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WHO DECIDES? ENGAGEMENT AS 'VIABLE PROCESS' IN ENVIRONMENTAL DECISION MAKING

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Abstract: *Environmental decision-making is usually considered a linear process that moves through discrete stages before arriving at a final decision (Davoudi 2006; Schon 1999). Scholars like, Ascher and Healy 1990; Dryzek 2005; Keeley and Scoones 2003; Kingdon 2003; Street 1997; Yeager 1991. This paper proposes 'stakeholder engagement processes' as alternative to traditional environmental decision-making as alternative that has the potential to achieve better outcomes. In the process it presents criticisms of the technical-rational model and discusses theoretical reasons for supporting stakeholder engagement processes in light of other available policy options. Taking examples from developed and developing countries, it brings to the audience the inherent differences in these situations and presents the limitations of these approaches. Specifically, drawing on brief empirical examples from Joint Forest Management (JFM) in India, agricultural policy in Ethiopia, agricultural and conservation policy in Zimbabwe, fisheries management in Europe and Clean Development Mechanism (CDM) negotiations (further details of which are presented in the footnotes), this paper concludes that deliberative, inclusive and participatory approaches to environmental decision-making could be better in certain cases, depending on the context. The paper, therefore, argues that these approaches should be circumspectly institutionalised within environmental decision-making processes.*

Keywords: Environmental Decision-Making, Stakeholder Engagement Approaches**,** Decentralization

Introduction

Decision making in general involves more than one step. The first step in decision making invariably has to be recognition of a 'need'. Rachel Carson's book '*The Silent Spring'* way back in 1962 highlighted the need to change the existing order and prevalent development practices with regard to environment. O'Connor (1994) writes that environmental crisis has given liberal capitalist society a new lease of life, as the expanding liberal capitalist economy, otherwise saturated, found justification for the experiments with new technologies which will 'save' the environment. Use of new elements in mechanical operations, replacement of existing combustion materials, possibility of new and 'clean' technologies became the 'buzz word' for contemporary production system and global political and economic negotiations. Decision making in any field is kind of choosing a suitable alternative from available set of possibilities. Here, the question is who is picking the most suitable option, and what are the alternatives and possibilities are considered. There are multiple models of decision making at the international levels, where national governments decide for their people, their finances, their livelihoods and the environment. The nature of national government varies and it could be an autocratic, authoritarian, monarchy or democratic one. Diverse methods of decision making are then followed in each of the nation-state, which are territorially and politically sovereign entities. The usual top-down approach of decision making is more widely practiced and in terms of environment in theory, it is accepted as heads of the state decides. Articulated position, though, is usually in favour of local actions. The articulated and adapted interventions at best remain favourable to some and making rest vulnerable. This is bound to happen as the limited understanding and modelling of the environmental processes, causes and consequences are defined based on certain known and generalized variables leaving other complexities and wickedness which in reality determine the environmental consequences and guide adaptation strategies at multiple levels from micro to macro scales. This paper critically evaluates the traditional decision making process and argues in favour of participatory decision making process involving different stakeholders. Engaging multiple sets of people in decision making is one possible way to address the question of dynamism, and multi-scale realities of environmental issues. Engagement of community means series of deliberations and participation of multiple power-blocks in the decision making, which would be inclusive to some extent. 'Stakeholder engagement processes' here would be referred to as 'deliberative, inclusive and participatory' approaches to environmental decision-making.

Traditional Methods of Environmental Decision-Making

Existing mainstream environmental policy theories are based on the assumption of '*homo economicus*' (Gsottbauer and Bergh, 2010), though it is difficult to ascertain the complex nature of human behaviour and the basis of their made choices in a given situation. The Western World post-Carson era of the twentieth century, developed concern for the environment which was different from the nineteenth century 'systematic, rational concern for environmental quality' (Yeager, 1991). After the industrial revolution, the industrial clusters of the world especially the cities and towns started reporting deterioration of the physical environment and the negative consequences to the human health. The possibility of the exhaustion of the raw materials including minerals and timbers prompted groups and individuals to have concerns for the longevity of intensive extraction of raw materials, such as lumber, for commercial use and sale. Environmental management in this background focused on regulating pollution and sustaining the environment for commercial purposes. Negative and evident health externalities were considered threat to the healthy life and healthy city. In order to address emerging environmental problems, groups and individuals relied on scientific disciplines, such as biology and ecology, to expose the limits of human exploitation and tried linked the limit to nature with that of the population (Ehrlich, 1968; Meadows and Meadows, 1972; Keeley and Scoones,

2003). Conservation of different elements in the nature, like specific birds, specific animals and specific forest became one of the important front activities. Colonial masters focussed on mapping resources across the world and tried for efficient exploitation of resources including timber, and minerals. The exploitation of nature was aggravated with the adopted hunting and gamin g by the officers appointed by the empire to oversee the resource extraction. Examples of such behaviour can be seen from Africa, to South Asia and Southeast Asia and Pacific, where the relation between indigenous population and nature was brought under the authority of the colonial regimes (Adams and Hutton, 2007; Beinart, 1989). Grove (1989) identified a significant departure in the colonial policy towards the nature and the environmental processes by early nineteenth century, which became 'more concerned with finding meaningful unities' amongst natural factors like run-off, forest, demography and so on. However, entire natural pool was conserved for the use of colonial developmental need and people were slowly constrained from using natural resources. Boundaries were drawn and buffers were created to protect forest for the utilitarian purposes. Developed in the West, this method of environmental decision-making was exported to the colonies, including India and numerous African countries, which were the sites of natural resource extraction (Beinart, 1989; Guha, 1983; Keeley and Scoones, 2003). Conservation was considered as a future prospect for biodiversity conservation across the world (Kareiva and Fuller, 2016). The broader philosophical undercurrent with regard to conservation usually remain no to visit the historical reference and focus on change, which in inclusive was might be flexible and entrepreneurial. The problem with such stride is that it ignores the structural cause of ecological depletion and also the question about 'what should be and could be conserved' (Damiens, et al. 2017). In India and elsewhere in the colonial regions wild life conservation was given greater emphasis rather than conservation of livelihood options. Environmental assessment became part of the environmental decision making process in the 1960s to address environmental concern in a systematic way (Nilsson and Dalkmann, 2001). Different states introduced environmental assessment as significant guiding principal towards state-led environmental action. That also means environmental protection strategies primarily concentrated on individual and corporate regulation, with the developing countries focusing more on individual behaviour, and leaving out corporate as these economies wanted to attract corporate for economic reasons. While environmentalists inveigh against consumption, the developmentalists blame population and keep talking about economic drivers and technological solutions with a focus on specified conservation (Adams, 1995; Abernethy, 1995). In the process, the state became the seat of environmental decision-making, and also throttling such decisions exercising 'bureaucratic and administrative control. The rationale for such an act seemingly lies upon 'a set of scientific analyses, framed in particular ways by certain groups of experts' (Keeley and Scoones, 2003). More often the State policy-makers and experts are found to be 'technician[s], exercising professional judgment on behalf of the public' (Selin and Chevez, 1995, 189), though interest of public at best is ignored be it in case of aggressive conservation measures or granting operational authorization for industries discharging lethal chemicals or are prone to accidents to the scale of Union Carbide Factory of Bhopal.

Technical Rationality as Traditional Environmental Decision-Making
Environmental decision-making for policies in the twentieth century remained based on the above sets of principles, where technical experts hired by the state determine the course of action for the people. In doing so, more often a kind of contempt is displayed for the practices and centuries old collective knowledge base of the inhabited communities in general and of the indigenous communities in particular. Following this paradigm, tacit knowledge was considered subaltern to the supreme faith in science. This paradigm essentially was supported by the adoption of technical rationality in environmental decision-making, often emphatically

propagating 'will do' approach of science, though of late the hubris of science has been rightly questioned (Jasanaoff, 2019). Assuming that science could explain the consequences of environmental destruction, environmental policy-makers relied on scientists to 'establish…facts about environmental realities' to enable them to develop 'policy options in light of the established facts' (Keeley and Scoones, 2003, 25). This simplified model, often termed technical rationality or the technical-rational model, is viewed as 'the positivist epistemology of practice' (Schon, 1999 cited in Davoudi, 2006, 685) and has had significant influence in general policy-making (Rai and Soni 2019). Technical rationality is fixated with problem-solving, and often focuses on the optimal means to achieve a specified end rather than the end in itself (Davoudi, 2006; Rai and Soni 2019). However fundamental issues remained with identification of the problem itself. Consideration of a 'problem' for the environmental condition and deterioration got decided on the basis of 'science'. Nevertheless, the core of the problem in most of the cases may not be scientific and rather be political. Rooted in the positivist view of knowledge, technical rationality sees 'no need for excessive consultation over technical decisions, as any group of experts would eventually arrive at similar [policy] conclusions' (Keeley and Scoones, 2003). This model views the public as passive witnesses to policy-making and relies on strict dichotomies between objective and subjective knowledge; facts and values; problem setting[1] and problem solving; knowledge and power; experts and policy-makers; and technical and social dimensions (Davoudi, 2006). The technical rationality model defines each set of binaries in a positivist and instrumental manner, where the other is either tacit or non-rational and non-essential in determining the policy. Policy-making proceeds in a linear fashion, moving through stages of agenda-setting, decision-making, implementation and evaluation, and it is assumed that decision-makers always make rational choices in response to short-term considerations (Yeager, 1991). However, rational for what remains questionable, as the problem itself is political and unless we deliberate on the framing of the problem, it would be inappropriate to consider 'problem setting' as accepted in the traditional rationality model. Technical rationality presents a model for the environmental decision-making process that has been used in both developed countries and in the developing world, throughout which much environmental policy is based on colonial environmental regulations (Beinart, 1989; Keeley and Scoones, 2003; Guha, 1983).

Questioning Technical Rationality

Technical rationality has been the maker and key determinant of traditional decision making process about the environments and ecologies, which were often external to the decision makers. Despite its historic dominance in environmental decision-making, technical rationality is extensively and rightly termed as 'inadequate theoretically, politically, and practically' (Davoudi, 2006, 694). One of the reasons traditional environmental policy has been called into question is due to its failure to achieve desired outcomes (Dryzek, 2005; Rai and Soni, 2019). The failure in achieving outcome can partially be attributed to misplaced focus of the priorities and partially to expect humans behaving as rational being. Humans act not as a copy-book characteristics of the laboratory based atomized being, but as adaptor and negotiator to the given situation and crisis based on their individual and collective capabilities. Technical rationality paradigm did not consider these realities as worth enough to give attention and remained rooted in certain set of scientific evidences, which did lead to the improvement of specific environmental parameters like change in the cooling technology globally[2]. It has been unsuccessful in many areas, including climate change and persistent ecosystem threats. Consequently, there has been 'a growing lack of faith in scientists and…policy institutions [...and] the legitimacy and authority assumed for successfully implementing the rational linear model are being undermined' (Keeley and Scoones, 2003, 29). This model has also been challenged for its focus on the *technical* aspects of environmental issues, which were

propagated as universal. Because socio-cultural and economic aspects are omitted, it 'is not always clear when a policy issue [should…] be decided on technical arguments and when on other criteria' and it is not clear who should select the technical experts under what conditions (Keeley and Scoones, 2003, 26). This is particularly significant in developing countries, in which technical expertise – as defined in Western, positivist terms – is said to be a 'relatively scarce commodity, often held predominantly within government' (Ascher and Healy, 1990, 179). Further, if technical rationality is adhered to, then other non-technical, but potentially useful forms of knowledge are inevitably excluded (Ascher and Healy, 1990) and collective wisdom ignored. Critics also argue that technical rationality is an inaccurate and oversimplified model of environmental decision-making (Keeley and Scoones, 2003; Kingdon, 2003; Yeager, 1991). Rather than moving neatly between stages and ultimately reaching a discrete 'moment of decision' (Ascher and Healy, 1990, 159), this model adapts uni-linear determinism. Serendipity, contingency and chances have to be important components in policy formulation (Keeley and Scoones, 2003). Environmental policies are supposed to be altered and contested at various stages before a decision is made (Choudhary et al., 2019). For example, while the Kyoto Protocol negotiations on CDM-sinks[3] were multilaterally supported as a climate change solution, their prominence in legislation was lessened due to actors' interests and other trade-offs (Boyd *et al.*, 2008). In the United States, hundreds of actors, including policy-makers, interest group representatives, researchers and journalists are involved in policy-making, representing different interests, perceptions and policy preferences (Sabatier, 1999). Outlined criticisms of technical rationality primarily rest on the fact the environmental decision-making process is ultimately a political one, involving contests among multiple actors.

Technical rationality model fails to acknowledge issues of power and the impacts of socio-cultural, economic and political issues at different stages of the policy process (Keeley and Scoones, 2003). Science is not isolated and must be viewed as socially constructed knowledge, since 'experts' are members of society and certain types of research are better funded than others (Jasanoff , 2019; Keeley and Scoones, 2003). In environmental policy, economists, physical scientists, and engineers are typically more influential than anthropologists or political scientists, because the former produce quantifiable facts while the latter explore the qualitative effects of environmental policy choices (Ascher and Healy, 1990; Nightingale, 2016). Technical rationality is also often unable to handle uncertainty (Street, 1997); even when 'scientists directly involved in producing knowledge…admit high levels of uncertainty,' (Keeley and Scoones, 2003, 29) decision-makers may admit lower levels in order to enhance their authority, as seen in the case of global climate change science (Shackley and Wynne, 1996). Therefore, the dualisms assumed by the technical-rational model do not often hold and decision-making is an inherently political process subject to manipulation by those with economic or political power (Adams *et al.*, 2003). The various stakeholders involved 'draw on their current knowledge and understanding to cognitively frame' environmental issues, which may limit the responses each decision-maker is willing to consider from the outset, notwithstanding any facts revealed during the process (Adams *et al.*, 2003, 1915-16). Thus, as Yeager (1991) notes, 'it is ironic that for all the rationalization of Western industrial societies and the key roles played by science and technology, forecasting and planning, this area of policy exposes fundamental limits to rationality[,] …from the state to individual action' (Yeager 1991, 323).

The nature of decision making based on so called 'technical rationality' is a political process rather than a non-political one. The selected scientific basis also depends on the kind of political and economic regimes take such decision and choose those scientist and technocrats to carry forward and justify those decisions. The complexities of this politicised

process are compounded by the complex and interdisciplinary nature of environmental problems (Ascher and Healy, 1990; Dryzek, 2005; Reed, 2008; Nightingale, 2016). Being borderless, the complex environmental problems often affect multiple countries simultaneously and are thus addressed in the international arena through global scientific debates and international treaties and conventions (Choudhary et al., 2019). Owing to differential access, in the process, the intersection of national and international policy processes adds layers of complexity to environmental decision-making[4] (Keeley and Scoones, 2003). Consequent neglect of environmental complexity often leads to misunderstandings about the possible outcomes of environmental policy decisions. Unfortunately, when complexity *is* recognised within the technical-rational model, it often 'stimulates an overreaction that […gives] too much authority […to] technical experts mistakenly thought to be the masters of complexity' (Ascher and Healy, 1990, 175). As scientists are directed to produce 'facts', 'an important part of the scientific enterprise is seen as generating universalizable statements' (Keeley and Scoones, 2003, 27), which neglect context and omit complexity while identifying problems. The seemingly simple process of 'problem setting' may in fact be much more complex, because underlying assumptions are often contested and problems are not 'self-evident' (Adams *et al.*, 2003). Furthermore, simplistic constructions of environmental problems 'lead to the domination of policy by the single agency that has the relevant mandate or technical expertise' (Ascher and Healy, 1990, 160). For example, declining crop production and food shortage in Ethiopia was left to the Ministry of Agriculture, which focused on 'aggressive technology transfer' of seed and fertilizer while ignoring other environmental issues such as soil conservation (Keeley and Scoones, 2003). Yet, as Dryzek (2005) notes, 'problems of any complexity defy such centralization […because] nobody can possibly know enough about the various dimensions of an issue such as acid rain…not to mention the social and economic aspects of these issues' (Dryzek, 2005, 93). A more pluralist approach to environmental policy is need of the hour because the state may require the support of other entities to make effective environmental decisions (Keeley and Scoones, 2003). Critics of technical rationality support arguments that due to the complexity of environmental issues, environmental decision-making ought to 'depend on the widespread support and involvement of an informed public […whose] rights, roles and participation…should be expanded' (WCED, 1987, 21).

Alternative to Technical Rationality Model
Alternative to the 'technical rationality' appeared as 'conciliatory approach' and 'voluntary approach'. Conciliatory approaches adopt a model where policy is to be designed through cooperation between the regulators and those being regulated. The binary, though, almost ensures that there would be relative power balance in favour of those regulate and others have to reconcile with the proposition or retaliate or negotiate or bargain, which depend on the relative capability of the individual or group and in most cases favour state and its agencies. The voluntary approaches constitute efforts where groups choose to self-regulate and often run into the developmental agenda of the state and the state supported and state promoted corporates. Plethora of examples like, opposition to Metro Project passing through forest of Mumbai, 'save the Great Barrier Reef against Mining' are available where state acts against the voluntary group or make them look like 'anti-development' and in certain cases 'anti-national'. Moreover, theoretically these approaches are proposed and often propagated in literature as some believe that 'if you want to secure people's compliance…then it makes sense to give them some stake in it' (Goodin, 1986, 436). Experiences suggest that these approaches, specifically voluntary agreement[5], do not add legitimacy to the regulatory process and 'are in no way morally superior to legislative compulsion' (Goodin, 1986, 443). This is argued because the state not only could still impose comparable or even stricter regulation but also can act against those having an understanding of the environment and decides to act in

one particular way with regard to the chosen environment. However, both pragmatic *and ethical* arguments are used to suggest that stakeholder engagement processes are superior to traditional rationality, providing additional support for these approaches.

Stakeholder engagement processes are those in which stakeholders are active in decision-making and there is a 'joint decision-making approach to problem resolution where power is shared' (Selin and Chevez, 1995, 190), and 'lay input is inherent to, and integrated with, the process' (Petts and Brooks, 2006, 1048). Owing to the wide range of interpretations of these concepts (Reed, 2008) and the development of frameworks internationally (Bruch, 2004), these processes assume a variety of formats, including scenario workshops, citizens juries and round tables, café approach[6] depending on the context and country of implementation (Konisky and Beierle, 2001; Street, 1997). While stakeholder engagement in environmental processes normally consists of consultation or small-scale, in-depth, discussion-based forums in the developed world, developing countries have used more site-specific and action-oriented approaches, emphasising empowering communities to make their own environmental decisions (Choudhary et al. 2019; Davies *et al.*, 2005; Reed, 2008;). In addition to the lack of compelling arguments for voluntary and conciliatory approaches, stakeholder engagement processes are supported for numerous practical reasons. First, the increased inclusion of stakeholders can lead to greater *flexibility* in the decision-making process because the various interests represented can be addressed (Reed, 2008). Second, in recognizing that participants have different interests from the outset, the focus can be on *deliberation* – characterised by careful consideration and discussion of an issue – which may reduce the 'confrontational politics that typify environmental policy' (Beierle and Cayford, 2002, 5). Third, by including a variety of stakeholders, the decision-making process could become more *transparent* and less susceptible to political or other types of manipulations possible in contemporary neoliberal regimes (Reed, 2008). Fourth, inclusion of stakeholders embraces a *diversity of knowledge and values*, accepting the locally based knowledge of citizens as equal to that of expert knowledge (Berghöfer*et al.*, 2008; Dryzek 2005; Irwin, 1995; Tilleman, 1995). Though, there is a problem in taking these propositions as they seem to be, as society also has dynamic relation amongst contesting power groups and they are also susceptible to manipulation, threat and corruption especially in the developing country. A research project on focussed on creation of multi-stakeholder platform in Indian city suggests existence of wicked urbanization with an obvious nexus of real-estate developers and land owners (Ely et al. 2020). Despite the evidences from different parts of the world about the possible contestations and group-interest being pursued in the name of consultations and negotiations, these processes has potential to avoid 'intellectual vacuum of closed-door thinking' (Tilleman, 1995, 343) by acknowledging that citizens' familiarity with their local environments can provide a more complete understanding of dynamic environmental systems along with the social issues in which they are embedded (Reed, 2008; Irwin, 1995; Street, 1997, Bruch, 2004; Petts and Brooks, 2006; Berghöfer*et al.*, 2008). For example, farmers in Zimbabwe[7] became increasingly influential in the 1990s, following the recognition that Agritex's[8] technical approach had failed and farmers had better understandings of environmental processes (Keeley and Scoones, 2003). Additionally, including local knowledge can ensure that policies will better address the *needs* of those to be affected by a proposed decision (Davies *et al.*, 2005; Reed, 2008; Street, 1997; Tilleman, 1995). Further, inclusion of stakeholders can ensure *sustainability* of projects by providing information to and creating incentives for those affected and to gain their support based on their consent (Davies *et al.*, 1995; Reed, 2008; Ascher and Healy, 1990; Berghöfer*et al.*, 2008). In 1980s Zimbabwe, the CAMPFIRE[9] program and other initiatives were created and maintained by stakeholders 'convinced of the validity of alternative approaches …who strategized and built alternative actor networks' (Keeley and Scoones, 2003, 158). In the

absence of such support, neglected individuals may 'create their own policy in practice' (Keeley and Scoones, 2003, 173) by resisting legislation (Ascher and Healy, 1990).

Stakeholder engagement approaches are seen ethically sound, as they enable citizens to engage in the process and ensure some kind of democratic right. Reed (2008) emphasized the possibility of environmental interest and pressure groups' participation as articulated by the United Nations Economic Commission for Europe's 1998 Aarhus Convention. In democratic countries, these possible participations are seen as 'fundamental challenge for administrative governance', which even within the conciliatory or voluntary framework, tries imposing a pre-determined hierarchical model to manufacture 'consultative consent'. Though, a democratic system demands transparency in reconciling the need for expertise in managing administrative programs (Beierle and Cayford, 2002). In these societies, stakeholder participation and 'public deliberation is something that is desirable… because it can help us to achieve the kind of fair, democratic society to which we generally aspire' (Davies *et al.*, 2005, 600). Stakeholder engagement processes are promoted in all societies, however, regardless of their democratic status, due to claims that 'stakeholder participation reduces the likelihood that those on the periphery of the decision-making context or society are marginalised, promoting… active citizenship…with benefits for wider society' (Reed, 2008, 2420). It is argued that these approaches adhere to a lateral decision-making process instead of the hierarchical structure supported by technical rationality (Selin and Chevez, 1995). Even more compelling are claims that 'stakeholder participation…can empower stakeholders through the co-generation of knowledge' (Selin and Chevez, 1995).

Deliberative, Inclusive and Participatory Processes: Theoretical Claims and the Challenges
Since late 1970s, deliberative, inclusive and participatory processes in one or other form have been doing rounds (Street, 1997). Literature dedicated to stakeholder participation generally focuses on efficiency and argue in favour of engaging those who hold a stake (whether directly or indirectly) in the scope of their initiative, though they fail to even attempt a meaningful engagement with the wider public (Reed, 2008). Stakeholders in such cases are defined as individuals, groups, and formal organizations having interest or impact on a particular environmental decision (Selin and Chevez, 1995). Experiences across the world especially form the developing countries like India, suggest appropriation and manipulated consent manufacturing in the name of stakeholder participation. Villages and towns in these countries have layered community relation and hierarchical power relation based on caste and economic status. It is in this background that despite the pragmatic and ethical theories in support of deliberative, inclusive and participatory processes as a superior alternative, recognising the inadequacies of technical rationality 'does not lead to an unqualified and uncritical acceptance of deliberative approaches' (Davoudi, 2006, 697). Multiple studies claim effectiveness of such approaches with moral superiority, however, 'there is little empirical evidence to support many of the other claims that have been made' (Reed, 2008, 2427). An essential caveat is that establishing a *single* definition of success in relation to these approaches is highly problematic. The problem of single definition becomes more evident with the existence of various forms of these approaches in different context along with the multiplicity of goals that managers try pushing through in adopting these processes (Petts and Brooks, 2006). Consequently, claims about the success or failure of these approaches need to be evaluated in relation to specific processes. Nonetheless, there are common themes that run through critiques of stakeholder engagement approaches to environmental decision-making.

The major contestation is witnessed due to the existing binary of 'local' knowledge and 'expert' knowledge or to say 'tacit' knowledge and 'universal' knowledge. Further, critics argue that these approaches are not in fact deliberative, inclusive and participatory. Because of the fixation on including local, citizen knowledge into environmental decision-making, it is argued that these processes only *highlight* rather than challenge dualisms between the two (Ascher and Healy, 1990). These approaches 'deny the possibilities of negotiation and deliberation of knowledge, and set up an advocacy position that relies on new, but equally problematic, form of…*expertise*' (Keeley and Scoones, 2003, 177) that is held by local or indigenous groups. The underlying assumption about the integration of local knowledge in decision-making is that 'there are distinct realms of knowledge that exist prior to the research process: one is Western, rational and familiar, the other is local, multiple and strange' (Mohan, 2001, 159), or unique and contextual which varies and suitable to only a particular situation. The fact is all knowledge per se is contextual and has particular relevance as the constructivists would like to argue. Paradoxically, even when citizens are included in the decision-making process and can challenge expert claims, they both 'value and demand expert knowledge in decision-making' (Petts and Brooks, 2006, 1045). The challenge then becomes to view these knowledge as 'different but *complementary*' (Ascher and Healy, 1990, 168), since they are all instrumental for decision-making, and to 'move away from an acceptance of the predominance…of scientific rationality in decision-making to …build on knowledge from multiple domains' (Petts and Brooks, 2006, 1047). Integrating different forms of knowledge may be difficult, as seen in attempts to establish ecosystem-based approaches to fisheries management in Europe, where averages are used in scientific models while fishers' experience is based on particular fisheries and different spatial scales[10] (Berghöfer *et al.*, 2008). Thus, adopting an unbiased view of knowledge is challenging and does not occur regularly, in part because stakeholder engagement processes are often initiated by groups or individuals from *outside* a particular society.

The current model of 'deliberative, inclusive and participatory' nature of stakeholder engagement processes, faces challenge for it being west centric. The claim of the model supporting their value have initiated in the West, and now being supported internationally, and been exported worldwide. However, in the process, actual engagement and community based co-conservation process has been compromised especially in country like India in the interest of the west based global corporate. Two specific examples can be cited here, where local community protested and fought to protect their forest again the EIA supported legally sanctioned deforestation.[11] Case in point here is that though the 'buzzwords' of development practice include participation, empowerment, decentralization, and indigenous knowledge (Keeley and Scoones, 2003), and as environment and development issues have been increasingly integrated over time, various actors have championed stakeholder engagement; yet actual participation remains a kind of standardization that suits the copy-book recommendation of stakeholder participation rather than actual participation. For example, the World Bank was instrumental in supporting Joint Forest Management (JFM) throughout India in the 1990s, as well as participatory approaches in Ethiopia and Zimbabwe (Vira, 2005; Keeley and Scoones, 2003). These processes are seen 'more as part of playing the development game…and a necessary part of often donor-funded state activity' (Keeley and Scoones, 2003, 14) rather than genuine citizen engagement (Hildyard *et al.*, 2001). For example, agencies in Ethiopia in the 1990s 'couch[ed] applications to donors in a participatory language' (Keeley and Scoones, 1003, 89) in order to gain funding for agricultural programs when they were in fact still promoting the seed/fertilizer solution[12]. Additionally, cultural differences may cause problems because 'Western models of cognition assume that knowledge is mediated by language, but most language is non-linguistic, tacit and generated in practice' (Mohan, 2001,

161). Multiple languages, illiteracy, and cultural differences may also inhibit the engagement of all who wish to participate, or who planners *think* should participate, in such processes (Bruch, 2004). The international pressure to adopt stakeholder engagement processes may also discourage government agencies and other institutions that lack the technical, financial, and personnel resources (Bruch, 2004) to perform the 'radical shift in…organisational culture' (Reed, 2008, 2426) which may be required to effectively implement these approaches. Engaging stakeholders may be seen by such institutions as adding more delay to complex, time-critical environmental decisions (Tilleman, 1995).

Critics also challenge the 'deliberative, inclusive and participatory' nature of these processes based on the *stage* at which stakeholders are engaged. In many of these programmes, the framework is determined in advance of engagement with stakeholders, such that the process becomes 'a means for top-down planning to be imposed from the bottom up' (Hildyard *et al.*, 2001, 59-60). Without flexibility built into the project design, it may be too late to adjust the alternatives being considered, forcing stakeholders to agree to a project that differs from their needs (Reed, 2008; Ascher and Healy, 1990; Koinsky and Beierle, 2001). For example, the World Bank-funded JFM approach was said to be based on 'mutual trust, defined roles and responsibilities to attain sustainable forest production and regeneration in keeping with the needs and aspirations of all stakeholders' (Bhatnagar, 2008). The primary argument was that the focus of JFM is on empowering local community with livelihood options. However, the model limited the rights of local people to use forest resources, while allegedly including their input through village forest protection committees (Vira, 2005). Territorial conflicts between two neighbouring groups or even between two hamlets of the same village are the most common conflicts encountered in JFM. This occurs because communities are engaged in forest protection without demarcation of community boundaries, which often did not match the administrative divisions. Management conflicts arise when the Forest Department (FD) tries to fit the boundaries of the community managed forest with the existing administrative boundaries for its own convenience, or when the FD felt their authority is challenged when the local forest protection committee (FPC) punishes violators. Differences in the perception of and expectation for JFM also created problems. The FD sees JFM as a convenient means of regenerating forests, the local communities view it as a means of meeting their daily need for fodder, fuelwood, and small timber. In many Indian states, like Madhya Pradesh, Maharashtra JFM remains highly exclusionary. There was noted contestations and arguments while granting the customary rights on bamboo to the Gram Sabha (village Panchayat) in the wake of the 2006 regulation[13] suggesting states to grant rights to indigenous people regarding use of forest products including bamboo (Reddy et al. 2011). Later, Maharashtra and a few more states allowed local communities to use non-timber forest products including bamboo, which in certain cases contributed in transforming lives of people dependent on the forest products (Chopra, 2008; Reddy et al. 2011; Seetharman, 2015). Nevertheless, if stakeholders are engaged late in the process or the issue being addressed is outside the context of an actual policy decision, then stakeholders have 'limited efficacy in changing policy' (Koinsky and Beierle, 2001, 823). The outcomes of such initiatives are not always in favour of the community as Sundar (2017) argued that JFM facilitated elite capture of forest in India and has been instrumental in 'changing the socioeconomic lives of forest dependent communities from being forest-cantered to one based on the money economy.

Another criticism rests on *which* stakeholders are included and to what extent the included stakeholder raises the concerns of the people in general. Some claim that these processes only involve a small number of stakeholders and selection is often biased (Koinsky and Beierle, 2001; Davies *et al.*, 2005). Since 'intensive deliberation necessitates a small

group, an important issue is always the question of who is *not* participating' and if those not participating are more important for the protection of the environment (Konisky and Beierle, 2001, 823). For example, many states in India under JFM programs neglected to include tribal peoples in committees and thus lessened the traditional forest-use rights of these groups (Ascher and Healy, 1990). The selection of which stakeholders participate in the process also impacts *composition* of and *power relations* within the group, as Reed (2008, 2420) notes, 'stakeholder participation does not take place in a power vacuum'. The inherent power inequalities within groups (in age, gender, background, etc.) can hinder effective deliberation and consideration of issues affecting all parties (Selin and Cehvez, 1995). Often, stakeholder engagement processes rest on the 'dubious assumption that simply identifying different '*stakeholders*' and getting them around the table will result in a '*fair*' consensus being reached' (Hildyard *et al.*, 2001, 69). For example, some Village Forest Committees established in Indian JFM programs were dominated by more powerful social groups and often only men (Hildyard *et al.*, 2001). Additionally, some stakeholder engagement approaches aim for *consensus*, which 'may…further empower the powerful vested interests that manipulated *even* the research in the first place' (Mohan, 2001, 160). This can also lead to 'consultation fatigue' (Reed, 2008), where marginalised stakeholders become disillusioned after their needs are continually neglected, as seen with some JFM committees[14]. Therefore, consideration of the stage at which stakeholders are engaged, which stakeholders are included and the potential power relations within a group is important to ensure the success of these processes.

A Way Forward
'Technical-rational model' of environmental decision-making remains dominant despite failures associated with using it, implying that the linear conceptualisation of decision-making is the greatest challenge to implementing stakeholder engagement processes (Petts and Brooks, 2006). However, given the complexity of the decision-making process, some argue that one '*must* find some way of simplifying the situation in order to have any chance of understanding it' (Sabatier, 1999, 4). Therefore, if one accepts the pragmatic and ethical arguments for stakeholder engagement processes discussed above, these processes should be *institutionalised* in environmental decision-making in order to ensure that they are not upstaged by technical rationality (Reed, 2008). Yet, institutionalising such methods should not mean adopting a 'one-size-fits-all model'. Studies show that the *form* of the processes does not determine process or success of the outcome (Chess and Purcell, 1999) and that even those participating in the same process may have different ideas of what constitutes 'good' participation (Webler*et al.*, 2001), indicating that such processes should consider context and promote communication among stakeholders throughout. Therefore, the challenge becomes how to institutionalise stakeholder engagement processes while avoiding 'bureaucratic participation'[15] (Vira, 2005) and preserving flexibility of implementation. For deliberative, inclusive and participatory processes to become superior alternative to the technical rationality of traditional environmental decision-making, it is important to clearly define relevant stakeholders and select them using a careful procedure with minimum bias (such as Q methodology[16]). There could be a provision for incentive for the stakeholders, especially those who are poor and who would lose a day's wage in participation. There is a need for early engagement of the stakeholder, as late addition is kind of manufacturing consent in the already decided process and there is always a danger of confrontation. In a diverse country like India, the form of the process should be selected based its appropriateness given the unique demands of particular socio-political, cultural and economic circumstances. Each process should adopt philosophy of participation based on mutual respect for all forms of knowledge ('local' *and* 'expert') and for individuals to minimize power inequalities. Most important is to articulate the nature of revenue generation and profit from the proposed changes in the

environmental settings, as there is always an element of doubt because state sponsored or supported corporate or multinational agencies eye for profit and do not want to share the same with the local communities, while for the 'ethical financing' want the consent of local communities. The deliberative, inclusive and participatory processes have the potential to escape the pitfalls discussed in this paper, if they adhere to the mentioned processes, as Reed (2008, 2421) argues 'the quality of a decision is strongly dependant on the quality of the process that leads to it'. Deliberative, inclusive and participatory processes as a superior alternative to the traditional environmental decision making may involve a pathway approach, if it has to succeed. The pathway approach allows decision makers to consider the dynamic nature of the environmental issues and also the adopted pathways by different stakeholders to deal with the changing scenario, called adaptation. Pathways in relation to adaptation can be considered as set of approaches designed to deal with adaptation and adaptation based decision-making process. Multi-stakeholder platforms, which ensure deliberations across power-blocks, could be one such option to move in a direction which is inclusive and participatory.

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Notes:

[1] 'Problem setting' (used by Schon, 1999) is defined as the process of converting a problematic situation into a problem to be addressed (in Davoudi, 2006).

[2] A notable success in the environmental realm is the realisation that emission of CFCs and halons was leading to depletion of the ozone layer, leading to the adoption of the Montreal Protocol banning the production of CFCs and halons.

[3] The CDM enables an industrialised country with greenhouse gas reduction targets to carry out emission mitigation projects in a developing country. A 'sink' is "any process, activity or mechanism which removes a greenhouse gas, an aerosol or a precursor of a greenhouse gas from the atmosphere" (Boyd et al., 2008, 96). It is claimed that many sinks are currently located in developing countries, but critics argue that allowing use of these sinks through the CDM will discourage developing countries from mitigating their impacts on climate change (Boyd et al., 2008).

[4] For example, in the case of engaging stakeholders in various fisheries in Europe (including Spain, France, Sweden, Denmak, and Norway), "even where decision-making power is explicitly devolved to sub-national participatory arenas, the scope for agency is limited by a plethora of existing legislation made at national and EU-level" (Berghöfer et al., 2008, p.247).

[5] Voluntary agreement is often characterised by the quest for policies that are made through cooperation between the regulators and those being regulated. In this process, "consultation and cooperation are decidedly preferred over compulsion; advice and accommodation are decidedly preferred over adversarial relations; self-regulation and voluntary codes of practice are decidedly preferred over compulsory regulations, imposed from without and backed by sanctions" (Goodin, 1986, 436).

[6] Scenario workshops are "meetings that involve discussions among a range of local actors, with the aim of developing visions and proposals for technological needs and possibilities in the future" (Street, 1997, 144). Study circles "typically engage 8 to 12 [volunteers] who meet regularly over a period of weeks or months to address a critical public issue" (Konisky and Beierle, 2001, 818). Round tables "are deliberative forums that provide opportunities for stakeholders concerned about specific issues to discuss and propose policy initiatives to government decision-makers" (Konisky and Beierle, 2001, 820).

[7] A poignant example of this is the case of Zephaniah Phiri who was once arrested for cultivating a wetland, but now uses his farm as a demonstration site (Keeley and Scoones, 2003).

[8] Agritex (now AREX, the Department of Agricultural Research and Extension) is the national extension agency.

[9] Communal Areas Management Program for Indigenous Resources (CAMPFIRE) was a program initiated in Zimbabwe in the 1980s, which aimed to give decision-making authority about wildlife management to local communities and to provide legalised ways of using natural resources for development purposes (Keeley and Scoones, 2003).

[10] One specific case where this has been difficult is in the debate over how many grey seals should populate the Baltic Sea. Although it was acknowledged that fishers could be useful in gaining knowledge about seal populations, Simply including the knowledge of small groups of local fishermen was not enough; several more regional and locally specific mechanisms have evolved in a longer and complicated process (Berghöfer et al., 2008, 246).

[11] The local community in Mumbai protested against the decision to clear 'Aarey forest' for the construction of Metro rail depot. They fought legal battle, when they lost the legal battle against the state which was against protection of forest and was branding them 'anti-development', it became political issue in the assembly election and the ruling BJP lost the power. Consequently, the forest is protected as of now (Times of India, 5 Jan, 2018, TOI, Indian Express, 10 Sep 2019; 7 Oct, 2019). Second case is about the highway construction through a dense forest in Madhya Pradesh. Despite people, environmentalist, artists protesting felling of trees, there is little hope for the forest (NDTV, 24 July).

[12] The Ethiopian Agricultural Research Organization claimed to be using bee-keeping, soil conservation, and fodder management in coordination with local communities in addition to the traditional maize/fertilizer option, although the degree to which these programs were actually implemented in the 1990s remains unclear (Keeley and Scoones, 2003).

[13] '**Forest Right Act 2006'** was promulgated to 'recognize and vest the forest rights and occupation in forest land in forest dwelling Scheduled Tribes and other traditional forest dwellers who have been residing in such forests for generations but whose rights could not be recorded; to provide for a framework for recording the forest rights so vested and the nature of evidence required for such recognition and vesting in respect of forest land' (https://tribal.nic.in/FRA/data/FRARulesBook.pdf). But different state governments like One in Maharashtra opposed it as it was not in conformity with the revenue model of 1988 Forest Act, which granted State the right to sell bamboo; for details see Times of India, 2008;

[14] Research reveals that the "quality of participation under JFM had declined over time" (Vira, 2005, 5072). There was little active participation in the formation of committees, meetings of committees were irregular, members were selected by the forest department, and enthusiasm declined over time (Vira, 2005.).

[15] Bureaucratic participation "describes an implementation process that establishes standardised, administrative formats for collaboration between the state and local people, but fails to account for the specific characteristics of the local context within which these partnerships are to be developed" (Vira, 2005, p.5074).

[16] The 'outcome of a Q study is an improved understanding of the range of discourses or perspectives within society related to a particular issue; these perspectives are derived through a process of assigning importance rankings to statements describing the problem under consideration' (Davies et al., 2005, p.609; cf. Dasgupta and Vira).