

INTERGOVERNMENTAL SCIENCE-POLICY PLATFORM ON BIODIVERSITY AND ECOSYSTEM SERVICE REPORT: *ECONOMIC IMPACTS ON ASSAMESE RURAL POPULATIONS*

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Abstract : IPBES (Intergovernmental Science is an intergovernmental body) which assesses the state of biodiversity and of the ecosystem services it provides to society, in response to requests from decision makers. Among the findings that are making global headlines is the assessment that as many as 1 million (10 lakhs) species, out of a total of an estimated 8million plant and animal species are facing the threat of extinction because of changes brought about in natural environments by human activities. Assam is a rich state in case of its plants and species. All plants are having each specific medicine elements. Rural poor people of Assam are merely dependent on plants for their livelihood. Which are easily available in the forests or nearby people habitants. But nowadays climate change has heavy impacts on these plants. In this paper, try to find out the economic impacts on Assamese rural poor people for unavailable or difficult to get plants which plants are use as food ingredient.

Index Terms – IBPES, Biodiversity, Traditional Xaak, Assam, Rural.

Introduction

Assam the centre of north east India is a highly fascinated state with play to with biodiversity and wealth of natural resources it stands as an altitude of 134 meters above sea level in the eastern most point and only 35 meters in the western part of the state. Geographically it is situated in between 24⁰ to 28⁰ north latitude and 90 degree to 97⁰ east longitude. Their existence of rare variety of insects and plants, orchids along with one horned world famous Rhinoce's. And the rest of the jungle and sanctuaries of Assam exerts a great contribution to deliberation of human civilization

Bio diversity is defined as the variability among living organisms from all sources including, inter-alia, terrestrial,, marine and other aquatic ecosystems and the ecological complexes of which they are part; this include diversity within species and of ecosystems. Biodiversity is simple consists of two words i.e., biological and diversity. Biological, its name signifies its meaning. Biological means all varieties of species, animals, fungi, plants and micro organisms, where diversity means diverse nature all among them. They are all combining with each other. They depend on each other. So they diversely inter related with each other.

Aims & Objectives:

Aims and objectives of our study are to find out the economic impacts on traditional people of Assam due to loss of bio diversity. Assamese society is passes through some traditional changes where they are gradually take away from traditional cultures.

Methodology:

Methodology of our study is mainly depending on some secondary data and our observations. From our forefather to father they had celebrate various traditions depending on time. But as time passes, those traditions are gradually decreasing.

Discussions

IPBES (Intergovernmental Science is an intergovernmental body) which assesses the state of biodiversity and of the ecosystem services it provides to society, in response to requests from decision makers. It was established on 21st April, 2012 and India is an origin signatory member of IPBES, which is also internal body of United Nations.

The first report was released on Monday by an international group of scientists. The report by the IPBES is the most comprehensive scientific evaluation ever made by the state of our nature, and it gives a detailed account of health of the species that inhabit this earth and the condition of habitats that they live in and depend on.

Among the findings that are making global headlines is the assessment that as many as 1 million (10 lakhs) species, out of a total of an estimated 8million plant and animal species are facing the threat of extinction because of changes brought about in natural environments by human activities. The report says that 75% of earths land surface and 66% marine environments have been “significantly altered”, and that “over 85%” of wetland area had been lost. But, on an average, these trends were less severe on areas controlled or managed by indigenous people and local communities (like tribal; communities in India) (the Indian EXPRESS-MAY8, 2019).

Biodiversity and natures benefits to people underpin almost every aspect of human development and are keys to the success of the new sustainable development goals. They help to produce food, clean water, regulate climate and even control diseases. Yet they are being depleted and degraded faster than at any other point in human history.
Some findings and key messages-

Agricultural production dependent on animal pollination that has increased by 300% over the past 50 years, but pollinator that dependent upon crops show lower growth and stability in yield than crops that do not depend on pollinators.

-Nearly 90% of all wild flowering plants depend to some extent on animal pollination.

-pesticides, including neonicotinoid insecticides, threaten pollinators worldwide, although the long term effects are still unknown.

Overall bio diversity and ecosystem play a critical role in socio economic development as well as the cultural and spiritual fulfillment of the population of India. Many rural populations in India are highly dependent on wild harvests from nature for their subsistence, income and energy needs, through forests gathering fuel wood, honey collection, sell vegetables etc.

Among coastal ecosystems, coral reefs, mangroves, sea grass beds and kelp forests are of critical ecological, cultural and economic importance in India also, providing a range of services, including food security, livelihoods and coastal protection.

India is the 6th top economics of the world in terms of GDP. The flora of India is one of the richest in the world due to the wide range of climate, topology and habitat in the country. It is estimated to be over 18000 species of flowering plants in India, which constitute some 6-7 percent of the total plant species of the total plant species in the world. India is the home to more than 50,000 species of plants, including a variety of endemics (Wikipedia). Many plants in India is eaten as food. About 90% rapid socio economic transitions have come at a high environmental cost, including a high rate of species and habitat loss, environmental pollution and deforestation. This has accelerated and may lead to permanent loss of the biodiversity in the terrestrial and marine ecosystems of India.

Some endangered plants in India are:

- Diospyros celibica (Karnataka, threaten)
- Actinodaphnelawsoni (Kerala threaten)
- Mnsli (Tamilnadu)
- Malabar illy (Tamilnadu) threaten
- Spider wort(MP-rare and endangered)

Assam has one of the oldest, richest and most diverse cultural traditions associated with use of medical plants. In Assam, a large number of village based herbal medicines practitioners who have traditional knowledge of herbal home remedies of alignments and nutrition.

Plants in ASSAM which were or are use as food ingredient:

Assamese name:	English name:	Scientific name:
Paleng	spinash	Spinacia oleracea
Podina	Mint	Mentha arvensis
Brahmi	Brahmi	Bacopa monnieri
Masendori	Fish mint	Houttuynia cordata
Purnanabhaxaak	Dichondra	Dichondra
Morisa/Datha	Amarnath	Amaranthus caudatus
Khuturaxaak	Green amaranth	Amaranthusviridis
Puixaak	Red vine spinach	Basella rubra
Sukaxaak	Spinach dock	Rumexacetosa
Babori		
Bagheasuraxaak	White goosefoot	Chenopodium album
Zilmilxaak	Jute plant	Corchorousolitorius
Titamora	Tar vine	Boerhaviadiffusa
Purnanobha	Pea greens	
Mosurxaak	Fiddle head fern	Diplaziumesculentum
Dhekia	Elephant ear	Colocasia
Kola kosu	Sessile joyweed	Alternanthera sessilis
Mati kaduri	Spiny amaranth	Amaranthus spinosus
Hatikhutura/ kata khutura		
Kukurajara	Celosia argentea	
Malbhogkhutura	Pusley	Portulaca oleracea
Kona ximolu	Tropical spiderwort	commelinabenghalensis
Xorupokmou	Hounds Berry	Solanum nigrum
Bhringraj	False Daisy	Eclipta alba
Methixaak	Fenugreek greens	Trigonellafoenum graecum

These plants were easily available in previous years. But now the above mentioned food plants are rarely found. Due to environmental problems or pollution may lead to extinct or rarely available these plants from our nature. Rural and tribal community of Assam was merely dependent on these above mentioned plants as their food items. It has also enormous medical benefits. All plants have its specific medical benefits. Some are used to increase brain power/memory power (Brahmi xaak) and other some also gives calcium (kola kosu).

Economic Consequences:

There are various traditions that are welcomed or enjoyed by people of Assam. One of the most important forefather traditions is to eat 101 types of plants in the occasion or festival of Bohag bihu. But due to biodiversity loss, these traditions are gradually disappearing.

In case of India, once a time India had variety of plants and species and thus India is known as Sub continent. But gradually India loosed almost everything in this view. With environmental degradation every year some plants and species are listed as endangered, critical, threaten and may extinct from India. Nature gave such invulnerable gifts but gradually India losses its diversity in its plant species. Not because of environmental degradation but also due to ignorance of people and government also. All these plants are most important for Indian society and its livelihood, security, income to the nearby people or rural/tribal people of India. They are dependent on these plants for their livelihood.

The absence of these plants or rare plants leads to economic loss. In Assam as we mentioned above that the people mostly dependent on plants. Assamese traditional people were mainly dependent on these plants as their ingredient of the menu items. Now as all of these are rare to found or may replace in endangered list, or extinct. This has heavy economic cost for the rural traditional people. Due to these reasons the cost of living of its indigenous people are gradually increasing. Now they depend on market based products, which is costly and unhealthy for human being.

Market based products are especially for market and profit purposes. These products are heavily dependent on fertilizers. Due to excessive use of chemicals it often leads to heavy economic burden on the health of tribal or rural community of Assam. Some economic costs which are related due to extinction or rarely available plants mentioned below:

a. Increased cost of living:

Early, traditional people were collect plants for foods for their breakfast, lunch or dinner. Now days, it is rare to found so they are forced to depend on market based products. Market based products price are too high which traditional people are often faces problems to purchases. Because to buy market based product they has to expend their money income to purchase. So they has lost another opportunities which were previously they did.

b. Increased medical costs:

As the market based products are produced highly chemicals. These chemicals are not good for human beings. Due to consume these market based products often they have to go medical for their illness.

c. Unhealthy in nature:

Market based products are produced with highly chemical and fertilizers. These products contains various chemicals which indirectly also harm the human beings. Consumption of these products leads to damaged in our human body parts. And it also reasons for various diseases.

d. Impact on mental health:

Previously, use of traditional medicine plants helps people's mental status. But now it is rare to found and it is not easily available for consumption. As like Brahmi xaak boost memory power of the consumed people. Now have to rely on market based products which may reduces memory power of the rural people. And now they have to purchase market based products which are very costly.

Conclusion:

With the development a country can achieve high standard of living with the cost of nature and poor rural people. One section of the society enjoys luxury life but another section (tribal/rural) community faces many problems. Due to loss of bio diversity and eco system, many plants and species are already extinct from Earth. One of the most important forefather traditions is to eat 101 types of plants in the occasion or festival of Bohag bihu. But due to biodiversity loss, these traditions are broken. As we all knows due our activities plants and species are extinct day by day or May placed in dangered lists or rare to found. To protect "MOTHER EARTH" from these types of evil we have to take various steps. To protect and conserve our nature then we must do to Educate, conserve water, choose sustainable development, plant trees etc.

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