

## BIODIVERSITY CONSERVATION *vis-à-vis* SUSTAINABILITY AND DEVELOPMENT IN MEGHALAYA

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### Introduction

The state of Meghalaya is endowed with rich natural vegetation, which ranges from tropical type to sub-tropical type of vegetation or from an evergreen to mixed deciduous types of forests. This is mainly due to certain physical factors such as (i) altitudinal differentiation (i.e. about 100 - 2000mts. a.s.l.) (ii) diverse topography and (iii) temperature and rainfall variations. As such, a large variety of plant species have been identified in the state. Reports show that in Khasi Hills itself there are more than 2000 flowering plant species, which were identified only within a radius of 10 miles from Cherrapunjee. Of these, there are 150 species of Ferns and a profusion of Mosses, Fungi and Lichens, which were identified. In addition, there are more than 250 species of Orchids, 25 species of Balsams, 20 species of Palms and 150 different species of Grasses<sup>1</sup> and numerous types of medicinal plants and herbs which were accounted.

### Human interference in Nature

However, the rich flora, which the state is bestowed with, is rather being disturbed due to human interference which takes place in different forms such as:

- (i) Burning of forest tracks and undergrowth during the pre-monsoon months on the pretext of forest clearing so as to enable new grass, which is a secondary forest product to propagate. Such burning is usually done by the cattle/dairy farmers to sustain their economic activity i.e. cattle rearing or dairy farming.
- (ii) Burning also takes place for the preparation of agricultural fields in the form of Jhum or shifting cultivation, *Bun* cultivation or burning of undergrowth clearing locally known as *thang ram* which is a modified form of Jhum cultivation. *Bun* is very rampant in the Ri Bhoi area for ginger cultivation mainly for enhancing soil fertility and for the control of termites and the growth of weeds.
- (iii) Unscientific tapping of economic forest by-products i.e. the medicinal herbs, minor non wood forest products for e.g. *Lycopodium*, black ginger, ginseng which has now been threatened and endangered in the state.
- (iv) However, the worst of the lot is the random slashing down of dense forest areas for the sake of timber trade in the notion of income generation for sustaining livelihood and for the development of inaccessible areas, which has turned to be a curse for the state in various forms.

All the above mentioned economic activities whether in the form of primary or secondary economic activities have resulted to no development but have only depleted the rich forest resources or bio-resources of the state.

## **Aspects of Conservation of Biodiversity**

Thus, the need of the hour in the state is conservation of our Bio-Resources or Biodiversity Conservation with a proper economic planning. As such planning is both a public and a private responsibility, where people have to work together with the Government to avoid exploitation and wasteful usage of Resources<sup>2</sup>. The term conservation may be looked and viewed from two aspects, firstly, by not touching nature and leave it to heal on its own and by its orderly system. As a matter of fact, nature has its own set of rules and norms and once man out of his own greediness has crossed the limits set by nature, nature reacts negatively in various ways such as natural calamities in the forms of floods, landslides, global warming, epidemics, diseases and such other forms. At present, it can be assessed that degradation of our Physical Environment in the State has reached a critical point and that further interference with Nature in the form of depleting our Bio-Resources which is one of the most important realm of the Physical Environment can be hazardous for the future generations.

Another aspect of conservation can be viewed through judicious usage of the resources through scientific innovations and technological know-how and not through wasteful exploitation of our Resources. But the big question now is that, does the present condition in the State still allow for such usage, and if yes, then for how long?

## **Sustainability and Development**

On the contrary, other than conservation two important terms may also ring in our ears at every juncture of our day-to-day needs - Sustainability and Development. Both Sustainability and Development can occur or is attained only after a well-planned management of our resources or can otherwise be termed as Economic Resources. The greatest resource that the state of Meghalaya is bestowed with is the vast forest resources, which are now depleting through our own greediness, lack of consciousness and lack of love and care for our natural surroundings. Secondly, all forest resources which we feel proudly rich with are sold or traded at raw-material level which gives a return of only 2 percent of what we should actually receive. Lakhs and Lakhs cubic feet of pine, sal and other various important species of timber and bamboo every year are being exported at raw material level. However, if all this timber and bamboo which has been sold cheaply was processed till final finished product in our own state and then being sold, maybe, we would have developed in a proper way and may have reached to the point of being self-sustaining. Also, it would have eased out the ever-growing unemployment pressure in the state. The most important aspect is that we would have been more Eco-friendly and would have also practiced the art of conservation of our forests and forests resources.

## **Propagation of Economic Medicinal plants through Research – Pros and Cons**

On the other hand, it looks encouraging that scientific researchers have come about to study deeper on the economic species and the returns of what certain plant species found in the state could bring to harness backwardness and poverty of the state. During my study for the last 5-6 years in the field as a Bio-geographer, touring from place to place particularly in the Khasi Hills and with the help of my dear friends who are full of traditional knowledge in the rural areas, I was capable to identify 137 different plant species out of which 97 are highly of medicinal value which would be of economic value and which would fetch millions of dollars in the international market. But, the main question stands: whether these indigenous species can be cropped or not. And since so far these species cannot be cropped there is no

point to advertise or popularize them, as it would only lead to more exploitation of the natural forest resources, which would again be highly unjustified. With this, I thus call to all researchers especially those working in the field of Bio-resources, that launching or popularizing any economic species in the open without first being capable of cropping or propagating it practically on the field or even knowing the required environmental conditions and procedure of how to crop or propagate any indigenous economic species would be hazardous. In such cases, we would in fact, be Bio-destroyers rather than Bio-Conservers.

Thus to attain Sustainability and Development at the moment goes against the Conservation Rules, since without any proper scientific innovation and technological know-how to propagate or crop important indigenous economic species in the open with their optimal conditions, everything would be futile.

### **Suggestions**

For Bio-Diversity Conservation, the following suggestions are needed:

- i. For any economic project to be launched, an Environmental Impact Assessment (EIA) should be prepared with remarks from various related disciplines followed by Environmental Auditing (EA).
- ii. Permit only exporting of finished forest products from the state.
- iii. Trees which are less than 7 feet in girth should not be allowed to be cut or traded in the market
- iv. Selling of charcoal should immediately be banned in the whole state.
- v. Ban forest fires for the sake of clearing or for growth of new grass.
- vi. Use of Bio-fertilizers, bone meal, organic fertilizers and vermiform should be encouraged to the farmers and chemical fertilizers should be discouraged.
- vii. Last but not the least, launching of any indigenous forest species product in the market whether in the raw form or in extracts without first being capable of cropping or propagating it in the open field should be banned.

### **References**

1. Directorate of Information and Public Relations, Meghalaya - Meghalaya: Land & People, 1991.
2. Smith Guy-Harold, Conservation of Natural Resources, 1958, 2nd Edition, John Wiley and Sons Inc.