Forest landscape restoration improves tree coverage in Bangladesh's Kutupalong Rohingya refugee camps

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In August 2017, about 700 thousand Rohingya citizen exodus in the forest of Ukhia-Teknaf peninsula of Bangladesh, resulting massive deforestation of approximately 4000 acres of forested lands within days!

Teknaf (2018) in False Color Composition (432)

N

Legend
Teknaf 2018
RGB
Red: Band_4
Green: Band_3
Blue: Band_2

0   4   8   16 KM

1 cm = 3 km
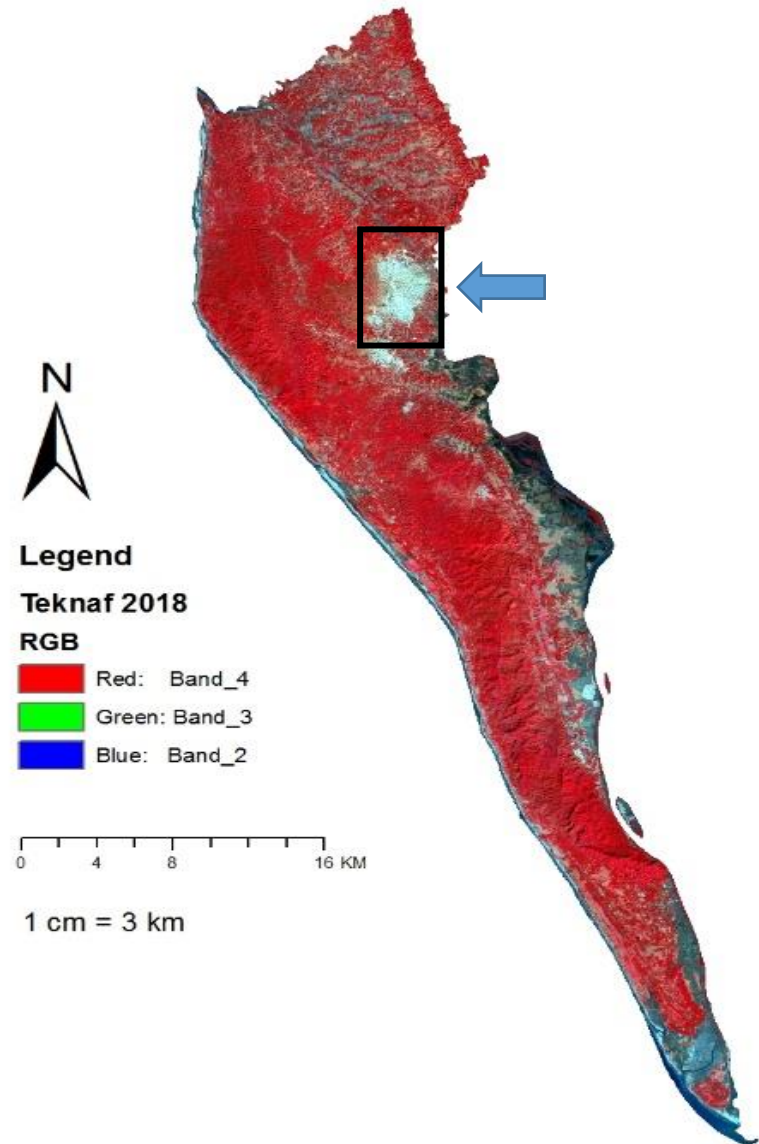
Forest Restoration Rohingya Camp

Fig.: Volunteers plants tree seedlings

Different governmental and non-governmental organizations launched plantation programs using native trees and non-woody plant species from 2018.

Is forest landscape restoration improves tree coverage in Kutupalong Rohingya refugee camps?
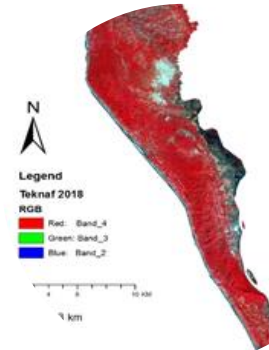
Team members:
- Rezaul Hasan Bhuiyan,
- Tasnima Dilshad

Fig.: A plantation site in Kutupalong camp No. 4 (2018)

Methods

1. **A multi-temporal satellite image analyses from 2017 to 2022**: To determine how the restoration initiative has affected the degraded forest landscape

Landuse change analyses

2. **A random field sampling approach with 45 plots (size: 10m×10m)** : to determine the current state of tree diversity and regeneration in the Kutupalong camps.
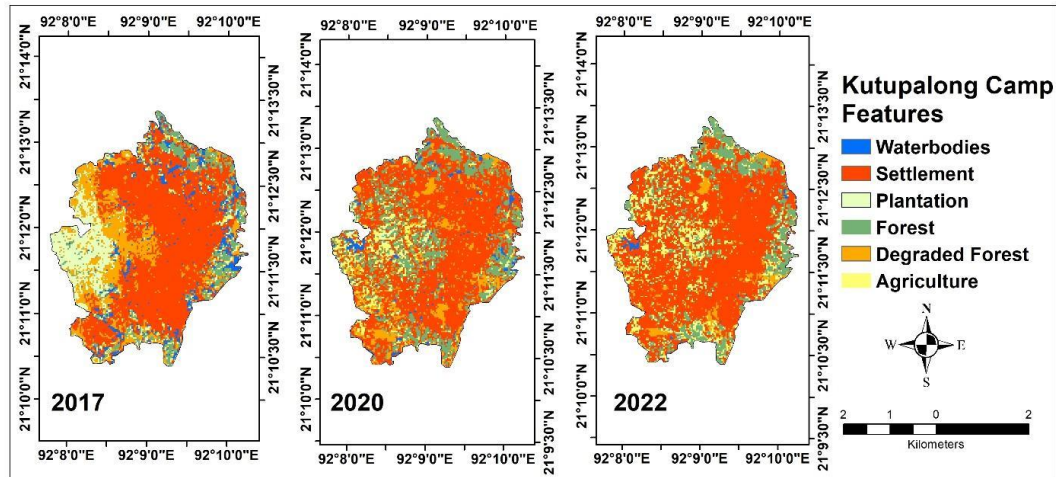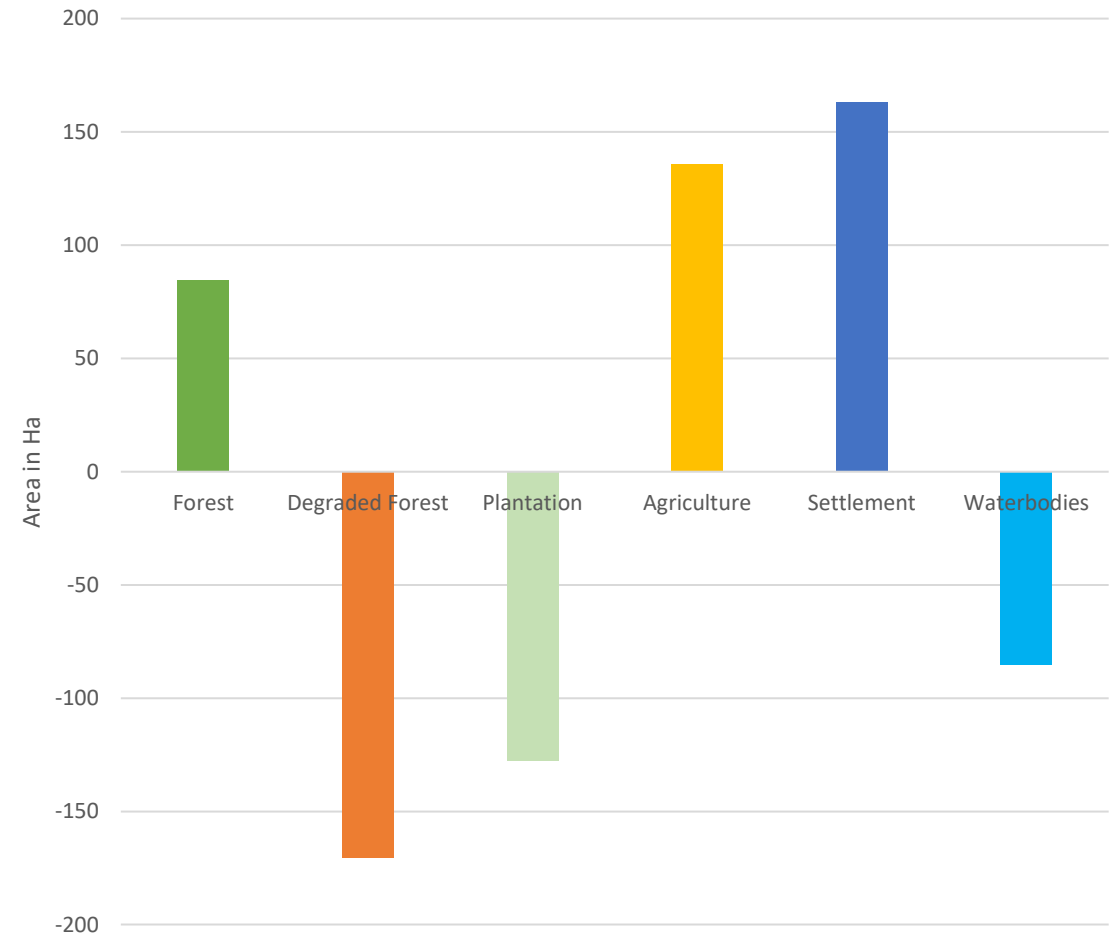

Tree spamling

Land use changes in Kutupalong camps

- Forest covers increased by 60%.
- Degraded forest was decreased by 38%.
- Conversion of plantation & degraded forest to forest area may cause this transition.

Tree diversity status in Kutupalong camps

Fig.: Volunteer planting a *Dipterocarp* seedling

Particular	Values
Tree species number	19
Shannon diversity	2.99
Survival rate	75%
Regenerating tree species number	32

- Higher numbers of regenerating tree species found in the camp site.
- Introduction of more tree species could help to reach the biodiversity in natural forest nearby!

Thanks for your attentions!

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