

# Implementation of the CBD Programme of Work on Agricultural Biodiversity

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Convention on  
Biological Diversity



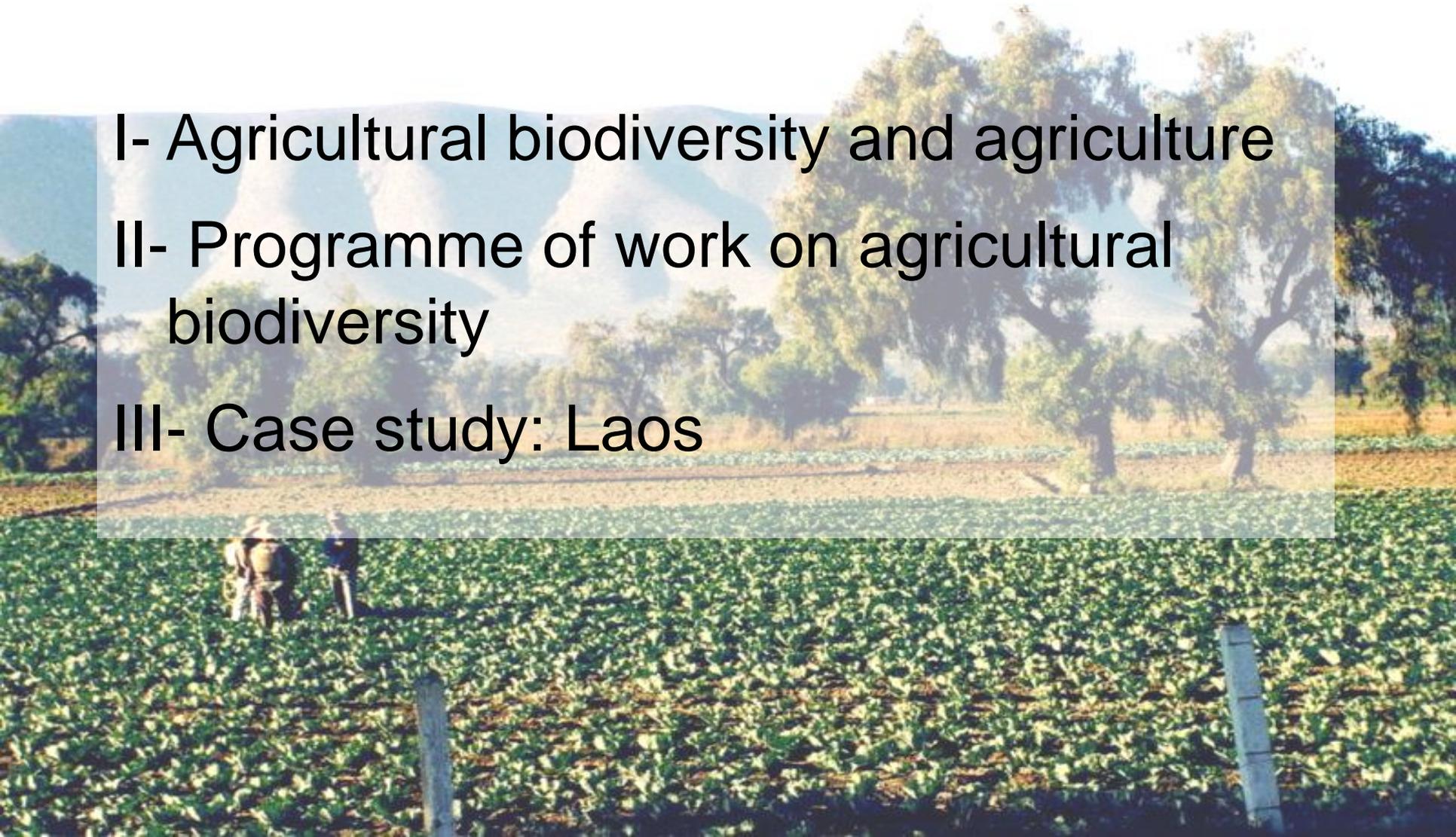
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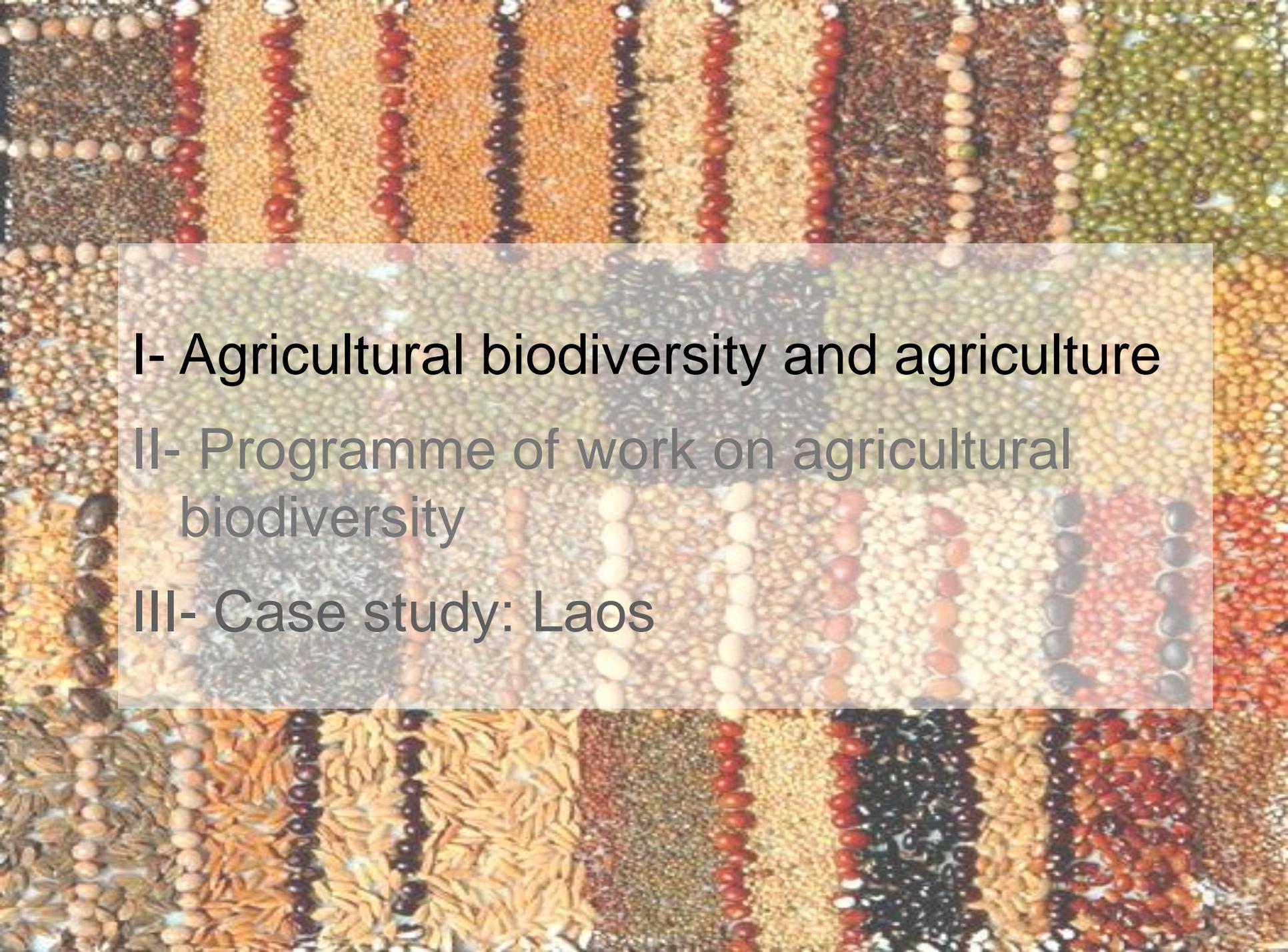
# Summary

I- Agricultural biodiversity and agriculture

II- Programme of work on agricultural biodiversity

III- Case study: Laos



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- I- Agricultural biodiversity and agriculture
  - II- Programme of work on agricultural biodiversity
  - III- Case study: Laos

# Agricultural biodiversity: what is it?

Decision COP V/15 recognized “the special nature of agricultural biodiversity, its distinctive features and problems needing distinctive solutions”.

COP Decision V/5: Agricultural biodiversity “...includes **all components of biodiversity of relevance to food and agriculture, and all components of biodiversity that constitute the agro-ecosystem**: the variety and variability of animals, plants and micro-organisms, at the genetic, species and ecosystem levels, which are necessary to sustain key functions of the agro-ecosystem, its structure and processes.”



# Agricultural biodiversity: what is it?

Considerations of agrobiodiversity include:

- **Intra-species diversity**: genetic resources, unique traits –resistance to drought, cold, disease, etc, rooting, aspect, taste, storage, etc.
- **Inter-species diversity**: plant, animal, fish, fungal and microbial
- **Habitat diversity**: mosaic of land uses varies with soil and terrain, hedges, borders, trees in the landscape; farm type
- **Harvested species** and **associated species**: pollinators, beneficial/harmful predators, soil organisms – health/ disease,...
- **Cultural diversity**: type of farmer and farm; regulations; common property resources/ownership

These considerations include:

- Harvested crop varieties, livestock breeds, fish species and non-domesticated ('wild') resources within field, forest, rangeland and in aquatic ecosystems;
- Non-harvested species within production ecosystems that support food provision, including soil micro-biota, pollinators and so on; and
- Non-harvested species in the wider environment that support food production ecosystems (agricultural, pastoral, forest and aquatic ecosystems)



# Agriculture: statistics

- Over **1.1 billion people** continue to live in **extreme poverty** and over **850 million** suffer from **chronic hunger**.
- The world's **population** is likely to grow from 6.5 billion at present to **9.2 billion people in 2050**.
- **The agriculture sector constitutes a source of work and income** for over 40% of the world population.
- **Crop diversity**: only 150 crops feed most human beings - 12 crops provide 80% of food energy (wheat, rice, maize and potato alone provide 60%).
- **Animal diversity**: just 14 out of the roughly 30 domesticated mammal and bird species provide around 90% of human food supply from animals.
- **Agriculture occupies 83%** of the total land area on earth. **Crops and pasture occupy about 5 billion ha** of the 13 billion ha total land area, making farming communities critical custodians and managers of biodiversity.
- About 80% of the increase in land-based agricultural production is expected to derive from increased input use and improved technology on existing agricultural land, while area expansion is expected to account for the remaining 20%.



# Importance of agricultural biodiversity

*Agriculture is a vital asset in achieving Millennium Development Goals 1 and 7*

In agricultural systems, biodiversity is important:

1. to ensure the **production** of food, fibre, fuel, fodder...
2. to maintain **ecosystems services** (e.g. pollination; nutrient cycling, decomposition of organic matter and maintenance of soil fertility; pest and disease regulation; hydrological cycle; erosion control; climate regulation and carbon sequestration)
3. to allow **adaptation** to changing conditions
4. and to sustain **rural peoples' livelihoods** (sustainable agriculture – food security, income, employment,...)



# Role of agricultural biodiversity

Agricultural biodiversity has been shared and developed through human activities and practices over generations and it requires human management to sustain it.

## *INTERDEPENDENCY AMONG COUNTRIES*

Among other things:

- ⇒ **traditional knowledge and cultural diversity** are integral parts of the sustainable management of agricultural biodiversity;
- ⇒ **agroecosystems managed sustainably** contribute to wider ecosystem functions and conservation and sustainable use of agricultural biodiversity;
- ⇒ **agricultural research and development** also contribute to the *in-situ* and *ex-situ* conservation of agricultural biodiversity.



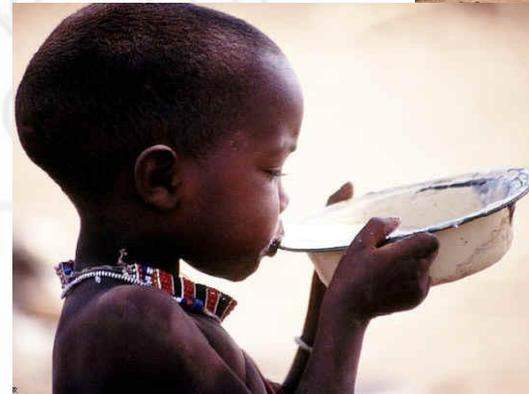
# Threats and challenges

## Main threats to biodiversity:

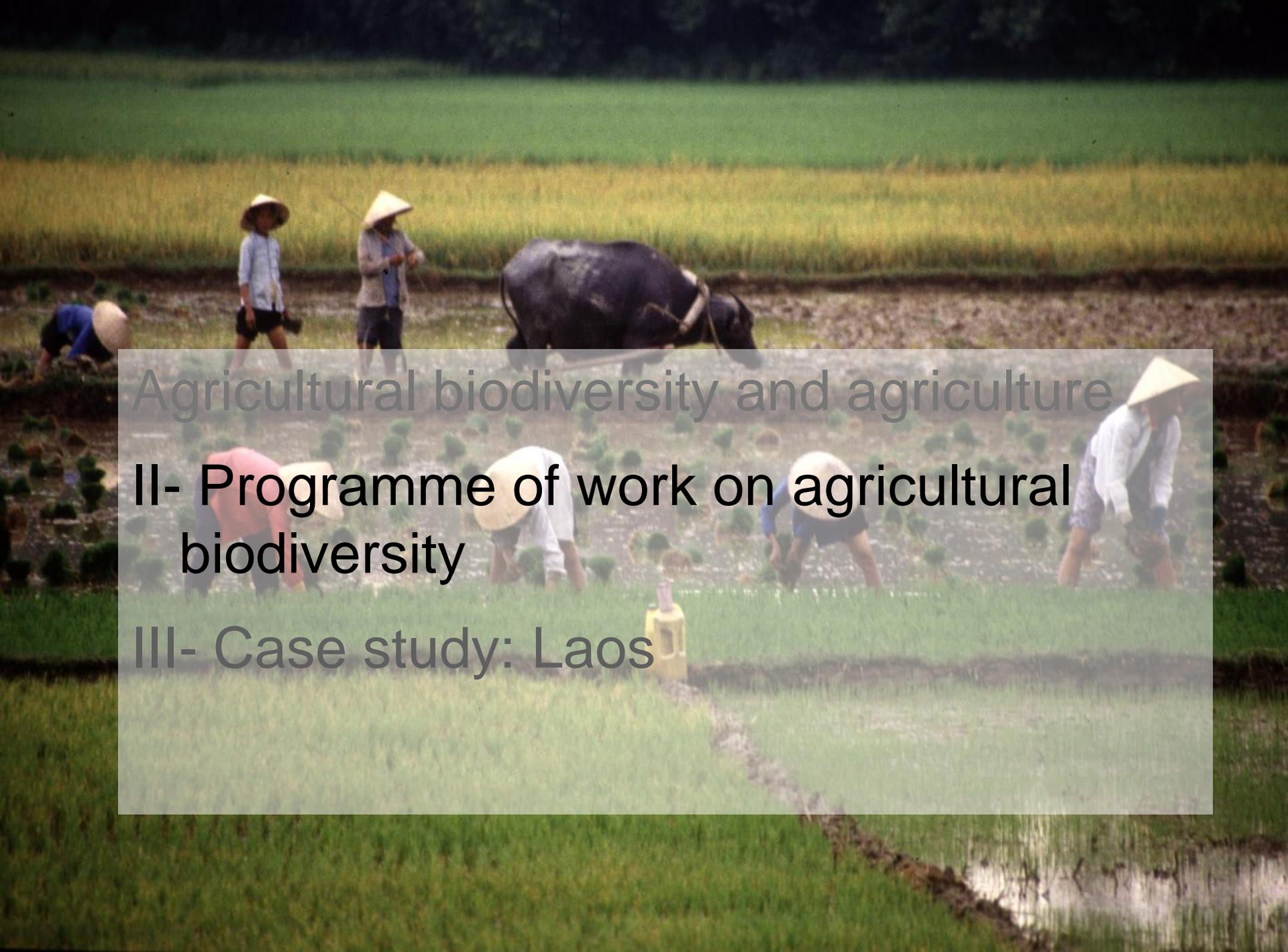
- overexploitation, mismanagement
- land use changes (e.g. about 43% tropical and sub-tropical dry and monsoon forests and 45% of temperate broadleaf and mixed forests globally have been converted to croplands)
- intensification
- specialisation (market forces)
- pollution

## Main challenges for agriculture:

- increasing world demand for food
- water availability
- emerging issues: climate change, biofuels
- world trade and policies
- interdependence between countries



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Agricultural biodiversity and agriculture

II- Programme of work on agricultural biodiversity

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# Programme of work on AgBD

## Objectives:

1. To promote the positive effects and mitigate the negative impacts of agricultural systems and practices on biodiversity in agro-ecosystems and their interface with other ecosystems;
2. To promote the conservation and sustainable use of genetic resources of actual and potential value for food and agriculture;
3. To promote the fair and equitable sharing of benefits arising out of the use of genetic resources.

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# Programme of Work on AgBD

## **Four mutually reinforcing programme elements:**

- Programme element 1: Assessments
- Programme element 2: Adaptive management
- Programme element 3: Capacity building
- Programme element 4: Mainstreaming

## **and three international cross-cutting initiatives on:**

- the Conservation and Sustainable Use of Pollinators
- the Conservation and Sustainable Use of Soil Biodiversity
- on Biodiversity for Food and Nutrition

(through the **ecosystem approach**)



# Programme of Work on AgBD

## Review of the Programme of Work on Agricultural Biodiversity

### Main findings

- The implementation of the PoW is well underway with:
  - significant progress on the assessment of components of agricultural biodiversity;
  - many activities undertaken to strengthen capacity and raise awareness of the importance of AgBD; however, more work still needs to be done;
  - most successful activities are reported to be partly due to the contribution and support of the international organizations
- A relevant framework to achieve the objectives of the CBD and flexible enough to address emerging biodiversity-related issues such as climate change and biofuels
- Effectiveness of the 3 cross-cutting international initiatives
- Need to build upon existing international plans of action, programmes and strategies
- Strengthen collaboration between FAO and the CBD, and between FAO's CGRFA and CBD, using the CGRFA's Multi-Year Programme of Work as a basis

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# Programme of work on AgBD

## Review of the Programme of Work on Agricultural Biodiversity (...cont'd)

Areas to strengthen:

- application of the ecosystem approach
- considering interactions between components of agricultural biodiversity, using the ecosystem approach
- approaching assessments by farming systems, rather than solely sectorally
- efforts to implement activities focusing on the sustainable use of agricultural biodiversity, using the ecosystem approach
- increasing appreciation of role of agricultural biodiversity in food security and poverty reduction strategies as well as in sectoral policies including agriculture and environment
- cooperation and synergy between environment and agriculture at the national level
- better integration of approaches in the environment, and agriculture and other production sectors
- need to work together, to establish partnerships, and capitalize on the added values of all organizations
- need to work closely with the main custodians of our biodiversity - farmers, pastoralists, forest users and fisherfolk
- strengthen cooperation with farmers
- integrate agricultural biodiversity into National Biodiversity Strategy and Action Plans

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- An aerial photograph of a lush green valley with terraced rice fields. The fields are arranged in a series of curved, stepped terraces that follow the contours of the hills. The water in the fields reflects the sky, creating a shimmering effect. In the background, there are dense forests covering the hillsides. A semi-transparent white text box is overlaid on the center of the image, containing three bullet points.
- I- Agricultural biodiversity and agriculture
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# Case study: Laos

## **A National Agricultural Biodiversity Programme (NABP) can:**

1. Provide a strategic framework for policy development and management activities in the agricultural biodiversity sectors.
2. Contribute to the implementation of national policies such as agricultural, developmental, and environmental policies and broader goals such as sustainable livelihoods, adequate nutrition, and food security.
3. Assist countries to better develop their agricultural biodiversity resources to meet current and future demands.
4. Provide a means to fulfil a major policy or strategy gap to bring together agriculture and environment.
5. Provide a foundation for determining priorities for capacity building and donor assistance.
6. Assist in fulfilling national obligations to international commitments.



# Case study: Laos

- Opportunity to implement and operationalize the Programme of Work on Agricultural Biodiversity in the national context
- Opportunity to mainstream agricultural biodiversity into national policy
- Opportunity to link agriculture, environment, development and other sectors

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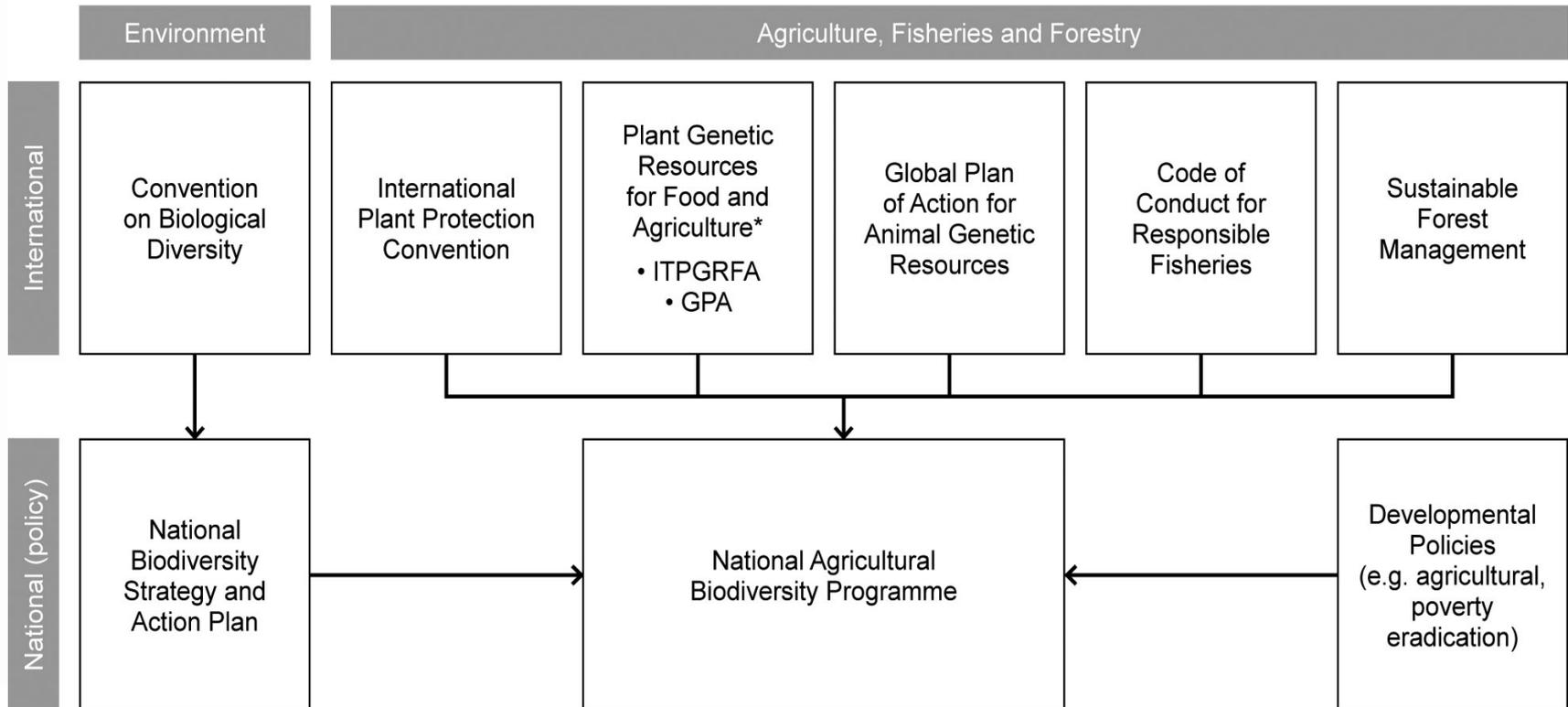


# Case study: Laos

- In 2004, the GoL developed and endorsed a National Agricultural Biodiversity Programme (NABP).
- Consistent with, and was designed to be integrated with the implementation of the National Biodiversity Strategy and Action Plan, the Strategic Vision for Agriculture Sector (2000-2020), and the National Growth and Poverty Eradication Programme. Acts as a framework and a long-term strategy for implementing a coordinated approach to better using, developing and conserving agricultural biodiversity.
- Was prepared to support two of the main development priorities for Lao PDR:
  - Achieve food security and improve the livelihoods of the rural communities.
  - Enhance the Government's capacity to ensure the sustainable use of natural resources.
- Designed to conserve and sustainably use agricultural biodiversity to achieve food security, adequate nutrition and sustainable livelihoods.

# Case study: Laos

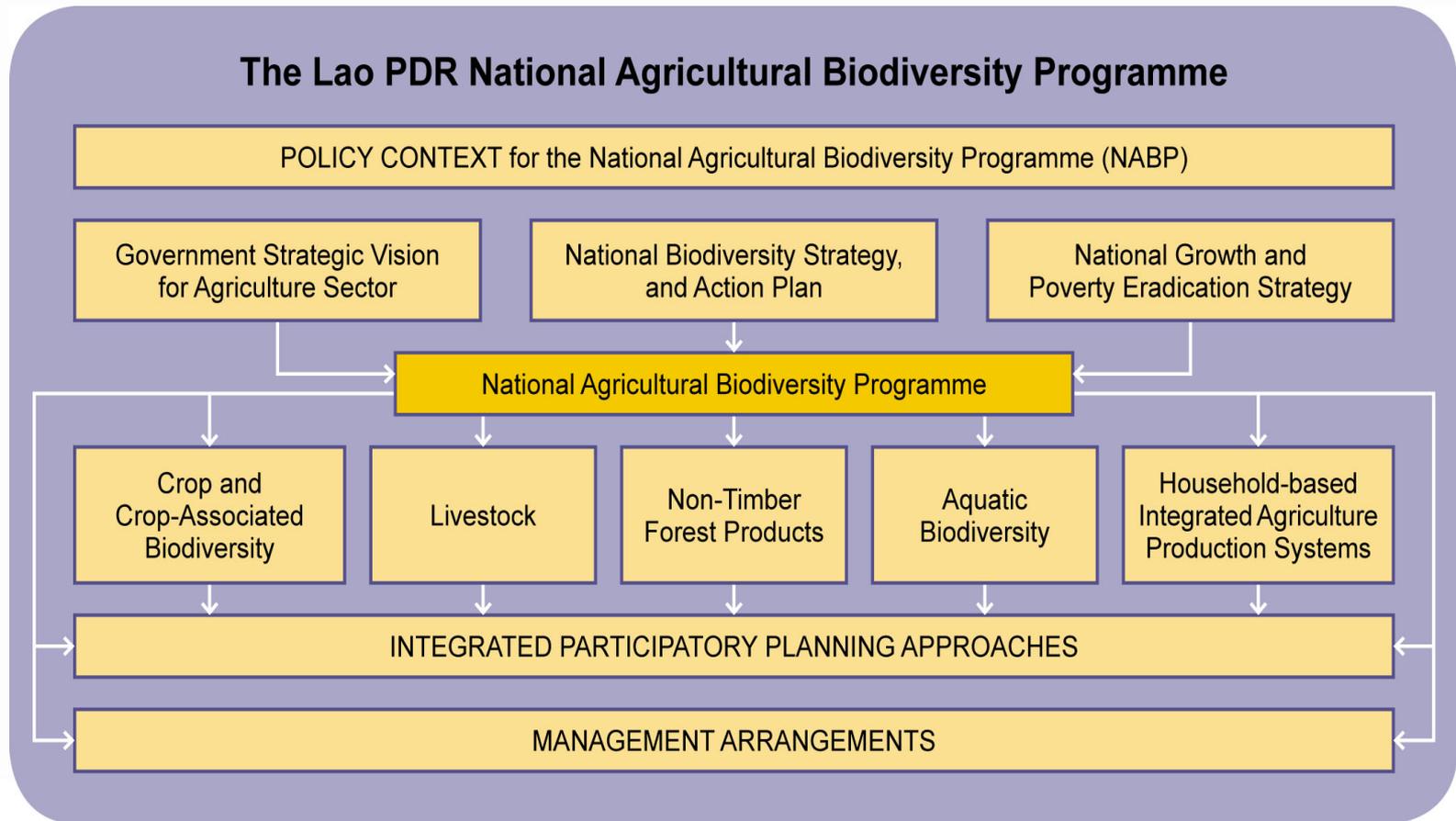
## Agricultural Biodiversity: An Illustration of Linkages



\* ITPGRFA: International Treaty on Plant Genetic Resources for Food and Agriculture

GPA: Global Plan of Action for the Conservation and Sustainable Utilization of Plant Genetic Resources for Food and Agriculture

# Case study: Laos



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**Thank you**  
**Merci**  
**Gracias**  
**Спасибо**  
**谢谢**  
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