



# **Biodiversity Assessment for Whom? Issues, Perspectives and Lessons from Community Forestry in Nepal**

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*BY*

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### Abstract

*As a result of increasing emphasis on participatory forestry as an approach to biodiversity management in the developing countries, the type and number of stakeholders, who have stakes, interests or otherwise influence biodiversity management is increasing. This expansion of stakeholder interests has given rise to a growing complexity in biodiversity assessment and monitoring, including conflicts and resistance in accommodating multiple interests on biodiversity. This paper analyzes the case of Nepal's community forestry and shows that despite recent advances in participatory policies, the current biodiversity management policies and practices are still dominated by interests of those groups who have greater political influence in the process. The paper suggests a strategy for more politically balanced strategy to facilitate equitable access to and control over biodiversity assessment and monitoring processes, which forms the basis of sustainable biodiversity management.*

## 1. Introduction

In recent years, participatory forestry is being increasingly considered as a chief strategy of conservation, management and sustainable use of forest biodiversity. This is being promoted in various forms, with varying degrees of sharing of power between local communities and government forest agencies. As a result of this shift in approach, a number of civil society and international groups have come into existence to influence, facilitate and promote the sustainable use of biodiversity.

In Nepal, the two decades of policies and practices of community forestry has shown a consistent increase in the number, types of stakeholders at micro (community), meso (district, sub-national) and macro (national, international) levels (Ojha et al 2002 - ACM report). This increase in number of stakeholders and diversity of interests has given rise to a growing complexity in biodiversity assessment and monitoring. The complexity is primarily related to the processes of conflicts and resistance in accommodating multiple interests in the policies, methods and practices of biodiversity assessment. This is particularly so in the context of Nepal, where a) there is a persisting power imbalance between local communities and forest bureaucracy, b) influence of donors and international conservation groups has been strong, and c) locally rooted civil society is still a new phenomena. These conditions are likely to result in conflicts, domination, and resistance in the process of formulating biodiversity assessment policies and methods, as it is always a very challenging task to accommodate diverse information needs in biodiversity assessment practices.

This paper analyzes the case of Nepal's community forestry and shows that despite recent advances in participatory policies, the current discourse, policies and practices relating to biodiversity management are still dominated by interests of those groups who have greater political influence. The paper begins with an analysis of various stakeholders at micro, meso and macro levels, along with a brief outline of their respective interests on biodiversity. It then analyzes various biodiversity assessment related policies and practices, to distill whose interests has been accommodated, and whose interests not, to what extent and why. The paper then suggests a strategy for more politically balanced strategy to facilitate equitable access to and control over biodiversity assessment and monitoring processes, which forms the basis of sustainable biodiversity management.

## 2. Biodiversity Stakeholders in Nepal's Community Forestry (Interests)

Nepal's community forestry is one of the highly successful participatory forestry programs in the world. The program has been considered a viable strategy for reversing forest degradation and reviving the habitats of many endangered species of plants and animals. The strongest element of this program is that it empowers local communities as the managers of forests

(HMG 1989, HMG 1993); users around a patch of forest are organized in the form of Forest User Groups (FUGs), and the rights and responsibilities relating to use, protection and management of the identified patch of forest is transferred to such groups. To date, there are over 12,000 FUGs that are managing over 850,000 ha of the country's forests (DOF 2003).

Community forestry is a partnership between local communities and the government to create local benefits as well as public goods such as conservation of biodiversity. FUGs as well as different layers of Ministry of Forest and Soil Conservation (MOFSC) share the primary rights, roles and responsibility of forest governance: FUGs are entrusted with rights to use and manage community forests; District Forest Offices (DFOs) are mandated with forming and supporting user groups, and handing over national forests to FUGs. Local government has also come into the scene more prominently than ever before through recently enforced local self-governance legislation; they will likely be a key player in resource governance in the future.

While local communities and government agencies form the key stakeholders historically controlling the forest resources, recently the conception of biodiversity has widened the stakeholders' landscape. The community forestry program is now supported and promoted by a huge network of non-government agencies, donor-funded bilateral projects and international groups. A number of civil society and private sector institutions, including networks, are emerging to influence priorities, processes, and power balances of stakeholders engaged in governing the forest resources.

Table 1 outlines various stakeholders from community to international levels, along with their key interests in relation to biodiversity. These interests may be assessed in terms of various values of biodiversity: a) use value - value of direct benefit, b) option value - value that could be used in future, and c) existence value - value relating to intrinsic existence of a component of biodiversity, without being directly of any use.

**Table 1 Biodiversity stakeholders at different levels and their interests**

<b>Stakeholders</b>	<b>Perspectives and biodiversity interests</b>
<b><i>1. Community Level</i></b>	
1.1 Women	Since women are responsible for many of the reproductive and other household works including managing fuelwood, fodder, and grasses, their interests lie in the management of forest biodiversity for multiple uses. They are also concerned with medicinal use of plants, and collection of NTFPs for cash income.
1.2 Poor, dalits and disadvantaged groups	These groups rely on forests for a variety of products, including foods, medicines, and raw materials for various marketable products. Different ethnic and occupational groups often have specific interests - such as charcoals (blacksmith), logs of specific species (wood carvers), etc. Poor farmers are in need of additional cultivable land, and they often resort to extra-legal cultivation of food crops in poorly guarded national forest areas.
1.3 Village elites	They constitute higher castes, educated, and rich people in the village, who often have adequate supply of forest products from their private lands. They often emphasize greenery and protectionist approach to community forests. They may also favor timber-oriented or commercial use of certain components of forest biodiversity.
1.4 Community Based Organizations (CBOs)	There are usually various forms of CBOs at the community level, which includes youth clubs, women's groups, etc. Their interests in local biodiversity vary, and the collective formal interests may not sometimes match with the individual interests of those making up the institution. They are quite often influenced by rhetoric of environmental conservation and may therefore emphasize greenery and protectionist approach to community forests
<b><i>2. District Level</i></b>	
2.1 Forest officials	Foresters' biodiversity interests originate from two main sources – academic education

	and the positional authority. In terms of education, they are trained on technical forestry, often isolating human elements as an integral element of the forest ecosystem. In terms of authority, they are entrusted with the responsibility of protecting forest from humans. These factors make forest officials approach biodiversity technocratically. Majority of the officials have a faith on the role of state institutions in safeguarding forest biodiversity.
2.2 Non-governmental Organisations (NGOs)	NGOs range from conservation groups to those advocating for people's rights in biodiversity.
2.3 Local government agencies (VDCs, DDCs)	As a result of recent local self-governance act, local bodies have been entrusted with some responsibilities for the management of local natural resources including forest biodiversity. Although there is some contradiction between this act and the forest act as well as other sectoral acts, these institutions are increasingly aware of their role in managing forest biodiversity as a local resource for development. They increasingly looking for greater role in community forestry in their respective areas, although holistic planning is generally poor in these bodies,
2.4 Local units of political parties	They are increasingly influenced by conservationist approach to biodiversity. Despite their commitment for rural development, they have hardly been able to see the subtle connections of local biodiversity with livelihoods, and often get co-opted by actors advocating environmental conservation and commercial use.
2.5 Small-scale forest products traders	They have interests on specific commercial products of forest biodiversity. Since their business environment is generally not supportive, they often resort to forming informal alliances with local forest officials. They buy forest products from or employ poor and disadvantaged groups in their business.
<b>3. National Level</b>	
3.1 Department of Forest (DOF) /MOFSC	They have a mandate of protecting forest biodiversity, and the recent 10 <sup>th</sup> five-year plan has made it more mandatory to target forest management to livelihoods needs. However forest professionals they hold similar view as those mentioned in row 2.1
3.2 Donor projects	Donor projects in forestry sector in Nepal vary in terms of explicit focus in the continuum between biodiversity conservation and livelihoods, and there are cases of conflict between these two perspectives. It is usually common that all forest-related projects have an agenda of natural resource sustainability.
3.3 Conservation-oriented NGOs	They promote biodiversity conservation, and may take local institutions and people as a means to achieving conservation goals. They consider themselves of having conservation focus to indicate a niche in getting resources.
3.4 NGOs advocating people's rights in biodiversity	They often see biodiversity as a legitimate resource of local people. They usually conduct and promote advocacy activities to this end.
3.5 Federations and networks comprising of civil society actors and other groups	There are networks of civil society pursuing biodiversity agendas from local people's perspective (such as FECOFUN). There are also cross-institutional alliances such as Nepal NTFP Network (NNN), which deals with policy and practical issues relating to NTFPs.
3.6 Research institutions	Research institutions vary in terms of perspectives, approach and focus in biodiversity research. Usually they approach research sectorally and emphasize extractive research, which mostly benefits international conservation and commercial groups.
3.7 Forest products manufacturers and exporters	They are interested in commercial components of biodiversity. The policy and regulatory environment for trade and export is often complex and discouraging.
<b>4. International</b>	
4.1 Donor organizations	Their stated concern is both protection of biodiversity and contribution to poverty reduction. Some more focus one perspective than the other.
4.2 International conservation groups	They promote conservation agendas and activities worldwide without looking into connection between biodiversity and local livelihoods.
4.3 Logging companies	They often lobby for policies and institutional arrangements for commercial management of biodiversity component.
4.4 Certifying institutions	They develop mechanisms and processes for certification of natural products - in aspects of sustainability and equity. Through this they advocate conservation and sustainable use
4.5 Green/natural products consumers	They expect green and natural products, including users of traditional medicines. Their values create incentives to manage biodiversity locally.

Abbreviations: DDCs (district development committees), VDCs (village development committees), FECOFUN (Federation of Community Forestry users, Nepal).

An analysis of various interests in terms of where they are located in the continuum of 'use-option-existence' values is given in Box 1.

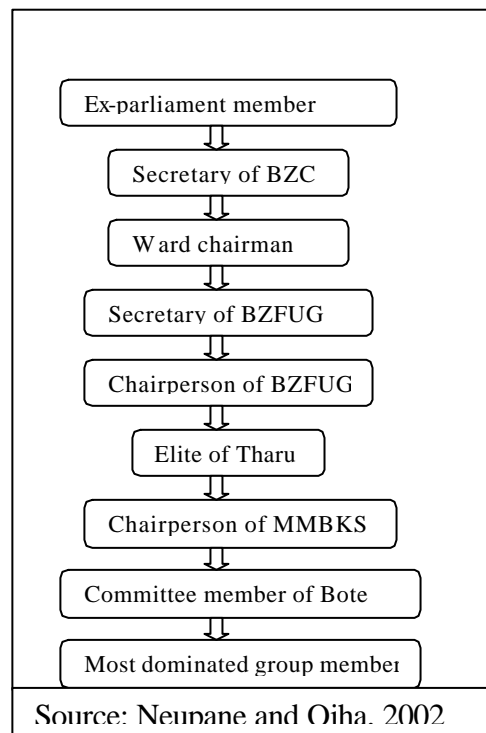
**Box 1 Distribution of stakeholders based on biodiversity values**

Values	Community	District, Sub-national Levels	National	International
<i>Existence value</i>	None	<ul style="list-style-type: none"> <li>• Forest officials, Conservation NGOs, Local government</li> <li>• Local units of political parties</li> </ul>	<ul style="list-style-type: none"> <li>• DOF and MOFSC</li> <li>• Donor projects supporting conservation</li> </ul>	<ul style="list-style-type: none"> <li>• Donor organizations, International conservation groups</li> </ul>
<i>Option value</i>	<ul style="list-style-type: none"> <li>• Village elites, CBOs</li> </ul>	<ul style="list-style-type: none"> <li>• Local government</li> </ul>	None	<ul style="list-style-type: none"> <li>• Certifying agencies</li> </ul>
<i>Use value</i>	<ul style="list-style-type: none"> <li>• Poor, women and disadvantaged groups</li> </ul>	<ul style="list-style-type: none"> <li>• NGOs advocating people's rights in biodiversity</li> <li>• Small-scale traders</li> </ul>	<ul style="list-style-type: none"> <li>• Donor projects supporting livelihood</li> <li>• Forest product manufacturers and traders</li> </ul>	<ul style="list-style-type: none"> <li>• Logging companies,</li> <li>• Green products consumers</li> </ul>

The Box indicates that poor, women and disadvantaged groups within the communities are the ones who are primarily concerned with the direct use values of biodiversity. It also indicates that there are a significant number of groups, often staying at distance place, who are concerned with existence values of biodiversity. Interestingly, there are only a few who are concerned with option values alone. Such a distribution of stakeholders across various values categories is actually the underlying basis for conflicts to emerge, indicating a need for strategies and processes to facilitate communication and negotiation across such interests.

It is to be noted that communities in Nepal are generally not homogeneous, and consists of groups differentiated by class, caste, religion, gender and ethnicity (Ojha 2002 ). Neupane and Ojha (2003), in a study of power relations of a community in central Terai district of Nawalparasi, found out that a few elites have always taken influential positions of decision-making in the community. The top five hierarchical layers and key power holders are from

**Figure 1 Power structure of the community - A case of Sishawar Buffer Zone FUG**



Brahmin/Chhetri ethnic group and other local elites (Figure 1). The poor and the disadvantaged occupy the lowest political positions.

This difference in political position, coupled with differences in economic characteristics, results in variation in the ways households depend on forest and value different components of forest biodiversity. In Sishwar community forest, a species called Vokta (??) was used by the poorest groups for rope-making. Since the rich households could afford plastic ropes, they eliminated this species as a weed, and the poor suffered (Neupane and Ojha 2002). Another example comes from Pallopakha FUG in central hills of the country, where women were found to value Tinju (*Dyospirus melanxylon*), whereas men valued only Sal (*Shorea robusta*) and Chilaune (*Schima wallichii*). This difference in valuing biodiversity demands an assessment approach that emphasizes recognition of such diverse values, and facilitates negotiation of perceptions, knowledge and perceptions.

The emergence of international biodiversity concern in Nepal's community forestry is triggered by two different sets of phenomena. First, the dissemination of evidences on the causes and consequences of forest degradation in the fragile Nepal Himalaya aroused great concerns in early 1980s both regionally as well as internationally (Echolm 1976). This was followed by a response from international donors and technical support groups to reorient policies and programs, which promoted community forestry and other participatory approaches to natural resources management. The same reflection of crisis also prompted Nepali government to establish a strong network of protected areas covering as much as 18% of the country.

The second phenomenon that led to the emergence of groups at the international level having interest on Nepal's biodiversity is the continuing expansion of market for Himalayan medicinal herbs, and various other forms of Non-Timber Forest Products (NTFPs). The expanding market for certain high value species (or their products) has created opportunities of trade. They tend to emphasize a few tradable species, rather than biodiversity as a whole, and more powerful business interests, often in collusion with bureaucratic elites. Despite such opportunities, efforts to find dynamic balance between the levels of commercialization, and biodiversity conservation are limited.

### **3. Whose Interests in Biodiversity Policy and Practices?**

#### ***3.1 Overview of biodiversity policies***

Nepal has several sectoral policy documents that emphasize biodiversity conservation, sustainable use of medicinal plants and NTFPs, participation of local people in resource management. Key policy documents and their scope of mandate in relation to biodiversity assessment and monitoring are given in Box 2.

**Box 2 Policies related biodiversity management in Nepal**

- *Forest Act 1993 and Forest Rules 1995*. They provide a regulatory base to government officials, forest users and other key actors to take control of, use and manage forest resources in various regimes, including community forestry.
- *National Conservation Strategy (NCS), 1988*. NCS focuses on people as the salient feature of resource conservation. In doing so, it endeavors to reflect the social and cultural values and the economic needs of the people. One of the key goals is to preserve the biological diversity of Nepal, both plants and animals.
- *Master Plan for the Forestry Sector (MPFS), 1989*. *Medicinal and aromatic plants and other NTFPs and Conservation of ecosystems and genetic resources* are two of the six primary programs. These programs aim at conserving resources and promoting sustainable use for the benefit of people. The policy has stressed the development and management of all accessible forest resources (about 61 % of the country's forests) through active participation of the local communities. Accordingly, community forestry programme has been implemented in the whole country through the past two decades.
- *Nepal Environmental Policy and Action plan (NEPAP), 1993*. National Planning Commission and IUCN Nepal developed NEPAP, which aims at preserving endemic and endangered species and their habitats, and promoting private-public roles in setting up biological inventory and developing conservation measures.
- *Nepal Biodiversity Action Plan (NBAP), 2000*. NBAP seeks to consolidate biodiversity conservation efforts by establishing a separate body under a special Act, and has identified conservation of country's biodiversity through coordinated efforts of government and NGOs.
- *Tenth Five Year plan, 2002-2007*. This plan also emphasizes promotion and conservation of NTFPs for creating local livelihoods opportunities.
- *Convention on Biological Diversity, 1992*. Signatories to the Convention on Biological Diversity (CBD) are committed to the identification and monitoring of biodiversity (article 7), to respect and conserve relevant indigenous knowledge (article 8 (j)) and to the sustainable use of components of biological diversity (article 10). Yet to date, despite the near completion of 149 National Biodiversity Strategies and Action Plans (NBSAPs), there is still a lack of straightforward and coordinated methods for monitoring biodiversity at national level, let alone for enabling the contribution of resource users to such assessments. The fulfillment of such commitments carries large information requirements: each country must assess and monitor biodiversity, taking into account the knowledge and use made of such biodiversity by a range of stakeholders. Consequently there is a widely perceived need to harmonize information gathering and reporting procedures and a demand for tools and methods to support local stakeholders in expressing their points of view, and contributing to the process.
- *Forest Inventory Guidelines 2000*. This stipulates a mandatory method as regards how biodiversity should be assessed in community forest while prescribing type and extent of uses.

In the subsequent section, we analyze three crucial policy elements: a) Forest Act 1993 and Forest Rules 1995, b) Forest Inventory Guideline 2000, and c) FUG Operational Plan to determine the extent to which various stakeholders have influenced the policy provisions and practices relating to biodiversity assessment and monitoring.

### ***3.2 Forest Act and Regulations - Distilling Biodiversity Interests***

Forest Act 1993 and Rules 1995 specify the provision through which various actors of community forestry pursue their interests (see Box 3). Although these regulations recognize FUG as an independent self-governed institution, it is actually the agreed operational plan that specifies the rights of forest users in the community forests. Several provisions of regulations provide discretionary rights to government, including forest officials, which may limit the rights of users. While in the Act, there is no mention of such discretionary rights (rather the DFOs are required to play the role of advisor and facilitator), in the Rules several such authorities have been included, which seems to withdraw some of the rights from communities.

**Box 3 Forest Act 1993 and Forest Rules 1995: analysis of distribution of biodiversity related rights between local communities and government agencies**

1. FUGs are authorized to use, manage and protect forests based on approved Operational Plans (OP)
2. If FUG actions create 'significantly negative' environmental impact, or if FUG do not comply with conditions specified by the government, DFO can revoke FUG OP (Article 26-2 of Forest Act 1993 and Rule 36 A of Forest Rule 1995).
3. Every year, FUG is required to submit a report on activities and achievement to DFO (Article 44).
4. Bias on forest trees when common land areas are taken by communities (Rule 26-2).
5. FUGs are mandatorily required to comply with any provisions specified by DOF (Rules 27-6, 29-2).
6. FUG is required to include any aspects directed by DOF in its operational plan (Rule 28-1).
7. Specified contents of OP - focus on forest protection; no indication of livelihood strengthening (Rule 28-1).
8. Cash crops can be cultivated only when they do not affect the canopy of main forest crop (Rule 28-2).
9. DFO is authorized to undertake monitoring and evaluation of FUGs (Rule 29-5).
10. User are not allowed to: a) destroy forest, b) transfer use rights (except on approval from DFO), c) clear forest area and cultivate field crops, d) construct huts (except on approval of DFO), e) undertake activities that will lead to soil erosion, f) arrest and kill wild animals, g) quarry stones, soil, gravel and sand (Rule 31).
11. FUGs are required to do plantation or undertake regeneration in areas where forest products have been harvested (Rule 32-2).
12. DFO can take actions against FUG officials (Forest Act Amendment 1998).
13. Recognition of FUG as an independent institution (Article 43).
14. Royalties of various forest products fixed by the government (Rule and their amendments).
15. Certain species are banned for collection and trade (Rule and their amendments).
16. Enforcement of forest inventory guidelines to be followed in forest resource assessment in community managed forests (DOF directives, 2000).

There are some legal provisions that mandate FUGs to comply with or at least respect the biodiversity values of the state forest authorities and officials. This is evident from the fact that users are not allowed to arrest wild animals that live in (or partially share the community forest as habitats), undertake cash crop cultivation by opening canopy of the tree crop, and are required to undertake plantation or undertake regeneration in areas from where forest products have been harvested. These provisions implicitly or explicitly seem to impose 'existence' values on the users who actually are motivated by the 'use' values.

**3.3 Forest Inventory Guideline - Assessment of Biodiversity from Whose Perspectives?**

In March 2000, MOFSC issued a circular to all DFOs as well as FUGs to undertake a detailed inventory of community forest while prescribing harvest levels of forest products. The idea was to ensure sustainable harvesting by limiting the extraction within annual increment. In line with this, DOF issued a directive for the inventory of community forest in August 2000 to provide practical guidelines to field foresters and rangers for the assessment of growing stock and increment. It is mandatory for DFOs and rangers to follow these directives while handing over a forest to community or renewing the expiring FUG operational plans.

Before the forest act 1993 and forest rules 1995 were put into effect, a single document called operational plan, that specified both the constitutional (relating to group norms) and operational aspects (relating to forest utilization, protection and management), was used as a basis for the hand over of forests to communities. After the new forest act, the two sets of issues - constitutional and operational - were disaggregated, and put in two different documents: a) FUG constitution, and b) forest operational plan. Once the constitution is prepared and a FUG registered with the DFO, operational plan is prepared with detailed inventory of forest, which forms the basis of forest hand over. After this adjustment, the current policy instrument regarding forest inventory is one step ahead in drawing out policy measures for addressing the issue of biodiversity assessment and monitoring.

While the inventory policy intervention was actually a result of widespread concern for ecological sustainability of community forest management, there is however debate as regards whose biodiversity interests it serves. Key issues around the debate are briefly outlined below:

First, the science of resource assessment is understood in a narrow sense of analyzing resource attributes isolating inextricably linked human perceptions, knowledge and actions. This means that an emphasis is put on assessing biodiversity from outsider's perspective, ignoring the way local people understand and monitor local biodiversity. A mechanistic and quantitative technique suggested in the guideline does not allow villagers' common sense, and their values of biodiversity direct the process of data collection and analysis. Limited qualitative insights are collected as part of developing wisdom for forest management. Because of the emphasized approach of science, the vast amount of knowledge that has created and sustained through local knowledge system is being ignored.

In addition, the scientific element that underpins the principle and practice of forest inventory as stipulated in the guidelines requires collecting a lot of quantitative data, spending a lot of time and resources, leading to a significant delay in decisions and actions. Forest users would not be prepared to invest a tremendous amount of effort to elevate the precision of firewood estimation from quintal to kilogram. Also, it is important to know how essential for them to know beforehand such a detailed strategy. They would rather prefer to distribute among themselves whatever amount of firewood that would accrue at the time of harvesting, using spatial control approach to sustainable harvesting, and the time thus saved would be used in farming or earning wages.

Second, the current focus of resource assessment is on assessing the stock and increment of timber products, and there are limited strategies recommended to assess a wide range of non-timber components of biodiversity that are available in community forests. This indicates that the guideline serves the interests of elites, and still ignores the interests of poor, women and disadvantaged groups, who actually are more concerned with non-timber components of biodiversity.

Third, the approach is highly generic, and fails to address specific contextual issues. In one instance, one of the authors observed a ranger suggesting a thinning formula to forest users: 'measure the girth, multiply by sixteen and measure that distance between the two trees; this would give the distance between the trees to be retained'. This is basically a generic rule of thinning that he has learnt, and we argue that if he gives this training to all forest users, and if they also apply the same formula, all community forests of Nepal would look similar in term of biodiversity composition. Our proposition is that technical foresters tend to impose their generic and abstract conceptions in the specific contexts that vary across time and space.

Fourth, the current policy instrument specifies the technical arrangements of resource use, which essentially interferes with users' independent decision on the harvesting levels. Political scientists regard this as a process of limiting 'constitutive choice' of FUGs (Agrawal and Ostrom 2001), which will lead to limited motivation and enthusiasm on sustainable forest management. In other words, if a FUG feels bad or gets discouraged through a technically sound guideline, the institutional base of sustainable forest management is ruined, and the outcomes may sometimes be counter-productive. It is essential that sustainable biodiversity

management should be understood in terms of the interactions of social, economic, political and ecological systems.

Fifth, the policy has legitimized a biodiversity knowledge system that is not owned by or accessible to large number of users, who are supposed to participate in forest management decisions as well-informed resource managers. This has put many users in difficult position in terms of participation in the decision-making as informed resource managers (Dhital et al. 2003). This means that mandating extra biodiversity assessment technicality in the FUG system involves cost in terms of participation, particularly of those who are illiterate, poor and disadvantaged. If this is the result, then the policy instrument may go counter to the community forestry goal of equitable livelihoods.

Since implementing this directive entailed a need for significant amount of extra efforts, knowledge, and skills on the part of forest users and rangers, the process of hand over of many new community forests is delayed or even halted. On an average, there are only a couple of forest rangers in a district who can skillfully provide technical support needed to conduct the inventory. The renewal of expiring OPs has been delayed, which implies a suspension of FUG use rights and management interventions. In many cases, since the government has not made provisions for alternative ways of delivering services to forest users in this regard (such as through private and NGO sector), the communities have been forced to pay rents or charges for speedy resolution.

In summary, the externally imposed, detail-oriented, quantitative science that is behind the inventory guideline is neither useful nor desirable for sustainable and equitable management of biodiversity, and it only serves the hidden political interests of powerful bureaucratic and professional elites. Introduction of this type of resource assessment obligation to FUGs widens the power gap that already exists between the forest bureaucrats and users. Since the inventory has been set as a pre-condition for forest hand over, and that the service is delivered only through the government staff who are limited in number to provide services, FUGs are compelled to be loyal to and comply with any conditions set by the staff.

### **3.4 FUG Operational Plans - Distilling External Biodiversity Interests**

**Forest Act 1993 and Rules 1995 have identified a set of contents to be included in an OP (see Box 4). Since the plan is a binding legal document, FUGs are required to strictly follow it. The plan is drawn up by forest rangers with varying degrees of participation of users. Box 4 Contents of FUG operational plans as prescribed in Forest Rule**

The community forestry guidelines on OP preparation stipulate the following compulsory components:

- Forest description - name, boundaries, area (ha), forest condition and forest type
- Forest map (survey map)
- Forest block division, and description of each block - name, boundary, area, aspect, gradient (cragginess), soil, forest type, dominant species, useful species, forest age (pole stage, mature or mixed) and status of natural regeneration
- Forest management objectives
- Method of protection of the forest
- Silvicultural activities - methods for thinning, pruning, cleaning and other operations
- Nursery, plantation, income generation activities, and time table for implementation
- Description of areas that may be suitable for medicinal plant cultivation, medicinal plants species found in the forest, programme and time table for medicinal plant cultivation
- Mechanism for sale and distribution of forest products and management of other income sources
- Fines and other punishments (as permitted in Article 29 of the Forest Act, 1993)
- Wildlife conservation activities
- Other issues stipulated by the DOF-

In practice, most of the OPs are designed to give emphasis on economic plants especially those tree species that are valuable for timber. Many inferior types of endemic plants are often ignored and eliminated as unwanted species or weeds during harvesting and silvicultural practices. There are several associated reasons and assumptions behind this. Firstly, the objective of the DOF, the leading institution for implementing community forestry, emphasizes for timber-oriented silvicultural and forest management practices in community forests. Second, local elites dominate decisions about the use and management of forest biodiversity either in formulation of rules or in taking the decisions in assembly/meetings at community levels. This is because the social structure is very complex and disadvantaged groups cannot express their views in the public forum.

Thirdly, the values of wealthiest and privileged castes also coincide with those of the government foresters as they share common commercial and/or biodiversity interests. Lastly, even the projects, research organizations and NGOs have done little to promote use and conservation of a huge range of biodiversity moving away from timber focus.

## **4. Discussion**

It appears that while there are several policy attempts to regulate biodiversity assessment, and various practical initiatives to facilitate this, there are still a number of crucial issues in relation to whose interests they serve, and who control, initiate and apply these initiatives.

The policy initiatives are conceived in a comprehensive way, and quite often well-intentioned policies have several unintended consequences. The forest inventory guideline failed to work out strategies of delivering services needed to implement the more rigorous procedure of resource assessment. While the guideline specified the kind of procedure to be followed for an inventory, it was not put clearly in the context of existing capacities of DOF, thus ignoring the need to set out policies that would address the service supply side. While it was clear that this would require tremendous amount of technical support, which is beyond the prevailing supply capacity of DOF, there was no policy to encourage service delivery from the NGO or

private sector. This left DOF as the monopolist in the delivery of technical services, which not only limited choices to people for competitive services, but also led to non-availability of services and reinforcement of bureaucratic power discouraging and patronizing forest user groups who are legally independent of DOF.

With the expansion of community forestry in Nepal, government and supporting donor projects have demonstrated concerns for sustainable use of biodiversity. Forest inventory guidelines and a circular banning green tree felling were among a few responses to this concern. These moves were based on or limited participation of local communities and civil society actors ignoring their values and perception on biodiversity.

The social and economic context in which biodiversity resource assessment and monitoring currently takes place is basically characterized by unequal power relationships and different approaches to and forms of knowledge. Policy instruments are often not sensitive to this aspect, and this is one of the reasons why they usually fail to create intended impacts. For instance, the inventory guideline ignores the application of local knowledge and wisdom, reinforcing the power imbalance between the government forestry staff and local people. Within community too, there are differences in power and position among caste, gender, ethnicity, education and age groups, which may result in unequal access to the process and outcomes of the prescribed biodiversity assessment formats. At some worse situations, alliances between government officials and local power elites may result in the use of such official approaches to reinforce their power and knowledge.

Indigenous ethnic groups, who are often marginalized from the mainstream forest decision-making processes, have relatively better knowledge of biodiversity of the area, as they are the ones who are more closely related to the various components of biodiversity for livelihoods. However, since their knowledge is not taken into account in the community decision-making processes, such knowledge system is being degenerated.

Also, the lack of committed people within and outside government and community organizations, and competent and politically committed service providing agencies and individuals, who could challenge the power of both government officials and the local power elites further exacerbate the situation.

Similarly, limited access of the poor and disadvantaged groups in decision making as a result of prevailing hierarchies in caste and class as well as gender discrimination has constrained the access of these groups in benefit sharing (Neupane 2003, Rai Paudel 2003). This has minimized the incentives of such groups to participate in sustainable resources management and biodiversity conservation.

The discussion presented above clearly indicates that any policy intervention option has to be analyzed from political perspective, looking at who controls and whose knowledge dominate in defining policies.

## **5. Strategies for collaborative biodiversity assessment**

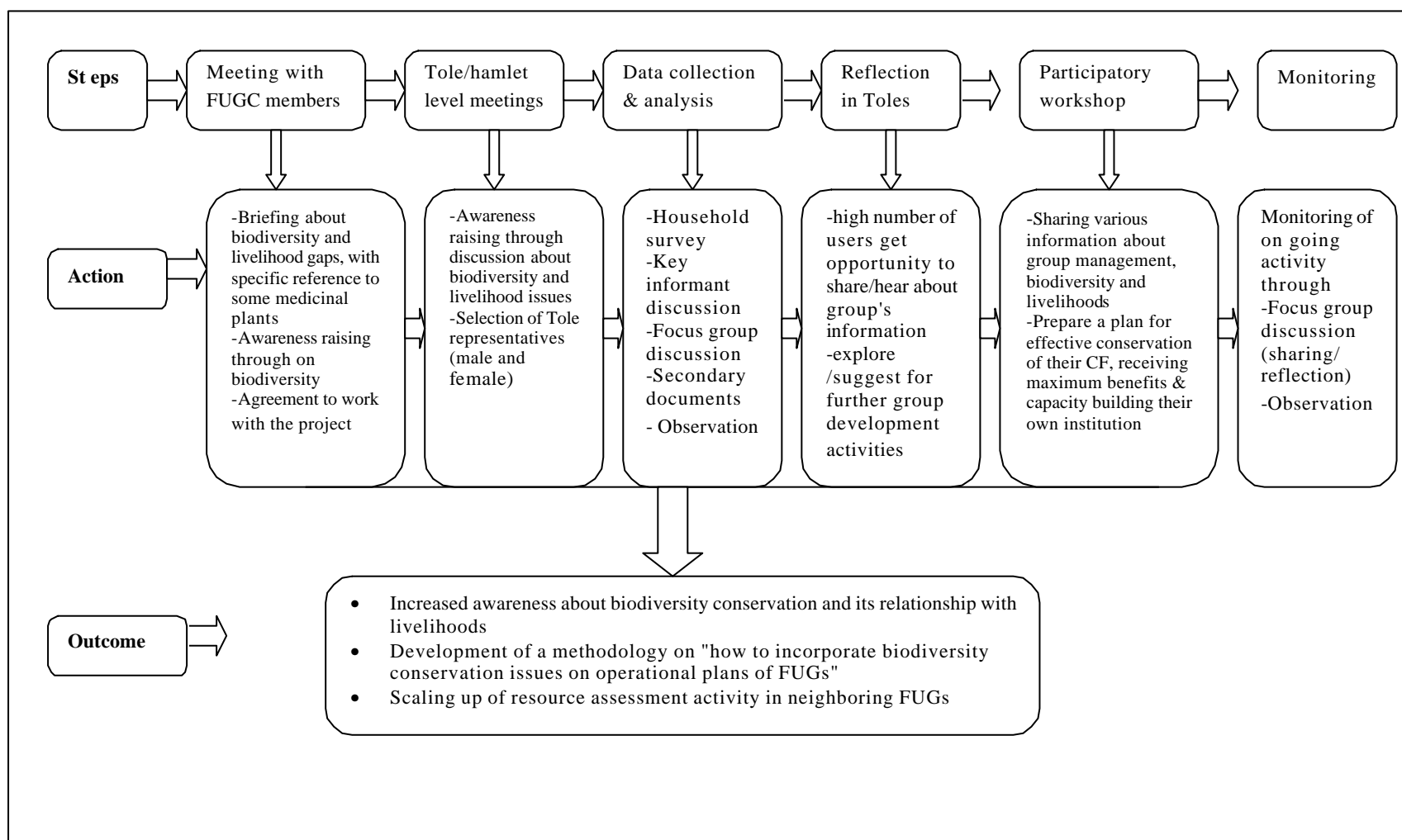
Since there is still limited policy and practical arrangements to ensure fair negotiation of interests, and methods for the assessment of biodiversity resources, there is a need to explore possible strategies to facilitate such arrangements. The process of negotiation of biodiversity

interests among the stakeholders, at different levels, need to be supported by a strong on-going processes of communication.

We can also improve the way we approach policy. We may move from the current practice of one-off discrete decisions to approaching policy as a process of holistic experimentation. If we approach forest policy (including implementation) as an 'experiment', then the role of monitoring is crucial to identify and assess different types of policy-induced changes. And, since biodiversity policies are shaped, created, decided and implemented at different governance levels, monitoring (including analysis of information) also needs to happen at each of these different levels.

A strategy for improvement should consider a) strengthening the stakes of the women, poor and disadvantaged groups within communities, b) facilitating better communication and negotiation of interests within community, and between community and other levels, c) recognizing local knowledge and cultural context, and d) ensuring equitable distribution of costs and benefits of biodiversity assessment.

In recent initiatives, methodologies (see Figure 2) are being used to facilitate on going monitoring and assessment of both biodiversity and institutional processes at the community level, based on the principles of participatory action and learning (Malla 2000, Malla 2002, Neupane and Ojha 2002). These highly iterative methods have demonstrated their potential to help both outside facilitators and local communities to work together in exploring issues and opportunities in relation to biodiversity management at local level. These methods incorporate steps and tools to address the imbalance of power and allow context-specific learning as regards 'how to balance' the power structure for sustainable use of biodiversity, emphasizing a learning based approach and smooth communication among various groups within the community.



Source: Neupane and Ojha 2003

## 6. Conclusion

As a result of increasing emphasis on community forestry as an approach to biodiversity management in Nepal, the type and number of stakeholders, who have stakes, interests or otherwise influence biodiversity management is increasing. This expansion of stakeholder interests has given rise to a growing complexity in biodiversity assessment and monitoring, including conflicts and resistance in accommodating diverse interests on biodiversity. The complexity is primarily related to differences in values, perceptions, knowledge, and power among the various groups.

The process of conflict and negotiation is taking place in unequal political footing, and this is why all policy instruments seem to explicitly or implicitly promote the interests and objectives of powerful groups in biodiversity assessment and monitoring, in terms of methods and contents, as well as enforcing reporting obligations. Likewise there is also a domination of the knowledge system of powerful groups. As a result, there is usually a situation of inequitable sharing of costs and benefits among various groups, and in some instances, this has affected the sustainable and effective use of biodiversity.

Stakeholders in Nepal often tend to see conservation, sustainable utilization and local livelihoods as separate issues. Many institutions and projects that are designed on this assumption rarely exchange ideas and search for holistic solutions. Our belief is that community forestry, given its current scale and prospect for future expansion, has tremendous scope for addressing goals of livelihoods as well as biodiversity conservation in an integrated way, if local stakeholders are made capable of actively monitoring, learning and adapting management systems.

There is a need for all stakeholders in forest management to understand each other's interests and diverse values in biological diversity. There is a need for a monitoring system that will enable stakeholders to negotiate diverse values, perceptions and interests. The focus should be on local level monitoring that can be the basis for enabling stakeholders to learn about, manage, preserve, utilize and develop bioresources for the benefit of present as well as future generation.

Key strategies for creating politically balanced processes of biodiversity assessment and monitoring include: a) recognition of local knowledge systems, b) recognition of 'user pays principle' in generating information to minimize burdens of data gathering on the local communities, c) recognize political dimensions of assessment and monitoring processes as an element of reflection and analysis, d) consider multiple facets of policy instrument, e) allow context-specific flexibility in resource assessment methods.

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