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Environmental risk regulation and the Indian Supreme Court: an exercise in de-formalization of the law?

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The Supreme Court of India has become a prolific positive legislator through the interpretation of Constitutional values and principles. Environmental rights and obligations has been one area in which the Supreme Court has been actively engaging in building rights-based jurisprudence ensuring the protection of environment and health. However, environmental risks emanating from technological intervention has been an area in which the Supreme Court has only intervened reluctantly by relying on individual technical experts, who assume the role of *amicus curiae*. Reliance on technical experts reflects a move away from democratic legitimacy that Max Weber had underlined as intrinsic to the formal character of law. The Supreme Court's reluctance to intervene on issues of technology regulation is not surprising given that technological development is subsumed within a strong political narrative of national development and by implication for determining policy which is the domain of the executive. Interestingly, the Court has demonstrated no such reluctance in other areas – such as in addressing environmental risks from forest degradation (*Godavarman* case). It has shown scant regard for executive turf. Are there then two parallel narratives that exist? A closer inspection reveals that both these are expressions of the same macro narrative, that of narrowing of forms of participation and legitimate spaces for the participation of the *public* in the policy discourse on environmental risk regulation. This narrative is explored through three ongoing cases in the Supreme Court (*T.N. Godavarman Thirumulpad v. Union of India; Aruna Rodrigues & Ors. v. Union Of India & Ors. and G. Sundarrajan v. Union of India & Ors*.).

Keywords: risk assessment; regulation; case law; India; Supreme Court; environment; public participation

1. De-formalization anxieties in environmental risk regulation

Max Weber's ideas on legal rationality and de-formalization provides a critical context to our discussion on environmental risk regulation in India and to some extent demonstrates the validity of Weber's predictions unfolding at present. By tracing the historical development of society, Weber demonstrated the distinct nature of legal rationality as separate from other rationalities (religion, custom) that was prevalent in feudal societies. Legal rationality is based on independent and abstract rules that govern all persons in the State. Rules operate in a hierarchic legal order

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and are applicable to specific situations and whose interpretation is secured through an independent judiciary (Rheinstein 1954). However, within increasingly complex societies that are characterized by specialization and fragmentation of knowledge – the clear separation between private and public law and the hierarchy of basic norms and statutes is challenged – and giving away to what Weber refers to as 'de-formalization of law' – i.e. the influx of substantive and controversial value orientations into the legal order.

Environmental risk regulation is one such area of law in India, wherein such trends of de-formalization catalyzed by expertization (Koskenniemi and Leino 2002; Koskenniemi 2009) and resulting in fragmentation can be witnessed. The discourse of environmental risk regulation is of recent (only emerged post the Bhopal Gas disaster in 1984 onwards) vintage in India (Abraham and Abraham 1991). With the hastening of development goals by the State, there has been a concomitant awareness of the environmental costs and repercussions of unplanned economic development that is debilitating for the natural environment. India was recently ranked relatively low in a recently released report comparing how countries address economic and environmental risks (World Economic Forum 2012). However, in formal terms, environmental risk regulation is embedded in the larger environmental law framework in India. A good example of this is the introduction and gradual strengthening of the legal requirements for environmental impact assessment (EIA) (Panigrahi and Amirapu 2012). EIA is one of the tools for the assessment, characterization, and management of environmental risks (Rogers 2011) in India.

The EIA is a good example of environmental risk regulation – which formalizes the legislative intent to provide for a deliberative discourse in assessing environmental risks. The 1994 EIA notification passed under Section 3 of the Environmental Protection Act, 1986[1] provides for a clear public hearing procedure that primarily allows for the consideration of public perception of risk as an important aspect of the impact assessment exercise (this part has been further strengthened by the 2006 notification that superseded the earlier notification). Although the ultimate decision to assess the EIA report and grant clearance to development projects under consideration rests with a committee of experts (Expert Appraisal Committee) constituted by the Ministry of Environment and Forests, it can be argued that the EIA process does provide an important space for deliberative processes that are accessible to the general public – who is potentially affected by the risk.

1.1. Deliberative processes vs. expertization

The legislative approach to providing such deliberative processes is in contrast to how the Indian Supreme Court has redefined such processes in the context of environmental risk regulation. The Supreme Court has contributed to the process of expertization; first through deepening of the *amicus curiae* procedure and second by establishing 'expert committees' to deliberate and provide policy solutions in the case of a wide range of environmental risks.[2] This is indeed particularly interesting because the rapid expansion of the Court's role in environmental jurisprudence (including environmental risk regulation) was achieved through a procedural innovation – liberalizing of the *locus standi* rule – which allowed for legal representation of public interest petitions. Thus, although accessing the law was made easier for the public, deliberation over legal and policy solutions to address environmental risk was removed to the hallowed corridor of 'experts.'

It is necessary to underline that expertization *per se* is in a sense inevitable given the complex socioeconomic and environmental problems that we are confronted with. However, what is indeed challenging is the source of expertise. private actors increasingly are appointed by the Supreme Court as 'experts' and they provide critical policy advice to the Supreme Court. They, however, function outside the boundaries of well-established mechanisms that ensure transparency and accountability that public experts are accustomed to. However, even in the case of public experts, they may act as 'interested parties' – especially in the case of technology development that is spearheaded by public sector organizations. Thus, for instance, the Department of Biotechnology is given a specific mandate to promote and develop biotechnology; however, they have argued that given that they have domain expertise they should also be empowered to undertake risk regulation of biotechnology products. In such cases, reliance on public experts may also compromise public interest.

This 'expertization' has led to the creeping of a number of substantive values and implicit normative evaluations into the legal discourse on environmental risk regulation in India, which threatens to impair the formal rationality of law that Weber held to be the hallmark of legal orders functioning in modern democratic states. This may seem as an academic argument and of limited import. That would be an incorrect assessment. In fact, as I explore in the following paragraphs, this shift toward expertization in environmental risk regulation can be marked as a discontinuity within the larger discourse of environmental protection that has been spearheaded by civil society movements across the country. It is precisely the deliberative nature and wide public participation within these movements that have allowed environmental protection to be organically embedded within larger polity of India and have shaped political decisions which have been seen as legitimate and, therefore, acceptable. Expertization leads to de-formalization of the law, and therefore undermines the legitimacy of environmental risks regulation initiatives of the Court.

1.2. Line of argumentation

This primary argument is explored in the following parts. Part 2 discusses the judicial activism of the Indian Courts – specifically the Indian Supreme Court. It provides a historical context to the emergence of judicial activism along with a discussion of the benchmarks in terms of cases. This provides the context for a specific assessment of the environmental risk regulation jurisprudence. This assessment is revealing in terms of how the Supreme Court reacted to executive lethargy and seems to be swinging from deference to defiance[3] vis-à-vis the executive. Part 3 debates the role of technical experts in legal deliberations specifically in Court proceedings. It specifically explores the idea that law (or more appropriately lawyering) has perhaps a natural affinity to expert knowledge and privileging of such knowledge over public interest representation – this is evident in special common law institutions such as the *amicus curiae*. Part 4 is an attempt to provide evidence of this narrative in terms of detailed discussion of three cases – *T.N. GodavarmanThirumulpad v. Union of India; Aruna Rodrigues & Ors. v. Union Of India & Ors*.; and *G. Sundarrajan v. Union of India & Ors*. All these three cases are legal benchmarks in environmental risk regulation – and are, therefore, a useful reflection of the Court's dependence on experts in addressing environmental risk. Part 5 provides an analysis of the three case studies and a few concluding remarks on this subject.

2. Judicial activism of the Indian Courts – a checkered history

Scholars hold two divergent views on the utility and legitimacy of judicial activism in India. Some have argued that judicial activism is a euphemism for judiciary usurping powers in the garb of public interest (Sacher 1999), while others argue that judicial activism is a check on executive disarray and, thus, reinforces the doctrine of separation of powers (Thiruvengadam 1999). Yet, others like Upendra Baxi, have developed their position over the years (Baxi 1980, 1985) underlining the belief shared by legal scholars commenting on developments in other jurisdictions (Corwin 1938; Agresto 1984; Kmiec 2004) that judicial activism lies in the middle of a continuum that stretches from judicial review and judicial supremacy at two opposite ends. And there is a propensity of aggravation once the Court starts moving from one extreme to the other.

2.1. Case law as benchmarks of judicial activism

Unsurprisingly, perhaps, during the first few decades following our independence, the Indian courts chose to adopt a narrow legalistic interpretation of its powers. The exercise of the powers of judicial review was, therefore, deliberately restrained.[4] Thus, in *A.K. Gopalan v. State of Madras*, the Court rejected the challenge that the Preventive Detention Act, 1950 violated Articles 13, 19, and 22 of the Constitution on the ground that strict interpretation of Constitutional provisions are required and stated:

> by adopting the phrase 'procedure established by law' the Constitution gave the legislature the final word.[5]

Over time, the court gained confidence and, therefore, became bolder and more willing to confront and contest legislative authority. In *Golaknath v. Punjab*,[6] the Court ruled that the parliament's power to pass constitutional amendments did not include the right to amend fundamental rights. The parliament, in response, adopted the 24th Amendment as a restatement of the power of Parliament to amend the Constitution without any limitation. This was challenged in court and the Supreme Court, through a majority judgment, upheld Parliament's power to amend provisions of the Constitution – with the critical caveat that the Parliament could exercise this power without altering the basic structure of the Constitution. The political upheavals following the national emergency declared by the Indira Gandhi-led government in 1975 and the lack of public support for such decisions were, in fact, critical to the Court emerging as a institutional check to the unbridled power of the executive (Sathe 2001).

One of the first instances of judicial activism by the Indian Supreme Court was in *Mumbai Kamghar Sabha v. Abdul Bhai*,[7] where Justice Krishna Iyer stated that:

> public interest is promoted by a spacious construction of *locus standi* in our socio economic circumstances and conceptual latitudinarianism permits taking liberties with individualization of the right to invoke the higher courts where the remedy is shared by a considerable number, particularly when they are weaker.

The Court, therefore, alluded to the function of public interest litigation as delivering representation to the voiceless. The Court's role in this context is facilitating

socioeconomic justice by liberalizing rules governing legal representation in Court. In *Maneka Gandhi v. Union of India*,[8] the Court took a major step of broadening the interpretation of 'personal liberty' and also 'procedure established by law.' This it achieved by drawing a substantive link between Articles 19 (2) and 21 of the constitution.[9]

The 1980s and the early 1990s witnessed a rapid expansion of judicial activism in a wide range of personal liberty issues, ranging from rights of prisoners,[10] right to a speedy trial,[11] bonded labour[12] and followed by a focus on socioeconomic rights that were read into the fundamental rights. This included the rights of pavement dwellers,[13] public health and safety measures undertaken by municipalities,[14] and arbitrary allotment of housing.[15]

2.2. Environment risk regulation and the Court

Environmental protection was another area in which the judiciary actively participated in two ways. First was the expansion of public duties of the states by granting positive environmental rights to individual citizens like access to clean drinking water,[16] clean air,[17] reduction in noise pollution,[18] etc. Second, the court has provided for an indigenization of international environmental law principles, such as polluters pay principle,[19] precautionary principle,[20] and intergenerational equity,[21] to expand the tort law remedies for ensuring obligations of private citizens, vis-à-vis environmental pollution.

Apart from the ex post end of the pipe – air and water pollution issues which the Court has been quite forthright in addressing – it has also been confronted with a number of cases in which the Court had to face the predicament of addressing environmental issues in the context of resource usage and economic development that require an ex ante assessment of potential environmental problems. This raised two apparent difficulties for the Court. First, natural resources allocation and economic development are policy areas within the clear remit of the Executive, and therefore adherence to the doctrine of separation of powers required that the Court restrain itself from commenting on such issues that require a determination of policy focus (excluding of course the legality of executive decisions). Second, ex ante assessments of potential environmental impacts requires risk assessment, characterization of risk, and risk management – subjects which do not fall within the expertise or competence of the Court. And this explains the increasing reliance of the Court on 'technical experts.' In the following paragraph, I discuss some landmark cases in this context.

One of the earliest examples of natural resource usage and potential environmental risk case was the *Rural Litigation and Environmental Kendra v. State of Uttar Pradesh*,[22] where the Court appointed several independent expert committees (and not only rely on evidence submitted by the State of Uttar Pradesh) to gather evidence of environmental impact of limestone quarrying in the Doon Valley and, based on the recommendation, finally ordered the closure of a number of mines. This case highlighted the fact that the nature of usage of natural resources was interwoven with the issue of environmental risk, and therefore the nature and pattern of economic development had implications for the discourse on environmental protection in India (Bandyopadhyay and Shiva 1984). Similarly, in *Banwasi Seva Ashram v. State of Uttar Pradesh*,[23] the Court appointed an independent commission to oversee the rehabilitation of persons displaced from the construction of a

thermal power plant by the National Thermal Power Corporation (NTPC). Here, however, the Court accepted the contention of NTPC as to the limited environmental impact of the power plant on the ecology of the area (Ramanathan 1996). In *S. Jagannath v Union of India*,[24] the scale of aquaculture and more specifically shrimp farming was to have attained environmentally harmful and unsustainable proportions on the basis of expert reports submitted by the Central Pollution Control Board and the opinion of other independent experts.

The following two cases are emblematic of the difficult position the Court finds itself in while assessing competing technical claims. In *Andhra Pradesh Pollution Control Board v. M.V. Nayudu*,[25] the Court appointed the National Environmental Appellate Authority as the 'technical expert' to undertake site inspections and collate oral and documentary evidence on whether the operation of the concerned factory would result in water pollution of the two lakes that supply drinking water to the city of Hyderabad. Relying on the technical report, the Court rejected the application of the factory to operate within the 10 km radius of the two lakes. However, the state government of Andhra Pradesh provided for a no objection certificate granting exemption to the concerned factory. The validity of this exemption was challenged and the Court then recruited the help of two more technical experts – the University Department of Chemical Technology, Bombay University, and the National Geophysical Research Institute, Hyderabad. The Court finally held that:

> In the light of the above exhaustive scientific Reports of the National Environmental Appellate Authority, New Delhi the Department of Chemical Technology, Bombay University and the National Geophysical Research Institute, Hyderabad – it cannot be said that the two lakes will not be endangered. The package of the IICT (Indian Institute of Chemical Technology) – which did not deal with the elimination of effluent effects, the opinion of Dr Santappa, the view of Director of Industries, and the view of the Government of Andhra Pradesh, must be held to be base on insufficient data and not scientifically accurate.

In *Goa Foundation v. Diksha Holdings Pvt. Ltd*,[26] the Court had to consider public interest litigation against the grant of permission to build a hotel within the coastal regulation zone in Goa. This case was, to an extent, different from the *Nayadu* case because right from the outset the Court framed[27] the case in terms of:

> task of maintaining and preserving the environment and ecology of the pristine beach with sand dunes and the development of hotels and holiday resorts for economy development of the State.

In this case, the Court relied on the assessments of the State Environmental Protection Authority, the National Institute of Oceanography, Goa, and the Ministry of Environment and Forests to come to the conclusion that the hotel would not negatively affect the ecology of the region. The fact that the economy of Goa was dependant on tourism was an important aspect that influenced the Court's judgment on this issue.

2.3. Power of judicial review: self-reflections by the Court

The Court's own reflection of its power is an important aspect that requires discussion since it allows us to explore the justifications, limits of the power, and also how the Court's thinking has evolved on this subject.

According to the Court, there are primarily three grounds for judicial review of administrative action: illegality, irrationality, and procedural impropriety.[28] The Court has also underlined that the power of judicial review is 'neither unqualified nor unlimited'. In a recent case,[29] the Court reiterated its position as discussed in *Shri Sitaram Sugar Co. Ltd. v. Union of India*[30]and reiterated in other cases[31] that:

> the Court dealing with the exercise of power of judicial review does not substitute its judgment for that of the legislature or executive or their agents as to matters within the province of either, and that the Court does not supplant 'the feel of the expert' by its own review, is also fairly well settled by the decisions of this court.

The Court, in recent times, may seem to be unusually deferential not only to the executive and the legislature but also to the idea that it may be necessary to access technical expertise on a wide range of issues to address legal questions that may be confronting it. However, this in itself is a specious argument, given that the Court is only called upon to settle questions of law. However, since the Court has expanded its remit considerably through judicial activism to also consider questions and provide solutions to policy problems – which is usually the mandate of the executive – it finds itself in a position where it has to increasingly rely on technical (or rather technocratic expertise) experts across policy areas, and therefore the need to reiterate its deference to their authority.

Nevertheless, there have been instances of defiance of legislative and executive authority. In *D. Sudhakar v. D.N. Jeevaraju*,[32] the Court held that the Articles 32, 226, and 136 of the Constitution do not bar the superior Courts to judicially review the order of the speaker. Under paragraph 2 of the Tenth Schedule to the Constitution, the speaker discharges quasi-judicial functions, which makes an order passed by him in such capacity subject to judicial review.

It is apparent from the above discussion that the Court's position on judicial review and judicial activism has developed over time and has, in most cases, been in reaction to executive 'failures' or as the erstwhile Chief Justice of the Supreme Court put it 'the role of the judiciary can be described as one of protecting the counter-majoritarian safeguards enumerated in the Constitution' (Balakrishnan 2009). It has however not been entirely consistent (which is not altogether surprising given the extensive range of subject matters that it has addressed) and appears to be more willing in certain areas to be deferential and in others more defiant, vis-à-vis the executive and legislative mandates (Upadhyay 2012).

3. Expertization of environmental risk regulation

The increasing reliance on technical experts is both a function of the ever-expanding proclivity of the Courts toward judicial activism (bordering at times on judicial adventurism) and on critical importance of the scale and the use of natural resources in economic development and its implications for environmental protection discourse in India.

On the issue of judicial activism, as discussed in Section 2, it has been argued that judicial activism was developed in order to address the socioeconomic problems that were unique to the Indian society. The basic structure doctrine in that sense was to establish a sense of entrenchment and inviolability of certain constitutional values which the Court felt was intrinsic to the idea of the Indian

state and the identity of its citizens. Similarly, the rapid recognition and extension of citizen's rights to clean environment, drinking water, clean air, etc. by the judiciary was in continuation to this process of enlarging entitlements to public goods by ensuring environmental protection. However, the delivery of these public goods by the Executive remained patchy and at best inconsistent. Executive failure prompted the judiciary to become 'activist' and provided the Court with an alibi, thus paving the way for a more interventionist role in providing technical solutions to policy problems.[33] And this in a sense necessitated the co-option of technological experts to provide technological solutions to policy problems that the Court was increasingly being called on to address through public interest litigation (and which, to an extent, was in response to executive inaction). Scholars have alluded to this trend globally as the 'scientification of policy-making' and have underlined the dangers of it being the harbinger of a disguised technocracy (Fisher 1990; Pellizzoni 2004).

The reliance of the Court on technical experts in order to assess risk is a reflection of the critical importance of the question of nature and scale of exploitation of natural resource within our economic development agenda and its implications for environmental protection. Further, public investment and development of technologies, such as biotechnology and nanotechnology (which have potential environmental risks), and their questioning by civil society activists through public interest litigations have also forced the Court to arbitrate upon the rival claims of environmental risks and benefits that may result from the adoption of such technologies. One such example is the genetically modified organism (GMO) case which will be discussed in detail in the following section. The necessity of relying on expert opinion in environmental matters is also reflected in the provision for the appointment of an equal (to the number of judicial members) number of 'expert members' in the National Green Tribunal. The recruitment of a cadre of public experts to assist in judicial decision-making is qualitatively different from co-opting private experts, and therefore a positive step toward institutionalizing the role of experts in adjudicating rival scientific claims.

The fact that the courts are being called upon to arbitrate on matters regarding the quantum of risk and the validity of risk assessments is itself not surprising given that humans inhabit the modern global society which is dominated by technological applications and it is this scale of penetrations that provide the context of humanity's anxiety about risk (Beck 1992). However, the Court only has the competence to determine facts and to assess questions of legal validity and to review procedure. In this kind of a situation, the ultimate result is either the Court will have a tendency to provide for reductionist accounts of environmental risk assessment and management that is verifiable and objective (for instance in the *Banwasi Sewa Ashram* case[34]) or the Court will appoint 'technical experts' whom it finds to be credible to conclusively assess potential environmental risks. Far from it, environmental risk assessments and standard setting for risk management are socially constructed, and therefore politically contested (Fisher 2000).

The Court's willingness to rely on experts – and consequently the trend toward expertization in the area of environmental risk regulation, also devalues the role of public participation and deliberation (Steele 2001) in providing for actual organic solutions to problems of environmental risks. The Court has also relied extensively on the opinion of the *amicus curiae* in cases relating to environmental risk regulation (see, for instance, the *Goadavarman* case).

This is quite extraordinary because it is a glaring departure from established legal precedents that provide for a clear process of admissibility of evidence by experts. These precedents were established to provide for accountability and authenticity of such 'expert' evidence in adversarial litigation. Thus, in India, the admissibility of expert evidence is strictly regulated under the Indian Evidence Act (Gawali and Dube 2012) and similar accountability mechanisms for checking the validity of evidence of technical experts appointed by the Court should also be applied.

The Court itself elaborated on this issue quite succinctly in a consumer protection case.[35] It stated as follows:

> … cases where the science involved, is highly specialized and perhaps even esoteric, the central role of expert cannot be disputed. An expert is not a witness of fact and his evidence is really of an advisory character. The duty of an expert witness is to furnish the judge with the necessary scientific criteria for testing the accuracy of the conclusions so as to enable the judge to form his independent judgment by the application of these criteria to the facts proved by the evidence of the case. The scientific opinion evidence, if intelligible, convincing and tested becomes a factor and often an important factor for consideration along with other evidence of the case. The credibility of such a witness depends on the reasons stated in support of his conclusions and the data and material furnished which form the basis of his conclusions. The evidentiary value of the opinion of expert depends on the facts upon which it is based and also the validity of the process by which the conclusion is reached. This means that the importance of an opinion is decided on the basis of the credibility of the expert and the relevant facts supporting the opinion so that its accuracy can be cross checked. Therefore, the emphasis has been on the data on basis of which opinion is formed.

However in cases where the Court takes *suo moto* action and has assumed an inquisitorial role,[36] it seems to have abandoned these checks when considering the opinions of those 'technical experts' or *amicus curiae* that it appoints at its own discretion. Given the contested nature of environmental risk assessment, the non-application of such procedures not only discounts the scientific validity of the assessment process itself but also erodes the public legitimacy of the exercise (Quirk 2008) and the institutions associated with it.

In this context, it would be helpful to draw insights from academic debates that focus on accountability ideas that have been discussed in the context of the increasing role played by non-state actors in norm setting in the context of international law. Scholars have stressed on two aspects – articulation and acceptability of such norms. The test of their legal validity would lie in their fulfilling conditions, such as norms reflecting uniform practice in multiple jurisdictions, and this practice is based on the belief that the norms are appropriate and finally that they are based on faithful accounts of facts and accepted legal values and objectives (Ruiter and Wessel 2012).

4. Three case studies of environmental risk regulation

Before I begin my discussion of these three cases of the Supreme Court, it is necessary to first discuss the reasons for selection of these cases. First, all the three cases are relatively recent cases that have been extensively debated in the media, and therefore have been able to generate substantial public opinion on the merits of the issue. Second, these are also in some sense 'test cases' because of the

determinative and precedential character of the issues in question, and thus worthy of discussion. And, third, although the cases may seem diverse in subject matter – two on the regulation of potential environmental risks that may emanate from the usage of the technologies themselves (nuclear technology and biotechnology) and one on environmental risks resulting from forest degradation and deforestation, all of them have been greatly deliberated (and indeed still open for deliberation by the Supreme Court) over by the Supreme Court; and given that it is the highest appellate body – provides a clear view as to the qualitative process of risk regulation which the Supreme Court considers legitimate, and therefore legally valid.

4.1. Aruna Rodrigues & Ors. v. Union of India & Ors

This case[37] was on the environmental risks pertaining to GMOs. The petitioners were civil society activists who filed public interest litigation under Art. 32 and approached the Supreme Court with the plea that a protocol be developed that shall scientifically examine all relevant biosafety aspects before the release of GMOs, and till the time that such a protocol is put into place to put a moratorium on import, manufacture, and usage of all GMOs. The Court, while considering the plea, made the following observation:

> It is obvious that such technical matters can hardly be the subject matter of judicial review. The Court has no expertise to determine such an issue, which, besides being a scientific question would have very serious and far reaching consequences.

This is indeed startling given that this is a rare (but honest) admission by the Court that it does not have the technical skills to adjudicate on environmental risk regulation issues. This is also the reason why the Court, quite logically, acceded to the demands of the petitioner for the constitution of an independent technical committee of experts since the petitioner was challenging the current regulatory structure manned by the Ministry of Environment and Forests. The Court constituted a 'Technical Expert Committee' (TEC) comprising of current and retired scientists from public universities and research center with terms of reference that included a thorough evaluation of the current regulatory structure and the adequacy of the ongoing field travels and recommendations for institutional reform. Importantly, the Court expressly allowed the TEC to review reports or studies authored by scientific experts in India and internationally and also to hear and consider the opinion of both the parties as well as other interveners.

The Committee submitted an interim report (based on consensus) to the Court in October 2013 in which it recommended a 10 year moratorium on field trials of Bt transgenic in all food crops (Supreme Court of India 2012). The TEC argued for a need based socio-economic assessment of all such environmental harmful technologies in terms of its utility to society and specific groups (for instance in this case farmers) and asked for complete restructuring of the regulatory regime with a view to building fulltime, in house scientific and regulatory expertise on this issue and in order to address conflict of interests. The TEC invited and received a list of submissions from a range of representative organizations, private companies, scientific experts and other concerned citizens. The names of the respondents were made public at the end of the report. Subsequent to the submission of the report – the Court has passed another order in November 2012[38] allowing the parties to file

written objections to the report and has directed the TEC to consider the objections and submit the final report within six weeks.

Interestingly the Parliamentary Committee on Agriculture presented the Thirty Seventh Report on 'Cultivation of Genetically Modified Food Crops – Prospects and Effects' to the Lok Sabha (Lower House of the Parliament) in August 2012. The report of the TEC was in agreement on many issues with that of the Parliamentary Committee report. The latter criticized the functioning of the Genetic Engineering Approval Committee and Review Committee on Genetic Manipulation and also underlined the need for a complete overhaul of the regulatory structure with a focus on his independence, representation and scientific expertise. The question which may be posed here is that given the issue of regulation of environmental risk of GMOs was under the active consideration of the Parliamentary Committee – which is suitably equipped to investigate documents and call witnesses; and is a forum which is publicly accessible to any concerned citizen or interested party – should not the Supreme Court have deferred to the opinion of the Parliament – especially given its self-proclaimed lack of expertise on the issue? Of course it did not do so and went ahead with the appointment of the TEC. Hypothetically if the TEC were to reach a different conclusion from the Parliamentary Committee on the same issue; then the Supreme Court would have found itself in an unenviable position. This puts into sharp relief the inherent dangers of the laissez faire approach of the Supreme Court in appointing and relying on expert committees. This is not advisable especially in the context of environmental risk regulation issues which require a public deliberative solution and not just an assessment of legal validity.

4.2. G. Sundarrajan v. Union of India & Ors

The primary issue in this case[39]was the environment and health safety concerns with the commissioning of the Kudankulam Nuclear Power Plant (KKNPP) Units 1–6. The main objections raised by the petitioners were that although the plant started to be established in 1988, however due to the subsequent agreement that the Government of India (GOI) entered into with Russia in 1998, Units 1 and 2 of the KKNPP were to be treated as new units and therefore the 1994 EIA Notification was applicable and it had become mandatory to conduct a public hearing. The subsequent agreement also meant that the present developments included modernization and expansion of the original project and was a qualitative alteration to the project and therefore required a fresh environmental clearance. The petitioners argued that the KNNPP was in violation of the CRZ Notification since the plant was within 500 m of the High Tide Line.

The plea of the GOI was based primarily on an economic argument for development of nuclear power given the shortfall in electricity production in the country and that it was a safer and cheaper option as compared to solar or thermal energy. The demand for a public hearing was also opposed on the ground that there was no such requirement when the initial clearance was granted in 1989 by the MOEF. Executive fiat in critical policy areas like energy generation was also advanced as an argument by the Department of Atomic Energy for non-maintainability of the writ petition.

The Court chose to frame the issue of public concern as an emotional one:

> India has now 20 Nuclear Reactors, in place, and the world over about 439, but people still react emotionally, for more reasons than one, when a new one is being established.

This in the first instance itself discounts the rational basis for such concern. Thereafter the Court expands considerably on the issue of 'national policy,' making the case for the requirement of nuclear energy as a source of electricity. It states that:

> One of the reasons for preferring nuclear energy as an alternative source of energy is that it is a clean, safe, reliable and competitive energy source which can replace a significant part of the fossil fuels like coal, oil, gas, etc. It is not for Courts to determine whether a particular policy or a particular decision taken in fulfillment of a policy, is fair. Reason is obvious; it is not the province of a court to scan the wisdom or reasonableness of the policy behind the Statute.

Thus the establishment of the KNKPP is a step in the fulfillment of a national policy and this is interpreted by the Court is a sufficient restraint on allowing it to qualitatively assess the policy. The executive has complete control over policymaking – and the Court is not empowered to question the policy. This is an extremely restrictive interpretation by the Court of its own powers of constitutional review (on the question of legality) and specifically in instances in which the government may violate its own laws in adopting a certain policy decision and a course of action.

The Court then provides an extensive analysis of the current legal and policy regime including the Atomic Energy Act, 1962, the functions and powers of the Atomic Energy Regulatory Board (AERB), the Factories Act, 1948, Environment (Protection) Act, 1986 and comes to the conclusion that the regulatory requirements provide for adequate and effective safeguards. In terms of the specific violations which were alleged by the appellants, the Court found that EIA notification (1994) would not be applicable to KKNPP units 1 and 2 since nuclear projects were exempted (Explanatory 8 appended to the notification) and MOEF circular on 23.7.1998. The EIA for the expansion of the KKNPP was taken into consideration when the MOEF granted clearances on 23.9.2008 and 31.12.2009. The Court underlined that the MOEF clearance did take into consideration all public concerns relating to safety, livelihood, radiation, impact on marine life and rehabilitation.

Since one of the primary legal arguments presented by the appellants was that the commissioning of the KKNPP units would results in a risk to life and would therefore violate the Art. 21 (Right to life), the Court had to respond to this specific charge. It stated that:

> While setting up a project of this nature, we have to have an overall view of larger public interest rather than smaller violation of right to life guaranteed under Article 21 of the Constitution.

Further the Court reflects on its own role as:

> We have, therefore, to balance economic scientific benefits with that of minor radiological detriments on the touchstone of our national nuclear policy. Economic benefit, we have already indicated has to be viewed on a larger canvas which not only augment our economic growth but alleviate poverty and generate more employment. NPCIL, while setting up the NPP at Kudankulam, have satisfied the environmental principle like sustainable development, corporate social responsibility, precautionary

> principle, inter - intra generational equity and so on to implement our National Policy to develop, control and use of atomic energy for the welfare of the people and for economic growth of the country. Larger public interest of the community should give way to individual apprehension of violation of human rights and right to life guaranteed under Article 21.

It is clear from the above that the Court adopts a utilitarian perspective that is firmly based on majoritarian ethics. However, it is unclear whether the Court is propounding for a clear majority welfare trumps individual 'detriments' (of course in the case of nuclear accidents these detriments may be life threatening) or is it supporting clear economic benefits for the majority trumping minority apprehensions. The former argument embraces extreme utilitarianism more than the latter. However in both the cases, the court upholds the argument that greater good may be achieved at the cost of trampling individual liberty – this would be anathema to not only libertarians but also liberal democrats that argue that democracy should not be reduced to majoritarianism. From a risk society perspective, this also reflects a tendency to peripheralize risk in the pursuit of economic growth.

The Court further constructs a two test step – justification test and the apprehension test. Once it establishes the economic argument – this adequately fulfills the justification test – then the apprehension test inevitably fails.

> Apprehension is something we anticipate with anxiety or fear, a fearful anticipation, which may vary from person to person.

This again reflects the Court's understanding of the basis of public concerns as something that is naïve and borne out of a lack of information and therefore tit is dismissive of such demands as unreasomanable. In arriving at this conclusion the Court reiterates that it is not competent to review expert decisions:

> Court should be slow to interfere with the opinion expressed by the Experts and it would normally be wise and safe for the courts to leave the decisions to experts who are more familiar with the problems which they face than the courts generally can be which has been the consistent view taken by this Court.[40]

> The Court, in our view, cannot sit in judgment on the views expressed by the Technical and Scientific Bodies in setting up of KKNPP plant at Kudankulam and on its safety and security.

The Court's acceptance of 'unanimous' expert opinions and it reluctance to review them even on grounds of legality and procedure is apparent. Interestingly this unanimity is a presumption of the Court. Recently, 60 research scientists from renowned national scientific research organizations like Council for Scientific and Industrial Research, Indian Institute of Technology (IITs) and Indian Institute of Science have written to the Chief Ministers of Kerala and Tamil Nadu demanding an independent 'safety review' of the KKNPP by an independent panel of experts.[41] This undermines this claim of unanimity which the Court supported. What is more confounding, the Court seems to ignore the role and functioning of the AERB which operates under the jurisdiction of the Atomic Energy Commission and is firmly entrenched within the nuclear establishment and therefore cannot be said to provide an independent assessment of the nuclear power projects (Jayaraman 2012).

Thus the nuclear regulator is not competent to undertake an independent safety assessment given its current legal status. In this circumstance, for the Court to rely on AERB assessments as reflecting a positive and unanimous opinion of experts fails to appreciate the current reality.

Justice Dipak Misra's concurrent opinion sought to blunt the impact of some of these statements, by arguing although comparative hardships had to balanced in the face of convenience and benefit for the larger section of the people, nuclear power is a special case; since it may be life threatening. He underlined that both the regulators (MOEF and AERB) carry the public trust and therefore they have to perform their duties with diligence. This however is not enough. The Court's dismissive attitude to public concerns of nuclear safety, its almost blind trust and reliance on the AERB's competence as a regulator, when it is institutionally compromised and its willingness to support an extreme majoritarian ethic that relies on the logic of economic growth and development to trump individual rights is a cumulative negation of the public deliberative model and hence negation is its own role as a legitimate forum for that public deliberation specifically on such technologically risk issues that are characteristically divisive.

4.3. T.N. GodavarmanThirumulpad v. Union of India

The case[42] was concerning a writ petition filed by Mr. T N Godavarman in the Supreme Court that sought the intervention of the Court in directing the State of Tamil Nadu to check timber felling and to combat the problem of deforestation in general. Reacting to the repeated apathy shown by state Governments (state governments were made party to the dispute since the Supreme Court judged this problem to be a national problem plaguing all states) who refused to respond to repeated notices sent by the Supreme Court (Datta and Yadav 2007) the Supreme Court has repeatedly enlarged the remit of this case to include all aspects of forest governance with respect with protection of forests – specifically the issue of de-reservation of forests and use of forests for non-forest purposes. The most important aspect of this case is however that it is an ongoing case – continuing mandamus[43] – the Court continues to pass orders at regular intervals (Sivaramakrishnan 2011) and without sight of any specific objective that would allow closure of this case in a time bound manner.

The primary fallout of this case has been a complete ban on felling of trees (also transportation of trees in the northeast), except on a limited case-by-case basis in some parts of the country. Since the Court redefined the term 'forests' under the Forest Conservation Act 1980 to also cover privately owned forest land, the import of the ban has practically resulted in a debilitating effect on the functioning of saw mills industry in India. The interminable nature of the case has meant that the Court has had the opportunity to spread like a hydra in all directions concerning aspects such as pricing of timbers; mining within forests; transportation of timbers, distribution of forests revenue, etc. In this article, therefore, I will limit my consideration to three specific aspects – role of the *amicus curiae*, constitution of the Central Empowered Committee (CEC), and calculation of the Net Present Value (NPV).

An outstanding feature of this case has been the expansive role played by the *amicus curiae* in this case. Till date, the Court has appointed as many as four *amicus curiae* (these include Harish Salve, U.U. Lalit, Siddharth Choudhary, and A.D.N Rao); although this is not unexpected given the landscape of issues which

the Court sought to address through this case, it does belie the extent of dependence and the magnified position of the *amicus* in the proceedings in this case. Encroachment was one such issue in which the *amicus* made an intervention – filing an application in the Supreme Court – to remove illegal encroachments from forest land across India.[44] In response, the Court passed an order[45] stating that no further regularization of encroachment would take place until further enquiries and without the permission of the Court. The MOEF interpreted this as an express order of the Court for eviction of encroachers (Dreze 2005) and launch of removal of encroachment drives in many states. This was severely criticized by the civil society and tribal rights groups (Kaur 2002) and reacting to the criticism the MOEF in an order in Oct 2002 reiterated its commitment to the 1990 Guidelines and then issued new guidelines in 2004 for the regularization of the rights of the tribal on the forest lands (however, the only difference being that the under the 1990 guidelines, the cut-off date was 25/10/1990 whereas under the 2004 guidelines 31.12.1993 was decided as the new dates).[46] These guidelines were stayed by the Supreme Court in response again to an interlocutory application moved by the *amicus* (Jayakrishnan 2005). These instances illustrate how the *amicus curia* in this case was able to repeatedly influence the Court's thinking on this issue. Interestingly, the Court, at both times, chose to react and order a clamp down rather than deliberate on the issue of tribal rights and forest protection and did not invest energy into even explaining what it did mean by the term encroachment (ELDF and WWF India 2009).

The CEC was established by the order of the Supreme Court dated 9/5/2000 in this writ petition. Initially, it was meant to be for a period of five years – but it continues to function. The CEC is empowered to inter alia examine pending interlocutory applications and affidavits filed by States in response to orders of the Court and recommend action by the Court. Individuals may file application for grant of relief with reference to the implementation of any Court order with the CEC. The CEC is also empowered to call for evidence and assistance from any person or government official.[47] These are indeed wide-ranging powers for a non-statutory authority, allowing it to function as both a court of first instance with considerable delegated powers of investigation and indeed supervision of enforcement of Court orders. And given the range of its powers – what are the kind of accountability mechanisms that it is subjected to? That is not quite apparent. The Court seems to be under the presumption that since this is the case of delegation by the Court – the Court would be vicariously responsible for the activities of the CEC (therefore, the Supreme Court being the principal and the CEC its agent) – there is no requirement for any separate mechanisms for accountability. Even if the Court were to elaborate on reasons for accepting or rejecting CEC recommendations, that would be a welcome development – but this certainly has not been the case. The CEC has enabled the Supreme Court to further extend the range of its powers as well as the subject matters that it addresses within the ambit of this case. It is an institutional innovation without any precedent and has allowed the Supreme Court to usurp powers of enforcement agencies like the Ministry of Environment and Forests as well as the various State agencies involved in forestry (Rosencranz, Boenig, and Dutta 2007).

The NPV is the amount to be paid in lieu of diversion of forest land for non-forest activity. The payment of NPV is in addition to payments to be made under the Compensatory Afforestation Fund that provided for under the Forest Conserva-

tion Act, 1980, but only became operational since August 2009.[48] The Court, in 2003, passed an order stating that no approval for felling of trees could be granted by the MOEF without levying NPV.[49] Initially, the Court determined the value in the range of five to nine lakh per hectares contingent on the density of forest land to be diverted for non-forest purposes. Later, however, the Dr Kanchan Chopra-led committee of experts made a recommendation which was then vetted by the CEC and thereafter accepted by the Court. The issue of NPV is another substantive policy objective that the Court introduced.

The above three instances are fairly approximate illustrations of the reach of judicial power in the case of forest protection. The Court has abrogated executive powers to an extent that it is impossible currently for the MOEF to take any policy decision independent and without consulting the CEC of the Supreme Court. Further there are two specific aspects that should be noted. First the CEC has virtually been provided with a veto power over all decision-making undertaken by expert bodies that are currently operating within the ambit of the MOEF – thus for instance the Forest Advisory Committee and the National Board of Wildlife – two independent expert bodies that advise the MOEF on forest clearance and for development projects in protected areas – find that their decisions being regularly scrutinized by the CEC. Second, the approximation of power by the Supreme Court through the CEC has catalyzed an extreme centralization of forest regulation which ignores local and regional conditions and imperatives that have to be considered while designing policy and regulatory responses.

5. Conclusion

The above three case studies are apt illustrations of the attitude of the Supreme Court in the case of environmental risk regulation. It may seem that the cases are different because the Court seems to have moved on a continuum from deference to defiance of executive fiat without any apparent reasons for differentiating between these cases. Where the Court has been confronted with strident economic development arguments and environmental risks emanating from such development activities – it has deferred to executive mandate on policymaking. Perhaps, one way to explain this deference is to explore the idea of environmental protection as a public good. The Supreme Court specifically has framed the issue of environmental protection as a public good – and therefore in terms of rights and entitlements to clean air, healthy environmental, pollution free water, etc. However entitlements to these public goods cannot be absolute – since in certain circumstances they may have to be balanced with other public goods – like opportunities for employment generation and other related economic development goals. This is a fallacy of framing that has continued to shadow environmental debates in India and the responses of the Supreme Court. Thus when in the case of *G. Sundarrajan v. Union of India & Ors*., the Court is confronted with strident arguments based on economic development; it responds by recognizing the need to balance between two public goods and therefore deferring to the authority of the executive to provide this balance.

In other cases like in *T.N. Godavarman Thirumulpad v. Union of India* and *Aruna Rodrigues & Ors. v. Union of India & Ors*., the Supreme Court has, however, chosen not to limit itself to examining questions of legal validity but to expand on aspects such as the determination of level and nature of risk. The lack of technical competence has forced the Court to rely on ‘experts.’ As the Court

increasingly moves from an adversarial to an inquisitorial system that has been fed by the PIL movement in India, curiously the Court has chosen to ignore the same principles of vetting expert depositions as per the Indian Evidence Act that it has itself reiterated in earlier case law. It seems like a contradiction that one of the unintended consequences of the PIL movement which has been able to liberalize access to justice has, in the context of environmental risk, led to expertization and the concomitant limitation on public deliberation of risk issues.

Public deliberation of environmental risk regulation is critical to the legitimacy of any regulatory or governance initiatives in India. Following Habermas, legal systems should be designed to deliver substantive legal certainty to all participants by guaranteeing them a right of access to the legal order (Habermas 1996). This is especially critical because the issue of environment risk is intrinsically linked to the public discourse on the nature and trajectory of economic development. Further, specifically in the case of technologically induced risk (like in the case of nuclear or biotechnology), there is greater need to allow for local communities who may bear a greater risk than the general population. Thus, there is merit in exploring a principle of subsidiarity that will allow local communities who will be directly affected by such decisions greater voice.

The Supreme Court, as an institution, has played a critical role in public policy in India in liberalizing mechanisms for access to justice, and it is expected to uphold this tradition in the context of environmental risk where the discourse may be polarizing and contentious. Therefore, expertization is not the solution to environmental risk regulation in India, but a greater need for substantive public engagement.

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Notes

1. Ministry of Environment and Forests, Environment Impact Assessment Notification, S.O. 60 (E), dated 27/01/1994.
2. Ganga action plan – CNG – GMO, etc.
3. This phrase ‘deference to defiance’ is inspired from James M. Lindsay’s usage of the term in the article: ‘Deference and Defiance: The Shifting Rhythms of Executive-Legislative Relations in Foreign Policy’; *Presidential Studies Quarterly* 33, No. 3 (September 2003) 530–546.
4. There were some exceptions – notably that of the right to property.
5. AIR 1950 SC 27. Paragraph 113.
6. AIR 1967 SC 1643.
7. AIR 1976 SC 1465.
8. AIR 1978 SC 597.
9. Article 19 (1) of the Constitution of India, recognizes the citizen’s right to freedom of expression and article 19(2) circumscribes this right by laying down certain reasonable restrictions. Article 21 provides for protection of life and personal liberty.
10. *Sunil Batra v. Delhi Administration*, AIR 1980 SC 1579.
11. *Hussainara Khatoon v. Bihar*, AIR 1979 SC 1360.
12. *Bandhua Mukti Morcha v. India*, AIR 1984 SC 802.
13. *Olga Tellis v. Bombay Municipal Corporation*, AIR 1986 SC 180; *Sodan Singh v. New Delhi Municipal Corporation*, (1998) 2 SCC 727, 743.
14. *K. C. Malhotra v. M. P.*, AIR 1994 M.P. 48.

15. *Shivsagar Tiwari v. Union of India*, (1996) 6 SCC 558.
16. *A.P. Pollution Control Board v. Prof. M.V. Nayadu* 2000 SCALE 354.
17. *Ishwar Singh v. State*, AIR 1996 P&H 30.
18. *Krishna Gopal v. State of M.P.* 1986 Cr.L.J. 396 (M.P.).
19. *Vellore Citizens' Welfare Forum v. Union of India* (1996) 5 SCC 647.
20. *The Majra Singh v. Indian Oil Corporation*, AIR 1999 J & K 81.
21. *Glanrock Estate (P) Ltd. v. The State of Tamil Nadu* (2011(8) SCALE 583).
22. AIR 1988 SC 2187.
23. AIR 1987 SC 374.
24. 1997 2 SCC 87.
25. See note 16.
26. 2001 AIR 184.
27. In framing the problem as such the Court relied on two earlier judgments: *People United for Better Living in Calcutta Public and another vs. State of West Bengal and Ors*. AIR 1993 CALCUTTA 215; and *Indian Council for Enviro-Legal Action vs. Union of India and Ors*.1996 (5) SCC, 281.
28. Quoting Lord Diplock in *Council of Civil Service Unions (CCSU) v. Minister for the Civil Service* [1984] 3 All ER 935; in *Tata Cellular v. Union of India* (1994) 6 SCC 651).
29. *Heinz India Pvt. Ltd v. State of U.P.* (2012) AIR SCW 2059; Reiteration of jurisprudence in *State of Punjab v. Gurdial Singh* (1980) 2 SCC 471.
30. (1991) AIR SCW 1760.
31. *Union of India v. S.B. Vohra*, (2004) 2 SCC 150.
32. (2012) AIR SCW 1670.
33. Two examples of this are *MK Balakrishnan v. Union of India and others*, WP (civil) No. 230 of 2001, Order dated 26th March 2009 and *M.C. Mehta v. Union of India*, W.P. (C) No. 13029 of 1985 (with W.P. No. 939 of 1996) Order dated 28/07/1998. In the former case the Court ordered the setting up of a Technology Mission headed by the guidance of the Secretary, Department of Science and Technology, Government of India to provide technological solutions to the problem of water scarcity in India. Similarly in the latter case the Court took up one of the recommendations of the Bhure Lal Committee and ordered that all public transport in Delhi from a specific deadline should only ply on CNG (compressed natural gas) fuel in order to bring down vehicular pollution levels.
34. 1992 AIR 920.
35. *Ramesh Chandra Agrawal v. Regency Hospital Ltd. & Ors*. 2009 (12) SCALE 474.
36. See *Maria Margarida Sequeria Fernandes and Ors v. Erasmo Jack de Seuqria* (2012 AIR SCW 2162) where the Supreme Court discusses the role of the judge not to act as a neutral umpire during the trial but to play an active role in establishing the truth. This is akin to a more inquisitorial role that judges in the civil law system play in contrast to the role played by judges in common law countries.
37. 2012 AIR SCW 3340.
38. ITEM NO.53 COURT NO.12 SECTION PIL; Supreme Court of India; Dated: 09/11/2012.
39. Civil Appeal No. 4440 of 2013.
40. Reference may be made to the judgments of this Court in *State of Bihar v. Asis Kumar Mukherjee (Dr.)* (1975) 3 SCC 602, *Dalpat Abasaheb Solunke v. B. S. Mahajan* (1990) 1 SCC 305, *Central Areca Nut & Cocoa Marketing & Processing Coop. Ltd. v. State of Karnataka* (1997) 8 SCC 31, *Dental Council of India v. Subharti K. K. B. Charitable Trust & Another* (2001) 5 SCC 486, *Basavaiah (Dr.) v. Dr. H. L. Ramesh* (2010) 8 SCC 372 and *Avishek Goenka v. Union of India* (2012) 5 SCC 275 and *University of Mysore v. C. D. Govinda Rao* AIR 1965 SC 491.
41. NDTV, "Top Scientists Express Safety Concerns over Kudankulam Nuclear Plant", News report, Accessed May 14, 2013. http://www.ndtv.com/article/india/top-scientists-express-safety-concerns-over-kudankulam-nuclear-plant-366949?pfrom=home-health.
42. Writ Petition (C) No. 202 OF 1995.
43. Another case in which the Court explored this remedy was *Union of India & Ors v. Sushil Kumar Modi & Ors* [1997] INSC 68.

44. I.A. No. 502.
45. See order dated 23.11.2001.
46. Circular No. 13-1/90-FP of Government of India, Ministry of Environment & Forests, Department of Environment, Forests & Wildlife dated 18.9. 90 addressed to the Secretaries of Forest Departments of all States/Union Territories. The six circulars under this were: (1) FP (1) Review of encroachments on forest land (2) FP (2) Review of disputed claims over forest land, arising out of forest settlement (3) FP (3) Disputes regarding pattas/ leases/ grants involving forest land (4) FP (4) Elimination of intermediaries and payment of fair wages to the labourers on forestry works (5) FP (5) Conversion of forest villages into revenue villages and settlement of other old habitations (6) FP (6) Payment of compensation for loss of life and property due to predation/ depravation by wild animals.
47. Ministry of Environment and Forests, File No.1-1/CEC/SC/2002; Dated: 3.6.2002.
48. Ministry of Environment and Forests, File No. 13-1/2009 – CAMPA; Dated: 13.8.2009.
49. I.A. Nos. 826,859, order dated 01.08.2003.

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