

# Bio DIVA

## Transformationswissen für eine nachhaltige und geschlechtergerechte Nutzung von Agrobiodiversität

Martina Padmanabhan

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## Multi-stakeholder dialogue on land use change

Transdisciplinary approaches to  
landscape transformation in Kerala,  
India

The project involves interdisciplinary and transdisciplinary research in Kerala, India, to investigate the impact of changing socio-economic and environmental conditions on land use change. The project was initiated in January 2010 in Wayanad district of Kerala, India.

The aim of this workshop was to provide a platform for interdisciplinary and transdisciplinary research on land use change. The workshop was held in Kerala, India, and was attended by researchers from various disciplines.

Key questions discussed were: How can we better understand the complex processes of land use change? How can we better understand the role of stakeholders in land use change? How can we better understand the impact of land use change on the environment and society?

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## Marketing Gandhakasala

Local varieties for livelihood options

The rapid loss of agrobiodiversity is one of the factors driving global food insecurity. In the South, low-input food systems have been dramatically affected by the loss of local varieties. The main cause lies in the conversion of agricultural lands to urban or industrial uses, or other, agricultural uses.

In the light of rapid changes in environmental conditions, it is important to conserve existing local varieties. One means for conservation is to add value to local varieties through marketing. This means to create a market based incentive for farmers to conserve local varieties.

On the example of the endemic Gandhakasala rice variety in Kerala, this study was to find out why this variety was to be conserved and how a marketing strategy can be developed.

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## Resilience in transformation

A study into the capacity for  
resilience in indigenous  
communities in Wayanad

Resilience is broadly understood as the ability of a system to absorb disturbance while adapting to changes and maintaining essential functions. The term also refers to the rate of this recovery. In contrast, a resistant system undergoes slight change over time. In the context of this study, the concept of resilience is a means to explore the potential resilience of people with different systems of property rights to adapt to environmental changes.

The study was carried out among several Adivasi groups in Kerala, India. Wayanad district is a high diversity area with a high concentration of Kerala's 20 groups of Adivasi communities. The study was carried out among several Adivasi groups based on their means of income generation: agricultural laborers, artisans and hunter-gatherers.

Wayanad district lies in the mountainous part of Kerala state, South India. The area is host to high agrobiodiversity, forming a complex socio-ecological system.

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## Visions for Wayanad

"The land of paddy fields"

Wayanad is a bio-cultural diversity hotspot located in the hills of the western part of Kerala State. It possesses a distinct socio-cultural mix of communities, as well as a mild climate and forested landscape. Most of the population lives on farms, producing rice and supplementary seasonal crops for home consumption. There is a high diversity of indigenous plant varieties, in particular rice, which has been the mainstay of agricultural production. Since the mid-1980s, an overall trend away from rice cultivation has been observed (20,000 ha to 13,000 ha in 2010). After the introduction of modern cultivars of rice, farmers shifted to area nut and banana plantations. This shift in land use is driven by economic considerations, relating to input costs, labour availability and marketing options.

In recent years, Wayanad has become interesting for the tourism industry that wants to capitalize on the popularity of Kerala as a tourist destination. Concurrently, the conversion of state land from rice to cash crops also leads to the preparation of land for real estate construction, displacing agricultural labourers. Members of indigenous tribal groups and women rely on seasonal farm labour to supplement their income.

### TOPICS

- Transdisciplinary
- Participation
- Scenario building
- Visioning exercises

Briefing Note 1, 2013

# Aims & Objectives:

Transdisciplinarity & the creation of transformation knowledge

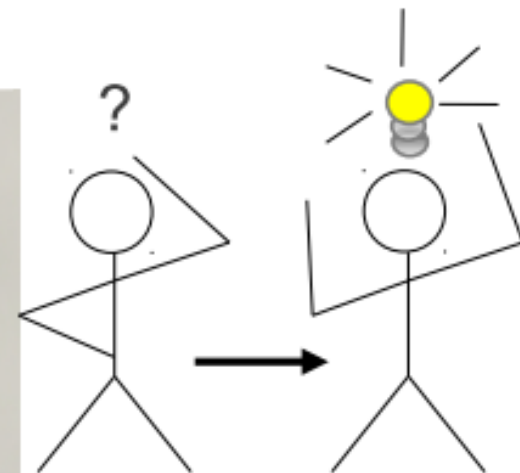
Theoretical  
Backgrounds

+

Methods

+

Practical  
Approaches



Inspire change:

- in research approaches,
- in institutions and
- in the field

## Why inter- and transdisciplinary research for agrobiodiversity?

By Martina Padmanabhan,  
Anja Christinck and Hannah Arpke

Agrobiodiversity is simultaneously a natural resource and a cultural asset. Its evolution has been closely linked to the rich diversity of human social, cultural and economic activities under specific en-

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### Aim of this chapter:

- Outline the need for inter- and transdisciplinary approaches to agrobiodiversity research
- To grasp its social-ecological dimension,
- To explore the options to stop the rapid loss of agrobiodiversity,
- To develop it further in a more sustainable and equitable manner.

## Developing a joint understanding of agrobiodiversity and land-use change

By Nidhi Nagabhatla and Anil Kumar

Agriculture is both creating and destroying agrobiodiversity. Understanding this ambiguity requires looking into the causes and driving factors for agrobiodiversity loss or enhancement on farm, among which land-use change is one issue quite difficult to conceive. Land-use change is in itself driven by complex dynamics and processes taking place on various spatial and temporal scales. Geospatial tools can be helpful for describing such dynamics



### Aim of this chapter:

- To point out that: *Land-use change is a main driver of agrobiodiversity loss.*
- It takes place at different scales that are influenced by different stakeholders, that commonly lack a joint understanding underlying their actions.

## Agrobiodiversity and equity: Addressing gender in trans- disciplinary research

By Janet H. Momsen,  
Isabelle Kunze and Emily Oakley

In spite of women's role in creating and maintaining agricultural biodiversity having been acknowledged in a number of international policy documents, an implementation gap continues to exist once we come closer to the ground.

Moreover, changes in agricultural and social systems challenge traditional gender roles and social obligations relating to collective agrobiodiversity management. To fulfil the promise of creating applicable knowledge for change, transdisciplinary research teams need to look closely into the gender and equity dimensions of agricultural biodiversity, and create spaces for women and men – to contribute their needs, knowledge and visions to the research, and to develop

### **Aim of this chapter:**

To discuss why gender and equity issues are essential to be included in transdisciplinary research.





## Adding value to research through partnerships: Interdisciplinary and intercultural diversity in agrobiodiversity research

By Silvia Werner,  
Martina Padmanabhan and Anja Christinck

Social and cultural diversity is highly topical, in commercial and research organizations alike. It aims at creating equal opportunities for people belonging to various social groups.

### Aim of this chapter:

- To raise awareness of the social and cultural relativity, positionality and situatedness of all knowledge
- To discuss how to practically deal with it, while building interdisciplinary and intercultural research teams
- To suggest approaches for integrating diverse peoples' knowledge and skills for a fruitful collaboration.

## Conserving agrobiodiversity on small-scale farms in developing countries through innovative market-based instruments

By Till Stellmacher, Anja Faße, Jaqueline Garcia-Yi and Ulrike Grote

Conserving agrobiodiversity on-farm is increasingly regarded as calling for new forms of cooperation among stakeholders operating along value chains, such as farmers, food processing companies, traders and consumers. Market-based instruments can provide a link for negotiating on standards and goals, and by effecting proper implementation. However, in order to achieve the desired impacts, and to promote equity along with agrobiodiversity conservation goals, market-based instruments



### Aim of this chapter:

Provide an understanding of:

*Concepts, Potentials & Challenges* of innovative Market based Instruments (MBIs) that aim to promote the in situ conservation of agrobiodiversity.

## Policy dialogue beyond recommendations

By Martina Padmanabhan

Transdisciplinary agrobiodiversity research aims at providing transformation knowledge to enable stakeholders to progress more efficiently towards sustainable and gender equitable management and use of agrobiodiversity. In order to lead a policy dialogue beyond mere recommendations, transdisciplinary research needs to engage from a very early stage with stakeholders involved in policy-making. Thus the challenge to be addressed is how to establish a meaningful form of dialogue at the science-policy interface from the inception of the research.



### **Aim of this chapter:**

To discuss: How to establish meaningful dialogue at the science-policy interface.

**Outlook: From science policy to  
transdisciplinary research**

By Martina Padmanabhan,  
Jörg Lohmann and Dieter Nill

Research aiming at sustainable development solutions is most often funded by public money and thus should serve the greater common good. The funding institutions have the liberty to create incentives and structures accordingly, by setting criteria for the eligibility of proposals and establishing funding and

**Aim of the chapter:**

Draw conclusions for research policy by:

- including the barrier-crossing character of transdisciplinary research,
- enabling a learning culture in research aiming at sustainable development

→ Sketch entry points for potential institutional change.





# Thank you for your attention

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