

# *Forestry in Lao PDR*



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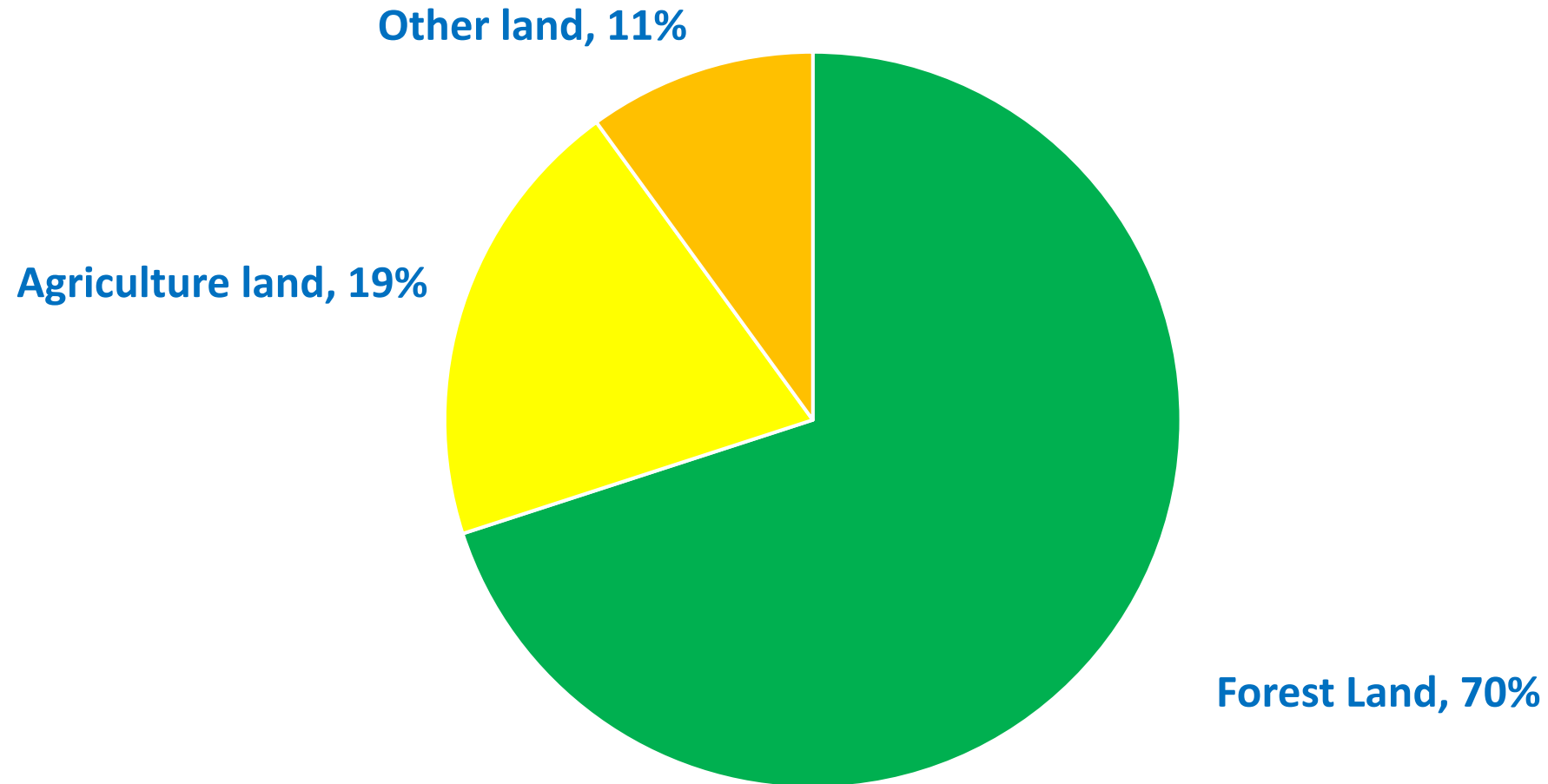
**November 10, 2023**

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3. Forest education
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# 1. Overview

National Land Management Master Plan to the year 2030 (Source: MoNRE, 2018)

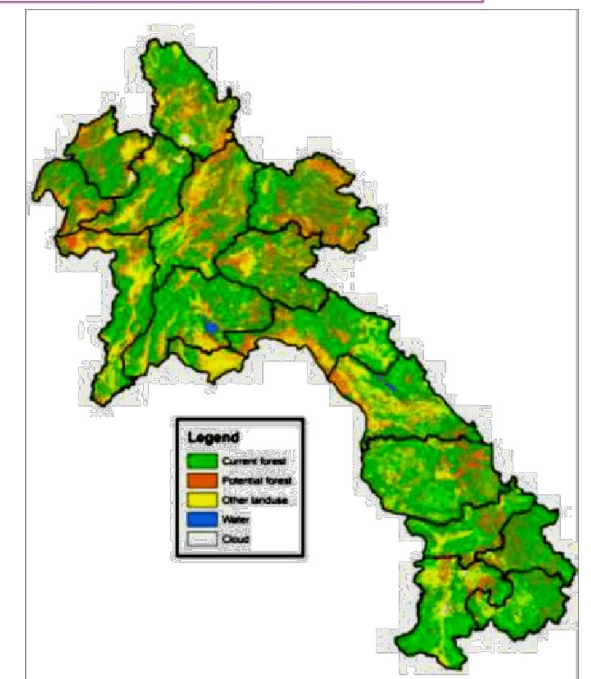
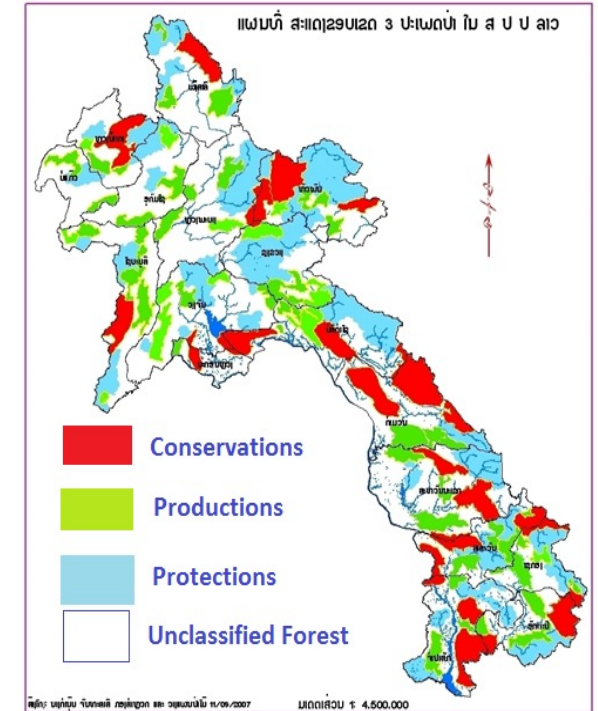


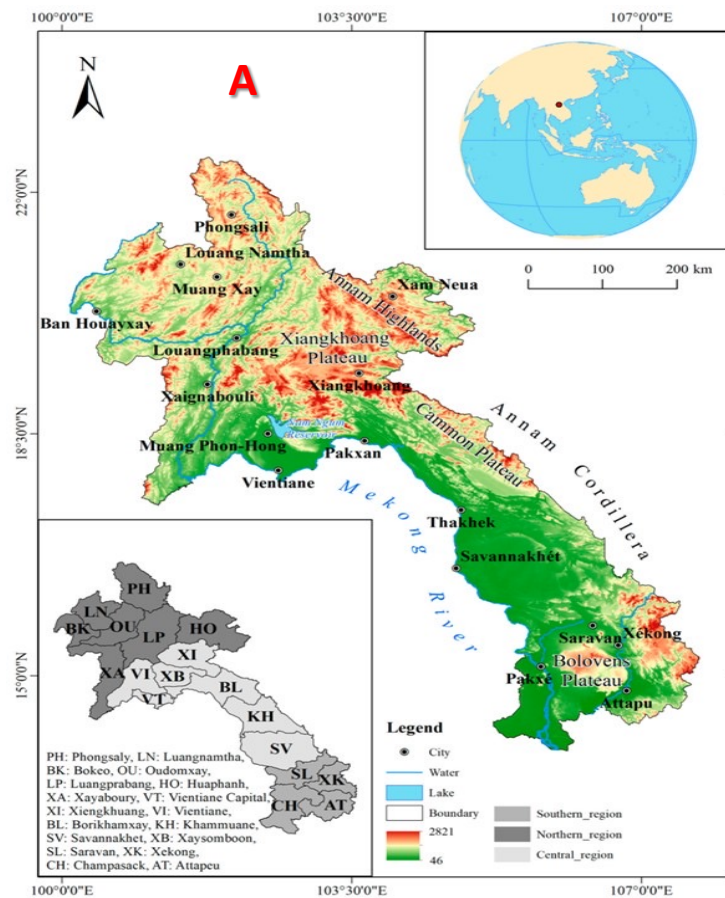


## Current land use and forest classification

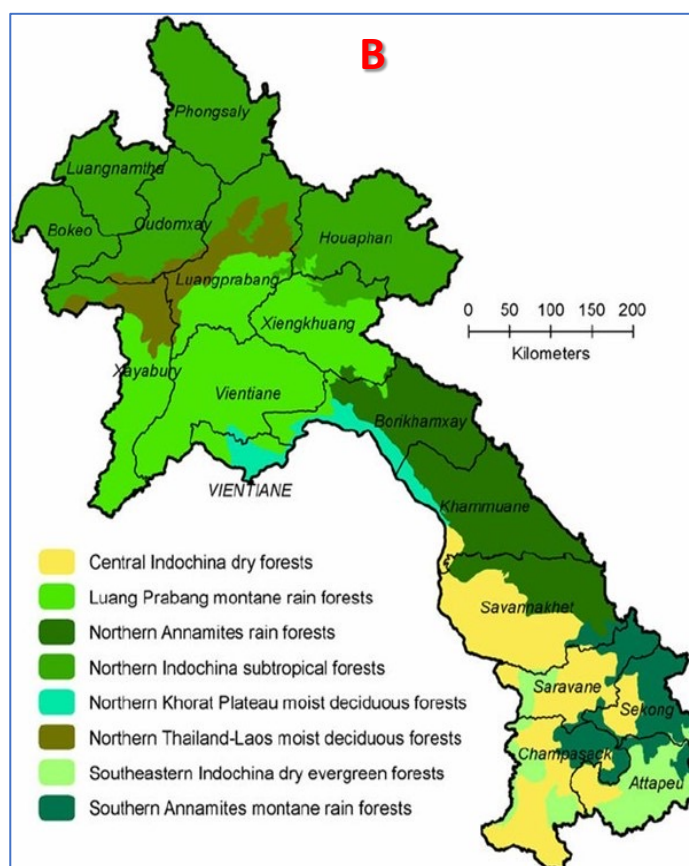
- ▶ Total Land Area: 236,800 Km<sup>2</sup>
- ▶ Population: 7.443 million (NSB, 2022)
- ▶ Lao PDR divided forest into 3 categories: **Protected Forest 4.7 M. Ha**; **Protection Forest 8.2 M. Ha**; and **Production Forest 3.1 M. Ha**; and **Plantation 0.5 M. Ha**

Land/Forest classes (2020)	Areas (Mill ha)	%
1. Current Forest	14.7	62.0
2. Potential Forest	5.2	22.0
3. Other Vegetable Areas	0.35	1.5
4. Crop Land	2.6	11.3
5. Settlement	0.1	0.4
6. Other Land	0.2	0.9
7. Above ground Water sources	0.4	1.7

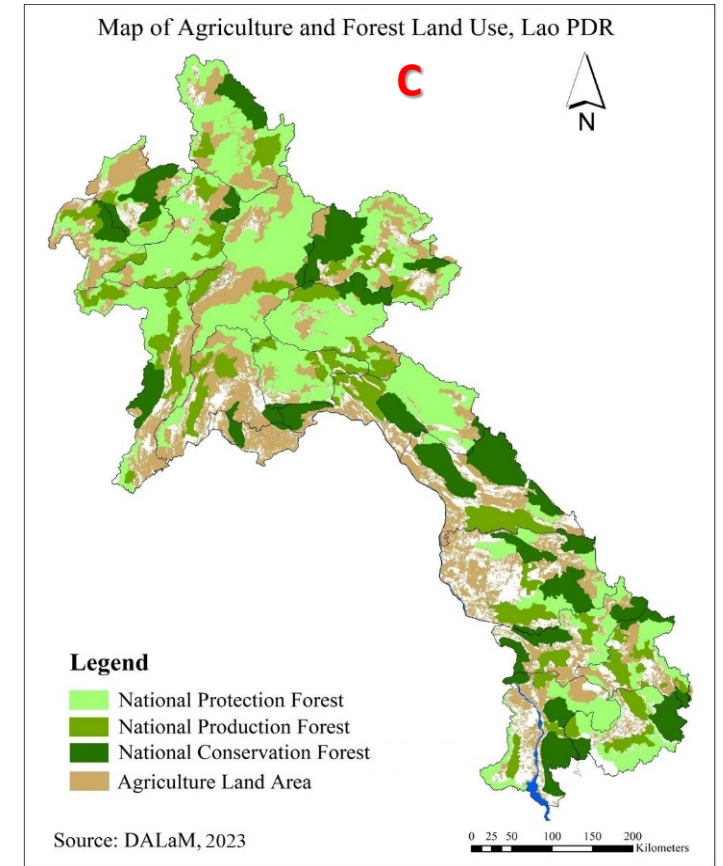




Source: Yu Zhang et al., 2022

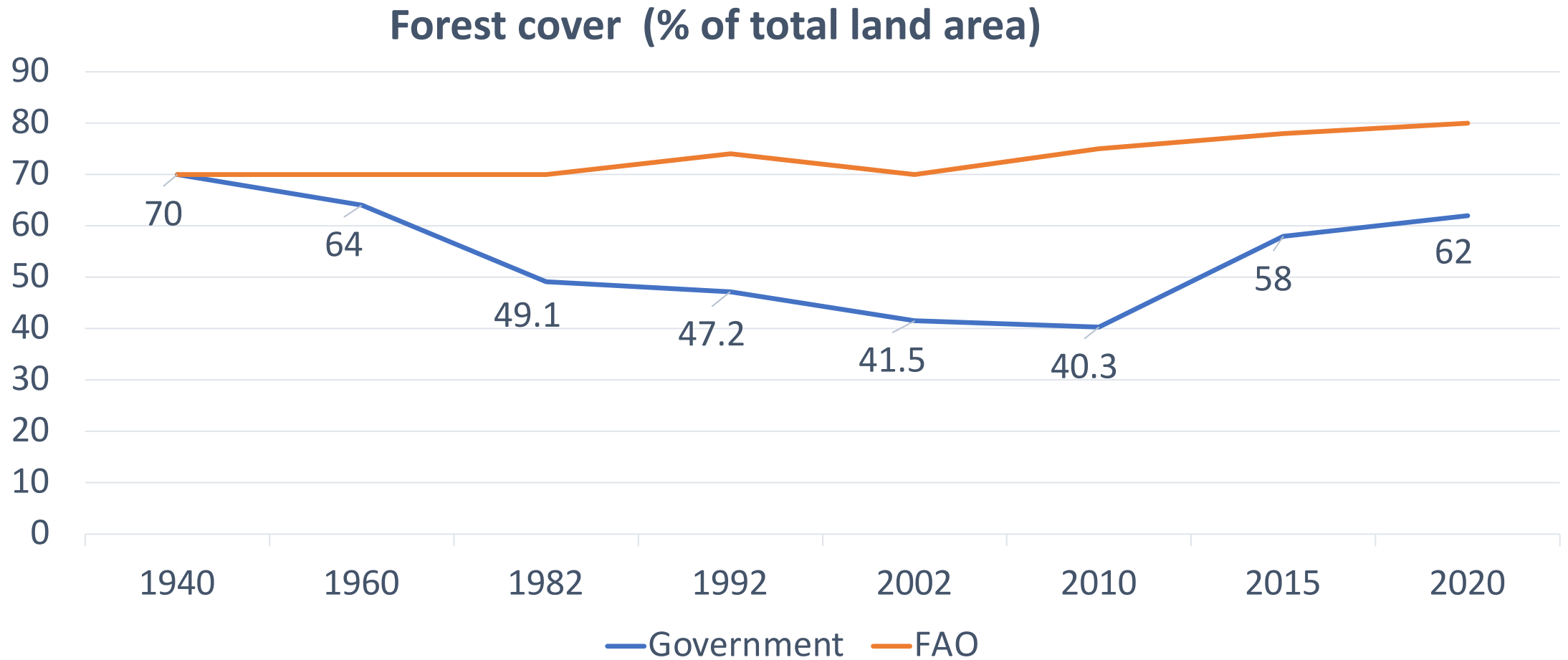


Source: Daniel Müller et al., 2013



- The topography is dominated by mountainous landscapes, characterized by two main geographical zones-plains and mountainous regions (**Map A**).
- The ecoregion was classified by eight regions; for example, central Indochina dry forests cover mainly in southwestern part of Laos (**Map B**)
- Forest and agricultural lands are the major land use types in Laos, accounting for 89-97% of the total land area (MAF, 2021; Yu Zhang et al., 2022). (**Map C**)

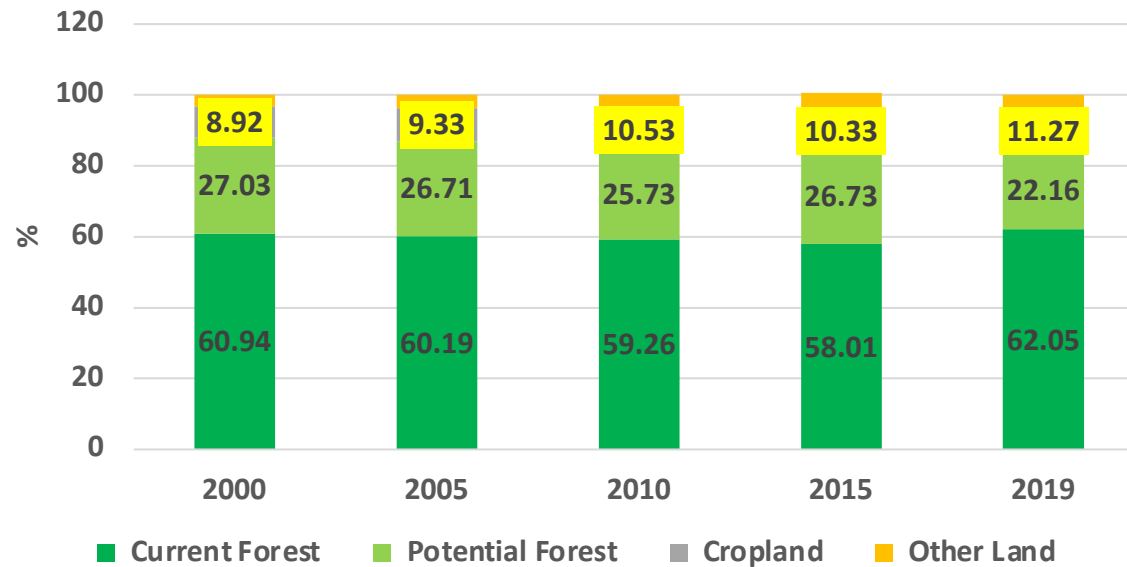
# Change in forest cover as estimated by the Lao government and FAO





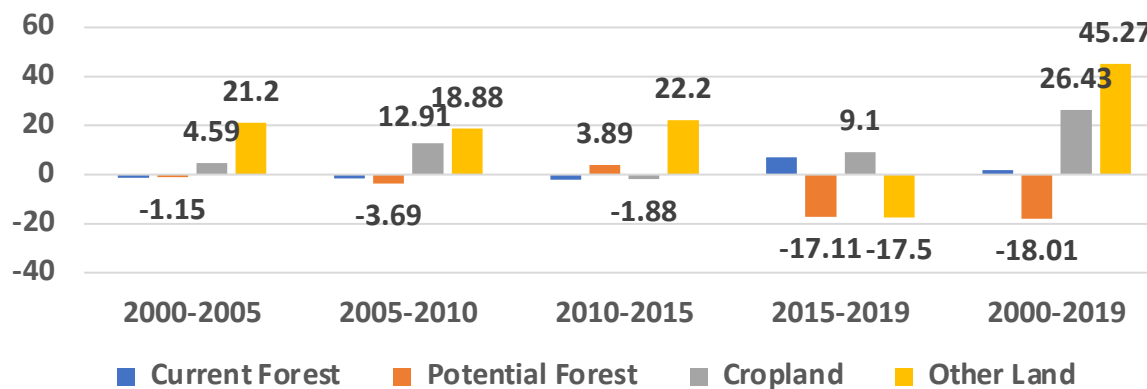
# Forest cover and change (2000-2019)

Land Use/Cover 2000 - 2019



Source: Jun Wang et al., 2019; DoF, 2021.

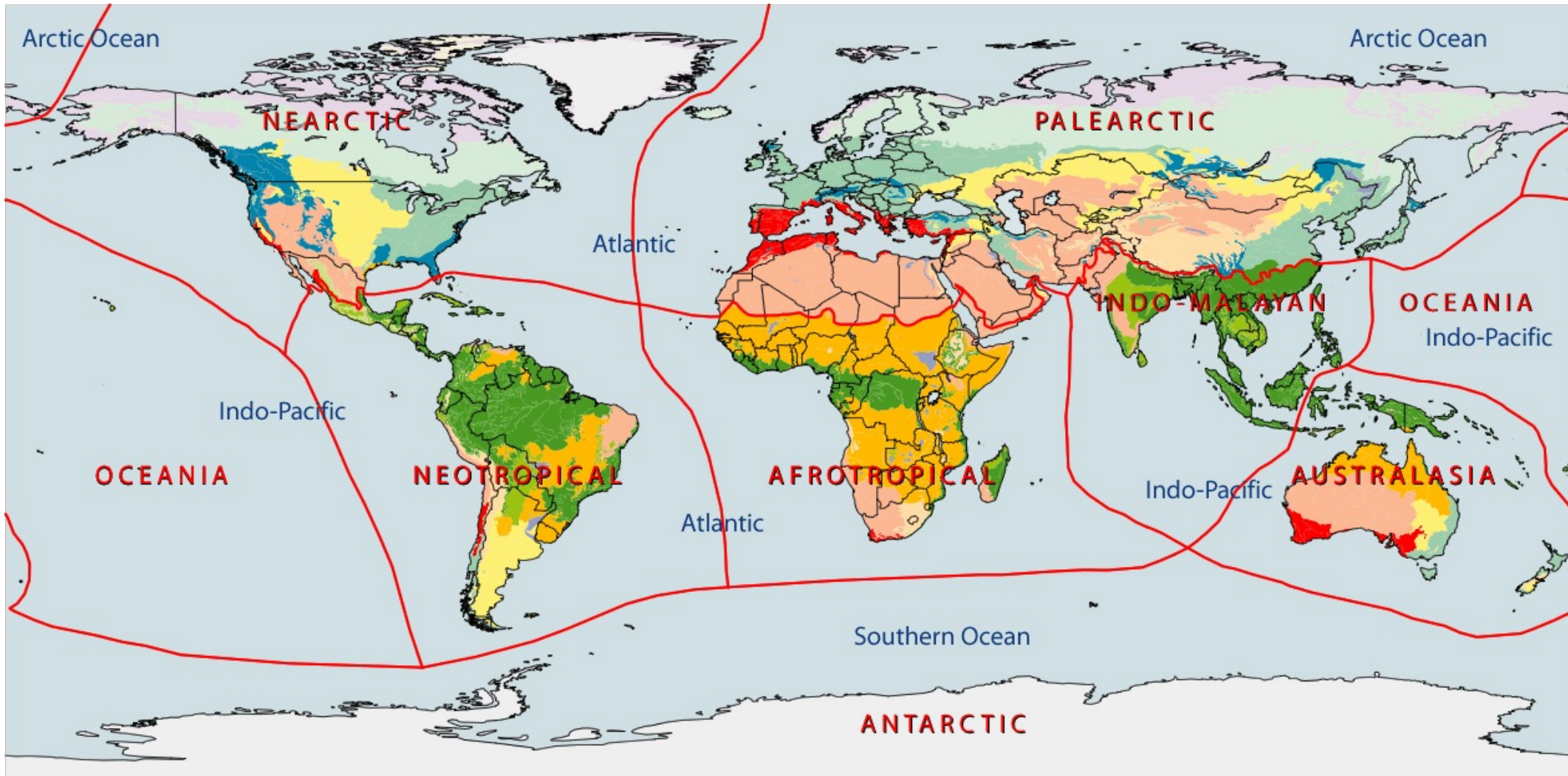
Land Use/Cover Change (2000-2019)



Source: Jun Wang et al., 2019; DoF, 2021.

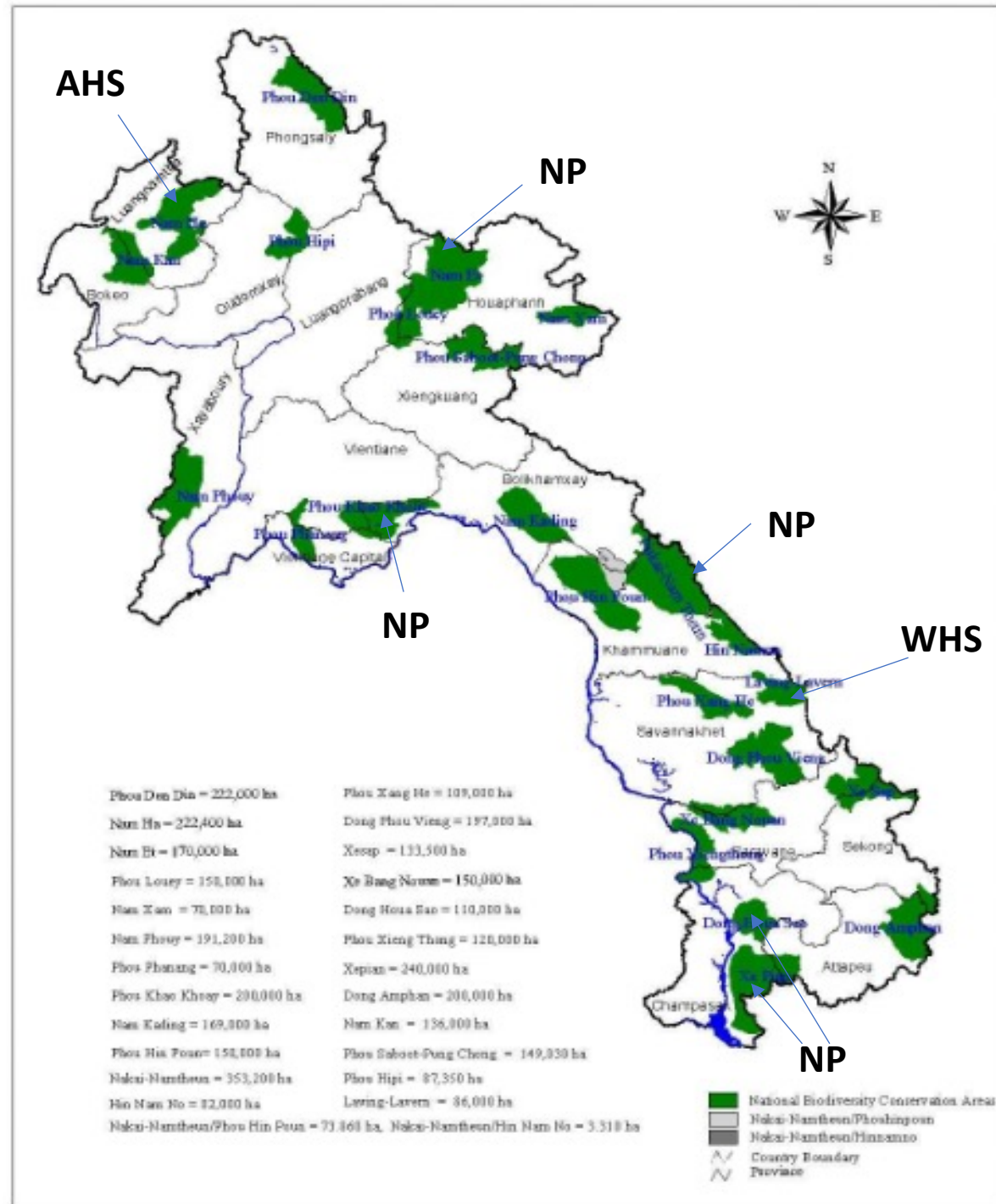


The ecoregions are categorized within 14 biomes and eight biogeographic realms to facilitate representation analyses. (Source: WWF) [www.eoearth.org](http://www.eoearth.org)





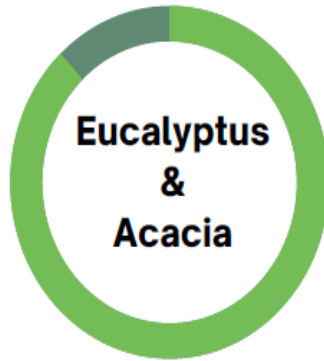
**1 ASEAN Heritage Site**  
**5 National Park**  
**1 World Heritage Site**



## *Biodiversity data base (Sources: NBSAP 1<sup>st</sup> 2004, 2<sup>nd</sup> 2015, NAFRI 2023)*

- 8,000-11,000 flowering plant species,
- 166 species of reptile and amphibian,
- > 500 species fish,
- 700 bird species,
- 100 mammal species,
- 90 bats species.
- *Noted: update **National** Timber Categories List (2021), NTFs list (2020), Wildlife and Aquatic species list (2020), tree master for commercial and non-commercial lists, Pha Khao Lao website (2017 – now)*  
<https://www.maf.gov.la/%e0%ba%99%e0%ba%b4%e0%ba%95%e0%ba%b4%e0%ba%81%e0%ba%b3/>

# Sustainable Forest Management and livelihood improvement: Plantation Forests



- Around 50,000 ha planted
- 88% 'company' concessions or company land
- 4 large companies
- 12% 'outgrower' plantations on small plots
- Rotation: 5-12+ years
- MAI: 5-28 m<sup>3</sup>/ha/yr
- Products: woodchip, sawlog, veneer, carbon

**Total plantation forest area in 2021: 529,758 ha**



- Around 276,000 ha planted
- 47% 'company' owned through over 203 land concessions or leases
- Many companies
- 53% contract farming or smallholder on small plots
- Rotation: 15-30 years
- MAI: 9-40 m<sup>3</sup>/ha/yr
- Products: latex, sawlog, veneer, carbon

Figure 3. Area of Eucalyptus & Acacia planted

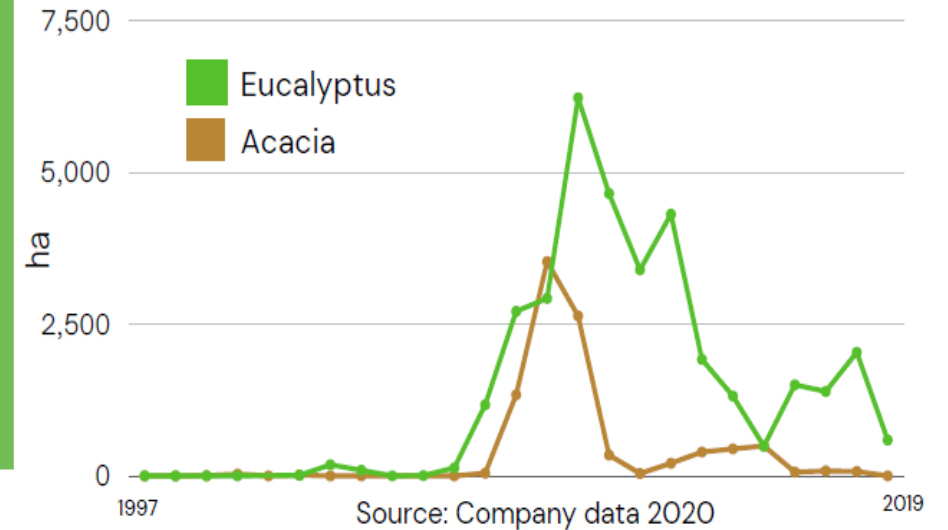
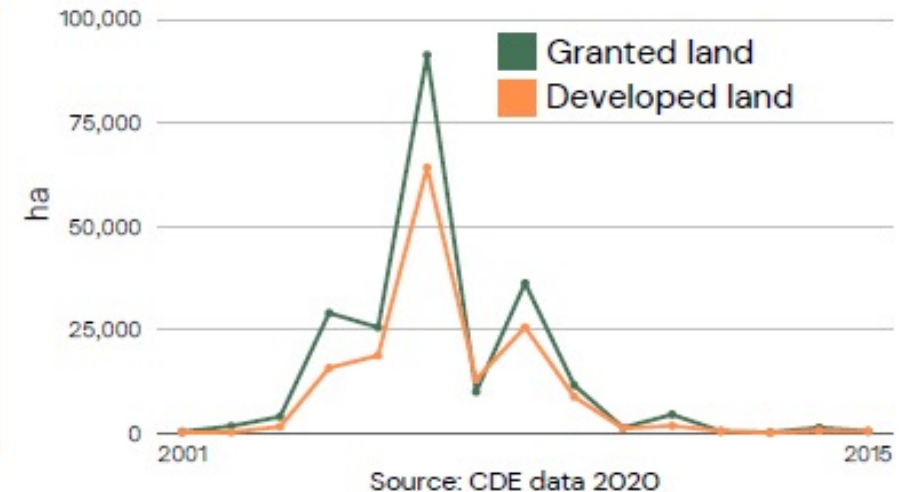
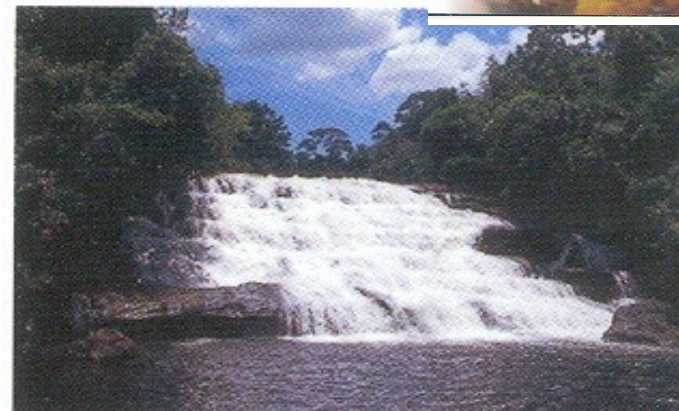
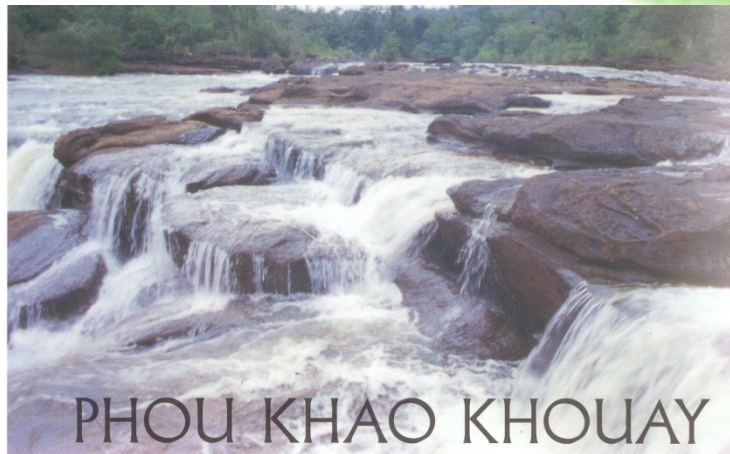
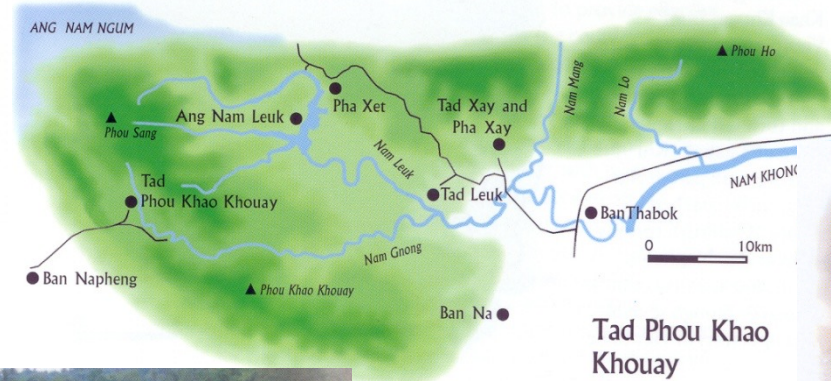
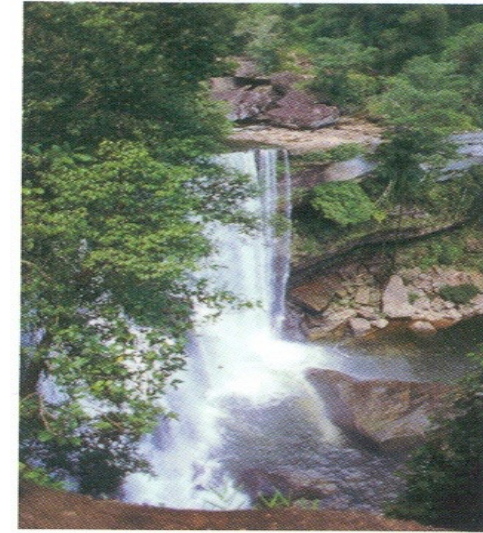
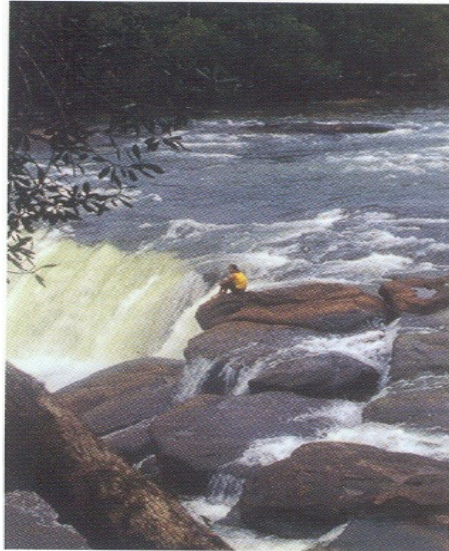


Figure 4: Land granted and developed for Rubber



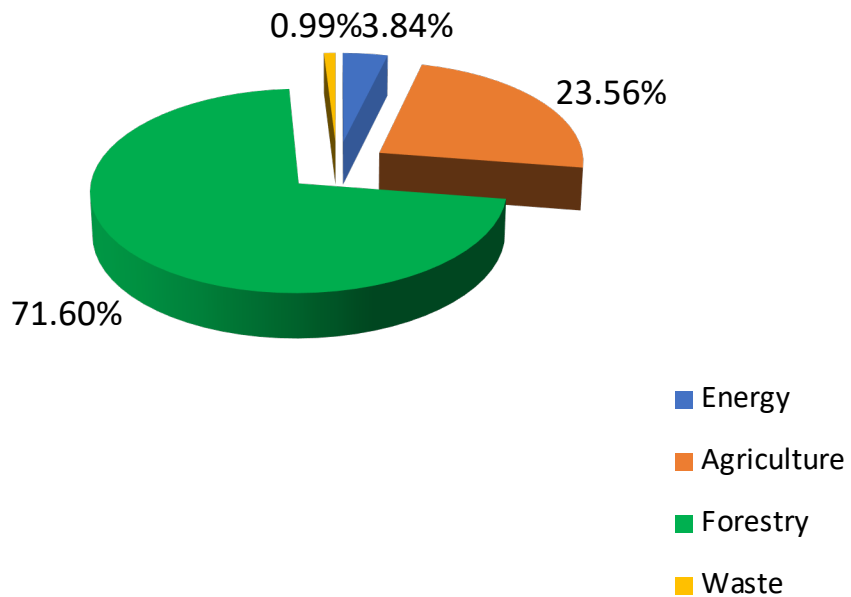




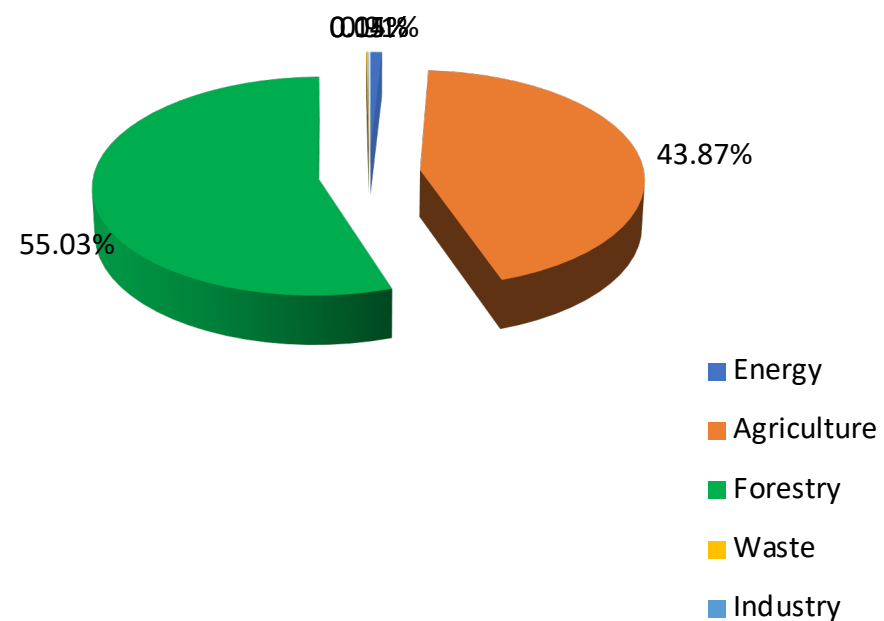
# Forestry and CC in Lao PDR

(Sources: FNC 2000 & SNC 2013, NDC 2021)

## GHG Inventories 1990



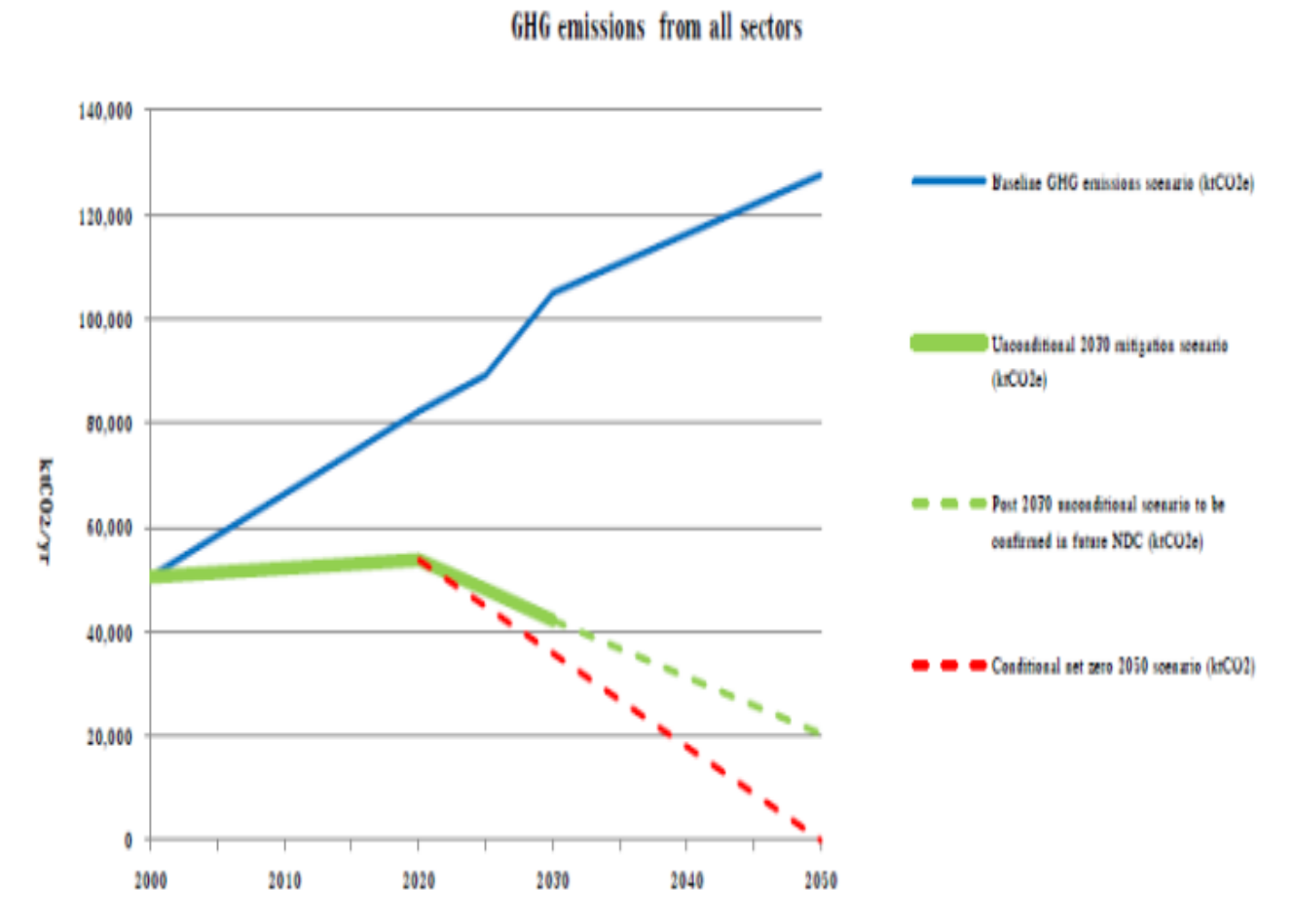
## GHG Inventories 2000





# Nationally Determined Contributions target for Laos by forestry sector

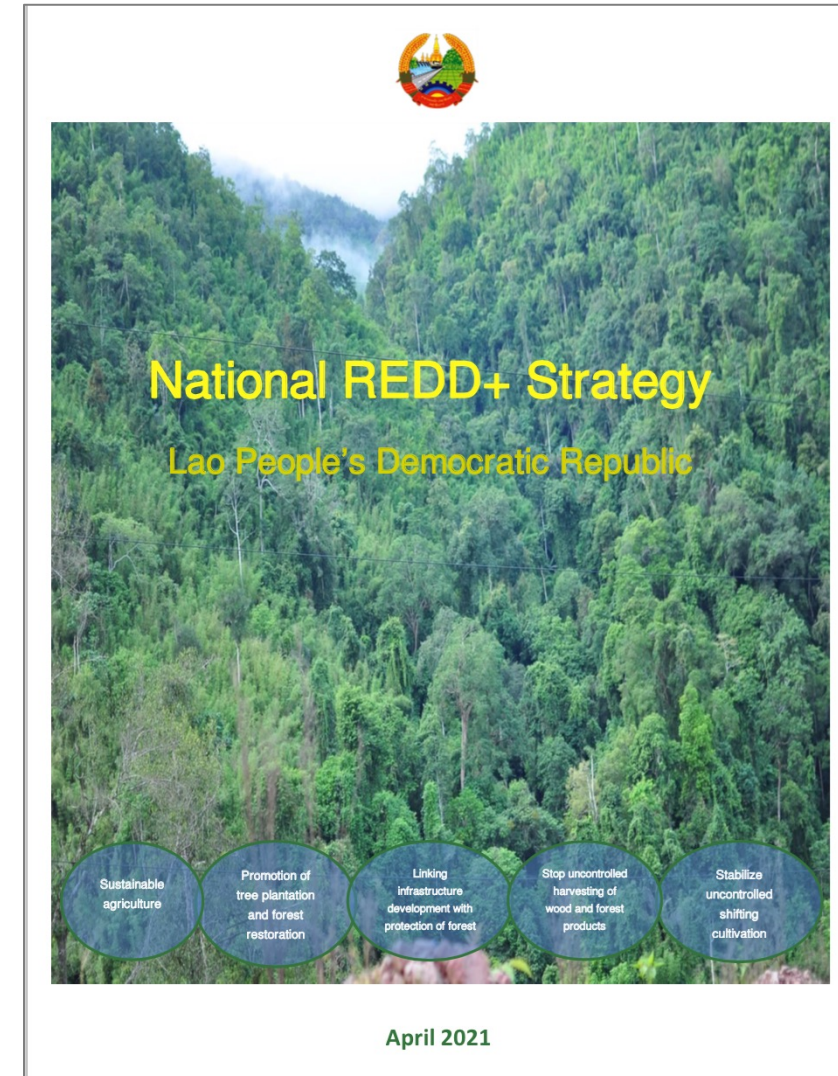
- Increase forest cover to 70% of total land area.
- The target for reducing greenhouse gas emissions from deforestation and forest degradation (REDD+) is a reduction of 30 million tonnes of carbon dioxide equivalent (tCO<sub>2</sub>e) by 2025, where by reducing emissions from forest/tree loss of around 21 million tCO<sub>2</sub>e, and the promotion of removals of around 9 million tCO<sub>2</sub>e through forest restoration and plantation.





# Reducing emissions from deforestation and forest degradation (REDD+) programme

- Developed the National REDD+ strategy, endorsed by Minister of MAF and submitted to UNFCCC.
- Signed the Emission Reduction Purchase Agreement (ERPA) for the buyer and seller of the carbon credits by the end of 2020.
- Developed the benefit sharing mechanism documents



## 2. Forest Policy and legals

- 1975-1978 recover forest after the war
- 1979 PM decree 74 on management and protection forest
- *1989 the first national forestry conferences*
- *1989 PM decree 117 and 118 on forest management and wildlife aquatic protection*
- *1991 the first National Constitution (2003, 2015 and supplements)*
- *1993 PM decree 169 on forest and forest land management*
- *1993 PM decree 164 on forest conservation*
- *1994 PM decree 186 on forest and forest land allocation for plantation and environment protection*
- 1<sup>st</sup> 1996, 2<sup>nd</sup> 2007 and **3<sup>rd</sup> 2019 forestry law**
- WG 2000-2005 First National Forest Strategy to the year 2020
- WG 2021-2023 Second National Forest Strategy to the year 2035 and vision 2050
- *Orders, instruction, guideline under PM, Ministry, Departments, etc.*

# Other relevance's

- 2005 National Growth and Poverty Reduction to the year 2020 and vision 2030
- 2005 National Biodiversity Strategy and Action Plan (NBSAP) 1<sup>st</sup> 2005-2015 vision 2020 and 2<sup>nd</sup> 2016-2025 and Vision 2030
- National Green Growth Strategy 2030 (MPI, 2018)
- National Climate Change Strategy 2020 and vision 2030
- National Land Master Plan 2030 (MoNRE, 2018) National *Working Group 2007-2011*
- Land Law 1997, 2003, 2019
- Environment Protection Law 1999, 2012
- Etc ....



# FS 2035 and vision 2050

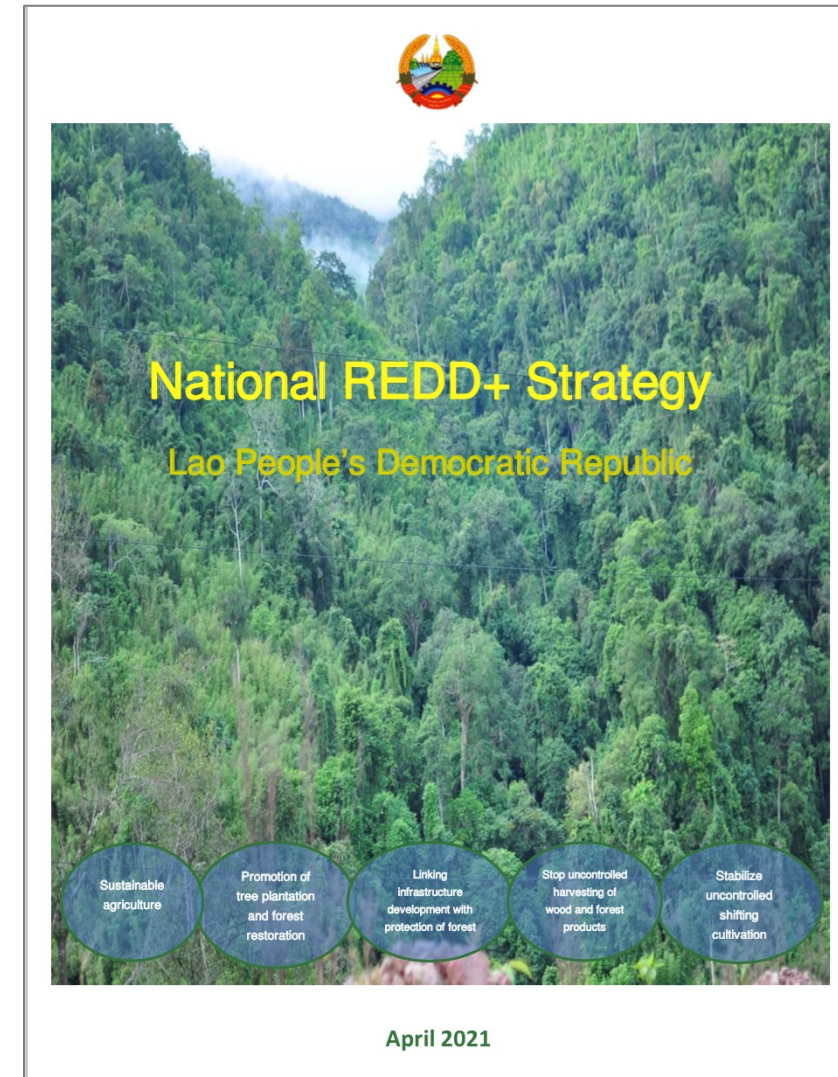
(8 targets, 8 strategic plan, *18 activities, 47 projects*)

- 1) Complete survey of 70%
- 2) Increase forest cover up to 70%
- 3) Promote processing industrial
- 4) Timber/wood business
- 5) Permanent rural residence and create jobs
- 6) Environment
- 7) Law and legal enforcement
- 8) Institutional development

- 1) Management / protection
- 2) Plantation / rehabilitation
- 3) Use of forest and forest land
- 4) Forest products / processing
- 5) Rural livelihood development
- 6) Institutional development
- 7) Nat. Reg and Int. cooperation
- 8) Budget and funding sources

# Reducing emissions from deforestation and forest degradation (REDD+) programme

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### 3. Forest Education

- Before 1975 no school of forestry in Laos (studied: India, Canada, Thailand, Soviet Union, Viet Nam)
- 1976-1995 Forestry Diploma School (one) and Vocational forestry training schools (fourth) in Laos (under Ministry of Agriculture and Forestry)
- 1996- currently School of Agriculture and Forestry (4 Schools) (under Ministry of Agriculture and Forestry)
- 1996 Established NUoL/ FoFS: Bsc (>1996), MSc (>2006), PhD (>2010); other University FoAF, FoENR, ...
- 1965-currently: Cooperation Program (Viet Nam, China, Thailand, Malaysia, Japan, South Korea, Sweden, Philippines, Russia, Hungary, Australia, Germany, USA, Finland, ....)



## 4. Forestry Research

- 1975-1985 research activities under school of forestry and Departments (GoL, Sida, FAO, Viet Nam, Xoviet Union, Germany)
- 1986-1995 Silviculture Research Station (GoL, Sida)
- 1996-currently Forest Research Centre (GoL, Sida, Danida, Korea, Japan, Australia, FAO, WWF, )
- Research programs 2016-2025 and vision 2030: Silviculture, Ecology-Environmental, Biodiversity, Primary processing, (GoL, FAO, AClAR, CGIAR, ...)

## 5. Way forwards

- 1) Protecting remaining forest cover and increasing cover up to 70%
- 2) Community Live hood improvement
- 3) Education and research development
- 4) Public awareness to all stakeholders
- 5) Law and legals enforcement
- 6) National, regional and international cooperation



*Thank you very much*

