

2019

**STRENGTHENING AGRICULTURE AND ALLIED  
SECTOR CONTRIBUTION TO INDIA'S  
NATIONAL BIODIVERSITY ACTION PLAN  
(NBAP) 2008 AND NATIONAL BIODIVERSITY  
TARGETS (NBTS) 2014**

**REPORT OF THE FINAL NATIONAL WORKSHOP**

**Food and Agriculture Organization of the United Nations  
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**REPORT OF THE TCP “STRENGTHENING AGRICULTURE AND ALLIED  
SECTOR CONTRIBUTION TO INDIA’S NATIONAL BIODIVERSITY ACTION  
PLAN (NBAP) 2008 AND NATIONAL BIODIVERSITY TARGETS (NBTs)”  
PROJECT FINAL WORKSHOP**

**Held on: 16 December 2019**

**Venue: We the People Hall, UN Office, New Delhi**

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## ABBREVIATIONS

|          |   |
|----------|---|
| BMC:     | Biodiversity Management Committee                               |
| CBD:     | Convention on Biological Diversity                              |
| CDS:     | Centre for Development Studies                                  |
| CRRID:   | Centre for Research in Rural and Industrial Development         |
| FAO:     | Food and Agriculture Organization                               |
| ICAR:    | Indian Council of Agricultural Research                         |
| IGNOU:   | Indira Gandhi National Open University                          |
| KILA:    | Kerala Institute of Local Administration                        |
| KSBB:    | Kerala State Biodiversity Board                                 |
| KVK:     | Krishi Vigyan Kendras   |
| MBB:     | Mizoram Biodiversity Board                                      |
| MoA&FW:  | Ministry of Agriculture and Farmers Welfare                     |
| MoEF&CC: | Ministry of Environment, Forest and Climate Change              |
| NBA:     | National Biodiversity Authority                                 |
| NBAP:    | National Biodiversity Action Plan                               |
| NBPGR:   | National Bureau of Plant Genetic Resources                      |
| NBTS:    | National Biodiversity Targets                                   |
| NPSC:    | National Project Steering Committee                             |
| PAMETI:  | Punjab Agricultural Management and Extension Training Institute |
| PBB:     | Punjab Biodiversity Board                                       |
| PMKSY:   | Pradhan Mantri Krishi Vikas Yojana                              |
| SAMETI:  | State Agricultural Management & Extension Training Institute    |
| SBB:     | State Biodiversity Board  |
| SDGs:    | Sustainable Development Goals                                   |
| TCP:     | Technical Cooperation Programme                                 |

## MINUTES

### Introductory Session

#### **Introduction**

The Ministry of Environment, Forest and Climate Change (MoEF&CC) and the National Biodiversity Authority (NBA) with the Food and Agriculture Organization (FAO) of the United Nations, implemented a project titled “Strengthening Agriculture and Allied Sector Contribution to India’s National Biodiversity Action Plan (NBAP) 2008 And National Biodiversity Targets (NBTs) 2014” under FAO’s Technical Cooperation Programme (TCP). The project was implemented in the states of Punjab, Kerala and Mizoram through 2017-2019. The Final National Workshop for the FAO-supported project was held on 16<sup>th</sup> December 2019 at UN Conference Hall (We the People Hall), 55 Lodi Estate, Max Mueller Marg, New Delhi. In this concluding workshop the FAO team and state partners presented key outputs from the project. The team also presented a mainstreaming framework and strategy to effectively implement NBAP and achieve NBTs in the context of agrobiodiversity.

The meeting started with Ms. Seema Bhatt, Project Implementation and Coordination Consultant for the project, welcoming everyone (participants list Annex 2) to the workshop. Ms. Bhatt also shared the agenda of the workshop (Annex 1).

- **Welcome Remarks by Dr. V. B. Mathur, Chairperson, National Biodiversity Authority:**

Dr. Mathur started by stating NBA’s involvement in formulating the National Biodiversity Targets (NBTs). He mentioned that after six years of considerable work, the NBA formulated 12 NBTs that are in complete alignment with the National Biodiversity Action Plan (NBAP). He specified that for last six years different organizations and entities have been working to implement them. He then thanked FAO for taking up this project to ensure that India's commitment and actions required for fulfilling these targets are achieved. He stated that the purpose of this workshop was to share learnings that emerged during the project period and at the same time to internalize those learnings and upscale them within the project states as also other states.

He mentioned that FAO’s role in building capacity in forestry, environment, wildlife and agriculture sector in the country is tremendous. He also thanked FAO for coming forward with technical expertise and for building capacity of the states in the project. He also requested FAO to continue these efforts as technical experts in the area.

Dr. Mathur pointed out that the agrobiodiversity community needs to be proactive in protecting, managing and achieving the NBTs. He said that there is a need to re-look at how and what changes are required in policy so that in the next ten years we will be in a better position to conserve agrobiodiversity. He commented that an interesting outcome of

the project is the development of agrobiodiversity curricula by the various agencies in the project states. These will be of significant value in years to come.

- **Remarks by Dr. Sujit Kumar Bajpayee, Chairperson, National Project Steering Committee (NPSC) and Joint Secretary, Ministry of Environment, Forest and Climate Change (MoEFCC)**

Dr. Bajpayee pointed out the importance of mainstreaming agrobiodiversity. He stated that encouraging people to plant certain kinds of species would help in supporting aspects of both livelihood security and nutrition. He acknowledged that this TCP on mainstreaming biodiversity into agriculture would support the Government of India (GoI) with increased capacity at national, state and local levels. He also highlighted the need to focus on the post 2020 Biodiversity Framework and to look at agrobiodiversity in the context of the Sustainable Development Goals (SDGs).

- **Remarks by Dr. Namita Priyadarshie, Joint Secretary, Ministry of Agriculture and Farmers' Welfare (MoA&FW)**

Dr Priyadarshie commended the project and hoped that the efforts made through this project will be upscaled. She also highlighted some of the key schemes of the Ministry that integrate agrobiodiversity concerns in their mandate.

- **Remarks by Mr. Tomio Shichiri, FAO Representative in India**

Mr. Shichiri reiterated the definition of agrobiodiversity as evolved by FAO. He stated that for mainstreaming agrobiodiversity FAO will keep working with Ministry of Agriculture and Farmers' Welfare and the Ministry of Environment, Forest and Climate Change.

- **Remarks by Dr. S P Ahlawat, Head, Division of Plant Exploration and Germplasm Collection, National Bureau of Plant Genetic Resources (NBPGR)**

Dr. Ahlawat pointed out that while mainstreaming is necessary, it is also important to look at the nutritional aspect of crops. The focus should be on improved varieties along with improvement in crop intensity. He stated that it is difficult to convince farmers to cultivate pulses as money is the driving force for farmers during crop selection. Hence, we should try to link crop diversity with better value chain structures, which can fetch appropriate income for farmers, thus providing them an incentive to grow diverse crops.

**Project Overview by Ms Seema Bhatt, FAO India**

- Ms. Bhatt talked about the importance of agrobiodiversity and the reason for its decline. She stated that the main idea of this project was to support the GoI to strengthen the agriculture and allied sector contributions to India's NBAP 2008 and NBAP Addendum 2014 and NBTs at the National, State and local levels.

**Review of Policy and Regulatory Framework for Agrobiodiversity and presentation of Action Plan to Mainstream Agrobiodiversity by Ms. Shalini Bhutani, FAO India**

- Ms. Bhutani highlighted specific issues related to agrobiodiversity in the context of the legal and policy regime for each of the project states. Further, she talked about the need for tools and protocols to help track agrobiodiversity and to support *in situ* conservation. She also discussed the engagement with larger issues around biodiverse production.

**Key Points of Discussion**

- The main aim of the project was to capture the diversity and policies of the three project states and a wealth of information has come from the consultations within the states.
- There is a need to discuss what can be done to overcome the constraints that are faced in mainstreaming agrobiodiversity practices.
- Need to learn from past experience (‘Green Revolution’) where some great initiatives turned out to be disasters in the long run. Need to discuss mechanisms required for not making the agrobiodiversity approach another disaster.
- FAO could potentially support in developing the state curricula, for capacity building for agrobiodiversity right from the top, cascading to various levels. This project is viewed as the first step.
- The sensitization of the officers in relevant Ministries is critical, for this approach to be successful.
- The integration and process of mainstreaming agrobiodiversity can be enhanced by incorporating it through government schemes and policies such as the National Food Security (NFS) Scheme, or the *Pradhan Mantri Krishi Vikas Yojana* (PMKSY).
- For the year of Millets 2023, we can work on its production enhancement and target to re-integrate it in our food cropping cycle.
- It is also important to strengthen the capacity of the State Biodiversity Boards (SBBs).
- Strong mechanisms to conserve crop varieties are needed to strengthen the efforts of agrobiodiversity conservation.
- Agrobiodiversity also includes below-ground biodiversity, hence a wider approach is needed to ensure that all indigenous varieties are considered.
- NBA now needs to shift its focus towards agrobiodiversity as a whole, rather than just forest biodiversity. Also needs to play a pro-active role and take up the issue with the MoA&FW on how to operationalize biodiversity related policies with the farmers.
- A recommendation is to work specifically on the agrobiodiversity aspect in the GEF 6 GreenAg project of FAO. Dr. Mathur stated that this could be achieved through the respective SBBs.

## **Reflections by State Institutions**

### **Centre for Development Studies (CDS), presentation by Mr. T. Abhilash**

- Mr. Abhilash pointed out that Kerala is one of the most biodiverse states in the country and is also part of one of the 34 Biodiversity ‘Hotspots’. However, there has been a constant decline in biodiversity in both India and Kerala. Mr. Abhilash emphasized the importance of People’s Biodiversity Registers (PBRs) as the main institutional mechanism for documenting and managing agrobiodiversity. PBRs document local community knowledge around the status, use, history as well as key threats to biodiversity. The Kerala Organic Farming Policy was discussed highlighting the necessity of linking this policy with biodiversity opportunities for local communities.

### **Kerala State Biodiversity Board, presentation by Dr. V. Balakrishnan**

- Dr. Balakrishnan in his presentation mentioned that the Kerala State Biodiversity Board (KSBB) has been front-runner in developing/addressing policies related to agrobiodiversity. However, the floods of August 2018 and August 2019 seriously impacted the biodiversity of the state. The KSBB has drawn up a three- pronged strategy to address the impact of the floods on the ecology and biodiversity of the State. This rapid assessment is to be followed by a study to understand how the disaster has affected various ecosystems. The third part of the strategy will focus on developing a long-term action plan for ecological restoration.

### **Mizoram State Biodiversity Board, presented by Dr. Lalneihpuia Chhakchhuak**

- In this presentation, Dr. Lalneihpuia mentioned the gaps and researchable issues relating to agrobiodiversity conservation that the Mizoram State Biodiversity Board (MSBB) and allied departments had identified. He reported that capacity building through trainings and workshops on biodiversity have been carried out in all the districts with the Biodiversity Management Committees (BMCs). He also mentioned that more awareness is needed on concept of biodiversity and agrobiodiversity, their importance and role in food production, security and economic development. This could be done through local media. A brief report on the TCP has already appeared in the local newspaper and television news.

### **Mizoram state laws and policies, presented by Ms. Shalini Bhutani**

- Ms. Shalini Bhutani of FAO India, presented the gaps in laws and policies in the state of Mizoram based on research and analysis carried out. Ms. Bhutani in her presentation, mentioned that there is little understanding about agrobiodiversity and near absent inclusion of it in agriculture and allied sectors. She also stated that the MSBB is the only body to have a focused mandate to conserve biodiversity in the state. However, there are issues of coordination between other relevant departments. There is also limited baseline data on agrobiodiversity and what exists, is not collated in one place. Also, people’s

knowledge and diversity of their practices are still to be recorded and recognised. She also mentioned that the Mizo Bird's Eye Chilli is the only Geographical Indication (GI) registered from Mizoram. There are a lot of other local products that have potential for GI protection.

#### **Punjab State Biodiversity Board, presented by Mr. Parveen Kumar**

- Mr. Kumar gave a pre and post project analysis in his presentation. He mentioned that before this project there was no focus on agrobiodiversity in the Punjab State Biodiversity Board (PSBB), relevant state departments or academic institutions. Moreover, there was no ground level data or documentation on agrobiodiversity. There was also a lack of coordination among line departments; lack of awareness about NBTs and the focus was on high yielding varieties and exotic breeds. The project has enhanced focus on agrobiodiversity. There is also an attempt towards better coordination within and between BMCs, the Technical Support Group (TSG), the Agriculture Technology Management Agency (ATMA) officials and progressive farmers. This has led to an increased capacity among various stakeholders.

#### **Centre for Research in Rural and Industrial Development (CRRID), presentation by Dr. Sukhvinder Singh**

- In his presentation, Dr. Singh stated the reason why Punjab was chosen as one of the project states. He cited the changes in cropping pattern as crops grown in the previous years were not suitable as per the state's topography. There is now a move to bring about a change in these cropping patterns. As a result of the project, there is an acceptance towards more indigenous livestock breeds both at the individual farmer as well as institutional level.

#### **Inputs from Chhattisgarh and Uttarakhand State Biodiversity Board**

- The State Biodiversity Boards need have a brainstorming session followed by capacity building to work out a more detailed strategy for agrobiodiversity conservation.
- A lot of data for many varieties of crops is missing because of certain criteria which do not let those varieties of crops to be qualified as the exportable variety and hence the data around them is either not collected or is lost. SBBs should work to address this issue and carry out adequate documentation for the same.
- The issue of high demand of rice was also brought up, as it has put a huge burden on state resources as also agrobiodiversity.

## Capacities for Agrobiodiversity

### **Curricula and Trainings: Presentations by State Institutions**

**1. Punjab Agricultural Management & Extension Training Institute (PAMETI) presented by Dr. Bharti Madan**

She mentioned the need, importance of and how to go for sustainable agriculture and the practice of economical, biodiverse farming systems. She also mentioned various native varieties of plant/shrubs/herbs that are highly tolerant, and of considerable nutritional value but are now being considered as weeds. This issue needs consideration. She talked about the need to strengthen marketing mechanisms for alternate crops.

**2. Mizoram Agricultural Management & Extension Training Institute (SAMETI) presented by Dr. Baby Zaithanpuii Hmar**

In her presentation, Dr. Baby stated that this project has provided the state with a learning process for Mizoram. Material of agrobiodiversity developed as part of this project will now be used both at the state and community level for further capacity building.

**3. Kerala Institute of Local Administration (KILA) presented by Mr. Mathew Andrew**

In his presentation, Mr. Mathew stated the reason of decline in biodiversity, especially agrobiodiversity. He pointed out how this is beginning to have a negative impact on sustainable livelihoods and food security. He mentioned the purpose and objective of the training and the methods of training, which was conducted by faculty members/consultants of KILA and KSBB. The training conducted was fruitful and productive and now a request has been made to conduct another training programme on the same lines in Alappuzha district.

## Discussion Points

### **Punjab**

- In Punjab more indigenous fruit varieties could be focused on.
- Agrobiodiversity needs to be revisited in Punjab in post-Green Revolution phase. At the same time the crop residue burning issue has made people to move towards crops, which do not require burning.
- Better value chains and marketing mechanisms can help farmers shift from growing paddy/wheat.
- The real challenge comes from the real estate sector that is poised to acquire farmlands. There is need for an in-depth analysis of how this sector is impacting agriculture.

### **Mizoram**

- Livestock should be made an inherent part of the agrobiodiversity sector.
- There are no GI registrations of the traditional rice varieties in Mizoram.

- Farmer innovations need to be recognized.

### **Kerala**

- An example of a conservation mechanism from Kerala is the Paddy Land Protection Act, which has successfully stopped the encroachment of the real estate sector into paddy lands.
- The issue of human-wildlife conflict is also considerably serious. Several farmers have stopped cultivating on lands frequented by animals. The Kerala Animal Husbandry and Veterinary University has developed a model that could be used to tackle this issue.
- There is an urgent need to implement mechanisms that promote sustainable agriculture at the grassroot level. At the same time, there is also a need to develop mechanisms that address improved production and productivity through the practice of agroecological farming systems.

### **Panel discussion on Mainstreaming Agrobiodiversity in Agriculture Education**

Panelists: Dr. R C Agrawal, DDG (Education), Indian Council of Agricultural Research (ICAR), Dr. V B Mathur, NBA and Shri R B Sinha, FAO, India

- The ICAR has lot of universities at various hierarchies, which are actively researching on agrobiodiversity. There is a need to train these students for better exposure at international level for better research.
- A module of agrobiodiversity should be made easily accessible to students on their phones so that they can easily interact with farmers regarding the same.
- A platform where students can express their views on agrobiodiversity could facilitate better awareness and sharing of information/experiences.
- It would be useful to modify existing agriculture/biodiversity curricula to make them state specific. Kerala, for example has now added issues related to disaster risk reduction into existing curricula.
- There need to be more agrobiodiversity related learning materials developed and made available to the *Krishi Vigyan Kendras* (KVKs).
- Introduction of an agriculture curriculum in IGNOU distance learning courses may not be feasible since orientation in agriculture would require regular fieldwork. However a certificate course in agrobiodiversity could be suggested for IGNOU.

### **Closing Remarks by NBA**

Dr. Mathur thanked all the participants and reiterated the usefulness of the discussions.

### **Vote of Thanks: FAO Representative in India**

Mr. Tomio Shichiri, FAO Representative in India, thanked everyone for attending the workshop. The event ended with a group photo.



**Project Overview and group discussion**



**Group photo of the final Agrobiodiversity Workshop @ We The People Hall, UN Office, New Delhi, 16 Dec 2019**

## **Annex 1: Agenda**

### **Introductory Session**

|               |  |
|---------------|--|
| 10.00-10.05am | Welcome Remarks, Dr V B Mathur, Chairperson, National Biodiversity Authority (NBA)       |
| 10.05-10.15am | Remarks by Joint Secretary, Ministry of Environment, Forest and Climate Change (MoEF&CC) |
| 10.15-10.25am | Remarks by representative Ministry of Agriculture and Farmers' Welfare (MoA&FW)          |
| 10.25-10.35am | Remarks by Mr Tomio Shichiri, FAO Representative in India                                |
| 10.35-11.00am | Project Overview by Ms Seema Bhatt, FAO India  |
| 11.00-11.15am | TEA BREAK  |

### **Key Issues**

|               |  |
|---------------|--|
| 11:15-11:45am | Review of Policy and Regulatory Framework for Agrobiodiversity and presentation of Action Plan to Mainstream Agrobiodiversity by Ms Shalini Bhutani, FAO India |
| 11:45-12:00pm | Discussion   |

### **Reflections by State Institutions**

|                  |   |
|------------------|---|
| 12:00 to 12:45pm | Kerala State Biodiversity Board; Centre for Development Studies (CDS)                                       |
| 12:45 to 1:30pm  | Mizoram State Biodiversity Board, FAO India   |
| 1:30-2:15pm      | LUNCH   |
| 2:15 to 3:00pm   | Punjab State Biodiversity Board, Centre for Research in Rural and Industrial Development (CRRID) Discussion |
| 3:00 to 3:45pm   | Inputs from other State Biodiversity Boards working on Agrobiodiversity                                     |
| 3:45 to 4:00pm   | TEA BREAK   |
| 4:00-4.30pm      | Capacities for Agrobiodiversity   |

### **Curricula and Trainings**

Presentations by State Institutions

Punjab Agricultural Management & Extension Training Institute (PAMETI)

Mizoram Agricultural Management & Extension Training Institute (SAMETI)

Kerala Institute of Local Administration (KILA)

**4:30-5:15pm: Panel – Mainstreaming Agrobiodiversity in Agriculture Education**

Dr. R C Agrawal, DDG (Education), ICAR

Dr. V B Mathur, NBA

Mr. R B Sinha, FAO India

**5:15pm        Closing Remarks by NBA**

**Vote of Thanks: FAO Representative in India**

**5:30pm        CLOSE**

**Annex 2: List of participants:**

- + one from MoEF&CC

| No. | Name                       | Designation  | Contact            | Email                       |
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|    |                             |   |            |  |
|----|-----------------------------|---|------------|--|
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|    |                             |   |            |  |