

'Fiat and Forbearance': The Challenge of Capturing Plurality and Diversity in Environmental Governance

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Abstract

A close reading of India's Constitution indicates that the ideals of pluralism and diversity underpin our basic approach to environmental issues. All the same, the past record of environmental governance in the country suggests that the twin ideals have not been adequately captured through appropriate policies and programmes. Part of the reason for this situation has been the predominant use of command and control instruments for realizing environmental goals. This article argues that the future of environmental governance in India lies in pursuing the principles of pluralism and diversity through balanced approaches to issues. This would imply having an open mind towards 'command and control' and 'market based instruments', pursuing economic and social development within the ambit of environmental policies, conserving the diversity of landscapes and nurturing a network of public spheres that can create plural viewpoints on environmental issues. In the light of the current environmental scenario in the country, where local commons and global commons fight for space, it is argued that an enlightened 'fiat and forbearance regime' that balances the 'global' with the 'local' offers the best hope for promoting plurality and diversity in environmental governance. The article unfolds the architecture of an enlightened fiat and forbearance regime for India in its local, regional, national and global dimensions. It is argued that a multi-level, multi-stakeholder governance system, if backed by certain enabling principles, can help India realize the paradigm of 'enlightened fiat and forbearance regime' in the realm of environment.

Keywords

Plurality, diversity, fiat and forbearance, multi-level governance, public sphere

Background

Ralph Miliband (1969) has perhaps provided one of the most succinct definitions of 'governance', by contrasting this term with the notion of 'ruling'. For Miliband while 'ruling' is the act of exercising ultimate control over a polity, governance is about 'day-to-day decisions'. This definition holds for 'environmental governance' as well. The thrust of this article is not to describe the processes underlying environmental governance in India. Rather, the central focus of the article is to look at the guiding principles and systems of environmental governance in the country. In the light of past experience the article seeks to provide a new framework for environmental governance in India that is consistent with the guiding principles of the country's Constitution.

The origins of India's environmental governance system go back to the 1970s, when the Wildlife (Protection) Act of 1972 was enacted by the parliament. The focus of the Act was on conservation of wildlife through the formation of an extensive network of 'protected areas'. The Act introduced a new tenet of 'conservation driven governance' for the wildlife rich forests of the country which sharply differed from the exploitative, 'commercial forestry' policies pursued during the colonial period. Following the Wildlife (Protection) Act came the Water (Prevention and Control of Pollution) Act of 1974, the Forest (Conservation) Act of 1980, the Air (Prevention and Control of Pollution) Act of 1981 and finally the Environment (Protection) Act of 1985. The environmental regulations, which were introduced in India since 1985, emanated from the Environment (Protection) Act of 1985.

The only exception was the National Bio-diversity Act of 2002 which was positioned as a stand-alone Act for the conservation of biodiversity in the country.

Some of the legislations passed by India's parliament since the 1970s resulted in the introduction of new environmental governance mechanisms. In the year 1981, a Department of Environment was formed at the Union Government/Federal level to oversee pollution and conservation related matters. By 1985, an integrated Ministry of Environment and Forests was established at the Union Government level that combined conservation functions of forests and other ecosystems with environment protection activities that included pollution abatement. Many states followed suit with similar set-ups.

The legislations in the spheres of water and air pollution created a new bureaucracy in the shape of the Central and State Pollution Control Boards. These bodies were entrusted with the functions of monitoring water and air pollution and providing periodical consents to industrial units and public utilities to carry on with their operations. As far as the Wildlife (Protection) Act went, though new governing systems were introduced, the senior personnel that manned the national parks and sanctuaries (viz., the Directors of National Parks and Wildlife Wardens) were mainly drawn from the Indian Forest Service, a descendent of the Imperial Forest Service of the British period. The lower formations of the bureaucracy that ran the parks and sanctuaries were also likewise drawn from the Forest Department.

Coming to the scope of environmental protection activities in India, what was noteworthy was the 'media specific' approach to governance adopted by authorities until 1984. While the Water Act focused on water sources, the Air Act focused on 'ambient air'. Following the Bhopal gas tragedy of 1985, the Environment (Protection) Act of 1985 was passed. This Act, for the first time, adopted a 'multi-media' approach. This was done to curb the tendency on the part of polluting entities to transfer their emissions/effluents from 'air'/'water' to 'land'. Indeed the focus of the Environment (Protection) Act went beyond 'air' and 'water' to encompass the 'environment' as a whole.

Despite its immense scope, the Environment (Protection) Act did not create a new bureaucracy. Rather, in the wake of concerns in the mid-1980s, about the need to sustainably manage hazardous wastes and genetically/living modified organisms, the locus of executive power shifted to the authority heading the district administration (another relic of the British rule).

The spate of environmental legislations enacted in India since 1972 offer many interesting lessons in governance. Notwithstanding the multiple media approach to environmental governance, efforts to tackle the menace of pollution and destruction of forests and wildlife have not met with success. Part of the blame lies with the command and control methods deployed to handle the problems of environmental pollution and forests depletion.

Article 48A of India's Constitution lays down that the 'State shall endeavor to protect and improve the environment and to safeguard the forests and wildlife of the country'. However, Article 51-A(g) of the Constitution (which forms part of the Fundamental Duties enshrined in Part IV A of our Constitution) requires a citizen of India 'to protect and improve the natural environment including forests, lakes, rivers and wildlife and to have compassion for living creatures'. What is clear from this is that environmental governance systems are not visualized to be the sole concern of the state.

Citizens of India or for that matter in any other part of the world are not unalloyed 'individuals' when it comes to sharing common natural resources. As members of 'a neighborhood' or a 'community' an individual citizen would seek to join her fellow community members to pursue issues of common concern or public interest (Galston, 2007). This implies that citizens, if empowered to participate in environmental governance, would seek community approaches to environmental problems that affect their habitat. Thus, Article 51-A(g) of India's Constitution affords considerable scope for pluralism, since citizens represent communities that are spatial, social and cultural in nature. This promises a variegated approach to environmental governance.

As mentioned earlier, successive environmental legislations of India varied in focus and scope. However, when it came to governance, leaving aside some minor exceptions (like the 'water cess', which was the only market-based instrument to be deployed in India), the focus was on command and control systems driven by the state. These systems, as we realize, have not promoted sustainable development. Rather command and control systems have suffered from a poor track record when it came to their effectiveness.

The command and control systems that characterize environmental governance in India have been an unfortunate outcome of the progressive centralization of India's federal polity, on the one hand, and the tepid response of state governments to environmental legislations, on the

other. Moreover, since 'environment protection' as a subject was a new entry in the lexicon of the India's polity, the 42nd amendment to the India's Constitution cast the responsibility of rule-making on the Union Government. Even in the case of forests and wildlife, where state governments have exercised 'governance' functions by its concurrent powers in legislating on forestry and wildlife, the central government sought to modulate governance systems in states, sometimes through legislations (like the National Biodiversity Act) or on other occasions through executive instructions. A case in point of an executive instruction in the field of environment is the circular of June 1990, issued by the Union Ministry for Environment and Forests, instructing state governments to institute 'joint forest management' mechanisms.

Since the 1990s, and particularly after the United Nations Conference on Environment and Development held at Rio de Janeiro in 1992 (the Rio summit), there has been a major focus on formulating national policies and programmes for discharging India's commitments to the UN Conventions on Biodiversity and Climate Change. These National Action Plans, however, do not focus on locally generated plans and programmes. Rather they comprise sectoral (non-holistic), macro-level plans that are executed by line departments of the state governments at the local level. Though participation of local self-governments and other local level institutions has been a feature of India's forest sector programmes in the past two decades, this is a far cry from 'holistic plans and programmes' for conservation of global public goods that are designed and executed by local communities.

Given that India's scale of commitments to the global cause of climate change and biodiversity have increased in recent years, it is important that an integrated environmental governance mechanism is evolved that gives due role to multiple stakeholders. The imperative is to institute an inclusive chain of multi-level governance for the environment sector that captures the ideals of plurality and diversity.

Why Plurality and Diversity

The inherent case for plurality rests on four elements. In the first place, plurality offers an individual or her community the possibility of extensive choice (Thompson, Ellis & Wildavsky, 1990). Pluralism thus has the potential to confer autonomy to local communities to manage their environment. The second element justifying pluralism is

that it offers the possibility of varied and balanced approaches to managing the resources of an ecological system, thus contributing to the resilience of the system in the wake of stresses and strains. The third case for plurality is that it creates a more solid intellectual consensus on a real world issue, amongst people who subscribe to different foundational ethics (Randall, 2002 citing Williams, 1985).¹ The fourth way in which pluralism helps is by creating a culture of consulting different traditions to answer ticklish questions particularly those that are best resolved by reference to moral imperatives (Rorty, 1992 as cited by Randall, 2002).

Pluralism manifests itself as 'diversity'. As the manifestation of plurality, diversity conveys socio-cultural, political and natural heterogeneities. Plural approaches to state formation and governance contribute to the diversity of socio-cultural institutions, political decision-making structures and ecological systems.²

In the context of environmental governance, plurality and diversity are expressed in terms of the following:

- Plurality of institutions for allocating resources for environmental ends
- Embedding of development goals in environmental policies
- Diversity of landscapes
- Existence of honeycombed public spheres and enlightened, multi-level governance structures

Each of these four faces of diversity is discussed sequentially in the ensuing section.

Faces of Plurality and Diversity in Environmental Governance

The four faces of plurality and diversity in relation to environmental governance convey a common message—the absence of a mono-functional approach to nature and nature-related issues. The details are as follows.

Plurality of Institutions for Allocating Resources for Realizing Sustainable Development

The relative role of the state vis-à-vis markets in economic governance have been debated for long by economists and public choice theorists. Ludwig von Mises and Frederick Hayek argued for the dominant role of markets in economic governance, while Abba Lerner and Oskar Lange

argued for centralized planning (Williamson, 1994). However, subsequent events of the 1990s, viz., the collapse of the Soviet Union, brought out the numerous limitations of the central planning system implemented by an 'omniscient' state.

An environmental governance system that is run by command and control instruments suffers from a few limitations. These limitations include high transaction costs, 'rent-seeking tendencies' and adoption of an approach that treats firms with different environmental performance levels in the same manner, by setting up a common standard that lets off the more wasteful producers lightly.³

Markets can be useful in overcoming the negative externalities of pollution by getting the polluter to pay for the damage (social costs) through taxes, charges and trading in emission permits. Markets also facilitate flow of private capital for deployment of cleaner technologies.

Nevertheless as Samuelson (1954) pointed out, there are limitations on the extent to which private markets can guarantee efficient production of public goods. Public goods are non-rival and non-exclusive resources. Therefore public goods like atmosphere and forests cannot be protected by markets. Public goods like forestry and biodiversity, whose value cannot be determined in a marketplace, require state interventions to prevent negative externalities. Research and development in low-carbon technologies is another area where market mechanisms may fail to deliver.⁴

Given the limitations of command and control and market mechanisms in resolving environmental problems, a policy that embraces one to the exclusion of the other is not desirable. A state committed to plurality and diversity neither relies exclusively on markets nor on the state machinery to solve its environmental problems. It needs to rely on both methods and more. Ostrom (1998) advocates an Institutional Analysis and Development (IAD) framework to solve problems that cannot be addressed by the state or markets. The IAD approach provides a framework that enables a community to analyze how institutional rules interact with the physical and biological world and culture, to condition the behaviour of individuals, and produce favourable social and environmental outcomes. Thus, implicit in the IAD approach is an institutional system that supplements the state and the market in allocating resources in an optimal manner.

Pluralism, therefore, calls for a balanced approach where the criteria of 'equity', 'efficiency' and 'outcomes' drive the choice between 'markets', 'state' and 'institutions' when it comes to allocating resources for sustainable development causes.

Embedding Development Concerns in Environmental Policies

Developing countries which are drawn to economic growth models that are premised on large-scale exploitation of natural resources tend to look at environmental issues less favourably. This situation is obviated if the policy apparatus recognizes that the goals of economic development, social justice and political empowerment are inseparable from the larger goal of environmental well-being. A pluralistic philosophy to development will not give precedence to socio-economic goals over environmental well-being. Indeed, scholars like Walsh (2011) even argue that environmental sustainability ought to be of primary importance to policy-makers in developing countries than the goals of social sustainability and economic sustainability.⁵ Such thinking may come naturally to policy-makers who value natural resources in terms of their life-support potential to human communities. However, for such a radical shift in thinking to occur amongst policy-makers, it is important that environmental policies are not reduced to narrow conservation or environmental protection goals. Rather environmental policies and programmes should seek to involve participation of social, political, economic and environmental bodies. For instance, 'environmental' policies and governance mechanisms that focus on bio-resource enterprises, organic farming and protection of traditional knowledge held by tribal communities and other weaker sections of the society, have an integrated approach to environment and development.

Diversity of Landscapes

Diversity of landscapes creates conditions for self-sufficiency. This creates possibilities for community mobilization to manage environmental resources. Landscapes are not merely physical entities. They have cultural and cognitive connotations.⁶ They can generate and distribute political power to a community which makes it possible for it to manage a given common natural resource successfully (Schlager & Blomquist, 1998).

One of the features of India's rural environment from time immemorial has been the diversity of its natural landscape. This is suggested by stylized Vedic descriptions that illustrate a 'village' as a unit comprising a central inhabitation place, plough lands, grazing lands, forests and water sources (Damodaran, 1992). The natural heterogeneity of a village enables it to be self-sufficient. Though a 'village

republic' is considered an 'ideal state', many villages in India are characterized by a variety of ecological habitats (Damodaran, 1992). However, it is equally true that many villages have lost these attributes due to changing land use and altered methods of land survey and demarcation attempted during the twentieth century (Damodaran, 1992).

Honeycombed Public Spheres and Enlightened Multi-level Governance Structures

Public spheres exemplify plurality and diversity. A 'public sphere' is viewed as an important element of a political order which is threatened by social schisms and is in need of a safety valve for letting off civic frustrations.⁷ Habermas (1962) considers public sphere as a realm of social life where matters of general interest are discussed, where differences of opinion can be settled by rational argumentation and not by recourse to established dogma or customs.

Public spheres can also be forums for alternative discourses, where established truths are questioned or where alternative viewpoints are aired. This accounts for its plurality.

Ideally, public spheres assume two shapes: One, where grievances are aired and two, where they are aired as well as debated with authorities whose actions or policies are contested. In a given political system, it is possible to conceive of a honeycomb of public spheres that is organized along spatial and social lines. While spatially evolved public spheres operate at community levels, certain public spheres operate on the basis of social class. Thus, while some public spheres are occupied by 'coffee house goers', others may cater to Satyagrahis.⁸ The main point about such 'special' public spheres is that they prefer to air their grievances to authorities and also indulge in horizontal communications with other similarly situated public sphere spaces, either for exchanging perceptions about issues of environmental governance or about developments that affect them adversely. A case in point is the 'horizontal spread' and the 'vertical impact' of the anti-endosulfan movement that originated in the Kasargod and Palghat districts in Kerala and spread to neighbouring districts and taluks before embracing the entire state. Indeed as a study on the tsunami-affected Nagapattanam district in Tamil Nadu showed, horizontal communication by small local forums was instrumental in spreading local knowledge on tsunami-coping strategies, thus offering an alternative to top-down discourses on the calamity (Damodaran, 2010).

A 'honeycomb of public spheres' also offers a robust mechanism to realize the notion of a truly federalized approach to environmental governance. 'Local' public spheres ventilate alternative viewpoints on an environmental issue. A power centre that believes in enlightened hierarchy would tap such local knowledge and opinions of local communities before framing policies, than impose unilaterally designed policies through 'top-down fiats'.⁹

Conditions for Diversity in Environmental Governance

This far we have discussed how and why the ideals of plurality and diversity ought to be the basis of environmental governance in India. We have also discussed the various organizing principles that define plurality and diversity. We have noted that environmental governance based on the principles of plurality and diversity requires the state to balance between the instruments of 'command and control' and 'markets' in the interests of securing a resource allocation framework that facilitates realization of sustainable development. We also noted how and why a plurality of approach to development is secured by embedding the concerns for economic development and social justice within environmental policies, which enables realization of all the three goals. Diversity of landscapes is likewise identified as a critical factor that taps plurality and diversity, given the fact that landscapes have physiographic, cultural and cognitive attributes. Finally, we have also argued that a labyrinth of honeycombed public spheres can promote the development of alternative viewpoints on critical environmental matters, thus facilitating the emergence of a genuine federalized order that is run by multi-level environmental governance structures.

For the ideals of plurality and diversity to be realized by environmental governance systems, a regime of enlightened 'fiat and forbearance' is a prerequisite. Such a regime cannot be established unless certain enabling conditions are obtained.

Figure 1 illustrates the normative system of environmental governance proposed in this article. As Figure 1 brings out, the ideals of plurality and diversity should manifest itself in an appropriate fiat and forbearance regime through three enabling principles, viz., triangulated approaches to policy analysis, bottom-up societal risk policies and participative technology development. The closed loop character of Figure 1 explains that an environmental governance system based on an appropriate 'fiat and

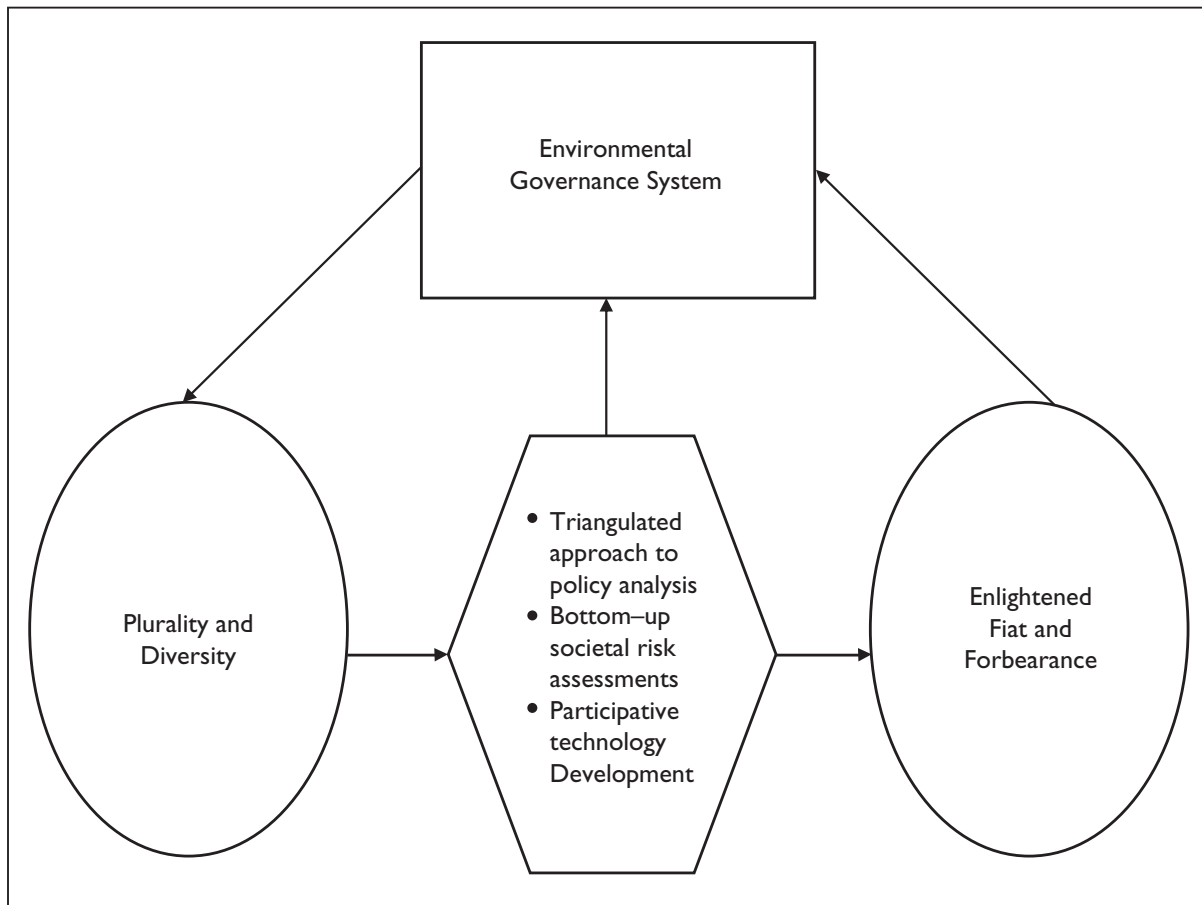


Figure 1. A Normative System for Environmental Governance in India

forbearance' regime will reinforce the principles of plurality and diversity.

Oliver Williamson (1991, 1994) is credited with the maxim of 'fiat and forbearance'. For Williamson, 'fiat and forbearance' is an informal paradigm that arises within the boundaries of a firm, unlike markets and its associated institutions that run on laws of the land. While 'fiat' is exercised through hierarchy and becomes the basis for accomplishing coordination in a conscious, deliberate and purposeful manner, 'forbearance' is an invisible force, which enables a fiat-issuing firm to act as its own court of ultimate appeal. 'Forbearance' settles intra-firm disputes in an efficient manner by avoiding the transaction costs of carrying out dispute resolution outside the boundaries of the firm. The transaction costs of an informal 'fiat and forbearance' regime is reduced, since the agency resolving the disputes has an intimate knowledge of the circumstances leading to the dispute, the issues involved and the efficiency properties of alternative solutions—which can only be conveyed to a formal court of justice only at a cost.

Recourse to an externalized dispute-resolution mechanism also undermines 'fiats' or the hierarchy principle that underlies a firm.

In some ways, the Williamson paradigm of fiat and forbearance aims to overcome what Bourdieu (2005) terms as the paradox of monitoring and surveillance by a higher entity in hierarchy. According to Bourdieu, the members of the monitoring body who stand higher in hierarchy are vested with greater cultural and symbolic capital than others lower down the scale. At the same time they are further removed from realities as they fear that they will get too identified with their subjects in case this remoteness is not preserved. The Williamson notion tries to get rid of the paradox of monitoring by vesting the right to settle disputes with the same authority that exercises executive powers. Under such circumstances, the entity at the top of the hierarchy is required to exercise its authority (fiat) and 'surveillance' based on a closer understanding of the fears and aspirations of the lower formations.

It is possible to extend a modified version of the Williamson notion of fiat and forbearance to the state and its lower formations (Williamson, 1991, 1994).

An executive arm of a state can issue 'enlightened fiats' which are technically sound in terms of objectives sought to be achieved and methods laid down for achieving them. However, such enlightened fiats may ensure effective project execution while not guaranteeing a high social impact in terms of altered behaviour. Enlightened fiats, if not complemented by a commensurate attitude of forbearance, may result in command and control instruments designed and executed from above. However, an executive arm of the state that has an intimate understanding of the needs and aspirations of local communities can be considered to have an enlightened state of forbearance as well. Enlightened forbearance can catalyze local action to design projects that are based on assessment of local needs.

The role of the authority will then be to impart the right degree of technical competence through an enlightened fiat that is based on enlightened forbearance which ensures that a project succeeds both in terms of technical competence and lasting community impacts.

A governance system that is characterized by enlightened fiats and forbearance will eschew command and control instruments and emphasize on bottom-up local action. Such an authority will also act as benevolent dispute settling entity. This enables its fiats to take roots amongst local communities.

It is axiomatic to suppose that in a democratic polity a state would be keen to exercise an appropriate 'fiat and forbearance' regime if this ensures great ground level acceptance of its exalted, benign position. However, states differ in their ability to practice the right degree of fiat and forbearance. States that have local formations with very low capabilities are characterized by governance systems that are run on the paradigm of 'enlightened fiats and fragile forbearance'. Even where capabilities are not a constraint, some states tend to move towards an enlightened fiat and fragile forbearance regime on account of centripetal trends that affect their polity.

On the one hand, states that are imbued by the 'moral call', what Bernard-Henri Levy mentions as the 'duty to step in' (Fukuyama, 2006), face the dilemma of having to restrain itself for fear of getting carried away or misusing its 'moral call' of duty. On the other hand, a state that is also imbued with the moral call of 'stepping aside', on issues over which its subjects have legitimate localized aspirations and rights, has a refined degree of forbearance and an enlightened approach towards 'fiats' that is inclusive as well.

Figure 2 attempts to translate the 'fiat and forbearance' paradigm to India's current environmental governance scenario. More specifically, Figure 2 attempts to cast the principal sustainable development policy imperatives confronting India's policy-makers. As may be seen from the entries in the different boxes, one of the principal sustainable development issues currently confronting India's political executive is the challenge of conserving global public goods without reducing the scope for poverty eradication. The greater complexity arises from the need to resolve the tension between conservation goals underlying global public goods with goals relevant to enhancement of local public goods (like local livelihoods). A case in point is the issue of resolving the tension between local community rights and rigorous conservation goals that are necessary for realizing global environmental benefits in a biodiversity rich forest tract.

As can be seen from Figure 2, a weak/fragile fiat and forbearance regime will produce weak national action plans and policies, thus accentuating the contradictions between environmental concerns and economic development, on the one hand, and tensions between the goals of conserving global public goods vis-à-vis local public goods, on the other. On the contrary, an enlightened fiat and forbearance regime provides opportunities to design bottom-up conservation-based action plans at the local community levels in a manner that seek to promote synergies between global and local public goods. The scenario of 'enlightened fiats and weak forbearance' does not create 'bottom-up' national action plans. On the contrary, they may encourage top-down programmes for conservation of local and global public goods.

The present system of environmental governance in India is characterized by enlightened fiats that go with fragile forbearance. This means that the executive authority has a refined approach to environmental governance in terms of identifying key requirements and also in laying down strategies to implement them at the local community levels. However, the weak forbearance dimension causes the authority to pursue its ends through non-inclusive command and control instruments.

In Figure 3, an operational system of environmental governance based on the paradigm of enlightened fiat and forbearance is illustrated. The governance structure commences from 'village level' governing systems, advances to regional level and nation level formations, before reaching the global level where policy initiatives for conserving global public goods are undertaken. As environmental governance proceeds from its lowest formation to its highest

		Fiat	
		<u>Enlightened</u>	<u>Fragile</u>
Forbearance	Enlightened	<ul style="list-style-type: none"> • Aggregative approach to conservation planning • Robust national action plan for conservation of global and local public goods • Conservation based local livelihood and enhancement strategy • High focus on local environment protection • Synergy between conservation strategies for global and local public goods 	<ul style="list-style-type: none"> • Neither aggregative nor disaggregative conservation planning • Non-existence of a robust national action plan for conservation of global and local public goods • High focus on local livelihood development strategy • High focus on local environment protection and local goods • Disconnect between conservation policies for global and local public goods
	Fragile	<ul style="list-style-type: none"> • Top-down national action plan for conservation of global and local public goods • High focus on global public goods • Non-conservation based approaches to enhancement of local livelihoods • Dissonance between policies for conservation of global and local public goods 	<ul style="list-style-type: none"> • Weak national action plan for conservation of global and local public goods • Weak focus on global public goods • Resource intensive local livelihood and enhancement strategy • Indifference to local public goods • Tension between environment protection and development goals

Figure 2. Fiat and Forbearance and the Matrix of Environmental Scenarios in India

level, not only would the scale of environmental issues handled increase, but also the spectrum of actors and stakeholders involved in the governance process. The multi-level governance system for environmental governance is driven by the state, civil society groups, private sector players (including financial institutions) as well as by the market mechanism. Programmes and action plans are designed locally and get aggregated and implemented in a holistic manner. Thus, a multi-level governance system based on the fiat and forbearance paradigm captures the virtues of pluralism and diversity. Further this structure opens possibilities for horizontal and vertical communication by multiple actors through networks of local, regional and national public spheres.

Enabling Conditions for Multi-level Governance Based on Fiat and Forbearance Principle

A well-knit multi-level governance system based on the principle of enlightened fiat and forbearance cannot take roots unless certain enabling conditions are obtained. One can identify three enabling conditions that can render a multi-level environmental governance system that is inclusive, effective and just. These are discussed next.

Triangulation as an Approach to Policy Analysis

As noted in the section discussing ‘Why Plurality and Diversity’, one of key advantages of pluralism is that it

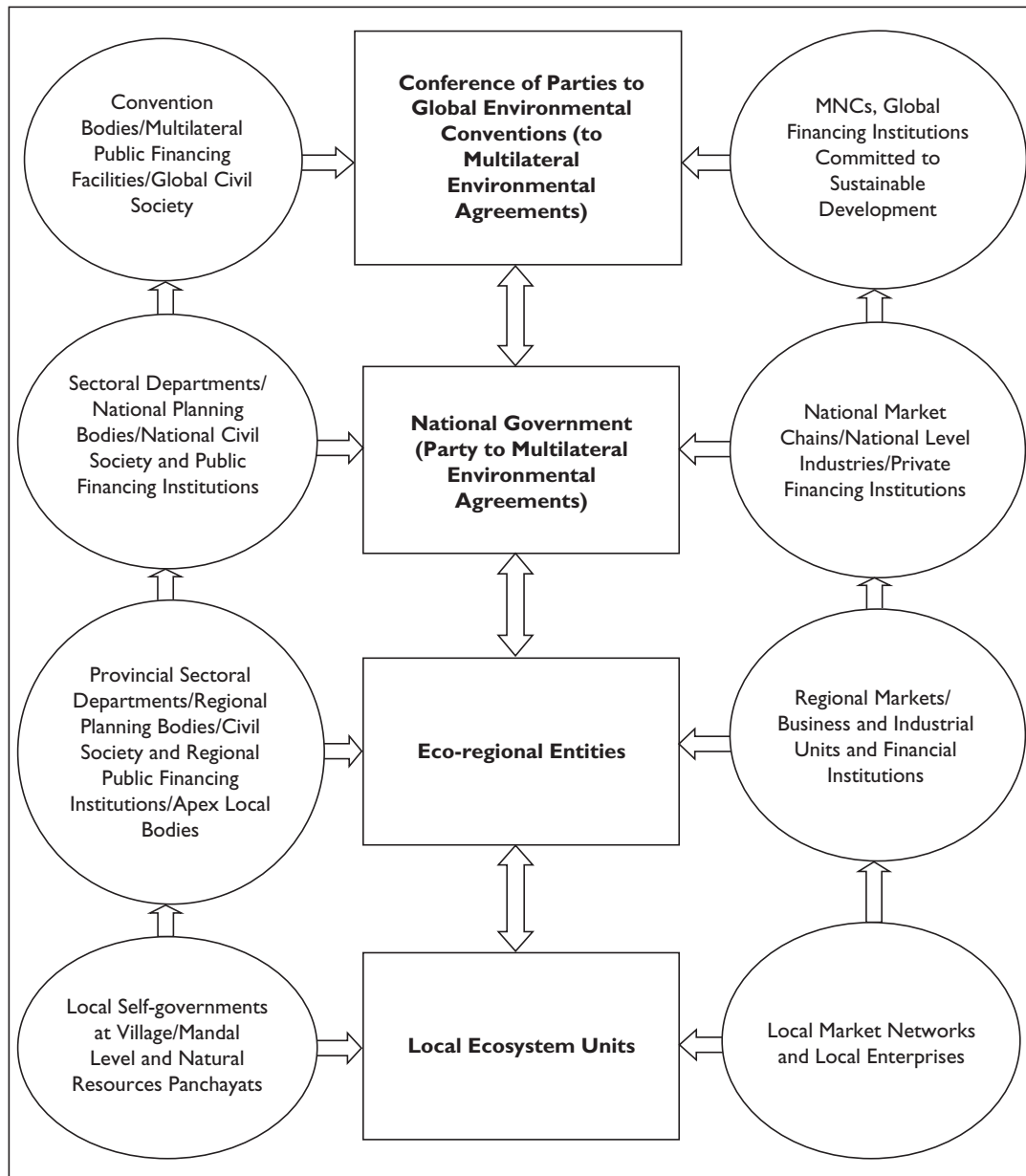


Figure 3. Multi-level/Agency Approach to Conserving Global Public Goods in the Indian Context

creates a culture of consulting different traditions to answer ticklish questions particularly those that are best resolved by reference to moral imperatives. Even for policy issues that do not suffer from an overhang of moral principles, a wider approach of consulting a variety of thought streams is advisable 'to ensure that all facets, all components and all connections and factors bearing on an object of the study are considered' (Nadkarni, 2010).

Triangulation as a method of policy formulation and analysis is helpful in inducing an 'enlightened fiat and

forbearance regime' that can capture the principle of plurality through a multi-level environmental governance system. One could define triangulation as involving use of very different theories to throw light on some common aspect of an otherwise complex policy issue (Damodaran & Roe, 1998). The basic assumption behind triangulation is that a single theoretical framework may not hold key to an analysis of a problem. A variety of frameworks could be applied to a policy problem to yield policy lessons. Triangulation enables a pluralistic approach to analyzing a

policy issue, thus preventing the design of 'one size fit all' approach to policy solutions. Thus the tension between conservation goals associated with global public goods and local public goods can be viewed from the angles of welfare and economic efficiency theories and from the paradigm of say the Global-Local Justice theory propounded by Jon Elster. The two frameworks throw different approaches to the issue and enable an executive authority make more inclusive policies.

Triangulation contributes to a better functioning of a fiat-forbearance paradigm, as it enables an executive to issue enlightened fiats as well as act as an objective dispute resolving agency. A triangulated approach to policy analysis will also promote an inclusive, plural approach that recognizes the roles of civil society, markets and the lower government formations in resolving the possible trade-offs arising between global and local public goods. Triangulated approaches to policy analysis and formulation can provide insights on the manner by which the multi-level, multi-agency environmental governance structure illustrated in Figure 3 can be made effective and robust.

A Fat Tail Approach to Societal Risk

Environmental hazards create societal risks as it affects a community as a whole. The Morvi Dam failure of 1979 and the Bhopal Gas Tragedy of 1984 are two noteworthy cases from India that have involved grave societal risks. The lodestar of successful environmental governance system is its success in managing societal risks in a manner that reflects the needs of vulnerable communities. Indeed it is reckoned that failure to prevent climate change or biodiversity erosion can pose severe risks to social groups and communities in rural and urban areas. Natural calamities like cyclones and the Tsunamis, though not environmental hazards, have huge environmental implications in terms of damage to ecosystems. Further they affect the poorer sections of the society the most. Unlike individual risks that are handled individually, societal risks suffer from some limitations. These limitations arise from absence of hedging mechanisms for societal risks as compared to individual/corporate risks that can be insulated with insurance cover.

Societal risks cannot be viewed as an outlier of a normal probability distribution. They are 'fat tails distributions' where the outliers may be more significant than one imagines it to be, in terms of the likelihood of occurrence of an extreme event and in terms of the high probability of 'downside loss'. Poorer communities in urban and rural

India are more concerned about the grave losses to their livelihoods that may result from an extreme event.

A societal risk policy that is centrally designed by the State or its executive agency, may suffer from a excess focus on the 'hump of the normal distribution curve' to the exclusion of its 'fat tail'. The results can be drastic. A centrally formulated societal risk policy (emanating from an inappropriate 'fiat and forbearance regime') would play down the likelihood of a disaster striking a local environment, apart from under-estimating losses likely to be incurred by a local community that faces the disaster. This explains why local communities are always aggrieved about disaster rehabilitation measures instituted by the State machinery. On the other hand a regime of 'enlightened fiat and forbearance' would map societal risks of local communities in India based on local assessment exercises to arrive at a more objective measure of the probability of disasters and resultant damages. The result could be the framing of a natural disaster policy that meets the requirements of local communities. Therefore a policy or system of bottom up, 'fat tail' assessment of societal risks is a pre-requisite for an enlightened fiat and forbearance regime to take roots in the sphere of environmental governance.¹⁰

Participative Technology Design

Technology is not a neutral device that 'functions' and 'leaves' everyone in the same state as before. The real problem with technology is that it has 'power', it has 'consequences' and 'also holds a promise' (Feenberg, 2005). The 'power' of a technology lies in its destructive or resource augmenting ability, while the consequences of a technology lie in its ultimate negative consequences or 'positive promise'. Consequently a technology policy can 'make' or 'mar' environmental governance.

For sections of the society and local communities in India that have participated in the anti-Bt Brinjal campaign, the problem with this genetically modified crop lay in its possible destructive impacts and negative consequences. On the other hand, had a participative process involving potential consumers, been instituted during the stage of design and development of the GM crops, it would have resulted in the development of a technology that is acceptable, safe and relevant to its consumers (farmers).

Hence a participative technology development process is a key element of an environmental governance system that is presaged on the ideal of enlightened fiat and forbearance. This is because technologies have the power to impact on a local environment in ways that defies the imagination of its creators.

Conclusion

India's Constitution has accorded a special place of importance for environmental governance by requiring both the State and its citizens to play an important role in protecting the country's environment. This conveys a pluralistic approach to environmental governance in India. For plurality and diversity to be captured by an environmental governance apparatus, it is essential that a variegated approach to environmental governance is adopted. Multiple actors, multiple institutions and stakeholders, backed by a honeycomb of public spheres can facilitate the emergence of a diversity driven approach to environmental governance. However, as has been argued in this article a regime of enlightened fiat and forbearance is essential for plurality to be realized on environmental matters. Such a regime will facilitate bottom up approaches to environmental governance that will integrate local conservation concerns with those of global commons. However for an enlightened fiat and forbearance regime to be a reality, three enabling conditions need to obtain viz., triangulated approaches to policy formulation, bottom up approaches to societal risk management and participative technology development. The three enabling elements, by promoting an intimate understanding of the aspirations of local communities on the part of the State, would create conditions for empowering local communities to implement environmental programmes that concern their environment.

Notes

1. This is not to state that an individualized approach always induces plurality that is conducive to environmental welfare. Not all individuals subscribe to the doctrine of well-being of nature. Rather, those individuals who are addicted to artificial wants would like to draw out resources of the country to meet their comforts of life (Thoreau, 1993). Indeed there are individuals who have non-welfarist concerns. In such cases the constructs of preferences, choice and welfare may not operate as a smooth continuum (see Sen, 1973).
2. Diversity is not diversification. The latter is 'induced' and partakes of measures by the state machinery to bring about a shift from the existing order of things without regard to the natural factors. Thus, introduction of incentives for promoting water consuming, commercial farming systems in a rainfall short area may be designed to seek diversification of livelihoods of local farmers. This is not the same as a package of incentives introduced by the state to conserve the natural diversity of a village or a region. See Damodaran (2010) for a discussion of the distinction between 'diversity' and 'diversification' in relation to the state of Rajasthan in India.
3. Peter Drucker (2010) perhaps offers one of the most eloquent critiques of command and control systems in his following lines: 'Punitive laws succeed only if the malefactors are few and the unlawful act is comparatively rare. Whenever the law attempts to prevent or control something everybody is doing, it degenerates into a huge but futile machine of informers, spies, bribe givers, and bribe takers. Today every one of us—in the underdeveloped countries almost as much as in the developed ones—is a polluter. Punitive laws and regulations force automobile manufacturers to put emission controls into new cars, but they will never be able to force 100 million motorists to maintain this equipment. Yet this is going to be the central task if we are to stop automotive pollution.'
4. As Ackerman (2009) remarks, 'If the US sulfur emissions trading experience is the model for carbon markets, then the most important question about market incentives may be, what other initiatives are needed to complement the market and again tilt the favour of success? It is not hard to identify the areas of energy efficiency, and low-carbon or no-carbon energy sources, where investment in research and development are needed.'
5. The case for embedding the goals of economic and social well-being in environmental policies may also arise due to the ethical dimension attributed to sustainable development (the guiding philosophy of environmental governance) by environmental economists like David Pearce. As Kula (1998) states, '(David) Pearce and his colleagues define sustainable development as a vector of desirable objectives such as an increase in real income per capita, an improvement in health and nutrition, educational achievement, access to resources, a fairer distribution of income and increase in basic freedoms. They then state that "the elements to be included in the vector are open to ethical debate". In other words, sustainable development is open to ethical debate, whereas in cost benefit analysis, where actual decisions are made at micro level, ethical questions are ignored.' It is noteworthy that cost-benefit analysis is the tool that we employ to evaluate the viability of socio-economic activities.
6. The Kantian notion of transcendental idealism states that our experience of objects is a mental construct. This perception is echoed by Schama (2004) in his study of rural landscapes of England. As Schama states, 'perceptions of hilly/mountainous periphery landscapes varied from barbaric rudeness to more kind version of being desirably romantic and picturesque aided by mixing of English and Celtic cultures'. Hannah Wittman's concept of 'agrarian citizenship' is also rooted in the complex mix that a rural landscape can assume. As she states, 'Agrarian citizenship thus recognizes the roles of both nature and society in the continuing political, economic and cultural evolution of agrarian society' (Wittman, 2011).

7. The safety valve notion of 'public sphere' perhaps explains why despite deep fissures between the civil society and state, the opposing social forces still choose to lie embedded in the state, articulating their insuppressible existence and autonomy (Negri, 2007).
8. Rudolph & Rudolph (2009) have used the metaphor of coffee house goers and Satyagrahis of Gandhiji's Ashram to distinguish between two forms of public spheres. The authors' state, 'Unlike in the world of the coffee house, in the world of the ashram the state was too frail to be the arena for realizing the public good. States could be more or less legitimate but none could survive without coercion and the threat of violence. In the world of the Ashram, the individual in civil society becomes the decisive arena for change. States are constrained and directed by ideas and goals generated within and by civil society.'
9. A centralized authority is inevitable when it comes to environmental governance. This requirement is accentuated by the fact that global commons issues have become indispensable components of environmental governance in nation-states. Prevention of climate change and conservation of biodiversity are issues of global commons, which cannot be ignored by nation-states like India. This is a challenging task as it involves stringing the local, regional and national institutions to the global. As Pattberg and Stripple (2008) say, 'We need to further our knowledge about the systemic interaction between the international and transnational global climate arena and the possibility for effective and equitable governance, taking into account a growing number of agents in a multiplicity of institutional contexts.' This necessitates the existence of an enlightened authority that is conscious of the global obligations and at the same time listens to the rumblings from below.
10. The ideas of 'black swans and fat tails' are credited to Taleb (2005, 2007). The key point about a fat tail is the catastrophe that can be wrought by an extreme event. Agents removed from the scene tend to push aside such extreme events as outliers. As Lawson (2011) states one of the problems with the approach of ignoring the fat tail is that 'there is not the remotest chance of securing a global agreement on the proposed course of action.' The 'global' arena tends to ignore the probability of an outlier event as it is far removed from a local theatre that has suffered an extreme event, This explains why a bottom up 'fat tail' assessment of societal risks is called for.

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