

# A Study on Indigenous Knowledge Systems of the Bodos of Jalukbari Village Associated with Agricultural Practice.

Bhaskarjyoti Boro

M. A. Student of Gauhati University

**Abstract:** *Indigenous knowledge is the skill, understanding and experience of interaction of the indigenous communities with their natural surroundings. The indigenous knowledge is derived from the experience and observation, both from current and past generation. The indigenous knowledge is also known as local and traditional knowledge. This article focus on the indigenous knowledge system associated with agricultural practice of a tribal rural cultivator group.*

**Keywords:** Agriculture, indigenous knowledge, adaptation, climate change

## 1. Introduction

Indigenous knowledge is the skill, understanding and experience of interaction of the indigenous communities with their natural surroundings. The indigenous knowledge is derived from the experience and observation, both from current and past generation. The knowledge based in transcribed and understood by participant through action, such as production method, verbally through saying and myth on cultural events, which are unique to the community and environment. The knowledge base provides cultural acceptance and identity and participant relate to all events and experience from this world views. The indigenous people understand the nature very well. Nature is the super market for the indigenous people from where they collect their food and other resources. According to Warren, "Indigenous knowledge is the local knowledge that is unique to a given culture or society." (Warren, 1991). Abdullah and Hassan (2013) mentions in the article entitled "The use of indigenous knowledge in agriculture and its Role in Sustainable Development" until now, an accurate definition of indigenous knowledge (IK) remains a challenge, because there is some degree of argument between the term Indigenous Knowledge and Scientific knowledge. According to Senanayake, "Indigenous knowledge is considered as the social capital of poor. It is their main asset to invest in the Struggle for survival, to produce food, to provide for shelter and to achieve control of their own lives. (Senanayake, 2006).

### The people:

The Bodo Kacharies are the largest Indo - Mongoloid racial group in Assam. The Bodos are linguistically Tibeto - Burman of Sino - Tibeto origin. In Assam they are mainly distributed in Kakarajar, Bangaigaon, Dhubri, Barpeta, Nalbari, Baksa, Goalpara, Darang, Tezpur, North Lakhimpur and Kamrup district. The Bodos are also called as *Kacharies*. In the Monograph "The Kacharies" by Endle writes that "the origin of the *kachari* race is still very largely a matter of conjecture and inference, in the absence of anything entitled to be regarded as authentic history". (Endle, 1911). Though the Bodos called themselves as bodo, but earlier they were known as *Mech* or *kachari*. Gait wrote

in his book "A History of Assam" that the origin of the word *kachari* is difficult to trace. The word '*kachari*' is derived from a Sanskrit word meaning a "broadening region". (Gait, 1926).

The village Jalukbari is situated at the Boko area of Kamrup district of Assam. It is geographically larger and inhabited by bodos, Kaibartyas and kalita caste. The village is consisted with three hamlet i. e. Kacharipara, kaibartapara and kalitapara. The kacharipara hamlet is inhabited by bodo communities, Kaibartapara which is inhabited by schedule caste and other backward caste and the Kalitapara which is inhabited by kalita caste people.

## 2. Materials and Method

The empirical data for the present study was collected at regular interval during 19<sup>th</sup> April to 30 April 2022. The data were gathered from the rural farmers. The primary data for the study was collected with the help of standard anthropological field method viz. non - participant observation, personal interview and in - depth interview method. The overall data gathered by applying multiple anthropological field method and techniques when situation demands.

## 3. Results and Discussion

The indigenous people understand the nature very well. Nature is the super market for the indigenous people from where they collect their food and other resources. The villagers apply their local knowledge in the different stage of cultivation and in different activities for solving the problem as well as in the process of adaptation. The various indigenous knowledge related with the agricultural practices which are prevailing among the Bodos of the Jalukbari village discussed on the following categories.

### Indigenous knowledge on Soil Fertility Management:

Animal manure is of vital importance in maintaining the soil fertility among the rural farmers. The farmers of the village keep the animal excreta (cow dung) in a particular space of their house. They carry the cow dung to the agricultural field

before ploughing. When the farmer ploughs the agricultural land the cow dung or the animal excreta mixed with the soil. The farmer use animal excreta as manure because of its ability to improve soil fertility and crop yield. This manure has the quality of soil management and has no negative impact on the soil.

#### The “Kur” as a water conservation system:

The “kur” are the small pond digs in a single corner of agricultural field. These are most commonly used for water conservation. In the agricultural field of the village found a good number of “kur”. Usually the “kur” are 4 - 6 feet deep and round in structure. These are dug by the farmer himself. When the paddy requires water the farmer supply water from the “kur”.



The “Kur”



The “ali” on agricultural field.

#### The “Ali” (dam) as a system of water conservation:

The system of “ali” is another significant indigenous method of water conservation. The “ali” is a dam which is made in the cultivated area for water conservation. The farmers make the “ali” by using hoe. The dams are designed in a linear form. The “ali” is the boundary of each agricultural plot. The “ali” are the boundary of owners own agricultural area. Each area covered with “ali” is called “dobol” or “dobola”. The “dobol” are mostly made in quadrangular shape. Each “dobol” conserve sufficient water for cultivation. The farmer transfer water from one “dobol” to another by making a small cut or open area on the “ali”.

#### Indigenous knowledge of pest control:

Climatic variation is one of the factors of driving the spread of pest and disease. The scientific review finds that an increase of temperature and precipitation levels favours the growth and distribution of most pest species by providing a warm and humid environment and necessary moisture for their growth.

#### Using of “masala bon” or “Garmani plant” for pest control:

The village farmer traditionally used the “masala bon”<sup>\*1</sup> in their paddy field for controlling the pest. They plant the “masala bon” around the paddy field for its strong smell by which they protect their crops from various insects and caterpillar.

#### The domesticated ducks as Pest control:

The rural farmer of the village, usually who has agricultural land near the household it is observed that they control the pest by leaving domesticated duck after few days of transplantation. The duck eats the pest like caterpillar, insects, grasshoppers etc. from the paddy field and helps in controlling the pest.

#### Using of crab for pest control:

A few farmers opine that they use crabs for protecting the paddy from the pest. They keep a number of death crabs on their agricultural field. When it starts petrifying it creates a stench. The caterpillar, insects and other pest pays attention on eating the petrified crabs and it ultimately helps in some extent to protect the paddy from the pest.

#### Pest control by “bhorijonma manuh” (breech birth person):

Among some of the rural farmer of the village found that they believe in some special spiritual aspect having a person which he gets by birth. They believe that a person who born bottom first instead of head first he has the quality of dominating the pest in agriculture. When the farmers face the problem of pest in his paddy field he tries to find out a person of this quality. After getting a person having this speciality goes to the field and he spreads water through his feet on the paddy plant from the surface water of the field. When the water is spread on the paddy plants, the plants moves and the caterpillar and some insects falls on the water surface of the agricultural field. Then the running water carries those pest from that particular agricultural field to the another place. The fish also eats the caterpillar and insects when it falls on water from the plants. By applying this simple way the rural farmer protect their paddy crops from the pest.

<sup>\*1</sup> Siam Weed, Scientific name: Eupatorium odoratum.

#### Pest control by using neem leaves:

The villager traditionally stores their harvested crops on bamboo made store system called “bhoral” or “bhakhiri”. They most commonly uses neem<sup>\*2</sup> leaves. They keep the neem leaves in the each corner of the “bhoral” and on the crops to protect it from the pest.

#### 4. Conclusion

The above mentioned indigenous knowledge system are the basic strategy of adaptation of the simple rural cultivators. The indigenous knowledge systems of local people are less polluted and environmental friendly. Today the climate change largely impacting on culture, health, subsistence pattern and in all the important aspect of human life. Especially, the indigenous people who are depend upon the surrounding environmental condition face difficulties. For indigenous people around the world, climate change brings different kind of risk and opportunities, threatens cultural survival and undermines indigenous human right. (Susan and Mark, 2009). If the indigenous knowledge systems are put together with the modern scientific knowledge it can protect the indigenous communities and can make better climate change adaptability by maintaining the balance of environmental sustainability. The policy maker and planner should pay their attention to this invaluable knowledge for environmental sustainable policies.

\*2 Neem leaves, Scientific name: *Azadirachta indica*.

#### References

- [1] Abdullah, H. J. and Hasan T. K. (2013). The use of Indigenous Knowledge in Agriculture and its Role in Sustainable Development. *International Journal of Science and Research*. Vol.4, 1312 - 1317
- [2] Endle, Sidney. (1911). *The Kacharis*. Macmillian and co., Limited St. Martin's Street, London.
- [3] Gait, Edward. (1926). *History of Assam*. Published by C. F. Hooper, of Thacker, Spink & co. Calcutta.
- [4] Susan, A. Crate and Mark, Nuttall. (2009). "Anthropology and Climate Change" Left coast press, Inc. Walnut Creek. California.
- [5] Senanayake, S. G. J. N. (2006). Indigenous Knowledge as a Key to Sustainable Development. *The Journal of Agricultural Science*. Vol.2, no.1
- [6] Warren, D. M. (1991). Using Indigenous Knowledge in Agricultural Development. *Discussion paper 127*. Washington D. C.: World Bank.