



***Ecosystem-based Disaster Risk Reduction
&
Regional Cooperation Effort in WBs***

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ODA and JICA

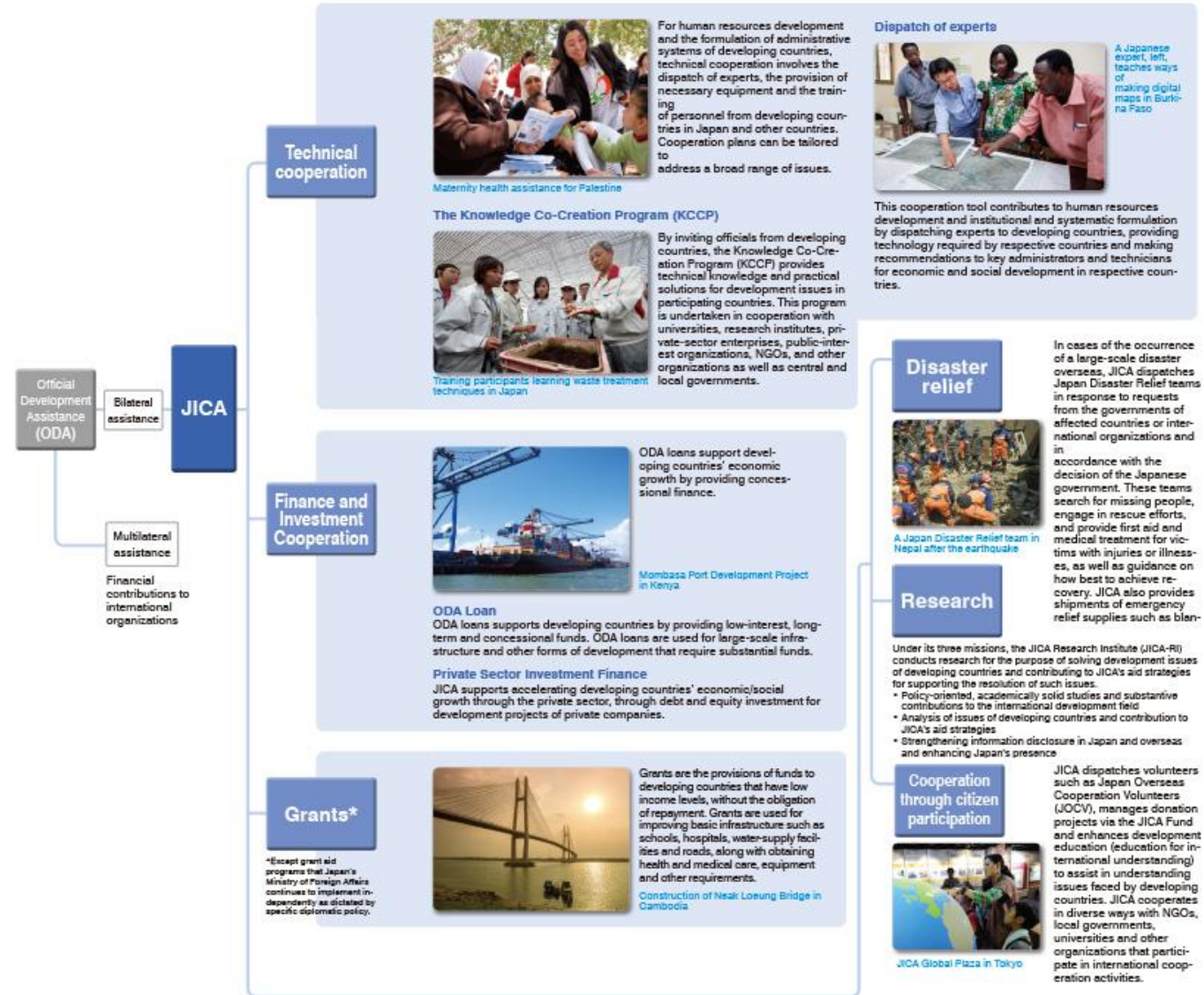
Since joining the Colombo Plan*₁ in 1954, Japan has been providing financial and technical assistance to developing countries through ODA, aiming to contribute more proactively to the peace, Stability and prosperity of the international community*₂.

JICA is in charge of administering all ODA such as technical cooperation, Finance and Investment Cooperation and Grants in an integrated manner, except for contributions to international organizations. JICA, the world's largest bilateral aid agency, works in over 150 countries and regions and has some 90 overseas offices.

*1 The Colombo Plan is an international organization established in 1950 to support economic and social development of countries in South Asia, Southeast Asia and the Pacific region. Its head office is in Colombo, Sri Lanka.

*2 Taken from the Development Cooperation charter, which was decided in February 2015.

Types of Assistance



Technical cooperation

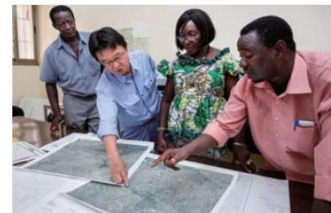
For human resources development and the formulation of administrative systems of developing countries, technical cooperation involves the dispatch of experts, the provision of necessary equipment and the training of personnel from developing countries in Japan and other countries. Cooperation plans can be tailored to address a broad range of issues.

Ex: The Knowledge Co-Creation Program (KCCP)



By inviting officials from developing countries, the Knowledge Co-Creation Program (KCCP) provides technical knowledge and practical solutions for development issues in participating countries. This program is undertaken in cooperation with universities, research institutes, private sector enterprises, public-interest organizations, NGOs, and other organizations as well as central and local governments.

Ex: Dispatch of experts



This cooperation tool contributes to human resources development and institutional and systematic formulation by dispatching experts to developing countries, providing technology required by respective countries and making recommendations to key administrators and technicians for economic and social development in respective countries.

Western Balkans Cooperation Initiative

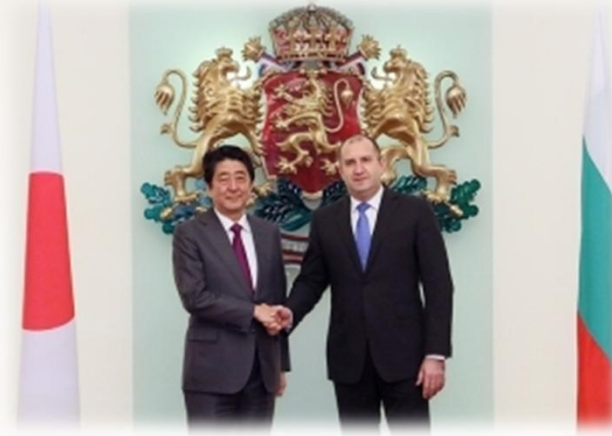


Photo: MOFA GoJ

Western Balkans Cooperation Initiative

Measures

- 1) promoting dialogue by appointing the Ambassador in charge of the Western Balkans at the Ministry of Foreign Affairs in Japan
- 2) dispatching a Japan International Cooperation Agency (JICA) survey team to uncover new cooperation projects
- 3) holding seminars in order to promote regional cooperation

JICA's Contribution to Western Balkans Cooperation Initiative

- 1) Enhancing Bi-lateral Cooperation with WBs
- 2) Enhancing Regional Cooperation to address issues common in WBs
- 3) Collaboration with Emerging Donor Countries such as Bulgaria and Romania

Track Record of Cooperation with WBs in DRR

Project on Development of Integrated System for Prevention and Early Warning of Forest Fires(2011-14)

Project aimed at establishment of Integrated System for Prevention and Early Warning of Forest Fires in order to facilitate information share between the relevant institutions

▶ Third Country Training Program on Development of Integrated System for Prevention and Early Warning of Forest Fires (2015-17)

Project's goal was to disseminate the achieved results and gained knowledge related to establishment of system for prevention and early warning of forest fires to Partners in WB6

▶ The Project on Capacity Building for Ecosystem based Disaster Risk Reduction through Sustainable Forest Management in Macedonia(2017-22)


Project aims at development of Ecosystem-based Disaster Risk Reduction (Eco-DRR) model against floods, landslides, soil erosion and forest fire by utilization of multiple forest functions.




MKFFIS - CONCEPTUAL DESIGN

Data Collection (from Hydro Met/Satellite)


Satellite data



Meteorological data




Existing Object

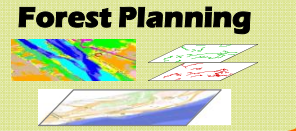


Maintenance of Forest Data (GFIS)


Forest Inventory with maps



Forest Planning




Implementation

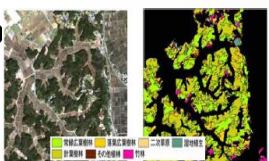


Capturing Initial forest fire reports from PEMF regional offices

1. Data Collection Management



2. Pro Analysis



3. Presentation

Capturing Official forest fire reports from CMC regional offices

Vegetation Dryness map

FWI map

Hot spot maps

Vegetation map

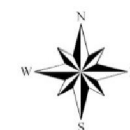
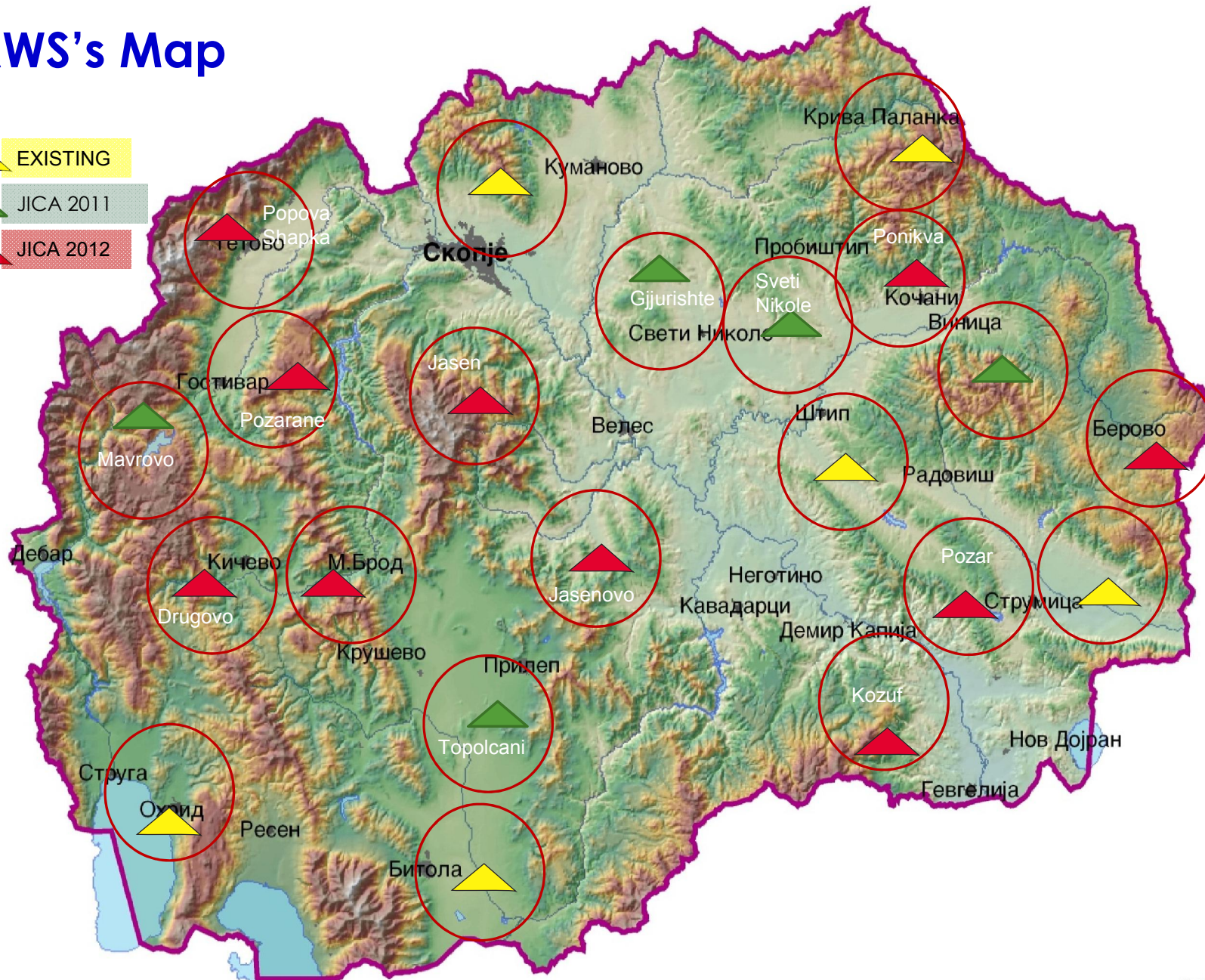
Forest fire history map

Political / managerial boundary maps

Base maps - AREC

AWS's Map

- EXISTING
- JICA 2011
- JICA 2012



Project on capacity building for Ecosystem-based Disaster Risk Reduction (Eco-DRR)



OUTLINE OF THE PROJECT

1. Title of the Project

- Project on Capacity Building for Ecosystem-based Disaster Risk Reduction (Eco-DRR) through Sustainable Forest Management in Macedonia

2. Overall Goal

- By Ecosystem-based Disaster Risk Reduction (Eco-DRR) measures and activities in synergy with sustainable forest management, disaster risks of floods, landslides, soil erosion and forest fire on a long-term basis is reduced in Macedonia.

3. Implementing Agency and Structure

(1) Implementing Agency:

- CMC is main implementing agency. During the implementation of the project activities, the closed cooperation will be established with PEMF. Also, CMC will establish additional implementation set-up with other relevant parties.

(2) Duration of the Project:

- Duration of the Project is five (5) years, from December 2017 to December 2022.



Project on capacity building for Ecosystem-based Disaster Risk Reduction (Eco-DRR)

Purpose

Eco-system based Disaster Risk Reduction (Eco-DRR) model against floods, landslides, soil erosion and forest fire by utilization of multiple forest function is developed.

Outputs

1 : Update MKFFIS

2 : Enhancement of Forest Management and Planning Capacity

3 : Enhancemet of Capacity to carry out Eco-DRR related activities

4 : Public Awareness

Activities

- ◆ Update of MKFFIS function
- ◆ Hydrological model
- ◆ Indentification of assessment method for flood, land slides, and soil erosion
- ◆ Creation of hazard map

- ◆ Introduction of forest management and conservation categories
- ◆ Development of forest management plan
- ◆ Development of forest recovery mid-long term plan
- ◆ Law and regulations

- ◆ Plan and construction for forest conservation
- ◆ Establishment of wind-breaks
- ◆ Participation of people
- ◆ Improvement of nursery

- ◆ Development of Eco-DRR material
- ◆ Dissemination of hazrd map
- ◆ Information sharing of project results

Main products

- Manual of new MKFFIS
- Hazard map

- Guidelines and training manuals for forest management and recovery plan

- Guidelines and manuals for forest conservation
- Guidelines and manuals for nursery techniques

- Eco-DRR material



Project on capacity building for Ecosystem-based Disaster Risk Reduction (Eco-DRR)

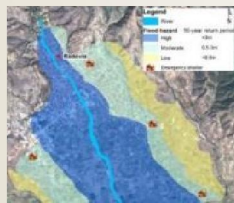
MKFFIS: Developed by previous JICA Project - **Forest fires oriented**

Update and expand of MKFFIS function

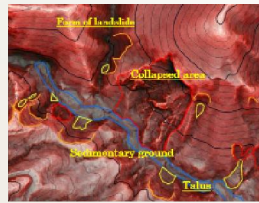
Output 1



High risk area



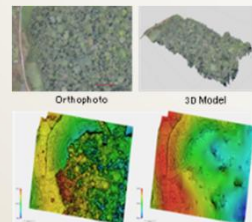
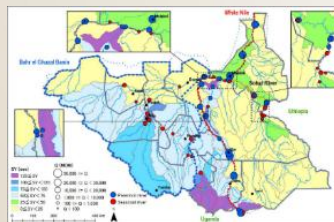
Hazard map



Other relevant information

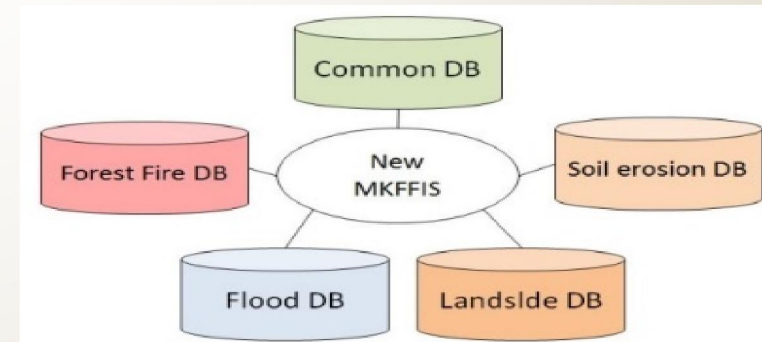
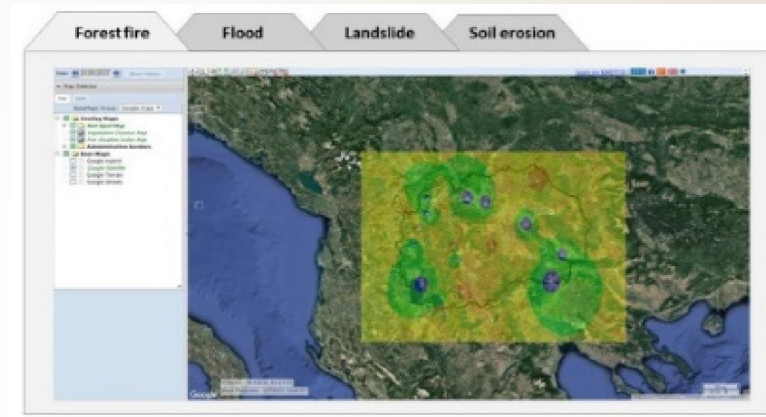


Drone



Orthophoto

3D Model

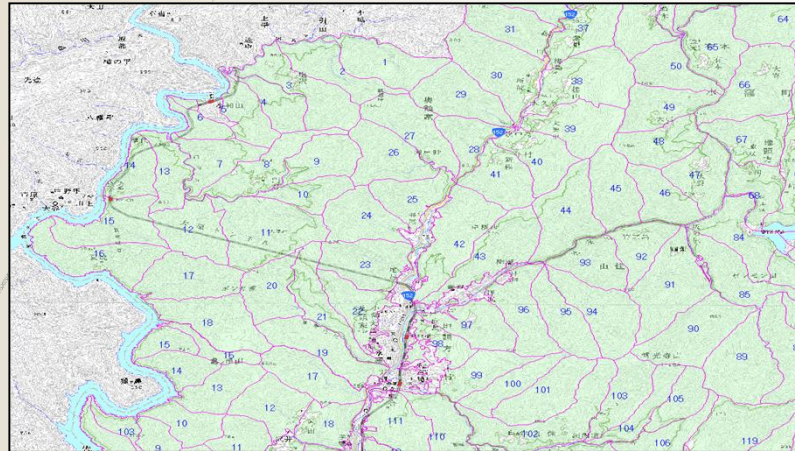




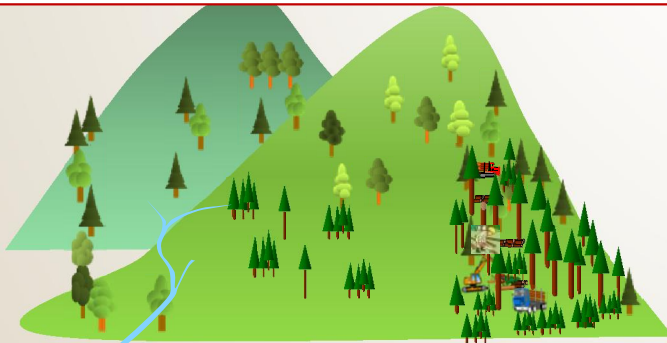
Project on capacity building for Ecosystem-based Disaster Risk Reduction (Eco-DRR)

Output 2

Current forest management plan
Primarily wood production oriented

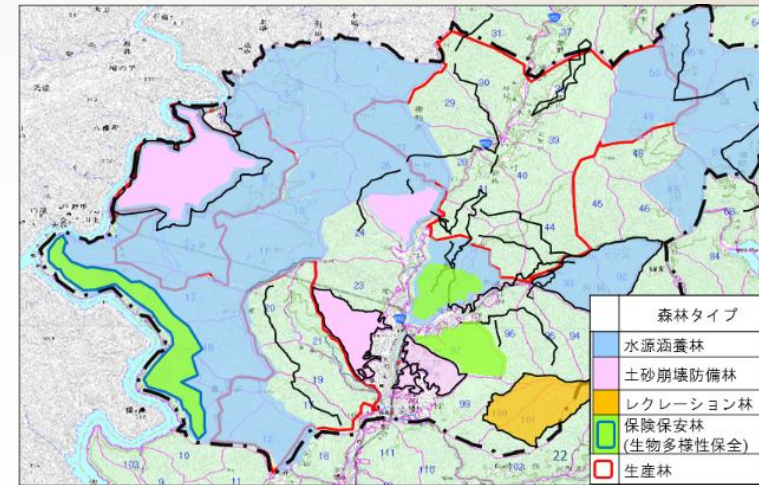


Degraded forest, Weak ecosystem functions



Land slides, soil erosion, floods

Forest management and zoning based on the Ecosystem function of forest



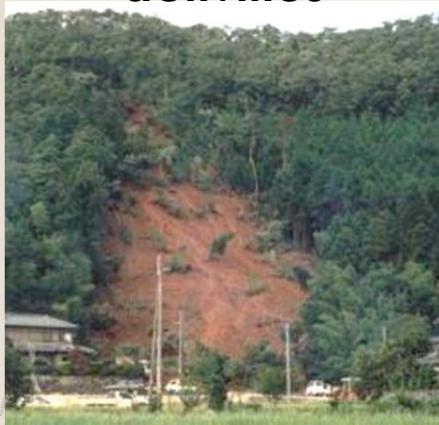
Improved forest management system
-DRR Functions



Project on capacity building for Ecosystem-based Disaster Risk Reduction (Eco-DRR)



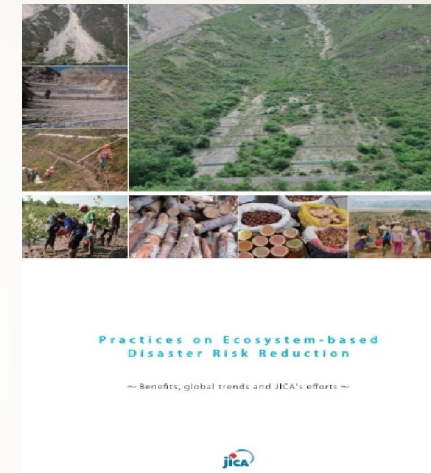
Situation before activities



After Eco-DRR activities



Eco-DRR material



Output 3

Improvement of nursery and technical transfer for nursing



- Soil erosion, Land slides, Flood control,
- Selection of suitable species

Output 4

- Disseminate Eco-DRR concept in and outside of the country,
 - Eco-DRR Campaign
 - Eco-DRR Concept workshop
 - Facebook Homepage
- <https://www.facebook.com/MacedoniaEcoDRR/>

Project on capacity building for Ecosystem-based Disaster Risk Reduction (Eco-DRR)



- Field Eco-DRR Activities
- Radovish River Watershed Pilot Site 1



Project on capacity building for Ecosystem-based Disaster Risk Reduction (Eco-DRR)

Regional Cooperation Effort in Western Balkans



- The Eco-DRR project is planning to hold a regional Eco-DRR seminar in Macedonia in Autumn 2019 and in 2022.
- We would like to invite institutions from WB6 + that are responsible for disaster prevention and forest management.
- Project team will organize preliminary visit to provide detail explanation of the seminar.
- In 2019, Project will present its initiatives in Macedonia and a project pilot site before field activities start.
- In 2022, it will present the pilot site after field activities are completed and the Eco-DRR measures are implemented.



**To disseminate Eco-DRR concept in Western Balkans
and discuss for disaster prevention**