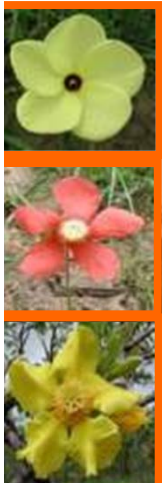




Cambodia's Conservation of Forest Biodiversity Resources



**Regional Conference on
“Biodiversity Conservation in Tropical
Forests of the Greater Mekong Sub-region”
March 23 - 25, 2016, Siem Reap, Cambodia**



Forestry Administration, Cambodia



Outline

- **Biodiversity in Cambodia**
- **Trends of Species Abundance**
- **Challenges to Conservation**
- **Planned Interventions**
- **Lessons Learned**



Biodiversity in Cambodia

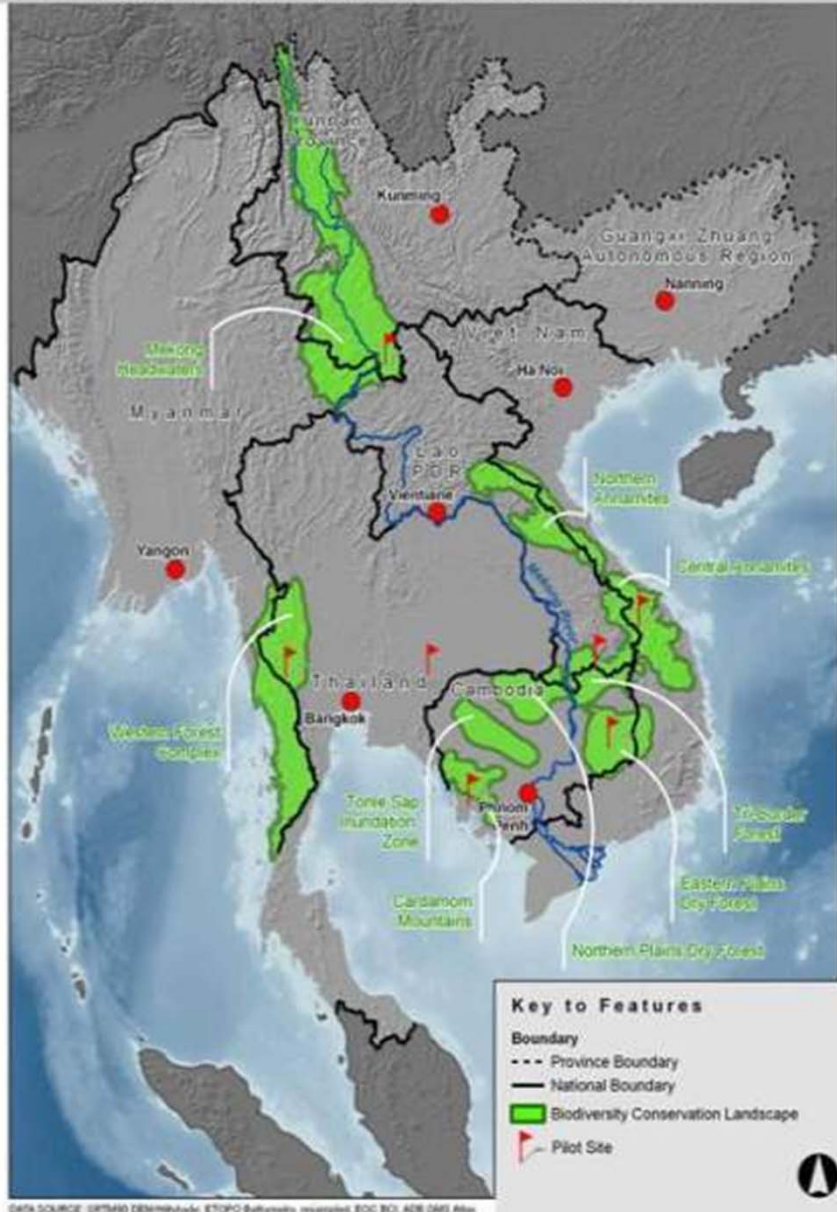


Cambodia is one of 35 Global Biodiversity Hotspots that provide habitats for thousands of plant and wildlife species, many of which are on the IUCN Red List of threatened and endangered species.

Biodiversity in Cambodia

GMS Core Environment Program and Biodiversity Conservation Corridors Initiative - ADB TA 6289

Greater Mekong Subregion
Biodiversity Conservation Landscapes and Pilot Sites



Cambodia has the largest remaining extensive intact block of a unique landscape of exceptional global importance for biodiversity conservation in Southeast Asia and contains 5 of the 9 important Biodiversity Corridors in the Greater Mekong Sub-Region

Forest Biodiversity in Cambodia



Forest Biodiversity in Cambodia

Evergreen Forests



Lowland and Mountainous Evergreen Forests cover 3,499,185 ha (2010) and account for 19.29% of the country's total land surface. These forests contain high amounts of biomass, represent important pools of carbon and provide exceptional habitats for mammal, bird and reptile species.

Forest Biodiversity in Cambodia

Semi-Evergreen Forests



Semi-Evergreen Forests cover 1,274,789 ha and account for 7.02% of the country's total land surface. These forests provide suitable habitats for mammal, bird and reptile species and have considerable value associated with commercial hardwood timber species.

Forest Biodiversity in Cambodia

Deciduous Forests



Deciduous Forests, which are the dominant forest type in Cambodia, cover 4,481,214 ha (2010) representing 24.68% of the country's total land surface. These forests provide suitable habitats for large mammals.

Forest Biodiversity in Cambodia

Other Forests



Pine Forests



Mangrove Forests



Rear Mangrove Forests

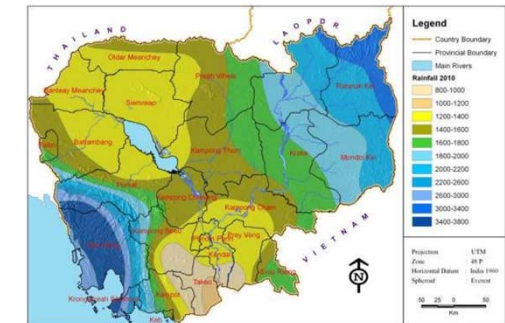
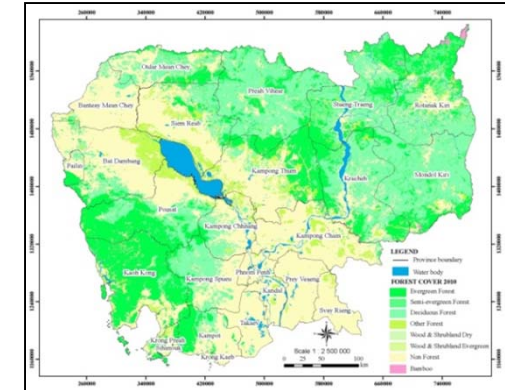
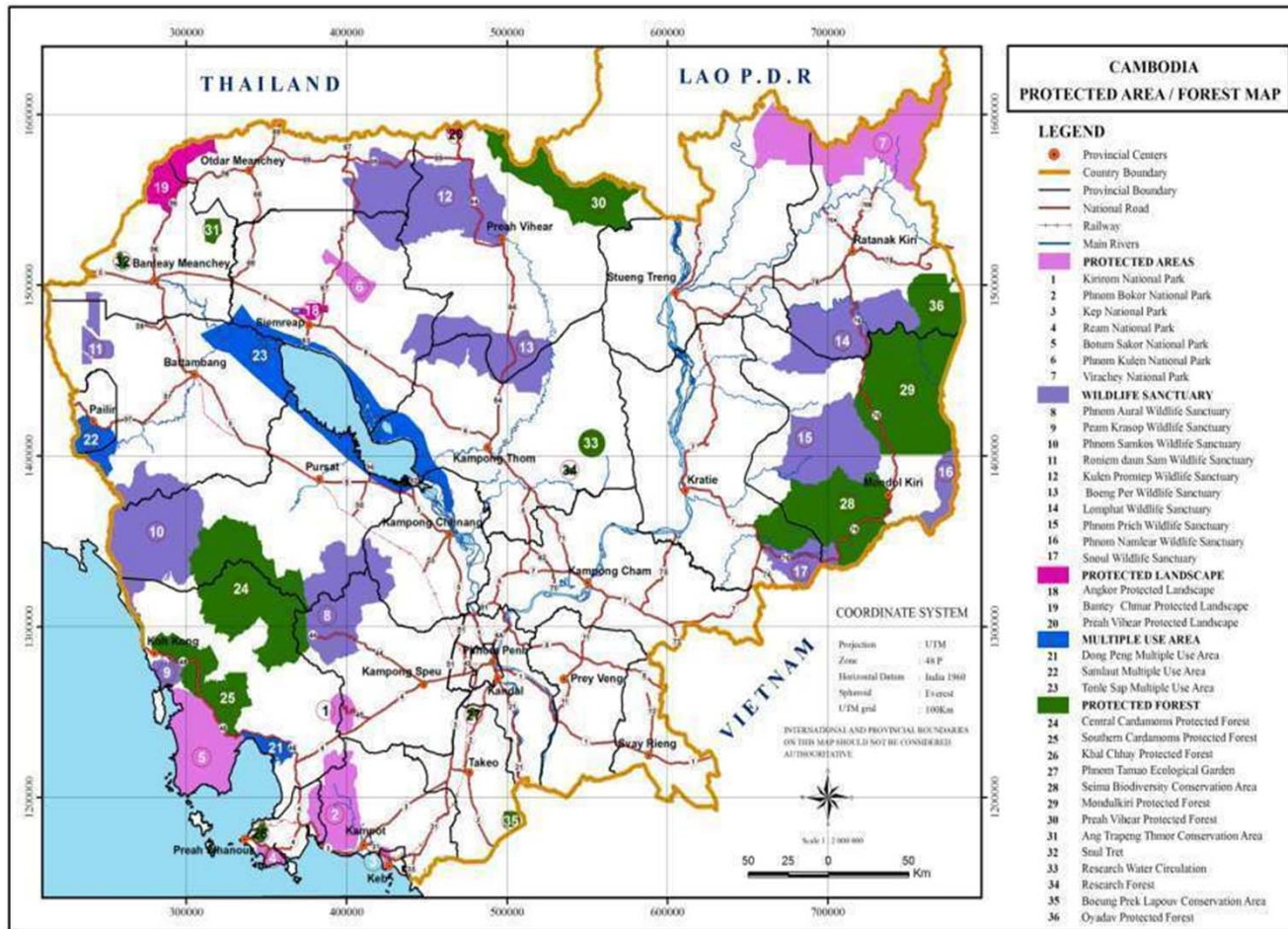
Other Forests include Pine Forests, Rear Mangrove Forests, Mangrove Forests, Evergreen and Deciduous Shrublands, Bamboo Forests, Forest Plantations and Inundated Forests. These other forests collectively cover 1,108,600 ha (2010) and represent 6.10% of the country's total land surface. They provide suitable habitats for small mammals, urban birds, fisheries and aquaculture.

Forest Biodiversity in Cambodia

Other Forests



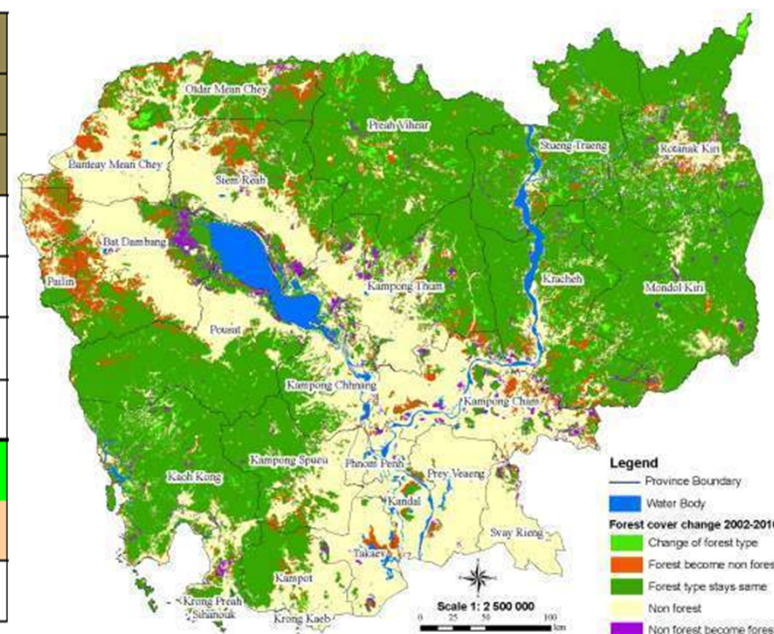
Biodiversity in Cambodia in Protected Forests and Protected Areas



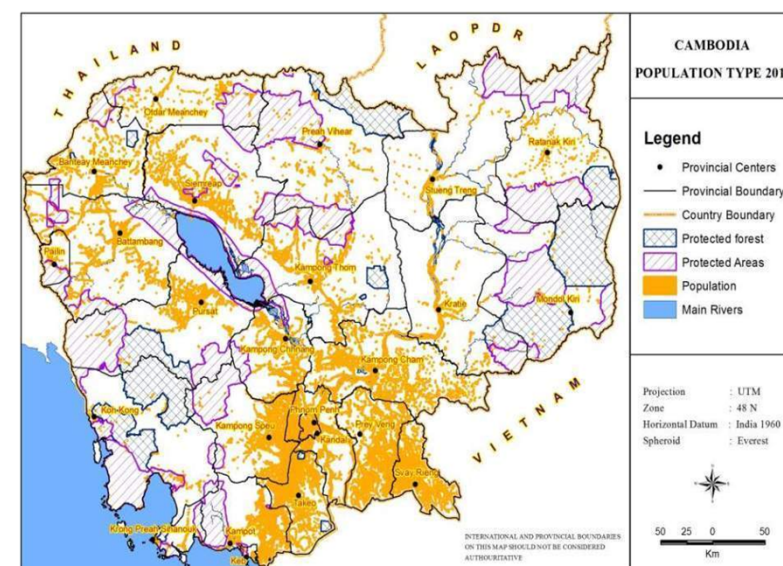
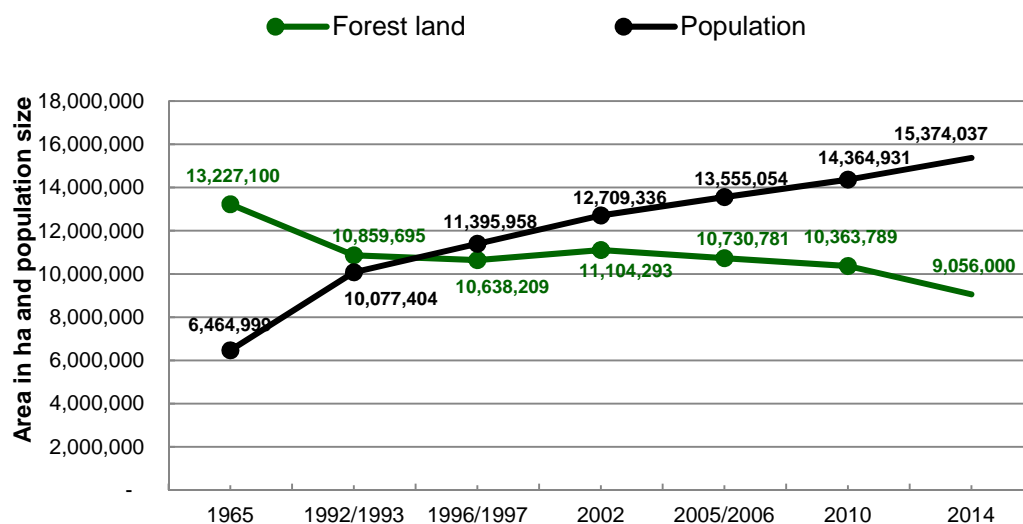
Cambodia currently has more than 3 million ha of Protected Areas, 1.65 million ha of Protected Forests and Biodiversity Conservation Areas, and 25,000 ha of Inland Fish Sanctuaries representing about 25% of the country's land surface, which surpasses Aichi Target 11's measure of 17%.

Forest Cover Changes 2002-2010

No.	FOREST TYPE	FOREST COVER					
		2002		2006		2010	
		ha	%	ha	%	ha	%
1	Evergreen forest	3,720,493	20.49	3,668,902	20.20	3,499,185	19.27
2	Semi-evergreen forest	1,455,183	8.01	1,362,638	7.50	1,274,789	7.02
3	Deciduous forest	4,833,887	26.62	4,692,098	25.84	4,481,214	24.68
4	Other forest	1,094,728	6.03	1,007,143	5.55	1,108,600	6.10
Total Forestland		11,104,291	61.15	10,730,781	59.09	10,363,788	57.07
5	Non-forest	7,056,383	38.85	7,429,893	40.91	7,796,886	42.93
TOTAL AREA		18,160,674	100	18,160,674	100	18,160,674	100

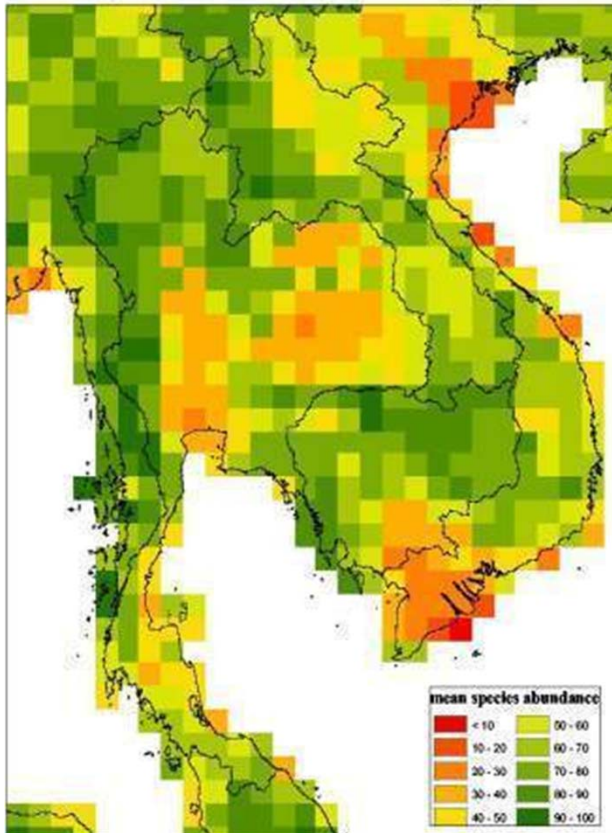


Forestland and Population Growth in Cambodia, 1965-2014

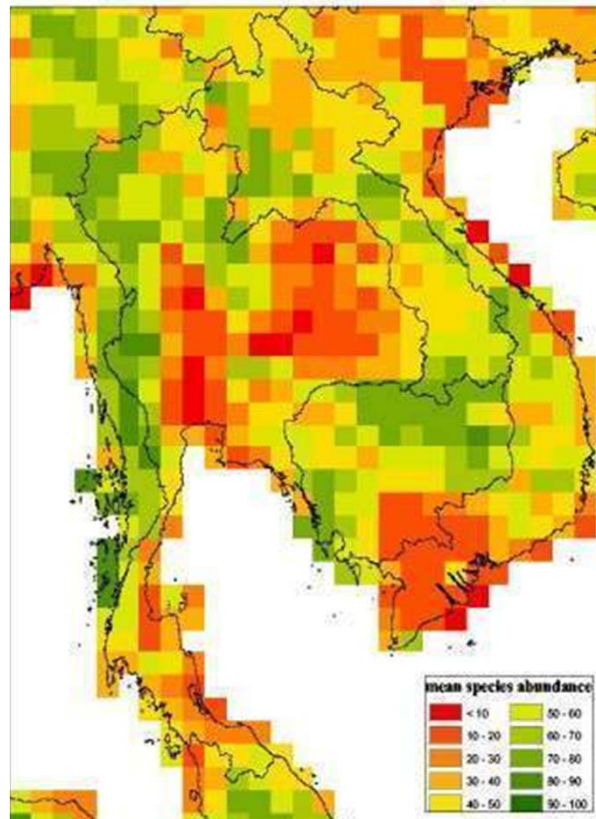


Trend of Species Abundance in the Greater Mekong Sub-region

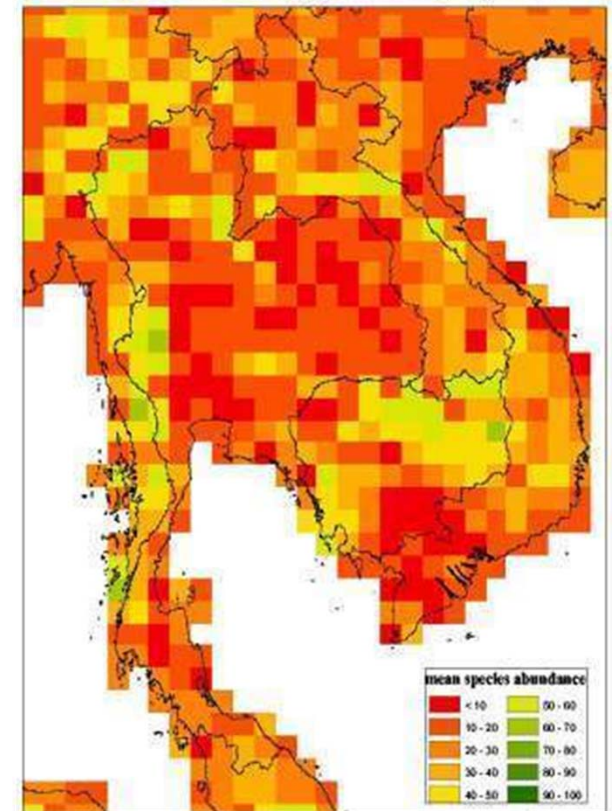
Mean species abundance (as % of original) in 1970



Mean species abundance (as % of original) in 2000



Mean species abundance (as % of original) in 2030



Source: Ben ten Brink "BCI Measuring and Modelling Biodiversity 2006"

Biodiversity in Cambodia: Plant and Animal Species

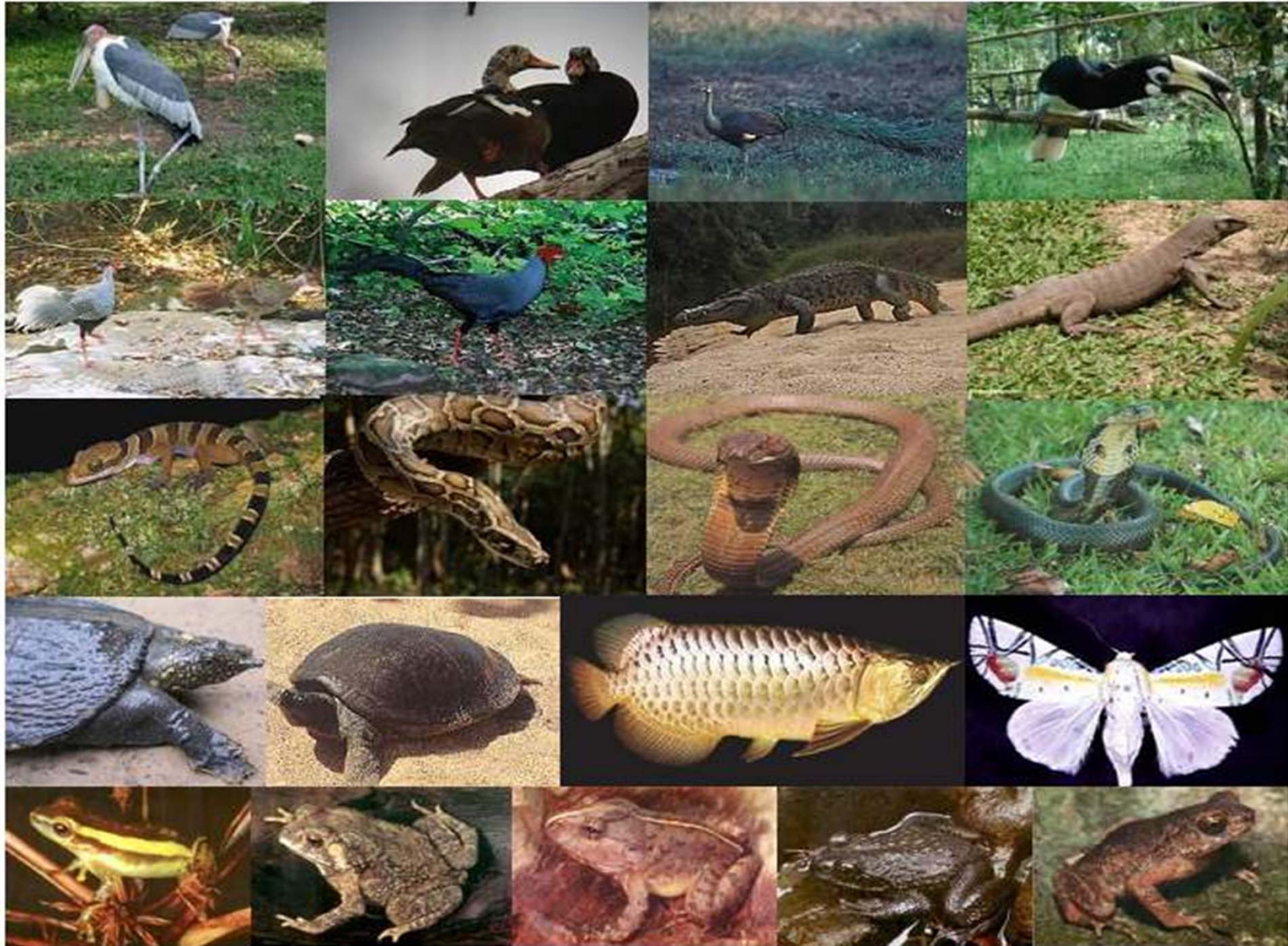
Taxon	Known Species	IUCN Red List
<i>Mammal species</i>	135	45
<i>Bird species</i>	635	40
<i>Reptile species</i>	95	15
<i>Fish species</i>	955	19
<i>Amphibian species</i>	65	12
<i>Vascular plant species</i>	4,500	50
<i>Hard coral</i>	24	
<i>Soft coral</i>	14	
<i>Sea grass</i>	10	



Wildlife Biodiversity in Cambodia



Wildlife Biodiversity in Cambodia



The Importance of Forest Biodiversity Resources



The physical use of resources:

Hydroenergy, timber, fuelwood, fisheries, wild foods, wildlife handicrafts, housing materials.

The provision of Forest/Ecosystem Services:

Watershed protection, carbon sequestration, landscapes, air and water quality.

Economic Options:

Industrial, agricultural, pharmaceutical, recreational, nature-based tourism.

Intrinsic worth, regardless of use:

Landscapes, aesthetic, heritage, bequest, cultural.

Challenges to Forest, Biodiversity and Genetic Resources Conservation and Management



- **Population Growth, Expanding Settlements and Increased Encroachment, Expansion of Agro-industrial Land, and Loss of Habitat.**
- **Limited Understanding of Values of Forest Biodiversity and Natural Forest Functions and Services.**
- **Potential Impacts of Climate Change.**
- **Modifications of Hydrologic Regimes.**
- **Increased Exposure to Alien Invasive Species and Associated Erosion of Genetic Resources.**
- **Limited Capacity, Insufficient Knowledge and Inadequate Funding to Manage and Conserve Natural Forests, Biodiversity and Genetic Resources Successfully.**

Lessons Learned

Meaningful Forest Biodiversity Conservation and Management must include:

- **Effective Landscape Management and the Conservation of Forest Biodiversity and Genetic Resources.**
- **Integrated Sectoral Planning.**
- **Trans-boundary/Cross Border Cooperation**

Planned Interventions

Cambodia Strategic Plan 2014-2018

Indicators	2014	2015	2016	2017	2018
Protected Forests and Wildlife Conservation Areas – Annual Increase (ha)	50,000	50,000	50,000	50,000	50,000
Reforestation – Annual Increase (ha)	25,000	25,000	25,000	25,000	25,000
Community Forests Established and Strengthened –Annual Increase (no.)	32	32	32	32	32

Cambodia is promoting the sustainable utilization of natural resources and the conservation of biodiversity, ecosystems and landscapes to support a national program of green development.

Planned Interventions

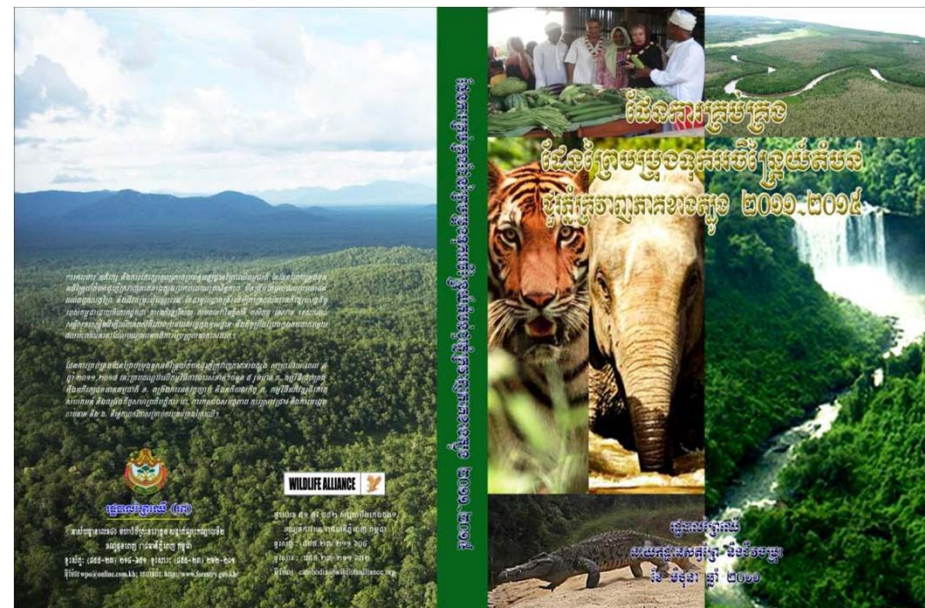
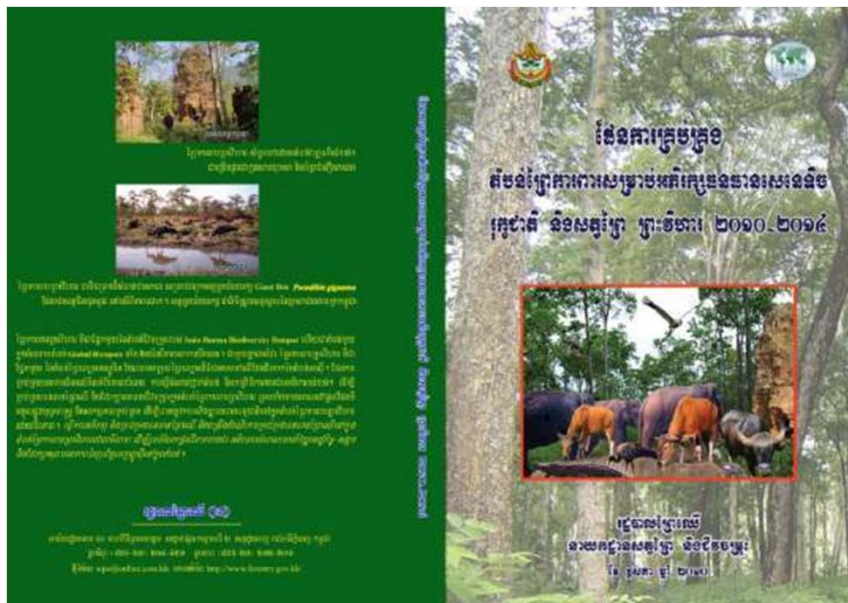
National Forest Programme Strategic Plan

Implementation of the National Forest Programme 2010-2029:

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

Technical and financial support are required to implement effective actions to support the Sustainable Utilization of Forest and Biodiversity Resources, especially with regard to Integrated Forest Ecosystem Restoration programs and the expansion of Agroforestry practices among Forest-Dependent Communities.

Preparation of Management Plans for Protected Forests and Biodiversity Conservation Areas



Forest Resource Management and Conservation

National Arbor Day



Forest Resource Management and Conservation

Habitat Restoration and Reforestation



Over 100 nurseries throughout the country.

Forest Resource Management and Conservation

Habitat Restoration and Reforestation



Annual distribution of more than 10 million plant seedlings.

Forest Resource Management & Conservation

Habitat Restoration and Reforestation



Seed production area



Seedlings in nursery



Tarrietia javanica



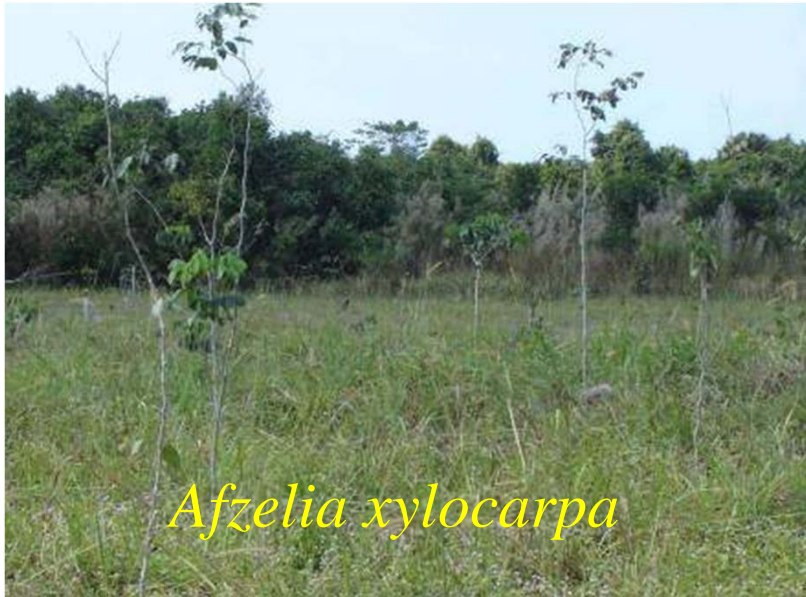
Aquilaria crassna

Forest Resource Management & Conservation

Habitat Restoration and Reforestation



Seedlings for provenance trial



Afzelia xylocarpa



Dalbergia cochinchinensis

Wildlife Rescue, Rehabilitation and Wildlife-Borne Diseases Surveillance



Community Forestry

Community Livelihoods Improvement



Community Forestry

Community Livelihoods Improvement



Community Forestry

Community Livelihoods Improvement

Non-timber forest products provide sources of income for rural communities.



Capacity Building and Research Development

Research and Monitoring



Capacity Building and Research Development

Seed Handling and Silviculture



Sustainable Forest Financing

Nature-based Tourism and Community Benefits Linked to Conservation



Nature-based tourism with community participation.



Bird and wildlife watching.



Jungle trekking and biking.



Tropical Forest trekking.

Thank you for your attention!



**BUILDING
THE FUTURE
we WANT**



Collaboration and cooperation for sustainable and productive landscape management and conservation to make world habitats safer for all.