

FFPRI International Seminar

Sharing F-DRR approaches and techniques with developing countries:
Experiences, realities and opportunities of private sectors

Movement and trends of disaster risk reduction in Thailand, Philippines and India

タイ・フィリピン・インドでの防災・減災の動向

Asia Air Survey, Co., Ltd.

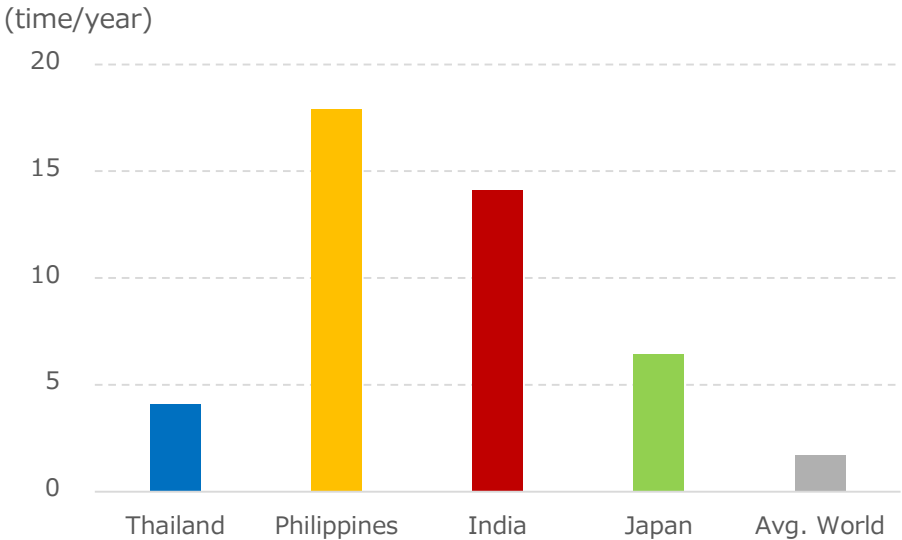
Toru Inada

February 1, 2023

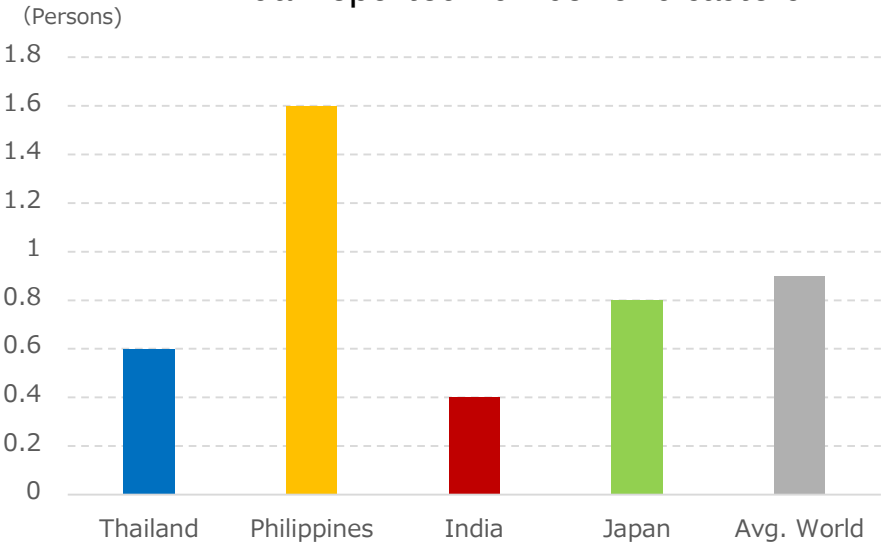


ASIA AIR SURVEY

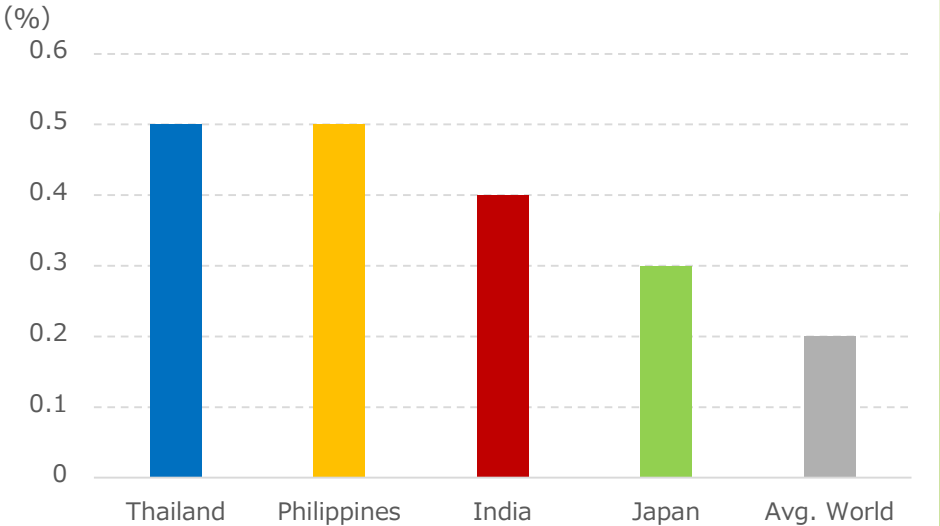
Occurrence and damage of natural disasters



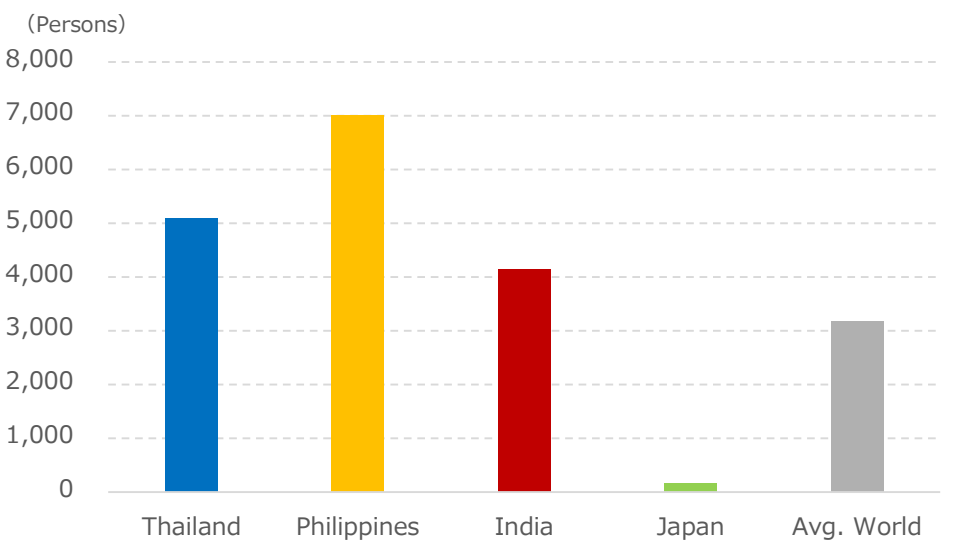
Annual reported number of disasters



Death per 100,000 people



Percentage of economic loss by natural disasters to GDP



Victims per 100,000 people

Source: EMDAT, data for 30-years from 1991 to 2019,

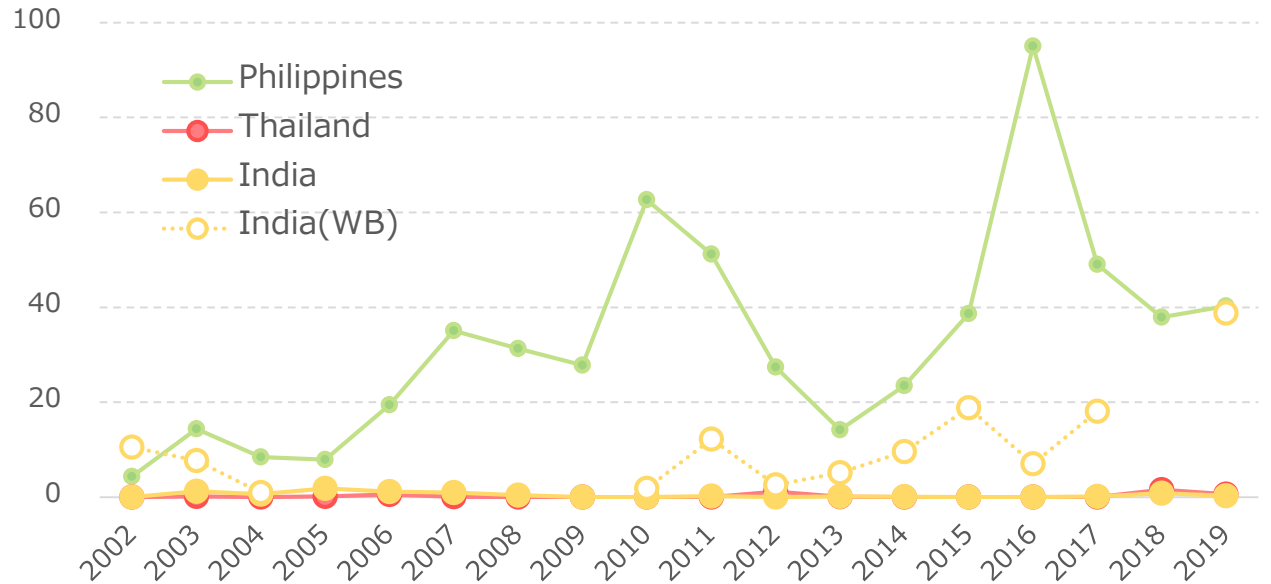
Occurrence and damage of natural disasters



International support for disaster risk reduction

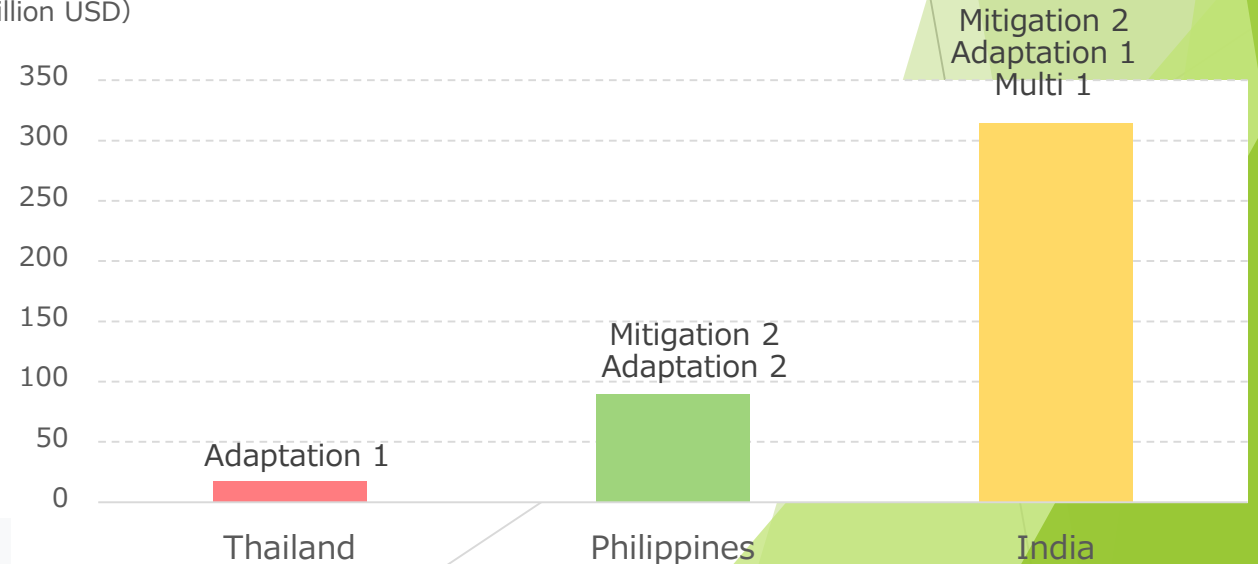
- ▶ The Philippines stands out in bilateral cooperation from the DAC. More than 90% of the actual amount was provided by Japan's ODA.
- ▶ India is the only country with a track record of assistance from the World Bank in the disaster risk reduction sector.
- ▶ India stands out for financial support from the GCF.

(Million USD)



Amount of disaster prevention sector support from DAC member countries and the World Bank

(million USD)



Funds from GCF

Comparison of development of erosion control technology “Chisan”



Academic institutions related to erosion control, and mountainous disasters

Thailand	Philippines	India
• Climate Change and Disaster Management Cluster, Department of Civil Engineering, Chulalongkorn University • Mahidun University • Department of Civil Engineering, Kasetsart University, Geotechnical Research and Development Center	• Establishment of master's courses in mountain engineering at multiple universities	• Currently, there are no academic institutions offering courses related to erosion control. • Appealing to Indira Gandhi National Forestry Academy etc. through JICA projects. [1]

Source:

[1] JICA “The Project for Natural Disaster Management in Forest Areas in Uttarakhand”

[2] JICA “Strengthening the Flood Management Function of DPWH”

Comparison of development of erosion control technology “Chisan”



Guidelines and manuals on erosion control

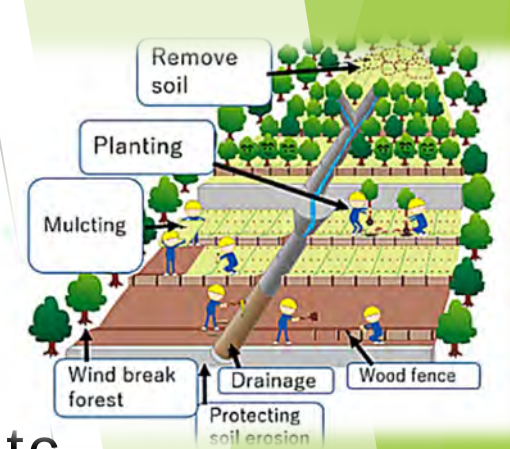
Thailand	Philippines	India
• Check Dam Installation Guidelines (Ministry of Natural Environment and Resources) • It has been pointed out that guidelines for countermeasures against landslides and sediment disasters have not been developed.	• Manual for flood control, erosion control, flood control structure design, flood control structure design, runoff calculation (Ministry of Public Works and Road) [2]	• Earth Conservation Guidelines and Manuals (National Disaster Management Committee) • Guidelines and manuals (Uttarakhand State) based on the Forestry Agency's Technical Standards for Conservation (General Rules, Conservation for Mountainous Areas) [1]

Source:

[1] JICA “The Project for Natural Disaster Management in Forest Areas in Uttarakhand”

[2] JICA “Strengthening the Flood Management Function of DPWH”

Comparison of development of erosion control technology “Chisan”



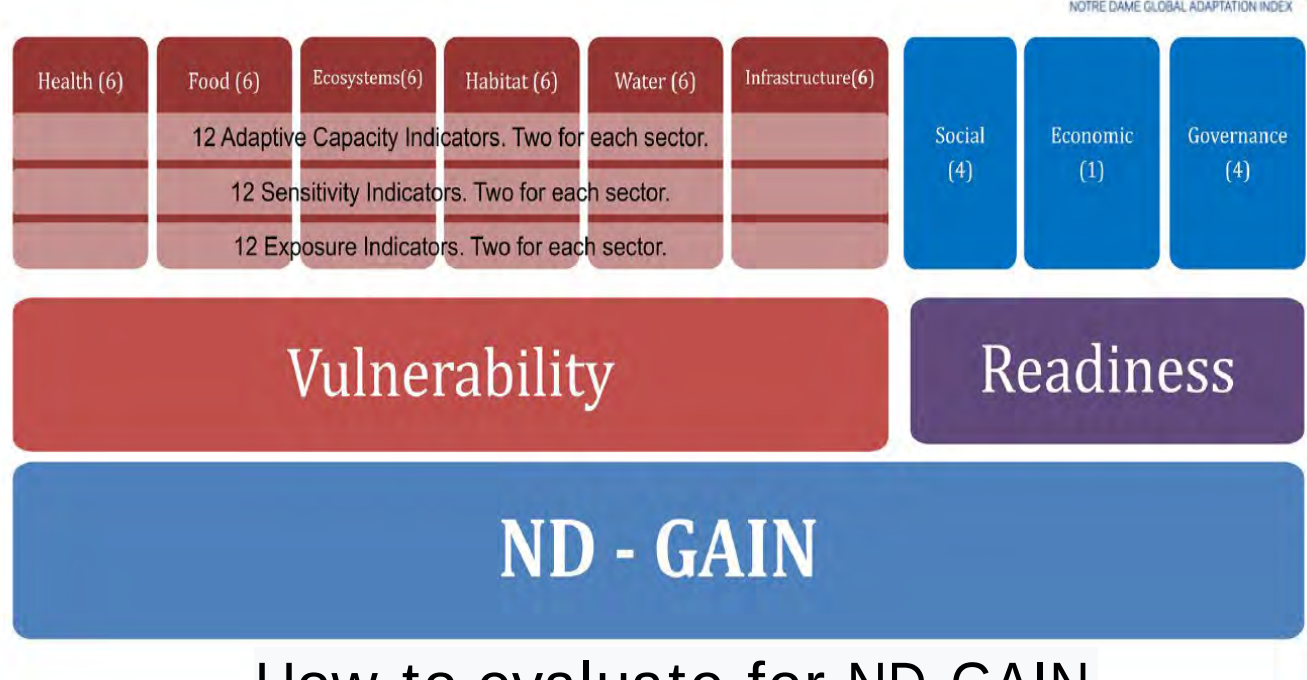
Installation record of erosion control construction, etc.

Thailand	Philippines	India
• Establishment of check dams (simple dams, semi-permanent dams, permanent dams) in mountain streams, etc. (nationwide)	• Establishment of a erosion control dam on the Santa Fe River in Nueva Vizcaya, using Soil Cement as the embankment [2]	• Simple check dam installation • Conservation work is underway at three locations in Uttarakhand [1]

Source: [1] JICA “The Project for Natural Disaster Management in Forest Areas in Uttarakhand” [2] JICA “Strengthening the Flood Management Function of DPWH”

- ▶ In countries that have received assistance from JICA, manuals are being prepared and demonstrations of erosion control and erosion control methods were carried out.
- ▶ Although the knowledge and information level of disaster prevention in general has improved in all three countries, it is considered that they do not have sufficient knowledge when it comes to erosion control

Rank of Vulnerability and Readiness Indicators by Notre Dame Global Adaptation Initiative



How to evaluate for ND-GAIN

Ranks by ND-GAIN country index

	Thailand	Philippines	India	Japan
ND-GAIN out of 182 countries	68	113	111	19
Vulnerability out of 182 countries	98	115	132	49
Readiness out of 192 countries	62	132	104	11

Source : 2022 University of Notre Dame, Notre Dame Global Adaptation Initiative
<https://gain.nd.edu/our-work/country-index/rankings/>