

PROJECT OBJECTIVES

Now in second phase of the project, we are continuing to apply state-of-the-art technologies and analytical approaches from climate modelling, geospatial analysis and sustainable forest management to develop tools for climate change adaptation, and to develop adaptive strategies and recommendations for sustainable forest management practices in the Asia-Pacific region. Specific objectives include:

- Improve and expand tools developed in the previous phase of the project, including climate, niche and process-based models, to further facilitate and promote related research and applications in more locations throughout the Asia-Pacific;
- Continue to build a strong scientific basis and provide adaptive management options to enhance the target economies' capacity for decision-making regarding adaptation to climate change;
- Expand the network built in Phase I and continue capacity building through workshops, communication and policy notes to further enhance information sharing and technology transfer



Adaptation of Asia-Pacific Forests to Climate Change

Phase II

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PILOT SITES

China

The province of Fujian, covering more than 121,000 km² in China's southwest corner, was selected as the pilot site and will be used for model application as it is the most forested province in China.

Focus species selected for this site include two species of larch (*Larix gmelinii* and *L. olgensis*), Scots pine (*Pinus sylvestris*), Yunnan Pine (*Pinus yunnanensis*), black locust (*Robinia pseudoacacia*), Chinese cork oak (*Quercus variabilis*), aspen (*Populus tremula*), and moso bamboo (*Phyllostachys edulis*).



Fujian Province, China

Chinese Taipei

Located off the southeast coast of mainland China, Chinese Taipei has a large forest area relative to its size (~36,000 km²). It contains more than 2 million ha of forestland including several forest types, ranging from tropical hardwoods in the lowland areas to cold temperate conifer forests along a gradient of increasing elevation.

Due to its unique geography and entrancing landscape, Yushan National Park has been selected as the pilot site, as it is well known for its diverse climate zones and rich biodiversity.

The plants found in the park spans from subtropical at its foothills to alpine at its summits. Focus species include *Quercus longinux* and *Lithocarpus megalophyllus* for their economic and ecological importance.

Laos

With a total land area of 236,800 km², Laos is particularly rich in commercially valuable and ecologically unique forests. In 2002, the total forest area was estimated at 41.5 per cent or about 9.8 million ha. Like many places in Southeast Asia, forest resources and associated ecosystem services in Laos are closely linked with local communities. There has been extensive degradation of forestland due to a long history of swidden agriculture practices; however, forest restoration has been identified as a future priority. The tropical hardwood forest types in Laos are representative of those in other countries in the Southeast Asia region.

Research plots belonging to local partners at the National University of Laos in Nam Ka Ding National Park were selected as pilot sites. The focus species for the research are Teak (*Tectona grandis*), Rosewood (*Pterocarpus macrocarpus*) Afzelia, subject to data availability.



Nam Ka Ding National Park, Laos

Malaysia

The Danum Valley Conservation Area (DVCA) in Sabah, Malaysia, covers 43,800 hectares rich in biodiversity. This ecosystem includes an outstanding 1,300 species, though the majority belong to the dipterocarp genus. Several of the most common species have been grouped into representative guilds as follows to serve as focus species:

- Canopy Emergents: *Shorea fallax*, *Parashorea malaanonan*
- Mid Canopy trees: *Dysoxylum cryobotryum*, *Litsea caulocarpa*, *Ochracea spp.*
- Sub Canopy trees: *Polyalthia spp.*



Danum Valley, Malaysia

Myanmar

Due to its wide geographical spread, Myanmar's forests are varied and cover roughly 46% of the country's total land. Located in Toungoo District, this pilot site stretches over 1,064,939 ha and encompasses primarily deciduous forest. Focus species include Teak (*Tectona grandis*) and Pyinkado (*Xylia dolabriformis*) as the country's most economically valuable species, Thadi (*Protium serratum*) for its ecological value, in addition to several other key species.