

# DECENTRALISED AGRO-BIODIVERSITY CONSERVATION:

A multi stakeholder participatory experiment

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Cultivated plant species and domesticated animal species, including their genetic variants and associated plant and animal diversity, are collectively called 'agrobiodiversity'. These resources are at risk with the expansion of industrial agriculture, and maintaining locally adapted native seed materials in micro agro-ecosystems will be vital for ensuring crop resilience to climate change.

This study narrates the learning experiences of a 3-year participatory project – *Networking traditional farmers and local self-governments for agro-biodiversity conservation and Wayanad community seed festival* – implemented with local communities and local governments. The aim of the project was to democratise agrobiodiversity conservation efforts through a seed conservation movement in the Wayanad district of Kerala, India.

**W**ayanad is a hilly district of south India known for its unique climate and rich biodiversity. The social fabric of Wayanad is a mixture of 12 tribal communities (18.53 % of the population), migrant farm families from different parts of the state (71%), and the rest comprising of government officials, plantation labourers and merchants (12%). Agriculture is the main livelihood activity for all the tribal communities living in this region.

A traditional farming family 20 years ago in Wayanad would have cultivated on average more than 20 varieties of vegetables, eight varieties of paddy, seven varieties of tubers and six varieties of cereals. However, Wayanad has witnessed a large scale transformation (from food crop cultivation to cash crop cultivation) in the last four decades, and diversity is fast disappearing due to land fragmentation, changing cropping patterns, government support to cash crop cultivation, and changing markets and agricultural policies. Traditional farmers still conserving agrobiodiversity are generally poor and located away from the cities.

### ***Networking for agrobiodiversity***

The project aimed to integrate community knowledge on cultivating diversity to the formal system of Panchayati Raj institutions (local governing bodies) under the legislative provisions of the Indian Biological

Diversity Act (BD Act) 2002. The project is a continuous process as part of the 'Seed Care Movement' which started working around the conservation of crop diversity, the protection of farmers' rights on agrobiodiversity, and the need to find markets for traditional agricultural products. The programme was initiated in 2014 by the M.S.Swaminathan Research Foundation (MSSRF), Seed Care and the Wayanad District Tribal Development Action Council (WTDC), with the objective of

- creating a network of traditional farmers;
- bringing the concept of agrobiodiversity conservation to the local development agenda;
- facilitating the establishment of a public mechanism for the conservation of diverse crop varieties under the provisions of the BD Act; and
- facilitating the establishment of a formal system at the local level to provide continuous support and recognition of custodian farmers.

The initiative started with the support of the Kerala State Biodiversity Board, the Wayanad district *Panchayath*, 25 *Grama Panchayaths* (the local governing bodies of the district), and the farming communities of the district. The National Bank for Rural and Agricultural Development, the Kerala State Biodiversity Board, the Kerala Kudumbasree Mission, and the Kerala State Council for Science Technology and

*Cover Leafy green market as part of Good Food campaign*

*Right Farmer stalls showing the local agrobiodiversity at the Wayanad Community Seed Festival*

Environment joined this programme as funding and organisational partners.

The four major components of the programme included community level conservation activities, public awareness programmes, the Wayanad community seed festival and policy deliberations at different levels. The activities were designed to facilitate integration of learning from the traditional farming communities and custodian farmers to the formal systems.

The process sensitised the general public, policymakers, farmers and local governing bodies on the need for agrobiodiversity conservation. The nutritional value of diverse food items was highlighted to the various actors; farmers' rights on seeds and related knowledge systems were discussed; and the science of locally adapted varieties and the increasing climate risks were introduced. Annual seed festivals were planned to maximise varietal conservation through the exchange of seed materials, and district and state level policy workshops were held to discuss existing policy gaps. The public awareness programmes were developed around the concepts of nutrition security and climate resilient farming systems, whilst the policy deliberations at local and higher levels were designed to generate awareness on the BD Act and issues of diversified farmlands.

Farmers' questions and issues were taken to the local governing bodies, and recommendations were divided into practical farm – and policy-level issues, and taken to district and state level decision-makers. Strategic leadership by the Kerala State Biodiversity Board and the district *panchayath* was key in this process.

### **Strengthening community seed management systems**

Each community has different cultural preferences for food and crops, and a different set of knowledge

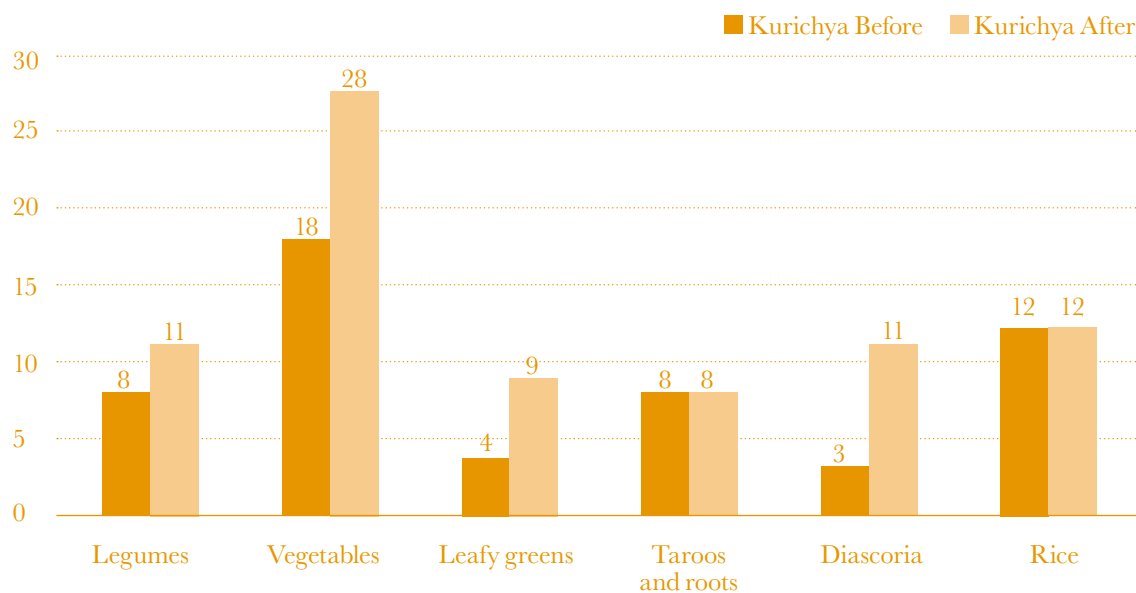


associated with cultivation and consumption. Kurichya and Mullukuruma are both farming communities with land holdings, but while Kurichya continues with the tradition of large land holdings under collective ownership and cultivation, the agricultural lands of Mullukuruma are fragmented due to a recent shift towards individual management. Paniya residents are largely landless and live in hamlets of many houses in small land areas. Their source of food is the plants and small animals grown in the commons and agricultural landscapes. According to the data collected from the participatory exercise, Paniya residents have lost 81% of their food basket diversity during the last 60 years, Mullukuruma has lost 76% and Kurichya, 54%. The decline in the productivity of traditional varieties is due to land use changes and due to the changes seen in the wider landscape agricultural practices.

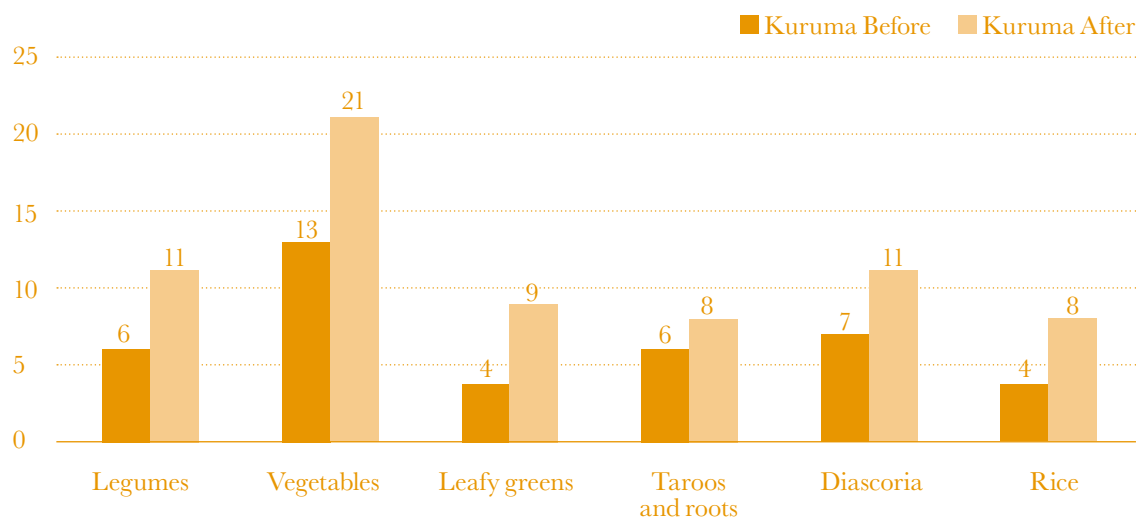
In the first year of the project, 22 village level groups were formed among farming families with the objective to reintroduce the lost crop varieties through group farming. The crops were selected according to the cultural preferences and land availability of each community. Maximum diversification through seed exchange between groups was the focus in Kurichya. Rebuilding collective farming practices and diversification was the strategy adopted with the Mullukuruma community. Group building, collective



**Figure 1:** On-farm diversity of food crops in Kurichya farms before the intervention in 2014 and after project had been underway for 3 years in 2017



**Figure 2:** On-farm diversity of food crops in Kuruma farms before the intervention in 2014 and after project had been underway for 3 years in 2017



planning and the promotion of organised farming were the strategies adopted in Paniya.

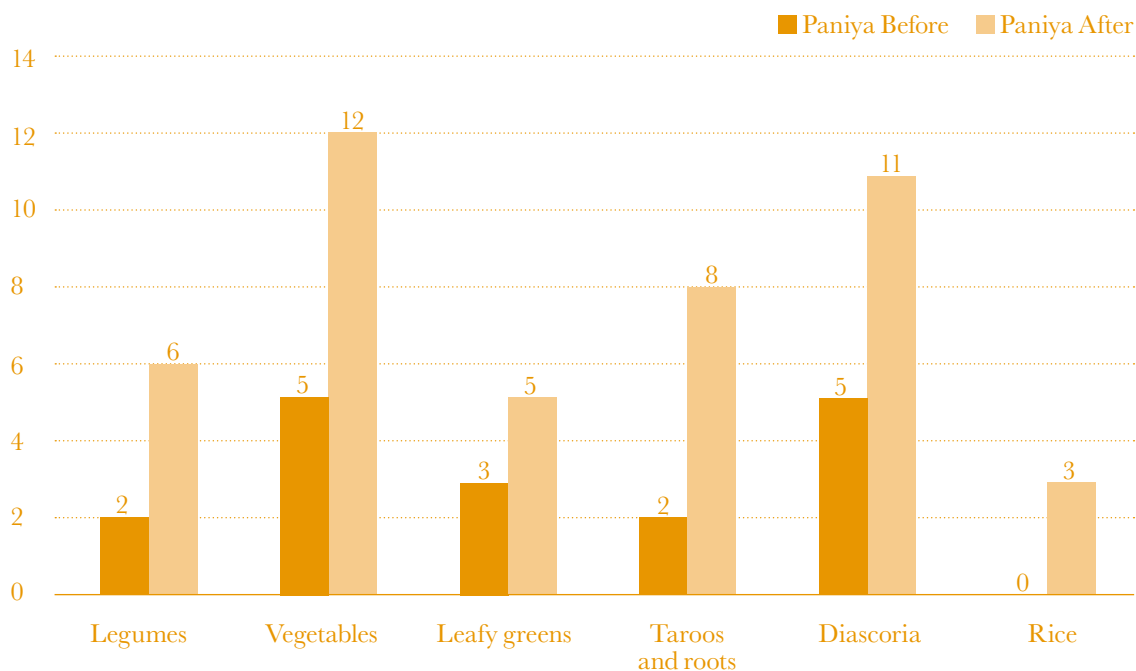
After 3 years, the home gardens of the 22 activity groups – under the ownership of the local women – had been enriched with 28 varieties of vegetables, nine varieties of legumes, nine varieties of leafy greens and eight varieties of taros, tubers and roots on average. There were also 11 varieties of *dioscorea* (root vegetable), and 12 varieties of rice being cultivated by different groups. The Paniya women, who historically were not

involved in agriculture, started cultivating three varieties of rice on leased land.

### **Agrobiodiversity and the local development agenda**

Prior to the project, data from the agricultural offices revealed that only 3% of the traditional and tribal farmers were involved in decisions regarding agricultural programmes. In the first year of the

**Figure 3:** On-farm diversity of food crops for Paniya farms before and after project intervention in 2014 and 2017, respectively



*Right Seed festivals also served as a platform for exchanging knowledge and information*

project, traditional farmers represented 12% of the participants at the *panchayath* level workshops. This increased to 21% in the second year and to 28% in the third year. These meetings helped the *panchayaths* hear the voices of the marginalised farmers. By the third year, a traditional farmer directory had been prepared by each *panchayath*.

The forums discussed the possibilities of conserving agrobiodiversity under the leadership of *panchayath* Biodiversity Management Committees (BMCs – statutory bodies at the *panchayath* level formed under the provisions of the BD Act, and responsible for local level biodiversity conservation). As a result, 12 *panchayath* governing bodies out of 26 discussed the possibility of establishing community seed banks or genetic gardens in their development seminars, and six developed a project for community seed banks under their BMCs. Of the six, four were able to set apart budget provisions for the activity as a development project.

### ***Wayanad community seed festival***

An annual seed festival is organised as a platform for custodian farmers to come together and exhibit, sell and exchange their seeds. It is also a platform for knowledge exchange between farmers, children, the general public and the scientific community.

Each year, the number of custodian farmers attending the festival increased by 23%, and under Seed Care,

a group formed a network among themselves. By the third year, 226 custodian farmers were members of this seed festival collective.

The socio political and policy concerns raised at the *panchayath* level workshops were taken to academic and policy seminars organised as part of yearly seed festivals. The academic seminars were attended by agricultural scientists, activists, farmers, policy makers and practitioners of agrobiodiversity conservation from different parts of the country.

In the first year, the academic seminar discussed the ground level issues of agrobiodiversity conservation. In the second, it discussed the existing policy and legislative spaces that could be utilised to overcome these issues, and in the third year, an exercise was organised to develop a model for agrobiodiversity conservation in the formal system. The model focussed



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on the structure, systems, sustainability and resources that would be involved. This led to a commonly accepted model for a community seed bank with participation of custodian farmers and under the management of BMCs at the *panchayath* level.

**Results and challenges ahead**

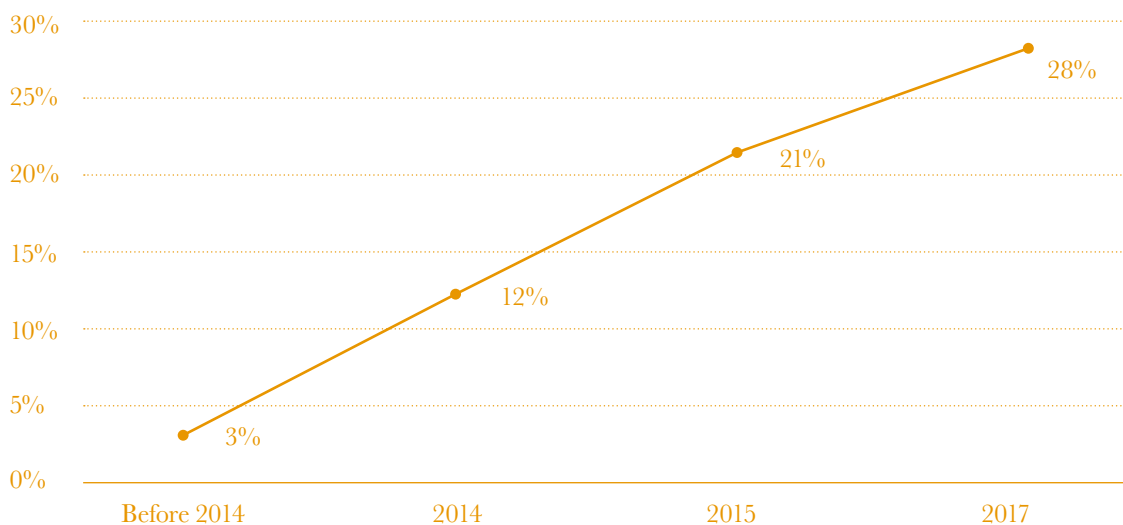
Four *panchayaths* set aside money for agrobiodiversity conservation as subsidies to custodian farmers. The Edavaka Grama *Panchayath* has initiated a seed bank project with 16 rice varieties and runs farm schools to educate children on agrobiodiversity. The district *panchayath* has decided to take over the responsibility of conducting seed festivals in the coming years with budget provisions from the *panchayath* plan fund.

The Kerala Kudumbasree mission, a state level programme initiated by Kerala state Government to empower women and to eradicate poverty, has adopted this people-centred model for agrobiodiversity conservation and set up a community seed bank for rice varieties.

The main challenge faced by the *panchayaths* was the willingness of government officers to take over the responsibility of implementing the projects developed by *panchayaths*. The officers were not familiar with the idea of the seed banks and were reluctant to carry them on.

The approach of this project was based on the decentralisation and participation agenda of present development discourse. The agenda empowered

**Figure 4:** Representation of traditional farmers in Panchayath level meetings from before 2014 to 2017



*Right Women selling wild leafy greens as part of the Good Food campaign*



traditional farmers by giving them more control over the governance of agrobiodiversity; whilst the involvement of the local government made the project more effective and sustainable.

This participatory experiment was successful in bringing local public attention to the importance of agrobiodiversity conservation and helped placing it within the development agenda. At the centre of this activity was farmer experience and knowledge. The process looked for ways to promote ‘bottom-up’ engagement and to better place the arguments of traditional farmers in the upper level of development strategies.

At the end of the 3-year project, community seed banks have been put in place by the public sector as a mechanism for conservation. *Panchayaths* are ready to cultivate and conserve traditional rice and vegetable varieties, and according to the final plan evolved out of the participatory exercise, all the crop varieties of Wayanad will be conserved in at least one genetic garden in 5 years. This will be the model to conserve agrobiodiversity in its micro habitats utilising public funding. Through it, Wayanad has come to recognise agrobiodiversity conservation as a public responsibility.

This is one of the results of the process started by the “Capitalization of Experiences for Greater Impact in Rural Development” project, implemented by CTA, FAO and IICA and supported by IFAD.  
<http://experience-capitalization.cta.int>



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