The MGB project team is happy to bring out this seventh issue of e-newsletter which consists of documentation on traditional knowledge of the community and events organized for conservation of indigenous crops, livestock, NTFP diversity and habitat eco-restoration.

1. Crop Genetic Diversity

Gourd diversity in Satpuda ranges
Satpuda mountain ranges are hub for unique crop landraces, NTFP and other biodiversity. Among these indigenous crops, gourd is one of the unique crop having considerable diversity. In local language gourd is known as ‘Kullo’. Information on some local gourd types is highlighted below

**Motho kullo:** It is cultivated in month of May-June and mostly allowed climbing on roof. This pumpkin has yellowish orange coloured, larger size fruits. Vine bears 20-25 fruits; each fruit weight ranges 4-6 kg. Fruits have more than six months shelf life. Fruits are eaten after boiling.

**Raykullo:** These pumpkins are cultivated on farm bunds or in kitchen garden and allow to climb on roof. It has smaller, reddish scarlet coloured fruits. Vine bears 15-20 fruits, each fruit weigh up to 3 kg. Mostly it is used as vegetable but occasionally cooked with rice. Seeds are also edible and eaten after roasting.

**Motho tumbado:** It is naturally grown non-edible pumpkin but has various uses as water vessel or to plant irrigator. It is used in processing of Mahua flower for fermentation. It has great importance in tribal rituals.

**Chhoto tumbado:** It is same as Motha tumbado but smaller in size. It is also used as spoon, water bag. It has prime importance in ‘Holi’ festival and it is one of the components of their drapery.

**Lambdo kullo:** It is bottle gourd locally also known as *Dudhi*. It is mostly cultivated on farm bunds/kitchen gardens. Vines bear up to 15 fruits. Fruits are used as vegetable and for desserts/dishes.

**Gangaphal kullo:** It is largest and sweeter pumpkin grown in Satpuda area. *Gangaphal* cultivate in kitchen garden and allowed climbing on roof and each vine bears 5-7 fruits. A fruit weigh up to 7 kg and has 5-7 years of shelf life. It has importance in rituals of Dashera festival. Fruits are used in preparation of various sweet dishes.

Some age old person claims that few years ago there were more than 15 types of pumpkins exists. However today only few types are observed due to non-cultivation. As these gourds has special importance in tribal culture, there is need for conservation of these pumpkin diversity.
2. Indigenous Livestock Diversity

Community Traditional knowledge in animal rearing

Indigenous breeds are habituated in different agro-climatic zones of India. They have been evolved over several generations of natural selection, domestication and are well adapted to their specific environment. Region wise breed are often a livelihood bastion for marginal farmers and tribal. Particular community raring specific animal breed e.g. Nanda Gaolis- Gaolao cattle, Banjara- Lalkandhari, Kanadi/Talwar – Dangi cattle, Mana tribe- Berari goat, Gond- Kathani, Golkar- Shahi Golkar buffalo, Pawara- Satpudi poultry. These breeds are sources, carriers and stewards of cultural heritage: practices, customs, knowledge, myths-beliefs, and aesthetic preferences. The landscapes related to custodians of these breeds i.e. communities rearing and maintaining these breeds.

It was observed that communities have their own criteria for selecting a preferred and suitable animal or bird for managing and getting optimum production from these resources. These criteria are based on their experiential knowledge over generations and their preference is based on the optimum production and performance of these animal genetic resources in their agro ecological area and community’s needs. For better selection and sound breeding programme these criteria and claims should be quantified and validated in future for better management and involvement of keepers in decision making for conservation of animal genetic resources.

Under MGB project BAIF have selected six local breeds and effort have been made to conserve these indigenous breed with community participation.

3. Conservation of Non-timber Forest Produce species (NTFPs)

Traditional knowledge on Mahua flowers

Mahua (Madhuca latifolia) belongs to Sapotaceae family. It is indigenous to India and found throughout the subtropical region. It holds a special position for tribal people in India. It serves as a prime NTFP and not only as a means of livelihood to them but a tradition in vogue since centuries. Tribal people has great importance to Mahua from both the economic and religious point of view.

Mahua fruit is eaten as a vegetable while oil from the seeds is used for cooking and lightening lamps. Mahua flowers are also edible and used in various preparations. Mahua flower drink is part of tribal cultural heritage and an essential drink for them during celebrations. Briefly we can say that each and every part is useful in many ways and that’s why it is referred as ‘Kalpvriksha. By considering the importance of Mahua, trees are being locally classified depending on their flower shading time, flower size, flower moisture six types have been identified.

1. Gulli movali: This type of plants has sweeter and high moisture flowers. Flower drops down during early morning. Wild animals like monkeys, bear and birds visits more frequently for flowers. It bears maximum fruits.

2. Ratgol moval: These plants shades flower during night hours and they are more fragrant. These
flowers mostly preferred by bears.

3. **Dundal muvala**: These trees shades flowers during early morning (5-9 am). These trees possess large size flowers even after drying. These plants give higher flower yield.

4. **Sikatyal muvali**: This type of trees shades flowers during day hours. The process of flower dropping is very slow even some flowers doesn’t drop from the inflorescence. These types of trees have more latex as compared to others.

5. **Sidani muvali**: It has comparatively smaller flowers. This type of trees shades flowers from late evening hours to late morning. Due to smaller size of flower, collection becomes tedious job as well as yield potential is quite lesser than other types.

6. **Fatal muvali**: Flowers of this type have more nectar and moisture content. Fruit setting is also more than other types.

## Important Events

### A) Meetings
Regional group meetings were organized by IISER, Pune as per below

- Vidharbh region meeting at Navegaon bandh (Dist.- Gondia) on 10-11 January 2018
- North Maharashtra meeting at Shahada (Dist.-Nandurbar) on 6th February 2018

### B) Important Visits

- The millet breeders, Dr. Sanjeev Despande and Dr. Nagappa from University of Agriculture Sciences, Dharwad were visited to crop diversity conservation program in Jawhar cluster (Dist. -Palghar) on 30th October 2017
- Dr. Anil Kakodkar, chairman of Rajiv Gandhi Science and technology Commission, Mumbai had visited to MGB activities in Jawhar cluster (Dist. -Palghar) on 31st January 2018.

### C) Trainings and workshops organized

- Mahua workshop cum training was organized on 7th February 2018 at Dhadgaon cluster (Dist. Nandurbar). Personnel from IISER, Pune and MGB partners were participated. The main objective of the workshop was to demonstrate the methodology of candidate tree selection, various nursery techniques for Mahua and other NTFP species and Mahua recipes.
- Training on importance of millets cultivation, promotion and value addition by processing was organized on 26th February 2018. Dr. Murlidhar Mahajan (Agriculture college -Dhule), Dr. P. Desale, Dr. Amruta Raut (MPKV Rahuri) and Dr. Rajendra Dahatonde (KVK -Kolada) were participated as resource persons. Each one of them emphasized on various aspects of minor millets. The 60 farmers from Dhadgaon cluster (Dist. -Nandurbar) were participated in this training.
- Anand Shala Workshop: two workshops were organized for school student and teachers from Dhadgaon and Jawhar clusters, in month of December 2017 which was facilitated by CEE Pune.
- Field trainings on participatory seed selection of rice, millets and maize were organized in Akole, Dhadgaon, Jawhar cluster. There were around 75 farmers from adjoining villages of respective clusters were participated in the trainings.
• Workshop on marketable products from old seeds was organized along with IITB-IDC department students during 1-9 Feb 2018. During this workshop, marketable products like seed jewelry, Rakhi and other decorative items were prepared.

• 'Mahua Recipe Mela' was conducted to create awareness about nutritive value and health benefits of Mahua flower. More than 40 women and students participated and learned about ten values added products of Mahua flowers.

• An exposure visit to NTFP nursery at Hidur (Dist. Gadchiroli) was organized on 31st January 2018. The 13 NTFP collectors from Bhamragad cluster participated in this exposure. The major purpose of this activity to create awareness about sustainable utility of NTFP and to promote plantation of elite NTFP trees.

D) Participation in exhibitions and other events

• Participated in biodiversity exhibition cum awareness program on Millets organized by IIMR, Hyderabad and PPV & FRA New Delhi.

• Participated in "Bhimthadi Jatra" Pune organized by Baramati Krishi Prathistan during 21-25 December 2017. Exhibited crop and wild edible plant diversity.

• Participated in Workshop of organic farming & Agriarian crisis by Centre for science & Environment, Delhi. Presented work on conservation of Agro-diversity in tribal area of Maharashtra.

• Participated in traditional Dangi festival (cattle fair) at Rajur (Dist.-Ahmednagar) during 8-10 February 2018. Displayed various posters on better animal health management, and cattle diversity.

• Participated in Gondwana Vaidu Sahitya Samelan Organized by Arogya Vardhani and Maharashtra State Biodiversity Board, during 6-7 January 2018. Exhibited crop seed and NTFP diversity.

• Participated in State level Marathi Vigyan Parished organized at Vasundhara Vigdyan Kendra, Kudal During 16-17th December 2017 and exhibited crop diversity.

• Participated in Kirloskar Vasundhara Festival organized by Kirloskar group during January 2018, Exhibited more than 200 landraces of different crops and more than 15 Wild edible plant, Mahua recipes.

• Participated in KRUSHAK-2018 organized by Baramati Krushi Pratishthan and KVK Baramati. During this event BAIF personnel and MGB farmer participants exhibited agro-biodiversity seed samples of various crop landraces collected from various localities.