PAR

Biennial Report

2017-2018

PLATFORM FOR AGROBIODIVERSITY RESEARCH

CONTENTS

BIENNIAL REPORT 2017-2018

INTRODUCTION

The Platform for Agrobiodiversity Research (PAR) is a multi-stakeholder partnership that works with organizations, researchers and others to share knowledge and experiences that can improve agrobiodiversity maintenance and use. PAR's goal is to enhance the maintenance and use of agrobiodiversity to meet human needs. Its objectives are to:

1. Bring together, synthesize and make available information on the maintenance and use of agrobiodiversity;
2. Identify and communicate ways in which the use of agrobiodiversity can contribute to addressing global challenges; and
3. Identify and facilitate new and innovative partnerships that strengthen cross-cutting, multidisciplinary, participatory research.

PAR has established a unique role in its capacity to bring together and link to the many diverse communities concerned with agrobiodiversity, and to generate information of direct relevance to its partners and collaborators.

This biennial report describes PAR activities during 2017 and 2018. In that period PAR has continued to undertake a number of activities that bring together, synthesize and make available information on specific issues involved in the conservation and use of agrobiodiversity. During 2017 and 2018, PAR put a greater focus on providing tools and information about how to collect and analyse agrobiodiversity information. In addition to research tools and guidelines, a new university course has been developed and taught to a diverse audience of students.

The main PAR products presented in this report include Agrobiodiversity Compendium, CBPAR training course, DATAR and various publications.

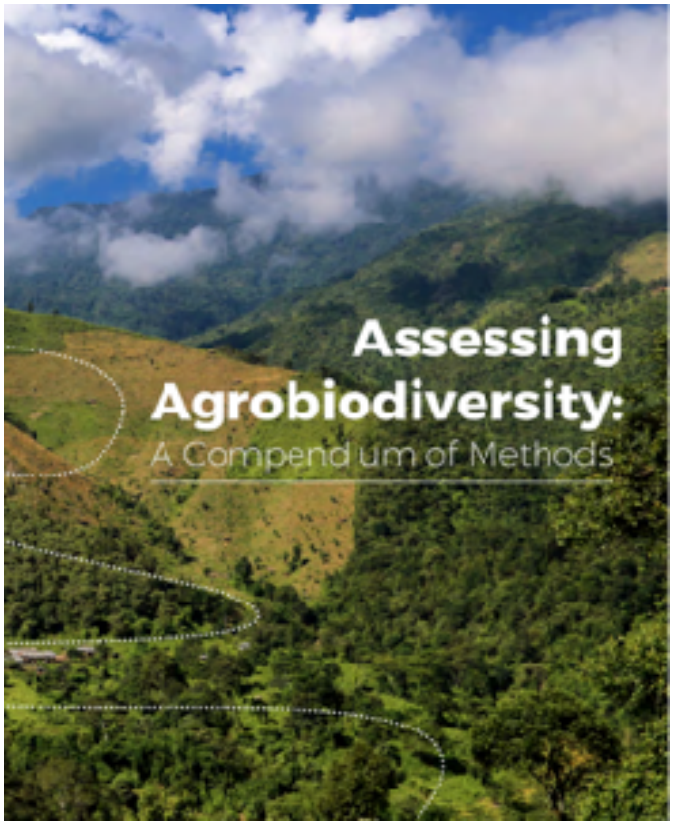
PROJECT ACTIVITIES

PAR coordinated a project "*Land use and agrobiodiversity: Developing a compendium of methods that support agrobiodiversity inclusion in local and global land use management decisions*". The project was supported by The Christensen Fund (TCF) under grant number 2016 – 7765. It was implemented in partnership with Bioversity International and partners. The project activities described in this section include Agrobiodiversity Compendium, training of young researchers and strengthening of community agrobiodiversity management. The work of young researchers and agrobiodiversity assessments made during the project aimed to support local communities in reviving their biocultural heritage and strengthening resilience.

AGROBIODIVERSITY COMPENDIUM

PAR developed "**Assessing Agrobiodiversity: A Compendium of Methods**" that provide agrobiodiversity research guidelines. These guidelines were created for researchers and other actors seeking to generate knowledge about the importance of agrobiodiversity and its conservation. The Compendium builds on the experiences from the PAR network and projects supported by TCF. The Compendium also presents some of the work conducted by young researchers who were trained in participatory agrobiodiversity research through PAR projects over the last four years.

The Compendium embraced contributions from a wide array of research areas. The 15 chapters (Figure 1) present key methods for the collection and analysis of information about the diversity of crops, livestock, wild plants and pollinators, as well as land uses at the landscape scale. The Compendium was developed to support the documentation, co-creation and sharing of knowledge about agrobiodiversity and its management through participatory research approaches. The methods provided in the Compendium can be used to gather information, document traditional knowledge and create new knowledge with local communities as part of efforts to maintain and recover local crops, varieties and breeds, improve sustainability and resilience, and protect and restore ecosystems.



The Compendium is available on the PAR website: http://agrobiodiversityplatform.org/

Figure 1 Agrobiodiversity Compendium chapters

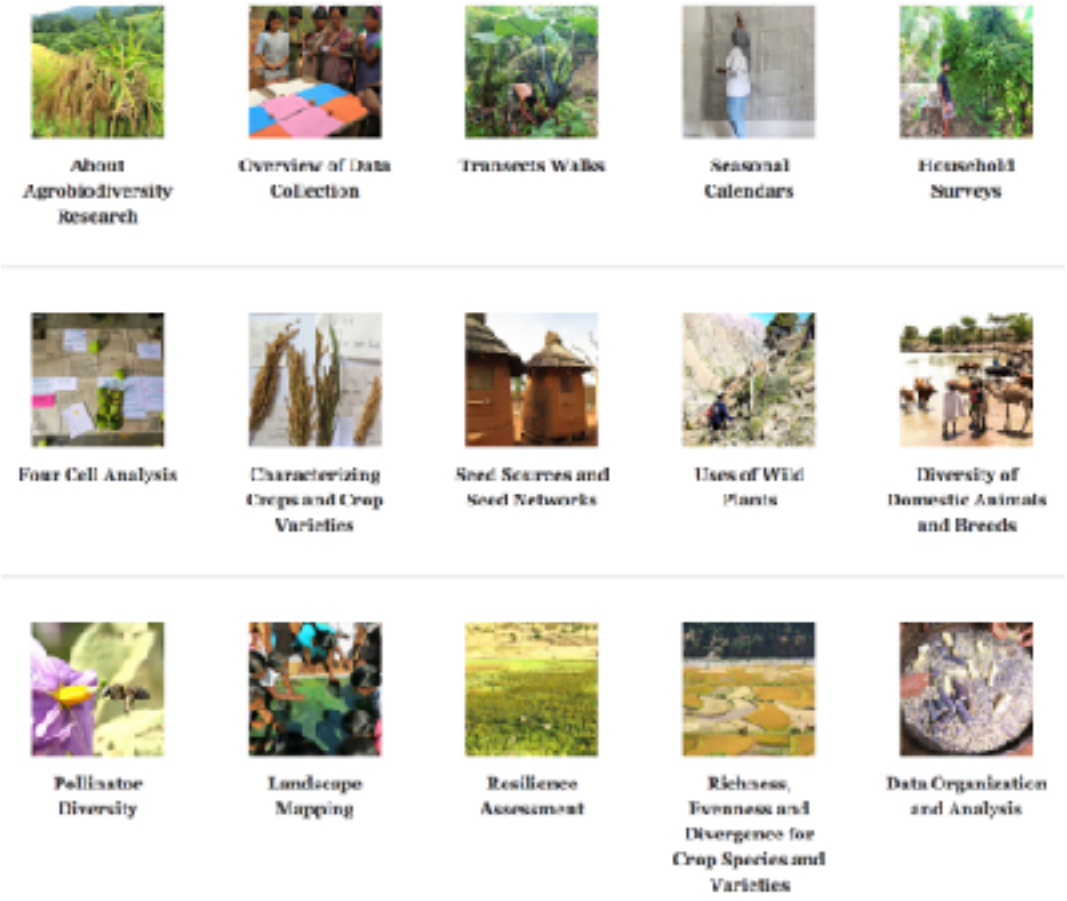
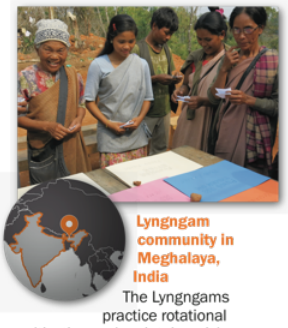
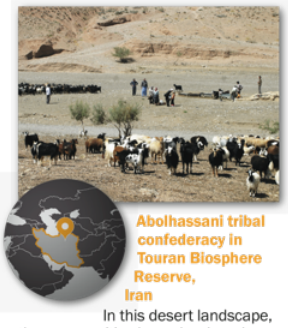


Table 1 Project sites and local partners

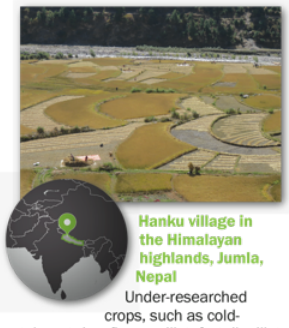
Aymara community of Cachilaya, Lake Titicaca, Bolivia
The Lake Titicaca landscape is a micro-centre of crop diversity for potato, quinoa, cañahua and other crops. Custodian farmers in Cachilaya safeguard about 100 potato varieties.



Lyngngam community in Meghalaya, India
The Lyngngams practice rotational cultivation and maintain a rich diversity of local crops. In the photo, community members are participating in an assessment of ecosystem services.



Abolhassani tribal confederacy in Touran Biosphere Reserve, Iran
In this desert landscape, the communities have developed ingenious strategies for the adaptive management of local resources and livestock diversity.



Hanku village in the Himalayan highlands, Jumla, Nepal
Under-researched crops, such as cold-tolerant rice, finger millet, foxtail millet and buckwheat, form the basis for food security for the communities in this high altitude agricultural system in Nepal.

Udakumbura in Kandy, Sri Lanka
Forests interspersed with black pepper gardens hold hundreds of species of wild plants, many of which are used for food and medicine. In the photo, community members are engaged in participatory mapping.

Sierra del Rosario Biosphere Reserve, Cuba
Shade coffee and home gardens are part of the agriculture-forest mosaic that hosts close to 900 species of plants, 115 birds, 35 reptiles, 16 amphibians and 11 bats.

Ndebele community in Tshongogwe, Lupane, Zimbabwe.
In the dryland savannah, communities rely on wild resources including forest fruits and insects. In the photo, community members are mapping land uses.

Karen communities in Inthanon National Park, Chiang Mai, Thailand
Indigenous Karen farmers practice rotational cultivation. Their land management based on traditional knowledge promoted the regeneration of the forest.

Training young researchers to assess agrobiodiversity

Agrobiodiversity research training with young members of partner organisations started in the previous phase of this project (Grant 2014-7935353 funded by TCF). The training involved five main components, and encouraged the involvement of the young researches in the design and implementation of each of the following steps:

1. Developing partnership with communities, agreeing shared aims and approaches and adoption of Free Prior Informed Consent Agreements
2. Participatory data collection on agrobiodiversity and use, and social-ecological resilience
3. Data integration and analysis
4. Sharing results with the communities and data validation
5. Developing strategies and action plans for improved adaptive management.

The work undertaken in this phase of the project completes the five-step process. While the first steps were conducted in the previous project, the main activities in this project were sharing and validation of data collected with the partner communities, and developing and supporting strategies and action plans for improved agrobiodiversity management. Some of the results of the last step are described below.

Strengthening community agrobiodiversity management

PAR activities sought to support ongoing initiatives by local partners that focus on agrobiodiversity conservation linked to biocultural heritage or resilience of local communities. Studies carried out by young researchers as part of their training helped assess diversity and management strategies in the project site (Table 1). These results helped define future adaptation strategies, which were supported by the local partner organisations. The results have been shared with different audiences including Tropentag Conference, where a poster with the following title has been presented: "*Adaptive Management of Agrobiodiversity in Biocultural Landscapes: Experiences from the Field*".

The results of the assessment of agrobiodiversity and resilience across the study sites showed the importance

of integrated management of land and agrobiodiversity as illustrated by the results from Cachilaya - a project site in Bolivia located in a micro centre of agrobiodiversity in the Andes. The most recent diversity assessment, conducted during data sharing and validation workshop, showed that 41 variety of potato are cultivated by the indigenous Aymara community of Cachilaya. The community, however, faces serious problems related to drought and land degradation, which threaten the cultivation of local varieties. The project aimed to support existing community-based institutions that guide the conservation and sharing of seeds, land and other resources.

CBPAR: Training for Change via Crop Biodiversity

PAR has developed a new international university course in collaboration with the Bioversity-CIAT Alliance and Sapienza University. The course is based on the textbook: "*Crop Genetic Diversity in the Field and on the Farm: Principles and Applications in Research Practices*", Yale University Press. Bringing together the fields of ecology, agronomy, crop breeding, genetics, anthropology, sociology, economics and policy the text book provides theory and tools for identifying ways of supporting farmers to maintain, use and benefit from the crop genetic diversity in their agricultural production systems.

CBPAR
Crop Biodiversity for Productivity and Resilience
Training for Change: A Semester Course

The objective of this course is to build the capacity of agronomic and other students to assess and implement innovative diversity rich solutions to improve agricultural productivity and food safety in under changing climatic and social-economic conditions are the norm.

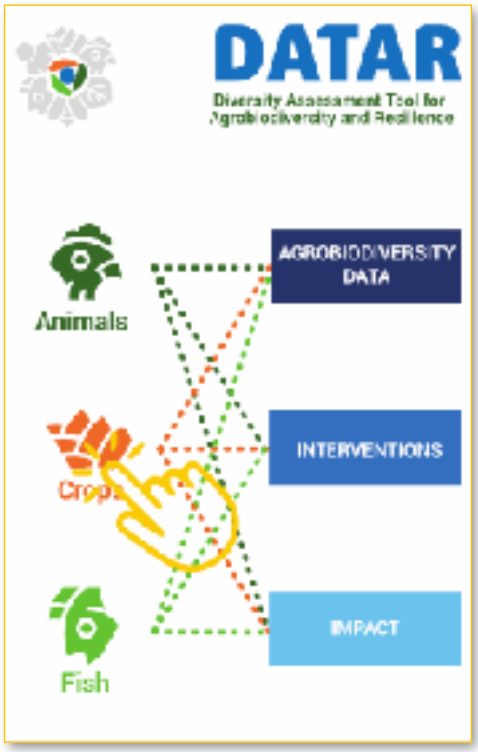
On-Farm Agrobiodiversity Course

First short course about participatory agrobiodiversity research was held at *Università di Roma Sapienza* in September 2017. The course covered research and conservation methods as well as policy work related to on-farm crop diversity. Participants travelled to Rome from 10 countries spreading across Africa, Asia, Europe and USA, and their backgrounds ranged from ethnobotany, agronomy, plant breeding, genetics, development, human geography to social work/activism. The course combined theoretical approaches, practical exercises and sharing of experiences from work with farmers. It kicked off with a stimulating introduction on the different levels of crop diversity (from genetic/varietal to species level), its importance for livelihoods, nutrition and food sovereignty, the actors involved, and global agrobiodiversity politics. Topic in the first days included genetics, evolutionary populations, diversity analysis, abiotic and biotic components of agricultural ecosystems and adaptation to biotic stress through diversification. These were followed by a rich elaboration on farmer's roles in managing, using and maintaining diversity. A discussion on the social, cultural and economic

values of on-farm diversity, provided for a thought provoking session on how to create a sustainable markets for agrobiodiversity that bring environmental, economic and social benefits to all. Participants organized a seed fair and a community biodiversity register to conclude the course, and to demonstrate rich diversity of bean varieties from all over Italy. The importance and value of agrobiodiversity education is illustrated in a participant's reflection on the course given below.

"Meeting such a wide range of people working and being passionate about agrobiodiversity from different countries has been a great part of this course. We were all contributing at tackling technical, social and economic points of view about the maintenance and evolution of plant genetic resources at farm level. I have especially appreciated the lessons on research methodologies that can be applied in studies with rural communities, with a lot of practical exercises. The different levels of collaboration and program interventions were also discussed with reference from many international case studies" **- Stella Beghini, activist, Italy.**

DATAR



DATAR, the *Diversity Assessment Tool for Agrobiodiversity and Resilience*, is an evolving multi-component tool for describing agricultural biodiversity and resilience at landscape level. DATAR is designed by Bioversity International and PAR to (i) assess the constraints encountered by farmers and farming communities to be able to benefit from the use of their own local crop and animal biodiversity. DATAR was designed to determine when and where there is sufficient crop variety and animal breed diversity available for farmers to meet their environmental and social economic demands and improve their production landscapes. The tool provides a portfolio approach to interventions determined by whether the constraint is due to (a) the lack of sufficient diversity of crop varieties and animal breeds within the production system; (b) the lack of access by farmers to available diversity, (c) the limitations in information on the performance of varieties available in key aspects, and (d) the inability of farmers and communities to realize the true value of the materials they manage and use. DATAR allows estimating the extent and distribution of diversity in the farmers' production systems. This is the first step in determining whether there is sufficient diversity of crop varieties or livestock breeds within a production system to meet the various needs of farming communities. The following steps include identifying obstacles and how to overcome them in order to add new diversity into the farmers' production systems, or to rehabilitate a production system with lost diversity. DATAR is being developed with Newt Vision to make the project a reality.

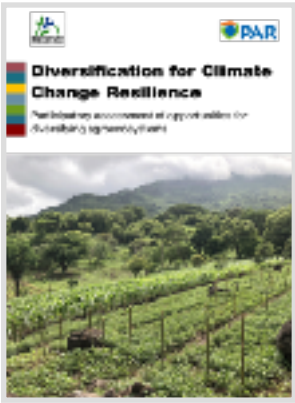
PUBLICATIONS

In addition to the Compendium, PAR has prepared a number of publications covering key topics of relevance to agrobiodiversity conservation and use.

The Contribution of Biodiversity for Food and Agriculture to Resilience

PAR prepared a thematic study for "*The First report on the State of the World's Biodiversity for Food and Agriculture*". The thematic study entitled "*The Contribution of Biodiversity for Food and Agriculture to Resilience"* reviews evidence on how biodiversity confers resilience to climate change stresses. The results support the view that resilience against a broad range of stresses requires the integration of multiple biodiversity for food and agriculture (BFA) based strategies at different scales. The analysis shows that BFA contributes to resilience of production systems by: i) providing resistance or tolerance to shocks and stresses; ii) supporting adaptation; iii) maintaining stability; and iv) supporting the recovery from disturbances. The review identified a number of knowledge gaps including a lack of integrated studies that address more than one component of BFA and are undertaken over longer periods of time.

Diversification for Climate Change Resilience



PAR and Bioversity International published an assessment method to identify opportunities for diversifying agroecosystems to strengthen climate change resilience. The assessment draws on participatory research approaches to describe local agrobiodiversity and support its conservation and revival. Opportunities for diversification are identified based on an analysis of diversity as well as gaps in the farm portfolios. The method helps to identify species, varieties, breeds, landscape features, and management practices that can be promoted to enhance resilience. The diversification assessment method along with results and reflections from the pilot sites in Guatemala, India, and Mali is published in a guidebook.

Mainstreaming Biodiversity in Production Landscapes

PAR supported the reparation of an analysis of the contribution to mainstreaming biodiversity into production landscapes made by the Global Environment Facility (GEF) and the United Nations Environment Programme (UN Environment). The results are presented in a report that summarizes key achievements of projects that UN Environment has undertaken through a diverse portfolio of GEF-supported initiatives in over 36 countries. Mainstreaming biodiversity conservation and sustainable use into production landscapes is recognized as a key strategy to secure the objectives of the CBD and as a major objective for projects supported by the Global Environment Facility.

COMMUNICATIONS

PAR website offers articles with the goal to spread awareness of PAR projects, initiatives and publications as well as general news on agrobiodiversity and similar principles, especially to support our partners' initiatives when possible. In 2017-2018 PAR website had 33,610 visits (of which 33,431were unique visits), altogether generating 59,325 page views. Users from numerous countries and locations visited the website. Visitors are mainly from India (41% of total visits), United States (11,6%), Philippines (4,1%), Italy (2,89%), United Kingdom, South Africa, Nigeria, Canada and Brazil.

A new website will be prepared for late 2019. It will include all the current content plus new content organized in a more user-friendly way in order to reach new users and increase readership, all in a platform that requires little maintenance therefore lowering costs. PAR is also working to increase social media presence through regular Facebook and Twitter posts that aim to announce and promote PAR documents and projects, re-post and summarize articles, re-posting stories or videos with scholarly articles providing information on agrobiodiversity and meaningful articles and tweets regarding agrobiodiversity with brief and captivating captions. We aim to involve the public in creating awareness for the importance of agrobiodiversity through more dynamic content.

FINANCIAL REPORT

International Fund for Agricultural Development (IFAD), the United Nationals Environmental Program (UNEP), and the Global Environmental Facility (GEF), Christensen Fund, United Nations Food and Agricultural Organization (FAO), Agroecology Fund (AEF), Centre de coopération internationale en recherche agronomique pour le développement (CIRAD).

PAR has been hosted by Bioversity International since 2012.

PAR hosts the Indigenous Partnership.

Finance Report 2012-2018 in USD

Expenditures

Details	2012	2013	2014	2015	2016	2017	2018	Total (USD)
Personnel	18,596	27,687	47,291	30,828	21,011	88,681	69,823	303,918
Other Collaborations	-	-	16,000	-	-			16,000
Supplies & Services	15,632	106,592	76,390	28,126	7,199	44,872	19,003	297,815
Travel	-	10,995	-	11,885	2,136	23,817	21,846	70,680
Publications and other media	-	-	-	-	-	2,182	14,264	16,445
System cost (CSP)	-	-	-	1,605	684	1,611	769	4,669
Indirect cost recovery	5,134	21,791	20,456	9,388	3,866	22,318	17,283	100,237
Total	39,362	167,065	160,137	81,833	34,897	183,480	142,989	809,764

Grant name	Amount (USD)
Christensen Fund From 1 September 2012 to 31 December 2013 Agrobiodiversity, Land and People: Strengthening the partnership between indigenous peoples, rural communities and scientists through the Platform for Agrobiodiversity Research (PAR)	170,000
FAO From 20 May 2013 to 31 May 2014 An information-sharing platform that facilitates professionals in the knowledge-based bioeconomy to build on and elaborate agroecological approaches to food production	30,000
FAO From 10 June 2013 to 1 May 2014 Climate change and genetic resources for food and agriculture	53,300
FAO From 1 May 2014 to 15 December 2014 Thematic study on the contribution of biodiversity for food and agriculture to resilience	30,000
Christensen Fund From 1 April 2014 to 31 January 2017 Supporting agrobiodiversity maintenance and use in the context of land management decisions	150,000
Christensen Fund From 15 April 2015 to 30 September 2015 Supporting agrobiodiversity maintenance and use in the context of land management decisions - supplemental grant	20,000
Christensen Fund From 1 July 2016 to 31 December 2017 Land use and agrobiodiversity: Developing a compendium of methods that support agrobiodiversity inclusion in local and global land use management decisions	150,000
Christensen Fund From 1 Aug 2016 to 31 July 2018 The Indigenous Partnership for Agrobiodiversity and Food Sovereignty (phase 6)	150,000
Christensen Fund From 1 April 2017 to 31 July 2018 The Indigenous Partnership for Agrobiodiversity and Food Sovereignty (phase 6)	45,000
Christensen Fund From 1 July 2018 to 31 Dec 2020 Renewal support for the Global Indigenous Youth Fellowship Program and affiliated programming of The Indigenous Partnership for Agrobiodiversity and Food Sovereignty.	160,000
AEF Agroecology Fund From 1 April 2018 to 31 March 2019 Indigenous Partnership for Agroecology	90,000
FRANCE - CIRAD From 1 Jan 2018 to 31 Oct 2019 Demand-oriented Training on Crop Agrobiodiversity Analysis and Management	20,100
FAO From 5 Nov 2018 to 30 Nov 2018 Support to the finalization of the report on The State of the World's Biodiversity for Food and Agriculture	12,100
UNEP-GEF From 19 Dec 2018 to 31 Dec 2022 Cross-cutting capacity building, knowledge services and coordination project for the Food Security Integrated Approach Pilot Program	784,000
Total	**1,864,500**

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