

National Research and Development Agency Forest Research and Management Organization

Forestry and Forest Products Research Institute

Shikoku Research Center



*"Know the forest",
"Support the forest"
and "Utilize the forest"*



The Mission of Shikoku Research Center

Our mission is to conduct forestry and forest researches that contribute to the vitality of mountain villages and the improvement of forest functions which maintain the rich and sound natural environment, thereby sustaining development of the Shikoku region.





Outline of research

The Shikoku region consists of one main island and approximately six hundred small islands. The region covers approximately 18,800km², of which 74% is covered with forest. In this region, 61% of forest area are artificial planted stands, mainly in areas with steep slopes and rather high annual precipitation. The artificial stands mainly consists of Japanese cedar (*Cryptomeria japonica*) and Hinoki cypress (*Chamaecyparis obtusa*).

The Forestry and Forest Products Research Institute (FFPRI) conducts research and development on the forest, forestry and wood industry. Although it is classified into three priority research tasks, Shikoku Research Center of FFPRI officially identifies the topics of (a) researches for demonstrating the multi-functionality of forests under environmental changes, and (b) researches for the realization of a recycling-oriented society by utilizing forest restrictions.

We have two research groups (Forest ecosystem dynamics group and Forest conservation and management group), and a research team (for forest soil conservation) is arranged to respond to social demands.



Maximization of research results

In order to maximize research results, we will work closely with industry, academia, government, and the private sector to bridge research results and return results to society.

Forest Soil Conservation Team

Currently, we are working on the following 2 themes.

- 1) Assessment of the effects of climate change on material cycling and stream water quality in forest ecosystems
- 2) Development of forest management technology for advanced carbon fixation function

Our drinking water originates from forested watersheds, and it is important to maintain healthy material cycles in forest ecosystems. We monitor stream water in forested watersheds over a long period of time. In addition, evergreen coniferous planted forests in the Shikoku region are important sinks for atmospheric carbon dioxide and store a large amount of carbon in the ecosystem. We are working to clarify the mode of existence of carbon in the forest ecosystem, including the soil, and to develop forest management techniques to achieve a high level of carbon fixation function.



Soil cross-sectional survey



Water quality survey in the Shimanto River basin

Forest Ecosystem Dynamics Group

Currently, the themes we are raising are the following three themes.

- 1) Elucidation of the renewal and maintenance mechanism of forest ecosystem
- 2) Development of appropriate forest management and reforestation method for the region
- 3) Improvement of impact assessment of climate change on forest

In order to continuously utilize forests in mountainous areas of Shikoku with many steep slopes, it is important to manage forests in consideration of multifaceted functions such as land conservation and water source recharge. For this reason, we focus on forest growth and dynamics, soil and material circulation, conduct research that is the foundation of conservation of natural forests and artificial forest management techniques. Furthermore, we are also working on the issues surrounding forests and forestry in the Shikoku region, such as the influence of the deer damage on reforestation, the prevention of bamboo grove expansion and the impact of climate change.



Long-term monitoring of tree growth and survival in a natural forest plot



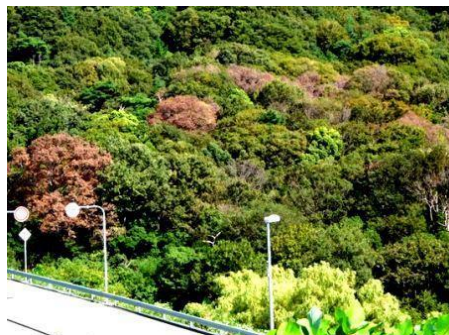
Protective fence on a steeply sloping reforested area

Forest Conservation and Management Group

Currently, we are working on the following themes.

- 1) Development of the forest management technology for sustained forestry management.
- 2) The presentation of the socioeconomic policy to support the diversifying forest usage.

Shikoku is an outstanding forestry area of artificial forest and it is necessary to promote forest management on a watershed basis in order to realize sustainable forest management. Therefore, in order to promote the conservation and management of forest resources, we are developing forest resource grasping methods, forestry technology considering regional characteristics, regeneration of mountain village economy, management of forest pests and forest biological diversity.



Japanese oak wilt disease caused by ambrosia beetles



Tree survey on a fixed plot of Japanese cedar plantation

Public relations

We carry public/delivery lectures, publications, and technical consultation.



Specimen exhibition hall

Research results and specimens of animals and plants related to Shikoku's forests and forestry are on display.



History

1947 Reorganized as Kochi Branch Station of the Government Forest Experiment Station.

1959 Renamed the Shikoku Branch Station.

1964 Moved to Asakura in Kochi City.

1988 Reorganized as the Shikoku Research Center, Forestry and Forest Products Research Institute.

2001 Reorganized as an Independent Administrative Institution, Shikoku Research Center, Forestry and Forest Products Research Institute.

2015 Reorganized as National Research and Development Agency, Shikoku Research Center, Forestry and Forest Products Research Institute.

2017 Reorganized as National Research and Development Agency, Forest Research and Development Organization, Shikoku Research Center, Forestry and Forest Products Research Institute.

Organization

FFPRI (head office) (Tsukuba, Ibaraki Pref.)

Hokkaido Research Center (Sapporo, Hokkaido)

Tohoku Research Center (Morioka, Iwate Pref.)

Kansai Research Center (Kyoto, Kyoto Pref.)

Shikoku Research Center (Kochi, Kochi Pref.)

Kyushu Research Center (Kumamoto, Kumamoto Pref.)

Tama Forest Science Garden (Hachioji, Tokyo)

Director

Academia-Industry-Government-Civil Cooperation Coordinator

Regional Cooperation Office

General Affairs Division

Team Leader for Forest Soil Conservation

Forest Ecosystem Dynamics Group

Forest Conservation and Management Group



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