

Community -Based Management Approaches : Towards Sustainable Biodiversity Conservation

Supatra Sen

Assistant Professor (Botany), Asutosh College, Kolkata -700026

Date of Submission: 15th January, 2016

Date of Acceptance: 22nd January, 2016

Abstract

Community based natural resource management approach combines conservation objectives with the generation of economic benefits for rural communities. A key point underpinning the Community Based models is that local communities have inherent resource management capabilities, and therefore, only the right incentive structure needs to be established. These models represent a significant shift from the State-driven, centralized, technocratic and blueprint approaches that were dominant previously. The catalysts for this change came 'from above' (e.g. international donors and the State) as well as 'from below' (e.g. communities and social movements). Some believe that the growth of community-based models is '*one of the most dramatic transformations in natural resource management in modern history*'. The adoption of the Millennium Development Goals – that identified poverty eradication and environmental sustainability as global imperatives – gave further impetus to community-based models. It was felt that it would not be possible to achieve these goals without focusing on the link between environment and poverty and acknowledging the *central role of local governance institutions*. Community-based models employ *three main strategies*. They are 1) providing *compensation* (or substitution); 2) promoting *alternative livelihood* opportunities; and 3) creating a direct stake in *conservation* for local people. *While the first two approaches support preservation, the third reflects a conceptual shift from preservation to sustainable use.*

Integrated Natural Resource Management (INRM) is a process of managing natural resources in a systematic way, which includes multiple aspects of natural resource use (biophysical, socio-political and economic) striving to meet production goals of producers and other direct users (e.g. food security, profitability, risk aversion) as well as goals of the wider community (e.g.

poverty alleviation, welfare of future generations, environmental conservation). INRM is definitely a major stride towards Sustainable Resource Management seeking to combine economy with ecology.

Keywords: Resource management, Autonomous community efforts, Decentralized governance of biodiversity, Integrated Natural Resource Management

1. Background and Objective

The IUCN World Conservation Congress report revealed a profound shift in the way protected areas are being managed around the world. In 1990, just 14% of protected areas allowed sustainable uses of natural resources, but currently that number has risen to above 30%. At the same time, the amount of area managed exclusively by governments has declined from 96% to 77%, a trend reflecting the rise of community-based conservation and co-management schemes with indigenous people. From the 1970s onwards, it became clear that the top-down preservationist management approach had to be supplanted by a more bottom-up, inclusive and participatory sustainable-use narrative. The community-based conservation policy asserts that it is possible and preferable to strike a balance between the needs of local people and the conservation of nature.^{1,2} *This study attempts to discuss the various community-based conservation strategies with a view to understand their precise role and functioning in the present Indian scenario.*

The modern conservation movement emerged in the late 19th century in response to fundamental changes in world views concerning the nature of the relationship between humans and the natural world. In its early days, biodiversity conservation was motivated by a desire to preserve sites with special meaning for the intellectual and aesthetic contemplation of nature, and by acceptance that the human conquest of nature carries with it a moral responsibility to ensure the survival of threatened life forms.³ Over the past century a wide range of different conservation-oriented approaches have been enacted, from local and regional scale activities, such as protected area establishment, *ex-situ* conservation, recovery planning for species and ecosystems, specific threat management (*e.g.* disease, fire), and biodiversity off-sets, to global scale inter-governmental policy developments such as the Convention on Biological Diversity (CBD) and the Convention on International Trade on Endangered Species (CITES). These approaches are based on multiple values of biodiversity, including those values not related to humans.

2. Community-based Models : Reviewed

A key point underpinning the Community Based models is that local communities *have inherent resource management capabilities*, and therefore, only the right incentive structure needs to be established.⁴ These models represent a significant shift from the State-driven, centralized, technocratic and blueprint approaches that were dominant previously. The catalysts for this change came ‘from above’ (*e.g.* international donors and the State) as well as ‘from below’ (*e.g.* communities and social movements).⁵ Some believe that the growth of

community-based models is 'one of the most dramatic transformations in natural resource management in modern history'.⁶

The adoption of the Millennium Development Goals (MDGs) – that identified poverty eradication and environmental sustainability as global imperatives – gave further impetus to community-based models.^{7,8} It was felt that it would not be possible to achieve these goals without focusing on the link between environment and poverty and acknowledging the central role of local governance institutions.⁹

The various biodiversity governance models in use in India helped in conservation, sustainable use and fair and equitable sharing of its biological resources across different landscapes. While operating under various policies, planning and institutional frameworks, a common thread runs through all these models – an increasing conservation awareness among the people and emphasis on the *participatory approach*.^{10, 11}

Participation as a concept has been debated vigorously in academic and policy circles and can take different forms, ranging from information sharing to empowerment.¹² Autonomous community efforts, co-management of forests and decentralized governance of biodiversity, all biodiversity governance models – are more closely aligned with community-based conservation.

Community-based models employ *three* main strategies. They are 1) providing compensation (or substitution); 2) promoting alternative livelihood opportunities; and 3) creating a direct stake in conservation for local people. While the first two approaches support preservation, the third reflects a conceptual shift from preservation to sustainable use.¹³

Autonomous community efforts: Autonomous community efforts (ACE) are initiated by communities for conservation and management of biological resources. ACEs in India are extremely diverse in terms of the governance institutions, management objectives and ecological impact. Such efforts can be broadly classified into two categories – 1) community conserved areas (CCAs) and 2) sacred groves (SGs). The main difference between the two lies in resource use. While resources in CCAs are generally appropriated for use, those in SGs are used only in exceptional circumstances, or for religious/spiritual reasons. While there is no comprehensive database, one estimate considers the total area under CCAs in India to be at least as great as the area under formal protected areas.¹⁴

Co-management of forests: In recent decades, India has experimented with the concept of co-management of State-owned natural resources such as forests. Although community involvement in the management of State forests has a long history, it was a few successful experiments in community involvement on State forest lands in the 1980s that sowed the seeds of Joint Forest Management (JFM). Under JFM, the state Forest Department enters into an agreement with the local community, which is allowed greater access to the forest resources as well as a share in revenue, in return for protection of the forests against unauthorized extraction, encroachment and damage.

This idea received a major policy boost in 1988 when the National Forest Policy advocated the creation of a '*massive people's movement*' to achieve national goals of afforestation /reforestation and meet the requirements of small timber, fuel wood, fodder and non-timber forest products (NTFPs) of the rural and tribal populations. The programme was formally launched in 1990 and has grown to become *one of the largest community forestry programmes in the world*. Attempts have been made to federate the Joint Forest Management Committees into the JFM programme, which is likely to play a significant role in Indian forestry in the coming decade as it has been identified as a major programme to *tackle climate change under the 'Green India Mission'*.

3. Decentralized governance of biodiversity

India has devolved considerable powers to local self government institutions in rural areas, which are known as Panchayati Raj Institutions (PRIs). The Constitution (Seventy-third Amendment) Act, 1992 added a new Schedule to the Constitution of India (Eleventh Schedule) that lists 29 subjects devolved to PRIs. The list includes minor forest produce, social forestry, farm forestry and fisheries. The PRIs play an important role in the implementation of the Biological Diversity Act, 2002. Under the Act, every local body has to constitute a Biodiversity Management Committee (BMC) for the purpose of promoting conservation, sustainable use and documentation of biological diversity. An important function of the BMC is the preparation of a People's Biodiversity Register (PBR) that contains comprehensive information on availability and use of local biological resources, or any other traditional knowledge associated with them.

4. Future Perspectives

Integrated Natural Resource Management (INRM) is a process of managing natural resources in a systematic way, which includes multiple aspects of natural resource use (biophysical, socio-political and economic) striving to meet production goals of producers and other direct users (e.g. food security, profitability, risk aversion) as well as goals of the wider community (e.g. poverty alleviation, welfare of future generations, environmental conservation). The conceptual basis of INRM continues to evolve over the years through the convergence of research in diverse areas such as sustainable land use, participatory planning, integrated watershed management and adaptive management. INRM is definitely a major stride towards Sustainable Resource Management seeking to combine economy with ecology.^{15, 16}

As considerable momentum gathers for the implementation of the Strategic Plan for Biodiversity (2011-2020) including the *Aichi Biodiversity Targets*, the Indian experience of employing a range of biodiversity governance models to balance conservation and development has immense relevance in countries throughout the world. As emphasized in the UNDP's new Biodiversity and Ecosystems Global Framework 2012-2020, *The Future We*

Want: Biodiversity and Ecosystems – Driving Sustainable Development, we need to unlock the potential of protected areas, including community conserved areas, to protect biodiversity while contributing towards sustainable development. In conclusion, the three segments of sustainability – ecology, economy and society are to be addressed based on the supreme principles of *conservation, utilization* and *regeneration* to preserve the crucial links in the web of life and nature.

References:

1. Sen Supatra, From Abundance to Scarcity: Education for Water Conservation, Seminar Proceedings of “Emerging Trends in Contemporary Education : Implications for 21st Century - A Sequel,” pp.78-82. ISBN 978-81-922305 – 1-1(2011).
2. Sen Supatra, Science of Biological Diversity : Management Approaches for Sustainable Conservation. Biodiversity and Livelihood : Proc. Nat. Conf. Biod., A.K. Sanyal, S.K.Gupta, S.Manna (ed.) pp. 347-352. ISBN 978-93-92258-17-9 (2014).
3. Sen Supatra, “Towards Sustainability : Blueprint for Resource Management” in Progress in Science *vis-à-vis* Environment, Dr. D. Choudhury & Dr. S.S. Nag (ed.) pp.56-63. ISBN 978-93-5174-670-6 (2014)
4. Wells, M., Brandon K. and Hannah L, People and Parks: Linking Protected Area Management with Local Communities. World Bank, World Wildlife Fund in association with U.S. Agency for International Development, Washington, DC. (1992)
5. Larson, A.M., Barry D. and Dahal G.R., Tenure change in the Global South. In Forests for People: Community Rights and Forest Tenure Reform, A.M. Larson and others ed. London: Earthscan, pp. 3-18 (2010)
6. Edmunds, D., Wollenberg E., Contreras P., Dachang L., Kelka G., Nathan D., Sarin M., and Singh N.M., “Introduction.” In D. Edmunds and E. Wollenberg (eds.) Local Forest Management: The Impact of Devolution Policies. Earthscan Publication Ltd.: London.1-19 (2003).
7. Sen Supatra, Towards Sustainability : Through Environmental Psychology, Seminar Proceedings of “Emerging Trends in Contemporary Education : Implications for 2^{1st} Century,” pp. 91- 94. ISBN 978-81-922305-0-4 (2010).
8. Sen Supatra, “Journey to Sustainability : Approaches for Resource Conservation – Retrospect & Prospect” in Environmental History of India, Publ. Print Gallery, Dr. M. Ray (ed.) pp. 48-65. ISBN 978-81-928645-6-8 (2015).
9. Sen Supatra, “Drivers of Changing Biodiversity” in Biodiversity: Interrelationship between Flora, Fauna & Human pp. 24-29. ISBN 978-81-929410-0-4 (2015).
10. Sen Supatra, Blueprint for Sustainability : The Many Faces of Resource Management, Seminar Proceedings of “Sustainable Resource Management : Myth or Reality,” pp. 76-83. ISBN 978-81-922305 –6-6 (2011).
11. Sen Supatra, Changing Perspectives in Biodiversity Management. J. Environ. & Sociobiol. 11(1): 117-122 (2014).

12. Sen Supatra, Strive to Sustainability: Education for Sustainable Development, *Magis –Xaverian Journal of Education* 3: 1-7. ISSN : 2319-3239 (2014).
13. Agrawal, A. and Redford K, Conservation and displacement: an overview. *Conservation & Society*, 7(1): 1-10 (2009).
14. Pathak, N. ed., *Community Conserved Areas in India- A Directory*. Pune/New Delhi: Kalpavriksh (2009).
15. Sen Supatra, From Conflict to Cooperation : ‘Water for Life’. *Musings*, 4:17-21, Uluberia College. ISSN 0975-8054 (2013).
16. Sen Supatra, “Sustainable Resource Management: Myth Or Reality” in *Biodiversity, Conservation And Sustainable Development: Issues And Approaches Volume-1* (Ed. Dr. P. Jha), New Academic Publishers, New Delhi-110002, pp.1-18. ISBN : 978-81-86772-75-1 (2015).