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## Construction of Environmental Knowledge: Experiences from India

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### Abstract

This paper explored key issues in how knowledge of the environment is constructed in the Third World. Drawing on which, it showed that there are both explicit and implicit ways in which this knowledge is contested. Particularly, it discussed how implicit forms of contestation are problematic in Third World economies because they are exclusionary and also where such issues become 'headlines' only after environmental damage and accompanying social injustices have resulted. It concludes by raising crucial questions for environmental research in the Third World where there is limited role of governments and communities in protecting their environment.

**Keywords:** Environment, Knowledge construction, Roles of actors, Ski Village project, India, Third World

### 1. Background

Despite the existence of international guidelines such as Principle 10 of the Rio Declaration passed in the 'Earth Summit' of 1992 (UNCED 1992), it is not still clear how and whether the issues of environment are integrated into the policy process. Positioned amidst ambiguity, are the tensions in how knowledge about the environment is constructed and by whom (Guha 1989). The significance of knowledge of the environment in the policy process is of great concern in the developing world which is rapidly exploiting natural resources to meet the rising demands of its population. A key aspect of this knowledge construction is in conceptualizing who should be involved in making decisions on the environment and how. Particularly in developing countries with a federal structure of government (where multiple levels of government including central, regional and/or local are involved in decision making), construction of the knowledge on the environment and the design of appropriate policy interventions is problematic. For instance, in the India, environment is a subject in the central list (exclusive authority of central government to legislate), land and water are subjects in the state list (exclusive authority of state government to legislate), and forest is a subject in the concurrent list (where both central and state governments have authority to legislate). More recently, the multiplicity of institutions has become particularly posed challenges with the inclusion of multinational enterprises (or corporate actors) in the policy arena. Thus, on one hand, the competing role of multiple institutions has created ambiguity in who should decide and why.

While on the other hand, there are arguments to involve individual citizens in environmental governance (DoE 1994; DETR 1999; Barr 2003). Following on this path, Environment Canada (the federal ministry of the environment) coined the phrase 'environmental citizenship' as a broad concept to help different actors to think through their rights and duties as inhabitants of planet Earth (Szerzynski 2006). However, such a conceptualization has been vague and brings on board competing sets of arguments. The first is the inherent rights of different stakeholders on matters concerning their environment, such as rights to clean air, a safe environment, or a right to be involved in decision making. The second relates to the values and practices used to nudge citizens to be environmentally aware and responsible in their everyday practices, such as conserving water, switching off lights and so forth (Horton 2006). These theorizations of environmental citizenship seem to suggest a rights-based as well as a responsibility-based approach, and this reflects the two broad traditions underpinning the notion of citizenship: a liberal notion, based on citizen rights, and a republican notion based on citizen responsibilities (Dobson and Bell 2006). However, such approaches are problematic in the Third World, where communities plagued by poverty and unemployment are more concerned on the different means for livelihood, and are to a lesser degree aware of their environmental rights – rights to clean air or the right to be involved in decision making. Also, responsible behavior to the environment is usually nudged through environmental regulations

that are generally weak and prone to corrupt practices in developing economies. This has in many ways created ambiguity in what the roles of different stakeholders might be in engaging with the environment.

### 1.1 Different forms of contestations

Due to a lack of clear understanding on how to decide on the environment particularly in developing economies, competing arguments of 'who should construct knowledge of the environment' have broadly resulted in two forms of contestations. In some cases, competing arguments of who should construct knowledge of the environment are not explicitly stated. Such forms of 'implicit' contestation become particularly problematic in Third World economies where such environmental issues become 'headlines' only after the occurrence of environmental damage and accompanying social injustices. With the advent of global players in making decisions of local environments, this has in different ways shaped the roles of governments and communities in the Third World. This has raised concerns about when, how and why actors beyond the local communities should become involved in the decision-making process. Some of these encounters have produced 'implicit' contestations within the Indian context (as in the Himalayan Ski Village project). The contestations are 'implicit' since such concerns have not reached the attention of the academic and research community, which Smith (2003) rightly notes is partly due to limited awareness of where to look for emerging environmental debates and conflicts. This is also to a certain extent due to the insistence in academic scholarship of 'reporting after something has happened' and as a result there is hardly an academic paper that discusses the Ski Village project. On matters relating to the environment and particularly in sensitive eco-systems, opportunities for facilitating basis research to inform policy and applied research appear to be severely limited. In this regard, Hinchliffe and Blowers (2003) argue that environmental disasters are not chance events and that the context should be examined at various levels including an exploration of the socio-political context. Such an approach seems to imply of the need to research the environment starting with the possibility of involving more stakeholders in the decision making process so that there might be limited ecological damage and minimal social impacts. But 'implicit' forms of contestation present challenges for environmental research in knowing how such issues can be studied. In this regard, this paper first examines 'explicit' contestations, and through an example, brings out a set of questions that can be used as a framework to explore 'implicit' forms.

More commonly, contestations are explicitly played out through different modes of 'head-on' confrontation among different stakeholders supplemented by media publicity (Bingham 2003). For instance in the Indian context, and particularly with respect to the environment, water management practices in north-western India provide a useful insight into the nature of 'explicit' contestations. It was reported in the local media that following the ineffective intervention of multiple institutions in providing water supply to drought-prone areas in north-western India (Mago 2000), communities had explicitly contested the notion 'that they were living in a water scarce environment'. Particularly, in the states of Gujarat (Das 2000) and Rajasthan (Nanda 2000), the traditional systems of water supply including large tanks, canals and aqueducts were cleaned up so that rainwater in the form of surface run-off could be collected and used for domestic consumption. This then provides one of the possibilities to unpack the tensions in how knowledge of the environment is being constructed – *how did the state engage with the local context in constructing knowledge of the environment?* Drawing on this inquiry, detailed studies were carried out in the desert city of Jodhpur in western Rajasthan (Gopinath 2001a). During the fieldwork however, it started to emerge that such forms of head-on confrontation and social action started to wither away particularly when quantities of public water supply became more readily available. Such tensions were generally treated as mere 'cause and effect' - that individuals challenge notions 'that they are living in a water scare environment' on the basis of self-interest, i.e. to survive. And when the right to survive is not threatened, then they do not contest. However, such explanations appeared simplistic and did not in any way provide an understanding of the socio-political context. Detailed semi-structured interviews were then carried out with different stakeholders including state actors and community members. Discussions with state actors revealed how knowledge of the environment (that they were living in a water scarce environment) was constructed independent of understanding the local context (Gopinath 2001a). State actors were more concerned in using 'scientific' approaches in managing water – including pricing policy, augmenting water supply from neighboring states. More importantly, the state actors did not find the relevance of creating a platform for engaging with communities for whom water management measures were being designed.

On the other hand, through the discussions with community members, it was learnt that there are underlying forces (such as the caste system) that were not visible even within 'explicit' forms (Gopinath 2001a). The caste system is a form of social organization drawing on the 'Brahmanic' traditions and has existed for many centuries in many parts of India. At the top of the caste hierarchy, are the upper castes consisting of Brahmins (priests), Rajputs (kings) who have historically controlled the land. The middle stratum consists of peasant castes. And, at the bottom, are the landless communities including the group of Untouchables. The respondents revealed how 'access to water' was shaped by an individual's caste identity. Prior to the introduction of public water supply, residents in Jodhpur relied on traditional systems of water supply. However at that time, settlements were designed in such a way that upper caste households were located on higher ground. This design consideration ensured that water was first consumed by the upper-castes as

it emerged from the rain-fed canals. After which, the water drained to further tanks on the plains where lower castes could access water. But in contemporary Jodhpur and especially in times of severe water shortage, such caste differentiations have been ignored and people come together to challenge notions 'that they are living in a water scare environment'. But when more quantities of public water supply became available, then traditional water systems are no longer maintained and as a result precious rainwater is lost. At this point, caste differentiations deter communities from making collective action. This then suggested the possibility that underlying factors might be embedded within 'explicit' forms of contestation. Thus, this provides a second possibility to unpack the tensions in how knowledge of the environment is being constructed - *whether and how the views of communities within their local socio-political context have been taken into consideration while constructing knowledge of the environment?*

This section brought out two questions that explored the challenges in constructing knowledge of the local environment. Drawing on these two questions, the following section will build an understanding of the range of challenges within 'implicit' forms of contestation through the example of the Himalayan Ski Village project in northern India. Such an inquiry has particularly become problematic in Third World where there is the lack of a guiding framework for environmental research. More significantly, 'implicit' contestations become 'headlines' only after the occurrence of environmental damage and accompanying social injustices.

## 2. Himalayan Ski Village and 'implicit' forms of contestation

This section first provides a backdrop to the influence of global forces on developing economies and discusses how tourism investment has been used by multinational enterprises to engage with the environment. The 'implicit' form of contestation that has largely been under-researched is then discussed by examining the Himalayan Ski Village project in northern India.

### 2.1 Under-development in the Third World: tourism as a solution?

Amidst the lack of sound institutional arrangements in developing countries, there has been the surge in multinational investments particularly within the tourism industry. This has been supported by claims that tourism investment is a means to reduce poverty and inequality (Cater 1995; Ashley, Boyd, and Goodwin 2000; Erb 2000) – through increased foreign exchange revenues and enhanced employment opportunities for the local population. The range of advantages suggests that the logic of tourism investment is linked to notions of 'development'. The notion of 'development' was initially argued as a path to be traversed by 'backward societies along the road to civilization' (Rist 2002). Then with the advent of the 'new development age', agendas of 'development' as 'modernization', was reinforced by leading development models, including Walt Rostow's 'unilinear' model (1960). The Rostovian Take-off model (as it sometimes called) is a linear theory of development which categorizes economies into primary, secondary and tertiary sectors by observing the patterns of change in the history of developed nations (Rostow 1960). This model was based on the premise that 'development' is a defining feature of advanced industrial economies and that regions in the Third World can progress toward development only by treading the same path, earlier traversed by advanced industrial economies. This was later followed by the Lewis model which regarded industrialization as the essence of development (Ranis 2004). It however accepted the classical British roadmap to development – of going through a phase of agricultural revolution first (and thus raising agricultural surplus) and then moving into a phase of industrial revolution (Figuroa 2004). Further it also assumed that for overpopulated nations a strategy of industrialization could help transform the subsistence (primary) sector through a process of labor transfer and growth of employment in the industrial sector (Figuroa 2004; Todaro 2000). These linear models of development attempted to reinforce the notion that there were no alternative paths to 'development' other than 'modernization' and by integrating into the world system. These had influences in the constitution of new international development agencies including the World Bank, and how development was normatively constructed by them.

But 'development' as 'modernization' has been confronted by the 'dependency school' – which argues that 'modernization' in an unequal international system would not create autonomous entities but rather will force backward regions (the 'periphery') into a state of great dependence on advanced industrial nations (the 'centre') (Rist 2002). While 'development as modernization' has been used by multinational enterprises as a guiding principle for tourism investment in the developing economies, dependency theory has been used to explain how Third World countries can assume only a passive role in deciding the nature of tourism projects implemented within their borders (Mowforth and Munt 2003; Britton 1982). But the modernization school of thought has been criticized for adopting technocratic approaches such as cost-benefit analysis; rather than taking into consideration the needs and priorities of local communities (de Kadt 1979). Drawing on these arguments, many have cautioned on the perceived advantages of tourism in addressing persistent poverty and rising inequalities in the developing world (Britton 1982). In addition, based on the experience of past decades, such claims appear to be more of rhetoric than reality. For instance, studies have brought out far-reaching social and environmental impacts caused by tourism projects on local communities (Mathieson and Wall 1987; Wheeler 1997). The debates linking notions of 'development' to the environment raises crucial questions as to what the role of governments and communities in the Third World might be in protecting their

environment and as a result, how they can and should engage with the activities of multinational enterprises (MNE), or enterprises that carry out its commercial operations outside its home or 'parent' economy (Bull 1991). To understand the implication of MNE activity and the resultant contestations, the next section takes up the case of the Himalayan Ski Village that is being developed by a multinational enterprise, the Himalayan Ski Village Project Company headed by Alfred Ford.

### *2.2 The Himalayan Ski Village Project*

The northern state of Himachal Pradesh in India is an environmentally sensitive region where more than two-thirds of land area comes under forest land (Winrock International India 2004). Over the last decade, there has been a rampant sanction of projects in Himachal Pradesh ranging from dam constructions to the recent ski-village project. In this regard, Although the extent of the Himalayan environmental degradation received scholarly attention in the early 1980s (Ives and Messerli 1989), recent studies reveal an alarming situation with dwindling fuel wood supplies, and more frequent occurrence of landslides (Sharma, Goel, and Minhas 1991). Of particular concern has been the increased soil erosion: this has led to increased sediment load in the rivers and has reduced the efficiency and lifespan of the many hydroelectric projects in Himachal Pradesh that provide power not only to the mountain communities but also to the neighboring states (Sharma and Minhas 1993). Of the total potential of hydroelectric power of 97000 MW in India, 21229 MW comes from Himachal Pradesh (Winrock International India 2004). Such large scale projects in sensitive environmental regions have also affected the lives of local communities who are dependent on natural resources for their subsistence. In this regard, many have advocated 'sustainable livelihoods' approach in mitigating the effects of such projects on the livelihoods of local communities (Chambers and Conway 1992; Stonich 1998; Scoones 1998).

However, amidst such alarming concerns in how large-scale projects have started to affect the livelihoods of local communities, one of the biggest tourism projects in India was sanctioned in Himachal Pradesh in 2006 – the Himalayan Ski Village project. The Himalayan Ski Village project was set up at Kullu valley in the state of Himachal Pradesh by Alfred Ford, the great-grandson of Henry Ford (founder of Ford motors) who is keen on holding international ski tournaments including the Winter Olympic Games. Drawing on his company's success in running a ski resort at Vedli in Colorado (USA), the Himachal Pradesh state cabinet approved the Preliminary Project Report (PPR) for the setting up of the Rs.3500 Crore (700 million USD) Himalayan Ski Village in November 2005. This tourism project, also called the 'Fort' is considered to be one of the biggest FDI (foreign direct investment) in India (The scale of the investment is interesting as according to 2006-07 budget estimates, the HP state annual income is around Rs.8000 Crore or 1.6 billion USD). In addition, the ski village project has been presented as 'very local-friendly', by promising to provide over 70 percent employment to the local population. The marketing schedule of the project has been spread over a period of five years starting in 2006. The first phase of the project started early in 2007 with the establishment of the training institute for winter sports. By early 2008, the presale of chalets and condo hotel rooms is expected to commence. The ski village is expected to be fully ready for commercial operations by early 2011 including the development of 700 hotel rooms, restaurants along with an 'Indian Village' shopping experience, twenty thousand square feet of convention facility and an entertainment/performing arts centre.

### *2.3 Unpacking 'implicit' contestations*

This section examines the Ski Village Project through the two questions developed earlier in this paper. Firstly, *of how the state had engaged with the local context in constructing knowledge of the environment*. The role of the Himachal Pradesh state government appears to be caught between a social objective of providing welfare support to rural areas and to protect the environment, and an economic objective of responding to challenges and constraint of a global market (Mathew 2005). It is true that the role of the state has been quite pronounced in Himachal Pradesh with the National Institute of Rural Development placing the state government's effort in first position with respect to indicators on human development and infrastructure provision in rural areas across the country (Sanan 2004). However, the upcoming investment opportunities in Himachal Pradesh owing to its tourism potential have in different ways put pressure on the state government to respond adequately. This is clearly reflected in the Memorandum of Understanding (MoU) signed by the state government and the Himalayan Ski Village (HSV) project company in 2006 (Sethi 2006). For instance, the opportunities for investment in property by the elites as well as the commencement of new chartered flights to the region, in contrast to the development of rural roads and infrastructure, seem to suggest that role of the state has become rather insignificant. Also, Section VII of the MoU gives the Ski Village company "water rights in the Project Area, including the tapping of unused *nallas* /ground water and for building retention ponds for snowmaking and supply to the resort village" (Sethi 2006). In addition, the sheer scale of the investment in the Ski Village project (700 million USD) in relation to the state government's annual budget (1.6 billion USD) point to the state in the Third World as being a 'passive player' in development. Thus, rather than engaging with the local context in constructing knowledge of the environment, the state seems to have accepted the notion of 'environment' as conceived by the multinational enterprise promoting the Ski Village project – 'that tourism investment as a means to reduce poverty and inequality, will result in a sustainable development of the local environment'.

Secondly, *of whether the views of communities within their local socio-political context were taken into consideration?* Based on the Memorandum of Understanding signed in 2006, the Ski Village project excludes local/indigenous knowledge of the environment from the policy process (Sethi 2006). In this regard, Gardner and Dekens (2007) have shown how local/indigenous knowledge has been used to protect communities from devastating floods in the Kullu valley – by locating the settlements at regular intervals on the hill slopes and surrounding them with areas of cultivated land. But more recently, the value of such local/indigenous knowledge has been ignored, and where rapid deforestation and intensification of human activities have increased the frequency and impact of floods and the damage they cause to the fragile eco-system (Gardner 2002). So on one hand, while the local communities conceive ‘a safe and protected environment’, the advocates of the Ski village project conceptualize the environment as synonymous with ‘rapid deforestation’ and ‘intensification of human activities’. It becomes further problematic when local communities are excluded from the policy process and do not have voice over ‘common property resources’. For instance, Section VII of the MoU gives the Ski Village company “irrevocable license for the use of ski trails and making of snow and ice on such trails for the duration of the [land] lease and for the construction of trail markers, retention ponds, underground water lines and water pumps...”(Sethi 2006). These contradictory understandings of engaging with the environment are seldom made explicit and where local communities remain passive players in the policy process. In addition, previous research seems to suggest the existence of implicit forms of knowledge construction prior to implementation of the Ski Village project – varied infrastructure provisions for different types of villages (highway villages, remote villages etc.), cultural differences between host and tourist populations etc. (Gopinath 2001b). Thus, being positioned in a culture that does not explicitly challenge notions of ‘environment’ conceptualized by powerful stakeholders, presents problems for protecting the fragile eco-system.

Moreover, the exploitation of natural resources through large-scale tourism investments raises questions of whether it has compromised the livelihood opportunities of rural communities (Ellis-Jones 1999). Based on fieldwork carried out in 2000, rural populations of the Kullu valley have sustained a traditional way of engaging with members outside their community – through a form of community tourism – and have relied on a defined rural economic base for their survival (Gopinath 2001b). The rural households engaging in tourist activities have traditionally welcomed tourists into their ‘personal space’ in the form of family owned guest houses. Further, tourists are largely considered as members of rural community and not as a community beyond the rural population. By segregating the new, elite tourists from the host rural community, would in some ways create the notion of a ‘gated community’. However in literature, emergence of gated communities is generally viewed as an urban phenomenon where communities (mostly upper-class families) by virtue of their ability to pay, demand a homogenous social culture, a sense of privacy and security from an outside, seemingly alien world (Roitman 2003). And also justification for creation of such communities has been based on prevalence of urban violence and crime (Blakely and Snyder 1997; Caldeira 2000). The debates on ‘gated communities’ becomes interesting in the context of Himalayan Ski Village Project in Kullu valley where the residential development is neither in an urban context nor based on a need for security. But, the notion of development here in Kullu valley, is one of restricted access where public spaces are being privatized (Blakely and Snyder 1997; Goolbar 2002) and new lines are being drawn between an emerging, elite tourists and the host rural community. The sustainability of community tourism now appears threatened especially with the introduction of large scale projects like the Himalayan Ski village project. Thus, there are also concerns that the Ski Village project will bring about greater inequality in the region; particularly through the emergence of an elite-driven, tourism agendum (and for private use) as opposed to a traditional, community-based tourism.

### 3. Conclusion

This paper explored key issues in how knowledge of the environment is developed in the Third World. Cutting across the different aspects of such arguments, the paper showed that there are both explicit and implicit ways in which knowledge is contested. In particular, since implicit forms are under-researched, this paper brought out key challenges by discussing the Ski Village project. Firstly, the paper raises concerns that environmental degradation and accompanying social impacts caused by the Ski Village project are not explicitly revealed. Such concerns point to the influence of competing interest groups within the Kullu valley. Particularly, powerful stakeholders including those who wish to cater for an ‘elite’ tourist population at the Ski Village project seem to be shaping the notion of ‘environment’ in Kullu valley. That the less powerful, local communities are not involved in decisions shaping the environment seems to be downplayed in the policy process. This seems to suggest why constructions of the ‘environment’ are implicit and exclusionary. However, such implicit forms of contestations will not prevent environmental degradation and accompanying social impacts. But after such damage has been done, it will provide material for a range of impact studies. Thus, the implementation of a large-scale tourism project such as the Himalayan Ski Village project in rural areas in the developing world raises many concerns particularly in who gets to decide on the nature of such projects.

In addition, the paper also raises more general concerns. It brings out challenges in the context of a developing nation where the livelihoods of communities are greatly connected to their immediate environment. Closely linked to this are concerns that existing approaches to environmental planning and management do not adequately make provisions for

stakeholder involvement in making policy decisions (Oduwaye 2006). This is particularly important because environmental projects that have been implemented without the involvement of intended beneficiaries have had limited success (Sharp 1992). These wider understandings are hoped to inform policy in re-examining the basis for creating knowledge of the environment particularly in the Third World particularly where such issues become 'headlines' only after environmental damage and accompanying social injustices have resulted.

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