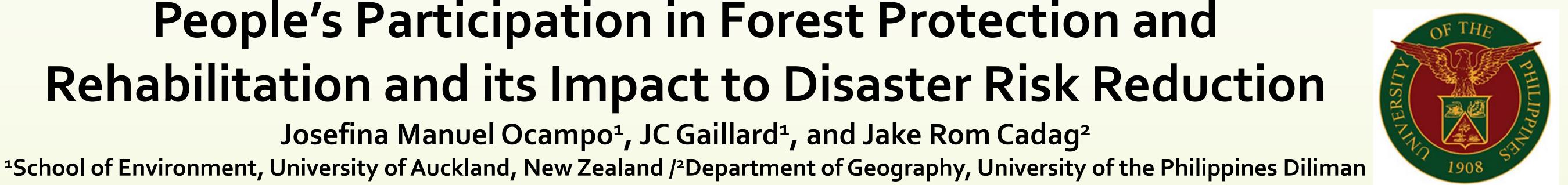


People's Participation in Forest Protection and Rehabilitation and its Impact to Disaster Risk Reduction

Josefina Manuel Ocampo¹, JC Gaillard¹, and Jake Rom Cadag²



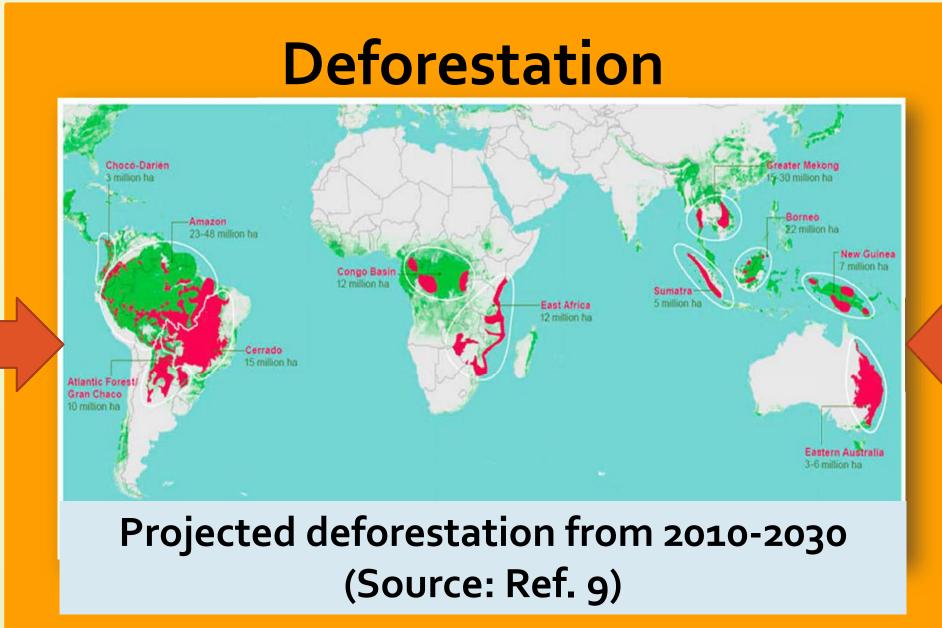
Overview

It has been recognised that sustainable relationship with the environment is necessary to build a sustainable future. Several studies aiming to contribute on this endeavour have been acknowledged (Botkin & Keller, 2011; Wright & Boorse, 2017). Yet, forest degradation is unabated and change in the ecosystems had influenced the occurrence of disasters. This is crucial because people rely on the ecosystem services (ES) and understanding the relationship of people and forest is vital in addressing deforestation and forest degradation. More importantly, preparedness and knowledge are necessary since disasters can jeopardized the environment and certainly affects lives of the people. The integration of these components is sensible to grasp the countless and profound ways of ES that sustain our everyday life. We carefully modify conservation actions with the purpose of creating and evaluating knowledge as means of adaptation and mitigation to disaster risk reduction (DRR) (Knight, Cowling, & Campbell, 2006). Henceforth, people's participation in forest conservation could be a pathway towards promoting DRR.

Forest Goods and services (examples) Maintenance of (good) air quality Maintenance of a favorable climate (temp., precipitation, etc) Storm protection & flood prevention Provision of water for consumptive use (e.g.drinking, irrigation & industrial use) Water regulation/water supply Prevention of damage from erosion/siltation Soil retention Maintenance of healthy soils and productive ecosystems Nutrient regulation Pollution control/detoxification, abatement of noise pollution Waste treatment Pollination of wild plant species Pollination Habitat Functions Refugium function Maintenance of biological & genetic diversity Maintenance of commercially harvested species Nursery function **Production Functions** Plants and animals Genetic resources Improve crop resistance to pathogens & pests Drugs and pharmaceuticals Medicinal resources Information Functions Aesthetic information Enjoyment of scenery Use of nature for scientific research Science and education Use of nature for religious or historic purposes Spiritual and historical

Ecosystem Services (ES) derived from forests (Source: Ref. 2 and 3)

Interaction



People use forests for

Livelihood

Incomes

Forest resources

Flooding



Flooding is a serious problem affecting all other ecosystems. As shown in Figure 1, people are helpless and prone to disease outbreaks.

Figure 1. Flooding aggravated by deforestation in August 1999 in the Philippines

Landslide

As illustrated in Figure 2, deforestation increases runoffs, erosion and massive landslide. Soil degradation could affect the overall productivity of land.

Figure 2. Landslides in the aftermath of typhoon Winnie in December 2004 in the Philippines



Pathway towards DRR

Dominant forest protection initiatives **Objectives Benchmarks Dominant Issues** forest conservation Maintenance of intact Protection of Conservation of Contentious effectiveness, **Biodiversity** conservation favourable species exclusionary approach endangered species forest ecosystems Delineation of Restricted access, local **Buffer zoning** Mapping of vegetation Lack of periodic tracking in protected zone types and assessing participation required monitoring activities land use activities Reforestation, **Integrated approach** Intermittent Incentive-based participation, **Forest** monitoring activities comprehensive training towards forest development afforestation, forest development protection and required programmes rehabilitation programmes **Multiple-use** Optimisation of land Lack of guidelines Poverty alleviation Adopting land use specialization for design system use approach requirements Exclusionary approach issues **Proclamation of** Refugium/Nursery Promoting sustainable Undetermined (power relation, decision protected areas boundaries due to forest conservation across different land disputes within making, benefit distribution) local jurisdictions protected areas

People's Participation in forest protection

Active people's participation in forest conservation is essential to improve the condition of the forests. It certainly mitigates the impacts of disasters since human well-being depends on healthy ecosystems. This twoway process demonstrated in Figure 3 is elusive but indeed critical to DRR.



Figure 3. Participatory forest management in the Philippines, 2011

Way forward

It is imperative to promote the switch from degradation to responsible forest protection and rehabilitation. Recognizing the importance of active people's participation in forest protection is an important component of DRR because it involved empowering the people through increasing control over the resources and lives (Kumar, 2002). Determining the nature and drivers of and obstacles to genuine people's participation is an opportunity to address deforestation as well as to foster DRR. However, different interests could affect the decision-making processes amongst stakeholders. Thus, deeper understanding of the processes involving people's participation in forest protection and rehabilitation can contribute in empowering the actors and perhaps achieving forest sustainability. Moreover, examining potential gaps, opportunities and challenges towards genuine people's participation is relevant to identify long-term solutions to deforestation and to DRR advancement. Necessarily, adaptation and mitigation towards DRR would effectively work along with forest sustainability.

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