

POLICY IMPLICATIONS OF PARTICIPATORY BIODIVERSITY ASSESSMENT

ETFRN International Seminar for Policy-Makers and Implementers

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SUMMARY REPORT

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'Monitoring assessment and reporting is not an end in itself. ... the primary goal of forest-related monitoring, assessment and reporting is to facilitate informed decision-making on forest policy and management at all levels (i.e. sub-national, national, regional and global.' (ECOSOC, 2001)

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1 Background and objectives

This report summarises a seminar held on 21 May 2002, with participants from government, NGO and research institutions. The aim was to review the results of an internet workshop on 'Participatory Monitoring and Evaluation of Biodiversity' (organised by ETFRN and ECI in January 2002), interpret the implications for policy formulation and implementation, and plan appropriate dissemination.

The day was structured to be as interactive as possible. Many participants had seen a draft version of the summary of the internet conference (final version now available at <http://www.etfrn.org/etfrn/workshop/biodiversity/index.html>). The diversity of assessment approaches was illustrated through a relatively large number of short presentations. Three discussants from different institutional and national backgrounds were invited to give their immediate reactions; all participants discussed the presentations in break-out groups in the afternoon, and international participants were invited to contribute short reports after the event. All of these mechanisms contributed to a rich debate, and are included in this report and taken into account in the conclusions.

The programme is given in appendix 1, and the participants are listed in appendix 2 with contact details.

2 Presentations

2.1 Anna Lawrence: Summary of the ETFRN internet workshop

2.1.1 Introduction

Participatory assessment, monitoring and evaluation of biodiversity (PAMEB) provides a possible means of reconciling the need for national assessment, monitoring and reporting, with the increasing focus on involvement of all relevant stakeholders and particularly indigenous / local communities.

An internet workshop was convened from 7-25 January 2002, which sought to elucidate:

- the various **objectives** and **information needs** of people conducting PAMEBs;
- the ways in which **values** affect the assessment process;
- **approaches** and **methods** in relation to objectives and information needs;
- the **costs** and **benefits**;
- and priorities for **institutional / policy change** to create an enabling environment.

300 Participants from 55 countries included the CBD secretariat, international donors and NGOs, universities, grassroots organisations.

We took as our starting point the IUCN definition of biodiversity (McNeely et al., 1990): *'all species of plants, animals and micoroorganisms and the ecosystems and ecological processes of which they are parts ... including both the number and frequency of ecosystems, species or genes in a given assemblage'*,

2.1.2 Participatory assessment monitoring and evaluation of biodiversity: What can it achieve?

PAMEB can be both process and product. As a product, it provides:

- short-cuts to scientific assessments;
- data which is useful to local resource managers in addition to scientific data;
- scientific information relevant to local needs;
- quantitative and qualitative data

As a process, it helps to:

- improve communication between stakeholders;
- build confidence and capacity;
- enhance transparency of decision-making
- support inclusive decision-making;
- fit in with ecosystem approach.

2.1.3 Assessment is value-laden

The call for participatory approaches is intimately connected with the question 'Is it possible (for anyone - scientist, forest user or whoever) to be objective in conducting a biodiversity assessment? If not, is it possible for different stakeholders to understand and use each others' assessments?' Our values affect our perceptions and therefore what and how we assess.

The conventional view is that local people value biodiversity only for its useful components, but research shows aesthetic, cultural and spiritual values; and that non-monetary benefits may be valued more than monetary ones. Different stakeholders may hold apparently incompatible values, for example key conservation species may be seen as pests. Values are location specific, and are affected by knowledge and access (for scientists as well as for local people).

Research which draws out values for biodiversity is a political process. On the one hand, making values explicit can lead to conflict, but without bringing such tensions into the open it would be difficult to work towards a solution which accommodates different interests. Recognition of the validity of different stakeholders' values is challenging particularly for more powerful stakeholders because it implies trade-offs. On the other hand, values can change through participation in a PAMEB, and through increased understanding of other stakeholders' values.

2.1.4 Methods and processes

Stakeholders have different reasons for conducting a PAMEB, and varying information needs. Most national or regional decision makers expect information in quantitative spatially comparable forms. Participatory processes may not supply this so readily (or efforts to quantify may distort local perceptions) but may provide qualitative information of different and complementary value. It is very important to match objectives with methods and stakeholders, rather than apply a blanket set of recommendations to all situations which appear to need a participatory approach.

Much of the discussion focused on the different cultures, knowledge systems and power relations of the different stakeholder groups, and the difficulties of "translating" between knowledge systems.

Steps in the PAMEB process, where local stakeholders are involved, include:

1. start with positive policy and official attitude, helping to establish respect between cultures and knowledge as discussed above;
2. clarify perceptions of benefits and obstacles; define terms and objectives;

3. select monitoring partners;
4. involve villagers in developing methodology; start simple and grow; use both scientific and participatory tools;
5. set indicators or define targets, which are relevant to stakeholders' livelihoods;
6. integrate recording of indicators into daily life;
7. make sure that villagers take part in analysis and decision-making, or agree on methods of analysis.

This process probably represents the most complex and challenging form of PAMEB. Other PAMEB approaches (involving, for example, volunteer enthusiasts in monitoring bird populations in the UK) require fewer steps, and less attention to establishing mutual understanding at the beginning of the process.

Several of the PAMEB approaches which seemed most successful in empowering local people to manage biodiversity resources, were based on the tradition of participatory research, i.e. using information-collection as a way of answering questions defined *by the participants* about the extent and function of natural resources. Key aspects of this approach include: involving local people in developing the methodology, iterative modification of the methodology, and decision-making or campaigning based on the results.

It is impossible to assess the whole of biodiversity, and decisions must be made about *which* components are to be measured and what they tell us about the whole (or the part that we are interested in). This observable subset of biodiversity components is usually termed 'indicators', and they are particularly useful in monitoring *changes* in biodiversity. Even among different scientific fields the choice of indicators is a contested issue and PAMEB adds a further dimension to the debate, in that the choice of indicators must be made by, or interesting to, the local stakeholders, but must also have a clear relationship to the whole. Some contributors expressed concern that PAMEB did not really relate to biodiversity because local people are unlikely to monitor the whole of biodiversity. However that seems to be the case with *all* indicators; we need to understand the relationship between the indicators and the whole, and in many cases we do not know enough about the whole (of biodiversity) to be sure of this relationship. Local choice of indicators is likely to be based on species of local importance, but not necessarily on useful species. A participatory process is more likely to lead to indicators which are useful to and communicable between a range of stakeholders.

One difficulty which scientists have with local indicators is that they may be expressed qualitatively. However, qualitative approaches not only express attributes which cannot be quantified, they can also help to *explain* changing phenomena. Because different approaches (qualitative and quantitative) have different strengths, the methods must be chosen to suit the objectives, and can often be fruitfully combined. Rather than a set procedure or 'recipe' for PAMEB, a tool box is needed which links methods to objectives for different stakeholders.

Nevertheless, while qualitative measures may be closely linked to empowerment objectives of PAMEB, quantitative measures of change are often more meaningful at the wider scale, and for planning. However, an explicit discussion with local people, of sampling procedures and the rationale for replication, can encourage them to use methods which are more amenable to scientific interpretation; objectivity needs to be offset against the time involved, and the advantages of highly selective sampling which increases the *range* of habitats included.

Difficulties in communication and mutual understanding of world views give rise to questions about the reliability of data collected by 'non-conventional' stakeholders. One response is to triangulate, i.e. to use different stakeholders and different methods, and

then discuss among them the reasons for perceived differences. Where results are validated by cross checking between different sources of data, correlations are often found between community estimates and more scientific survey methods.

Local participants must be involved in *analysis* of data, and decision-making. The exact nature of the work done by local people can be negotiated; for example, if they do not feel comfortable filling in forms, or using computers, these roles can be allocated to other stakeholders, but the data must be accessible to them afterwards.

2.1.5 Costs and benefits – or synergy

Participatory approaches take more time and different skills compared with scientific surveys, but there are benefits that are worth this cost. The potential for real synergy between different actors depends not only on good communication, but also on realistic understanding of the costs and benefits of involving different actors in such assessments, and above all ensuring that local people can take part in analysis and decision-making.

Scientists and other outsiders benefit from PAMEB when local people can provide specialist local knowledge on species and habitat location, and, when trained, provide more data more quickly and cheaply than scientists.

But what are the benefits for local people? In some cases, they need the information to help them manage a resource. Furthermore, there is strange interest among local people in learning about scientific approaches, and hearing about the basis for scientific or global values applied to their local resources. Where there are no direct perceived benefits for local participants however, it may be important to recognise their time and knowledge through payments.

There may be other unforeseen benefits arising from local people's participation. The *process* of communicating results, perceptions, analysis and decisions can contribute to local people's empowerment, as well as provide improved understanding which leads to clarification of rights, resource management decisions etc. This aspect is closely linked to the institutional factors discussed in the next section – because it is unlikely to take place unless the groundwork has been done in establishing a common interest and 'goodwill' among the different participants in the process, sometimes through a *prior* process of empowerment. Similarly, participatory research processes are much more likely to lead to action, particularly if attention is paid to joint analysis and decision-making.'

To achieve real synergy which provides benefits for all parties, we may need not so much new tools, but intermediaries who are able to communicate between the different approaches, and provide a 'voice' for local people to make their perspective more explicit and comprehensible to outsiders.

2.1.6 The policy and institutional environment

Local people cannot take responsibility for creating an enabling environment for PAMEB. There is a need to move the focus out of the community and look at policy and institutional change. Useful PAMEB comes from:

- Policy which acknowledges local rights and creates security of access / tenure
- Positive attitude of officials – stronger relationship with communities
- High level support
- Capacity building (for all stakeholders)

This section of the internet workshop was the one where participants expressed the most need for inputs from decision-makers, so that field experience in PAMEB could be

related to realistic possibilities for institutional change. That is where today's seminar can have the most effective role.

2.1.7 To summarise

PAMEB provides a means to:

- gather more useful data
- ensure participation of indigenous / local communities in decisions, and use of local knowledge in forest management;
- build capacity (through action learning);
- involve all relevant stakeholders.

Methods exist, but real synergy will come from:

- Joint identification of objectives
- Joint development of methods
- Stronger institutional support
- Enhanced communication of objectives and results

The conference ran from 8-25 January 2002. Please see the conference website for a full summary of the discussion, and for case studies:

<http://www.etfrn.org/etfrn/workshop/biodiversity/index.html>

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2.2 Adrian Wells: Participatory biodiversity assessment: the international legal and policy context

The international legal and policy context affecting participatory biodiversity M&E is primarily set by the Convention on Biological Diversity (CBD), and the evolving international forest policy dialogue, previously within the International Panel and Forum on Forests (IPF/IFF) and now under the United Nations Forum on Forests (UNFF). Together, they establish rights and responsibilities, as well as processes for national planning, monitoring and reporting.

2.2.1 Rights and responsibilities (CBD)

The CBD creates rights and responsibilities that may impinge on participatory biodiversity M&E, depending on whether the process involves the collection, documentation and possible use of biological material and associated traditional knowledge. CBD Article 15 requires prior informed consent from the country of origin for access to and use of genetic resources, and on mutually agreed terms for benefit-sharing. CBD Article 8(j) addresses the traditional knowledge, innovations and practices of indigenous and local communities, and encourages the equitable sharing of benefits arising out of their utilisation.

Some 50 countries have introduced national laws and policies to implement these provisions, including procedures and mechanisms to obtain governmental and local community consent. The CBD Bonn Guidelines on Access to Genetic Resources and Benefit-Sharing were recently agreed to facilitate these processes. A number of corresponding initiatives by companies, and research institutes (such as botanic gardens and culture collections) provide useful guidance, including corporate policies and codes of conduct for access to genetic resources, traditional knowledge and benefit-sharing.

The CBD Working Group on Article 8(j) is drafting recommendations on the conduct of cultural, environmental and social impact assessments, and is reviewing participatory mechanisms for indigenous and local communities. It is also reviewing mechanisms for protection of traditional knowledge and folklore (in collaboration with WIPO). Of particular relevance is the development of biodiversity knowledge registers (e.g. in India), to secure benefits for local knowledge holders.

2.2.2 Planning and implementation

Under the CBD Article 6a, countries are obliged to develop national biodiversity strategies, plans or programmes, as stand-alone initiatives or integrated into existing strategies and plans. These present an opportunity to forge a holistic policy framework for participatory biodiversity assessment, incorporating other provisions of the CBD on identification and monitoring, traditional knowledge, sustainable use and impact assessment. But biodiversity strategies are often time-bound processes and participation is time-consuming. Many have had little opportunity to integrate participatory assessment into initial diagnostic analyses and as yet lack a strong grassroots infrastructure for implementation, monitoring and evaluation. However, the development of sub-national/local action plans (e.g. in India) presents new opportunities.

National forest programmes (NFPs) provide another entry point for participatory biodiversity M&E. The international forest policy process (IPF/IFF) endorsed NFPs as the leading framework for forest-sector planning. They are envisaged as holistic, multi-sectoral processes, requiring broad participation at every stage, from formulation and implementation to monitoring and evaluation. Opportunities to engage with the NFP process include the NFP Facility based at FAO and PROFOR II (both multilateral lesson-sharing and capacity-building initiatives).

2.2.3 National monitoring and reporting

Under the CBD, countries submit both national and thematic reports on implementation. To date, countries have submitted two rounds of National Reports. CBD Decision V/19 urges consultation involving all relevant stakeholders in reporting processes. But again, participation is time-consuming and may not meet with reporting deadlines. There is also a disjuncture between formal reporting on implementation, and need for long-term biodiversity monitoring involving local actors to assess the actual *impact* of implementation. However, the CBD Revised Forests Work Programme presents an opportunity to address this; it highlights the need to enhance technical capacity to monitor forest biodiversity, including local community involvement. Formats for 3rd National Reports will be considered at COP7 in 2004.

Monitoring, Assessment and Reporting (MAR) is a principal function of the United National Forum of Forests, established to enable implementation of IPF/IFF Proposals for Action. The UNFF MAR system has yet to take shape and is based on *voluntary* national reporting. An inter-sessional meeting on MAR of progress towards sustainable forests management (Yokohama 2001) highlighted the need for bottom-up aggregation of information, in particular qualitative data, and to communicate a '*comprehensive and holistic story*' of the role and functions of forests. Opportunities to engage with the UNFF MAR process include the development of a format for voluntary reporting (to be agreed by UNFF3 in 2003) and the Expert Group on Approaches and Mechanisms for MAR (to be established at UNFF3).

2.2.4 Some outstanding challenges

- Reconcile reporting on implementation (legal, policy, administrative measures) with long-term monitoring of status and threats to biodiversity. (i.e. the *impact* of implementation).
- Reconcile time-bound reporting requirements with the cost and time of participatory assessment.
- Reconcile locally-determined indicators with needs of national and international policy makers (aggregation and comparability).
- Strengthen the grassroots infrastructure for participatory biodiversity monitoring and assessment.

Adrian Wells

Forest Policy and Environment Group ODI

2.3 Elizabeth Cromwell: The sustainable livelihoods context

Biodiversity resources include not only plants, animals and trees, but also biodiversity below ground (earthworms, rhizobia, pathogens, etc) and in the air (insects, etc), as well as – critically – the human knowledge that has sustained and shaped the world's biodiversity resources over the millenia.

Biodiversity resources are important to the world not just in terms of their “existence” or “intrinsic” value, but also for their direct “use” value and future “option” value:

- They protect soil health, water and air quality, thereby contributing to ecosystem resilience and productivity;
- They contribute to sustainable production now, and form the building blocks for the future (genes for breeding and adaptation);
- They provide biological support to production, in the form of soil biota, pollinators, pest predators, etc.

These contributions are just as important for “industrial” systems as for more “traditional” systems, although the type of biodiversity resources may vary (e.g. in industrial systems, breeding material may be imported from off-site, but local soil biota and insect pollinators remain essential). Thus, biodiversity resources play an essential role in global poverty alleviation.

Biodiversity resources are also an essential component of sustainable livelihoods at the individual household level:

- Poor people are generally weakly integrated into mainstream development processes, in terms of their access to infrastructure, markets, and human and social capital. Locally available biodiversity resources can compensate for this, by providing food and non-food products, and breeding material without the need to engage in markets;
- Locally available biodiversity resources are a form of natural and human capital accessible to poor people who may not have access to natural and human capital in the form of purchased inputs and formal education;
- Many locally available biodiversity resources still retain strong elements of common property and are thus accessible even to poor people.

Thus biodiversity resources can contribute to sustainable livelihoods in multiple ways, including reducing vulnerability. The availability of local varieties, crop diversification and low external input agriculture is key for poor people, and biodiversity resources are often managed sustainably in intact farming systems. For example, 85% of farmers questioned in Eastern Zimbabwe and Eastern Kenya in a recent study stated that they intend to

maintain or increase the number of crops and varieties grown over the next five years (ITDG/ODI, 2000).

In the sustainable livelihood context, the need is to monitor and evaluate more than just the changes in the number of crops and varieties (to continue with the agricultural example), and to include:

- Farmers' own biodiversity indicators;
- Farmers' assessments of trends in biodiversity indicators over time
- Changes in farmers' asset base (ecological conditions, knowledge and skills, access to other capitals) (because this influences farmers' attitudes towards the sustainable use of biodiversity resources);
- Changes in livelihood goals and underlying causes (family composition, on- and off-farm opportunities) (because farmers conserve, abandon or add biodiversity resources according to the livelihood functions they can fulfil).

Participatory approaches can really help – they are “the best of both worlds”:

- They are visual and discussion-based (farmers can lead discussions, with staff involved only as facilitators);
- So they give a better understanding of farmers' perspectives.
- They capture diversity amongst different socio-economic categories and within families according to gender, age;
- They provide very useful information in a relatively short time (good for farmers, good for researchers);
- It is possible to scale up results if a) the sample is drawn from a quality database that accurately records the variation in the influential variables and b) the field work uses an objective common framework (e.g. absolute scores not rankings);
- They convince policy-makers because they are a) visual and b) ground-truthed.

There can be problems with participatory approaches:

- Farmers often do not relate to institutional aspects and other upstream linkages;
- Research leaders and field facilitators need to have an understanding of participatory approaches, and of farmers' livelihood contexts;
- Participatory approaches generally provide deep rather than broad information;
- Participatory approaches involve farmers' definitions which may not be the same as researchers' (e.g. in Malawi, farmers defined “sustainable agriculture” as being having enough high-yielding maize seed and chemical fertiliser to plant their plots, and did not relate to ecosystem linkages (DFID/GoM, 2000)).

What are the institutional implications of using participatory approaches?

- Research leaders and field facilitators must be experienced with participatory approaches and farmers' livelihood context;
- Policy makers must be prepared to accept results obtained using participatory approaches;
- Service institutions must be responsive to farmers' needs expressed through participatory approaches, rather than following top-down service delivery;
- Good inter-institutional linkages are necessary because participatory approaches show that the influence on biodiversity resources, are economic and social as well as environmental.

Further research in the following areas could be useful:

- Farmers' definitions of biodiversity resources, goals and assets;
- The influence of access to human capital, markets, and the policy and institutional context;
- Entry points to strengthen positive access, including fair and equitable access to biodiversity itself;

- Definitions of more refined participatory approaches.

Further sources

- Conference on Combining Qualitative and Quantitative Methods in Development Research, Swansea, 1-2 July 2002 (j.d.holland@swansea.ac.uk)
- Statistical Service Centre, University of Reading (www.rdg.ac.uk/ssc/info/examples/compwork.html)
- Institute for Development Studies www.ids.ac.uk/ids/particip
- ITDG/ODI agricultural biodiversity conservation study, 1997-2000 (see www.ukabc.org)
- DFID/GoM Starter Pack evaluation Module 4, 1999-2000 (see ODI AgRen Network Paper No. 112 from a.coyle@odi.org.uk)

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2.4 Seema Bhatt: Institutionalising Participatory Monitoring and Evaluation within the National Biodiversity Strategy Action Plan (NBSAP), India

India initiated the formulation of its National Biodiversity Strategy and Action Plan (NBSAP), about two and a half years ago. The main objective of the NBSAP is to produce an implementable plan that will: i) conserve India's biodiversity ii) use biological resources sustainably iii) achieve equity in access to benefits from biodiversity. The plan hopes to cover the full range of biodiversity i.e. ecosystems, species and genes, both wild and domesticated.

The NBSAP is being formulated at many levels. There will be 33 state plans; 18 sub-state plans; 10 inter-state ecoregional plans, as also 13 thematic plans that cover a range of biodiversity related issues. The national plan will emerge on the basis of these 74 plans. The NBSAP is perhaps the largest participatory environment/development exercise the country has seen and has involved several thousands of people from various sectors.

A look at the status of Monitoring and Evaluation (M&E) in India's biodiversity programs reveals that there has been practically no focus on the same in any of the relevant National Working Documents. However, there have been efforts towards M&E in several NGO-led and donor supported programs and projects in the country. One such is the Biodiversity Conservation Network, a USAID supported project looking at an enterprise-based approach to conservation. The projects under this program allocated over 30% project funds towards participatory monitoring and evaluation. The Deccan Development Society in the southern state of Andhra Pradesh has initiated the monitoring of agrobiodiversity in 75 villages. The National Institute of Oceanography, as a part of the Lakshadweep coral reefs Management Action Plan has instituted a system of participatory monitoring. Another tool for PM&E in India, has been the People's Biodiversity Registers, which are used to document traditional knowledge. They are developed by school/college teachers and students and/or NGO researchers along with villagers.

The challenges for institutionalising PM&E in the Indian NBSAP are the following:

- 1) Promoting policies conducive to participation of local communities in biodiversity conservation and management;

- 2) Ensuring that PM&E becomes an integral part of all existing biodiversity-related schemes of the central and state government and is mandatorily conducted by the scheme implementing agencies along with local communities;
- 3) Ensuring that PM&E becomes part of all projects that impact natural resources;
- 4) Ensuring that information related to the relevance of PM&E is disseminated to stakeholders and decision makers at every level;
- 5) Ensuring that appropriate mechanisms for carrying out PM&E are instituted;
- 6) Ensuring that suitable institutions are in place to carry out PM&E;
- 7) Ensuring that the appropriate capacity to carry out PM&E is built within stakeholders;
- 8) Recognising and acknowledging the value of existing community systems.

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2.5 Douglas Sheil and the MLA team: Local priorities and biodiversity in tropical forest landscapes: asking people what matters

2.5.1 Introduction

Decision makers require knowledge on how to address the needs and interests of local communities and biodiversity. Some relevant information is easy to elicit by merely talking to the communities, but some aspects are harder. Our approach brings together a suite of effective methods that can be used to survey tropical forest landscapes and to find out 'what matters'. The techniques provide conventional biophysical descriptions of the landscape and explicitly relate this information to local needs, knowledge and value systems. These methods can be used to inform decisions about land use and policy. The improved understanding provides a foundation for deeper dialogue between development practitioners, policy makers and forest communities to improve forest conservation, protect the needs of local people and advance the management of tropical forests.

While biodiversity assessment has become a widespread preoccupation, the information generated often has little impact. Decision makers, from local politicians to concession managers and international policy makers, faced with the demands of various commercial stakeholders and development programmes still find it difficult to react to lists of species and other biological survey data.

The interests of many stakeholders, especially commercial enterprises, are relatively clear and easily communicated. But, for indigenous rural communities, their needs and perceptions remain hidden to outsiders unless a specific effort is made to uncover them (Scott 1998). Where external decisions have local impacts, the concerns of local communities are often overlooked and undesirable impacts, though common, are inadequately anticipated. What is needed is an understanding of local needs and a means to make these more influential in the decision-making process.

Our study of marginalised communities in East Kalimantan asked, "How can we find out what we need to know to make better decisions about tropical forest landscapes?" Our multidisciplinary approach, developed during a study with seven communities in the forest-rich upper portion of the Malinau watershed, is detailed in a new book (Sheil *et al.*, 2002). A village-based survey collected a wide range of data in a wide range of group and individual based exercises. A parallel field survey assessed sample sites. These

methods emphasised landscape-scale characterisation. Two hundred plots were established, recording 2126 distinct plant species in 15 430 plant records. Local informants attached 1457 specific species-by-use combinations to these plants, including notes on their relative importance.

2.5.2 Results relevant to local needs

All sections of the communities considered unlogged forest as the 'most important' land cover both in general and for all classes of uses and values that we assessed. Logged-over forest is given a lower preference for a number of reasons: diminished key resources, reduced physical accessibility and reduced access rights. Regulations that require concession holders to repeatedly slash all undergrowth and climbers after timber harvesting, lead to many useful species being cut, including rattan and timber seedlings. Even if applied properly, the silvicultural benefits are limited while the impacts on biodiversity and communities are considerable. This policy should be reviewed.

Another valued resource is the wild forest boar *Sus barbatus*. These pigs are highly preferred food and provide the bulk of vital animal fats and proteins. According to the communities, these animals decline in logged areas. With fewer pigs available, the communities have to find other ways to supplement their diets by eating less-preferred and often protected species, such as monkeys.

A shortage of preferred construction materials (e.g. 'ulin' or *Eusideroxylon zwagerii*) is already being felt in many communities. One community has reacted with a mutual agreement to keep one area of local forest cover as a community resource, thereby promoting a *de facto* protected area. Unfortunately, such sites have no official recognition and are threatened by concessions.

Crop failures with droughts and floods loom large in community histories. Many remoter Punan cultivate little and depend on wild food resources such as palm starch. In the primary forest, the palms are common enough and community management practices protect these plants. They are less secure in logged forest. The main local sago (*Eugeissonia utilis*) tends to grow on ridge tops – where heavy machinery is used to extract logs on the steeply undulating local terrain. This is currently approved practice endorsed in 'reduced impact logging' guidelines. Such concerns might be addressed by modifying skid-trail design, or by programmes for food security.

It may appear that all such important information is so clearly 'common sense' that it should be trivial to elicit, but it is not always so simple. Reliance on sago has been strongly stigmatised as symbolic of "backwardness" such that communities are ashamed to discuss it. When talking to outsiders, community representatives (often the wealthier members), will agree that sago was "only eaten in the old days" even though this is untrue. It is only through using a range of approaches with a range of people that these discrepancies are identified and understood.

There are other instances of hidden values, for example, many Punan groups have traditionally buried their dead in large ceramic jars. These are now very valuable and are often stolen. It appears taboo to discuss such sites with outsiders – this secrecy offers some protection. Many outsiders believe that the Punan merely "left their dead in the forest" – a myth the Punan themselves are happy to perpetuate. The often-unintentional destruction of gravesites by concession holders is common and has caused local resentment. Roads, trails and heavy machinery often damage sites of importance to the communities. Protecting such sites would appear easy to implement if the sites can be recognised. These provide forest refuge areas with conservation significance and would help avoid local conflict and discontent that currently threatens community-company

relationships. Local priorities are rarely clear to outsiders, but they can be uncovered through various interactive exercises.

2.5.3 Results relevant to outside needs

Though our surveys seek practical relevance to local communities, benefits work both ways. Local knowledge can contribute greatly to our understanding of the landscape and our ability to facilitate positive change. Much has been written about community empowerment, but in many ways, our methods have empowered *us* to understand and utilise the extensive knowledge that local communities often possess about their landscapes.

During our work, we were faced with a rugged area of about 2000 km². Available maps were poor and of limited value. We developed simple maps, with major rivers, roads, village locations and mountain ridges. With our guidance, communities provided names, resource locations (like sago and rattans) and various special sites (like abandoned village sites, good hunting locations and caves). Many of these maps provide detail for even distant and inaccessible areas. Ecologically they reveal the localised nature of many natural resources and their site associations, many of which we were able to check during our field sampling using local guidance. This information would be near impossible to attain from first-hand field exploration, due to the size and terrain of the region.

In our sampling, we sought to understand the range of sites and habitats and local advice proved invaluable. But we wanted to go further. We suspected that special sites often have special significance for local people and might contain restricted habitats and species. For example, the limited areas of limestone outcrops not only provide habitat for valuable birds-nests (the cave swiftlet nests highly valued for Chinese soups), but also for many other restricted species. We thus specifically sought out such sites using local guidance. These samples (especially those in natural habitats) did, on average, add more (unique) species per sample to the overall survey than more "typical" sites.

2.5.4 Follow up and impacts

Local communities have complex relationships with their environment that need to be understood and taken into account in decision and policy making. This message requires a paradigm shift for all the institutions and processes related to forest management.

Decentralisation opens many issues to local scrutiny. Numerous local institutions, both governmental and NGO, are seeking ways to integrate the needs and aspirations of local communities with national development strategies and conservation plans. In this era where payments for biodiversity services are being considered for peopled landscapes, understanding the landscape and its values is an essential first step. The local communities seemed genuinely pleased that outsiders would seek out their views. They recognise benefits of openly discussing topics that they have previously not given much explicit attention and of learning how to make their views apparent to outsiders. There will always be difficulties in integrating local perspectives with real change unless the process is iterative. The key point is to develop a dialogue.

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The main reports about this work can be downloaded from CIFOR's web site at: <http://www.cifor.cgiar.org/publications/index.htm>. More general information is available at the CIFOR web site www.cifor.cgiar.org or contact Susilanasari@cgiar.org.

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2.6 Pam McCarthy: Participation in Biodiversity Assessment, Policy and Practice, Poland

To investigate the state of participation in biodiversity assessment in Poland it is necessary to compare the policy of the Aarhus Convention and current Polish environmental law with the practice of implementation of the Natura 2000 system and experiences from CEED's Podaj Dłon Naturze (Give a Hand to Nature) Project. The Aarhus Convention sets an ideal in public participation, with its three 'pillars' of access to information, participation in decision-making and access to justice ¹. The convention was ratified in October 2001, and is now a legally binding document for all its signatories, including Poland. Requirements for public participation particularly relevant for environmental matters are Article 6 - Decisions in Specific Activities and Article 7 - Plans, Programmes and Policies Relating to the Environment.

As Poland is currently proceeding in overhauling its legal systems for environmental protection from previous times, it is often creating new laws in areas that previously lacked any legislative control. The fact that new laws are being created, rather than amending existing laws, as would often be the case in western countries, provides greater opportunity for new concepts to be incorporated. For example the 2001 Polish Law on Access to Information on the Environment and Environmental Impact Assessment builds upon the Aarhus principles, specifically Chapter 2 – Access to Information, the 'passive' provision of information, and Chapter 3 – Public Participation in Procedures, the 'active' provision of information

However, although the policy development maybe advanced in Poland, it is interesting to investigate the practice of participation. Natura 2000 is a network of special areas for conservation created to ensure the implementation of the EU Habitats Directive ². Poland is working towards compliance with the Directive as part of its accession process to the EU. The Polish system for designation of Natura 2000 sites is currently being prepared, building upon the CORINE biotype list, Polish Red Data species, and important bird breeding areas ³. This survey system and the proposed list of sites is at present undergoing a formal consultation process, with steering committees comprised of state ministry, regional and local government representatives and NGOs.

The consultation process highlights some significant points, for example, the national government did not expect the Natura 2000 system would be required to undergo consultation and there has been very strict controls over the provision of information to outside parties. However, the NGOs were legally ensured a right to representation on the steering committees and the ability to make recommendations that must be considered, both new developments for Poland. The Polish NGOs are concerned that the Natura 2000 survey system will not undergo sufficient consultation, with incorporation of new data, but will just be an endorsement of already existing protected areas, due to

concerns that new designations would bring increased environmental responsibilities and associated financial costs. The involved NGOs have formed a coalition with the support of Dancee⁴ to ensure a genuine process, not just in name but in spirit. They are seeking to continue the consultation and will recommend a shadow list of proposed Natura 2000 sites if necessary.

CEED is currently running three-year project based in southern Poland, which aims to define and protect urban biodiversity. Six Polish partner NGOs have been involved creating a system to identify sites of urban biodiversity importance and to seek their protection by local government and appreciation by the local community. The project has sought to establish the initial stages of the biodiversity action plan process involving regional and local government, the Polish Academy of Science, NGOs and local communities.

Poland has a high standard of wildlife and wilderness areas but due to former times urban areas did not come under such strong economic pressures or heavy land management techniques more common in western countries, and therefore the quality of urban biodiversity is impressively rich. However, as economic changes progress the issue is how to protect urban biodiversity whilst embracing the concept that urban wildlife can improve the quality of life in towns and cities and aid regeneration. Although a system of locally protected areas now exists, it is designated by local government, which is often reluctant in the process due to the increased responsibilities it brings. However, NGOs are able to propose sites for designation.

Building on its several previous projects in Poland CEED was successful in achieving funding from the Darwin Initiative and others to establish a programme to train NGOs staff and transfer expertise in biodiversity assessment and survey techniques, project management and community involvement. The project provided training and analytical tools for the participants to carry out a survey of sites of biodiversity importance in southern Poland. The survey system had to be sufficiently rigorous to assess the quality of urban biodiversity on a European region-wide scale but had to be suitably practical for use by NGO staff, and a local government and local community audience. The survey system produced therefore sought to combine to work of the PAN incorporating the CORINE biotypes with relevant Polish assessment schemes.

Recent seminars to present progress on the project demonstrated some important changes in attitudes to public participation for all concerned. The Nature Conservators, as the regional government representative for nature conservation matters in Poland, have traditionally been wary of NGOs. However, it has only been very recently as the professionalism of NGOs has increased that local government has accepted them as a respectable partner. Nature Conservators readily acknowledge their limitations due to lack of funds and staff, and now appreciate the role NGOs can play, genuinely welcoming their involvement, one asking the NGO to be 'motor' of the process. However, NGOs have undergone significant changes in perception as well, noticing it is not sufficient just to stridently criticise the work of the local government if improvements are to be made. NGOs have also made the recent discovery that unless they involve the local community and site users in their work for wildlife protection, it is not going to be successful.

The next stages of the project are to complete initial nature conservation strategies in the partner NGO regions and a seminar to address mechanisms for co-operation with regional and local government. The final stage will be the production of a manual to share the work from the project, lessons learnt and recommendations for co-operation between NGOs and local government to instigate a biodiversity action planning process. Polska Zielona Sieć (Polish Green Net) is the main partner organisation in Poland and

there is currently discussion on future plans to share the work of the project with other NGOs in Poland and develop participation in local environmental decision-making.

The Polish national proposals for biodiversity protection have already been completed and there are several local level schemes seeking to protect biodiversity, but it is only now that there is a new requirement for regional government to consider their strategies. There therefore exists a, perhaps understandable, lack of capacity where national and local plans fail to meet, thus preventing any true realisation of biodiversity protection plans or policies. But without participation, the plans for biodiversity protection, have a real danger to remain just that, plans, with little potential for action. Participation in biodiversity assessment does not make the process easier. However, by providing a way to involve NGOs and the wider community, does offer an impetus to overcome the gap and achieve implementation of real protection and enhancement of biodiversity.

1. Convention on Access to Information, Public Participation in Decision-making and Access to Justice in Environmental Matters, <http://www.unece.org/env/pp/welcome.html>
2. Council Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Fauna and Flora, 1992, <http://www.europa.eu.int/comm/environment/nature/habdir.htm>
3. Polish Academy of Science (PAN) - Institute of Nature Conservation, <http://www.iop.krakow.pl/natura2000/default.htm>
4. Dancee – Danish Co-operation for Eastern Europe, <http://www.ava-net.com/>

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2.7 Finn Danielsen: Institutionalising Participation in Biodiversity Monitoring, Philippines

A simple and cost-effective, field-based biodiversity/resource use monitoring system has been developed and institutionalized in Philippine protected areas by the Department of Environment and Natural Resources. The preliminary lessons learned are discussed (Biodiv. and Conserv. 9:1671-1705).

Whilst the monitoring system aims to identify trends in biodiversity and its uses so as to guide management action, it also promotes the participation of local people in the management, stimulates discussions about conservation amongst stakeholders and builds the capacity of government staff and communities in management skills. In addition, it seeks to provide people with direction regarding the aims of protected areas, and reinforces the consolidation of existing livelihoods through strengthening community-based resource management systems.

The field methods are: (1) focus group discussion, (2) standardised recording of routine observations, (3) fixed point photographing, and (4) line transect survey. Both bio-physical and socio-economic data are used and given equal importance. The system can be sustained using locally available resources.

An advantage is the short process from data sampling to action. In less than two years, a total of 507 natural resource management actions and initiatives have been undertaken on-the-ground in eight protected areas as a result (or partly as a result) of the monitoring. The approach is useful in countries embarking on shared management of natural resources with local communities, where rural people depend on use of natural

ecosystems, and where the economic resources for natural resource management are limited and 'specialist staff' is lacking.

Due to his commitments to the Philippine government, Finn Danielsen was unable to provide a more in-depth summary. You can read more on his presentation subject in (Danielsen et al., 2000).

2.8 Nancy Diamond: Improving Environmental Governance through Participatory Biodiversity Assessments: Lessons from World Bank and USAID Work

Nancy Diamond, an independent consultant to the World Bank & the United States Agency for International Development, argued that Participatory Biodiversity Assessments (PBAs) will only be able to make their full contribution to sustainable biodiversity management when these information collection processes, skills and information are intentionally used to promote social justice and good governance. Otherwise, PBA (and the rules about access to information) can, either intentionally or unintentionally, be instrumental and extractive. Because information equals power, PBA can easily reinforce existing power relations or harm the less powerful. By linking PBA to environmental governance reform, donors and practitioners can use scarce funding more strategically (e.g., who needs information and for what purpose) and avoid problems related to lack of local ownership and consultation that often arise during project implementation

Several key assumptions frame existing discussions about biodiversity assessment, as well as the recent PBA electronic discussion. Biodiversity assessment advocates generally believe that biodiversity problems partly stem from inadequate information about resources, better information will lead to more interest in NRM & biodiversity conservation, and funding for information collection is inadequate. Participants in the PBA electronic discussion highlighted several related assumptions. Participation was assumed to be a means to reduce data collection costs, joint PBA experiences are assumed to lead to a useful exchange of information between resource managers and lay people and PBAs are believed to serve as a model for more inclusive resource decision-making.

An environmental governance perspective suggests that the fundamental cause of biodiversity problems stem from governance problems (the rules, roles and relationships constructed by society to allocate resources and power) rather than a lack of information. Therefore, PBA activities should be tied to reform efforts related to accountability, corruption and rule of law. Donors can help improve the data collection skills of communities, community sub-groups and civil society advocacy groups (e.g. citizen monitoring of forest concessions under the Global Forest Watch) and help to improve the quality and legitimacy of community-collected data (e.g., participatory mapping). Donors can help local people to open up access to environmental decision-making processes, expand citizen rights to information (e.g., expanding Aarhus principles beyond Europe) and improve community advocacy skills with government agencies. Donors can play a role in supporting local efforts to identify and fight corruption via increased transparency (e.g., local posting of logging concession opportunities and awards), greater accountability and local enforcement. To address the values conflicts raised by biodiversity conservation, donors can build conflict management skills via PBA-related activities. By understanding the motivations of sub-groups ("segmenting"), social marketing approaches can help biodiversity specialists to improve local participation in PBAs, find appropriate conservation incentives and better tailor information for environmental decision-makers (e.g., USAID GreenCOM Project).

Diamond drew examples from two recent initiatives that she has spearheaded: the Environment-Democracy/Governance Exchange (EDGE) Initiative for USAID's

Biodiversity Support Program and the World Bank's Participatory Conservation Initiative. Through white papers, workshops and a seminar series ("democracy" under <http://www.bsponline.org/bsp/publications>), the EDGE work disseminated the democracy/governance-related work of the Biodiversity Support Program and raised USAID staff and partner awareness of the linkages between environmental and democracy/governance objectives. The World Bank Participatory Conservation Initiative (<http://lnweb18.worldbank.org/ESSD/essdext.nsf/8ByDocName/themesparticipatoryconservation>) expanded the dialogue, within and outside the World Bank, on three timely topics related to participation and conservation: scaling up, systemic governance reform work and incentives. The initiative included a sequenced list-serve discussion and seminar series with posted summaries, a web-site and an annotated bibliography.

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3 Discussants

Three discussants were invited to spend 5-10 minutes presenting their reactions to the morning's presentations.

3.1 UK Forestry Commission

Mike Dudley of the UK Forestry Commission (International Policy) pointed out that the seminar takes place in the context of an explosion of demands for forest information, in which Monitoring and Reporting (MAR) has become a dominate theme at international meetings (of the CBD and UNFF). He picked up on a question from John Palmer that highlighted the key issue of comparing assessments at different scales and by different stakeholders, and related this to the issues of knowledge as power. His impression of the morning's presentations was that a great deal of pilot experience is now available, and that our discussions suggested some directions for aggregation of such information. As information is aggregated, some of it becomes less important to some people, so the question 'who needs what information?' is important. This applies as much to the scaling up of assessments from local to national, as from national to international scale.

The increasing demand for more information, can make it seem that information grows on trees, but in fact information collection is very resource intensive, so we must be selective in both collection and aggregation. He emphasised that a key contribution made by this seminar can be to address the question, "What input can information collected in case studies make to monitoring and reporting at national and international levels?"

The importance of participatory approaches to such information collection is now widely recognised, and Yokohama (International Expert Meeting on Monitoring, Assessment and Reporting on the Progress toward Sustainable Forest Management", Japan on 5-8/11/2001) identified the need to bring in participation at international level. But there is clearly a need to make it simpler and more rapid, in order to attract the interest of both national and international bodies.

3.2 National Environmental Secretariat, Kenya

Joseph Masinde of the National Environmental Secretariat, Kenya began with examples from Kenya of biodiversity assessments, and environmental impact assessments, which have been conducted without involving local people, leading to resistance and misunderstanding.

Examples included:

- 1) the decision to translocate the endangered Hilora antelopes to more secure areas

caused problems as the local people viewed the animal as a food resource which should not be taken away from them;

2) the decision to allow Tiomin Company to mine Titanium at the Kenya coast has caused problems with the local people and environmentalists. The EIA reports have not fully addressed problems related land and biodiversity conservation.

The seminar provides relevant inputs at a time when various initiatives on biodiversity assessments have been proposed under the GEF project on Additional Biodiversity Enabling Activity Funding. Kenya will be assessing capacity building needs for the conservation and sustainable utilization of her biodiversity. Kenya will also assess the capacity building needs of all the stakeholders so as to enhance Kenya's contribution to the CBD Clearing House Mechanism.

Furthermore, with the increasing demand for participatory resource management, local people need to be involved in drawing up management plans, and biodiversity assessment for conservation areas. This is an essential component of proper biodiversity conservation in Kenya.

He drew attention to the large number of organisations involved in generating biodiversity information including government departments , community-based and non-government organisations, and highlighted a key issue: that of institutional reluctance to share information, and tensions between sectors and duplication of efforts. Information sharing between key organisations can also be an issue of great concern , as was demonstrated when the NBSAP and the Biodiversity Data Management Plan were drawn up in 1997. In many cases useful and relevant information exists, but departments keep it to themselves, because there is a suspicion that information can be 'sold'. Indeed the benefits of sharing information among institutions need to be highlighted.

3.3 Intermediate Technology Development Group

Patrick Mulvany of the Intermediate Technology Development Group (ITDG) related the morning's presentations to his own interest in agricultural biodiversity and sustainable livelihoods. He recalled that this interest was initiated by studying the agricultural biodiversity and sacred Ensete groves in Ethiopia, governed through a mix of religion and folk ritual. In ITDG's work he was particularly interested in the local definitions of biodiversity by local people who are its guardians. It is not so hard to capture these cosmovisions and feed them into the decision-making process. ITDG has found that various PRA methods are effective in collecting this information, with focus groups, use of key informants . and mapping as particularly powerful tools. Reflecting this information in policy forums is more challenging.

The whole notion of participation is a complex one, and he was intrigued to learn that there is an EU directive on participation. This 'top-down' approach to participation is paradoxical and reflected in the ironic use of terms such as "to be participated" or "facipulation". So when we aim to be participatory, we must consider carefully how to initiate this process and ensure that it is not extractive of knowledge or common property resources. Power is a central issue here, and one which we must be absolutely clear about in our relationship with informants. Power relations are dependent on the context so must be looked at on a case-by-case basis, but recognition of local Farmers and Community Rights is essential.

He drew attention to the emphasis on capacity building, which is a key issue for the NGO sector. Much of the work of many NGOs has been as much in building capacity of local producers and custodians of biodiversity as in the re-education (de-schooling in Ivan Illich's words) of NGO workers, government staff or academics so that they can

recognise the primacy of local knowledge with respect to the management of natural resources.

Moving on to policy issues, Patrick Mulvany raised the issue of incentives – why should anyone engage in a PAMEB? In some cases this may be because of pride in the environment (he noted particularly the Philippines example presented by Finn Danielsen), but the technocratic nature of discussion can exclude and demotivate people. It is essential to remember that biodiversity is of the people, and information about it must be accessible to them. He provided various other examples of work in a number of countries with which ITDG and other NGOs were involved that illustrated aspects of participation in practice.

The CBD (Convention on Biological Diversity) provides us with lots of opportunities, and has developed some good programmes that can not only enhance local biodiversity but will address root causes of loss, from, for example, industrial agriculture. Most of these have been developed through political processes that are not always derived from scientific evidence but as much from other information flows, for example in the discussions on biopiracy, intellectual property rights and GMOs. So, we must remember that information gathering for policy formulation, and information gathering for monitoring and implementation, may often be two quite different challenges.

4 Break-out groups

Four discussion groups considered the following questions:

Thinking about institutionalisation:

1. What were the key messages for you
 - As a decision-maker
 - To convey to decision-makers
2. What still needs to be clarified
3. What further action is needed
4. What specific output would you like to see from this meeting

The responses of the four groups are summarised in the following.

4.1 Key messages for ourselves

- PAMEB can reverse the alienation of local people from their immediate environment. As a learning tool it may be used not only in relation to biodiversity itself, but also with regards to rights to manage and use it. It may lead to community mobilisation and renegotiation of informal and formal management arrangements.
- PAMEB may increase the social status of ecological knowledge and knowledge holders, and facilitate intergenerational transfer of ecological knowledge.
- Through PAMEB, local communities can be brought into a constructive relationship with government.
- Biodiversity assessment can be performed more quickly.
- One must be diplomatic with some stakeholders (i.e. Forest Departments & corporations) not to imply directly that current / previous system was unsuccessful. E.g. PAMEB can be advocated so that resource management can become more 'effective' or 'strengthened'
- Incentives for local people to participate in activities: should not be the 'kings shilling' patronage' approach, but through supporting local motivation. For this to happen minimal conditions are likely to be:
 - Institutional support, whether by NGO / government agency – to maintain momentum, overcome conflict & obstacles, raise awareness, and
 - Sufficient democratic opening / responsiveness for action plans to be respected & supported.
- Wish to encourage the influence required to ensure necessary infrastructure to impact on a larger audience / number of shareholders. Need to find that "interface" to promote a wider meeting of minds.

4.2 Areas we can work on

- Better "triangulation" of information; making PAMEB cheaper, and demonstrating that it leads more quickly to action.

4.3 Key messages to convey to decision-makers

The following points are the most important at this stage, for policy makers and implementers:

- PAMEB encourages ownership and empowerment by incorporating data collection analysis and decision-making; and can improve local governance.
- The process itself is as valuable as the data gathered.

- PAMEB can provide data more cheaply, and lead more quickly to resource management decisions.
- PAMEB could / should be institutionalised locally rather than occurring only when there is 'demand' (i.e. outside funding). In order for this to happen it will need to fit with existing local structures rather than becoming yet another local committee which people will hardly have time to attend.
- We must distinguish between PAMEB as an instrument for furthering objectives of higher 'decision-makers' (locals as subjects who participate in return for something) and as process of empowering at the local level (locals as citizens who determine what is needed, and make demands / receive support from their government servants).
- Different approaches will be appropriate for different ecological systems and tenure systems: for example for forests; protected areas; village forests; forest plantations / production forests
- If PAMEB becomes a politically influential tool, there is a danger of cooption and dilution by elites, particularly where there are powerful economic interests regarding the resource in question.

4.4 Clarification

The presentations suggest that further work is needed to clarify:

- The scale of the aggregation of grassroots networks, and how to implement it;
- The functions of different stakeholders: Who should be collecting information? What burdens are to be put on regional staff? Who will be involved in the linkages from local to high levels, and how will it be achieved? Who decides how to sample?
- What happens if there is no societal infrastructure to engage with?
- Lessons from voluntary monitoring networks in Western / richer countries.
- We must be aware of tokenism: Does PAMEB only function as a well-funded resource-intensive "simulation" project? How can we ensure it has a wider impact?
- The usefulness of information generated: whose criteria should it satisfy, and what are they? Is there a minimum level of information needed to make accurate decisions? At what scale can useful information be collected – local, regional, national?
- Ways to restrict conflict of interests;
- In what context is a participatory approach inappropriate?
- Local norms and laws, which affect the implementation of PAMEB;
- How locally determined indicators compare with national needs, and international obligations;
- Cost effectiveness of widely-implementing PAMEB, and ways to achieve this;
- Ways to reconcile time-bound reporting with the time needed for PAMEB;
- And the emergent benefits of biodiversity, the ecosystem functions and the holistic values, make the choice of indicators even more subjective, in the context of the ongoing fundamental ecological debate about the value of biodiversity function vs. genetic information store;
- How areas are selected to conduct PAMEB.

4.5 Further action

Participants highlighted the following areas for action:

- Train decision-makers in PRA;
- Produce guidelines or a compendium for "best practice" of PAMEBs;

- Develop a robust system for “value” analysis – scaling up to “global” level. A transparent methodological framework for reconciling/consolidating “scales” and types of value (utilitarian, aesthetic, system, rarity, local use), and for finding common ground.
- Pool information regarding CBD etc.
- Take discussion away from protected areas, and into agricultural situations.
- Try PAMEB ideas in an institutional framework.
- Build capacity at local and institutional level, including appropriate skills and attitudes, to conduct PAMEB.
- Train parataxonomists
- Find funding for all the above!

4.6 Specific outputs requested from this meeting

Finally, participants expressed the wish to see the following resulting from the seminar:

- Workshop notes available for policymakers, as well as a list of future research priorities.
- Participants list updated with email and other contact details, possibly used as a distribution network before Johannesburg.
- An “inventory” of case studies, which includes the good as well as the bad.
- The development of linkages.
- ETRN workshop web site maintained and expanded, providing guidance on wider resources available.
- Short publication [policy brief] for decision-makers in accessible languages.

5 Reports from international participants

Three international participants who had not participated in the internet workshop, and for whom the material was therefore new, documented their response to the meeting, as follows.

5.1 Pham Nhat

Context in Vietnam:

The Government of Vietnam has paid lots of attention to conserving biodiversity since 1962, and in February 2002, a list of 101 protected areas with 2.3 million ha was submitted by the Ministry of Agriculture and Rural Development to the Government of Vietnam for it to approve; 11 are National Parks, 53 Nature Reserves, 16 Species / Habitat Management Areas and 21 Cultural, Historical and Environmental Areas. Although Vietnam has tried with great effort to achieve biodiversity conservation, activities are still low. One of the most important reasons, is the lack of participation of local people. So the workshop “Participatory Biodiversity assessment” held by the Environmental Change Institute, of Oxford University was important.

Success of the workshop:

All participants came from different countries and had a chance to exchange with each other, the experiences and methods that are used in biodiversity monitoring and assessment, and to discuss the role of institutions in participatory biodiversity monitoring and assessment.

Comments:

- Most of the presentations and case studies were good and provided lots of useful information and methods, as well as experiences of participatory biodiversity monitoring and assessment.
- All the case studies showed they were one-off results from projects. The research was limited to the project areas, and there seemed to be no follow up monitoring. What is the situation of participation biodiversity monitoring at the locations after the project finished? Has the participatory biodiversity monitoring continued? Are there monitoring activities of participatory biodiversity monitoring existing now? How can we increase participatory biodiversity monitoring outside project areas?
- Most of the case studies were conducted by non-resident (mainly European) people, and not by people from the country in which the project was located (or from other tropical countries). Is there an effective transfer of knowledge and skills from these people to the local staff?
- The workshop was too short and it could have paid more attention to biodiversity management. Monitoring helps us to identify the causes which lead to the loss of biodiversity. The next step however, is to discuss how to manage natural areas and how to encourage local people and other stakeholders to participate in biodiversity conservation activities. My experiences show that it is not easy to increase the involvement of local people in biodiversity monitoring after the project has finished and their income is not enough to sustain their livelihood. What can be done in the sustainable livelihood context?

Recommendations for further research in the Vietnam context:

- Select some good case studies and compile them as a book of guidelines for participatory biodiversity monitoring and assessment (may also include management case studies).
- Set up a network and create some opportunities / priorities for tropical countries. The big limitation of Vietnam now is English, so a lot of attention should be paid in order to make the information available in local languages.
- Convene an annual meeting on participatory biodiversity monitoring, in which each participant brings the best or worse case study to discuss and to exchange experiences.
- Extract practical management applications from the results of work by the Forest Inventory and Planning Institute (FIPI) which has been setting and implementing a system of permanent plots to monitor the modification of the forest resources in Vietnam since 1990.
- Conduct training. For example, the Forestry University, FIPI have carried out some training courses or programs for participatory biodiversity monitoring, examples being: "Participatory primates monitoring in Phong Nha Ke Bang National Park" and "Biodiversity monitoring in Pumat Nature Reserve". The institutions of Vietnam have always co-operated well with PAs' staff to conduct research and biodiversity monitoring activities.
- Identify permanent sources of funding (not a large budget) for carrying out the participatory biodiversity monitoring.

5.2 Joseph Masinde

- There is a need to institutionalise biodiversity assessment and it should be specific for different areas, as methods that work in a certain area may not necessary work in another.
- Assessment should be cheap and generate quick action.
- Encourage ownership of information by local communities so as to empower them and improve local governance.

- Participatory Monitoring and Assessment is an instrument for mobilizing and raising awareness to increase efficiency in resource management and reverse alienation of resources. In order to achieve sustainability of PM &A there is a need to create incentives.
- Decision-makers need to share responsibilities.
- What should be clarified is the reliability of the information and at what level it should be used; for instance, participatory reporting works well within decision-making but not at a local level.
- How much information is needed to make a decision?
- What criteria are used to choose an area for assessment and what are the indicators -who is to decide?
- How should the aggregation of grassroots networks be conducted and to what scale?

What is needed for further action:

- Useful case studies that should be written and made available to everybody through various information exchange mechanisms.
- Strengthening the networking of ideas e.g. through Voluntary Monitoring networks.
- Stakeholders need to understand the terms used or use a language that can be understood by different disciplines
- Determine local information needs and time bound reporting
- Train decision-makers in PRA
- Pool information and coordinate the monitoring efforts

Recommendations on how participatory monitoring and evaluation of biodiversity can effectively be implemented in Kenya:

- The Government should support the strengthening of institutions currently dealing with participatory biodiversity assessment issues, in order to increase their efficiency and accountability in the management and sustainable use of biodiversity, resources planning and decision-making.
- The Government should proceed to implement the Environmental Management and Coordination Act 1999, to support the implementation of the NEAP, NBSAPs activities, and laws that shift a greater share of the authority and responsibility for conservation to the local communities. The government should use traditional institutions, and this devolution of power will reflect the fact that local communities are the ones that are most affected by biodiversity loss.
- Support policies on PAPPA (Policy Analysis for Participatory Poverty Alleviation) concept.
- EIA documents must be made as public documents, not government documents.
- Greater use of economic tools including valuation, incentive measures and innovative financing mechanisms for sustainable biodiversity assessments.
- The Government should formulate and implement economic policies and establish realistic and appropriate pricing systems for various components of biodiversity resources including wildlife, medicinal plants and genetic materials.
- Collaboration and clear definition of roles and responsibilities between different stakeholders and institutions at all levels and improved generation and sharing of information. This is to reduce institutional conflicts and hiding of information. Information should be readily available at the Clearing House Mechanism.
- The Government should support (with help from UN agencies) initiatives to raise the levels of education, awareness and capacity building in all stakeholders including communities, women, and administrators, local authorities, CBOs and NGOs in Participatory Biodiversity Assessment. Herbalists should be fully involved

in the monitoring and evaluation of biodiversity areas, which supply medicine to encourage growing indigenous herbs and trees of cultural and medicinal value.

- Integration of PBA into broader sectoral and cross-sectoral planning.
- Greater political commitment at both national and sub-national levels, in terms of budget allocation for biodiversity monitoring.

5.3 Bertin Akpatou

- The one day seminar on Policy implications of participatory biodiversity assessment was a great opportunity for the participants in general, and for me in particular, as it was my first participation in an ETFRN international workshop.
- The different case-studies were full of experiences and lessons that merited them to be shared. I learnt a lot from the projects, and my understanding of the policy implication of participatory biodiversity assessment and evaluation has really improved.
- The presentations were diverse but they all underlined the importance of adopting participatory approaches when carrying out a natural resources project. I was also fascinated by the different strategies for the involvement of all the actors (local populations, researchers and decision-makers) in a sustainable biodiversity monitoring program. Despite the short amount of time available, the debate on institutionalization was an exciting exercise, owing to the enthusiasm of the participants to share their experiences.
- One of the major priorities of the Centre Suisse de Recherches Scientifiques (CSRS) is to valorise the result of its research for sustainable development in West Africa. Policy implication of participatory biodiversity assessment is thus a strategy that the CSRS adhere to. Therefore, the lack of specialists will hinder the full adoption of participatory approaches. Consequently, most of the projects are more scientific and the involvement of local communities is in its infancy.
- My invitation to the seminar is a nice example of participatory approach at international level, and I hope it will be mutual and durable .

6 Conclusions

During the day we have heard from a wide range of perspectives, covering policy, governance, sustainable livelihood frameworks and specific experience from India, Indonesia, the Philippines and Poland. Together with the results of the internet conference, the case studies have highlighted both the wealth of data gathered, and the empowerment benefits of participatory approaches. To some extent, that is what we might have expected. Those who advocate participatory approaches, often do so because the information produced is more relevant, and because local capacity and confidence is built up. But through today's presentations we have gone beyond that, in seeing how participation can contribute to wider objectives. This morning's presentations showed how, at least in some cases:

- PAMEB can have greater impact than traditional assessment approaches, in terms of change towards more sustainable management;
- local decisions about resource management are made more quickly, when local people are involved in the assessment;
- data across regional scales *can* be available more quickly, cheaply and be more relevant;
- collaboration in PAMEB *can* enhance trust and communication between local people and officials;
- participatory approaches are a logical response to the sheer bulk of communication and information demands.

From the range of contexts and methods presented, we now have a strong basis for developing best practice guidelines. With the potential for PAMEB clarified, we can focus on the issues raised today, in the context of our key question for today's audience: how can PAMEB contribute to regional, national and international information needs, and how can it be facilitated by the policy and institutional context? It is evident that PAMEB covers an enormous range of situations, that it (and indeed any monitoring and assessment) should be carried out for a useful purpose, and that there are not enough resources to collect all the information that might possibly be asked for.

This *utility* of monitoring and reporting offers both confusion and potential for PAMEB advocates. PAMEB can provide relevant and useful information, and can help to bridge the gap between the needs and objectives of different stakeholders. Our biggest challenge today is to look at the scale implications of PAMEB results. We have seen that local assessments can contribute to the efficiency and usefulness of larger scale biodiversity and landscape assessments, and that incentives may be needed at local level to do that. However, without some extraordinary training and data-processing effort, we must recognise that it is not going to provide *uniform* and *quantitative* data across a nation, let alone comparable data between nations.

However it is not yet clear that international reporting requirements can integrate community data, or can be flexible enough to do so when appropriate. In the absence of international guidelines on assessment or monitoring, it may be best not to assume a blanket approach but instead to apply a series of filters in deciding who should be involved in assessing biodiversity in different locations.

This absence of guidelines may itself provide an opportunity, in that there is still scope for relevant qualitative information to be made acceptable. One way in which the information demands at national and international level (for quantified, spatially-comparable data) may be modified, is through increased understanding of the value of other types of information. Instead of asking whether local assessments fit national needs, we can turn the question around and ask what is interesting for national policy people, in what has been done locally. The production and advocacy of local information, which is demonstrated to be valid, reliable and useful, may do more to demolish the spectre of vast insatiable data needs (for national monitoring and reporting) than a top down approach which seeks to apply a uniform data collection approach.

The power issues will not go away though, and PAMEB is a governance issue as well as an information issue. To enable PAMEB to take place in the first place requires a shift in power; but to take PAMEB results seriously requires a more profound shift yet. Only if the institutions responsible can cope with that, and also overcome traditional internal constraints to participation (secrecy within, rivalry between institutions) will PAMEB approaches really be able to make a contribution to biodiversity knowledge.

7 Further outputs

Based on the suggestions made at the seminar, work is in hand to produce the following outputs:

1. Editing/re-writing of the case studies to a standard structure, to be disseminated through EFRN and ECI websites, hyperlinked to other major biodiversity sites/EFRN/TFF, and printed, (possibly as a book).
2. Lessons learned from a PAMEB approach for the various stakeholders, including (a) households, (b) biodiversity user groups, (c) biodiversity-dependent communities, (d) national authorities responsible for CBD reporting, (e) the CBD Forest Programme, (f)

scientists (sensu lato), (g) the private sector. Documented in a journal article and available on the workshop website.

3. Policy brief on the implications of a PAMEB approach, addressing the following questions: How does PAMEB affect decisions on biodiversity management, on valuation of biodiversity, on benefit sharing from managed biodiversity ? What changes in international law, national law, regulations, incentives can be foreseen or have been caused by PAMEB ?

4. Through FRP, work with a science journalist to disseminate relevant message to audiences of a New Scientist type.

5. UNEP: Biodiversity Assessment manual:

To include a section on participatory approaches, with definitions / characteristics of participatory assessment guidelines on best practice, and methods / tools.

6. A full summary of the internet discussion, which took place during the internet workshop (now available on the ETFRN website).

7. World Parks Congress: Input to team coordinating the theme. Local people, equality and protected areas. With possible overview paper at the congress, September 2003.

Further resources will be sought for:

1. translation of case studies and best practice guidelines.

2. management of website to include further case studies and links to other sites of interest.

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Appendix 1: Programme

09:30	Registration and coffee
10:00	Welcome and objectives (Terry Dawson and Hermann Ellenberg)
10:05	Workshop summary (Anna Lawrence)
10:20	The international policy context (Adrian Wells)
10:35	The sustainable livelihoods context (Elizabeth Cromwell)
10:50	Case study: the Indian NBSAP (Seema Bhatt)
11:05	Coffee
11:30	Case study: CIFOR and Multidisciplinary Landscape Assessment (Douglas Sheil)
11:45	Case study : Participation in Biodiversity Assessment, Policy and Practice, Poland (Pam McCarthy)
12:00	Case study: institutionalising participation in biodiversity monitoring, Philippines (Finn Danielsen)
12:15	Improving Environmental Governance through Participatory Biodiversity Assessments: Lessons from World Bank and USAID Work (Nancy Diamond)
12:30	Discussion
13:00	Lunch
14:00	Reaction from discussants (Mike Dudley, Joseph Masinde, Patrick Mulvany)
14:30	Break-out groups
15:45	Presentations from groups
16:45	Summing up (Anna Lawrence)
17:00	Close

Appendix 2: List of participants

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Appendix 3: Acronyms

CBD – Convention on Biological Diversity
ECI – Environmental Change Institute
ETFRN – European Tropical Forest Research Network
FAO – UN Food and Agricultural Organisation
NGO – Non-Governmental Organisation
PA – Protected area
PAMEB - Participatory Assessment, Monitoring and Evaluation of Biodiversity
WIPO – World Intellectual Property Organisation

Appendix 4: References

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