

International Cooperation on Capacity Building in Forest Research and Development in Cambodia

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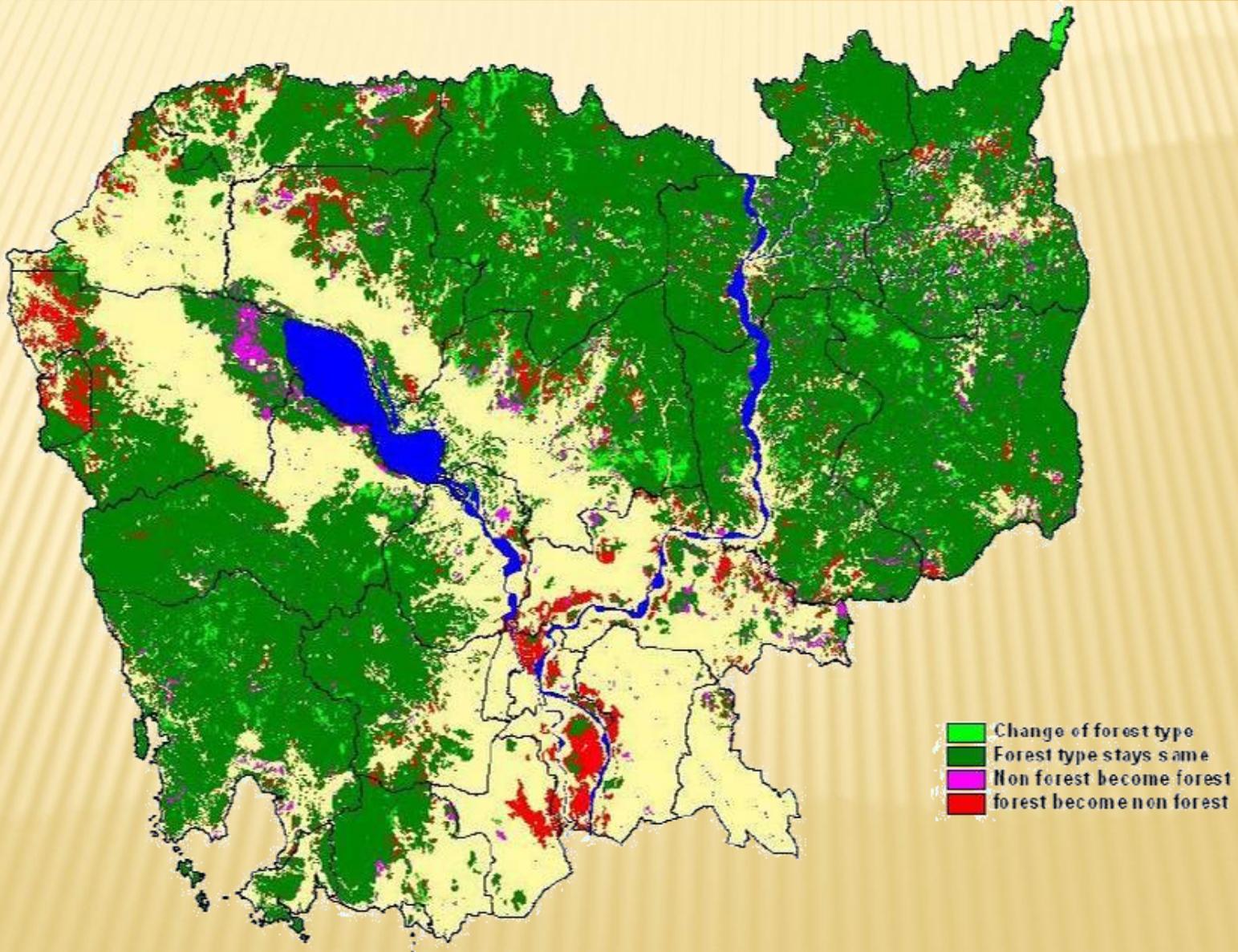
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1. A look at the Forest resources and policies in Cambodia



Distribution of Forest Resources





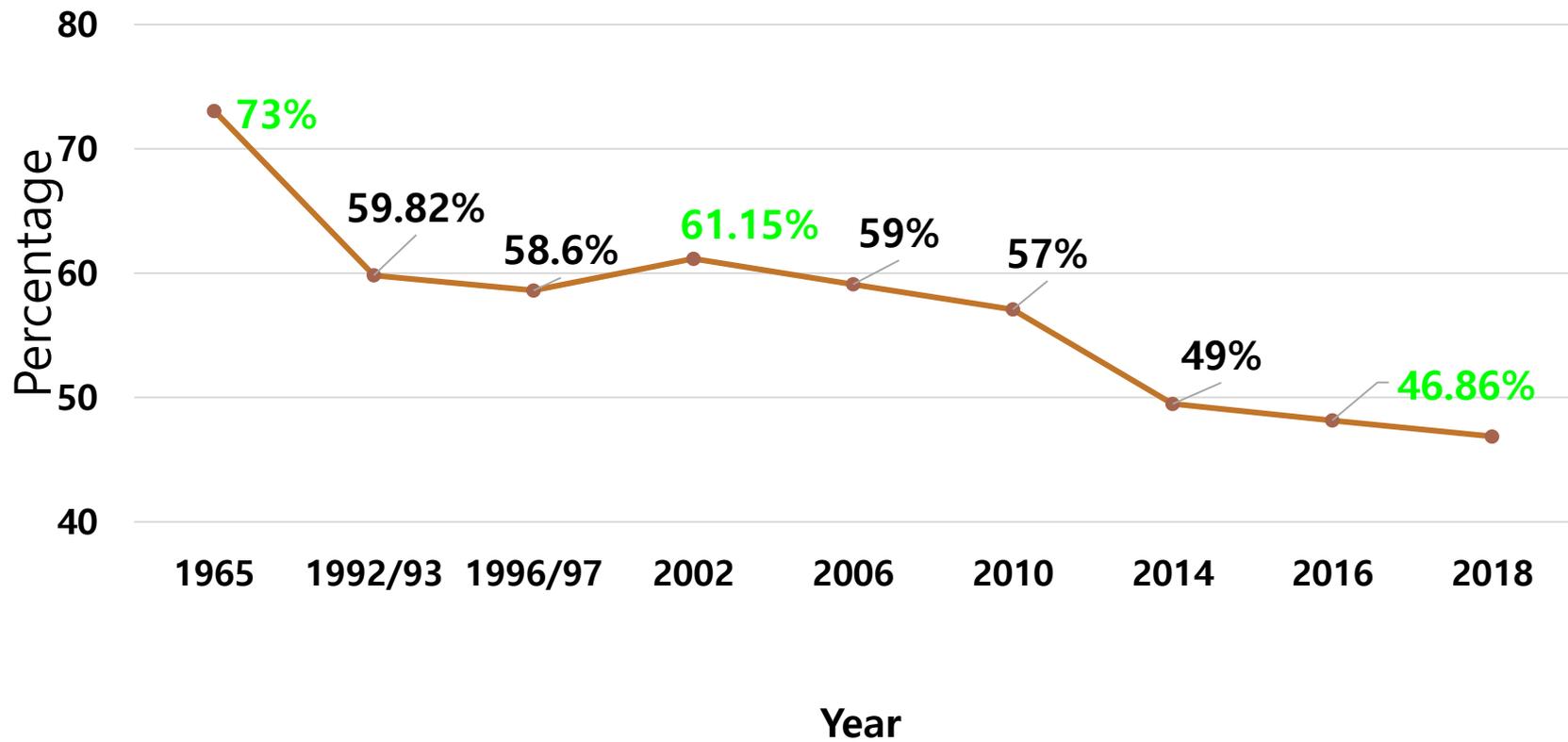
Forest types in Cambodia

1	Evergreen forest
2	Semi evergreen forest
3	Deciduous forest
4	Other forest





Forest Cover change during the last 5 decades





FOREST COVER CHANGE (%)

2005/6

2010

2014

2016

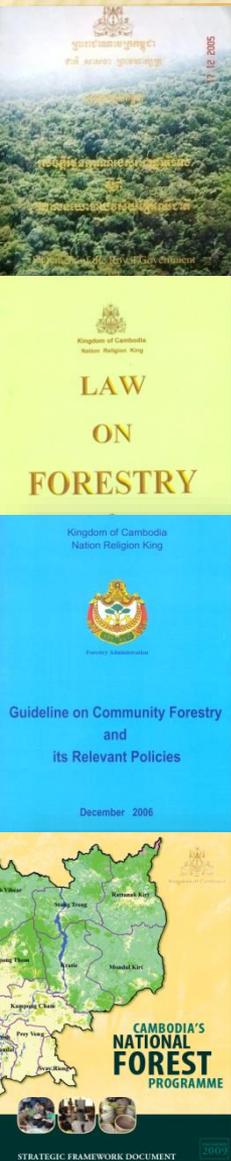
2018





2- POLICY AND REGULATION

- I. **Rectangular Strategy of RGC** : ensure environmental sustainability through sustainable management of natural resources
- II. **National Strategic Development Plans**
- III. **Law of Natural Resource Management (1992)**
- IV. **Forest Law and relevant regulations (2002)**
- V. **Protected Area Law**
- VI. **National Forest Program (2010-2029)**





PRIORITIZED PROGRAMS IN NFP FOR 2010-2029

- 1. National Forest Demarcation, Classification and Registration**
- 2. Forest Resource Management and Conservation**
- 3. Forest Law Enforcement and Governance**
- 4. Community Forestry Development**
- 5. Capacity Building and Research Development**
- 6. Sustainable Forest Financing**



× **A Brief Introduction of Cambodian Forest
Research Institute**



INSTITUTE OF FOREST AND WILDLIFE RESEARCH AND DEVELOPMENT (IRD)

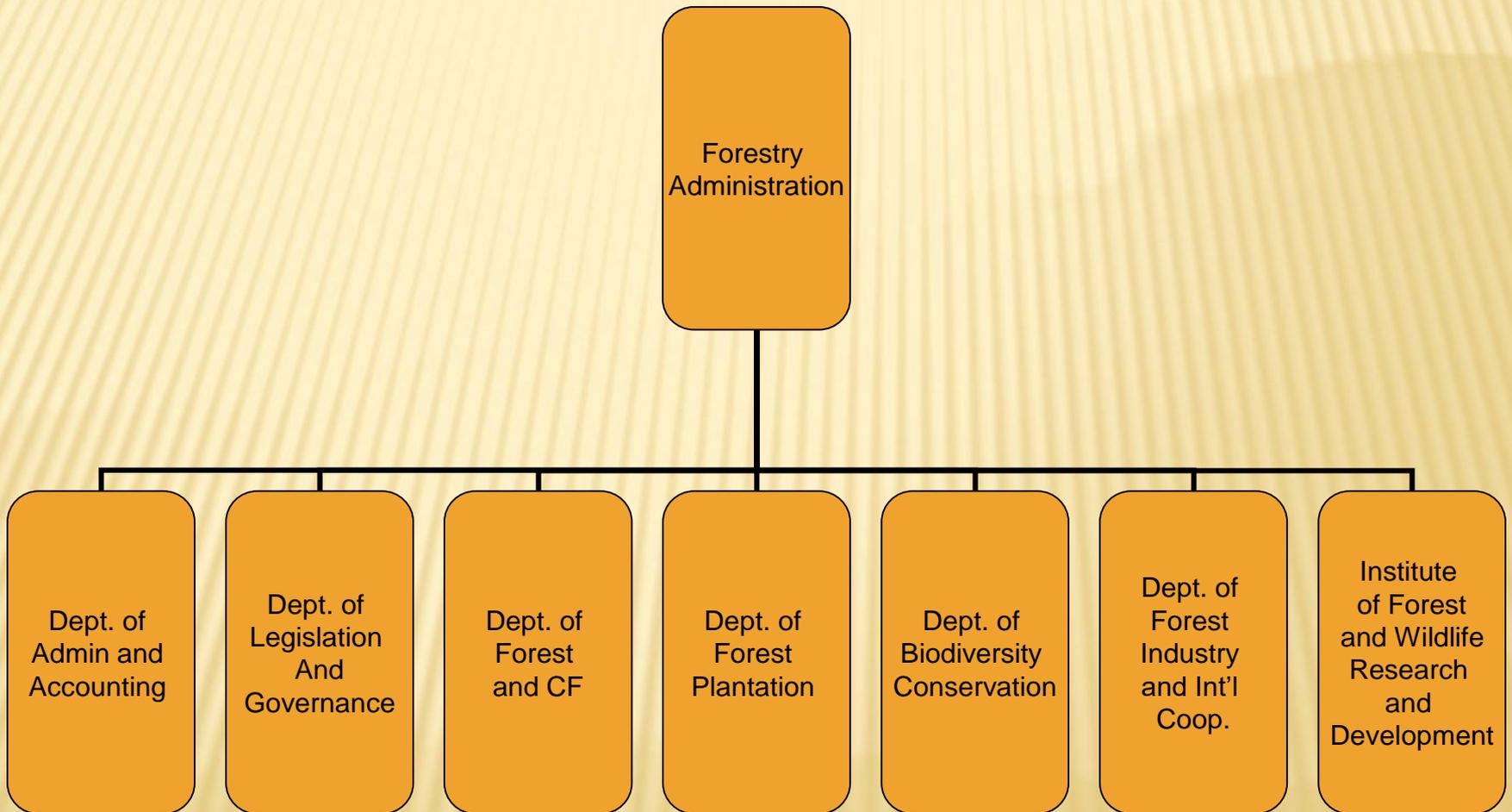
IRD has a mandate to conduct research that will generate scientific knowledge and appropriate technologies to facilitate decision-making in forestry sector in Cambodia.

IRD is also tasked with capacity building and human resource development in forest sector



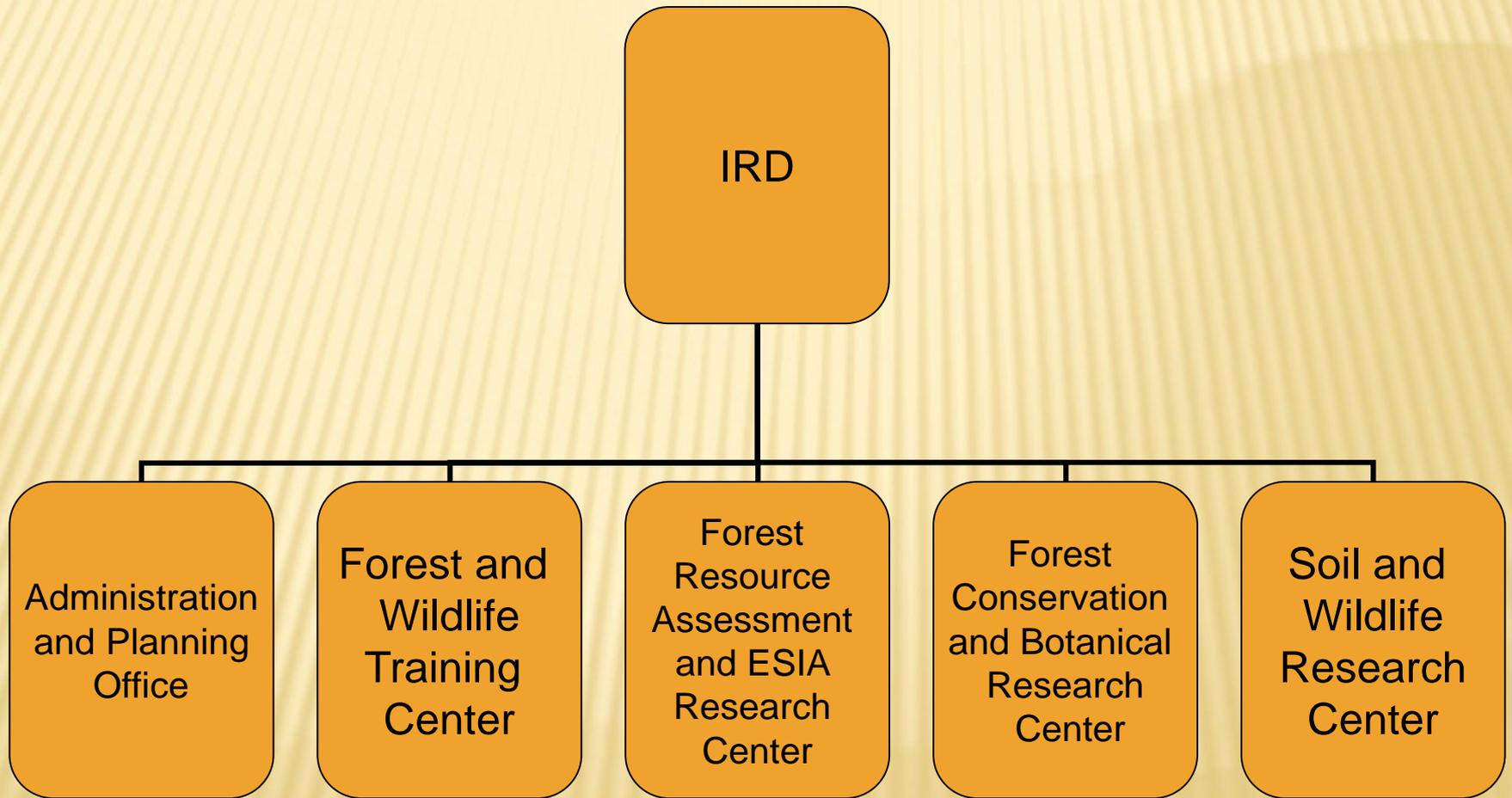


STRUCTURE OF FORESTRY ADMINISTRATION





CAMBODIA FOREST RESEARCH INSTITUTE





FOREST RESEARCH STATIONS



Coastal Forest Research Center

- Newly constructed
- Funded by ADB
- Research Forest: 145 ha
- Understaffed



Lowland Forest Research Center

- Constructed in 2012
- Funded by KRC (Korea Rural Corporation Community)
- Research Forest: 2000 ha
- Fully operated



INTERNATIONAL COOPERATION

Key partners and donors are:

- **The Asia-Pacific Network for Sustainable Forest Management and Rehabilitation (APFNet)**
- **Asian Forest Cooperation Organization (AFoCO)**
- **National Institute of Forest Sciences of ROK (NIFoS)**
- **Forestry and Forest Products Research Institute (FFPRI)**
- **Chinese Academy of Forestry**
- **Vietnamese Academy of Forest Science**
- **Korea Rural Community Corporation (KRC)**
- **Asia Development Bank (ADB)**
- **Asia-Pacific Association of Forestry Research Institutions (APAFRI)**
- **Seoul National University (SNU)**
- **Yunnan Academy of forestry and grassland (YAFG)**
- **Asia Forest Institute (AFI)**

- **Others: Institute of Statistical Mathematics (Japan), Kyushu University (Japan), Kunming Institute of Botany (China), Korea National Arboretum etc..**



INTERNATIONAL COOPERATION IN RESEARCH CAPACITY BUILDING IN CAMBODIA

Some key collaborative partners projects:

1. The Asia-Pacific Network for Sustainable Forest Management and Rehabilitation (APFNet)

- ❖ Multi-function forest restoration in degraded forest areas in Cambodia
- ❖ Landscape Approach to Sustainable Management of Forests in Prek Thnot Watershed
- ❖ Establishment of High Value Tree Species Breeding Center in Cambodia

2. Asian Forest Cooperation Organization (AFoCO)

- ❖ Promotion of forest rehabilitation in Cambodia and Viet Nam through demonstration models and improvement of seed supply system
- ❖ Establishment of Forest Genetics Research Center for Restoration of Major Timber Species in Cambodia
- ❖ Improving Capacity on Forest Restoration in Cambodia (AFoCo)

3. AKECOP

- ❖ Regeneration of *Dalbergia Cochinchinensis* Pierre in degraded forest area in Cambodia (AKECOP)

4. KRC through KFS

- ❖ Forest restoration and establishment of forest research facilities in Cambodia



Key areas for capacity building



THE FACTS

- ❖ In the last decade, we have strengthened our research and forest management capacities through collaborative projects funded by AFoCO, APFNet , AKECOP and others.
- ❖ However, Cambodia and other countries in the region need more supports in both technical and functional capacities toward SFM
- ❖ Need a more cooperation in an integrated approach (dynamic platform) in capacity building in the region.
- ❖ Such a regional capacity building program should aim at meeting the general trend and demand but be responsive in addressing specific capacity need at the country level



THEMATIC AREAS FOR CAPACITY BUILDING

- × **RESEARCH AND DEVELOPMENT IS A HIGH PRIORITY**

- × **OTHER IMPORTANT AREAS INCLUDE:**
 - **FOREST PLANNING AND MANAGEMENT (BOTH LEVELS)**
 - **AWARENESS RAISING AND OUTREACH (RELEVANT STAKEHOLDERS – ROLES AND BENEFITS OF OF FORESTS)**
 - **FOREST EDUCATION AND ADVOCACY (FORESTRY SCHOOLS AND UNIVERSITIES)**
 - **MONITORING ON THE GROUND AND EVALUATE THE POLICIES (REAL DEMAND VS POLICIES)**



THANK YOU !



IRD Headquarter



SOME PHOTOS AND ADDITIONAL INFORMATION OF COLLABORATIVE PROJECTS



CONSTRUCTION OF HIGH VALUE TREE BREEDING CENTER

The High Value Tree Breeding Center will be constructed in the IRD compound in Phnom Penh city with a total area of 1,755m² including a comprehensive business building (office, meeting room, tissue-culture laboratory and diagnostic laboratory) and a nursery greenhouse with the most advanced Venlo structure system.

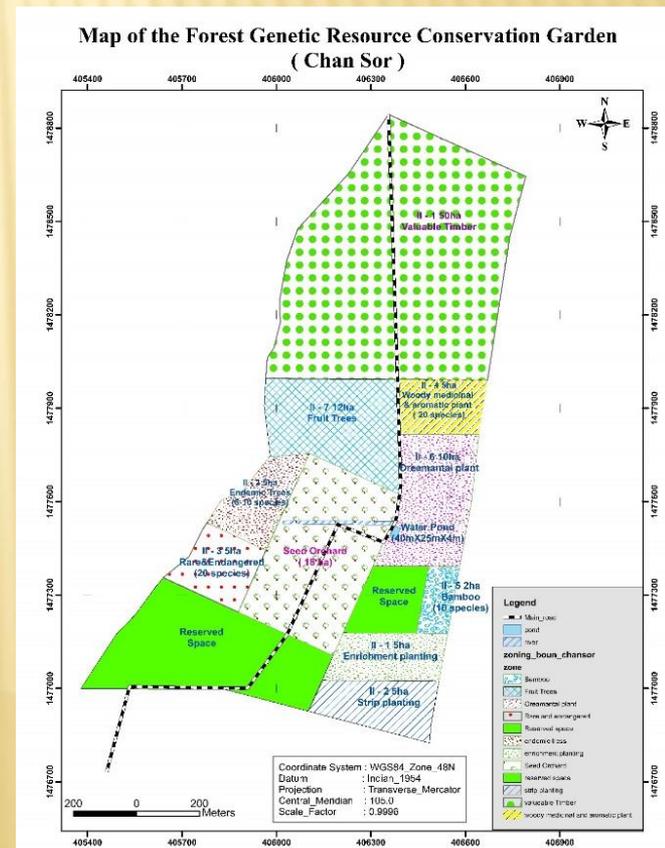




ESTABLISHMENT OF FOREST GENETIC RESOURCE CONSERVATION GARDEN OF VALUABLE TREE SPECIES

A hundred hectare of land inside Chan Sor forest research and development area is being converted to be the forest genetic resource conservation garden.

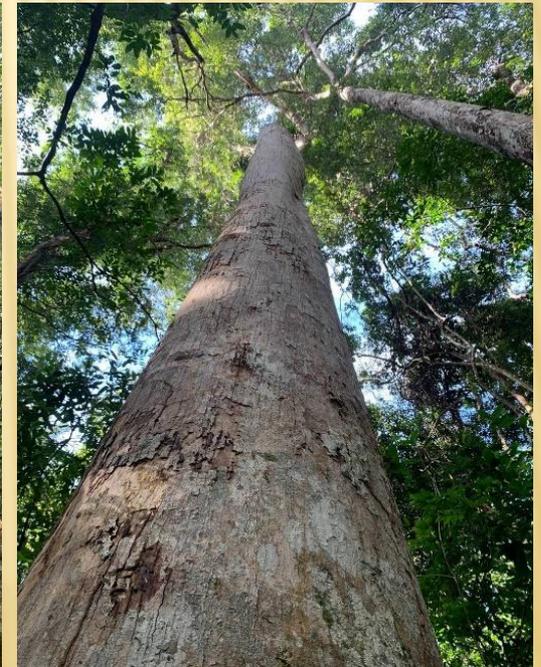
	Zone	Area (ha)	Species No.
I	Seedling collecting & display zone	1	
II	Tree Garden	89	
2.1	Valuable timber tree garden	50	50
2.2	Cambodian endemic species garden	5	10
2.3	Rare and endangered tree species garden	5	20
2.4	Woody medicinal & aromatic plant	5	20
2.5	Bamboo garden	2	10
2.6	Ornamental plant garden	10	20
2.7	Economic fruit tree garden	12	10





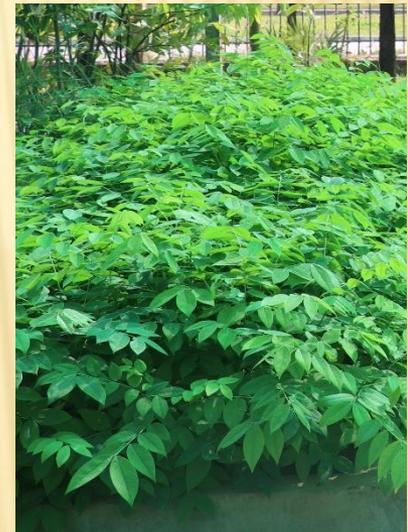
COLLECTION OF PRECIOUS TREE GERmplasm RESOURCES IN CAMBODIA FOR FGRC

A total of 100 species of valuable and precious tree genetic resources in Cambodia with consideration to landscaping, including precious tropical tree species, endangered species, other traditional species and those for special purposes, such as medicinal, spices and forest vegetable tree species are planned to be collected for establishment of the forest genetic re source conservation garden



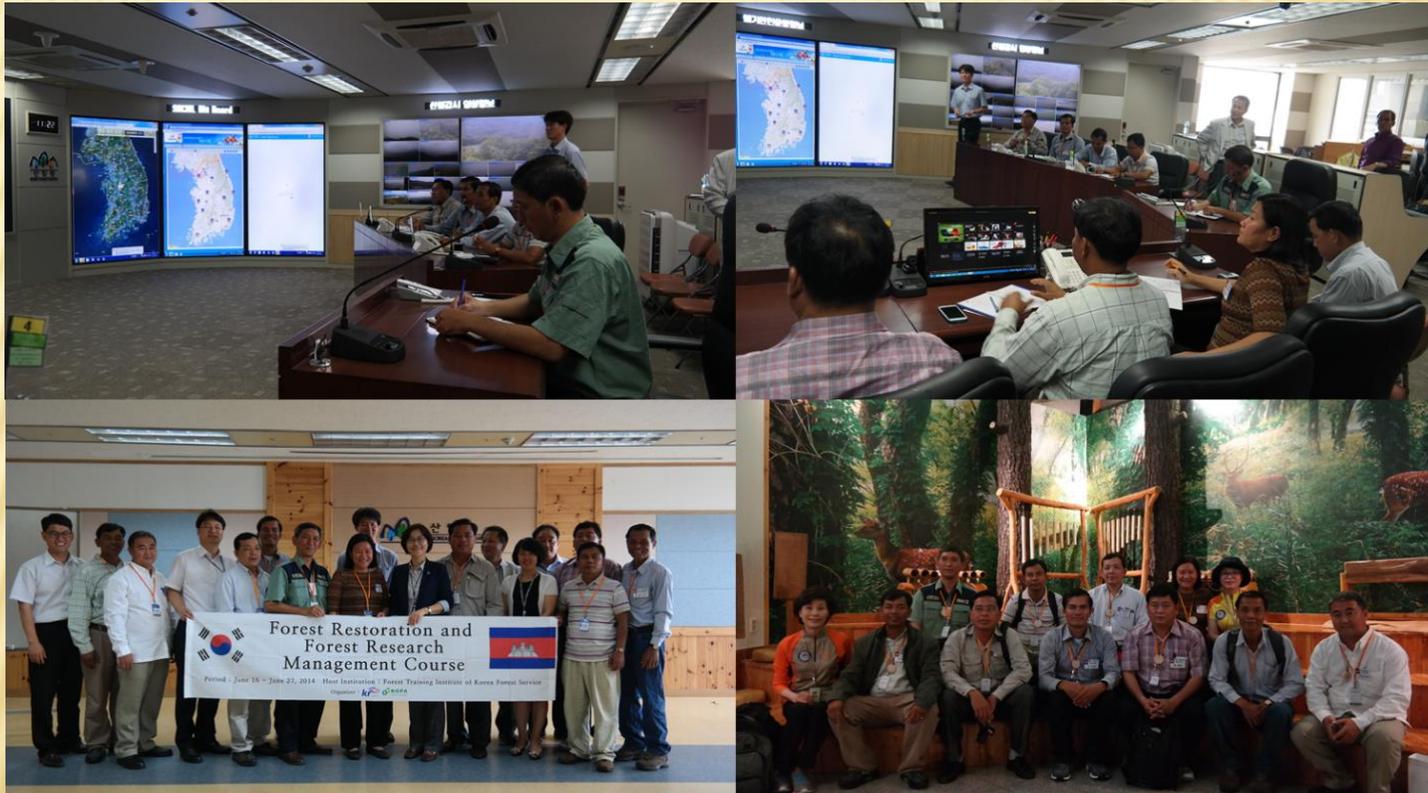


SEEDLING PRODUCTION (COLLECTED SEEDS)





SOME PHOTOS OF CAPACITY BUILDING ACTIVITIES









MONITORING AND MAINTENANCE OF THE FOREST RESTORATION SITES AND RESEARCH PLOTS





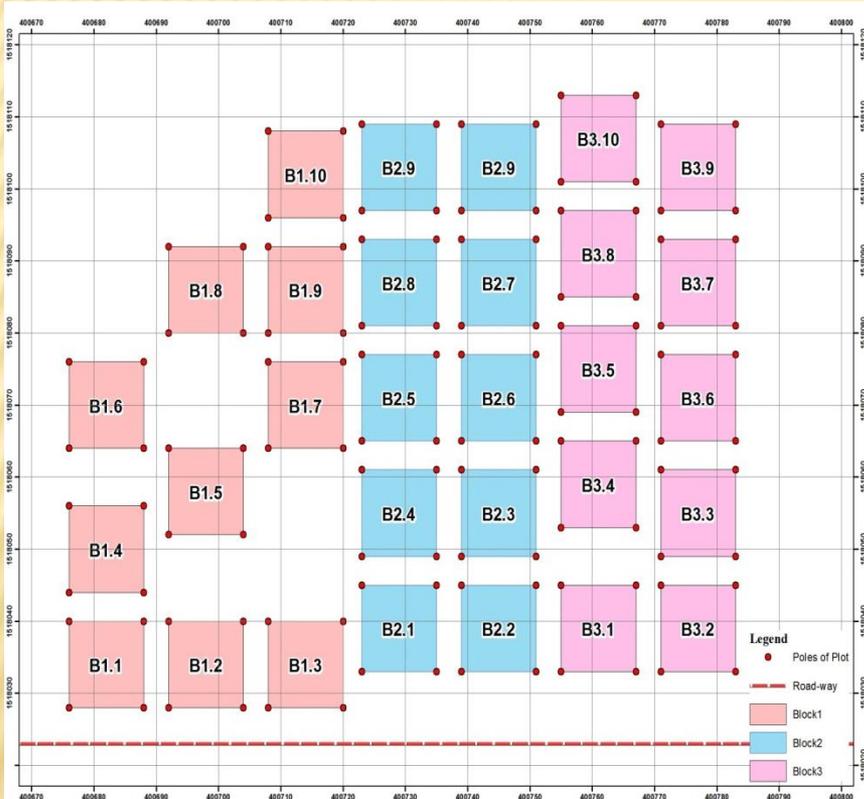
IMPROVING CAPACITY ON FOREST RESTORATION IN CAMBODIA

- To initiate a research study on reforestation of degraded by direct seeding; and
- To improve the capacity in producing seedlings through tissue culture.





LAYOUT OF BLOCKS AND PLOTS OF THE DIRECT SEEDING EXPERIMENT IN THE FIELD



- | | |
|-------|----------------------------------|
| B1.1 | <i>Afzelia xylocarpa</i> |
| B1.2 | <i>Albizia lebbeck</i> |
| B1.3 | <i>Cassia Fistula</i> |
| B1.4 | <i>Cassia grandis</i> |
| B1.5 | <i>Dalbergia cochinchinensis</i> |
| B1.6 | <i>Cassia siamensis</i> |
| B1.7 | <i>Sindora cochinchinensis</i> |
| B1.8 | <i>Peltoforrum dasyrachis</i> |
| B1.9 | <i>Cassia javanice</i> |
| B1.10 | <i>Erythropheum succirubrum</i> |





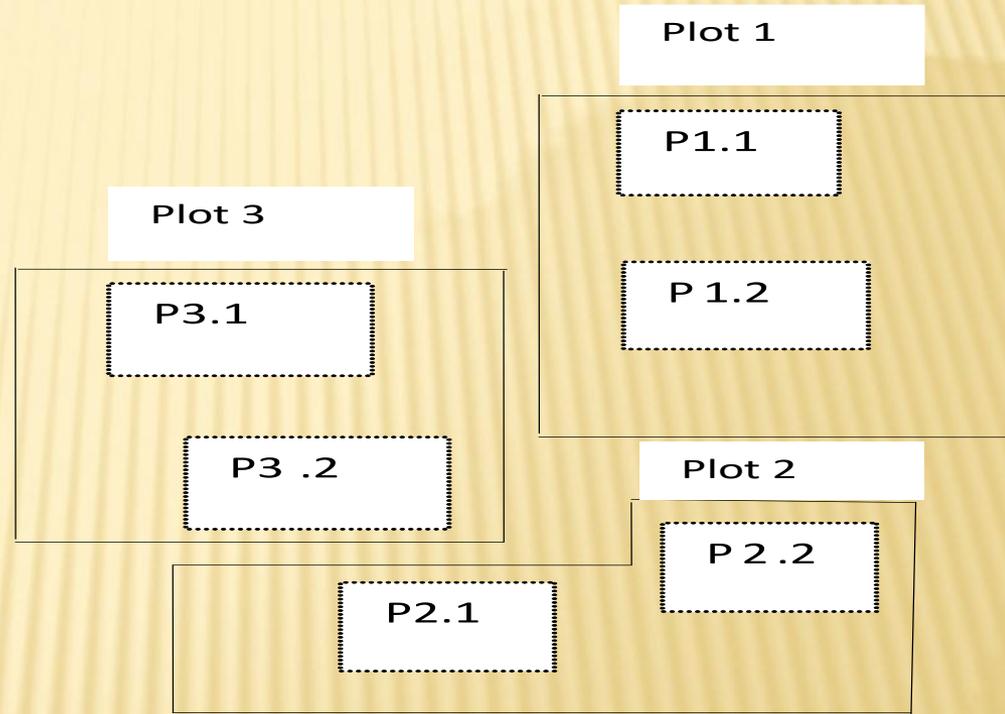
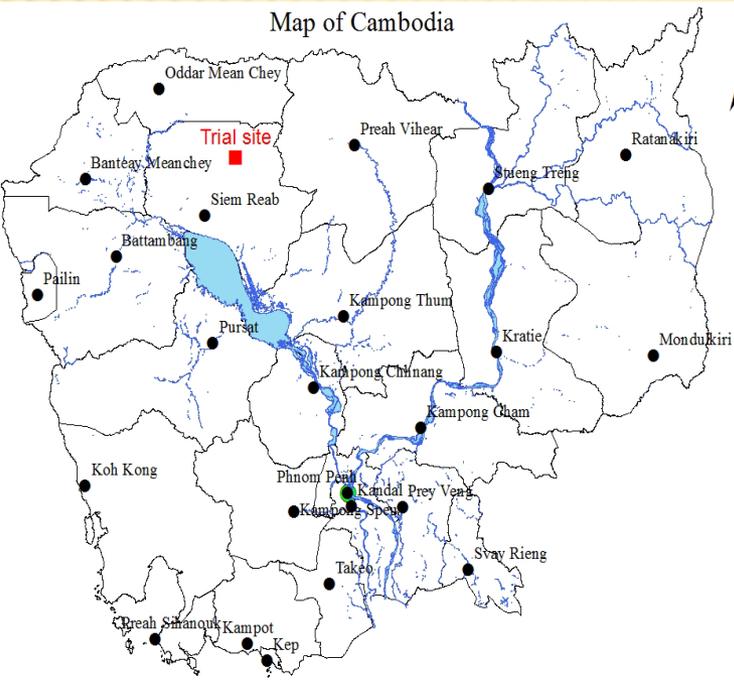
PLANT TISSUE CULTURE LAB.





REGENERATION OF *DALBERGIA COCHINCHINENSIS* PIERRE IN DEGRADED FOREST AREA IN CAMBODIA

Map of Cambodia





PRUNING AND COLLECTING THE DATA



Data collected: Stem diameter, canopy and height





The plots are being used research and training purposes for students