



National Biodiversity Authority

UNEP – GEF – MoEF ABS Project

“Strengthening the Implementation of the Biological Diversity Act and Rules with focus on its Access and Benefit Sharing provisions”

Two Days National Consultation Meeting on

***ECONOMIC VALUATION OF BIO-RESOURCES FOR
ACCESS AND BENEFIT SHARING (ABS)***

9 – 10 December, 2013 (CHENNAI)

Brief Concept Note

The project on “Strengthening the Implementation of the Biological Diversity Act and Rules with focus on its Access and Benefit Sharing provisions” deals with assessing and quantifying the economic value of biological resources, using appropriate methodologies to determine benefit sharing, which will help in better implementation of the Biological Diversity Act, and inform national decision makers on prioritizing conservative action. In other words, the project is an attempt towards mainstreaming and strengthening the Access and Benefit Sharing (ABS) process in India.

The identification of bio-resources or genetic resources, with potential for ABS from selected ecosystems, such as forests, wetlands and agriculture, and their valuation (estimation of the real value) is an important task in this project. Developing standardized economic valuation methods for valuing bio-resources in finalizing the ABS agreements is the major activity under this head. The project is implemented in 5 states in India (Andhra Pradesh, West Bengal, Sikkim, Himachal Pradesh and Gujarat) with the collaboration of the State Biodiversity Boards and Biodiversity Management Committees.

Bio-resources / biological resources means: plants, animals and micro-organisms or parts thereof, their genetic material and by-products (excluding value added products) with actual or potential use or value, but not human genetic material (The Biological Diversity Act,

2002). Generally, large quantities of divergent bio-resources are collected or extracted from the ecosystems, which human beings can directly or indirectly use either as food, medicines or biomass. These goods are also involved in research and development (which lead to the innovation of new consumer products) and trade, and act as the basic raw-material or input factor in manufacturing many products.

Apart from the various non-marketed services provided by different ecosystems or biodiversity, it provides large number of goods, which enhance human welfare. Forests provide number of resources (goods) as timber and non-timber forest products. These goods include timber, fuel wood, fodder, non-timber forest products, food items (honey, mushrooms, fruit, and other edible plants, game), genetic resources and cultural resources. Most of these resources are used as an unavoidable input factor for manufacturing various value added products, having a huge market potential.

Inland and coastal wetland systems are the buffer zone of diversity of species. Coastal ecosystems can provide goods such as, fish and shellfish, fish meal (animal feed), seaweeds (for food and industrial use), salt, genetic resources and cultural resources. The goods provided by the freshwater ecosystem are fish, genetic resources and cultural resources. Wetland species (animals and plants) have huge economic value and ABS potential.

The primary goods provided by the agriculture and grassland ecosystems include; food crops, fiber crops, crop genetic resources, other crops (energy, fodder, etc), cultural resources, and livestock (food, hides, fiber). Agricultural products or outputs have a huge market and business potential, and play a significant role in manufacturing different food items and achieving food security.

However, most of our ecosystems (forests, rivers, estuaries, oceans, etc.) are common properties. Hence, the goods from these sources experience market failure or distortion, and the current market price at their collection point does not represent their real or true value or price but only an exchange rate that is too arbitrarily assessed or fixed. In other words, due to the market imperfections, ecosystem goods are 'under-priced'. In the case of ecosystem goods, particularly those obtained from common property, the demand, supply and price mechanisms do not function effectively as they do in the case of other commodities. Providers/sellers and buyers have limited knowledge and information about both the "price" and "value" of a product. Normally, information is disclosed by both the parties (sellers and

buyers). In the exchange, the users of ecosystem goods / bio-resources (the companies or their representatives) have better knowledge about their significance and value than the providers. However, the providers (local communities) are being exploited (obtaining only a meager price), by the traders and companies, who make substantial profits from the business.

In this context, the valuation of biodiversity/ecosystem goods is a fundamental step towards determining the real value of bio-resources, and operationalizing the “Access and Benefit Sharing (ABS)”, one of the objectives of the Biological Diversity Act of India. With 193 countries around the world agreeing on an international protocol related to ABS – the Nagoya Protocol on ABS – under the Convention of Biological Diversity (CBD), time has come for environmental economists, planners and governments to understand and apply principles of Environmental Economics to real on the ground action to achieve the objectives of ABS. The National Biodiversity Authority is currently working to develop a workable model to address un-ambiguous valuation methods towards valuing biodiversity goods.

Different methods has drafted for bio-resources valuation, which includes: (a) Value Chain Analysis and Identification of Economic / Resource Rent, (b) The “Maximum Willingness to Pay” Approach, (c) Application of the Appropriate Economic Instruments: (tax, cess, charges, royalty etc.), (d) Minimum Support Price for Bio-resources and (e) Collectors’ Willingness to Accept and Minimum Livelihood. However, the experts proposed that “value chain analysis and identification of economic / resource rent” of bio-resources based product is more appropriate in estimating the real value of bio-resources. Further it is significant to develop case specific and / or separate formulas for valuing bio-resources based on its nature, availability, potential uses etc. where scarcity rent, information rent and endemic rent are playing crucial role (Table - 1).

In connection with the valuation of bio-resources, a two days National Consultation Meet has been scheduled on 9 - 10 December, 2013 at Chennai. The purpose of the meeting is to assess and review the methodology suggested by NBA and obtain expert opinion related to bio-resources valuation for ABS in consultation with selected group of environmental economists and / or other key biodiversity stakeholders and managers in the country.

Table 1

Valuation Methods Derived from the Expert Committee Meeting (13th July 2013)

	Category of Bio-resources	Possible Methodological Approach	Payment Detail
A	Bio Pharmaceuticals (modern drugs)	Scarcity Rent (SR) + Information Rent (IR) (share a proportion attributable to the product).	Initial payment + payment at the time of product development + payment at marketing stage.
	<i>(Population status, Rare Endangered and Threatening (RET), Abundant, Endemic)</i>	Endemic Rent (ER)	Monetary + Non- Monetary (for endemic and RET)
B	Bio-technology (Seed / Agriculture Related), Land races, Microbes,	Information Rent (IR) - share a proportion attributable to the product.	Initial payment + payment at the time of product development + payment at marketing stage Monetary + Non- Monetary (for endemic and RET)
C	Crop protection products	Information Rent (IR) (share a proportion attributable to the product).	One time
D	Botanicals (AYUSH)	Based on the proportion of Net Present Value (NPV) of the profit x the contribution of input to the out put	One time
E	Nutraceuticals / Personal Products cosmetics	Based on the proportion of NPV of the profit x the contribution of input to the out put	One time
F	Academia / R&D (non-commercial scientific research)	Onetime fee + renegotiation change in intent	One time

The major issues and sub-topics will be covered during the national consultation include:

1. Bio-resources market: barter to global economy

- Livelihood potential of bio-resources
- Scenario in a subsistence economy
- Development of bio-technology and bio-prospecting
- Commercial utilization of bio-resources vs. sustainability of biodiversity
- Bio-piracy
- Innovative ideas towards biodiversity management, ABS as an option: Myth and Reality

2. Need for identifying “real/true value” of the bio-resources for ABS agreements

- Biological Diversity Act and Rules in India and ABS process
- Experiences and challenges
- Complexity in fixing the benefit sharing criteria
- Common property resources character of bio-resources and market distortion
- Significance of real value estimation
- Criteria to be considered
- Providers vs. users and negotiation process

3. Methodology for using the economic valuation in deciding ABS permits

- Bio-resources valuation – differences from ecosystem valuation
- Need for a paradigm shift in valuation
- Draft methodology developed by NBA
- Scope for further improvement and any new methods
- Practicability and operational challenges
- How to overtake the challenges

4. ABS an incentive mechanism and source of financing for biodiversity

- Incentive to community for conservation and sustainable use of biological resources.
- Operationalization process
- Institutional mechanisms
- ABS an internal financial sources towards biodiversity management

5. ABS Potential bio-resources and bio-prospecting in the changing world

- ABS mechanism in practical sense
- ABS relevant bio-resources
- Criteria for identification
- Bio-prospecting: past and present scenario
- Benefit drain from the developing to developed world
- Ethical and moral significance of ABS.

6. Developing a data base covering the economic valuation information

- Data requirement for bio-resources valuation (volume and depth)
- Traditional knowledge vs. modern Research and Development
- How to gather those data?
- Cooperation from different stakeholders, particularly industries
- Reliability and accuracy
- Database management.