

Forest and society: some thoughts on a possible interdisciplinary approach in IUFRO

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The rather small, un-discussed and remarkable incident took place sometime in British India. In an informal discussion Yogi Kuladanada Brahmachari told the noted physicist (Sir) JC Bose that plants do have consciousness and can be sensitive too. Kuladananda inherited the vision and experiences of his famous guru Bijaykrushna Goswami who had 'seen' that some departed great souls (saints) lived in the holy place of Brundavan in the form of sacred plants. Bizarre though this may seem, JC, the scientist however took it in a positive way and invented the instrument crescograph that provided early scientific clues to plant sensitivity. This story of a successful interaction between a spiritualist and a scientist not only helped extend the knowledge of botanists, but also vindicated the traditional message to the society that be careful and sensitive to plants and trees.

Forests are the major source of our ecosystem services that the society avails for its sustenance and healthy growth. Forestry thus has continued to have a very complex and large social dimension with a number of interfaces between forest and society. These interfaces range from exploitation to protection & conservation. They form the key to an interdisciplinary approach between forestry sciences and social sciences, and create the potential for a mutual collaboration between the two.

Now, the question is: Do we really need such an interdisciplinary approach? How about forestry totally independent of social science, and vice versa?

The answer can be demonstrated through some case studies from India. Colonial system of forest administration in India intended initially to secure exclusiveness of forests by relinquishing socio-economic rights in the forest reservation process. This however led to many complex issues. Many rights being not recorded formally during the previous surveys were not considered for settlement, thereby causing conflicts with the local communities. It was further understood that ensuring a successful forest conservation and management without the support and participation of local communities would be expensive and less practicable. Most of India's forests belonged to feudal regimes where the British rules were not directly applicable in some cases like forestry. And many feudal rulers 'reserved' their forests without any forest settlement procedures while imposing strict forest administration rules. On one hand, the rights of the people were dishonoured and on the other hand forest regimes turned out to be a kind of semi-military administration that tortured the public. The foresters never formally admitted the root causes of the conflicts with people. In 1930s, the Khurdha Forest Enquiry Committee found clear evidences that even in some British tracts the foresters erroneously delineated forest boundaries including completely non-forest, village areas. Noted anthropologist Elwin came to know from poor tribals how the forester(s) drew RF (reserved forest) boundaries in/around village areas simply because they were not offered the bribe desired by them. And finally, a senior civil servant Mr. Ramadhyani submitted an enquiry report to the Government of India that mentioned deviations in forest reservation and settlement procedures. Unfortunately, his report was apparently ignored when in 1954, the government declared that all 'reserved forests' for erstwhile princely states (that merged with India after its independence) would now deem to be treated as the RF under the Indian Forest Act, 1927. This was a historical injustice in the independent India though the foresters never questioned this. The Working Plans continued to

describe how the past exploitations by people (and/or others) degraded the forest, but hardly ever reviewed critically if there was any fault on the part of the Forest Department itself. Thus, forest degradation continued despite thick Working Plans and 'scientific' management. The Sariska story further exposed the fallacy of the exclusive forest and wildlife management. In the recent years the government, after the promulgation of the Scheduled Tribe and other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006 has made some attempts to undo the historical injustice and errors, and has proposed to take NGOs and social scientists in the committees that would oversee the determination and notification of Critical Wildlife Habitats though the foresters are yet not much ready to accept any role of a social scientist in the matter. The message of this story is: social scientists/activists/organizations pioneered in discovering many misdeeds and errors which the foresters either ignored or were unaware of, and this provided a scope for developing holistic management models for effective conservation of forest & wildlife.

On the other hand, our studies on the community front also revealed some fallacies. Many of the community forestry initiatives, despite their successful forest conservation, actually lacked a proper management practice. Protection was the major part of the community initiative followed by some elementary systems of management and benefit sharing, but forest development activity was almost absent. The forest management was timber-centric and NTFP management was an ignored aspect. Biodiversity assessment and measures for endangered species was a distant topic to be discussed ever. Technical support was necessary for them to make their efforts more concrete and holistic particularly in view of climate change, and without experienced foresters they were not able to successfully avail the benefits under REDD+(a community-friendly version of REDD+, of course). Hence, RCDC in its pilot project under REDD+ (that experiments to see if and how REDD+ can actually benefit the forest protecting communities without dictating them or harming their rights) has facilitated interactions of the concerned communities with expert forester(s) for necessary scientific projection of their resources and efforts.

Going for an interdisciplinary approach doesn't disturb the exclusive identity of a stream/subject; rather it liberalizes it in a constructive manner creating scope for a more comprehensive and holistic understanding as well as expression. It's like two or more nations sharing their boundaries (they obviously do not and cannot share all their boundaries with each other). And the challenges in the present world critically need an interdisciplinary approach for facing them in an effective and holistic way.

RCDC took a significant initiative towards making such interface possible in forest management. In



the training-cum-workshop organized in 2010 it invited villagers practicing community forestry, and also some forestry experts to discuss silviculture in community forestry. And the interaction came out with a very interesting conclusion that silviculture needs to be participatory so as to avoid the possible ill effects

(communities reported how the Departmental silviculture led to clearing of some of the valuable NTFP species and also to the invasion of weeds). It also gave a message to the community that

silviculture doesn't mean only thinning & cleaning, but it considers a lot of other elements and activities for overall forest development. Thus, silviculture itself can serve as an interface between foresters and communities, and participatory silviculture becomes an interdisciplinary approach. I suggest below few more such possible interface points among different IUFRO divisions and units:

Division/Unit	Division/unit	Interface point
1.00.00 (Silviculture)	3.02.01 (Silvicultural operations)	Silvicultural practices
	9.05.06 (Community forestry)	Participatory silviculture
2.00.00 (Physiology & genetics)	1.07.00 (silviculture and management of endangered species)	Conservation of endangered biodiversity
	8.02.00 (forest biodiversity)	Biodiversity studies/management/conservation
	9.05.06 (community forestry) with support from 9.01.03 (extension & knowledge exchange) and 6.09.00 (improving education.. in forestry)	Understanding abnormal species diversity Propagation/conservation of RET species
3.00.00 (Forest operation engineering & management) through 3.02.02 (nursery operations)	2.00.00 (Physiology & genetics)	Nursery operations for critical species that require special care because of their genetic vulnerability
4.00.00 (Forest assessment & modelling) through 4.01.00 (forest mensuration) and 4.02.00 (forest inventory)	5.11.00 (non-wood forest products)	NWFP inventory
	9.04.02 (valuation of ecosystem services and carbon markets)	Carbon stock assessment and valuation
	9.05.06 (community forestry)	Carbon stock measurement
05.00.00 (Forest products) through 5.10.00 (forest products marketing)	6.10.00 (rural development)	NWFP/NTFP-based livelihood promotion
6.00.00 (Social aspects of forests & forestry)	5.12.00 (sustainable utilization of forest products)	Differential dynamics on forest utilization and its impact on sustainability
	9.05.06 (community forestry)	Differential dynamics in community forestry
7.00.00 (Forest health) through 7.13.03 (biological control of forest insects)	9.03.00 (forest history & traditional knowledge)	If traditional knowledge systems can contribute to biological control of forest insects
8.00.00 (Forest environment)	9.04.04 (forest land tenure & property rights)	How insecure/secure forest tenures can have differential impact on forest environment
9.00.00 (Forest policy & economics) through 9.05.06 (community forestry)	8.03.05 (forest fire)	Participatory/community forest fire management

These are but few examples and one can identify more interface points. In fact, few of the IUFRO units already recognize that their approach is and should be interdisciplinary. Further, limitations of the existing scope do not mean that we can't have more/new points of interface in future, with changing dynamics.

For promoting interdisciplinary approach in research we must first recognize that it is both in the interest of our own(branch/subject/knowledge) and also the society that we need to adopt such an approach so that we can be holistic, more broadened & enriched in our knowledge, and more useful for the nature & society. Keeping ourselves mystified with our own identity followed by an attitude to not open to suggestions from other areas are our biggest barriers in promoting such



This abnormal colour (pink) of what should be the green alma (*Emblica officinalis*) made the local people confused whether to use it or not.

an approach; so demystification must be a key word to remove such a barrier. For instance, when a layman talks about his blood pressure



Tamarind in Mayurbhanj district of Odisha (India) was found this year to be relatively hollow with significantly faded patches.

level or blood sugar level he doesn't become a doctor, rather the doctor wants him to have such necessary medical knowledge so that the patient can make an effort to put things under control and also to help the doctor administer in an effective way. Why can't we have a demystified and simplified version of forest mensuration which the non-technical villagers can adopt in community forestry? Why can't forest genetics help the communities

understand why an abnormal deviation in some local species has occurred with all external factors remaining the same, or if it has any adverse impacts?

And, why can't forest pathology help them understand if the adverse physical change observed in the recent harvest of tamarind was caused by pathological activities or climate change?

In fact it is high time that we adopt an interdisciplinary approach in IUFRO and come out with some concrete results for the benefit of nature & humanity. For this purpose, the sub-division/WP coordinators have to identify the possible interface points first and the division coordinators have to ensure an attitude for demystification and liberalization. The IUFRO secretariat on the other hand should closely monitor the track and make specific efforts for encouraging the distinguished interdisciplinary achievements because, after all, it would be IUFRO's distinguished achievement in science and society.

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