Vol. 0 Jun 2018

Macedonia Eco-DRR Newsletter

Capacity Building For ECO-DRR Through Sustainable Forest Management In MACEDONIA
Nov 2017 - Oct 2022

Capacity building project for Ecosystem-based Disaster Risk Reduction (Eco-DRR) through sustainable forest management.

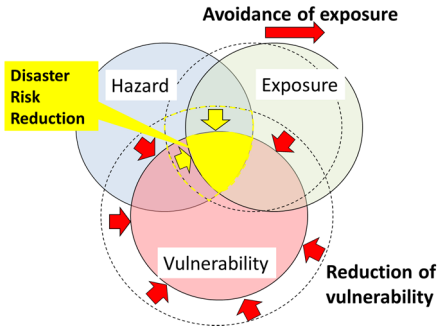
The purpose of this Project is to develop an Ecosystem-based Disaster Risk Reduction (Eco-DRR) model project against flood, landslides, soil erosion, and forest fires by utilizing multiple forest functions.
Newsletter Vol 0 explain the background/outline of the project and Eco-DRR, as well as the activity contents.

Background

Major and most frequent natural disasters in Macedonia are floods, forest fires, soil erosion, landslides caused by torrential rains, and cold and heat waves.

In recent years, floods have been the cause for the greatest human and physical damage. Due to torrential rains, possibly related to recent climate change (abnormal weather pattern), and forest destruction (by forest fires and illegal logging) of the upper river catchments, rain water in the steep mountainous region of the upper basins rapidly concentrates in the lower basins causing floods and damages in downstream areas and cities almost every year in the country. Therefore, disaster risk reduction for protecting lives and property is an urgent issue.

Disaster risk can be expressed by the relationship among three risk components: dangerous natural phenomena (hazard), exposure, and vulnerability (see the figure below).



Disaster risk reduction

Exposure:
Condition where residents or human activities such as property are exposed to the influence of dangerous natural phenomena.

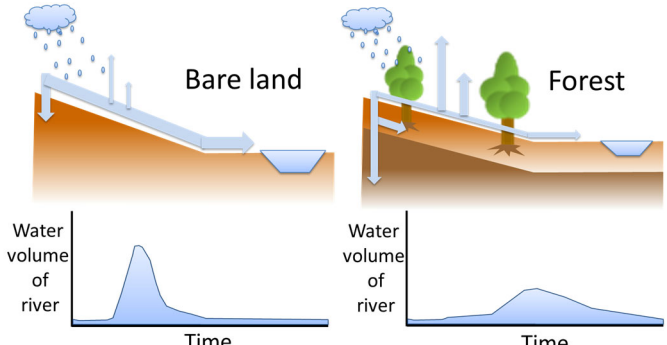
→Avoidance of exposure（Choosing not to live in or use the exposed land）

Vulnerability:
Susceptibility to dangerous natural phenomena.

→Reduction of vulnerability（Mitigating the impact of hazards）

The ecosystem's multiple functions

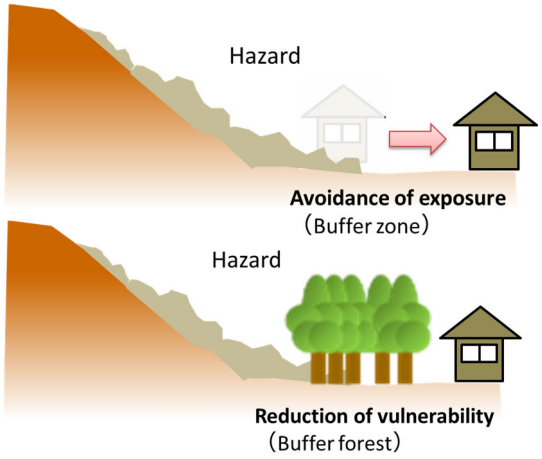
Ecosystems provide multiple functions, for example forests have a number of functions besides timber production, such as soil and watershed conservation, recreation, and biodiversity.



Difference in water volume of river in the presence of forest and bare land (Sample).

What is Eco-DRR？

"Eco-DRR" is the sustainable management, conservation and restoration of ecosystems to reduce disaster risk, with the aim to achieve sustainable and resilient development.



Outline of the Project and activities

Outline of the Project

Project name

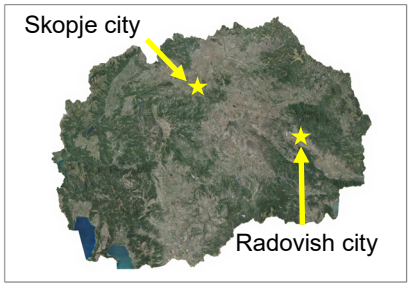
Capacity building project for ecosystem-based disaster risk reduction (Eco-DRR) through sustainable forest management

C/P institutions

Crisis Management Center (CMC), Ministry of Agriculture, Forestry, and Water Economy (MAFWE), Public Enterprise Macedonian Forests (PEMF)

Target area

Skopje (Vodno mountain), Radovish, and another site



Period

November 2017 ～ October 2022 (5 years)

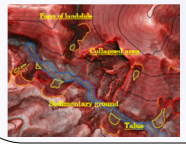
Purpose of the Project

To develop an Eco-DRR model project against flood, landslides, soil erosion, and forest fires by utilizing multiple forest functions.

Four activities

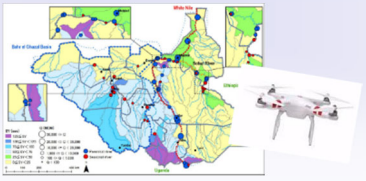
Activity 1: Strengthening and expanding of the Macedonian Forest Fire Information System (MKFFIS) functions developed by a past JICA project in 2014.

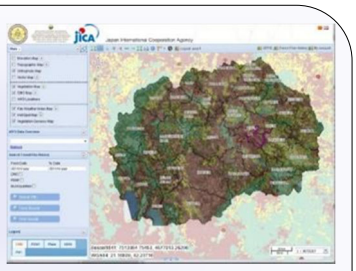
Mapping of dangerous locations



Hydraulic model

Production of Hazard Map





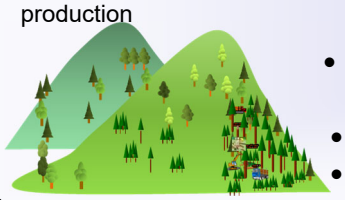
Avoidance of Exposure

→ disaster risk reduction

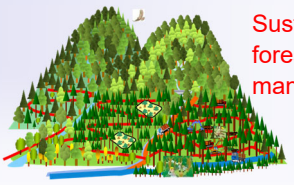
Activity 2: Strengthening the forest management plan

Destroyed or degraded forest
Forest management focused on timber production

Forest with diverse functions including disaster risk reduction function



- Forest management measures depending on forest function type
- Production of forest recovery plan
- Review of legal regulations

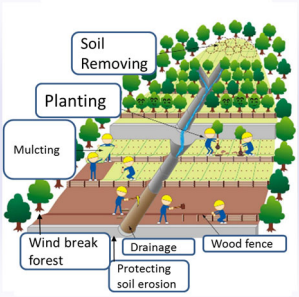


Sustainable forest management

Activity 3: Capacity building for forest conservation, afforestation and nursery techniques

- Soil erosion prevention
- Water holding capacity improvement

→disaster risk reduction



- Seedling nursery improvement and guidance
- Participatory afforestation
- Appropriate tree species selection

→Sustainable forest management

Activity 4: Eco-DRR Public Awareness raising

Utilizing the outputs of activities

Material Production

Distribution of leaflets

Seminars

Project HP
https://www.jica.go.jp/project/macedonia/001/index.html
https://www.jica.go.jp/project/english/macedonia/001/index.html
CMC HP
www.cuk.gov.mk/mk

Crisis Management Center (CMC)

Japan International Cooperation Agency