles incorporated to protect environmental damage in peacetime but also, during warfare. Elsewhere, Principle 5 of the World Charter for Nature mandates that "nature shall be secured against degradation caused by warfare or other hostile activities".[44] This principle appears intended to prohibit environmental harm during armed conflict. But it is probably rather a political postulate than the expression of a legal rule.

Moreover, the UN General Assembly resolution 47/37, 1993, urges states to take measures for complying with international law protecting the environment during armed conflict.[45] Although it also encourages incorporating such international law into military manuals, the precise import of these provisions remains unclear. Its reference to provisions 'applicable to the protection of the environment' may refer to relevant provisions within IHL, or to IEL.

While some principles expressly address armed conflict, others – such as the Trail Smelter principle (considered as customary international law) – are silent.

42 *Supra* note 35.

43 Dapo Akande, "Nuclear Weapons, Unclear Law? Deciphering the Nuclear Weapons Advisory Opinion of the International Court" 68 *British Year Book of International Law* 184 (1997).

44 UN General Assembly, *World Charter for Nature*, GA Res 37/7, GAOR, UN Doc A/RES/37/7 (October 28, 1982), principle 5.

45 UN General Assembly, *Protection of the Environment in Times of Armed Conflict*, GA Res 47/37, GAOR, UN Doc A/RES/47/37 (February 9, 1993).

Nonetheless, they may be applied to armed conflict. The Trail Smelter principle arose from an arbitral decision resolving a dispute between the United States and Canada regarding transboundary air pollution.[46] The Trail Smelter arbitral panel held that Canada had a responsibility to prevent harmful transboundary air emissions from a smelter located in its territory, and was liable for the damages. The decision was based on a fundamental responsibility to use one's territory so as not to cause harm to that of another.

The Trail Smelter principle may afford protection to non-belligerent, neutral territories by establishing state responsibility for transboundary environmental damage. Certain comments suggest that such allocation might not apply if belligerent interests outweigh the victim state's harm.[47] Where damage is caused in neutral territory, this principle is in contradiction with the general principle of the law of neutrality that the neutral territory is inviolable and that it may not be affected by the armed conflict. The frequent reiteration of the Trail Smelter principle indeed indicates the rapid emergence of a state's right to environmental protection as customary IEL that also applies during armed conflict.[48]

In the *Corfu Channel* case, the ICJ practically extended the Trail Smelter principle to the actions of parties during conflict, although the case did not specifically address transboundary pollution.[49] The ICJ held Albania responsible for damages caused to the British ships, observing that international law obliges the state "not to allow knowingly its territory to be used for acts contrary to the rights of other states."[50]

The ICJ also recognised the Trail Smelter principle in the 1996 *Nuclear Weapons* Advisory Opinion. In this advisory opinion, the Court notes that a state's general obligation "to ensure that activities within their jurisdiction and control respect the environment of other States or of areas beyond national control is now part of the corpus of international law relating to the environment."[51]

The same concept of neighbourly protection from harm is seen in the 2010 decision by the ICJ in the *Pulp Mills* case.[52] The Court decided that the construction and operation of Pulp Mills in Uruguay required the country to undertake a transboundary environmental impact assessment.

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46 *Trail Smelter Case* (*United States* v. *Canada*) [1941] 3 RIAA 1905.

47 *Supra* note 36 at 46-47.

48 Karen Hulme, *War Torn Environment: Interpreting the Legal Threshold* 88-90 (MartinusNijhoff, 2004).

49 *The Corfu Channel Case(United Kingdom* v. *Albania)(Merits)* [1949] ICJ Rep 4.

50 *Id.* at 22.

51 *Supra* note 27 at para 29.

52 *Pulp Mills on the River Uruguay(Argentina* v. *Uruguay)(Merits)* [2010] ICJ Rep 14.

VI. Enforcement and Implementation

Liability for Environmental Destruction During War: What Punishment should be Afforded to the Guilty?

Penalties are geared to deter misconduct, to restitute the aggrieved, and to voice condemnation. These essential sentencing principles ought to guide those accused of ecocide or any subset of environmental war crimes. Part 7 of the Rome Statute offers the most contemporary compilation of the international community's thinking on how international crimes ought to be punished.[53] The punishment provisions of the Rome Statute contain two limitations on the effectiveness of Article 8(2)(b)(iv).[54]

Firstly, the jurisdiction of the International Criminal Court ("ICC") is limited to natural persons, and does not extend to institutional or state liability. Secondly, sentencing is based on imprisonment, fines, and forfeiture of the proceeds of the crime.[55] There does not appear to be much room to compel restitution, remediation of blight or, simply put, to clean up the environmental harm. Without the ICC being able to order such remedies, the curative nature of the punishment for causing "widespread, long-term and severe" damage to the natural environment is limited at best. As a result, there is cause for concern not only that environmental crimes will be poorly cognizable under the ICC, but also that the punishments for wrongdoing will not address the unique nature of these crimes.

More proactive and peremptory methods, however, also need to be developed. After all, any finding of ecocide operates only on an *ex post facto* basis; the environmental harm has already occurred.[56] What is more important is to provide incentives not to act in environmentally threatening ways in the first place. Examples include the creation of economic disincentives to producing environmentally destructive weaponry, technology transfers to assist developing countries to pursue national security interests in a more environmentally friendly manner, and financial

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53 Rome Statute of the International Criminal Court, part 7.

54 Article 8(2)(b)(iv) of the Rome Statute states: "For the purpose of this Statute, "war crimes" means: Other serious violations of the laws and customs applicable in international armed conflict, within the established framework of international law, namely, any of the following acts: Intentionally launching an attack in the knowledge that such attack will cause incidental loss of life or injury to civilians or damage to civilian objects or widespread, long-term and severe damage to the natural environment which would be clearly excessive in relation to the concrete and direct overall military advantage anticipated".

55 *Id.*, art. 77.

56 Mark Anthony, "The General Agreement: From Tariffs and Trade to Sustainable Development"25 *Canadian Business Law Journal* 398 (1995).

assistance mechanisms.[57] One final linkage that is of considerable importance involves international peace-keeping or peace-enforcement forces. Allotting these international forces a "green-keeping" mandate could help integrate international environmental norms into an internecine conflict. For instance, were U.N. involvement in Somalia to have had a "green-keeping" mandate, then practices of deforestation and assaults on water purity that were commonplace in the conflict could have been addressed.

Individual Criminal Responsibility

The principle of the individual criminal responsibility of the perpetrator of certain breaches of international law, including those bearing on the environment in time of armed conflict, as well as of the person ordering the commission of such acts, is of critical importance. Under international law, States have a clear duty to bring to justice all persons suspected of having committed or ordered the commission of such acts.

Article 8(2)(b)(iv) of the Rome Statute of the ICC includes as a war crime the act of widespread, long-term and severe damage to the environment. Although much of this provision is modelled after Article 35(3), Additional Protocol I**,** there are a number of important differences which further limit the application of the ICC's provision. For instance, the statute requires both intention and knowledge of the outcome, instead of either intention or expectation as required **by** the Protocol.[58] Moreover, "the damage to the natural environment must be clearly excessive in relation to the military advantage anticipated".[59] This requires a consideration of the international humanitarian law principle of proportionality *vis-á-vis* the harm to the environment. This provision has the same difficulty as the Protocol in that it could prove very difficult to substantiate that the three required criteria of "widespread, long-term and severe damage" have been met.[60]

Prosecuting Environmental Destruction in Furtherance of another Atrocity

Given the absence of criminal prosecution for environmental war crimes, the tribunals should prosecute environmental destruction when the attack is conducted to achieve another atrocity. This paper does not suggest that environmental damage

57 One option that should be considered is the creation of an international insurance scheme to fund environmental clean-up as a stop-gap measure until liability can be conclusively determined. The financing of such a scheme could flow from international contributions or taxes. See: Environmental Law Institute, *International Conference on Addressing Environmental Consequences of War : Legal, Economic, and Scientific Perspectives*,18 (June 10-12, 1998).

58 *Supra* note 17 at 239.

59 *Supra* note 17 at 240.

60 *Ibid.*

as an independent crime should not be prosecuted, but points out that the international community has not taken steps in that direction since Nuremberg.

Individuals should be prosecuted for environmental attacks conducted in furtherance of other atrocities and war crimes. This would establish precedent in which environmental damage would be measured and considered such that it can give meaning to the ambiguities of the terms "widespread, long-term and severe". It would remove the "military advantage" element, and would apply in both international and internal armed conflicts. This would be a step forward in establishing international legal precedent for the prosecution of environmental destruction.

Is This Approach Feasible?

Prosecution of environmental attacks within the context of humanitarian laws as a tool to achieve a further atrocity is feasible because: 1) it fits into the legal lexicon established in the Geneva Conventions; and 2) there is international legal precedent for the prosecution of one crime committed in furtherance of another.

The International Criminal Tribunal for Rwandaestablished precedent for prosecuting an individual for an act conducted as a tool in furtherance of another atrocity in the case of *Prosecutor* v. *Akayesu*.[61] It opined that sexual violence and rape against Tutsi women were integral parts of the genocide committed in Rwanda and major weapons in the genocide.[62] The tribunal recognised the commission of one crime, rape, as a tool to commit a further crime, genocide. Just as rape was prosecuted as a tool to achieve genocide, environmental destruction can be prosecuted as an accelerator of genocide or as a crime against humanity.

"VII. ARE WE ON THE RIGHT PATH?"

Recommendations & Suggestions

There are a host of recommendations and suggestions proposed.

a. For starters, the terms "widespread", "long-term" and "severe" within Articles 35 and 55 of Additional Protocol 1 to the 1949 Geneva Conventions should be clearly defined.

b. The above discussed ICRC Guidelines require updating and subsequent consideration by the UN General Assembly for adoption. In particular, the revised guidelines should explain how damage to the environment affects human health, livelihoods and security, and undermines effective peacebuilding.

61 *The Prosecutor* v. *Jean-Paul Akayesu*(1998) ICTR 96-4-T.

62 Patricia H. Davis, "The Politics of Prosecuting Rape as a War Crime" 34(4) *The International Lawyer* 1244 (2000).

c. There is a need to address the continued application of IEL during armed conflict; explain how damage to the environment can be considered a criminal offense under international criminal law, enforceable in both international and national courts.

d. In order to enrich the corpus of case law available, international judges, prosecutors and legal practitioners should be trained on the content of the international law that can be used to prosecute environmental violations during armed conflict.

e. In order to ensure that environmental violations committed during warfare are prosecuted, the provisions of international law that protect the environment in times of conflict should be fully reflected at the national level. A permanent UN body to monitor violations and address compensation for environmental damage should be considered.

f. The international community should consider strengthening the role of the Permanent Court of Arbitration ("PCA") to address disputes related to environmental damage during armed conflict. In 2002, the PCA adopted the "Optional Rules for Conciliation of Disputes Relating to the Environment and/or Natural Resources". These rules provide the most comprehensive set of environmentally tailored dispute resolution procedural rules presently available and could be extended to disputes arising from environmental damage during armed conflict.

g. A new legal instrument granting place-based protection for critical natural resources and areas of ecological importance during international and non-international armed conflicts should be developed. At the outset of any conflict, critical natural resources and areas of ecological importance would be delineated and designated as demilitarised zones. Parties to the conflict would be prohibited from conducting military operations within their boundaries and this could include protection for a basket of natural resources.

VIII. CONCLUSION

The existing international legal framework contains many provisions that, either directly or indirectly, protect the environment and govern the use of natural resources during armed conflict. However, armed conflicts often cause environmental destruction and this depletion of the natural environment caused by war is likely to cause further wars. Law might play a role in breaking this vicious circle but the existing rules are clearly not adequate. The current law has a limited practical relevance, as it prohibits only a very high degree of damage or exclusively certain

types of weapons. Regarding rules not specifically addressing the environment, they are both "too general and abstract"[63] or were not conceived with the environment in mind, and "any effort aimed at a retroactive interpretation of an environmental connotation into such old-fashioned, general treaty provisions, is bound to be a tricky interpretative exercise."[64]

It is clear that the current law needs to be amended, beginning with the lowering of the threshold of application of the environmental provisions of Additional Protocol I, a same standard of environmental protection for international and non-international armed conflicts, the explicit extension of the applicability of the En-Mod Convention to conventional warfare and the qualification of the violations of the environmental provisions contained in Additional Protocol I as grave breaches.

Three general strategies have emerged since the 1991 Gulf War to improve the legal protection of the environment. One view endorsed by the US and the ICRC, among others, is to leave the substance of existing law substantially alone and focus on its application. They contend that the environment would be sufficiently protected if the law of war was universally respected and better implemented.[65] Better implementation of existing law would entail wider subscription to the body of existing law as well as increased awareness and compliance with its provisions. A UNGA resolution on this subject calls for all three aspects to be given effect.[66] In particular, it encourages States to heighten awareness by incorporating relevant aspects of the law into their military manuals. Underlying this proposal is a serious observation that better education of the armed forces would greatly assist in preventing violations, although more profound instruments of education are needed in order to be truly effective, such as training seminars.[67]

Thirty years ago, international environmental law did not pay much attention to armed conflict. The end of the Cold War brought about enhanced international cooperation to build peace and (separately) international cooperation around the environment. The events of the twentieth century, particularly in the recent past, provide great urgency to implementing and strengthening environmental protection

63 R. Falk, "The Environmental Law of War: An Introduction", in G. Plant (ed.), *Environmental Protection and the Law of War* 85-86 (Belhaven Press, 1992).

64 Wil D. Verwey, "Protection of the Environment in Times of Armed Conflict: In Search of a New Legal Perspective" 8 *Leiden Journal of International Law* 21 (1995).

65 P. Antoine, "International Humanitarian Law and the Protection of the Environment in Time of Armed Conflict" 32(291) *International Review of the Red Cross* 532, 534 (1992).

66 UN General Assembly, *Additional on consular functions to the Vienna Convention on Consular Relations*, GA Res 47/46, GAOR, UN Doc A/Res/47/36 (February 9, 1993).

67 *Supra* note 35 at 77.

provisions. Further, intergovernmental consultation might be made more fruitful by focusing on how to incorporate into state practice those parts of Protocol I that protect the environment, and that "reflect customary international law or are positive new developments, which should in time become part of that law". Governments could revise their military manuals to reflect the importance of environmental protection.

अंतरराष्ट्रीय आर्थिक आदान-प्रदान का जलवायु परिवर्तन एवं मानव अधिकारों पर प्रभाव

*मनोज कुमार सिन्हा**

जलवायु परिवर्तन अंतरराष्ट्रीय स्तर पर गारंटीकृत मानवाधिकारों जैसे भोजन का अधिकार, आश्रय का अधिकार, जीवन का अधिकार आदि के आनंद में बाधा डालता है। इसलिए, इस संदर्भ में, कई मानवाधिकार विद्वानों का तर्क है कि मानवाधिकार कानून प्रत्येक व्यक्ति पर एक दायित्व डालता है। राष्ट्र राज्यों को जलवायु परिवर्तन के प्रभाव के कारण इन मानवाधिकारों के उल्लंघन से बचाने के लिए। 21वीं सदी में हुई मानवाधिकार बहस में सबसे महत्वपूर्ण परिवर्तनों में से एक, व्यापार और मानवाधिकारों के बीच संबंधों में वृद्धि को दिखाया है। हाल के दशकों में, विशेष रूप से 1990 के दशक में, बहुपक्षीय व्यापार समझौतों, द्विपक्षीय निवेश संधियों और राज्यों द्वारा अपनाई गई घरेलू उदारीकरण और निजीकरण नीतियों के परिणामस्वरूप वैश्विक बाजारों में काफी विस्तार हुआ। यह शोधपत्र व्यापार के तेजी से विस्तार और जलवायु परिवर्तन और मानवाधिकारों पर बढ़ते अंतरराष्ट्रीय आर्थिक आदान-प्रदान के प्रभाव की जांच करने का प्रयास करता है। यह अंतरराष्ट्रीय ढांचे में उस विकास का आंकलन करता है जिसने वैश्विक व्यापार विस्तार, जलवायु परिवर्तन और मानव अधिकारों पर प्रभाव के बीच अंतर्संबंधों को स्वीकार किया है और जलवायु परिवर्तन के प्रति दृष्टिकोण में बदलाव के लिए तर्क दिया है। यह मानवाधिकार के मुद्दे के रूप में जलवायु परिवर्तन पर पुनर्विचार का प्रस्ताव करता है और मानवाधिकार कानून में जलवायु कार्रवाई उपायों के एकीकरण की वकालत करता है।

I. प्रस्तावना

जलवायु परिवर्तन हमारे समय की वास्तविक्ता है। जलवायु परिवर्तन शब्द का प्रयोग कि एक समय अवधि में पृथ्वी की सामान्य जलवायु परिस्थितियों में परिवर्तन का वर्णन करने के लिए किया जाता है।[1] जलवायु परिवर्तन पर संयुक्त राष्ट्र फ्रेमवर्क कन्वेंशन (यूएनएफसीसीसी), 1992; 'परिभाषाओं' के खंड में जलवायु परिवर्तन को ऐसे 'जलवायु परिवर्तन के रूप में परिभाषित किया है, जो प्रत्यक्ष या अप्रत्यक्ष रूप से मानव गतिविधि के लिए जिम्मेदार है जो वैश्विक वातावरण की संरचना को बदल देता है और जो अन्य प्राकृतिक जलवायु परिवर्तनशीलता के अतिरिक्त है जो एक समय अवधि में तुल्नात्मक रूप से देखा जा सकता है।'[2] अब यह एक स्वीकृत तथ्य है कि एक घटना के रूप में जलवायु परिवर्तन को सीधे मानवजनित गतिविधियों के लिए जिम्मेदार ठहराया जा सकता है।

मानव जीवन को बनाए रखने के लिए 'जलवायु' स्वयं अत्यंत महत्वपूर्ण है; जलवायु एक क्षेत्र में परिदृश्य और संस्कृति के प्रकार के लिए जिम्मेदार है।[3] संयुक्त राष्ट्र महासभा ने 1988 में एक प्रस्ताव पारित किया था जिसमें कहा गया था कि, 'जलवायु परिवर्तन मानव जाति की एक सामान्य चिंता है,

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1 Stuart Kaye, Donald R. Rothwell, Afsin Akhtarkhavari, Ruth Davis, *International Law: Cases and Materials with Australian Perspectives* 697 (Cambridge University Press, 2nd ed, 2014).

2 *United Nations Framework Convention on Climate Change* [1994] ATS 2, Article 1(2).

3 C. Lever-Tracy, *Routledge Handbook of Climate Change and Society* (Routledge, 2010).

क्योंकि जलवायु पृथ्वी पर जीवन को बनाए रखती है,[4] अत: एक आवश्यक शर्त है नतीजतन, जलवायु परिस्थितियों में परिवर्तन मानव जीवन को प्रभावित करते हैं; और इस तरह जलवायु परिवर्तन मानव अधिकारों से जुड़ जाता है। अत: जलवायु परिवर्तन को मानवाधिकारों के परिपेक्ष्य में देखना अनिवार्य हो जाता है। जलवायु परिवर्तन मानव के स्वास्थ्य, खाद्य सुरक्षा, आवास आदि के संदर्भ में गंभीर खतरे पैदा करते हैं, प्रत्यक्ष या अप्रत्यक्ष रूप से विभिन्न मानवाधिकार उपकरणों में प्राप्त मानवाधिकारों से जुड़ा हुआ है। मानव जीवन पर जलवायु परिवर्तन का प्रभाव अंतरराष्ट्रीय स्तर पर गारंटीकृत मानवाधिकारों जैसे भोजन का अधिकार, आश्रय का अधिकार, जीवन का अधिकार आदि के आनंद में बाधा डालता है। इसलिए, इस संदर्भ में, कई मानवाधिकार विद्वानों का तर्क है कि मानवाधिकार कानून राष्ट्रों पर एक दायित्व डालता है। कि राज्यों को जलवायु परिवर्तन के प्रभाव के कारण इन मानवाधिकारों के उल्लंघन से बचाने के लिए प्रयास करें।

II.जलवायु परिवर्तन एवं मानव अधिकार

21वीं सदी में, सबसे महत्वपूर्ण घटनाओं में से एक, जो मानव अधिकारों की बहस में घटित हुई है, वह यह है कि व्यापार और मानवाधिकारों के बीच की कड़ी की मान्यता बढ़ी है।[5] यह एक स्वीकृत तथ्य है कि व्यापार और मानवाधिकारों पर बहस अंतरराष्ट्रीय कॉर्पोरेट जिम्मेदारी एजेंडा में एक केंद्रीय विषय बन गया है।[6] हाल के दशकों में, विशेष रूप से 1990 के दशक में, बहुपक्षीय व्यापार समझौतों, द्विपक्षीय निवेश संधियों और राज्यों द्वारा अपनाई गई घरेलू उदारीकरण और निजीकरण नीतियों के परिणामस्वरूप वैश्विक बाजारों में काफी विस्तार हुआ।[7] बहुराष्ट्रीय निगमों (एमएनसी) के अधिकारों को राष्ट्रीय कानूनों में शामिल किया गया है और तब से, अंतरराष्ट्रीय न्यायाधिकरणों के समक्ष अनिवार्य मध्यस्थता के माध्यम से भी संरक्षण प्राप्त हुआ है। वैश्वीकरण ने उभरती बाजार अर्थव्यवस्थाओं में गरीबी को कम करने तथा औद्योगिक देशों में कल्याणकारी नीतियों को बढ़ाने में योगदान दिया है। लेकिन इसने लोगों और समुदायों पर लागत भी लगाई है जिसमें कॉर्पोरेट से संबंधित मानवाधिकारों के हनन के मुद्दे शामिल हैं।[8] मानव अधिकारों और पर्यावरण की सुरक्षा के

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4 UN General Assembly, "Protection of Global Climate for Present and Future Generations of Mankind"A/Res/43/53 adopted on 6 December 1988, *available at*:_https://refworld.org/docid/3b00eff430.html(last visited on 24thNovember 2021).

5 R. Sullivan, (ed.) *Business and Human Rights : Dilemmas and Solutions* (Sheffield : Greenleaf, 2003); Amnesty International, *Business and Human Rights : A Geography of Corporate Risk* (The Prince of Wales International Business Leaders Forum, 2002); R. Mares, *Business and Human rights : A Compilation of Documents* (Leiden ; MartinusNijhoff , 2003); Oliver De Schutter, (ed.) *Transnational Corporations and Human Rights* (Oxford ; Portland, Hart, 2006).

6 R.Fagerfjäll, P. Frankental, F. House, *Human Rights - A Corporate Responsibility?* (Stockholm : Amnesty International : 2001).

7 *Ibid.*

8 J. Ruggie, Implementation of General Assembly Resolution 60/251of 15 march 2006 entitled "human rights Council" Report of the Special Representative of the Secretary-General on the issue of human rights and transnational corporations and other business enterprises, A/HRC/4/35, 19 February 2007, *available at*: *http://www. ohchr.org*, (last visited on 18 November 2021).

साथ आर्थिक विकास को सुमेलित करना आज हमारे सामने सबसे बड़ी चुनौती है।[9] यह एक ऐसी चुनौती है, जिसका यदि सामना कर लिया जाता है, तो वह आर्थिक विकास की महान शक्तियों को उपयोग कर मानवीय गरिमा के महान सिद्धांत को प्राप्त कर सकती है।

जलवायु परिवर्तन से निपटने में संयुक्त राष्ट्र उच्चायुक्त कार्यालय की पहल

मानवाधिकार के लिए संयुक्त राष्ट्र उच्चायुक्त का कार्यालय (OHCHR) पहला अंतर्राष्ट्रीय मानवाधिकार निकाय था जिसने 2009 में अपनी रिपोर्ट में जलवायु परिवर्तन और मानवाधिकारों के बीच संबंधों का विश्लेषण करने का प्रयास किया था।[10] मानव अधिकारों पर जलवायु परिवर्तन के प्रतिकूल प्रभावों के प्रभाव को समझने के लिए ओएचसीएचआर द्वारा किए गए उक्त अध्ययन के पीछे छोटे द्वीप राष्ट्रों और विशेष रूप से मालदीव गणराज्य (जिसने 2007 में एक बैठक बुलाई थी) द्वारा किए गए प्रयास थे। 2007 में लघु द्वीप राष्ट्रों (मालदीव में अपनी बैठक में) ने ''वैश्विक जलवायु परिवर्तन के मानव आयाम पर माले घोषणा'' को अपनाया।[11] माले घोषणा में, उन्होंने ओएचसीएचआर से जलवायु परिवर्तन और मानवाधिकारों के बीच संबंधों पर एक अध्ययन करने का आग्रह किया; इसने आगे मानवाधिकार परिषद से जलवायु परिवर्तन और मानवाधिकारों को जोड़ने के लिए राजनीतिक समर्थन प्रदान करने का आग्रह किया; और अंत में इसने यूएनएफसीसीसी के तहत सीओपी से भविष्य की सभी जलवायु परिवर्तन वार्ताओं में इसे ध्यान में रखने और इस मामले पर ओएचसीएचआर और मानवाधिकार परिषद से मार्गदर्शन लेने का आग्रह किया।[12]

ओएचसीएचआर अपनी रिपोर्ट में दो कानूनी सवालों का जवाब दे रहा था: पहला, क्या जलवायु परिवर्तन मानवाधिकारों का उल्लंघन करता है और दूसरा, जलवायु परिवर्तन के संबंध में मानवाधिकार कानून व्यवस्था ने विभिन्न देशों पर क्या दायित्व रखे हैं।[13] रिपोर्ट ने मानवाधिकार कानून व्यवस्था में एक कानूनी कर्तव्य के उल्लंघन के माध्यम से मानवाधिकारों के उल्लंघन के मुद्दे पर विचार किया और इस संदर्भ में, रिपोर्ट ने स्वीकार किया कि जलवायु परिवर्तन से जीवन के अधिकार, भोजन के अधिकार, आत्मनिर्णय के अधिकार आदि जैसे मानवाधिकारों को खतरा है। रिपोर्ट में यह भी कहा गया है कि हालांकि यह किसी विशेष राज्य द्वारा कानूनी कर्तव्य के सीधे उल्लंघन का परिणाम नहीं था।[14] OHCHR ने स्वीकार किया कि किसी विशेष देश के ऐतिहासिक ग्रीनहाउस गैस उत्सर्जन को विशिष्ट जलवायु परिवर्तन-संबंधी प्रभाव से जोड़ने वाले जटिल कारण संबंधों को अलग करना

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9 Harvard Law School, *Business and Human Rights : An Interdisciplinary Discussion* (Harvard Law School,1999).

10 OHCHR, *Report of the Office of the United Nations High Commissioner for Human Rights on the Relationship Between Climate Change and Human Rights*, U.N. Doc. A/HRC/10/61 (Jan. 15, 2009).

11 Male' Declaration on the Human Dimension of Global Climate Change, Nov. 14, 2007, *available at:* http://www.ciel.org/Publications/Male_Declaration_Nov07.pdf. (last visited on 24 November 2021.

12 *Ibid.*

13 *Supra* note 10.

14 *Ibid.*

लगभग असंभव है।[15] हालांकि, रिपोर्ट ने जलवायु परिवर्तन के प्रभावों और मानवाधिकारों के बीच एक कड़ी स्थापित करने में मदद की। इसके अलावा, रिपोर्ट ने लोगों को जलवायु परिवर्तन (मानव अधिकारों की प्राप्ति के लिए खतरा) के प्रभावों से बचाने के लिए राज्यों पर एक दायित्व भी स्थापित किया। जलवायु परिवर्तन के विद्वानों ने जलवायु परिवर्तन का मानवाधिकार-आधारित अध्ययन के पक्ष में तर्क विकसित करने के लिए इन टिप्पणियों पर उपयोग किया हैं।

ओएचसीएचआर ने यूएनएफसीसीसी के सदस्य देशों के 21वें सम्मेलन (सीओपी) प्रस्तुत और लेख मे संबंधित मानवाधिकार मुद्दों को ध्यान में रखते हुए जलवायु कार्रवाई के लिए विभिन्न दिशानिर्देश प्रदान किए।[16] इस प्रस्ताव में, ओएचसीएचआर ने विभिन्न देशों और अन्य हितधारकों (व्यवसायों सहित) के बुनियादी दायित्वों को जलवायु कार्रवाई से संबंधित नीतियों को विकसित करने और लागू करने के लिए निर्धारित किया जो मानवाधिकार दायित्वों के अनुपालन में भी हैं।

26 जून 2014 को, मानवाधिकार परिषद ने एक प्रस्ताव अपनाया जिसके द्वारा यह निर्णय लिया गया कि मानव अधिकारों के संबंध में अंतरराष्ट्रीय निगमों और अन्य व्यावसायिक उद्यमों पर एक ओपन-एंडेड अंतर-सरकारी कार्य समूह स्थापित किया जाए, जिसका निर्देश अंतरराष्ट्रीय स्तर पर कानूनी रूप से बाध्यकारी होना चाहिए।[17] ओपन-एंडेड इंटरगवर्नमेंटल वर्किंग ग्रुप (OEIGWG) अब तक छह बार मिल चुका है और OEIGWG की सातवीं बैठक इक्वाडोर में 25 से 29 अक्टूबर 2021 में हुई है। अंतर्राष्ट्रीय निगमों और अन्य व्यावसायिक उद्यमों की गतिविधियों को विनियमित करने के लिए कानूनी रूप से बाध्यकारी साधन के लिए तीसरा संशोधित मसौदा चल रहा है। यह मसौदा सातवीं बैठक के दौरान राज्य के नेतृत्व वाली प्रत्यक्ष वास्तविक अंतरसरकारी वार्ता का आधार होगा।

ध्यान देने योग्य मामले

ऐसा नहीं है कि छोटे द्वीप द्वारा किए गए प्रयास जलवायु परिवर्तन के प्रभावों के प्रति विशेष रूप से संवेदनशील समुदाय द्वारा जलवायु परिवर्तन को मानव अधिकारों से जोड़ने का पहला प्रयास था। 2005 में, आर्कटिक के मूल निवासी इनुइट लोगों द्वारा मानवाधिकारों पर अंतर-अमेरिकी आयोग (''आईएसीएचआर'') में एक याचिका दायर की गयी, जिसमें संयुक्त राज्य अमेरिका पर मानवाधिकारों के उल्लंघन का आरोप लगाया गया था, क्योंकि वे अपने ग्रीन हाउस गैस (जीएचजी) को कम करने में विफल रहे थे।) उत्सर्जन जो जलवायु परिवर्तन के लिए अग्रणी था। याचिका में अमेरिका की जवाबदेही का आरोप लगाया गया क्योंकि अमेरिका ग्रीन हाउस गैसों का दुनिया का सबसे बड़ा उत्सर्जक है। विभिन्न कॉर्पोरेट घरानों प्रमुख रूप से जिन्हें संयुक्त राज्य अमेरिका कथित रूप से विनियमित कर रहा है। याचिका में दावा किया गया है कि यह इनुइट समुदाय को उनकी संस्कृति के

15 *Id.* at 20.

16 OHCHR, "Understanding Human Rights and Climate change" (Submission of the Office of the High Commissioner for Human Rights to the 21st Conference of the Parties to the United Nations Framework Convention on Climate Change) (2015).

17 A/HRC/Res/29 adopted by the Human Rights Council to "elaborate an internationally legally binding instrument to regulate, in international human rights law the activities of transnational corporations and other enterprises." Adopted on 14 July 2014.

लाभों का आनंद लेने के उनके अधिकार, पारंपरिक रूप से कब्जा की गई भूमि का उपयोग करने और आनंद लेने का अधिकार, उनकी निजी संपत्ति का उपयोग करने और आनंद लेने का अधिकार, स्वास्थ्य के संरक्षण के अधिकार, जीवन का अधिकार, शारीरिक अखंडता, और सुरक्षा, अपने स्वयं के निर्वाह के अधिकार का अधिकार और निवास और आंदोलन के उनके अधिकार का उल्लंघन करता है।[18] याचिका एक क्षेत्रीय मानवाधिकार दस्तावेज, मनुष्य के अधिकारों और कर्तव्यों की अमेरिकी घोषणा में निहित अधिकारों पर बहुत अधिक निर्भर है।[19] इस तर्क के आधार पर कि ''प्रदान की गई जानकारी हमें यह निर्धारित करने में सक्षम नहीं बनाती है कि क्या कथित तथ्य अमेरिकी घोषणा द्वारा संरक्षित अधिकारों के उल्लंघन की विशेषता रखते हैं,'' आईसीएचआर ने याचिका की समिक्षा करने से मना कर दिया।[20] ग्लोबल वार्मिंग और मानवाधिकारों के बीच संबंध ग्लोबल वार्मिंग के लिए राज्य की जिम्मेदारी पर विचार करने के लिए कदम की चर्चा हुई है।

जलवायु परिवर्तन के प्रभाव से संबंधित एक और महत्वपूर्ण विकास हाल ही में, 12 अक्टूबर 2021 को हुआ, जब ऑस्ट्रियाई पर्यावरण समूह All Rise ने अंतर्राष्ट्रीय आपराधिक न्यायालय (ICC) के यहां एक आधिकारिक शिकायत दर्ज करने का फैसला किया, जिसमें आरोप लगाया गया है कि ब्राजील के राष्ट्रपति जायर बोल्सोनारो ब्राजील के अमेज़ॅन वर्षावन के विनाश में उनकी भूमिका से मानवता के खिलाफ अपराध करने के लिए जिम्मेदार था।[21] शिकायत में आरोप लगाया गया कि बोल्सोनारो प्रशासन निरंतर वनों की कटाई, जीएचजी उत्सर्जन और अपेक्षित नकारात्मक स्वास्थ्य प्रभावों के लिए जिम्मेदार था। शिकायत में प्रशासन द्वारा अनुमति दी गई कि वनों की कटाई की मात्रा का भी अनुमान लगाया गया है और दावा किया गया है कि इस सदी में जलवायु परिवर्तन के कारण दुनिया भर में 1,80,000 से अधिक संबंधित मौतों का कारण गर्मी से होगा। All Rise समूह ने यह शिकायत COP26, संयुक्त राष्ट्र जलवायु परिवर्तन सम्मेलन से कुछ दिन पहले दर्ज की है, जो अक्टूबर 2021 में स्कॉटलैंड के ग्लासगो में हुई है।

इसमें शामिल शिकायत तंत्र की कार्यप्रणाली को समझना शिक्षाप्रद है। यह ध्यान दिया जाना चाहिए कि प्रारंभिक जांच किए जाने तक अभियोजक को दायर की गई शिकायतों पर विचार करने के लिए ICC का कोई दायित्व नहीं है। इसके अलावा, कोई भी समूह या व्यक्ति रोम संविधि के अनुच्छेद 15 के तहत अभियोजक के कार्यालय में एक याचिका भेज सकता है। सभी अनुच्छेद 15 संचार आवश्यक रूप से प्रारंभिक परीक्षा की शुरुआत की ओर नहीं ले जाते हैं। अब तक, ICC को उस

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18 Hari M. Osofsky, "The Inuit Petition as a Bridge? Beyond Dialectics of Climate Change and Indigenous Peoples Rights" 31(2) *American Indian Law Review* 675-697 (2006).

19 The American Declaration on the Rights and Duties of Man, was adopted on 2 May 1948, making it the first international human rights instruments, a few months before the adoption of the Universal Declaration of Human Rights,1948.

20 *See* Jane George, *Nunatsiaq News, ICC Climate Change Petition Rejected,* 2006, *available at*: http://www.nunatsiaq.com/archives/61215/news/nunavut/61215_02.html (last visited on 24 November 2021).

21 The AllRise group also launched its campaign "The Planet v. *Bolsanaro"available at*: thplanetvs.org(last visited on 24November 2021).

प्रकृति के 12,000 से अधिक संचार प्राप्त हुए हैं, पर्यावरण कार्यकर्ता आईसीसी के मुख्य मिशन का हिस्सा बनने के लिए पर्यावरण के खिलाफ अपराधों पर मुकदमा चलाने पर जोर दे रहे हैं।[22] अंतरराष्ट्रीय वकीलों और विशेषज्ञों के एक समूह ने 'पारिस्थितिकी' के अपराध की एक प्रस्तावित कानूनी परिभाषा इस प्रकार प्रकाशित की, जिसमें यह कहा गया है कि इसे रोम संविधि में शामिल करने का महत्वपूर्ण समय है, ''गंभीर पर्यावरणीय नुकसान के लिए सुरक्षा, पहले से ही एक मामले के रूप में मान्यता प्राप्त है।''[23] ये घटनाक्रम गंभीर पर्यावरणीय नुकसान के लिए दायित्व निर्धारित करने के लिए अंतरराष्ट्रीय ढांचे में स्पष्ट सिद्धांतों की मान्यता की आवश्यकता के बारे में बढ़ती चिंता की ओर इशारा करते हैं, जिन्हें अन्य गंभीर मानव अधिकारों के उल्लंघन के समान माना जाना चाहिए।

III. संयुक्त राष्ट्र, अंतर्राष्ट्रीय श्रम संगठन एवं आर्थिक सहयोग और विकास संगठन दिशानिर्देश

1960 और 1970 के दशक में, बहुराष्ट्रीय उद्यमों (एमएनई) की गतिविधियों ने गहन चर्चा को हवा दी जिसके परिणामस्वरूप उनके आचरण को विनियमित करने और मेजबान देशों के साथ उनके संबंधों की शर्तों को परिभाषित करने के लिए ज्यादातर विकासशील देशों में अंतरराष्ट्रीय उपकरणों को तैयार करने के प्रयास हुए। श्रम से संबंधित और सामाजिक नीति के मुद्दे उन चिंताओं में से थे, जिनसे एमएनई की गतिविधियों को बढ़ावा मिला। अपनी क्षमता के क्षेत्र में अंतर्राष्ट्रीय दिशानिर्देशों के लिए ILO की खोज के परिणामस्वरूप ILO शासी निकाय द्वारा 1977 में बहुराष्ट्रीय उद्यमों और सामाजिक नीति (MNE घोषणा) से संबंधित सिद्धांतों की त्रिपक्षीय घोषणा को अपनाया गया।[24] सिद्धांतों की इस त्रिपक्षीय घोषणा का उद्देश्य सकारात्मक योगदान को प्रोत्साहित करना है जो बहुराष्ट्रीय उद्यम आर्थिक और सामाजिक प्रगति के लिए कर सकते हैं और उन कठिनाइयों को कम करने और हल करने में मदद कर सकते है। इन सिद्धांतों का उद्देश्य सरकारों, नियोक्ताओं और श्रमिक संगठनों और बहुराष्ट्रीय उद्यमों को ऐसे उपाय और कार्य करने और ऐसी सामाजिक नीतियों को अपनाने में मार्गदर्शन करना है, जिनमें ILO के संविधान में निर्धारित सिद्धांतों और संबंधित सम्मेलनों और सिफारिशों के आधार पर हो।[25] वैश्विक बाजारों में काम करने वाली कंपनियों से अपेक्षा की जाती है कि वे अपनी आपूर्ति श्रृंखलाओं के साथ श्रम प्रथाओं के लिए उपयुक्त स्तरों पर जिम्मेदारी लें।[26]

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22 On 24th June 2021, an international panel of legal experts adopted a legal definition of 'ecocide' proposed to be added as a fifth crime under the Rome Statute, *available at*: https://hsfnotes.com/publicinternationallaw/2021/07/08/expert-panel-defines-ecocide-for-potential-adoption-as-a-crime-to-be-prosecuted-by-the-international-criminal-court/ (last visited on 12 November, 2021).

23 *Ibid.*

24 ILO, *Tripartite Declaration of Principles concerning Multinational Enterprises and Social Policy* (Geneva, International Labour Office, 2001), 3rd edition.

25 *Ibid.*

26 Radu Mares, *Business and Human Rights: A Compilation of Documents* (Martinus Nijhoff Publications, The Hague, 2004).

श्रम मानकों पर ILO के सम्मेलन कंपनी की मानवाधिकार नीति के लिए सर्वोत्तम ढांचा प्रदान करते हैं।

बहुराष्ट्रीय उद्यमों[27] और एमएनई[28] के लिए ओईसीडी दिशानिर्देश महत्वपूर्ण हैं क्योंकि वे सरकारों द्वारा आधिकारिक, उच्च स्तरीय बयान हैं कि व्यवसायिक कुछ मानवाधिकारों को बनाए रखने की जिम्मेदारी है। ये उपकरण स्पष्ट रूप से कंपनियों की प्रत्यक्ष जिम्मेदारी स्वीकार करते हैं। इसी तरह, श्रम मानक, यानी श्रमिकों के मानवाधिकार, त्रिपक्षीय ILO प्रणाली में नियोक्ता के रूप में कंपनियों पर सीधे बाध्यकारी हैं।[29] संयुक्त राष्ट्र मानवाधिकार संधि निकायों, जैसे कि आर्थिक, सामाजिक और सांस्कृतिक अधिकारों की समिति ने भी अपनी सामान्य टिप्पणी संख्या 12 में निजी कंपनियों की जिम्मेदारियों पर जोर दिया है।[30] ये मानदंड सॉफ्ट लॉ के इन मौजूदा मानकों को एक साथ लाते हैं। वे नए अंतरराष्ट्रीय कानून नहीं बनाते या बनाने की कोशिश नहीं करते हैं, लेकिन एक दस्तावेज़ में अलग-अलग मानकों को जोड़ते हैं। वे विस्तृत और परिचालन नियम नहीं बनाते हैं जिनका उपयोग कंपनियों के विशिष्ट कार्यों को निर्धारित करने के लिए किया जा सकता है। बल्कि, वे व्यापक रूप से मानवाधिकार ढांचे को परिभाषित करते हैं जो कंपनियों की गतिविधियों पर लागू होता है।[31]

संयुक्त राष्ट्र मानवाधिकार उप-आयोग ने मानव अधिकारों के संबंध में ट्रांस-नेशनल कॉरपोरेशन और अन्य व्यावसायिक उद्यमों की जिम्मेदारियों पर मानदंड को मंजूरी दी।[32] ये मानदंड एक ही दस्तावेज़ में श्रम अधिकारों, मानवाधिकारों, उपभोक्ता संरक्षण और पर्यावरण संरक्षण से संबंधित मौजूदा मानकों को एकीकृत करते हैं और किसी भी व्यवसाय के लिए एक उपयोगी प्रारंभिक स्थान प्रदान करते हैं जो देश और विदेश में सुशासन में योगदान करने के तरीकों का पता लगाने के इच्छुक हैं।[33] अंतरराष्ट्रीय निगमों और अन्य व्यावसायिक उद्यमों की जिम्मेदारियों पर मानदंड, उपयोगी तत्वों और विचारों को शामिल करने के लिए माना जाता था, लेकिन मानवाधिकार आयोग द्वारा कानूनी स्थिति वाले दस्तावेज़ के रूप में स्वीकार नहीं किया गया था।[34]

विभिन्न हितधारकों के असंगती से उत्पनन गतिरोध को दूर करने के लिए - मसौदा मानदंडों के अनुसार, 20 अप्रैल 2005 को, मानवाधिकार पर संयुक्त राष्ट्र आयोग ने 'मानव अधिकार और अंतरराष्ट्रीय निगमों और अन्य व्यवसायों' पर एक प्रस्ताव अपनाया, जिसने सचिव से अनुरोध किया-

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27 Revised OECD Guidelines for Multinational Enterprises, adopted on 27 June 2000.

28 ILO, *Supra* note 24.

29 *Ibid.*

30 General Comment 12: The Right to Adequate Food (Art. 11): 12 May 1999, E/C.12/1999/5, para 20.

31 B.G Ramcharan, "Implementation of the International Covenant on Economic, Social and Cultural Rights" 23 *Netherland International Law Review* 151-162 (1976).

32 Norms on the Responsibilities of Transnational Corporations and Other Business Enterprises with Regard to Human Rights, U.N. Doc. E/CN.4/Sub.2/2003/12/Rev.2 (2003).

33 A. King, The United Nations Human Rights Norms for Business and the UN Global Compact, *available at*: http://www.casin.ch/web/pdf/normstncshumanrights.pdf (last visited on 17 November 2021).

34 *Ibid.*

मानव अधिकारों और अंतरराष्ट्रीय निगमों और अन्य व्यवसायों के मुद्दे पर एक विशेष प्रतिनिधि (एसआरएसजी) नियुक्त किया जाये।[35] 28 जुलाई 2005 को, तत्कालीन महासचिव कोफी अन्नान ने जॉन रग्गी को विशेष प्रतिनिधि के रूप में नियुक्त किया और उन्हें 2007 में एक रिपोर्ट प्रस्तुत करने के लिए कहा जो मानव अधिकारों के संबंध में कॉर्पोरेट जिम्मेदारियों की पहचान करेगी और व्यापार को विनियमित करने और निर्णय लेने में राज्यों की भूमिका को विस्तृत करेगी।[36] रिपोर्ट अंतत: 19 फरवरी 2007 को मानवाधिकार परिषद (एचआरसी) को सौंपी गई।[37] एसआरएसजी ने अपनी रिपोर्ट में एक वैचारिक नीतिगत ढांचा प्रस्तावित किया जो तीन मुख्य सिद्धांतों पर आधारित है, (1) रक्षा (2) सम्मान और (3) उपाय। पहले स्तंभ के तहत, राज्य का कर्तव्य है कि वह उचित नीतियों, विनियमन और निर्णय के माध्यम से व्यावसायिक उद्यमों सहित तीसरे पक्ष द्वारा मानवाधिकारों के दुरुपयोग से व्यक्तियों की रक्षा करे। दूसरा स्तंभ मानवाधिकारों का सम्मान करने के लिए कॉर्पोरेट जिम्मेदारी पर जोर देता है और तीसरा न्यायिक और गैर-न्यायिक दोनों तरह के प्रभावी उपचार के लिए पीड़ितों की अधिक पहुंच की आवश्यकता पर प्रकाश डालता है।

एचआरसी ने एसआरएसजी के जनादेश को और तीन साल के लिए बढ़ा दिया और उसे राज्य और व्यवसायों को ठोस मार्गदर्शन प्रदान करने के लिए ढांचे को संचालित करने के लिए कहा। एसआरएसजी ने 21 मार्च 2011[38] को एचआरसी को अपनी अंतिम रिपोर्ट प्रस्तुत की, जिसे अंतत: 16 जून 2011[39] को एचआरसी द्वारा सर्वसम्मति से अपनाया गया, इस प्रकार पहली बार व्यापार और मानवाधिकारों के लिए एक अंतरराष्ट्रीय मानक स्थापित किया गया।[40] उनकी अंतिम रिपोर्ट में मुख्य रूप से व्यापार और मानव अधिकारों पर मार्गदर्शक सिद्धांत शामिल थे: सुरक्षा, सम्मान, उपाय के कार्यान्वयन के लिए संयुक्त राष्ट्र ष्रक्षा, सम्मान और उपायष् ढांचे को लागू करना।[41] तीन साल की

35 J. Ruggie, Implementation of General Assembly Resolution 60/251of 15 march 2006 entitled "human rights Council" Report of the Special Representative of the Secretary-General on the issue of human rights and transnational corporations and other business enterprises, A/HRC/4/35, 19 February 2007.

36 Kari Storstein& Radu Mares (ed.), *The UN Guiding Principles on Business and Human Rights: Foundations and Implementation* (Brill Academic Publisher, The Hague, 2011).

37 *Ibid.*

38 Report of the Special Representative of the Secretary- General on the issue of human rights and transnational corporations and other business enterprises, John Ruggie on Guiding Principles on Business and Human Rights: Implementing the United Nations "Protect, Respect and Remedy" Framework, A/HRC/17/31 of 21 March 2011.

39 See United Nations Human Rights Office of the High Commissioner, News Release, "New Guiding Principles on Business and human rights endorsed by the Human Rights Council" (16 June 2011), online: Business and Human Rights Resource Centre.

40 A/HRC/RES/17/4, *available at*: http://www.business-humanrights.org/media/documents/un-human-rights-council-resolution-re-human-rights-transnational-corps-eng-6-jul-2011.pdf (last visited on 15 November, 2021).

41 *Report of the Special Representative of the Secretary-General on the issues of human rights and transnational corporations and other business enterprises, John Ruggie, Guiding Principles on Business and Human Rights: Implementing the United Nations "Protect, Respect and Remedy" Framework*, UNHRC, 17th Sess, UN Doc A/HRC/17/31 (2011).

अवधि के लिए व्यापार और मानवाधिकार पर एक कार्य समूह, जिसमें संतुलित भौगोलिक क्षेत्रों के पांच स्वतंत्र विशेषज्ञ प्रतिनिधि शामिल थे, एचआरसी द्वारा स्थापित किया गया था।[42] कार्यकारी समूह को मार्गदर्शक सिद्धांतों के प्रभावी और व्यापक प्रसार और कार्यान्वयन को बढ़ावा देने का कार्य सौंपा गया है।[43] SRSG द्वारा सुझाए गए नीतिगत ढांचे और दिशा-निर्देशों ने यह बिल्कुल स्पष्ट कर दिया कि, मानव अधिकारों का सम्मान करने के लिए एक कम्पनी में ना केवल एक विशिष्ट विभाग में विभाजित हो बल्कि, कंपनी की संस्कृति के हर पहलू में व्याप्त होना चाहिए।

संयुक्त राष्ट्र ढांचा एवं संयुक्त राष्ट्र विकास कार्यक्रम के अनुसार उपचारात्मक कार्रवाई

प्रतिबद्ध कार्रवाई के लिए कंपनियों को उत्तरदायी ठहराने के अपने स्पष्ट गुणों के अलावा, उपचारात्मक कार्रवाई का एक विकल्प प्रदान करती है जिसे 'एक्स-पोस्ट' विनियमन के रूप में संदर्भित किया जा सकता है। गैर-न्यायिक उपायों द्वारा निपटाए गए मामलों और कथित मानवाधिकारों के उल्लंघन से कंपनियों और राज्यों दोनों के लिए सीख मिलती है, और मामलों और निपटान की पारदर्शिता (भले ही गुमनाम रूप में) दूसरों को सीखने और कार्रवाई पर सबक लेने में सक्षम बनाती है जो अनुमेय है या नहीं, आधारित कंपनियों के कानूनी दायित्वों और निजी क्षेत्र की सामाजिक अपेक्षाओं के संयोजन पर।

यह सुनिश्चित करने के लिए कि गैर-न्यायिक शिकायत तंत्र प्रभावी हैं, मार्गदर्शक सिद्धांत कई विशेषताओं पर विस्तार से बताते हैं जिन्हें पहले से ही संयुक्त राष्ट्र ढांचे में महत्वपूर्ण के रूप में पहचाना गया था। मूल उपचार से संबंधित मानवाधिकारों के अनुपालन के लिए गैर-न्यायिक उपचार कैसे किए जा सकते हैं, इसके आकलन के आधार पर, संयुक्त राष्ट्र फ्रेमवर्क और मार्गदर्शक सिद्धांत प्रदान करते हैं कि उपचारात्मक प्रक्रियाएं 'वैध', 'सुलभ', 'पूर्वानुमान योग्य', 'न्यायसंगत', 'पारदर्शी' और 'अधिकार-संगत'। इसके अलावा, वे निरंतर सीखने का एक स्रोत होना चाहिए और तंत्र को डिजाइन करने और संघर्ष को हल करने के साधन के रूप में जुड़ाव और संवाद (हितधारकों सहित) पर आधारित होना चाहिए।[44]

जबकि स्तंभ दो और तीन के तहत मार्गदर्शक सिद्धांत कानून को उसी हद तक संदर्भित नहीं करते हैं जैसे कि स्तंभ एक के तहत, उन्हें समग्र अपेक्षा के साथ पढ़ा जाना चाहिए कि कंपनियां राष्ट्रीय कानून का पालन करती हैं, और मानवाधिकारों की रक्षा के लिए अंतरराष्ट्रीय कानून के तहत उनके दायित्व को लागू करने के लिए यह कानून एक तरीका है जिसे राज्यों को नियोजित करने की आवश्यकता है।

मानवाधिकार संधियों ने स्पष्ट रूप से कहा है कि संरक्षित अधिकारों के उल्लंघन के मामले में एक प्रभावी उपाय प्रदान करने के लिए राज्यों का दायित्व है, और मानवाधिकार निकायों ने उस सिद्धांत को मानवाधिकारों पर लागू किया है जिसका आनंद पर्यावरणीय नुकसान से बाधित है। कई राज्यों ने

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42 *Resolution, Human Rights and transnational corporations and other business enterprises,* UNHRC, 17th Sess., UN Doc A/HRC/17/4 (2011) at para. 6 [*Resolution L17/4*].

43 *Resolution L17/4, ibid* at para 6.

44 UNGP, *Supra*note 39 at Guiding Principle 31.

पाया है कि यह सुनिश्चित करने का एक तरीका है कि प्रासंगिक विशेषज्ञता के साथ अदालतों द्वारा पर्यावरणीय दावों को सुना जाए। व्यापार और मानव अधिकारों पर संयुक्त राष्ट्र के मार्गदर्शक सिद्धांत (UNGPs) जलवायु परिवर्तन के कारण होने वाले मानवाधिकारों के नुकसान की रोकथाम और निवारण के लिए प्रदान करते हैं, और पर्यावरणीय नुकसान की रोकथाम का दायित्व यकीनन रक्षा के लिए राज्य के कर्तव्य और व्यावसायिक जिम्मेदारी दोनों के अंतर्गत आता है। हाल के समय में, यह देखा गया है कि वर्तमान नीति और न्यायिक विकास से पता चलता है कि राज्यों और निगमों दोनों के मानवाधिकारों के कारण परिश्रम (एचआरडीडी) दायित्वों के एक आयाम के रूप में 'जलवायु उचित परिश्रम' तेजी से आकार ले रहा है।

IV. अंतर्राष्ट्रीय मानवाधिकार कानूनों के तहत राज्यों की बाध्यता

अंतर्राष्ट्रीय मानवाधिकार कानून राज्यों पर मानव अधिकारों के संरक्षण को लागू करने और सुनिश्चित करने की प्राथमिक जिम्मेदारी रखता है।[45] जब गैर-राज्य संस्थायें ऐसे कार्य करते हैं जो मानवाधिकारों के लिए हानिकारक हो, तो राज्य मानवाधिकारों के उल्लंघन को रोकने के लिए कार्रवाई करने और पीड़ितों को उचित उपचार और राहत प्रदान करने के लिए अंतर्राष्ट्रीय कानून के तहत बाध्य है। इसलिए राज्यों का यह कर्तव्य है कि वे यह सुनिश्चित करें कि निजी निगमों द्वारा मानवाधिकारों का सम्मान किया जाए। उन्हें इस दायित्व को लागू करने के लिए कानूनी और संस्थागत ढांचा तैयार करना होगा। संधियों के माध्यम से स्थापित निकाय संधियों के कार्यान्वयन के लिए तंत्र हैं। उन्होंने राज्यों के द्वारा विनियमन और कॉरपोरेट कृत्यों के निर्णय पर जितना ध्यान दिया है, वह एक महत्वपूर्ण और स्वागत योग्य कदम है। यह महत्वपूर्ण है कि संधि निकाय राज्यों को मार्गदर्शन प्रदान करते रहें कि वे मानव अधिकारों के संबंध में व्यावसायिक उद्यमों के कृत्यों को प्रभावी ढंग से विनियमित करने और निर्णय लेने में अपनी भूमिका कैसे निभा सकते हैं।[46] इस विशेष मुद्दे के बारे में संधि निकायों के बीच इस तरह के मार्गदर्शन के साथ-साथ विचार-विमर्श न केवल राज्यों की सहायता करेगा बल्कि इस संबंध में राज्यों के दायित्वों के बारे में अधिकार-धारकों और व्यावसायिक उद्यमों को अधिक स्पष्टता प्रदान करेगा। इसके लिए, संधि निकाय इस मुद्दे पर विशिष्ट सामान्य टिप्पणियां या सिफारिशें जारी करने पर भी विचार कर सकते हैं।[47] जॉन एच. नॉक्स, मानवाधिकार और पर्यावरण पर संयुक्त राष्ट्र के पूर्व विशेष प्रतिवेदक, ने 2015 में अपनी रिपोर्ट में, उन कानूनी और संस्थागत ढांचे को अपनाने के लिए

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45 Manoj Kumar Sinha, *Implementation of Basic Human Rights* (Lexis Nexis, New Delhi, 2013).

46 Helena M.Cook, "International Human Rights Mechanisms: The Role of the Special Procedure in the Protection of Human Rights and the Way Forward After Vienna" 50 *Review of International Commission of Jurists* 31-55 (1993).

47 John G. Ruggie, State Responsibilities to Regulate and Adjudicate Corporate Activities under the United Nations' core Human Rights Treaties, Prepared for the mandate of the Special Representative of the United Nations Secretary-General (SRSG) on the Issue of Human Rights and Transnational Corporations and other Business Enterprises (Kennedy School of Government and Harvard Law School, 12 February 2007), *available at*: http://www.humanrights.ch/home/upload/pdf/070410_ruggie_2.pdf (last visited on 14 November, 2021).

राज्यों के कर्तव्य को रेखांकित किया है जो पर्यावरणीय नुकसान से रक्षा करते हैं और जो मानव अधिकारों के आनंद में हस्तक्षेप करते हैं, इसमें निजी रूप से किये गये नुकसान भी शामिल है।[48]

मानवाधिकार कानून, कर्तव्यों सहित पर्यावरण संरक्षण के संबंध में राज्यों पर प्रक्रियात्मक दायित्वों को लागू करता है: (ए) पर्यावरणीय प्रभावों का आकलन करने और पर्यावरणीय जानकारी को सार्वजनिक करने के लिए; (बी) अभिव्यक्ति और संघ के अधिकारों की सुरक्षा सहित पर्यावरण निर्णय लेने में सार्वजनिक भागीदारी की सुविधा के लिए; और (सी) नुकसान के लिए उपचार तक पहुंच प्रदान करने के लिए।[49] वैश्विक पर्यावरण उपकरण भी इन मानवाधिकार दायित्वों का समर्थन करते हैं, विशेष रूप से रियो घोषणा के सिद्धांत 10, जो प्रदान करता है कि प्रत्येक व्यक्ति के पास सार्वजनिक प्राधिकरणों द्वारा आयोजित पर्यावरण से संबंधित जानकारी और 'निर्णय में भाग लेने का अवसर होगा' और यह कि 'निवारण और उपचार सहित न्यायिक और प्रशासनिक कार्यवाही तक प्रभावी पहुँच प्रदान की जाएगी।[50] इन दायित्वों के अलावा, मानवाधिकारों से संबंधित निगरानी दलों ने स्पष्ट किया है कि मानव अधिकारों को पर्यावरणीय नुकसान से बचाने के लिए, राज्यों को पर्यावरणीय जानकारी तक पहुंच प्रदान करनी चाहिए। कई राज्यों ने ऐसी पहुंच प्रदान करने वाले कानूनों को अपनाया है।

राष्ट्रीय कानून मानवाधिकारों की रक्षा में सबसे महत्वपूर्ण साधन हैं, क्योंकि वे कानूनी रूप से बाध्यकारी हैं, और किसी दिए गए देश में सभी व्यक्तियों एवं संस्थाओं पर लागु होते है चाहे वह किसी भी आकार का क्यों ना हो। इसलिए, मानवाधिकारों को बढ़ावा देने और उनकी रक्षा करने में सरकार के प्रदर्शन का आकलन न केवल उनके द्वारा बनाए गए कानूनों के आधार पर किया जाना चाहिए, बल्कि महत्वपूर्ण बात यह है कि इन कानूनों को कितनी प्रभावी ढंग से लागू किया जाता है।[51] कानूनी मानकों और व्यवहार में उनके कार्यान्वयन के बीच यह अंतर आज सबसे अधिक दबाव वाला मानवाधिकार मुद्दा है। इसलिए राष्ट्रीय कानूनों में मानवाधिकारों की प्रभावी रूप से रक्षा और बढ़ावा देने और उनके अंतरराष्ट्रीय दायित्वों का सम्मान करने के लिए राष्ट्रीय सरकारों की क्षमता में सुधार को प्राथमिकता दी जानी चाहिए।

V. पर्यावरण सुरक्षा के लिए भारतीय कानूनी ढांचा

भारतीय संविधान दुनिया के उन कुछ संविधानों में से एक है जिसमें पर्यावरण संरक्षण के लिए सीधे तौर पर प्रावधान हैं। पर्यावरण के संरक्षण से संबंधित प्रावधान हालांकि संविधान के मूल पाठ का हिस्सा नहीं हैं, फिर भी संविधान के 42वें संशोधन, 1976 द्वारा शामिल किए गए। इस संशोधन में भारतीय संविधान के तहत भाग IV-A शामिल है, जो नागरिकों के मौलिक कर्तव्यों से संबंधित है।

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48 John H Knox, "Report of the Independent Expert on the issue of human rights obligations relating to the enjoyment of a safe, clean, healthy and sustainable environment", A/HRC/28/61 (3 February 2015), para 2.

49 *Ibid.*

50 *Ibid.*

51 Sinha, *Supra*45.

42वें संशोधन द्वारा, राज्य के नीति निर्देशक सिद्धांतों के तहत अनुच्छेद 48–ए जोड़ा गया, जो पर्यावरण संरक्षण के संबंध में राज्य की जिम्मेदारी पर प्रकाश डालता है।[52] यह नागरिकों और राज्य के पर्यावरण की रक्षा और सुधार के मौलिक कर्तव्यों के लिए अनुच्छेद 51(ए)(जी) के तहत भी प्रदान करता है।[53] राज्य के नीति निर्देशक सिद्धांतों और मौलिक कर्तव्यों पर अध्याय स्पष्ट रूप से पर्यावरण की रक्षा और सुधार के लिए राष्ट्रीय प्रतिबद्धता को स्पष्ट करते हैं। इन प्रावधानों के अलावा, भारतीय न्यायपालिका ने भारतीय संविधान के अनुच्छेद 21 के क्षितिज का विस्तार किया है और विभिन्न निर्णयों के माध्यम से स्थापित किया है कि जीवन के अधिकार और स्वच्छ पर्यावरण के अधिकार के बीच घनिष्ठ संबंध है।

संविधान का अनुच्छेद 21 एक मौलिक अधिकार है, जो इस प्रकार है, कानून द्वारा स्थापित प्रक्रिया के अनुसार किसी भी व्यक्ति को उसके जीवन या व्यक्तिगत स्वतंत्रता से वंचित नहीं किया जाएगाश। यद्यपि यह अनुच्छेद स्पष्ट रूप से पर्यावरण का उल्लेख नहीं करता है, सर्वोच्च न्यायालय और देश के विभिन्न उच्च न्यायालयों ने इस अनुच्छेद में 'जीवन' शब्द की व्यापक व्याख्या की है। न्यायालयों के अनुसार, जीवन के अधिकार में मानव अस्तित्व के अनुकूल रहने वाले वातावरण का अधिकार शामिल है। मौलिक अधिकारों के विपरीत, राज्य के नीति निर्देशक सिद्धांतों या मौलिक कर्तव्यों के उल्लंघन पर न्यायालय में सवाल नहीं उठाया जा सकता है। इस प्रकार, अनुच्छेद 21 में निहित जीवन की अवधारणा के विस्तृत अध्ययन के माध्यम से, अदालतों ने पर्यावरण के संरक्षण से संबंधित गैर–प्रवर्तनीय प्रावधानों को लागू करने की मांग की है। यह स्पष्ट रूप से पर्यावरणीय नुकसान के मुद्दे के प्रति न्यायपालिका के गंभीर दृष्टिकोण को इंगित करता है।

इसके अलावा, भयावह भोपाल गैस औद्योगिक आपदा जैसे उदाहरणों ने गंभीर पर्यावरणीय तबाही और श्रम सुरक्षा के मानकों की कीमत पर मुनाफाखोर बहु–राष्ट्रीय निगमों के दायित्व के निर्धारण के मुद्दों को अदालत के सामने प्रस्तुत किया है। अदालत द्वारा पूर्ण दायित्व सिद्धांत की घोषणा और औद्योगीकरण गतिविधियों में भारी उछाल के परिणामस्वरूप न्यायशास्त्र में बदलाव की आवश्यकता के बारे में टिप्पणियों से पता चलता है कि न्यायपालिका ने पर्यावरणीय नुकसान के लिए व्यवसायों की जिम्मेदारी को गंभीरता से लिया है।[54]

यहां यह ध्यान देने योग्य है कि यद्यपि भारतीय न्यायपालिका ने पर्यावरण सक्रियता के लिए एक चैंपियन के रूप में एक नाम अर्जित किया है, जलवायु परिवर्तन के मुद्दे से संबंधित मामले अपेक्षाकृत दुर्लभ हैं। जलवायु परिवर्तन की विशिष्ट चुनौती और मानव अधिकारों के उल्लंघन के बड़े मुद्दे के साथ इसका संबंध बना हुआ है और वैश्विक तापमान में वृद्धि और जलवायु परिवर्तन शब्दावली का संदर्भ प्रासंगिक बना हुआ है। कुछ मामलों के उदाहरण जिनमें इस मुद्दे पर कुछ विस्तार से चर्चा की

52 The Constitution of India, art. 48(A). It reads as: "the State shall endeavour to protect and improve the environment and to safeguard the forests and wild life of the country".

53 The Constitution of India, art. 51-A(g). It imposes duties on every citizen "to protect and improve the natural environment including forests, lakes, rivers and wild life, and to have compassion for living creatures".

54 *M.C. Mehta* v. *UOI*, AIR 1992 SC 248.

गई है, उनमें शेर सिंह बनाम हिमाचल प्रदेश राज्य[55] जैसे हालिया मामले शामिल हैं, जिसमें नेशनल ग्रीन ट्रिब्यूनल ने रोहतांग दर्रा क्षेत्र के आसपास गतिविधि पर कई प्रतिबंध लगाए गए थे, जो भी जलवायु परिवर्तन से प्रेरित हिमनदों के पीछे हटने के बारे में अवलोकन किए और इसे 'ब्लैक कार्बन उत्सर्जन' के लिए जिम्मेदार ठहराया।[56] इन मामलों पर निर्णय देते समय, अदालतों ने पर्यावरण कानून के सिद्धांतों पर काफी हद तक भरोसा किया है, जैसा कि अंतरराष्ट्रीय कानून जलवायु परिवर्तन पर संयुक्त राष्ट्र फ्रेमवर्क कन्वेंशन, क्योटो प्रोटोकॉल, पेरिस समझौते जैसे उपकरणों का बार-बार उल्लेख होता है।

भारत में जलवायु परिवर्तन का कारण बनने वाली किसी भी गतिविधि की रोकथाम और/या विनियमन के लिए कई मौलिक कानून हैं, साथ ही एक विशिष्ट ढांचा, जिसे 'जलवायु परिवर्तन पर राष्ट्रीय कार्य योजना (एनएपीसीसी)' के रूप में जाना जाता है, के लिए आठ मिशन हैं।[57] NAPCC का उद्देश्य सरकार, वैज्ञानिकों, उद्योग और समुदाय के प्रतिनिधियों के बीच जलवायु परिवर्तन से उत्पन्न खतरे और इन चुनौतियों का मुकाबला करने के लिए सरकार द्वारा प्रस्तावित कदमों के बारे में जागरूकता फैलाना है। पर्यावरण संरक्षण से संबंधित विधायी ढांचे की सराहना करने के लिए देश के संविधान के तहत प्रदान की गई राज्य और संघ की विधायी क्षमता को समझना उपयोगी है। संविधान की सातवीं अनुसूची के तहत राज्य और केंद्र के बीच पर्यावरण से संबंधित विषयों का उल्लेख किया गया है।

इस प्रकार, भारत में, काफी बड़ी संख्या में केंद्रीय और राज्य क़ानून हैं जिनका पर्यावरण संरक्षण पर कुछ प्रभाव है।[58] क्योंकि पर्यावरण संरक्षण अंतत: जीवन के अधिकार से उपजा है, भारतीय संविधान देश के अन्य सभी पर्यावरणीय नियमों के लिए प्राथमिक संदर्भ है। भारतीय संविधान जीवन के अधिकार की रक्षा करता है,[59] राज्य को अपने नागरिकों के स्वास्थ्य को सुरक्षित करने के लिए बाध्य करता है,[59] और पर्यावरण की रक्षा और सुधार के लिए राज्य के दायित्व को परिभाषित करता है।[61] भारतीय संविधान में पर्यावरण संरक्षण के लिए विशेष प्रावधान हैं। इन प्रावधानों ने जनहित याचिका

55 Application no. 237 (THC)/2013 (CWPIL No.15 of 2010, Principal Bench, NGT.

56 See Shibani Ghosh, "Litigating Climate Claims in India", 114 *AJIL Unbound* 45–50 (2020).

57 NAPCC was adopted by the then Prime Minister's council on Climate Change in the year 2008, *available at*: http://www.nicra-icar.in/nicrarevised/images/Mission%20Documents/National-Action-Plan-on-Climate-Change.pdf (last visited on 15 November 2021).

58 Report of the Tiwari Committee for Recommending Legislative Measures and Administrative Machinery for Ensuring Environment Protection (1980), Department of Science and Technology, Government of India.

59 The Constitution of India, art. 21. It states that "No person shall be deprived of his life or personal liberty except according to procedure established by law."

60 The Constitution of India, art. 39(e). It states that "that the health and strength of workers, men and women, and the tender age of children are not abused . . .".

61 The Constitution of India, art. 48. It states that "the State shall regard the raising of the level of nutrition and the standard of living of its people and the improvement of public health as among its primary duties ...".

के माध्यम से दायर पर्यावरणीय मुद्दों पर कई मामलों की व्याख्या को निर्देशित किया है और सर्वोच्च न्यायालय द्वारा इसकी सक्रियता के औचित्य के रूप में उद्धृत किया गया है।

पर्यावरण प्रभाव आकलन (ईआईए)

घरेलू स्तर पर जलवायु परिवर्तन का शमन मजबूत कानूनी व्यवस्था और प्रासंगिक पर्यावरण नीतियों और उनके प्रभावी कार्यान्वयन पर निर्भर करता है। इसके लिए नियोजित विकासात्मक गतिविधियों की आवश्यकता होती है जो पर्यावरण की जरूरतों को ध्यान में रखते हैं। पर्यावरण पर विकास गतिविधि के प्रभाव की भविष्यवाणी करने और नकारात्मक प्रभावों को कम करने और सकारात्मक प्रभावों को बढ़ाने का अवसर प्रदान करने के लिए, भारत में 1970 के दशक में पर्यावरण प्रभाव आकलन (ईआईए) प्रक्रिया विकसित की गई थी। मानव विकास गतिविधियों के पर्यावरणीय परिणामों की भविष्यवाणी करने और प्रतिकूल प्रभावों को खत्म करने या कम करने और सकारात्मक प्रभावों को बढ़ाने के लिए उचित उपायों की योजना बनाने के लिए एक ईआईए को एक औपचारिक प्रक्रिया के रूप में परिभाषित किया जा सकता है। पर्यावरण संरक्षण अधिनियम, 1986 (ईपीए) की धारा 3 जिसके तहत ईआईए अधिसूचना जारी की गई है, केंद्र सरकार को 'पर्यावरण की गुणवत्ता की रक्षा और सुधार और पर्यावरण प्रदूषण को रोकने, नियंत्रित करने और कम करने' के लिए उपाय करने के लिए अधिकृत करती है। स्वाभाविक रूप से, यह प्रवाहित होता है कि ईपीए की धारा 3 के तहत प्राप्त कुछ भी पर्यावरण के संरक्षण और प्रदूषण को नियंत्रित करने के उद्देश्य से होना चाहिए। इस प्रकार, प्रावधान में किए गए किसी भी संशोधन को यह भी सुनिश्चित करना चाहिए कि कानून का अंतिम लक्ष्य खो न जाए।

पर्यावरण मंत्रालय ने पुरानी ईआईए अधिसूचना 1994 कि कमियों को दूर करने के लिए 2006 में नई ईआईए अधिसूचना को अधिसूचित किया। इसके बाद, पुरानी अधिसूचना में विभिन्न संशोधनों को शामिल किया गया है। नई अधिसूचना ने इसके दायरे को बढ़ा दिया है और कई परियोजनाओं को पर्यावरण मंजूरी प्रक्रिया के दायरे में ला दिया है। हालाँकि, हाल ही में ईआईए अधिसूचना 2020 के मसौदे के बारे में चिंता व्यक्त की गई है, जो 2006 की अधिसूचना को बदलने के लिए निर्धारित है। इसे पर्यावरण और वन मंत्रालय द्वारा 23 मार्च 2020 को पेश किया गया था। इसका उद्देश्य देश में पर्यावरण शासन में कई बदलाव लाना है, जो संभावित रूप से उद्योग-समर्थक होने के दौरान पर्यावरणीय सुरक्षा उपायों से समझौता करता है जैसे कि एहतियाती सिद्धांत को कमजोर करना, सार्वजनिक सुनवाई के लिए समय में कमी आदि। इसके बारे में बढ़ती जागरूकता के मद्देनजर व्यवसायों के बीच जटिल संबंध, पर्यावरण और मानवाधिकारों पर उनका प्रभाव, ऐसा कदम जो ईआईए के प्रावधान को कमजोर करता है, पुनर्विचार की मांग करता है और यह पूरी उम्मीद है कि प्रस्तावित संशोधन के भाग्य का फैसला उसी को ध्यान में रखते हुए किया जाएगा।

VI. निष्कर्ष

जलवायु परिवर्तन संकट के बारे में मानवाधिकार दृष्टिकोण लेना महत्वपूर्ण है क्योंकि जलवायु परिवर्तन के प्रतिकूल प्रभाव मानव को गंभीर रूप से खतरे में डाल रहे हैं- समुद्र के बढ़ते स्तर से दुनिया भर में समुद्र तट को खतरा होगा, पारिस्थितिकी तंत्र के ढहने से गंभीर खाद्य संकट पैदा होगा,

और यह सब मिलकर जीवन को प्रभावित करते हैं। इसलिए, एक मानवाधिकार विश्लेषण राष्ट्र राज्यों से इस तरह के विनाशकारी मानव नुकसान को रोकने के लिए कुछ सक्रिय कार्यों को गति दे सकता है; और मानवाधिकार दृष्टिकोण भी प्राकृतिक आपदाओं के मामलों में पूर्व कार्योत्तर कार्रवाई को सूचित कर सकता है।[62] यह ध्यान रखना दिलचस्प है कि वर्तमान नीति और न्यायिक प्रवृत्तियों से पता चलता है कि राज्यों और निगमों दोनों के मानव अधिकारों के कारण परिश्रम दायित्वों के एक आयाम के रूप में जलवायु संबंधी परिश्रम तेजी से आकार ले रहा है। हालाँकि, जलवायु परिवर्तन से संबंधित मामलों की संख्या बहुत अधिक नहीं है और इन मुकदमों के परिणाम अनिश्चित हैं, हालाँकि, यह विकास निगमों को जलवायु परिवर्तन के प्रति संवेदनशील बनाने में मदद करेगा। जलवायु परिवर्तन और मानवाधिकारों से संबंधित अंतर्राष्ट्रीय मानवाधिकार कानून के तहत राज्यों की जिम्मेदारी को निकट भविष्य में विभिन्न मानवाधिकार निगरानी निकायों द्वारा स्पष्ट रूप से मान्यता दी जाएगी। वर्तमान में पहली व्यक्तिगत शिकायत से निपटने वाली मानवाधिकार समिति जलवायु परिवर्तन और इसके प्रतिकूल मानवाधिकार प्रभावों को संबोधित करने के लिए राज्यों के कर्तव्य को स्पष्ट रूप से संबोधित करती है।[63]

62 Margaux J Hall and David C Weiss, "Avoiding adaptation apartheid: Climate change adaptation and human rights law" 37 *Yale J. International Law* 309 (2012).

63 Petition of Torres Strait Islanders to the United Nations Human Rights Committee Alleging Violations Stemming from Australia's Inaction on Climate Change, *available at*: http://climatecasechart.com/climate-change-litigation/non-us-jurisdiction/united-nations-human-rights-committee/ (last visited on 29 November, 2021).

समसामयिक वैश्विक राजनीति एवं पर्यावरणीय चुनौतियाँ: भारतीय दृष्टिकोण एवं प्रशासनिक, नीतिगत, विधायी और न्यायिक प्रयास

*अनूप कुमार**

I. प्रस्तावना

पृथ्वी पर जीवन का आधार पर्यावरण है। पर्यावरण केवल मानव ही नहीं, अपितु समस्त जीव-जन्तुओं एवं वनस्पतियों के अस्तित्व का आधार है। पर्यावरण की शुद्धता व सामर्थ्यता पर ही मानव के वर्तमान एवं भावी पीढ़ी का अस्तित्व निर्भर है। आज पर्यावरण का ही अस्तित्व संकट के दौर से गुजर रहा है। इन्हीं दबावों के परिणामस्वरूप आज मानव, पर्यावरण संरक्षण के प्रति अपनी जागरूकता को प्रदर्शित कर रहा है। पिछले कुछ दशकों से पर्यावरण के बारे में उत्सुकता विश्व के प्रत्येक समाज में बढ़ती जा रही है। 1960 के दशक से ही वैश्विक राजनीति में पर्यावरणीय मुद्दे उभरने लगे थे। युद्ध एवं शांति जैसी विषयों से अब तक जुड़ी वैश्विक राजनीति में अब शनैः-शनैः पर्यावरणीय मुद्दे छाने लगे हैं। संयुक्त राष्ट्र की महासभा ने जुलाई 2022 में स्वच्छ, स्वस्थ और टिकाऊ पर्यावरण को मानवाधिकार के रूप में मान्यता प्रदान किया है। आज हमारे सम्मुख जो पर्यावरणीय चुनौतियाँ हैं वह मानव समुदाय के ऊपर पतले धागे में लटकते तलवार की भाँति हैं। सार रूप में कहें तो राजनीतिक परिवर्तन का कारण, ये पर्यावरणीय चुनौतियाँ ही हैं। प्राकृतिक संसाधनों एवं प्रकृति से जुडे अवयवों जैसे वन, नदी, भूमि से सम्बन्धित पर्यावरणीय चुनौतियाँ मानव के समक्ष उसके अस्तित्व के संकट के रूप में तब अस्तित्व में आयी, जब इनका दोहन साम्या एवं न्याय के सिद्धान्तों के विपरीत वाणिज्यिक उद्देश्यों हेतु वैज्ञानिक तरीकों से किया गया। असिमित असीमित वाणिज्यिक दोहन ने इनका तेजी से विनाश किया। निर्वनीकरण, नदियों का सूखना, जलवायु परिवर्तन, वैश्विक तापमान में वृद्धि, मृदा, जल एवं वायु प्रदूषण के रूप में हमें, इस उद्योग एवं अर्थ केन्द्रित वाणिज्यिक दोहन की परिणति प्राप्त हुई। इस संकट के परिणामस्वरूप विधिक, न्यायिक, वैज्ञानिक तथा सामाजिक स्तर पर पर्यावरणीय चुनौतियों के सन्दर्भ में प्रयास प्रारम्भ हुए ताकि हम सुरक्षित व स्वस्थ विश्व में निवास कर सके तथा हमारी भावी पीढ़ी को भी सुरक्षित भविष्य मिल सके।

इस शोध-पत्र के अन्तर्गत पर्यावरणीय पक्षों के वैश्विक समसामयिक राजनीति को समझने के साथ, विकसित व विकासशील राष्ट्रों के पर्यावरणीय मुद्दों का विश्लेषण किया गया है। तत्पश्चात् लेख के दूसरे भाग में वैश्विक पर्यावरणीय चुनौतियों को संक्षेप में प्रस्तुत किया गया है। तीसरे भाग में पर्यावरण संरक्षण व चुनौतियों का सामना करने में भारत के दृष्टिकोण व प्रयास को प्रशासनिक, नीतिगत, विधायी एवं न्यायिक दृष्टिकोण से व्याख्यायित करने का प्रयास किया गया है।

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II. पर्यावरण: अर्थ एवं परिप्रेक्ष्य

पर्यावरण[1] का अर्थ चारों तरफके वातावरण से लिया जाता है। हमारे चारों तरफजो सजीव और निर्जीव प्राणी हैं वे मिलकर पर्यावरण का निर्माण करते हैं।[2] भूगोल परिभाषा कोष के अनुसार चारों ओर उन बाहरी दशाओं का योग, जिसके अन्दर एक जीव अथवा समुदाय रहता है या कोई वस्तु रहती है, उसे पर्यावरण कहते हैं।[3]

पर्यावरण की परिभाषा को पर्यावरण संरक्षण अधिनियम, 1986 की धारा 2 में वर्णित किया गया है जिसके अनुसार पर्यावरण के अन्तर्गत जल, वायु और भूमि तथा जल, भूमि और वायु तथा मानव प्राणी, अन्य जीवित जीव-जन्तु, पौधे सूक्ष्म जीवाणु तथा सम्पत्ति में और उनके बीच के विद्यमान अन्तर्सम्बन्ध शामिल हैं।[4] यह परिभाषा अति व्यापक है। जिसमें जैविक एवं अजैविक तत्त्वों के साथ उनके बीच के अंतर्संबंधों को भी पर्यावरण का अंग मानने के साथ परिभाषा में सम्पत्ति को भी पर्यावरण का अंग माना गया है। व्यापक विधिक परिभाषा संरक्षण की सीमा को बढ़ाता है ऐसे में विधायन का क्रियान्वयन एवं अर्थान्वयन महत्वपूर्ण हो जाता है।

पर्यावरण के लिए पारिस्थितिकी (Ecology) शब्द का प्रयोग भी किया जाता है। इसका सर्वप्रथम प्रयोग प्राणी-वैज्ञानिक अर्नेस्ट हैकल एवं रैठर ने किया। पारिस्थितिकी शब्द की उत्पत्ति ग्रीक भाषा के शब्द OIKOS से हुई[5], जिसका शाब्दिक अर्थ 'घर' अथवा 'आवास' है। अत: पारिस्थितिकी से तात्पर्य ''जीव का उसके घर में अध्ययन'' है, अत: जैव वैज्ञानिकों ने परिभाषित किया है कि ''पारिस्थितिकी, जीव अथवा जीव समूह का उसके पर्यावरण से संबंध का अध्ययन है।''[16] फिलफ हेल्डर के अनुसार, ''पारिस्थितिकी जीवों तथा उनके पर्यावरण के परस्पर संबंधों का विज्ञान है।'' टेलर के मतानुसार, पारिस्थितिकी समस्त जीवों के समस्त पर्यावरणों के साथ संबंधों का अध्ययन कराता है।''[17] मानव स्वयं भी चूंकि पारिस्थितिकी का एक अंग है इसलिए उसे इस संदर्भ में प्रज्ञायुक्त ज्ञान की अपरिहार्यता भी है।[18] पारिस्थितिकी, जीव विज्ञान का आधारभूत भाग है इसमें जीवधारी, पर्यावरण, आबादी, समुदाय, व सम्पूर्ण जीव मण्डल आता है।

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1 परि + आ + वृ + ल्युट् + सु – परित आवरणं पर्यावरण्, देखें, नित्यानंद मिश्रा, *पर्यावरण संस्कृति प्रदूषण एवं संरक्षण* (अल्मोड़ा : श्री अल्मोड़ा बुक डिपो, 1998) पृ. 7

2 पर्यावरण को आंग्ल भाशा में इन्वायरॉन्मेंट (environment) कहा गया है। जो फ्रांसीसी शब्द *environir* शब्द से उत्पन्न हुआ है। आंग्ल भाशा में पर्यावरण के लिए एक शब्द *'habitat'* का भी प्रयोग किया जाता है जो लैटिन भाशा के *'habitare'* शब्द से बना है। जिसका अर्थ है एक सुनिष्चित स्थान जिसमें जीव उस स्थान की भौतिक एवं जैविक दषाओं में समायोजन स्थापित कर रहते हैं।

3 वीरेन्द्र सिंह यादव, *पर्यावरण वर्तमान एवं भविश्य* (नई दिल्ली : राधा पब्लिकेशन, 2009 प्रथम संस्करण) पृ. 3

4 आर.एल. राठी, *आधुनिक पर्यावरण विधि* (जयपुर : यूनिवर्सिटी बुक हाउस, 2006) पृ. 23

5 दीप्ति शर्मा और महेन्द्र कुमार, *मानव एवं पर्यावरण* (नई दिल्ली : अर्जुन पब्लिशिंग हाउस, 2009 प्रथम संस्करण) पृ. 9

6 आलोक कुमार बंसल,*पर्यावरण एवं पर्यावरणीय संरक्षण* (जयपुर : सबलाइम पब्लिकेशन, 2007 प्रथम संस्करण) पृ. 31

सभ्य मानव वही है जो दूसरे मनुष्यों में ही नहीं, बल्कि सम्पूर्ण सृष्टि को मित्रता की दृष्टि से देखे। उसका कर्त्तव्य केवल नागरिकों की रक्षा करना ही नहीं, बल्कि पशु जीवन और जंगलों के वृक्षों की रक्षा करना भी है।[9] यदि हम भारतीय सनातन परम्परा पर दृष्टि डालें, तो स्पष्ट होता है कि परम्परागत रूप से भारतीय समाज में आवश्यकता एवं भोग में अन्तर किया गया है। प्रकृति में ब्रह्म का अस्तित्व माना जाता रहा हैं, जिससे मनुष्य प्रकृति के प्रति कृतज्ञ रहता था तथा उसका सम्मान करता था। नदी, भूमि को माता, वृक्षों को पुत्रों के समान मानने की परम्परा रही है। (माता भूमि: पुर्तोऽहम पृथिव्या:) हम प्रकृति पूजक समाज के रूप में विख्यात थे।

पर्यावरण का जो संकट इस दुनिया के सामने है, वह हमारे भूमण्डल के भविष्य को गम्भीर रूप से बदलेगा। हममें से कोई भी उसकी सामाजिक स्थिति, सामर्थ्य और परिस्थितियों, चाहे जो हों, उसके प्रभाव से अछूता नहीं बचेगा। परिवर्तन की यह प्रक्रिया वर्तमान अन्तर्राष्ट्रीय नीतियों के सामने एक चुनौती है। क्या 'एक धरती' और 'एक पर्यावरण' की बढ़ती हुई चेतना हमें 'एक मानवता' की धारणा की ओर ले जायेगी? पर्यावरण के दोहन में न्यायोचित भागीदारी हो सकेगी? कम विकसित देशों के विकास में तेजी लाने के लिए क्या और अधिक अंतर्राष्ट्रीय दिलचस्पी होगी? यह मूल प्रश्न एवं संभावनाएँ हमारे समक्ष हैं। जितनी तेज गति से हम विकास की ओर बढ़ रहे हैं, क्या उतनी ही तेजी से विनाश हमारी ओर नहीं बढ़ रहा है? यदि हम इनका समाधान नहीं कर पायेंगे तो यह मानवता के सामने विराट प्रश्नचिन्ह हमारे अस्तित्व के लिए एक काल बन जायेगा और सम्पूर्ण जीव-जगत् एक पूर्ण विराम की स्थिति में आकर खड़ा हो जाएगा। प्रश्नवाचक या पूर्ण विराम! कौन सा विकल्प चुनेंगे हम?[10]

III. वैश्विक राजनीति एवं पर्यावरण

पर्यावरणविद् एवं आमजन इस निष्कर्ष पर पहुँचे हैं कि पर्यावरणीय समस्या की प्रकृति वैश्विक है। एक देश की सरकार मात्र अपने प्रयासों से इन समस्याओं का हल नहीं निकाल सकती। इसलिए इन मुद्दों का वैश्विक राजनीति से सरोकार होना अवश्यंभावी हो गया। समय के साथ ये मसले विश्व राजनीति का हिस्सा बन गये। पेरिस समझौते के क्रम में विकसित देशों के रवैये इसका ज्वलन्त उदाहरण है ।

वैश्विक राजनीति में कुछ मूलभूत प्रश्न खड़े हुए हैं कि कौन पर्यावरण को अत्यधिक नुकसान पहुँचा रहा है? पृथ्वी के प्राकृतिक संसाधनों पर किसको, और किस सीमा तक इस्तेमाल करने का हक है?

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7 शर्मा, पूर्वोक्त पृ. 9

8 अरविन्द भाटिया और हरिष्चन्द्र, *भारतीय परिचयात्मक पर्यावरण जैविकी* (जयपुर : राजस्थान हिन्दी ग्रंथ अकादमी, 2000 प्रथम संस्करण) पृ. 5

9 इन्दिरा गांधी, *पर्यावरण का संरक्षण* (नई दिल्ली : न्यू एज इन्टरनेषनल (प्रा.) लि. पब्लिषर्स, 1984) पृ. 15

10 दामोदर शर्मा और हरिष्चन्द्र व्यास, *आधुनिक जीवन एवं पर्यावरण* (दिल्लीः प्रभात पब्लिकेशन, 2010) पृ. I

11 समकालीन विष्व राजनीति, कक्षा–12 की राजनैतिक विज्ञान की पाठ्य पुस्तक (नई दिल्ली : राश्ट्रीय षैक्षिक अनुसंधान और प्रषिक्षण परिशद, 2007 संस्करण) पृ. 119

पर्यावरण की सुरक्षा की जिम्मेवारी किसकी है ? वर्तमान में इन प्रश्नों का उत्तर इस पर निर्भर कर रहा है कि कौन राष्ट्र कितना शक्तिशाली है। इस कारण ये मसले, गहरे अर्थों में राजनैतिक हो गये हैं।[11]

विकास की अंधी दौड़ में, संसाधनों के अत्यधिक दोहन से संसाधनों के विनाश का अंदेशा उत्पन्न हो गया है इन्हीं अंदेशों को दूर करने के लिए अन्तर्राष्ट्रीय सम्मेलनों का दौर निरन्तर जारी है। मानवीय पर्यावरण पर स्टाकहोम सम्मेलन 1972 में हुआ, इसका मुख्य उद्देश्य पर्यावरण के संरक्षण तथा सुधार की विश्वव्यापी समस्या का निदान करना था। इसमें 119 देशों ने प्रथमत: 'एक ही पृथ्वी' के सिद्धान्त को स्वीकार किया तथा यह स्टाकहोम घोषणा पत्र 1972 के नाम से जाना जाता है।[12]

वैश्विक राजनीति में बढ़ते पर्यावरणीय सरोकार को हम गरीब व विकासशील राष्ट्र तथा विकसित व धनी राष्ट्रों के मध्य बढ़ते मतभेदों के रूप में समझ सकते हैं, क्योंकि उत्तरी व दक्षिणी गोलार्द्ध पर्यावरण संरक्षण के अलग-अलग एजण्डे के पैरोकार हैं। जहाँ विकसित देशों की मुख्य चिंता ओजोन परत के क्षरण व वैश्विक तापन में वृद्धि को लेकर है तो विकासशील देशों की सबसे अधिक चिंता आर्थिक विकास व पर्यावरणीय प्रबन्धन के आपसी रिश्तों को सुलझाने की है।

इस सन्दर्भ में रियो सम्मेलन में कुछ नियमों को स्वीकार किया गया है। एजेण्डा 21 में विकास का जो तरीका बतलाया गया है उसे 'टिकाऊ विकास' का तरीका कहा जाता है, परन्तु सबसे बड़ी समस्या यह है कि इस पर अमल कैसे किया जाय ? विरोधियों का मत है कि एजेण्डा 21 का पर्यावरण संरक्षण को सुनिश्चित करने के बजाय आर्थिक वृद्धि की ओर जोर अधिक है।[13]

पर्यावरणीय समस्या वैश्विक इसलिए बन जाती है क्योंकि ''मानवता की साझी विरासत'' या वैश्विक सम्पदा का संरक्षण, एक देश के बूते की बात नहीं है। विश्व के कुछ हिस्से और क्षेत्र किसी एक देश के सम्प्रभु क्षेत्राधिकार के बाहर होते हैं, इसलिए उनका प्रबन्धन साझे तौर पर अन्तर्राष्ट्रीय समुदाय द्वारा किया जाता है। इसमें पृथ्वी का वायुमण्डल, अंटार्कटिका की समुद्री सतह, बाहरी अंतरिक्ष इत्यादि शामिल हैं। वैश्विक सम्पदा की सुरक्षा के सवाल पर अन्तर्राष्ट्रीय सहयोग कायम करना एक टेढ़ी खीर है परन्तु इस दिशा में कुछ महत्वपूर्ण समझौते भी हुये हैं। अंटार्कटिका संधि (1959) मांट्रियल नवाचार (1987) अंटार्कटिका पर्यावरणीय नवाचार (1991)। पर्यावरण से जुड़े प्रत्येक मसले के साथ यह एक बड़ी समस्या जुड़ी है कि अपुष्ट वैज्ञानिक साक्ष्यों और समय सीमा को लेकर मतभेद पैदा होते रहे हैं, ऐसे में सर्वमान्य पर्यावरणीय एजेण्डे पर सहमति कायम करना मुश्किल है।[14] आइ.पी.सी.सी.आर की रिपोर्ट विवादों में आयी जिसमें हिमालय ग्लैशियर पिघलने व वैश्विक तापमान में वृद्धि जैसी भविष्यवाणियाँ की गयी थी, परन्तु उसकी प्रामाणिकता पर ही प्रश्न चिह्न लग गया है।[15] आई.पी.सी.सी. की पाँचवी निर्धारण रिपोर्ट में कहा गया है कि 1850 से अब तक

12 सी.पी. सिंह, *पर्यावरण विधि* (इलाहाबादः इलाहाबाद ला एजेंसी पब्लिकेशन 2010 शश्ठम् संस्करण) पृ. 96

13 उपरोक्त नोट, 12 पृ. 120

14 उपरोक्त नोट, 11 पृ. 122

15 व्यापक रूप से देखें, प्रतियोगिता दर्पण वार्शिकी 2008, पृ. 114

(2014) विश्व का तापमान 0.8^0 सेंटीग्रेट की दर से बढ़ा है। हमारा लक्ष्य है कि यह तापमान 2^0 सेंटीग्रेट से ज्यादा न बढ़े। विश्व के पास 250 गीगाटन कार्बन बचा है हमें उसका संतुलित प्रयोग करना चाहिए। विकासशील राष्ट्रों ने विकसित राष्ट्रों से तकनीक एवं आर्थिक मदद की मांग की है। पेरिस में होने वाले सम्मेलन में अब यह तय होगा कि कोई मुकम्मल समझौता हो पाता है या नहीं।

सरकारों ने पर्यावरणीय मामलों में सही तथ्यों एवं अनुमानों की आवश्यकता पर बल दिया है।[16] जलवायु परिवर्तन सम्बन्धित सत्य तथ्यों के लिए अलग पर्यावरण विज्ञान तंत्र को विकसित करने की सलाह दी गई है। वैश्विक राजनैतिक मंचों पर अपना पक्ष मजबूत और तार्किक ढंग से रखने के लिए आवश्यक हो जाता है कि हम स्वयं का आकलन तंत्र विकसित करे। उचित जानकारी के अभाव में हम अन्तर्राष्ट्रीय मोर्चे पर कमजोर पड़ जाते हैं। विश्व 16 जैव भौगोलिक क्षेत्रों में विभक्त है जिसमें से 10 का प्रतिनिधित्व भारत में है इसलिए ये और भी जरूरी हो जाता है कि भारत पारिस्थितिकीय के अध्ययन के लिए खुद का तंत्र विकसित करे।

IV. विकसित बनाम विकासशील देश और पर्यावरणीय चुनौतियाँ

रियो घोषणा पत्र में कहा गया था कि धरती के पारिस्थितिकी तंत्र की अखण्डता और गुणवत्ता की बहाली, सुरक्षा तथा संरक्षण के लिए विभिन्न देश विश्वबन्धुत्व की भावना से आपस में सहयोग करेंगे, पर्यावरण के विश्वव्यापी अपक्षय में विभिन्न राज्यों का योगदान अलग-अलग है। इसे देखते हुए विभिन्न राज्यों की साझी किन्तु अलग-अलग जिम्मेवारी होगी। विकसित राष्ट्रों का वैश्विक पर्यावरण पर दबाव ज्यादा है और इन देशों के पास विपुल प्रौद्योगिकी एवं वित्तीय संसाधन हैं। इसे देखते हुए विकसित देश अपनी खास जिम्मेवारी निभायेंगे।[17]

रियो घोषणा पत्र का सार यह है कि 'साझी जिम्मेदारी व अलग-अलग भूमिका' लेकिन जब-जब भूमिका तय करने की बात होती है तो पूरा मामला राजनीति की भेंट चढ़ जाता है। कोपेनहेगेन[18] इसका एक ज्वलंत उदाहरण है जहाँ सम्भवत: यह पहली बार हुआ जब किसी अन्तर्राष्ट्रीय सम्मेलन में सहमति पर पहुँचने के लिए इतनी खींचतान हुई और फिर भी नतीजा सिफर रहा। अंत में जो कुछ समझौता हुआ उसके औचित्य एवं प्रभावकारिता पर ही प्रश्न चिन्ह लग गये। जी-77 के विकासशील देशों तथा अन्य निर्धन देशों ने इसे पूर्णत: खारिज कर दिया। अत: ऐसे में आम सहमति का लक्ष्य दूर प्रतीत हो रहा है।[19]

विकासशील देशों का तर्क है कि सभी पर्यावरणीय समस्याओं जैसे वैश्विक तापन एवं जलवायु परिवर्तन के लिए औद्योगिक विकसित देश जिम्मेदार हैं। इस कारण विकसित राष्ट्र भारी मात्रा में कार्बन उत्सर्जन में कटौती करें। पूरे विश्व में स्वच्छ प्रौद्योगिकी उपलब्ध करायें, पर्यावरण सुधार के

16 दैनिक जागरण, वाराणसी संस्करण, सम्पादकीय 7 अक्टूबर 2014 पृ. 10

17 उपरोक्त नोट 11 पृ. 123

18 यूनाइटेड नेषन फ्रेमवर्क कन्वेन्सन आन क्लाइमेट चेंज (UNFCCC) COP. 15, 7-8 दिसम्बर 2009.

19 व्यापक रूप से देखें, उपरोक्त नोट 12, पृ. 141–143

लिए आर्थिक खर्चों का दायित्व मुख्यत: सम्पन्न विकसित राष्ट्र उठायें तथा अन्तर्राष्ट्रीय पर्यावरणीय विधियों के निर्माण में, प्रयोग में व उनके अर्थान्वयन में विकासशील राष्ट्रों की विशिष्ट जरूरतों को ध्यान में रखा जाना चाहिए। तकनीक एवं प्रौद्योगिकी का हस्तान्तरण रियायती शर्तों पर हो तथा विकसित राष्ट्र अच्छी तकनीक प्रदान करने से तथ्यत: न मुकरें।

रियो सम्मेलन के 20 वर्षोंपरांत पुन: सतत् विकास पर संयुक्त राष्ट्र सम्मेलन जून 2012 में रियो दी जेनेरियो ब्राजील में हुआ। जिसे हम रियो+.20 के नाम से जानते हैं। यह एक ऐसा अवसर था जब पूरा विश्व पुन: एक साथ 1992 के बाद सबके लिए सुरक्षित, हरित, स्वच्छ, अधिक समृद्ध व अधिक सामयिक विश्व के लिए कार्ययोजना बनाने के लिए एकत्रित हुआ था।[20]

एक महत्वपूर्ण प्रश्न था कि रियो के बाद रियो 20 की अपरिहार्यता क्यों महसूस की गई ? इसके कुछ महत्वपूर्ण कारक थे, जो निम्न हैं–

1. विश्व की वर्तमान जनसंख्या सात बिलियन से बढ़कर सन् 2050 में नौ बिलियन हो जायेगी।
2. प्रत्येक पाँच व्यक्तियों में से एक व्यक्ति विश्व में लगभग (1.4 बिलियन) 1.25 डालर प्रतिदिन या उससे कम में जीवन निर्वाह कर रहा है।
3. 1.5 बिलियन कमाने वाले को विद्युत मयस्सर नहीं है। 2.5 बिलियन के पास शौचालय नहीं है और एक बिलियन के लगभग लोग प्रतिदिन भूखे रहते हैं।
4. हरित गृह गैसों के उत्सर्जन में निरन्तर वृद्धि हो रही है तथा ज्ञात प्रजातियों में से एक तिहाई प्रजातियाँ जलवायु परिवर्तन के कारण विलुप्ति के कगार पर हैं।
5. यदि हम अपने बच्चों व पौत्रों के लिए जीवन युक्त विश्व छोड़ना चाहते हैं, तो अब हमें पर्यावरणीय क्षरण व गरीबी की विश्वव्यापी समस्या को अब काबू में करना होगा।

इन अपरिहार्यताओं के कारण रियो+20 ने एक ऐसा अवसर प्रदान किया कि हम वैश्विक रूप से सोच सकें, घरेलू स्तर पर कार्य कर सकें तथा अपने भविष्य को सुरक्षित रख सकें। इस सन्दर्भ में रियो20 सम्मेलन के महासचिव शॉ जूकांग ने कहा है कि, ''धारणीय विकास एक विकल्प नहीं है बल्कि यह इस ग्रह पर मानवता के उचित जीवन का एकमात्र विकल्प है। रियो+20 ने हमारी पीढ़ी को यह अवसर प्रदान किया है कि हम इस रास्ते को चुन सकें।''[21]

इस सम्मेलन में राष्ट्रों ने अपने एक दृष्टिकोण को स्वीकार किया तथा कुछ मुद्दों पर राजनैतिक प्रतिबद्धता को भी स्वीकार किया, जिसमें रियो सम्मेलन, स्टाकहोम सम्मेलन, एजेण्डा 21 की स्वीकारोक्तियों के पक्ष को पुन: पुष्ट किया गया। परन्तु यह सम्मेलन अपने मूल लक्ष्य 'हरित

20 दी फ्यूचर वी वांट, रियो+20 युनाइटेड नेषंस कांफ्रेंस आन सस्टेनेबिल डेवलपमेंट रियो दी जेनेरियो, ब्राजील 20–22 जून 2012, पृ. 2 उपलब्ध ***http://www.un.org/en/sustainablefuture/pdf/conf_brochure.pdf*** लिया गया 20 जून 2022

21 *वही*, पृ. 3

अर्थव्यवस्था' के परिप्रेक्ष्य में कोई निश्चित एवं समग्र समझौते को एक ठोस स्वरूप देने में विफल रहा। इसके बावजूद सम्पूर्ण विश्व के लिए सतत् विकास माडल को सामने लाने में व समझौते में इसकी प्रमुख भूमिका रही।

सितम्बर 2000 में विश्व के नेताओं ने शताब्दी विकास के लक्ष्यों को स्वीकार किया, जिसमें इस बात पर ऐक्यता व्यक्त की गई थी कि सदी का मुख्य लक्ष्य गरीबी का न्यूनीकरण व मानव का विकास है। रियो+20 में इन्हीं मन्तव्यों को आगे बढ़ाने का कार्य किया गया था, इतिहास व सम्मेलनों का अध्ययन हमें सुझाता है कि अपवादिक स्थिति को छोड़कर लगभग सभी संधियों व अभिसमयों में आदर्शात्मक बातों को तो स्वीकार कर लिया जाता है। परन्तु बाद में इनके क्रियान्वयन के मुद्दे पर विकसित एवं विकासशील राष्ट्र अपना-अपना राग अलापते हैं तथा मुद्दा वास्तविक अर्थों में क्रियान्वित नहीं हो पाता। इसके कारण ही अंतर्राष्ट्रीय स्तर पर समृद्ध अंतर्राष्ट्रीय पर्यावरणीय विधि के बावजूद अभी तक पर्यावरणीय चुनौतियों को कम व समाप्त करने की दिशा में प्रगति वैसी नहीं रही है जैसी कि समस्या की गंभीरता को देखते हुए अपेक्षित थी।

V. विश्व व्यापार संगठन व पर्यावरणीय मुद्दे

1995 में विश्व व्यापार संगठन की स्थापना के बाद यह संगठन, विश्व राजनीति का एक नया अखाड़ा बना। वर्तमान में 164 देश सदस्य हैं।[22] यद्यपि व्यापार एवं पर्यावरण पर गैट व डब्लूटीओ के प्रारम्भिक दिनों में भी चर्चा हुई पर प्रथम सार्थक प्रयास 2001 दोहा के मंत्रीस्तरीय सम्मेलन में हुआ; जब पर्यावरण एवं व्यापार के मुद्दों पर चर्चा के लिए कमेटी आन ट्रेड एण्ड इनवायरमेंट स्पेशल सेशन (सीटीइएसएस) को गठित किया गया।[23] जिसमें यह सुझाव आया कि ऐसी वार्तापत्र आयोजित की जाय, जिसमें विकासात्मक मुद्दे व पर्यावरणीय मुद्दे साथ-साथ हों। दोहा मंत्रीस्तरीय घोषणा में तीन बिन्दुओं पर पर्यावरणीय दृष्टि से अधिक ध्यान दिया गया। बाजार पहुँच व पर्यावरण संरक्षण सम्बन्धी प्रयासों में परस्पर जीत की स्थिति उत्पन्न करने तथा ट्रिप्स एग्रीमेंट के संगत प्रावधान तथा पर्यावरण उद्देश्यों के लिए लेबलिंग प्रयासों पर जोर दिया जाना तथा इन तीन मुद्दों के अलावा सदस्य राष्ट्रों ने तकनीकी सहायता, सक्षमता विकास व पर्यावरणीय पुनरीक्षा पर भी जोर दिया गया।

यदि हम डब्लूटीओ पर विहंगम दृष्टि डालें तो पाते हैं कि विश्व व्यापार संगठन एक पर्यावरण सुरक्षा से जुड़ा अभिकरण नहीं है परन्तु गैट एवं डब्लूटीओ के अन्तर्गत ऐसे महत्वपूर्ण नियम हैं जिसके द्वारा पर्यावरण संरक्षण की पर्याप्त सम्भावनाएँ हैं। इसमें विकासशील राष्ट्रों के बाजार तक पहुँच को सुनिश्चित किया गया है साथ ही विषय विशेषज्ञों का मानना है कि व्यापार व पर्यावरण के बीच समन्वय को बढ़ाया जाना चाहिए।[24] वर्तमान वैश्विक उदारीकृत व्यापार व्यवस्था में यह समझना आवश्यक है कि

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22 विष्व व्यापार संगठन *https://www.wto.org/english/res_e/booksp_e/anrep_e/anrep21_chap3_e.pdf* लिया गया 30 जून 2022

23 ट्रेड एण्ड इनवायरमेंट एट दी डब्लूटीओ, विष्व व्यापार संगठन उपलब्ध *http://www.wto.org/english/tratop_e/envir_e/envir_wto2004_e.pdf* लिया गया 25जून 2022

24 नाथाले ब्रेनास्कोनी ओस्टरवाल्डर, *इनवायरोमेंट एण्ड ट्रेड ए गाइड टू डब्लूटीओ, ज्यूरिसप्रुडेंस* (लंदन 2, 2008) पृ. 307

व्यापार के उदारीकृत होने का पर्यावरण पर क्या प्रभाव पड़ा है ? तथा आप कब पर्यावरण की सुरक्षा के लिए व्यापार को प्रतिबंधित कर सकते हैं।

जैव विविधता व ट्रिप्स एग्रीमेंट से जुड़े प्रावधान पर्यावरण व व्यापार से काफी घनिष्ठ रूप से जुड़े हैं। ट्रिप्स एग्रीमेंट विश्व व्यापार संगठन के ढाँचों के अन्तर्गत ही आता है। ट्रिप्स के अनु. 7 में उसके उद्देश्यों को दिया गया है।[25] जिनमें तकनीक के विकास व हस्तान्तरण की बातें कहीं गई हैं। चूँकि आज उत्पादन एक प्रमुख अवयव बन गया है इसलिए स्वच्छ पर्यावरण सम्मत तकनीक का विकास हो तो यह सबके लिए लाभप्रद होगा।

यदि गरीबी पर्यावरण के लिए खतरा है तो इसका उपचार विकास द्वारा ही हो सकता है। विकास को गति देने के लिए राष्ट्रों के मध्य व्यापारिक गतिरोधों को दूर करने का कार्य विश्व व्यापार संगठन करता रहा है। यह भी तथ्य है कि पर्यावरणीय समस्याएँ व अंतर्राष्ट्रीय व्यापार आपस में प्रत्यक्ष रूप से न जुड़कर अप्रत्यक्ष रूप से जुड़े हैं, लेकिन डब्लूटीओ पर्यावरण संरक्षण के लिए कुछ कर सकता है जिसमें व्यापार अवरोधों को न्यूनतम करके पर्यावरण हितैषी उत्पाद उत्पन्न करने की तकनीक को विकसित किया जाय तथा पर्यावरणीय प्रबन्ध नीति अपना कर स्वच्छ पर्यावरण हितैषी तकनीक के निवेश में अवरोधों को कम किया जा सकता है। साथ ही ऐसी रियायतों को समाप्त किया जा सकता है जो पर्यावरण की सुरक्षा के प्रतिकूल हो।

यद्यपि विश्व व्यापारिक राजनीति का एक मजबूत अखाड़ा है और यह एक तीर से कई निशाने साधने का केन्द्र है। कुछ राष्ट्रों का यह तर्क है कि कुछ सब्सीडी पर्यावरण पर प्रतिकूल प्रभाव डाल रही है। अत: पर्यावरण के रक्षणार्थ कृषि व ऊर्जा से जुड़ी सब्सीडियों को समाप्त कर दिया जाय या न्यूनतम कर दिया जाय। हो सकता है कि यह कुछ सीमा व मात्रा में पर्यावरण के लिए क्षतिकारक हो, परन्तु यह कुछ राष्ट्रों व उनके नागरिकों के सामान्य जीवन से जुड़ा मुद्दा भी है। राष्ट्र एवं इसके नागरिक अपने अस्तित्व व कृषकों के अस्तित्व के रक्षणार्थ इस पद्धति का प्रयोग करते हैं क्योंकि विकासशील देशों की अधिसंख्य जनसंख्या कृषि पर निर्भर है तथा उनका जीवन निर्वाह कृषि से होता है। ऐसे में आवश्यकता है कि एक ऐसा संतुलन स्थापित हो जिसमें यह अवसर हो कि सभी राष्ट्र अपने हितों की रक्षा कर सकें।

समसामयिक वैश्विक राजनीति से जुड़े मुद्दों का यदि विश्लेषण किया जाय, तो यह प्रतीत होता है कि कुछ समृद्ध राष्ट्र स्वच्छ मन से अपनी जिम्मेवारी का निर्वाह नहीं करना चाहते, चूंकि सभी के मन में अपने हित निहित हैं ; अत: तर्क उसके अनुसार दिया जाता है। ऐसे में विकसित व विकासशील राष्ट्रों के मध्य पर्यावरणीय मुद्दों को लेकर सदैव मतभेद रहता है। ऐसे में वैश्विक मंचों पर पर्यावरण सम्बन्धित गंभीर वार्ताएँ प्रारम्भ होने के पूर्व अलग-अलग राष्ट्र अपने हितानुकूल गुटबाजी प्रारम्भ कर देते हैं, जिससे पूरा विश्व गुटों में बँट जाता है तथा कोई परिणाम नहीं मिल पाता है। कोपेनहेगेन तथा क्योटो प्रोटोकाल के विस्तारण पर सम्मलेन इस नूराकुश्ती का एक उदाहरण है। वार्ताओं के अंत में यद्यपि घोषणाएँ हो जाती हैं परन्तु उनके वास्तविक क्रियान्वयन का क्या हुआ ? कैसे होगा ? व

25 *वही*

जवाबदेही क्या होगी ? ये प्रश्न सदैव से ही राजनीति की भेंट चढ़ता आया है। ऐसे में आवश्यकता है कि पर्यावरण एवं जीवों के हितार्थ राष्ट्रीय परिसीमा की मन:स्थिति से बाहर आकर चर्चा व कार्य किया जाय क्योंकि पर्यावरणीय चुनौतियों की प्रकृति वैश्विक है अत: इसमें वैश्विक प्रयास ही हमें सफलता की तरफ हमें अग्रसारित कर सकता है।

VI. वैश्विक पर्यावरणी चुनौतियाँ

वर्तमान विश्व के समक्ष कई पर्यावरणीय मुद्दे व चुनौतियाँ हैं। 1990 के बाद विश्व की जनसंख्या 5.3 बिलियन से बढ़कर 8 बिलियन तक पहुँच गयी है।[26] इसके साथ ही विश्व की आर्थिक वृद्धि दर, कुल प्रति व्यक्ति आय के साथ ही साथ बढ़ी है। ब्राजील, रूस, चीन व भारत ने अन्य क्षेत्रों के साथ उक्त क्षेत्र में भी विकास किया है। लेकिन यह पाया गया है कि राष्ट्रों के बीच व स्वयं राष्ट्रों में प्रति व्यक्ति उपभोग व आय का स्तर भिन्न-भिन्न है।[27] वैश्विक पर्यावरणीय चुनौतियाँ अन्तर्राष्ट्रीय समुदाय के समक्ष एक बड़ी चुनौती के रूप में सामने आयी हैं, जिसमें वैश्विक जलवायु परिवर्तन, ओजोन परत का क्षरण, मरुस्थलीकरण, निर्वनीकरण, पौधों की जैव विविधता में बढ़ती कमी, परिसंकटमय पदार्थों का अंतर्देशीय परिचालन व रासायनिक वस्तुओं से जुड़ी समस्याएँ इत्यादि हैं। सभी पर्यावरणीय समस्याएँ प्रत्येक देशों को अहितकारी रूप में प्रभावित कर रही हैं।

बीसवीं शताब्दी की पर्यावरणीय समस्याओं से उपजे पर्यावरणीय संकट के समाधान हेतु वैश्विक स्तर पर अनेक पर्यावरणीय आन्दोलनों ने जन्म लिया। प्रो. रामचन्द्र गुहा एवं प्रो. जे.एम. एलियार ने पर्यावरणवाद के विभिन्न प्रकारों (Varieties of Environmentalism) की चर्चा करते हुए 19 प्रकार के पर्यावरणीय आन्दोलनों की पहचान की है।[28] इसी प्रकार विकासशील एवं गरीब देशों में विकास परियोजनाओं का समाज के गरीब एवं असहाय वर्गों पर पड़ने वाले दुष्परिणामों का विरोध करने के लिए ''गरीबों का पर्यावरणवाद'' (Environmentalism of the Poor) से जुड़े अनेक आन्दोलनों का जन्म हुआ।[29] उपर्युक्त वर्णित आन्दोलनों ने मानव की मूलभूत आवश्यकता, अधिकारों और सामाजिक न्याय को एक अनिवार्य तत्व के रूप में स्वीकार करने पर बल दिया।

विकास की संकल्पना के में विभिन्न पर्यावरणीय दार्शनिक विचारों का स्पष्ट प्रभाव रहा है। उदाहरण के लिए, जहाँ एक ओर 'एन्थ्रोपोसेन्ट्रिसिज्म' (Anthropocentricism) नामक दार्शनिक विचार ने

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26 World Population Prospects 2022: Summary of Results उपलब्ध *https://www.un.org/development/desa/pd/sites/www.un.org.development.desa.pd/files/wpp2022_summary_of_results.pdf* लिया गया 25 मई 2022

27 एस. विजय आनन्द, *ग्लोबल इनवायरोमेंटल इषू* (2013) 2 (2) ओपेन एक्सेस साइंटिफिक रिपोर्ट पृ. 3

28 रामचन्द्र गुहा एवं जान मार्टिनेज एलियार, *वेरायटीज ऑफ एनविरानमेन्टलिज्म : एसेज नार्थ एण्ड साउथ* (आक्सफोर्ड यूनिवर्सिटी प्रेस, 1998) पृ. 44–45

29 अधिक विस्तार हेतु देखें, जॉन माटिनेज एलियार, *द एनविरानमेन्टलिज्म ऑफ द पुअर : एक स्टडी ऑफ इकोलॉजिकल कानफ्लिक्ट एण्ड वैल्यूएशन,* (नई दिल्ली : आक्सफोर्ड यूनिवर्सिटी प्रेस, 2005 प्रथम संकरण) पृ. 10–14

विकास की प्रक्रिया में मानव के हितों को वरीयता देने का समर्थन किया। वहीं दूसरी ओर बायोसेन्ट्रीसिज्म (Biocentricism) नामक दार्शनिक विचार ने प्रकृति को उसकी समग्रता में देखने पर बल दिया। इस दर्शन ने 'डीप इकोलॉजी मूवमेन्ट' (Deep Ecology Movement) को भी जन्म दिया, जिसके अन्तर्गत अर्न नायस (Arne Naess) जैसे विचारकों ने प्रकृति में स्थित समस्त जीवों/प्राणियों के मध्य समानता (Biospheric Egalitarianism) का विचार प्रस्तुत किया।[30] इस क्रान्तिकारी अथवा समग्रतावादी पर्यावरणीय दर्शन ने पर्यावरणीय संकट के मूल दार्शनिक कारणों की उपेक्षा कर केवल सतही पर्यावरणीय कारणों (जैसे, प्रदूषण की समस्या हेतु आंदोलन) पर बल देने का विरोध किया। इन दार्शनिक विचारों का स्पष्ट प्रभाव अन्तर्राष्ट्रीय एवं राष्ट्रीय पर्यावरण विधियों की संकल्पना व इसके विधिक सिद्धान्तों/नियमों पर दिखायी देता है।

यदि हम लोगों से पूछते हैं कि विश्व के समक्ष पर्यावरणीय चुनौतियाँ कौन-कौन सी हैं तो अधिकतर लोग वैश्विक तापन व ऊर्जा संकट को ही मानेंगे, लेकिन वास्तविकता यह है कि इनके अतिरिक्त कुछ और मुद्दे हैं जो मानव सभ्यता के लिए खतरा है जिनका वैश्विक सरोकार है और जो विश्व के लिए संकटमय हैं। सभी चुनौतियाँ एवं मुद्दे एक दूसरे से जुड़े हुए हैं। सारांश रूप में इनका विवरण निम्न है:

जलवायु परिवर्तन

जलवायु परिवर्तन आज वैश्विक रूप से दशक दर दशक एक बड़ी चुनौती के रूप में सामने आया है। वैज्ञानिकों में मतैक्यता है कि जलवायु परिवर्तन असंदिग्ध है। 19वीं शताब्दी के मध्य में औद्योगिकीकरण की शुरुआत से पृथ्वी के वातावरण में हरित गृह गैसों (जैसे कार्बन डाई आक्साईड, मिथेन, नाइट्रस आक्साइड आदि) का सृजन हुआ है। ग्रीन हाउस गैसों ने पृथ्वी द्वारा परावर्तित इंफ्रारेड विकिरण को रोका है जिससे वैश्विक ताप में निरन्तर वृद्धि हो रही है।[31] जिसके कारण वर्षा असमान्य हो गयी, हिमनद पिघल रहे हैं, समुद्र का जल स्तर बढ़ रहा है, भारी वर्षा व चक्रवातों में तेजी आ गई है। जिनके कारण जल संसाधनों के संपोषण व कृषि, वन तथा पारिस्थितिकी पर गंभीर प्रभाव पड़ा है और पृथ्वी पर लाखों लोगों के जीवन पर आज संकट है।

ऊर्जा संकट

यह एक तथ्य है कि हम जीवाश्मों के ईंधन (उदाहरणत: कोयला) पर अत्यधिक निर्भर हैं। सम्पूर्ण विश्व की ऊर्जा जरूरतों का सबसे ज्यादा हिस्सा इसी पर निर्भर है।[32] अत्यधिक उपभोग व उत्पादन के दौड़ में इनका तेजी से अपक्षय हुआ तथा इनके समापन का खतरा मानव सभ्यता के सामने आ चुका

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30 अधिक विस्तार हेतु देखें, रामचन्द्र गुहा, *एनविरानमेन्टलिज्म : ए ग्लोबल हिस्ट्री* (नई दिल्ली : आक्सफोर्ड यूनिवर्सिटी प्रेस, 2000) पृ. 84–85

31 बारहवीं पंचवर्षीय योजना खण्ड–एक अध्याय 9 : पर्यावरण,वानिकी और वन्यजीव, पृ. 218 उपलब्धः *http:///planningcommission.nic.in/plans/planrel/fiveyr/12th/pdf/12fyp_vol1.pdf* लिया गया 30 मार्च 2014 (योजना आयोग, भारत सरकार, 2012)

32 कोल्या, अब्राएमसक्या, इनर्जी क्राइसेस एण्ड वर्ल्ड वाइड प्रोडक्सन रिलेषन, उपलब्ध *http://www.dhf.uu.se/pdffiler/cc6/cc6_web_art13.pdf* लिया गया 10 जून 2022

है। यद्यपि हम अब अपो कदम पुनर्नवीकरणीय ऊर्जा स्त्रोतों की तरफ बढ़ा रहे हैं परन्तु इस दिशा में ऐतिहासिक कार्य करना अभी बाकी है।

प्राकृतिक संसाधनों का अधिकतम दोहन

मानव के लाभ के लिए आज सम्पूर्ण विश्व में अति तीव्र गति से प्राकृतिक संसाधनों का दोहन हो रहा है। खनन, कृषि, आवासीय, औद्योगिक आदि उद्देश्यों के नाम पर प्राकृतिक संसाधनों का प्रचंड अवक्रमण हुआ है। व्यापक पैमाने पर खनन एवं निर्वनीकरण से समाप्त होते प्राकृतिक संसाधनों की यदि यही दर चलती रही तो यह कहना अतिशयोक्ति नहीं होगा कि हम स्वयं अपनी समाधि के लिए कब्र खोद रहे हैं।[33]

प्रजातियों का संरक्षण

यह भी एक महत्वपूर्ण वैश्विक पर्यावरणीय चुनौती है यह वनस्पति जात एवं प्राणिजात प्रजातियों के संरक्षण से जुड़ा मुद्दा है। 1962 में अमेरिका की प्रसिद्ध जीव वैज्ञानिक 'रेगेल कार्शन' ने एक पुस्तक लिखी 'मूक वसंत' जिसमें इन्होंने खतरनाक रसायनों के पर्यावरण एवं मानव जीवन पर प्रभाव को व्याख्यायित किया। उन्होंने लिखा कि अब वसंत ऋतु मौन होकर आ रही है चिड़ियाँ एवं कोयलें मर रही हैं[34], यह स्वयं मानव के लिए एक गंभीर चुनौती है। पिछले कुछ समय से जिस तेजी से वनस्पति व पशु विलुप्त हो रहे हैं यह इस ग्रह के जैव विविधता की सबसे बड़ी हानि है।

प्रदूषण

प्रकृति के प्राकृतिक गुण में नकारात्मक परिवर्तन को ही प्रदूषण कहते हैं। प्रदूषित पर्यावरण का प्रकोप हमारे जीवन के प्रत्येक पक्ष पर देखा जा सकता है आज जीवन का ऐसा कोई पक्ष नहीं है जो प्रदूषण के कारण विपरीत ढंग से प्रभावित नहीं हुआ है। प्रदूषण के रूप भी इतने अधिक हैं कि तय करना मुश्किल हो रहा है कि यह भयानक प्रदूषण का कौन सा रूप है।[35] अगर इसी तरह प्रदूषण जारी रहा तो पूरी मानवता भविष्य में सांस लेने के लिए ताजी हवा व पीने के लिए स्वच्छ जल से महरूम हो जायेगी।

परमाणुओं से जुड़े मुद्दे

यह सत्य है कि परमाणुओं में उच्च क्षमता है परन्तु इससे जड़ी समस्यायें भी उससे कम नहीं हैं। परमाणु के रेडियोधर्मी कचड़ों की समस्या वर्तमान विश्व की सबसे बड़ी समस्या के रूप में उभर रही है चैम्बरलेन के बाद जापान के फुकुशिमा दुर्घटना ने सम्पूर्ण मानवता को सदमे में डाल दिया है तथा

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33 क्रोनी, रिचर्ड, *नेचुरल रिसोर्स एण्ड दी डवलपमेन्ट–इनवायरोमेंट डाईलमा* (वाषिंगटन स्टीम्सन 2009) पृ. 64

34 ओ.पी. गावा, *राजनीति सिद्धान्त की रूपरेखा* (नोएडा : मयूर पब्लिकेशन 2010 सप्तम संस्करण) पृ. 444–464

35 मधुसूदन त्रिपाठी, *जल प्रदूषण समस्या व समाधान* (नई दिल्ली : ओमेगा पब्लिकेशन 2010 संस्करण) पृ. iii

परमाणु उर्जा के विकल्प पर ही प्रश्नचिन्ह उठ खड़ा हो गया है। आज विश्व परमाणु हथियारों के जखीरे पर बैठा है हिरोशिमा व नागासाकी का अनुभव बहुत डरावना रहा है, फुकुशिमा में नाभिकीय दुर्घटना इसकी भयावहता का एक नवीन उदाहरण है। हम इस डर से आज के बढ़े प्रतिस्पर्धी परमाणु युग में भयभीत हैं।[36]

जनसंख्या आधिक्य

आज सम्पूर्ण विश्व के समक्ष जनआधिक्य भी एक समस्या है। माल्थस का सिद्धांत[37] पूर्णत: अपने निष्कर्षों में सही साबित नहीं हो सका है आज विश्व की अनाधिक्य (अधिक जनसंख्या) 7.16 बिलियन के स्तर तक पहुँच गई है।[38] संसाधनों की सीमितता ने अतिशय दोहन को प्रोत्साहित किया है। इस जनसंख्या की आवश्यकता व भोग को पूरा करने के लिए व्यापक स्तर पर पर्यावरण का दोहन हो रहा है।

अपशिष्ट प्रबन्धन

जैसे-जैसे जनसंख्या व मानवीय क्रियायें आगे बढ़ रही हैं। वैसे ही अपशिष्ट पदार्थ तेजी से बढ़ रहे हैं। यह अपशिष्ट/कूड़ा तरह-तरह के प्रदूषण व रोगों का स्त्रोत बन गया है। यद्यपि वैज्ञानिक पद्धति द्वारा इन अपशिष्ट पदार्थों को निस्तारित करने का प्रयास किया जा रहा है परन्तु अब तक कोई संतोषजनक परिणाम मिलता नहीं दिख रहा है। परमाणु अपशिष्ट, ई-वेस्ट, मेडिकल वेस्ट और हमारे घरों के अपशिष्ट एक वैश्विक चुनौती के रूप में उभरे है।[39]

ये कुछ महत्वपूर्ण पर्यावरणीय मुद्दे, चुनौतियाँ या हम कह सकते हैं कि समस्यायें हमारे समक्ष हैं परन्तु आज सम्पूर्ण वैश्विक युग जिन समस्याओं को झेल रहा है उसे इस सूची में ही मात्र सीमित नहीं किया जा सकता है। इन मुद्दों के अलावा कई अन्य महत्वपूर्ण मुद्दे व चुनौतियाँ हमारे समक्ष हैं। जैसे बाँधों के निर्माण से जनित समस्यायें, आनुवंशिक प्रदूषण आदि। वर्तमान समय में यह अनुभव हो रहा है कि यदि हमनें अपने कर्त्तव्यों का निर्वहन सही ढंग से करना प्रारम्भ नहीं किया, तो वैश्विक पर्यावरणीय चुनौतियाँ समय के साथ और बढ़ती जायेंगी। हमें इन समस्याओं का समाधान एक-एक कर निकालना पड़ेगा नहीं तो हमारे सामने इन पर्यावरणीय चुनौतियों के समक्ष आत्मसमर्पण के अतिरिक्त दूसरा कोई विकल्प नहीं होगा।

मानव प्रकृति के समक्ष आत्मसमर्पण का विकल्प नहीं चुनेगा, ऐसा मेरा विश्वास है क्योंकि यह तर्क लिया जा रहा है कि प्रकृति पर सर्वत्र विजयी पुरुष आसीन हैं। समसामयिक वैश्विक राजनीतिक

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36 व्यापक रूप से देखें, लीस्ब्रेथ ग्रोनलुंड एट् आल, *न्यूक्लीय पावर इन ए वार्मिंग वर्ल्ड, एराइजिंग द रिस्क, एड्रेसिंग दी चैलेंजेज* (कैम्ब्रिज : कैम्ब्रिज पब्लिकेशन, 2007) पृ. 9–15

37 माल्थस ने कहा था कि संसाधन गणितीय रूप से तथा जनसंख्या ज्यामितीय रूप से (संसाधन 1,2,3,4कृ, जनसंख्या 2, 4, 8, 16, कृकृ) बढ़ती है जनसंख्या अधिक होने पर प्रकषति अपने प्रकोपों द्वारा जनसंख्या कों स्वयं कम कर संतुलन स्थापित कर देती है।

38 उपरोक्त नोट, 24

39 उपरोक्त नोट 24 पृ. 5

गतिविधि व विकसित तथा विकासशील देशों के बीच में बढ़ती दूरी और अविश्वास पर्यावरण के मुद्दे पर अन्तर्राष्ट्रीय मतैक्यता में सबसे बड़ी बाधा के रूप में सामने आये हैं। जिम्मेदारी व दायित्व का प्रश्न गहरे अर्थों में राजनैतिक होता जा रहा है। हरित प्रौद्योगिकी का मामला राजनैतिक नूराकुश्ती का एक माध्यम प्रतीत हो रहा है।

VII. भारतीय दृष्टिकोण और प्रशासनिक, नीतिगत, विधायी और न्यायिक प्रयास

वैश्विक राजनीति व पर्यावरणीय चुनौतियों को व्याख्यायित करने के बाद इस अध्याय का अगला लक्ष्य भारतीय नजरिये व प्रयास को व्याख्यायित करने पर होगा कि पर्यावरणीय चुनौतियों को भारत कितनी गंभीरता से ले रहा है तथा इसके समुचित समाधान के लिए उसका वैश्विक और घरेलू रूप में योगदान क्या है? वैश्विक भागीदारिता की संक्षिप्त रूपरेखा प्रस्तुत करते हुए शोध पत्र का मुख्य लक्ष्य भारत सरकार द्वारा उठाये गये प्रशासनिक, विधिक, संवैधानिक व नीतिगत क्रियाओं के विश्लेषण पर होगा। साथ ही भारतीय न्यायपालिका के विचार को भी संक्षेप में इस शोध-पत्र में व्याख्यायित किया जायेगा।

यद्यपि भारत पर अन्य विकासशील देशों की भाँति यह आरोप लगता रहा है कि भारत में विकास को पर्यावरण से ज्यादा तरजीह दी जाती है, जिसके कारण ही भारत एक तेजी से विकसित होते देश के रूप में आया है।[40] पर हम जब 12वीं पंचवर्षीय योजना के दस्तावेजों का विश्लेषण करते हैं तो पाते हैं कि ''इसमें माना गया है कि वैश्विक चुनौतियों के कारण अब पर्यावरण वैश्विक रूप से शासन का मुख्य क्षेत्र हो गया है जिसमें वैज्ञानिक सामाजिक, आर्थिक और राजनैतिक आयामों के साथ आर्थिक क्षेत्र में तीव्र, सतत् एवं अधिक समावेशी विकास ही मूल होगा। इस प्रकार से हम कह सकते हैं कि भारत अपने विकास को सतत् विकास के परिप्रेक्ष्य में ही देखता है।[41]

भारत पर्यावरण संरक्षण से सम्बन्धित अंतर्राष्ट्रीय सम्मेलनों में सक्रिय रूप से सम्मिलित होता रहा है। वह अनेक करारों के साथ-साथ 94 बहुपक्षीय करारों का हिस्सा रहा है।[42] जैसे कि वैटलैण्ड्स संबंधी रामसर सम्मेलन, वनस्पति एवं पेड़ पौधों की संकटापन्न प्रजातियों में अन्तर्राष्ट्रीय व्यापार सम्मेलन (सीआईईटीईएस) जैव विविधता संबंधी सम्मेलन (सीबीडी)। भारत ने जलवायु परिवर्तन संबंधी संयुक्त राष्ट्र की रूपरेखा पर अभिसमय पर हस्ताक्षर किये हैं और भारत ने 2002 में क्योटो प्रोटोकॉल पर सहमति जताई है। यूनाइटेड नेशन्स फ्रेम वर्क कन्वेंशन आफ क्लाइमेट चेंज (UNFCCC) के

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40 अजेन्द्र श्रीवास्तव, द प्रिन्सिपल आफ सस्टेनेबुल डेवलपमेंट : इंटरनेषनल एण्ड नेषनल प्रास्पेक्टिव, बी.सी. निर्मल और रजनीष कुमार सिंह, *कन्टेम्पोरेरी इषू इन इंटरनेषनल लॉ (इनवायरोमेंट, इंटरनेषनल ट्रेड, इनफारमेषन टेक्नोलॉजी एण्ड लीगल एजुकेषन* (नई दिल्ली : सत्यम लॉ इंटरनेषनल 2014) पृ. 216

41 विस्तार से देखें, 12वीं पंचवर्षीय योजना (वाल्यूम–1) अध्याय–7 'पर्यावरण, वानिकी और वन्य जीवन',पृ. 200–231 उपलब्ध : ***http://planningcommission.nic.in/plans/planrel/fiveyr/12th/pdf/12fyp_vol1.pdf*** लिया गया 20 मई 2022, (योजना आयोग, भारत सरकार, 2012)

42 *वही,* पृ. 110

अनुसार कोई बाध्यकारी न्यूनीकरण प्रतिबद्धता न होने के बावजूद भारत ने अपने सकल घरेलू उत्पाद की उत्सर्जन तीव्रता को कम करने की स्वैच्छिक न्यूनीकरण कार्यवाही के बारे में संसूचित किया है। भारत सरकार यूएनएफसीसीसी के साझा परन्तु पृथक् उत्तरदायित्व (सीबीडीआर) सिद्धांत के प्रति भी वचनबद्ध है। सरकार ने जलवायु परिवर्तन के संबंध में राष्ट्रीय कार्यवाही योजना को सूत्रबद्ध किया है[43], जिसमें देश को जलवायु परिवर्तन के अनुकूल बनाने में सहायता करने के लिए आठ मिशनों की व्यवस्था की गई है।

पर्यावरणीय मुद्दों पर उभरते विश्व आयाम के बीच भारतीय नजरिये व प्रयास को हम तीन भागों में वर्गीकृत कर समझ सकते हैं।

(क) प्रशासनिक प्रयास

इसके अन्तर्गत भारत सरकार द्वारा उठाये गये विभिन्न प्रशासनिक कदमों को हम व्याख्यायित कर सकते हैं। जिनमें बारहवीं पंचवर्षीय योजनान्तर्गत उठाये गये कदम महत्वपूर्ण हैं।

प्रथम: धारणीय विकास

योजना के दस्तावेज में स्पष्ट किया गया है कि सकल घरेलू उत्पाद राष्ट्रों के कल्याण नापने का सर्वदा उत्तम तरीका नहीं होता है क्योंकि आर्थिक विकास पर्यावरण की कीमत पर हो सकता है। पर्यावरण व विकास के बीच एक द्विमार्गीय संबंध मौजूद होता है। संसाधनों की सम्पन्नता कच्चे माल उत्पादन के लिए सीधे तौर पर इनपुट उपलब्ध कराते हैं जबकि औद्योगिक विकास जो जीडीपी की वृद्धि में एक प्रमुख भूमिका निभाता है, कुछ पर्यावरणीय क्षति भी पहुँचाता है।[44] अत: भारत ने धारणीय विकास की पद्धति को स्वीकार किया है।

भारत ने इस सन्दर्भ में अपना नजरिया स्पष्ट करते हुए योजना दस्तावेज में लिखा है कि उत्पादन के सन्दर्भ में जीडीपी को नापने के पारम्परिक तरीकों में, वस्तुओं तथा सेवाओं के उत्पादन द्वारा की गई पर्यावरणीय क्षति को ध्यान में नहीं रखा जाता है। पर्यावरणीय लागतों के लिए जीडीपी समायोजित करने के बाद ही, समायोजित जीडीपी के विकास को ही अर्थव्यवस्था में कुल उत्पादन में वृद्धि का पैमाना कहा जाना चाहिए। इस सन्दर्भ में योजना आयोग ने प्रो. पार्थ दासगुप्ता के नेतृत्व में एक विशेषज्ञ दल का गठन किया है जो हरित राष्ट्रीय लेखों का आकलन करने के लिए एक सांचा तैयार करेगा जो राष्ट्रीय संसाधनों पर नकारात्मक प्रभाव को ध्यान में रखते हुए राष्ट्रीय उत्पादन माप सकेगा।[45] बेहतर विनियमन मानव स्वास्थ्य तथा हरित निजी निवेश तथा रोजगार में वृद्धि करने में सहायक हो सकता है। इसके लिए भारत ने सतत् विकास पर आधारित एक व्यवसायिक मॉडल विकसित करने की वकालत की है।

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43 अजेन्द्र श्रीवास्तव, पूर्वोक्त पृ. 217

44 बारहवीं पंचवर्शीय योजना दस्तावेज, खण्ड–एक, अध्याय 4, धारणीय विकास पृ. 110 उपलब्ध : *http://planningcommission.nic.in/plans/planrel/fiveyr/12th/pdf/12fyp_vol1.pdf* लिया गया 20 मई 2022,

45 *वही,* पृ. 111

इस व्यावसायिक माँडल को प्रमाणित करते हुये विश्व व्यवसाय परिषद ने लिखा है कि ''यह पर्यावरणीय दक्षता, प्रतिस्पर्धात्मक तौर पर मूल्यांकित वस्तुएं और सेवाएं प्रदान करने से प्राप्त की जाती है जो मानव आवश्यकताओं की भी पूर्ति करती है व जीवन में गुणवत्ता लाती है साथ ही साथ समस्त जीवन चक्र के दौरान पारिस्थितिकी प्रभाव तथा संसाधन तीव्रता को धीरे-धीरे उस न्यूनतम स्तर तक कम करती है जो पृथ्वी की वहन क्षमता के अनुरूप हो।''[46] इस पूरी प्रक्रिया में सरकार विकास को धारणीयता के साथ परखना चाहती है।

द्वितीय: वित्तीय प्रोत्साहन

भारत ने पर्यावरण संरक्षण के लिए व्यापक वित्तीय प्रोत्साहन प्रदान किया है। क्योंकि धारणीय विकास में वित्तीय प्रोत्साहन की भूमिका को नकारा नहीं जा सकता है। दसवीं पंचवर्षीय योजना में पर्यावरण एवं वन मंत्रालय को 5954 करोड़ रुपये का परिव्यय का निर्धारण किया गया था[47] तो ग्यारहवीं पंचवर्षीय योजना के दौरान कुल अनुमानित 8882 करोड़ रुपये (2007-08) के मूल्य पर और 10,000 करोड़ (वर्तमान मूल्य पर) जारी किया गया था।[48] बारहवीं पंचवर्षीय योजना के अन्तर्गत मौजूदा मूल्य पर 17,899 करोड़ की संभावित योजना को पर्यावरण एवं वन मंत्रालय के लिए मंजूर किया गया है।[49] इस प्रकार हम कह सकते हैं कि पर्यावरण विषयक मुद्दे पर भारत ने सकारात्मक रूप से पर्यावरणीय क्षेत्र में अपने वित्तीय प्रोत्साहन को बढ़ाया है। वित्तीय पोषण के अतिरिक्त अन्य महत्वपूर्ण कदम भी उठाये गये हैं।

पर्यावरण को क्षति पहुँचाने वाले किसी उत्पाद या सम्पूरक उत्पाद पर एक 'हरित या पर्यावरणीय' कर लगाकर उसके उत्पादन या खपत को कम करने का प्रयास किया जा रहा है। भारत सरकार ने इसका प्रयोग प्राकृतिक संसाधनों की उत्पादकता में सुधार लाने के लिये किया है। कोयला उपकर हाल के समय में भारत सरकार द्वारा लगाए गए पर्यावरणीय कर का एक अच्छा उदाहरण है जिसकी प्राप्तियाँ राष्ट्रीय स्वच्छ उर्जा कोष में जमा की जाती हैं।

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46 *वही,* पृ. 111

47 दसवीं पंचवर्षीय योजना, खण्ड–दो, अध्याय 9 : वन और पर्यावरण,

उपलब्ध : *http://planningcommission.nic.in/plans/planrel/fiveyr/10th/volu1/10th_vol1.pdf*

लिया गया 30 मार्च 2022, पृ. 1144 (योजना आयोग, भारत सरकार)

48 ग्यारहवीं पंचवर्षीय योजना खण्ड–एक अध्याय 9 : पर्यावरण एवं जलवायु परिवर्तन,

उपलब्ध : *http://planningcommission.nic.in/plans/planrel/fiveyr/11th/11_v1/11th_vol1.pdf* लिया गया 30 मार्च 2022 पृ. 237 (योजना आयोग, भारत सरकार)

49 बारहवीं पंचवर्षीय योजना खण्ड–एक अध्याय 9 : पर्यावरण,वानिकी और वन्यजीव, उपलब्ध : *http://planningcommission.nic.in/plans/planrel/fiveyr/12th/pdf/12fyp_vol1.pdf* लिया गया 20 मई 2022 (योजना आयोग, भारत सरकार, 2012) पृ. 218

भारत सरकार ने वित्तीय प्रोत्साहन के रूप में ऊर्जा, जल एवं कृषि क्षेत्रों में रियायत संबंधी नीतियों की पुनर्समीक्षा करने का निर्णय लिया है। इसमें अधिकांश रियायतें पर्यावरण के लिए खतरा मानी जा रही थी। अप्रैल 2002 में नियंत्रित मूल्य निर्धारण तंत्र (एपीएम) को भंग करने के साथ तरल पेट्रोलियम व कैरोसिन, जिनका घरों में प्रयोग किया जाता है, को छोड़कर सभी तेल उत्पादकों पर से रियायतें समाप्त कर दी गई। सरकार का यह तर्क है कि इससे वायु प्रदूषण व अन्य रियायतों के समाप्त करने से मृदा प्रदूषण कम होगा। भारत सरकार ने हरित प्रौद्योगिकी के विकास को प्रोत्साहित करने के लिए सूक्ष्म, लघु व मध्यम उद्योगों (एमएसएमई) को वित्तीय संसाधन उपलब्ध कराने का प्रयास कर रही है तथा निधियों का आवंटन इस तरीके से कर रही है कि प्रौद्योगिकी को लगातार अपग्रेड किया जा सके। प्रतिपूरक वन रोपण कोष की भी स्थापना की गयी है।

तृतीय: गैर वित्तीय प्रोत्साहन

यह एक ऐसा नीतिगत प्रोत्साहन है जिसमें बिना मौद्रिक मूल्य के संरक्षण कार्यक्रमों को बढ़ावा दिया जा रहा है। साथ ही साथ जल के विवेकपूर्ण प्रयोग, वृक्षारोपण, मोटरकार साझा करने और प्लास्टिक की थैलियों के उपयोग से बचने को प्रोत्साहन जैसी गतिविधियों को पुरस्कृत किया जा रहा है।

चतुर्थ: ग्रीन हाउस गैस उत्सर्जन में कमी

सकल घरेलू उत्पाद की उत्सर्जन तीव्रता कम करने के लिए भारत निरंतर प्रयास को सुनिश्चित करने का प्रयास जारी रखे हुये है। यह अनुमान है कि 2031 में भारत का प्रति व्यक्ति उत्सर्जन 2005 के वैश्विक प्रति व्यक्ति उत्सर्जन से कम ही होगा।[50]

पाँचवाँ

भारत ने शहरीकरण की बढ़ती प्रवृत्ति के बीच पर्यावरणीय समस्या से निपटने के लिए जवाहर लाल नेहरू राष्ट्रीय शहरी नवीकरण मिशन को बारहवीं पंचवर्षीय योजना में अधिक केन्द्रीकृत दृष्टिकोण से अपनाने की आवश्यकता पर बल दिया है। सरकार ने पर्यावरणीय औद्योगिक पार्क पर भी बल दिया है।

छठा

पहाड़ी क्षेत्र विकास कार्यक्रम (एचएडीपी) तथा पश्चिमी घाट विकास कार्यक्रम (डब्लूजीडीपी) को और गतिशील ढंग से जारी करने पर बल दिया गया है ताकि इन दुर्बल क्षेत्रों में प्राकृतिक संसाधनों व जैव विविधता को सुरक्षित किया जा सके। इसके तहत सरकार पश्चिमी घाटों के अति दुर्बल व पिछड़े इलाकों के लिए अधिक धनराशि व्यय कर रही है।[51] तटीय क्षेत्रों का प्रबन्धन स्वामीनाथन समिति के सिफारिश के आधार पर स्थानीय परिस्थितियों तथा संवेदनशीलता के आधार पर करने का प्रयास जारी है।

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50 उपरोक्त नोट 49 पृ. 113, पैरा 4.18

51 उपरोक्त नोट 49 पृ. 114, पैरा 4.25

भारत सरकार ने पर्यावरणीय चुनौतियों का सामना करने के लिए बारह केन्द्रीकृत क्षेत्रों की सूची तैयार की है। आधुनिक कोयला प्रौद्योगिकी, राष्ट्रीय पवन उर्जा मिशन, राष्ट्रीय सौर मिशन, लौह इस्पात उद्योग में प्रौद्योगिकी उन्नयन, उद्योगों में उर्जा दक्षता कार्यक्रम, माल परिवहन की दक्षता में सुधार, बेहतर शहरी सार्वजनिक तथा गैर-मोटर परिवहन, प्रकाश व्यवस्था, हरित भवन संहिताओं का अंगीकरण, वन तथा आच्छादित क्षेत्रों के संचय में सुधार आदि सम्मिलित हैं।[52]

सातवाँ

पवन उर्जा का प्रयोग कर विद्युत उत्पादन का भारत में अनुमान 500000 मेगावाट से अधिक होने का है। प्रयास है कि वायु को विद्युत उत्पादन का एक नवीकरण स्रोत बनाया जाय[53] तथा सौर विद्युत के लिए जवाहर लाल नेहरू राष्ट्रीय सौर मिशन में 2022 तक सौर विद्युत ग्रिड तुल्यता पर विचार किया जा रहा है तथा 20000 मेगावाट उत्पादन का लक्ष्य है। नवीकरण उर्जा प्रमाण पत्र (आरईसी) जैसे दस्तावेजों के माध्यम से सौर विद्युत परिवर्द्धन में तीव्रता लाने के लिए राज्य स्तरीय सुविधाओं को प्रोत्साहित भी किया है। उर्जा दक्षता ब्यूरो[54] (बीईई) ने 1 जनवरी 2012 से रेफ्रीजरेटरों और एयर कंडीशनरों हेतु लेबलिंग मापदण्डों को सख्त बनाया है और मापदण्डों को दूसरी सख्ती को भी अधिसूचित कर दिया गया है जो 1 जनवरी 2014 से प्रभावी हो गई है। इन हस्तक्षेपों के परिणामस्वरूप वर्ष 2011-12 में बेचे गये रेफ्रीजरेटरों की तुलना में 2016-17 के बाद बेचे जाने वाले रेफ्रीजरेटरों में उर्जा की खपत में 30 प्रतिशत की और कमी होने की सम्भावना है।[55]

आठवाँ

हरित भवन कोड के अन्तर्गत भवन क्षेत्र के अंतर्गत आवासीय और गैर औद्योगिक भवनों को शामिल किया गया है। चूंकि, 2031 तक शहरी जनसंख्या 600 मिलियन होने का अनुमान है अत: आवासीय, अस्पतालों, सरकारी कार्यालयों व शैक्षणिक भवनों आदि को हरित कोड के अनुरूप बनाने पर जोर दिया जा रहा है तथा हरित भवन रेटिंग पद्धति को विकसित किया गया है। चूँकि देश के 95 प्रतिशत भवन हरित कोड के अनुरूप नहीं हैं, अत: सरकार अब इस दिशा में प्रयासरत है।[56]

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52 उपरोक्त नोट 49 पृ. 116, बॉक्स 4.1

53 उपरोक्त नोट 49 पृ. 118, पैरा 4.39

54 दी एक्सन प्लान फॉर इनर्जी इफीसीएंसी, ब्यूरो आफ एनर्जी इफीसीएंसी उपलब्ध : ***http://beeindia.in/miscellaneous/documents/useful_downloads/actionplan.pdf*** लिया गया 20 मई 2022

55 बारहवीं पंचवर्षीय योजना खण्ड–एक अध्याय 9 : पर्यावरण,वानिकी और वन्यजीव,

उपलब्ध : ***http://planningcommission.nic.in/plans/planrel/fiveyr/12th/pdf/12fyp_vol1.pdf*** लिया गया 20 मई 2022 (योजना आयोग, भारत सरकार, 2012) पृ. 132, पैरा 4.103

56 *वही,* नोट पृ. 135, पैरा 4.121

नौवाँ

भारत ने वनों व पेड़ों के फैलाव के लिए कई प्रशासकीय कदमों को उठाया है क्योंकि वन ही कार्बन डाईआक्साइड का अवशोषण करते हैं तथा जलवायु परिवर्तन को कम करते हैं। इस पर राष्ट्रीय कार्य योजना बनाई गई है जिसका उद्देश्य वन के फैलाव की गुणवत्ता को बढ़ाना व सुधारना है। इसके लिए 'हरित भारत हेतु राष्ट्रीय मिशन' को पुन: संगठित करने की आवश्यकता पर बल दिया गया है। 12वीं योजना के अन्तर्गत वनारोपण कार्यकलाप पर 10,000 करोड़ वार्षिक खर्च होने का अनुमान है।[57]

साथ ही साथ भारत ने जलवायु परिवर्तन पर राष्ट्रीय कार्य नीति को 2007 में स्वीकार कर लिया है जिसके अन्तर्गत आठ मिशनों को शामिल किया गया है। राष्ट्रीय सोलर मिशन, उर्जा सक्षमता बढ़ाने का राष्ट्रीय मिशन, राष्ट्रीय जल मिशन, हरित भारत मिशन, सतत् कृषि पर राष्ट्रीय मिशन, जलवायु परिवर्तन पर स्ट्रैटजिक नालेज मिशन, सस्टेनेबिल हैविटैट पर राष्ट्रीय मिशन।

(ख) नीतिगत प्रयास

भारत ने प्रशासनिक प्रयासों के साथ ही साथ नीतिगत प्रयास भी पर्यावरण संरक्षण के संदर्भ में किया है। इस कड़ी में समकालीन प्रयास 2006 में राष्ट्रीय पर्यावरणीय नीति के रूप में सामने आया जिसमें माना गया कि मात्र वही विकास स्थायी होता है जो पारिस्थितिकी बाधाओं व सामाजिक न्याय की अनिवार्यता की कद्र करता हो। यह नीति पर्यावरणीय विषय पर भारत में मौजूद विभिन्न नीतियों की कमियों को पूरा करने का प्रयास है। इसका उद्देश्य सतत् एवं धारणीय विकास को सुनिश्चित कर पर्यावरणीय न्याय को सुनिश्चित करना है।[58] राष्ट्रीय पर्यावरणीय नीति के अलावा भारत में पर्यावरण से प्रत्यक्ष व परोक्ष रूप से सम्बन्धित विभिन्न नीतियाँ हैं जैसे राष्ट्रीय वन नीति (1988) राष्ट्रीय कृषि नीति (2000) राष्ट्रीय जनसंख्या नीति (2002) राष्ट्रीय जल नीति (2012),[59] राष्ट्रीय विद्युत नीति 2008, राष्ट्रीय शहरी सफाई नीति 2008, भारत इन विभिन्न नीतियों के साथ समसामयिक पर्यावरणीय चुनौतियों का सामना कर रहा है।

(ग) विधिक प्रयास

भारत ने पर्यावरणीय चुनौतियों के समक्ष पर्यावरणीय संरक्षण हेतु विधिक प्रयास भी किये हैं। भारत में आज संवैधानिक व विधिक प्रावधानों का पूरा एक ढाँचा है । 1960 के बाद भारत में पर्यावरणीय

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57 *वही,* नोट पृ. 137, पैरा 4.129

58 भारत में राष्ट्रीय नीति 2006 उपलब्ध : *https://ibkp.dbtindia.gov.in/DBT_Content_Test/CMS/Guidelines/20190411103521431_National%20Environment%20Policy,%202006.pdf* लिया गया 20 अप्रैल 2022

59 विश्वसत अध्ययन के लिए, अनूप कुमार (सम्पादक) पर्यावरणीय विधि : चुनौतियाँ, विश्लषण और भविष्य, मयंक प्रताप जल प्रदूषण से सम्बन्धित विधि एवं केन्द्रीय जल प्रदूषण नियन्त्रण बोर्ड: विधिक समीक्षा पृ.226.248 (29>,>& :8G(MM02 2I *,M2?G6(2015)

विधियों का विकास हुआ पर्यावरणीय चुनौतियों के समक्ष प्रमुख भारतीय विधायन निम्न है।[60] जल (प्रदूषण, निवारण एवं नियंत्रण) अधिनियम, 1974; वायु प्रदूषण, निवारण एवं नियंत्रण) अधिनियम, 1974; पर्यावरण संरक्षण अधिनियम, 1986। इन अधिनियमों को स्टाकहोम अभिसमय में लिए गये निर्णय के आलोक में अधिनियमित किया गया। 1990 के प्रारम्भिक दशक में दो और महत्वपूर्ण विधायन निर्मित किये गये। लोक दायित्व बीमा अधिनियम, 1991 व हरित न्यायाधिकरण अधिनियम, 2010 अधिनियमित कर दिया गया है। कुछ अन्य महत्वपूर्ण अधिनियम वन संरक्षण अधिनियम, 1980; वन्य जीव (सुरक्षा) अधिनियम, 1972; जैव विविधता अधिनियम, 2002 आदि महत्वपूर्ण पर्यावरणीय संरक्षण से जुड़ी विधियाँ हैं।

उक्त सभी अधिनियमों में पर्यावरण संरक्षण अधिनियम, 1986 सर्वाधिक महत्वपूर्ण है क्योंकि यह पर्यावरण के एक विशिष्ट क्षेत्र तक सीमित नहीं है बल्कि यह एक छाता अधिनियम है जो पर्यावरण के विभिन्न पक्षों पर लागू होती है। जिसका उद्देश्य पर्यावरण संरक्षण एवं पर्यावरण की दशा में सुधार लाना है इसके अन्तर्गत कई महत्वपूर्ण नियम[61] भी जारी किये गये हैं। जैंसे परिसंकटमय अपशिष्ट

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60 स्वतंत्रता के पष्चात भारतवर्श में पर्यावरण संरक्षण से जुड़े विधायनों की सूची निम्न है। *रिवर बोर्ड अधिनियम,* 1966, *इंसेक्टीसाइट्स एक्ट,* 1968, *ए मर्चेंट षिपिंग (संषोधन) अधिनियम,* 1970, *विकिरण सुरक्षा अधिनियम,* 1971, *वन्य (जीव संरक्षण) अधिनियम,* 1972, *दण्ड प्रक्रिया संहिता,* 1973, *जल प्रदूषण निवारण एवं नियंत्रण अधिनियम,* 1974 (वर्श 1978 में संषोधित), *जल प्रदूषण निवारण एवं नियंत्रण अधिनियम,* 1977, *वायु (प्रदूषण निवारण एवं नियंत्रण) अधिनियम,* 1980, *वन संरक्षण अधिनियम,* 1980, *पर्यावरण (संरक्षण) अधिनियम,* 1986, *मोटर वाहन (संषोधन) अधिनियम,* 1989, *औद्योगिक (विकास एवं नियमन),* 1951, *खाद्य अपमिश्रण नियंत्रण अधिनियम,* 1954, *प्राचीन इमारतें एवं पुरातात्विक क्षेत्र खण्डहर अधिनियम,* 1958, *परमाणु ऊर्जा अधिनियम,* 1962, *द गुजरात स्मोक न्यूसेंस एक्ट,* 1963, *द रिवर बोर्ड एक्ट,* 1956, *उड़ीसा नदी प्रदूषण नियंत्रण अधिनियम,* 1953, *महाराश्ट्र प्रिवेंषन ऑफ वॉटर पॉल्यूषन एक्ट,* 1969, *दि बिहार कंट्रोल ऑफ दि न्यूज एण्ड प्ले ऑफ लाउडस्पीकर एक्ट,* 1955, *ग्रांट ऑफ परमीषन अंडर द हिमाचल प्रदेष इंस्ट्रूमेंट (कंट्रोल ऑफ नॉयज) एक्ट,* 1969, *राश्ट्रीय वनस्पति अधिनियम,* 1988, *भू–संरक्षण अधिनियम,* 1955, *राजस्थान षोर नियंत्रण अधिनियम,* 1961, *ध्वनि प्रदूषण (नियम एवं नियंत्रण) संषोधित अधिनियम,* 2002, *भारतीय मत्स्य संरक्षण अधिनियम,* 1997, *नगर भूमि (सीमा निगम) अधिनियम,* 1976, *नगरपालिका ठोस अपषिश्ट (प्रबंधन) नियम,* 2000, *रेडियोधर्मिता निवारण नियम,* 1971, पब्लिक लायबिलिटी इंष्योरेंस अधिनियम, 1991 (वर्श 1992 में संषोधित)। *पर्यावरण (औद्योगिक परियोजना का स्थान निर्धारण) नियम,* 1999, *जैव विविधता अधिनियम,* 2002, *राश्ट्रीय हरित न्यायाधिकरण अधिनियम,* 2010 इत्यादि अधिनियम पर्यावरण के संरक्षणार्थ वर्तमान में प्रवर्तित है।

61 अपषिश्ट प्लास्टिक (प्रबंध और प्रहस्तन) नियम, 2016;ई–अपषिश्ट (प्रबंध और हथनाला) नियम, 2016;जैव चिकित्सा (प्रबंध और प्रहस्तन) नियम, 2016,परिसंकटमय अपषिश्टों का (प्रबन्धन, प्रहस्तन, एवं सीमापार गमन) नियम, 2016;ध्वनि प्रदूषण (विनियम एवं नियंत्रण) नियम, 2008;राश्ट्रीय हरितअधिकरण (व्यवहार और प्रक्रिया) नियम, 2011; राश्ट्रीय हरित अधिकरण (न्यायिक व विषेशज्ञ सदस्यों की नियुक्ति रीति, अध्यक्ष और अन्य सदस्यों के वेतन भत्ते और सेवा के अन्य निबंधन तथा षर्तों व जाँच प्रक्रिया) मूल नियम 2010 तथा संषोधन नियम, 2012; राश्ट्रीय हरित अधिकरण (वित्तीय व प्रषासनिक षक्ति) नियम 2011; राश्ट्रीय हरित अधिकरण (अधिकारियों और कर्मचारियों की भर्ती, वेतन और सेवा के अन्य निबन्धन और षर्त) नियम, 2011

(प्रबन्ध एवं प्रहस्तन) नियमावली 1989 जिसे 2000 व 2003 में व्यापक रूप से संशोधित किया गया। पर्यावरण प्रभाव मूल्यांकन अधिसूचना 1994 जिसके द्वारा 29 क्रियाकलापों के लिए ईआइए अनिवार्य व बाध्यकारी बना दिया गया। इसमें व्यापक संशोधन 2006 में किया गया जिसके अनुसार उद्योगों के लिए पर्यावरणीय अनुमति को अनिवार्य कर दिया गया।[62]

स्टाकहोम अभिसमय के उपरांत पर्यावरणीय आलोक में भारत के संविधान को संशोधित किया गया। संविधान के भाग-4 में अनुच्छेद 48-क को जोड़ा गया जो राज्य पर यह कर्तव्य अधिरोपित करता है कि वह पर्यावरणीय संरक्षण हेतु कार्य करे। तो दूसरी तरफ अनु0 51क(छ) व्यक्तियों पर यह कर्तव्य सौंपती है कि वह प्राकृतिक पर्यावरण, वन, वन्य जीवों की रक्षा व सुधार के लिए प्रयास करे। इसके अतिरिक्त पंचायतों[63] व नगरपालिका[64] के कार्यों में भी पर्यावरणीय आयामों को शामिल किया गया है।

(घ) न्यायिक प्रयास

भारत के उच्चतम न्यायालय का निर्णय भी पर्यावरणीय संरक्षण के मुद्दे पर प्रखर रहा है तथा *सुभाष कुमार*[65] के बाद में सर्वप्रथम न्यायालय ने स्वच्छ पर्यावरण को एक अधिकार के रूप में अपनी मान्यता दी थी। *तमिलनाडु राज्य* बनाम *हिन्द स्टोर*[66] के मामले में न्यायालय ने कहा कि अनुच्छेद 48क व 51क(छ) को साथ रखने से यह निष्कर्ष निकलता है कि राज्य के साथ-साथ नागरिक भी इस विधिक बाध्यता के अधीन हैं कि वह पर्यावरण को बनाये रखे, संरक्षित रखे व उसको बेहतर बनाने की दिशा में कार्य करे। यह प्रत्येक पीढ़ी का दायित्व है कि वह आने वाली पीढ़ी के लिए प्राकृतिक संसाधनों को राष्ट्र हित में विकसित व परिरक्षित करे। आगे उच्चतम न्यायालय ने अनु. 21 के प्राण व दैहिक स्वतंत्रता के अधिकार को निर्वचित करते हुए उसके क्षेत्र को विस्तारित कर उसमें स्वच्छ जल एवं पर्यावरण के अधिकार को समाहित माना।[67] उच्चतम न्यायालय के कुछ और महत्वपूर्ण निर्णय हैं जिनका योगदान पर्यावरण संरक्षण में महत्वपूर्ण माना जाता है। *इण्डियन कौंसिल फार इनवायरो लीगल एक्सन* बनाम *यूनियन ऑफ इण्डिया*[68] में **'प्रदूषक भुगतान करे'** (स्टाकहोम

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62 उपरोक्त नोट, 55 पृ. 204

63 संविधान (73वां संसोधन) अधिनियम 1992 के धारा 4 द्वारा जोड़ी गई 11वीं अनुसूची और प्रविश्टयाँ 2,6,7,11,15 व 23

64 संविधान (74वां संसोधन) अधिनियम 1992 के धारा 4 द्वारा जोड़ी गई 12वीं अनुसूची और प्रविश्टयाँ 2,6,8,10 व 15

65 *ए.आई.आर.* 1991 एस.सी. 420

66 *ए.आई.आर.* 1991 एस.सी. 711

67 *सुभाश कुमार* बनाम *बिहार राज्य* ए.आई.आर. 1991 एस.सी. 420 (जीवन के अधिकार में प्रदूषण मुक्त जल व वायु लुत्फ का अधिकार षामिल है।) पृ. 424; *वीरेन्द्र गौर* बनाम *हरियाणा राज्य* (1995) 2 एस.सी.सी. 577 (स्वस्थ पर्यावरण जीवन के अधिकार का अविभाज्य अंग है) पृ. 580; *ए.पी. पलूषन कंट्रोल बोर्ड* बनाम *प्रो. एम.वी. नायडू (II)* (2001) 2 *एस.सी.सी.* 62

68 (1996) 3 *एस.सी.सी.* 212

घोषणा,1972 के सिद्धांत 22; आर्थिक सहायक एवं विकास संगठन' (OECD) के निर्देशक सिद्धांतों के सिद्धांत 4; रियो उद्घोषणा सिद्धान्त 16; द सिंगल यूरोपियन एक्ट 1986; टाइटिल VIIअनु. 130r.) के सिद्धान्त को विधिक सिद्धान्त के रूप में मान्यता मिली। *वेल्लोर सिटिजन्स फोरम* बनाम *यूनियन आफ इण्डिया*[69] में सतत् विकास के सिद्धान्त व उसके उप सिद्धान्तों 'प्रदूषक भुगतान करे' एवं '**पूर्व सावधानी के सिद्धान्त**'(स्टाकहोम घोषणा,1972 के सिद्धांत 6; रियो उद्घोषणा सिद्धान्त 15; जैव विविधता अधिनियम, 1992, अनुच्छेद 14) को विधिक मान्यता दी गई। *एम.सी. मेहता* बनाम *कमलनाथ*[70] के वाद में लोक न्यास के सिद्धांत को मान्यता दी गयी जिससे राज्य का दायित्व पर्यावरण के प्रति और जवाबदेह हो गया। *एम.सी. मेहता* बनाम *भारत संघ*[71] के मामले में माना गया कि पर्यावरणीय प्रभाव का मूल्यांकन किये बगैर किसी खनन कार्य की अनुमति नहीं दी जा सकती है।

नर्मदा बचाओ आन्दोलन बनाम *भारत संघ एवं अन्य*[72] सरदार सरोवर बांध के निर्माण में अपने छठवें दिशा-निर्देश में उच्चतम न्यायालय ने कहा कि बांध की ऊँचाई बढ़ाने की अनुमति तभी दी जायेगी जबकि पर्यावरण का संरक्षण ही नहीं बल्कि पुनर्स्थापना और सुधार के सभी दिशा निर्देशों का पालन न कर दिया जाय। *एन.डी. जयाल* बनाम *भारत संघ*[73] टिहरी बांध के मामले में निर्णय में उच्चतम न्यायालय में न्यायाधिपति राजेन्द्र बाबू, धर्माधिकारी व माथुर की पीठ ने कहा कि विकास व पर्यावरण का अधिकार अनु. 21 का भाग है तथा पर्यावरण संरक्षण अधिनियम 1985 सतत् विकास प्राप्त करने का साधन है। *एम.सी. मेहता* बनाम *भारत संघ*[74] के वाद में कहा गया कि हम विकास व पर्यावरण के बीच में युक्तियुक्त तर्क संगत व्यक्ति का परीक्षण करेंगे। विद्युत, उद्योग, सिंचाई की सुविधा का विकास तथा रोजगार के अवसर की भी आवश्यकता है अत: हम पर्यावरण की अपूरणीय क्षति व आर्थिक हितों की अपूरणीय क्षति जैसी दो चरम स्थितियों के बीच मध्यम मार्ग ढूँढ़ेंगे। *तिरूपुर डाईंग फैक्ट्री ओनर्स एसोसिएशन*[75] के मामले में न्यायालय द्वारा आर्थिक हित-पर्यावरणीय हित में संतुलन साधते हुए 'प्रदूषक भुगतान करे' का सिद्धान्त लागू करके फैक्ट्री मालिकों पर पर्यावरणीय क्षति के लिए 24,79,98,548 रु. तथा आम जनता पर जो प्रभाव पड़ा उसके लिए 17,22,46,031 रु. प्रतिकर देने के लिए बाध्य किया तथा पूर्व सावधानी के सिद्धान्त का प्रयोग करते हुए संयत्र में प्राथमिक, द्वितीयक व तृतीयक उपचार संयत्रों को प्रभावी ढंग से लगवाने का निर्देश दिया। *दिल्ली विकास प्राधिकरण* बनाम *राजेन्द्र सिंह*[76] राष्ट्रमण्डल खेलों की पृष्ठभूमि में यह वाद यमुना के किनारे

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69 *ए.आई.आर.* 1996 एस.सी. 2715

70 (1997) 1 *एस.सी.सी.* 388

71 (2009) 6 *एस.सी.सी.* 142

72 *ए.आई.आर.* 2000 एस.सी. 357, 2000 (7) *स्केल* 34, (2000) 10 *स्केल* 664

73 2003 (7) *स्केल* 59, (2004) 9 *स्केल* 362

74 मनु / एस.सी. / 0247 / 2004

75 मनु / एस.सी. / 1708 / 2009

76 2009 (10) *स्केल* 273; मनु / एस.सी. / 1318 / 2009

बनाये जा रहे निर्माणों से सम्बन्धित था, जिसमें न्यायालय ने कहा कि खेल गाँव नदी के 'रीवर वेड' व बाढ़ क्षेत्र में नहीं आता है। यह पाकेट III की भूमि पर स्थित है, जिस भूमि का प्रयोग लोक प्रयोजन के लिए किया जा सकता है। *स्टेरलाईट इण्डस्ट्री (इण्डिया) लि.* बनाम *भारत संघ*[77] के मामले में अपीलार्थी कम्पनी को बंद करने के मद्रास उच्च न्यायालय के निर्णय को पलटते हुए उच्चतम न्यायालय ने कम्पनी के विस्तार व क्षमता को आधार बनाते हुए कम्पनी पर 100 करोड़ रुपये का प्रतिकर लगाया। न्यायालय ने कहा कि कम्पनी भारत में ताँबे का 39 प्रतिशत उत्पादन करती है जिसे बंद करने से रक्षा व विद्युत उद्योगों व 1500 से ज्यादा नियोजित कर्मचारियों पर प्रतिकूल प्रभाव पड़ेगा इसलिए इसे चालू रखने के लिए कम्पनी को सभी आवश्यक शर्तों को पूरा करना होगा। अपने अद्यतन निर्णय में *सेन्टर फार इनवायरोमेंटल लॉ डब्लू.डब्लू.एफ I* बनाम *भारत संघ*[78] व अन्य में न्यायालय ने कहा कि हम कोई भी निर्णय लेते समय 'जीव के सर्वोत्तम हित के सिद्धांत' को लागू करेंगे ऐसे में हम मानव केन्द्रित सिद्धान्त पर ध्यान नहीं देंगे। अनु. 21 मात्र मानव को स्वतंत्रता नहीं देता, अपितु मानव पर यह दायित्व भी अधिरोपित करता है कि वह अन्य जीवों को, जो पर्यावरण के अपृथक्करणीय भाग हैं की सुरक्षा व संरक्षण करें। *एनिमल वेलफेयर बोर्ड ऑफ इण्डिया* बनाम *एम.नागराज*[79] में उच्चतम न्यायालय ने संविधान के अनुच्छेद 21 के अन्तर्गत जीवन शब्द की व्याख्या करते हुए कहा की 'जीवन' शब्द का व्यापक अर्थ है इसमें आधारभूत पर्यावरण के समस्त जीवों का जीवन आता है और यदि इसमें हस्तक्षेप किया जायेगा तो पशुओं के सम्मान व गरिमा को अनु. 21 के अन्तर्गत संरक्षित किया जायेगा। *ओड़िशा माइनिंग का. लि.* बनाम *पर्यावरण व वन मंत्रालय*[80] *व अन्य* के वाद में न्यायालय ने वनों को न सिर्फ लोकन्यास की सम्पश्रि माना, बल्कि राज्य द्वारा इन्हें व्ययनित किये जाने की दशा में प्रभावित समूहों के हितों को सर्वोपरि रखने का आदेश दिया।

एसोसिएशन ऑफ इन्वायरॉन्मेंट प्रोटेक्सन बनाम *केरल राज्य*[81] में उच्चतम न्यायालय ने राज्य सरकार द्वारा पेरियार नदी के तट पर होटल निर्माण की अनुमति रद्द कर दिया। न्यायमूर्ति सिंधवी और बोबडे ने लोक न्यास के सिद्धान्त का प्रयोग किया तथा निर्माण कार्य को लोकहित तथा नदी के हितों के विरुद्ध माना। *एनिमल वेलफेयर बोर्ड ऑफ इण्डिया* बनाम *ए0 नागराज*[82] उच्चतम न्यायालय ने पशुओं के अधिकारों को संविधान सम्मत माना तथा तमीलनाडु राज्य में आयोजित होने वाली जल्लीकट्टू प्रथा को प्रतिबन्धित किया। तथा न्यायालय ने जीव आधारित पर्यावरण के वैचारकीय को स्थापित किया। सन् 2015 में पुनः *भारत संघ* बनाम *जबरप एस. पूना वाला*[83] के मामले में उच्चतम

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77 मनु / एस.सी. / 2841 / 2013

78 2013 *इण्ड.लॉ,* एस.सी. 236

79 मनु / एस.सी. / 0426 / 2014; 2014(6) *स्केल* 468

80 (2013) 6 *एस.सी.सी.* 476

81 (2013) 7 एस.सी. 226.

82 (2014) 7 एस.सी.सी 547.

83 (2015) 7 एस.सी.सी 347.

न्यायालय ने पशुओं एवं पंक्षियों के अधिकारों तथा नागरिकों का उनके प्रति कर्त्तव्य पर अधिक जोर दिया तथा प्रजाति विशेष के विशेष हितों की चिन्ता पर बल दिया। *कामन कॉज* बनाम *भारत संघ*[84] में उड़िसा में चल रही अवैध खनन के मामले में, पट्टे में प्राप्त 237.05 करोड़ की राशि को उस क्षेत्र विशेष में खर्च करने को निर्देशित किया। *गोवा फाउण्डेशन बनाम एस. स्टेरलाईट लि.*[85] में उच्चतम न्यायालय ने निर्णित किया कि 'पर्यावरणीय विधि शासन' को उससे जुड़े विषयों में अनिवार्य रूप से मानना होगा, तथा खनन का पर्यावरण पर क्या दुष्प्रभाव पड़ेगा इस पर विचार करना होगा। *पर्यावरणीय सुरक्षा समिति बनाम भारत संघ*[86] में न्यायालय ने प्रदूषण नियंत्रण बोर्ड की कार्यशैली पर प्रश्न उठाया तथा उसकी जबाबदेही तय करने का निर्देश दिया।

मानर्ती टेकजोन (प्रा.लि.) बनाम *फोरवर्ड फाउण्डेशन*[87] के मामले में परिस्थितिकी रूप से सम्वेदनशील भूमि को कर्नाटक औद्योगिक क्षेत्र विकास बोर्ड ने उत्तरदाता को निर्गत किया था, उत्तरदाता ने 'संरक्षित क्षेत्र' के नियमों का उल्लंघन किया, जिसमें अपने मौलिक क्षेत्राधिकार का प्रयोग करते हुये, हरित न्यायाधिकरण ने 130.20 करोड़ का जुर्माना लगाया था। जिसे उच्चतम न्यायालय में चुनौती दी गयी। न्यायालय ने अधिकरण के निर्णय को विधि सम्मत माना। उच्चतम न्यायालय ने सरकार से ग्रीन क्लीयरेंस की गिरानी के लिए स्वतंत्र पर्यावरण नियामक (Independent Environmental Regulator) की स्थापना में विलम्ब के कारणों को पूछा है, क्योंकि सर्वोच्च न्यायालय ने लाफार्ज भाईनिग के बाद[88] में पर्यावरण अधिनियम 1986 के अन्तर्गत एक राष्ट्रीय पर्यावरण नियामक संस्था के निर्माण का आदेश दिया था। विशेषज्ञता के अभाव में देश का पर्यावरणीय प्रभाव मूल्यांकन तंत्र ठीक से नहीं कार्य कर पा रहा है। पूर्व में पर्यावरणीय अनुमति के वगैर किसी भी व्यापारिक गतिविधि पर पूर्व प्रतिबंध का निर्णय भी लिया गया है।[89] प्लास्टिक अपशिष्ट नियम 2016 के प्रावधानों का प्रयोग कर भारत में एक बार उपयोग होने वाले प्लास्टिक पर प्रतिबंध लगा दिया गया। उच्चतम न्यायालय ने देश के संरक्षित वनों, वन्यजीव अभयारण्यों और राष्ट्रीय पार्कों के एक किलोमीटर दायरे के क्षेत्र को पर्यावरणीय रूप से संवेदनशील क्षेत्र घोषित किया तथा इसमें खनन, पक्के निर्माण की इजाजत पर रोक लगा दी है।

राष्ट्रीय हरित न्यायाधिकरण के पर्यावरण के रक्षार्थ प्रयास को काफी सराहना मिली है। अधिकरण ने केन्द्र सरकार से पूछा है कि गोवा सहित पाँच पारिस्थितिकीय रूप से संवेदनशील राज्यों ने पश्चिमी घाट में अतिशीघ्रता पूर्वक पर्यावरणीय अनापत्ति प्रमाण पत्र बिना पर्यावरण संरक्षण अधिनियम, 2010

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84 (2017) 9 एस.सी.सी 499.

85 (2018) 4 एस.सी.सी 218.

86 (2017) 5 एस.सी.सी 326.

87 (2019) 18 एस.सी.सी. 498.

88 (2011) 7 एस.सी.सी 338.

89 *पहवा प्लास्टिक लि0* बनाम *दस्तक एन.जी.वो* 2022 लाई 5 ला (एस.सी.) 318.

की धारा 3 में अधिसूचना जारी किये बिना अनुमति क्यों प्रदान किया गया।[90] कृषकीय अपशिष्ट से उत्पन्न होने वाले प्रदूषण को निवारित करने के लिए राष्ट्रीय नीति बनाने का निर्देश अधिकरण ने केन्द्र सरकार को दिया है।[91] अधिकरण ने यह भी निर्देश दिया है कि पर्यावरणीय रूप से संवेदनशील क्षेत्र में अब कोई नया उद्योग न लगाया जाय।[92] उक्त सारे सन्दर्भ अधिकरण की वर्तमान कार्यशैली की छाप स्पष्ट करते हैं। विकास व पर्यावरण के बीच द्वन्द्व में हमें मानव जीवन तथा प्रगति का निर्णय करना है ताकि हमारा आगत भविष्य संकटापन्न न हो।

VIII. निष्कर्ष

समसामयिक वैश्विक राजनीति में वास्तव में पर्यावरणीय मुद्दे गहरे अर्थों में राजनैतिक हो गये हैं। पर्यावरणीय मुद्दे आज सम्पूर्ण विश्व में मानव अस्तित्व से सीधे जुड़े हैं ऐसे में पारस्परिक मतभेदों को भुलाकर सार्थक प्रयास करने की अपरिहार्यता है। क्योंकि तभी हम मानव समुदाय के ऊपर पतले धागे में लटकते तलवार से अपने को बचा पायेंगे। जहाँ तक वैश्विक व घरेलू पर्यावरणीय चुनौतियों में भारत का प्रश्न है तो भारत ने पर्यावरण संरक्षण के मुद्दे को संजीदे ढंग से प्रशासनिक, विधिक, नीतिगत एवं न्यायिक तरीके से प्रतिरक्षित करने का प्रयास किया है। चूँकि पर्यावरणीय समस्या वैश्विक स्तर की है तो ऐसे में रियो में स्वीकार्य साझी जिम्मेदारी परन्तु अलग-अलग भूमिका के सिद्धांत के अनुरूप राष्ट्रों का दायित्व उनकी क्षमता एवं प्रदूषण में योगदान पर आधारित हो तो यह न्यायोचित होगा। चूंकि जब मुद्दा हमारे अस्तित्व से जुड़ा हो तो राजनीति के स्थान पर स्वच्छ मन से प्रयास की आवश्यकता होती है। ऐसे में हमें द्वन्दों से दूर पृथ्वी के रक्षार्थ सकारात्मक कार्य एवं कार्ययोजना की अपरिहार्यता है।

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90 उपलब्धः *http://www.heraldgoa.in/Goa/MoEF-ordered-to-declare-ESAs-in-Goa-and-5-other-states/78987.html* लिया गया 30 जून 2022

91 उपलब्धः *http://articles.economictimes.indiatimes.com/2014-09-26/news/54353480_1_national-green-tribunal-ngt-vikrant-tongad* लिया गया 30 जून 2022

92 उपलब्ध :*http://indianexpress.com/article/india/india-others/green-panel-says-no-to-new-industry-in-eco-sensitive-zone/* लिया गया 5 जून 2022

THE DAM SAFETY ACT, 2021 : A LEGISLATIVE COMMENT

Priya Kumari[*]

Abstract

Due to the initiation of Shri Gajendra Singh Shekhawat, the long-awaited Dam Safety Bill saw the light of the day. It was passed as early as August 2019 by the Lok Sabha but needed approval from the upper house of the Parliament, Rajya Sabha. Now that the procedural aspect is taken care of, the provisions laid down in the newly enacted Dam Safety Act, 2021 requires analysis. Undoubtedly, the Act is a step ahead towards "inspection, operation and maintenance" of dams which by and large remained ambiguous before the same. However, India which has one of the largest dams in the world with dependency on them for water security, the Dam Safety Act, 2021 falls short of a robust mechanism. This paper intends to examine the provisions of the Dam Safety Act, 2021 in light of the existing mechanisms/ guidelines for safety inspection of dams. While doing so, the paper would also throw light upon the history of dam safety and requirements of today.

I. INTRODUCTION

IT IS well-known that water has been the lifeline of humans since the dawn of civilization. Tribes have located themselves near the water sources for ease in irrigation, usage for household purposes, control floods and so on. As time went by, countries felt the need to impound rivers and other sources of water to assist their citizens in utilizing the same effectively. Dams are one way of doing the same. It has been defined as a structure around a water source (predominantly a river) to store water within the defined boundaries.[1] Dams have the potential to assist in several usages. Apart from the basic domestic or industrial use, dams also assist in flood control and harnessing hydroelectricity.[2] It has thus been stated that there are

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1 Dam Basics, *Association of State Dam Safety (ASDSO)*,*available at*: https://damsafety.org/dams101 (last visited on March 15, 2022).

2 *Ibid.*

two primary functions that dams perform.[3] The first function is the retaining of water to utilize the same for domestic, irrigation or industrial use. While on the other hand, the second function is assisting in increasing the upstream water levels for other purposes like the generation of hydroelectricity.

However, building structures across a river requires planning, appropriate materials, timely inspection and maintenance to safeguard people and their environment.[4] It is because there are several repercussions of building a dam. Quality of water, marine life and even the ecosystem nearby gets affected by its construction.[5] Moreover, people living nearby a dam construction site are displaced.[6] Even after its construction there have been instances of dam failure which claimed the life of people and destruction of property nearby.[7] The official recorded numbers for large dams is somewhere near 60,000 globally while the overall number of dams is much more.[8] The need to frame laws for dam safety was felt globally due to the increasing number of dams and the accidents related therewith.

India, a country primarily dependent on agriculture with an unreliable monsoon season throughout the country, started constructing dams for storing water. In India, the existence of dams dates back as early as the 1st century AD.[9] A number

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3 N. Leroy Poff and David D. Hart, "How Dams Vary and Why It Matters for the Emerging Science of Dam Removal: An ecological classification of dams is needed to characterize how the tremendous variation in the size, operational mode, age, and number of dams in a river basin influences the potential for restoring regulated rivers via dam removal" 52:8 *Bio Science* 659-668 (2002).

4 Excluding China, report suggests that there has been about 4000 dam related failures around the world. Devendra Damle, "Dam safety in India"*National Institute of Public Finance and Policy Working Paper Series, No. 329* (2021).

5 Dinah L. Shelton and Donald K. Anton, *Problems in Human Rights and Large Dams, Environmental Protection and Human Rights* (Cambridge University Press, 2011).

6 Like in the case of India's Narmada Project that is, the consruction of Sardar Sarovar Dam on the Narmada river inaugurated in the year 1961 wherein about 5,00,000 people were stated to be displaced, "A short history of the Sardar Sarovar Dam on river Narmada" September 17, 2017,*available at*: https://indianexpress.com/article/research/a-short-history-of-the-sardar-sarovar-dam-on-river-narmada-4847807/ (last visited on March 15, 2022).

7 As highlited by Nataniel Gee, Machu dam incident in Gujarat in the year 1979 claimed the lives of about 25,000 resident living nearby, See Nataniel Gee Case Study: Machhu Dam II (Gujarat, India, 1979), ASDSO,*available at*: https://damfailures.org/case-study/machhu-dam-ii-gujarat-india-1979/ (last visited on March 15, 2022).

8 As reported by the International Conference on Large Dams (hereafter, ICOLD) cited in Jida Wang *et. al*., *GeoDAR: Georeferenced global dam and reservoir dataset for bridging attributes and geolocations, Earth System Science Data* (2021).

9 The Kallanai, a dam constructed by the then ruler of the Chola dynasty, Sumanta Bid, Giyasuddin Siddique *et. al*., "Dam: Historical Perspectives and an Overview of India" 7 *International Journal of Scientific Research and Review* 387 (2018).

of dams were constructed during the British era which escalated when India became independent.[10] As reported in 2019,[11] India has a total number of 5745 large dams with several other smaller dams.[12] The first recorded case of dam failure in India is the Tigra dam incident.[13] In the year 1961, India recorded a major dam failure during the monsoon season which claimed the lives of about 1000 people.[14] As time went by, incidents like the Macchu disaster, the displacement and outrage during the Narmada project, as well the Tehri dam protests pointed out to the fact that the construction and maintenance of the dams in India needed regulation.

II. Tracing the History of Dam Safety

The International Commission on Large Dams (hereinafter "ICOLD")[15] was instituted as early as 1928 to provide a platform for disseminating information on dam construction and safety. Every three years, ICOLD holds a congress wherein technical queries are selected and discussed. As of now, it has about 10,000 members hailing from 100 different countries.[16] But as mentioned above, its objectives were primarily limited to information transfer. There was a blank space regarding a more vigorous action towards dam safety. A step was taken in this regard in the year 1979 by the ICOLD wherein more than 240 papers revolving around dam safety were presented in the ICOLD Congress.[17] Fiasco related to dams was among

10 Diane Raines Ward, "Water Wants: A History of India's Dams", September 14, 2003, *available at*: https://www.pbs.org/wnet/wideangle/uncategorized/the-dammed-water-wants-a-history-of-indias-dams/3098/#:~:text=Near%20Bhopal%2C%20the%20Mudduk%20Maur,are%20also%20still%20in%20use(last visited on March 15, 2022).

11 Dam Safety Organisation, "National Register of Large Dams 2019",(Central Water Commission, Government of India, June 2019), (hereinafter CWC).

12 Indian Insights, "International Water Power & Dam Construction", 24 Feb 2021,*available at*: https://www.waterpowermagazine.com/features/featureindian-insights-8545296/(last visited on March 15, 2022).

13 The dam located in Madhya Pradesh overtopped, *see* Dam Safety Organisation, "Risk of Dam Failure", (Central Water Commission, Government of India).

14 The Panshet dam incident in Maharashtra as recorded in Mohit Kumar Bharti *et. al.*, "Study on the Dam & Reservoir, and Analysis of Dam Failures: A Data Base Approach" 7:5 *International Research Journal of Engineering and Technology* (2020).

15 Established in Paris to disseminate information regarding construction, operation and effect of large dams.

16 History, "International Commission on Large Dams",*available at*: https://www.icold-cigb.org/GB/icold/history.asp (last visited on March 15, 2022).

17 This event marked the golden jubilee of the International Commission on Large Dams hence, was called ICOLD Golden Jubilee congress and was organized at New Delhi, India.

the four major issues[18] discussed at the conference. Unfortunately, with such a huge number of papers, audience and experts involved, significant discussions over specific topics did not occur.[19] Nonetheless, ICOLD has been continuously working towards dam safety. This has been reflected in the recent World Declaration on Dam Safety.[20] It stated that the total number of dam failures equated with the dams operating has diminished considerably.[21]

As stated above, even under British rule, the building of dams took a surge. Soon after independence, several five-year plans focussed on dam construction projects.[22] Today, India is next only to China and the United States of America in terms of the number of dams.[23] However, spending money on projects revolving around an increase in the number of dams were not enough. Dam failure first came into notice in the year 1958 which only increased in number in the forthcoming years.[24] The Machhu II disaster in Gujarat has been noted as one of the "deadliest floods in history".[25] In the same year as the incident, a Dam Safety Organization[26] was created. Its functions included evaluation of the existing dam security methods while developing novel procedures for the same.Thereafter, the Indian Government instituted a standing committee[27] to report on the prevalent procedure of dam

18 Other issues discussed were "interface problems of dams, large-capacity outlets and spillways and seismicity and seismic design of dams", Golden Jubilee Congress of the International Commission on Large Dams, held in the Ashoka Hotel, New Delhi, India, during 29 October–12 November 1979, (Cambridge University Press, 2009).

19 *Ibid.*

20 World Declaration on Dam Safety, "Better Dams for a Better World", declared on 18th Oct, 2019, Portugal, ICOLD,*available at*: https://www.icold-cigb.org/userfiles/files/World%20declaration/World%20Declaration%20on%20Dam%20Safety_ICOLD_A3.pdf (last visited on March 15, 2022).

21 *Ibid.*

22 See Diane Raines, "Water Wants: A History of India's Dams", Sept. 14, 2003, *available at*: https://www.pbs.org/wnet/wideangle/uncategorized/the-dammed-water-wants-a-history-of-indias-dams/3098/ (last visited on March 15, 2022).

23 See Dam Safety Organisation, *available at*: http://www.cwc.gov.in/damsafety/home (last visited on March 15, 2022).

24 See Dam Safety Organization, "Reported failure of dams in India",*available at*: https://damsafety.in/ecm-includes/PDFs/List_Reported_Failure_of_Dams_in_India.pdf (last visited on March 15, 2022).

25 Utpal Sandesara and Tom Wooten, *No one Had a Tongue to Speak: The Untold Story of One of History's Deadliest Floods* (Rupa Publications Pvt. Ltd., New Delhi, 2012).

26 Dam Safety Organisation was established in CWC by the Government of India in 1979.

27 The committee submitted its report on July 10, 1986, See "Report on Dam Safety Procedures", CWC, Government of India, 1986, New Delhi,*available at*: https://prsindia.org/files/bills_acts/bills_parliament/2019/Report%20on%20Dam%20Safety%20Procedure.pdf (last visited on March 15, 2022).

safety, operation, and maintenance and to develop a uniform course of action thereon.

While there has been a tremendous effort by the Central Water Commission to issue reports and guidelines on dam safety, there has been no unified legislation on the issue to date. Moreover, all form of water supplies is the subject matter[28] of the State list under the Indian Constitution. In other words, the States have been given the authority to legislate upon water supplies within their jurisdiction. This led to the enactment of the Dam Safety Act, 2006 by the State of Bihar. However, the said subject has a condition attached to it. Such issues on inter-state waters would be handled by the Union of India which the Parliament declares to be necessary for the overall public interest.[29]

A Dam Safety Bill[30] was first introduced in the lower house of the Parliament in 2010. Two states namely, West Bengal and Andhra Pradesh sought Parliament's aid to enact a law on the issue by presenting resolutions for the same. But it was never moulded into legislation. A modified version of the Dam Safety Bill of 2010 was again introduced in the lower house in 2019. The Bill received the approval of the house the same year. Nonetheless, it was only on December 2nd, 2021 that Rajya Sabha passed the same amid roaring debates and rejections from the Opposition.[31]

III. Analysing the Provisions of the 2010 Bill

The Dam Safety Act, 2021(hereafter, the Act)as seen now is a modification of the 2010 Bill which never travelled the entire journey. The 2010 Bill was framed "to provide for proper surveillance, inspection, operation and maintenance of all dams of certain parameters in India to ensure their safe functioning and for matters connected therewith or incidental thereto."[32] It elucidated that the Parliament is not empowered to legislate upon matters mentioned in the State List. But in furtherance of the resolutions passed by the two abovementioned States, Parliament has moved ahead in enacting the said Bill.[33]

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28 The Constitution of India, sch. VII, List II, Entry 17.

29 The Constitution of India, sch. VII, List I, Entry 56.

30 The Dam Safety Bill, 2010 (hereafter, the 2010 Bill).

31 Bharti Jain, "Rajya Sabha passes Dam Safety Bill," Dec 03, 2021,*available at*: https://timesofindia.indiatimes.com/india/rajya-sabha-passes-dam-safety-bill/articleshow/88057047.cms (last visited on March 15, 2022).

32 The Dam Safety Bill, 2010, Preamble.

33 The Constitution of India, art. 252. It reads as: Power of Parliament to legislate for two or more States by consent and adoption of such legislation by any other State.

The 2010 Bill was to be made applicable to certain specified dams. The definition of specified dams[34] signified that only large dams which fulfilthe indicated criteria[35] would fall within the purview of the same. The conditions were a reiteration of the definition of large dams as expoundedin the Guidelines[36] issued by the Indian government previously. The 2010 Bill was divided into X chapters with a total of 49 provisions.

Chapter II and III talked about the constitution of a National Committee on Dam Safety (hereafter, NCDS) and a Central Dam Safety Organisation (hereafter, CDSO) at the Union level. The functions of the NCDS included monitoring different State Organisations and thereby, developingan all-inclusive method for the safety of dams. While the CDSO was primarily tasked with the role of conveying the abovementioned information with the State Organisations. At the State level too, a State Committee on Dam Safety (hereafter, SCDS) and a State Dam Safety Organisation (hereafter, SDSO) were thought to be established. The functions of the SCDS included assessing the efforts undertaken by the respective SDSO's and recommending suitable methods for application in the future. However, the 2010 Bill failed to specify the constitution of the SDSOs and left it open to be decided by the State governments. Moreover, those States which were in the ownership of twenty dams or less than that were given the discretion of not constituting an SCDS. These States were permitted to constitute a State Dam Safety Cell. Like the SDSOs, the responsibility of deciding the constitution of these Cells was allocated to the respective State governments.

Interestingly, the authorities as expounded by the 2010 Bill were not limited to those mentioned above. The 2010 Bill suggested the establishment of a Non-State Dam Safety Organisation and a Non-State Dam Safety Cell as well.[37] The former

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34 The Dam Safety Bill, 2010, cl. 3 (w). It reads as: "specified dam" means a large dam which is,—

(i) above fifteen meters in height, measured from the lowest portion of the general foundation area to the crest; or

(ii) between ten meters to fifteen metres in height and satisfies at least one of the following, namely:—

(A) the length of crest is not less than five hundred metres; or

(B) the capacity of the reservoir formed by the dam is not less than one million cubic metres; or (C) the maximum flood discharge dealt with by the dam is not less than two thousand cubic metres per second; or

(D) the dam has specially difficult foundation problems; or

(E) the dam is of unusual design.

35 *Ibid.*

36 Central Water Commission, "Guidelines for Safety Inspection of Dams,"(Ministry of Water Resources, River Development & Ganga Rejuvenation, Government of India, 2017).

37 The Dam Safety Bill, 2010, cl.17 and 18.

was to be constituted by those dam owners who had the ownership of more than ten dams. While for those dam owners having less than ten dams were directed to form a Non-State Dam Safety Cell. These clauses are applicable for private dam owners. While those dams falling under the ownership of Central or State governments would be assigned members and functions as decided by the CDSO or the respective State.[38]

While Chapter VI laid down a list of functions for the state organisations, the constitution of numerous authorities as mentioned above would have led to chaos in the implementation of the Bill. Moreover, while the Bill had an entire chapter[39] dedicated to emergency and disaster situations, no form of penalty was specified thus, leaving room for non-committal towards the guidance provided under the Bill.

However, Chapter VIII which dealt with the emergency action plan and disaster management was a much-needed step towards dam safety and protection. Even after all the efforts, the 2010 Bill lapsed. Finally, in the year 2019, the Dam Safety Bill, 2019 (hereafter, the 2019 Bill) was introduced which culminated in the Dam Safety Act, 2021.

IV. An Analysis of the Dam Safety Act, 2021

With 56 sections, three schedules and XI chapters, the Act is the first of its kind with no uniform legislation on dam preceding it. The Dam Safety Act, 2021 like the 2010 Bill stipulates the statement of object and reasons highlighting the need for dam safety and responsibility of the Union of India (Union refers to the Union of India as mentioned under the Indian Constitution. Centre or the Indian government are informal variations hence, the researcher avoided using them) towards the same. And declares it to be necessary for the overall public concern to enact uniform legislation for the whole of India.[40] The Actapplying to the whole of India would also be governing dams built across intra-state rivers. But as highlighted above,[41] issues on water resources within the boundaries of a State is a matter of State List. Without any provision in the Act dealing with the stated issue, discordance among the powers of the State and the Union is likely to follow.

A short preamble has been attached to the Act, stating:

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38 *Id*., cl.17 (3), 17(4), 18(3), and 18(4).

39 *Id*., chapter VIII, Emergency Action Plan and Disaster Management.

40 The Dam Safety Act, 2021, s. 2.

41 *Supra* note 14.

> An Act to provide for surveillance, inspection, operation and maintenance of the specified dam for prevention of dam failure related disasters and to provide for an institutional mechanism to ensure their safe functioning and for matters connected therewith or incidental thereto.

The preamble enumerates that the Act is concerned with the safety and maintenance of the specified dam. The specified dam is defined[42] but it is again a reiteration of the criteria established for identifying large dams in the country. Moreover, dams are also defined in a separate provision.[43] It remains unclear whether this inclusion signifies the regulation of small and medium dams as well. This is because apart from the preamble, even the functions of all the authorities established by the Act primarily focuses on the well-being of specified dams only. There is no reference to small or medium-sized dams. This discrepancy was present even in the 2010 Bill.[44] A comprehensive list of definitions is added with essential modifications. Environmental concerns have been incorporated wherever possible. For instance, the scope of dam failure[45] and distress conditions[46] has been expanded to include even the environmental concerns like protection of plants, animals, river ecosystem[47]. "Dam incident"[48] has been introduced as a novel terminology that was absent in the 2010 Bill or the guidelines on dam safety. In the context of dam incidents, the SDSOs have been mandated to record and report information regarding all such major incidents.[49] Nonetheless, a loophole remains here. The Act fails to mention the difference between dam incidents and major dam incidents. Or even to outline the criteria to assist in identifying a major dam incident. In the absence of a clear provision, the authorities are left with the discretion to decide which is a major dam incident and which is not. And since the actions are to be taken concerning

42 The Dam Safety Act, 2021, s. 4(x).

43 *Id.*, s. 4(e). It reads as: Dam means any artificial barrier and its appurtenant structure constructed across rivers or tributaries thereof with a view to impound or divert water which also include barrage, weir and similar water impounding structures but does not include—

(a) canal, aquaduct, navigation channel and similar water conveyance structures;

(b) flood embankment, dike, guide bund and similar flow regulation structures.

44 The Dam Safety Bill, 2010, the preamble of the 2010 Bill reads as: "to provide for proper surveillance, inspection, operation and maintenance of all dams of certain parameters…." and it also had separate definitions of dam and specified dam.

45 The Dam Safety Act, 2021, s. 4(f).

46 *Id.*, s. 4(i).

47 *Supra* note 45 and 46.

48 The Dam Safety Act, 2021, s. 4(g).

49 The Dam Safety Act, 2021, s. 19 read with sch. 1 cl. 3.

only the major dam incidents as mentioned above,[50] dam incidents might be declared trivial for the purposes of the Act. The operation and maintenance manual[51] is another innovative concept introduced in the Act. Every dam owner is mandated to keep a manual and adhere to the instructions provided in it.[52]

Unlike the ambiguity in the number and functions of the authorities, organisations, and committees previously in 2010 Bill, the Actis progressive in this aspect. The 2010 Bill talked about the constitution of about 7 bodies.[53] The government as well as the private dam owners had to establish separate bodies[54] for monitoring safety and conducting inspections of dams. But the Act has put forth the establishment of a limited number of four bodies[55]. The functions allotted to each of them is varied. For instance, the NCDS is primarily responsible for laying down policies under the Act,[56] the National Dam Safety Authority (hereafter, NDSA) is given the task of implementing the same and other tasks[57] while the SCDS has an altogether different set of functions.[58] Like its predecessor, Chapter II talks about the constitution and functions of the NCDS. The Act properly lays down the constitution of the NCDS.[59] However, unlike the 2010 Bill, there is no tenure fixed for the members of the NCDS. But it is stated that the NCDS is to be "reconstituted every three years"[60] which implies that the tenure of the members is for a period of three years. The tenure of the members if the NCDS under the 2010 Bill was also for three years.[61] Chapter III of the Act formulates the establishment of the NDSA. The NDSA has been designated as the authority[62] under the Act. Chapters IV and V spell out the functions and constitution of the SCDS and the SDSO.

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50 *Ibid.*

51 *Id.*, s. 4(r).

52 *Id.*, s. 28 (2).

53 *Id.*, Chapters III, IV and V.

54 Like the States have to establish State Dam Safety Organisation if they are the owner of more than twenty dams while the dam owner.

55 Namely, National Committee on Dam Safety, National Dam Safety Authority, State Committee on Dam Safety and State Dam Safety Organisation.

56 And other functions like finding out the reason behind a dam incident and providing recommendation for the same, acting as a platform for discussing and finalising methods to be adopted in cases of remedy claimed. The Dam Safety Act, 2021, sch. I read with s. 6(1).

57 Like resolution of disputes, maintenance of a respository of dams etcetera.*Id.*, sch. II read with s. 9(1).

58 Like assessment of work undertaken by the SDSO, suggestions regarding usage of funds for old dams etcetera. *Id.*, sch. III read with s. 12(1).

59 *Id.*, s. 5.

60 *Id.*, s. 5(2).

61 *Id.*, cl. 5.

62 *Id.*, s. 4(d).

Sections 11, 12 and 13 of Chapter IV deals with the Consitution, functions and meetings of the SCDS respectively. Sections 14 and 15 of Chapter V deals with the establishment and officers of the SDSO respectively.

Even though certain sections of the Act are titled as "functions of the concerned organisation", those functions are separately listed out in the three schedules[63] appended at the end of the Act. The functions listed are broad as well as inclusive in nature, unlike the former guidelines.. Moreover, the Central Government has been accorded the authority to amend the functions as and when it finds it necessary.[64] Even in case of any difficulty arising during the implementation of the Act, the Central Government has been made the final authority to decide the outcome.[65] Chapter VI has divided the functions related to dam safety between SDSOs and the dam owners. Duties such as inspection,[66] classifying dams according to their vulnerability,[67] and maintenance of data[68] regarding the specified dams have been allocated to the respective SDSOs. While dam owners are responsible for expenses required for maintaining the dams,[69] technical documentation,[70] control, and upkeep of dam[71] etcetera. Chapter VII is an extension of the safety procedures to be taken by the respective dam owners. Thus, the Act has wider connotations than the 2010 Bill and tries to encapsulate every aspect related or incidental to dam safety. It is because apart from the already existing requirements as mentioned under the 2010 Bill, the Act also mandates the inclusion of a dam safety unit[72] for each specified dam.[73] This unit has to be comprised of qualified engineers to carry out proper inspections of dams.[74] The 2010 Bill also had provision for inspection of dam by 'operational and maintenance set up'[75] established for each specified dam. However, it did not mention its composition or definition anywhere unlike the Act.

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63 These schedules list out the functions of the National Committee on Dam Safety, National Dam Safety Authority and State Committee on Dam Safety respectively.

64 The Dam Safety Act, 2021, s. 49.

65 *Id.*, s. 56.

66 *Id.*, s. 16(1).

67 *Id.*, s. 17.

68 *Id.*, s. 18(1).

69 *Id.*, s. 21.

70 *Id.*, s. 22.

71 *Id.*, s. 28.

72 *Id.*, s. 4(h).

73 *Id.*, s. 30.

74 *Id.*, s. 31(1).

75 *Ibid.*

One of the other progressive features of the Actlies in the inclusion of sections 7 and 13. These sections revolve around the meetings to be held by the National and the State Committee. Both the Committees are mandated to meet at least twice a year and one of those should be scheduled before the advent of monsoon. Considering the difference in rainfall in all major states in India, safety measures near dams are a prerequisite during the monsoon season.

Chapter IX in the Act talks about "Comprehensive dam safety evaluation" similar to the Chapter IX of the 2010 Bill. Comprehensive dam safety evaluation is the analysis of all aspects of dams including its design, functioning, as well as any dangerous situation.[76] Section 41 makes obstruction in the working of any officer under the Act an offence. A penalty for a maximum period of two years is specified and the offender can also be made liable to pay a fine. The Act undertakes a strong measure through section 42 by prescribing the punishment for offences that are committed by government departments. On the other hand, the corporations are also brought under the purview of the Act.[77] However, the exact quantum of punishment for the government departments and corporations is not defined under the Act.[78] Moreover, while laying down the penalties under the Act, there is no provision dedicated for the victims of dam-related accidents.

All the remaining chapters and the subject matter of the Act is similar in approach and content to the 2010 Bill.

V. Conclusion

It has been a journey when it comes to the safety, inspection or maintenance of dams in India. Nonetheless, these efforts came after a series of dam related accidents like the Macchu II disaster. And the actions were also of a limited nature. The Parliament failed to bring in proper legislation until the year 2021.

For ensuring dam safety, CWC was established with work in consonance with the state governments to ensure the health and safety of dams, people and ecology. As early as 1986, a standing committee on the functioning of existing dams was formed. It resulted in suggesting the most efficient methods for balancing the dam safety as per the existing technologies. The standing committee also highlighted the safety measures taken by the states thereby, underlining that most of the states did not have any emergency procedure in place. From time to time, guidelines

76 *Id.*, s. 38(2).

77 *Id.*, s. 43.

78 *Id.*, ss. 42(2) and 43(2).

were published incorporating the changing needs.[79] These recommendations like the guidelines for safety inspection of dams also elaborated upon the meaning of the terms essential in comprehending dam safety.

Thus, efforts were being taken to mitigate the effects of dam failure and prevent further disasters. However, a need for comprehensive legislation was felt. The Bill on Dam Safety was amended from time to time but did not complete all the procedures of becoming an Act. Finally, in the year 2021, the Dam Safety Act came into being. The Act is a culmination of all the endeavours taken previously. The outcome of the same will be noticed only after it is enforced. However, even before the Dam Safety Bill, 2019 transformed into the Act, criticism from several parties like the DMK ensued. According to them, the Act is encroaching upon the States' right of formulating legislation on enclosures of water bodies within a state. On the other hand, a conflict between states due to the existence of a dam built along a river flowing in both their territories like the Mullaperiyar dam incident is not new. It is sound to conclude that the Dam Safety Act, 2021 has a long battle ahead of its enactment.

Nevertheless, at this junction, the researcher believes that certain aspects needed a mention or clarity in the Act to effectively deal with the issues revolving around dams.

1. Undoubtedly, the functions of the SCDS are wide-ranging starting from a review of the work done by SDSOs to recommending better strategies. Yet, the regulations concerninga majority of these tasks can be formulated by the NDSA only. It is not unknown that NDSA is headed by a person appointed by the Central Government. Such provisions might create a conflict between the actions taken up by the Union and the respective State.
2. As stated above, framing of the laws for the management of the intra-state water bodies is the power of the respective State. However, the Parliament enacted the Dam Safety Act without including a specific provision to justify making of legislation touching upon the above-stated power of the State.
3. The Act has talked about the rehabilitation of affected people but has nowhere provided for remedying or compensating people affected by a dam failure or accident.
4. 'Dredging and de-silting of dams' has been listed as exempted from taking prior environmental clearance under the Draft Environment Impact

79 For instance, the 2017 guidelines provided the list of different types of inspections that could be conducted along the entire process of preparing for an inspection starting from gathering the team for inspection to scheduling an inspection..

Assessment Notification, 2020. But the definition of dam failure under the Act mentions any 'unusual seepage or leakage' as a dam failure. This incident can also occur when a dredging activity is under operation. Allowing such projects to not gain prior environmental clearance can make it a hazard for the local communities later. And since the Act does not talk about compensation to victims of dam failure, it will lead to a chaotic situation in the future.

5. There is also no inclusion of the discussion with the local authorities, hearing opportunities for them or even of accommodating their recommendations while ensuring the safety of dams.

However, it must be highlighted that the Act does not distinguish between a government-owned dam and a private dam. All the rules and regulations under the Act including the penalty is equally applicable to all the dam owners. This might come across as promoting the efficacy of the entire Act. Moreover, the Dam Safety (Procedures, Allowance and other Expenditure) Rules, 2022 was notified on February 17, 2022,. The rules clearly specify the constitution, functions as well as the expenses of the authority under the Act. Yes, the Act took decades to be turned into reality. But after the implementation, steps are being taken on an immediate basis to assist in maintain the safety of the dams. But the potential of this freshly notified Act is yet to be witnessed. Till then, the Dam Safety Act, 2021 can certainly be called the creation of a way ahead.

SUO MOTO POWER OF NGT: A CASE COMMENT ON *MUNICIPAL CORPORATION OF GREATER MUMBAI* V. *ANKITA SINHA*

Vijay K. Tyagi & Rahul Saini[*]

I. Introduction

ON OCTOBER 7, 2021, the Supreme Court of India pronounced judgment in the case of *Municipal Corporation of Greater Mumbai* v. *Ankita Sinha*,[1] wherein the question as to whether the National Green Tribunal (hereinafter "NGT") has the power to act *suo motu* was decided by a bench of 3 judges[2].

The case came into being when the NGT noticed an article titled "Garbage Gangs of Deonar: The Kingpins and their Multi-Crore Trade"[3] published in an online news portal. The article covered a story on the mismanagement of solid waste and its adverse impact on the environment and health of the citizens in the locality. The NGT took *suo motu* cognizance of the article and directed the author Ms. Ankita Sinha to be the applicant in the case. In the events that followed, the representatives of the Central Pollution Control Board, Maharashtra Pollution Control Board and the District Collector of the area held inspections at the Deonar dumping site. The aforementioned team came up with the report that the dumping site has been operating in violation of the Solid Waste Management Rules, 2016. The NGT accepted the report of aforesaid violations and directed the Municipal

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1 2021 SCC OnLine SC 897.

2 Justices A.M. Khanwilkar, Hrishikesh Roy and C.T. Ravi Kumar.

3 Ankita Sinha, "Garbage Gangs of Deonar: The Kingpins and Their Multi-Crore Trade", *available at*:https://www.thequint.com/explainers/garbage-business-in-deonar-dumping-ground-rag-pickers-businessmen-and-mafia (last visited on January 1, 2022).

Corporation of Greater Mumbai to pay compensation of Rs. 5 crores as the environmental damage was "self-evident". The court stated:[4]

> Pursuant to the Report of the inspecting team which highlighted that the landfill site failed to comply with the provisions of the Solid Waste Management Rules, 2016, the NGT vide order dated 30.10.2018 noted that 'damage to the environment and public health is self-evident' and ordered MCGM to pay compensation to the tune of Rs. 5 crores.

The aggrieved Corporation filed an appeal before the Supreme Court wherein the following seminal issue touching upon the jurisdiction of the NGT arose for consideration:

> 2. The consideration to be made in these matters is whether the National Green Tribunal has the power to exercise suo moto jurisdiction in the discharge of its functions under the National Green Tribunal Act, 2010.[5]

Contentions of the Appellant

The appellant Corporation submitted against the recognition of *suo motu* jurisdiction of the NGT and relied upon the following grounds:

I. That NGT is a statutory body and being such a body, it cannot exercise any power or jurisdiction which is not envisaged for it under the statute;

II. That NGT has no power of judicial review or any power akin to those exercised by the High Courts and Supreme Court under Article 226 and 32 of the Constitution respectively;

III. That the National Green Tribunal Act, 2010 uses the term "disputes" which predicates the requirement of two contesting parties before the Tribunal;

IV. That *suo motu* jurisdiction would lead to the Tribunal being a judge in its own cause and would violate the principles of natural justice; and

V. That the Tribunal can act even upon a letter from any person and there is no need for a formal application, but it cannot act on its own.

II. Conception, Purpose, and Scheme of NGT Act, 2010

Conception of NGT

The NGT was conceived as a special body for dealing with environmental matters in an exclusive manner. In its 186th Report, the Law Commission of India called

4 *Supra* note 1, para 4.

5 Hereinafter referred as "the NGT Act".

for the creation of a specialised forum for dealing with environmental cases. The idea was to decentralise the forums dealing with ground-level environmental issues. Local inspections, receiving evidence, availability of scientific expertise etcetera were some key factors for the suggestion. These factors were noted as limitations in the functioning of High Courts and the Supreme Court as the constitutional courts lacked access to scientific advice, spot inspections and evidence. Despite noting the specialised character of the proposed environmental courts, the Commission made it clear that the writ jurisdiction of the High Courts and the Supreme Court cannot be delegated or watered down in any manner. However, to prevent any intervention of the High Courts in the functioning of the Tribunal, an option for a direct statutory appeal to the Supreme Court was created.[6]

Purpose of NGT

The Statement of Objects and Reasons attached with the NGT Act, 2010 lays emphasis on the right to a healthy environment and its intrinsic connection with the right to life under Article 21. It is also noted, and crucially so, that the constitution of the National Green Tribunal was an advancement from the erstwhile proposition of the National Environment Tribunal under the Environment (Protection) Act, 1986 which had a limited mandate. It is noteworthy that the NGT was conceived as a multidisciplinary body vested with both original and appellate jurisdiction "for effective and expeditious disposal of civil cases relating to environmental protection and conservation of forests and other natural resources including enforcement of any legal right relating to the environment."[7]

The judgment has connected the mandate stated in the statement of objects and reasons with that envisioned in the 186th Report to observe that the ultimate objective of the Tribunal is to "achieve the objectives of Article 21, 47, 48A, 51A (g) of the Constitution of India through a fair, fast and satisfactory judicial procedure."[8]

Pertinently, one cannot help but observe that while discussing the statement of objects and reasons of the NGT Act, 2010, as delineated above, the court called for the "most liberal construction"[9] for the institution as it is connected with "the

6 The National Green Tribunal Act, 2010, s. 22.

7 About us, *available at*: https://www.greentribunal.gov.in/about-us (last visited on January 5, 2022).

8 Law Commission of India, "186th Report on Proposal to Constitute Environment Courts" 9 (September, 2003).

9 *Supra* note 1, para 26.

most significant aspect of the right to life."[10] A peculiar feature here is that the reasons for adopting such liberal construction are discussed at a much later stage in the judgment that is, after forming the view.

Statutory Scheme of NGT Act, 2010

The statutory scheme of the NGT Act is a crucial guiding factor in determining the question of jurisdiction. Section 14 of the Act empowers the Tribunal to have original jurisdiction over all civil disputes involving a substantial question relating to the environment relating to any of the enactments mentioned in Schedule I. Section 15 empowers the Tribunal to not only grant relief to the victims of environmental damage but also take steps for the restitution of the environment in the manner that the Tribunal deems fit. The legislature has used wide language by empowering the Tribunal to decide the steps that are to be taken for such restitution. Section 18 is yet another important provision which relaxes the norm of *locus standi* and allows "any person aggrieved" to move the NGT for seeking relief under the Act.

Section 19 relaxes the rules of procedure for the Tribunal and allows the Tribunal to regulate its own procedure subject to following the principles of natural justice. Section 20 specifies the principles to be followed by the Tribunal for deciding causes under the Act and provides that environmental principles must be applied that is, the *precautionary principle*, *sustainable development* and *polluter pays principle*.

Notably, the Tribunal has been statutorily placed in a peculiar position to give effect to three broad-based environmental principles. The manner in which the Tribunal chooses to give effect to these principles that is, whether by way of restitution, prevention, remedial measures or compensation is also left to be decided by the Tribunal in the manner in which it deems fit. One must pause and appreciate that the statutory scheme does intend to vest the Tribunal with wide powers. An analysis of these provisions shows that there is no intention on the part of the legislature to restrict the functioning of the Tribunal. An effort has been made to couch the functions and powers of the Tribunal in a widely worded language. The same intent is reflected in Rule 24 of the National Green Tribunal (Practice & Procedure) Rules, 2011 which reads as:

> **24. Order and directions in certain cases –** The Tribunal may make such orders or give such directions as may be necessary or expedient to give effect to its order or to prevent abuse of its process or to secure the ends of justice.

Any forum with a power to secure "ends of justice" is vested with a wide jurisdiction. But would that extend to the grant of a *suo motu* jurisdiction?

10 *Ibid.*

III. Purposive Interpretation

The judgment lays great emphasis on applying the principle of purposive interpretation to bring home the point that the Tribunal must be empowered to act on its own. Relying upon the words of Justice S.R. Das in *Bengal Immunity Co.* v. *State of Bihar*,[11] the judgment supports the construction which advances the concept of *pro bono publico* and adds "force and life" to the cure and remedy provided under the Act, in this case, the NGT Act, 2010. The very fact that the NGT is entrusted to decide substantial questions relating to the environment, both in an original and appellate capacity, coupled with the fact that it is bound to apply the three fundamental principles of environmental adjudication while deciding the cases before itself advances the view that the Tribunal must not be bound by any procedural impediments. The court called for eschewing the procedural impediments and noted that:[12]

> The laudatory objectives for creation of the NGT would implore us to adopt such an interpretive process which will achieve the legislative purpose and will eschew procedural impediment or so to say incapacity. The precedents of this Court, suggest a construction which fulfills the object of the Act.

The court advanced the idea with a further observation that since the objective of the legislation is to protect the rights under article 21 of the Indian Constitution, the approach of interpretation has to be "forward looking"[13] and the provisions must be read with the intention "to accentuate them"[14].

However, the manner in which purposive interpretation is deployed in this case is less than convincing. One cannot help but note that the rule of purposive interpretation and mischief rule have been used and applied in an inter-changeable manner. The reliance upon *Bengal Immunity*,[15] wherein mischief rule was applied at length, points in this direction. Whereas the two rules may bring forth the same result, as is the case here, however, the two rules are premised on different grounds. The mischief rule is based on the existence of a "mischief" in the existing scheme and then requires the court to do away with the mischief by adopting a corrective measure. The rule of purposive interpretation, on the other hand, is not dependent

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11 AIR 1955 SC 661.

12 *Supra* note 1, para 36; *Sarah Mathew* v. *Institute of Cardio Vascular Diseases* (2014) 2 SCC 62; *New India Assurance Co. Ltd.* v. *Nusli Neville Wadia* (2008) 3 SCC 279.

13 *Supra* note 1, para 36.

14 *Ibid.*

15 *Supra* note 11.

on the existence of a problem *per se*. It is a discovery of the purpose of the legislation and adopting that particular meaning out of the possible meanings which fulfills the purpose. Peculiarly, in this case, no mischief is traced by the court. Tracing the mischief would have required the court to identify the circumstances when *suo motu* power was sought to be exercised by the Tribunal and impediments that arose in such exercise. Furthermore, it would have required an analysis of the deficiencies in the Tribunal's functioning due to its inability to act on its own. One fails to find any such effort on the part of the court in this regard.

IV. Wider Concept of "*Lis*" for NGT and its *Sui Generis* Role

The concept of "*lis*", as understood in a civil case, has to be understood in a different manner when it comes to the NGT. In a civil case, "*lis*" involves two parties litigating over civil rights. The party approaching the court bears the burden to establish a cause of action in its favour and presses for a definite remedy available to that party under the law or under any contractual/private arrangement between the parties. On the contrary, in an environmental *lis,* the party approaching the Tribunal comes with a grievance regarding an environmental impact and could be pitted against an individual, corporate person or the government depending upon the liability for damage to the environment. The cause of action need not necessarily be in favour of the plaintiff and the alleged damage could be against the society at large. The contours of *locus standi,* as discussed above, are relaxed, understandably with the objective of fulfilling the mandate of environmental protection without waiting for the right person to come and agitate before the Tribunal. The nature of *lis,* therefore, takes a wider shape here as compared to a civil case. The wide nature of *lis* is also recognized in the sense that the Tribunal is empowered to take preventive action as well, apart from remedial and corrective action. This is manifested in section 20 of the NGT Act which expressly enjoins the Tribunal to apply the "precautionary principle" in its decisions. The court also noted that, "… As the specialized forum, the NGT would be expected to take preventive action, besides settling and adjudicating disputes and pass orders on all environment related questions."[16]

In *DG NHAI* v. *Aam Aadmi Lokmanch*,[17] as well, the Supreme Court had emphasized and recognized the preventive jurisdiction of the NGT depending upon the nature of the abuse that is being caused to the environment. It noted that:[18]

16 *Supra* note 1, para 46.

17 2020 SCC Online SC 572.

18 *Id*., para 76.

> The power and jurisdiction of the NGT under Sections 15(1)(b) and (c) are not restitutionary, in the sense of restoring the environment to the position it was before the practise impugned, or before the incident occurred. The NGT's jurisdiction in one sense is a remedial one, based on a reflexive exercise of its powers. In another sense, based on the nature of the abusive practice, its powers can also be preventive.

The requirement of applying the precautionary principle and mandate to take preventive measures needs some deliberation. It is so because the availability of preventive measures expands the sphere of action of the Tribunal and opens a wide range of possibilities for its functioning. The word "preventive" is self-explanatory and takes within its sweep such actions as are intended to harness the situation before any damage is done. Therefore, the cause of action is not an alleged violation of legal right existing in favour of a person. The cause of action is the violation or possible violation of the most sacred right to life of the society at large which is a guaranteed fundamental right under article 21 of the Indian Constitution.

The preventive jurisdiction of the NGT places it in a *sui generis* position. It makes it an expert body holding a complete mandate over all the issues having a bearing on the environment and environmental justice. The availability of powers to deal with multi-dimensional environmental issues using multi-dimensional tools that is, restitutive, preventive and compensatory, places the NGT in an unique jurisdictional position. The judgment has succinctly noted that this wide mandate could not be justifiably fulfilled until and unless the mechanism to trigger the jurisdiction of the Tribunal is not flexible. The court notes how a "flexible institutional mechanism" is a prerequisite for addressing environmental concerns in the following manner:[19]

> … The necessity of having a specialized body, with the expertise to handle multidimensional environmental issues allows for an all encompassing framework for environmental justice. The technical expertise that may be required to address evolving environmental concerns would definitely require a *flexible institutional mechanism for its effective exercise*.

The question that essentially arises is whether this preventive jurisdiction and *sui generis* position of the NGT would stand compromised if the Tribunal is procedurally disallowed from acting *suo motu* or on its own. The court answered it in the affirmative. Illustratively, if the Tribunal receives information regarding any environmental violation which is impinging upon the right to life of the public,

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19 *Supra* note 1, para 67.

then the Tribunal cannot be expected to wait for a formal application in order to act against such violation. To do so would be to compromise on its mandate of doing environmental justice. More so, it would disable the Tribunal from applying the precautionary principle with its full effect as the inability to take preventive action in the wake of sustained environmental violation would render it otiose of performing its core functions. The availability of *suo motu* power is also crucial for fulfilling the vision of environmental justice and environmental equity, as discussed.

V. Environmental Justice and Environmental Equity

Environmental Justice and Environmental Equity are regarded as two of the most important principles of modern-day environmental jurisprudence as they take into account not only the crying need for a healthy environment for one and all but also acknowledge the social dimension of the society which places different sections of the society at different pedestals. The judgment has applied these principles in a succinct manner. These principles seek to remedy the problem of access to justice which disables some sections from approaching the courts for seeking redressal of their grievances by way of adversarial litigation. The court has rightly noted this aspect in the following words:[20]

> Environmental equity as a developing concept has focused on the disproportionate implications of environmental harms on the economically or socially marginalized groups. The concerns of human rights and environmental degradation overlap under this umbrella term, to highlight the human element, apart from economic and environmental ramifications.

The court has adopted an approach of social justice oriented interpretation while noting that substantial justice, at times, is beyond the reach of the masses and when that gap emerges due to a procedural lacuna in the vindication of rights, it is the duty of the court to remove such lacunae and adopt a liberal approach. Therefore, the absence of a self-activation power directly impinges upon the fulfilment of substantial rights of the people due to their disadvantaged position in the society and removing such irregularity would be a step towards equity and "balancing the arm of justice"[21]. Noting that an "equal footing" conception would be detrimental to the idea of environmental justice, the court observed that," An "equal footing" conception may not therefore be feasible to adequately address the asymmetrical relationship between the polluters and those affected by their actions."[22]

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20 *Supra* note 1, para 82.

21 *Supra* note 1, para 85.

22 *Ibid.*

Thus, opening the doors of NGT to *suo motu* action would advance the principle of environmental justice, as discussed.

VI. Anomalous Distinction Between Order, Award and Decision

The NGT Act, 2010 uses three different terminologies - order, award and decision at various places in the statute. The court has found that these words carry different meanings in light of the statute. The view taken[23] is that an "order/award" would refer to the outcome in an adversarial adjudication by the Tribunal involving contesting parties, whereas the term "decision" would refer to the outcome of a *lis* before the Tribunal in its non-adjudicatory functions. This distinction is used by the court to support the view that the legislation itself contemplates certain decisions by the Tribunal when there are no contesting parties before it, which points towards its *suo motu* action.

The observation does sound attractive at first blush but goes on to create an anomalous situation later when other provisions of the NGT Act, 2010 are viewed in light of it. Section 19, for instance, which provides for the procedure and powers of the Tribunal, states that the Tribunal can review its decision. No such power is specifically provided for an order or award. Adopting the distinction between "decision" and "order/award", as laid down in this case, the consequence would be that while acting in its *suo motu* capacity, the Tribunal can review its decisions, but if it is performing its adjudicatory functions involving parties and passing an order/award (not decision), there will remain no such power of review. Understandably, it would lead to absurd consequences. No doubt, there has to be a distinction between the three terms as the assumption is that every word used by the legislature carries a specific meaning, but the distinction placed by the court, in this case, is less than convincing, particularly in light of the usage of these terms in other provisions of the statute.

VII. Sphere of Action - A Limitation

While expanding the jurisprudential domain of NGT, the court has cautiously observed that the all-encompassing powers of the Tribunal are limited to its sphere of action. It is observed that, "…However, As long as the sphere of action is not breached, the NGT's powers must be understood to be of the widest amplitude."[24]

Again, in light of the decision of the Supreme Court in *Rajeev Suri* v. *Delhi Development Authority*,[25] the court noted that the role of the NGT is discernible in "*its own*

23 *Supra* note 1, paras73,78.

24 *Supra* note 1, para 51.

25 2021 SCC OnLine SC 7.

domain". It noted that, "…In its own domain, as crystalized by the statute, the role of the NGT is clearly discernible."[26]

What is peculiar here is that despite noting that the domain of the NGT is limited to its sphere of action, the court nowhere offers any guidance on what that sphere of action is. Therefore, one has to seek guidance from section 14 only. Section 14 provides NGT with the jurisdiction in all civil cases:

a. Involving substantial questions relating to the environment; and

b. Enforcement of any legal right relating to the environment.

It then provides that such a question must arise from the implementation of any of the enactments specified in the First Schedule of the Act. Therefore, the decision must be understood in this correct perspective. This decision relaxes the procedural impediments in activating the jurisdiction of the NGT by allowing it to self-activate in appropriate circumstances, but it does not expand the subject matter competence of the NGT. It does not empower the NGT to conduct a merit-based review or to venture beyond the subject matter jurisdiction. The province and duties of the NGT remain the same that is, i.e. environmental matters as contemplated under section14 of the NGT Act, 2010.

For the National Green Tribunal, this decision shows a very important path. While acknowledging and declaring the *suo motu* jurisdiction of the Tribunal, the judgment emphasizes "preventive action" and the need thereof to effectively fulfill the mandate of the precautionary principle in its letter and spirit. The experience of the last decade shows us that little is left to be preserved in securing environmental justice after environmental violations have already taken place. A judicial forum, no matter how widely empowered, has its inherent limitations when it comes to taking remedial steps. Therefore, to give proper effect to this decision, the Tribunal will have to be on its guard so that violations can be curbed at the threshold stage to fulfil the vision of the precautionary principle.

26 *Supra* note 1, para 56.

DEVELOPMENT OF ENVIRONMENTAL LAWS IN INDIA (2021) by Kanchi Kohli and Manju Menon. Published by Cambridge University Press. Pp. 388. Price 6938/- ISBN : 9781108490498

IN THE recent findings of 'Environment Performance Index' (EPI) 2020, India stood at the bottom of the global rankings at 168th place out of 180 countries worldwide. The EPI scores indicated negligible improvement in India's environmental performance over the past decade.[1] This situation is particularly worrisome as India has a huge cluster of environmental laws in place. The dynamics of the development of the set of environmental laws is the central theme of the book. Along with this, the authors have also made an attempt to highlight the state of environmental sustainability. The distinctive feature of this book in comparison to the existing literature is that the authors have not only highlighted the much scrutinised 'judicial activism' but has also allocated equal space to the contributions of the executive wing in the development of environmental laws in India. This digression embeds a fresh and novel perspective to the Indian environmental jurisprudence which seems missing in the past discussions.

The book has been divided into 10 broad themes discussing the varied roles and responsibilities of the Indian environmental authorities. Thematic distribution of issues is another unique feature of this book which is very facilitative for the readers. The book further raises pertinent questions about their roles in the implementation of the environmental regulations. The authors have highlighted the overlaps, contradictions, duplication, fragmentation and confusions of Indian environmental law comprehensively. The book has presented many recent laws and judgments that are helpful in understanding the continuities and departures of India's post-liberalisation environmental laws from earlier legal instruments. Lastly, the authors have done a brilliant job of connecting the themes/issues across chapters.

Chapter one analyses the historical developments and events which led to the development of the environmental laws in India. The Authors have aptly categorised the fundamentals in three parts such as constitutional provisions, landmark judgments and International Conventions and principles. The authors have stressed upon the proactive role played by the High Courts[2] and not the Supreme Court in the identification of the 'right to environment' under article 21 of the Constitution. This analysis has rarely been mentioned in the previously published scholarly work on the subject. ***Chapter two*** outlines the vast institutional landscape of

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1 EPI use 32 performance indicators across 11 issue categories which includes Air Quality, Waste Management, Biodiversity & Habitat, Climate Change, Pollution Emissions, etc.

2 *T. Damodhar Rao* v. *Special Officer, Municipal Corporation of Hyderabad*, AIR 1987 A.P. 171 and *V. Lakshmipathy* v. *State of Karnataka,* AIR 1992 Kant 57.

environmental laws. The authors have rationalized the tussle between central and state governments due to the absence of the subject 'environment' in any of the lists of Schedule Seven. The disagreements affect the implementation and enforcement of environment laws which has been highlighted by the authors in thematic chapters. The authors have done a brilliant job at classifying environmental institutions, demonstrating their limitations and why they failed to deliver environmental sustainability. The Authors have highlighted that the most unused section, despite having capability, is the local body.

Chapter three discusses issue of ***'Forest Reservation and Conservation'***. It focuses on the division of administrative responsibilities of the forest departments and interventions by the judiciary in cases where law presented a lacunae. The authors have highlighted the historical colonial roots of the regulatory regime of forest governance and hinted towards the complexity in the current set of forest laws. One of the issues reflected by the authors is the conflict between the tribal/ forest-dwelling communities and forest departments. In the second part, the loopholes within the existing forest legal machinery, the provisions which are least implemented and recent amendments in the forest regulatory regime have been discussed.

The important issues dealt in this part includes "Compensatory Afforestation" (CA)funds, and the role of the apex court in defining the "Net-present value" for valuation of forests and in the establishment of the Compensatory Afforestation Fund Management and Planning Authority (CAMPA). The authors have highlighted the implementation related issues regarding CA and CAMPA. However, authors have failed to describe the role of CA and CAMPA in climate change mitigation and adaptation.

In the third part, the "*Godavarman case*"[3] popularly known as the "Forest case" has been discussed in detail.One of the orders of the case is responsible for expansive definition of the word "forest"[4] and have had far-reaching consequences on development projects. The last section has focused on the intersections between the Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006 and the Forest Conservation Act, 1980.

'Pollution Control and Prevention' has been discussed in ***chapter four***. The chapter scrutinises the pollution prevention laws in place. Pollution related regulations and their regulators have failed due to habitual legal non-compliance and no defined criteria for the selection of the site for the polluting industries/projects and

3 *T. N. GodavarmanThirumlkpad* v. *Union of India*(1997) 2 SCC 267.

4 The order of the Supreme Court extended the definition of 'forest' to its dictionary meaning.

remediation of the polluted site. Further, the authors have rightly criticised the 'self-regulating techniques' like continuous emission monitoring systems (CEMS) and continuous effluent quality monitoring systems (CEQMS). The collected data from these systems is not accessible to the general public which is a shortcoming of these measures. The role of the Central Environment Ministry, as highlighted by the authors, has been very limited in comparison to the higher courts.[5]

The latter part of the chapter has highlighted that National Green Tribunal (NGT) has noted poor appointments in the Pollution Control Boards and Committees (PCBs/PCCs) and lack of competence in appointed members of PCBs.[6] Further, authors have highlighted the ambiguities within the kinds of "consents" prescribed by the PCBs which are based on the type of industry and not on where it is located. The NGT has also recorded in one of the cases, that there are gaps in the inspection policy of the PCBs/PCCs.[7]

Chapter Five put forth the legal framework of the Environment Protection Act (EPA), 1986. However, limited procedural aspects of EPA have been highlighted and the part also lacks an analysis on the implementation and enforcement of EPA. The second part deals with the subordinate legislations under EPA. The most controversial of all is Environmental Impact Assessment (EIA) and Coastal Regulation Zone (CRZ) notifications because of dilution of prohibitions and required processes in favour of economic investments which, authors claim, made them 'unstable' in their approach.[8] The authors have substantiated these findings with many cases and complaints.[9] For the sake of clarity, authors have compared the regulatory aspects of two main notifications (Coastal Regulation Zone and Island Coastal Regulation Zone) with the help of the table which makes it easier for the readers to pinpoint the differences between the two. Authors have also hinted towards untoward outlook of the waste policies which focus more on management of waste rather than prevention and minimisation. The last part deals with the Ecologically Sensitive Areas (ESAs) Notifications the implementation of

5 *M. C. Mehta* v. *UOI*, Writ Petition (Civil) No. 13029/1985.

6 *Rajendra Singh Bhandari* v. *State of Uttarakhand*, National Green Tribunal judgment dated August 26, 2016 in Original Application No. 318 of 2013.

7 *State Pollution Control Board, Odisha* v. *M/s Swastik Ispat Pvt. Ltd.*, National Green Tribunal judgment dated January 19, 2014 in Appeal No. 68 of 2012 and *State Pollution Control Board, Odisha* v. *M/s Patnaik Steel & Alloys Ltd.,* National Green Tribunal judgment dated January 19, 2014 in Appeal No. 69 of 2012.

8 Other reported issues with EIA notification are quality of EIA reports and restricted public hearings.

9 For example, Site of Jetty at Nate village and Rajapur taluka of Ratnagiri district. Refer, *Vikrant Kumar Tongad* v. *Delhi Tourism and Transportation Corporation*, National Green Tribunal judgment dated February 12, 2015 in Original Application No. 137 of 2014.

which has remained patchy. The chapter, therefore, reflects on the conflicts between state governments and Central Government on different environmental issues. Lastly, the authors have emphasised on the need for new environmental regulator which should be executed by the current government.

Chapter Six is on ***'Wildlife and Biodiversity Conservation'*** wherein the legislative measures for conservation of wildlife and biodiversity and their overlapping jurisdictions in institutional coordination for enforcement[10] has been discussed. It has been highlighted by authors that the current regulatory framework on conservation is "land centric in their approach" which is unfit for 'marine ecosystem' and is one of the drawbacks of the legislations. Authors have criticised the pro-business approach of the Ministry of Environment led to the diversions of large parts of Protected Areas (PAs) of forests affecting forest-dwelling communities and wildlife.[11] However, the chapter fails to analyse or comment upon the role of the Wild Life Protection Act, 1972 (WLPA) in conservation of wildlife in past five decades as a significant increase has been reported in the death toll of protected species.

The second part of the chapter discusses the legal framework for conservation of biodiversity. It identifies the legal challenges attracted by the Biological Diversity Act, 1992 (BDA). For instance, inadequate interpretation of the definition of term 'Bioresources'[12]. Other issues include unclear regulatory approach regarding Access and Benefit Sharing(ABS) Mechanism and delays in constitution of Biodiversity Management Committees (BMCs). The inclination of the chapter is towards the WLPA and less towards BDA due to limited implementation of BDA in India. In the last part, authors have clearly demarcated the issues relating to conservation of

10 To clarify the overlapping jurisdiction a particular case has been referred wherein two Czech scientists were convicted for illegal entry and collecting rare insects in Singhalila National Park, West Bengal in 2008. Refer, C.R. Case 48 of 2008 before the Darjeeling chief judicial magistrate and Priyadarshini Subhra,'Entomologists Convicted', *Nature India*, Sept. 8, 2008, *available at*: http://www.natureasia.com/en/nindia/article/10.1038/nindia.2008.277(last visited on March 3, 2022).

11 For instance, between 1998 and 2008, the standing committees of the Indian Board for Wild Life (IBWL)/The National Board for Wild Life (NBWL) considered 244 cases for diversion of land from PAs. An analysis of these cases reveals that diversion of 7,949 hectares of land was approved in which 2,102.4 hectares of land was allowed for mining, 625 hectares for transmission lines and wind projects, 271 hectares for rehabilitation projects, 237.1 hectares for dams, 170 hectares for road projects and 90 hectares for building and construction projects.

12 Refer, *Bio Diversity Management Committee* v. *Western Coalfields Ltd.,*NGT judgment dated October 16, 2015 in Original Application No. 28 of 2013(CZ) and *Bio Diversity Management Committee* v. *Union of India*, Original Application No. 17 of 2014(CZ).

both which are primarily procedural in nature although backed by various important judgements.

In ***Chapter Seven,*** the authors have discussed ongoing and past concerns around '***Ground and Surface Water Extraction'***. The chapter begins by describing 'water', a critical environmental resource, governed by the 'web of institutions' that cut across the central and state jurisdictions.The first part of the chapter discusses the legal frameworks for '*extraction of groundwater'* despite which the groundwater crisis has continued. This part has argued, on one hand, the failure of legal machinery due to the involvement of many laws and institutionsand cases of illegal extraction. On the other hand, there is no comment on the inefficient Zonation and no objection certificate (NOC) models.

The second part discusses issues related to '*surface water utilization'* for which currently there is no legal framework or institution to deal with. Further, the present regulatory framework have prioritised water provisioning and are not set up for water conservation. The authors have highlighted that "state governments view reservoirs made for irrigation and hydropower as revenue earning assets."[13] Lastly, it has been suggested that present laws for water access and use require several changes based on climate change concerns and the need for water conservation as it has been argued by the water experts that 'institutional frameworks for the management of water in India are outdated'.

Chapter Eight has dealt with issues relating to **'*Land Acquisition'*** and why is it important to discuss Land Acquisition law in environmental issues? It is because changes in land use are likely to pose critical challenges for sustainable development, rehabilitation and resettlements issues.[14] In light of this relevance, the authors have elaborated on the regulatory framework of Land Acquisition which has colonial roots. Acquisition of land is a complex issue because both central and state governments have powers to enact laws. The preceding law of 1894 was recently been replaced by the 2013 law to combine acquisition, compensation,rehabilitation and resettlement (R&R) into one single law.[15] The unique features of the Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Act, 2013 (RFCTLARR) are, Social Impact Assessment (SIA) and inclusion of compensation rate mechanism.

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13 As of 2016, more than 18 percent of the irrigation project is used to provide water for industrial and other non-agricultural purposes.

14 For instance, The Narmada Valley Development Plan (NVDP) which led to 'Narmada Bachao Andolan' of 1998.

15 Chapter II of the Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Act (RFCTLARR Act), 2013.

Ninth chapter discusses the present legal framework on Climate Change. The International framework includes United Nations Framework Convention on Climate Change (UNFCCC) and the Kyoto Protocol (1997). This has also been recorded as the first phase of international climate negotiations. However, these negotiations failed because the commitments were unenforceable and non-binding on the parties. The second phase started with the enforcement of the Paris Agreement (2016) which establishes domestic climate action targets. Unlike first phase, commitments in Paris Agreement are binding and enforceable in nature which led to the enactment of new laws and amendment to existing laws.[16] At the National Level, policy frameworks for climate change include Intended Nationally Determined Contributions (INDCs), the National Action Plan on Climate Change (NAPCC) and the State Action Plans on Climate Change (SAPCC). The National Action Plan on Climate Change of 2008 was criticised heavily which led to the revision in 2014. However, the implementation of the plan has remained weak and lackadaisical so far. Further, many states have also passed the SAPCCs.[17] The major drawback of these SAPCC is that they focus more on adaptation than mitigation measures of climate change. The last part of the chapter has discussed the climate litigations all around the world and in India which have remained very limited in approach.

In the ***tenth chapter***, the authors have discussed the major '***environmental reforms'***. The rationale for the same are investment reforms agenda, implementation challenges and international environmental conventions and treaties. The chapter thereafter focuses on the reforms suggested by the Environment Ministry and other High Level Committees. T. S. R. Subramanian Committee[18] and the Shailesh Nayak Committee[19] were setup by the Environment Ministry. The second part mentions other committees such as Govindarajan Committee[20], Hoda Committee[21], Chawla Committee[22] and 186th report of the

16 It has been reported that there are more than 1,500 laws and policies worldwide that address climate change or transition to a low carbon economy.

17 As of 2018, 32 States and Union Territories had prepared their State Action Plans on Climate Change(SAPCC) or Union Territory Action Plan on Climate Change. Refer, Committee on Estimates, *Performance of the National Action Plan on Climate Change (NAPCC)*.

18 It led to the introduction of draft Environment Law Amendment Bill (ELAB) on October 7, 2015. One of the primary purposes of this bill was to put in place a mechanism where damages that accrued from violation of laws could be adjudicated and civil penalties could be calculated.

19 It was setup to review the issues relating to the Coastal Regulation Zone Notification, 2011.

20 It was set up for 'Reforming Investment Approval and Implementation Procedure'.

21 It was set up to review the National Mineral Policy.

22 It was set up to deliberate on measures required for enhancing transparency, effectiveness and sustainability in utilization of natural resources.

Law Commission[23]. Major amendments to the present environmental regulatory framework drew extensively from the recommendations of these committees. The focus, however, of all the recommendations were more towards economic development and less restrictions on the developmental projects.

All things considered, it can be concluded that the book under review has brought a new dimension to the surface successfully. The authors have analysed in depth the incompetence of institutional mechanisms. One can extrapolate that to achieve the goal of environmental sustainability, India is in urgent need to do more than just implementing the existing regulatory schemes. It is, therefore, an insightful addition to the existing literature on the subject. The book is well-written and timely updated and provides the reader(s) with more updated contents and clarity on the issues covered in the book. The authors raised issues and failures in every thematic chapter, however, the solutions to any of those highlighted issues could not be traced in the book. Therefore, the aim of the authors is limited to the identification of the issues and concerns. Likewise, the book does not say much about the relevancy of the environmental institutions and legal instruments in the current times.

The book is useful for the students, practitioners, academicians, other professionals of law, environmental activists and all those who have an interest in the subject. Further, it also caters to the curiosity of the growing community of non-legal professionals as well as self-trained environmental activists and public-spirited individuals who engage actively with environmental laws and policies. It is, therefore, recommended to all those who want to understand the development of environmental laws and policies in India.

*Nivedita Chaudhary**

23 It recommended the setting up of specialised environmental courts.

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