

Rethinking the threshold: An approach to execute potential environmental risks in vulnerable Rohingya settlement

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Abstract:

The purpose of the paper is to through light on the magnitude of environmental risks in vulnerable Rohingya settlement in the southern part of Bangladesh."Rethinking the threshold" is basically an approach to investigate the existing along with prospective environmental threats beyond the conventional analysis. The vulnerable Rohingya migrants, who are the Muslim ethnic minority group of Rakhine State, have created humanitarian and environmental disaster in Bangladesh because of the brutality of Myanmar Army since 2015. However, this paper will not only focus on the genocide; human trafficking and the violation of human rights of Rohingya migrants, but also the shelter; health; ecology and fabric of Rohingya settlement and their surrounding environment. Nonetheless, the paper will reveal different arrays of statelessness of Rohingya migration including lack of human security, Humanitarian crisis, and seasonal crisis last but not the least the Environmental risks in broader aspects to draw the possible epilogue for the future of vulnerable Rohingya settlement.

Keywords: Rohingya Refugee, Humanitarian crisis, Environment, Environmental risks.

Introduction:

"The Rohingyas" is an allegory of brutality and discrimination of past few years. There is a Muslim ethnic minority group living in Western Myanmar'sⁱ Rakhin State whose ancestry remains unclear and who have always suffered oppression in past centuries. Discriminatory policies of Myanmar's government since the late 1970s have compelled hundreds of thousands of Muslim Rohingya to flee their homes in the predominantly Buddhist country. Most have crossed by land into Bangladesh, while others have taken to the sea to reach Indonesia, Malaysia, and Thailand.ⁱⁱ

The Myanmar government has effectively institutionalized discrimination against the ethnic group through restrictionsⁱⁱⁱ on marriage, family planning, employment, education, religious choice, and freedom of movement. For instance, Rohingya couples in the northern towns of Maungdaw and Buthidaung are only allowed to have two children.^{iv} Rohingya must also seek permission to marry, which may require them to bribe authorities and provide photographs of the bride without a headscarf and the groom with a clean-shaven face,

practices that conflict with Muslim customs. To move to a new home or travel outside their townships, Rohingya must gain government approval.^v

The latest report of the UN High Commissioner for Human Rights (OHCHR) revealed devastating cruelty against Rohingya children, women and men by Myanmar's security forces in a sealed-off area in Northern Rakhine State. The organization reports on mass gang-rape, killings (*inter alia* of babies and youngsters), brutal beatings, disappearances and other serious human rights violations.^{vi} The document states that the recent level of violence is unprecedented, attacks against Rohingya villages and the associated violations seriously affecting the right to life and physical integrity. By destroying houses and food stocks the security forces and other armed elements – including civilians^{vii} make it impossible for Rohingyas to live in their villages, thereby creating a coercive environment aiming displacement. The report claims the situation not to be an isolated event; rather a "calculated policy of terror" as the attacks against the Rohingya population seems to have become widespread systematically.^{viii}

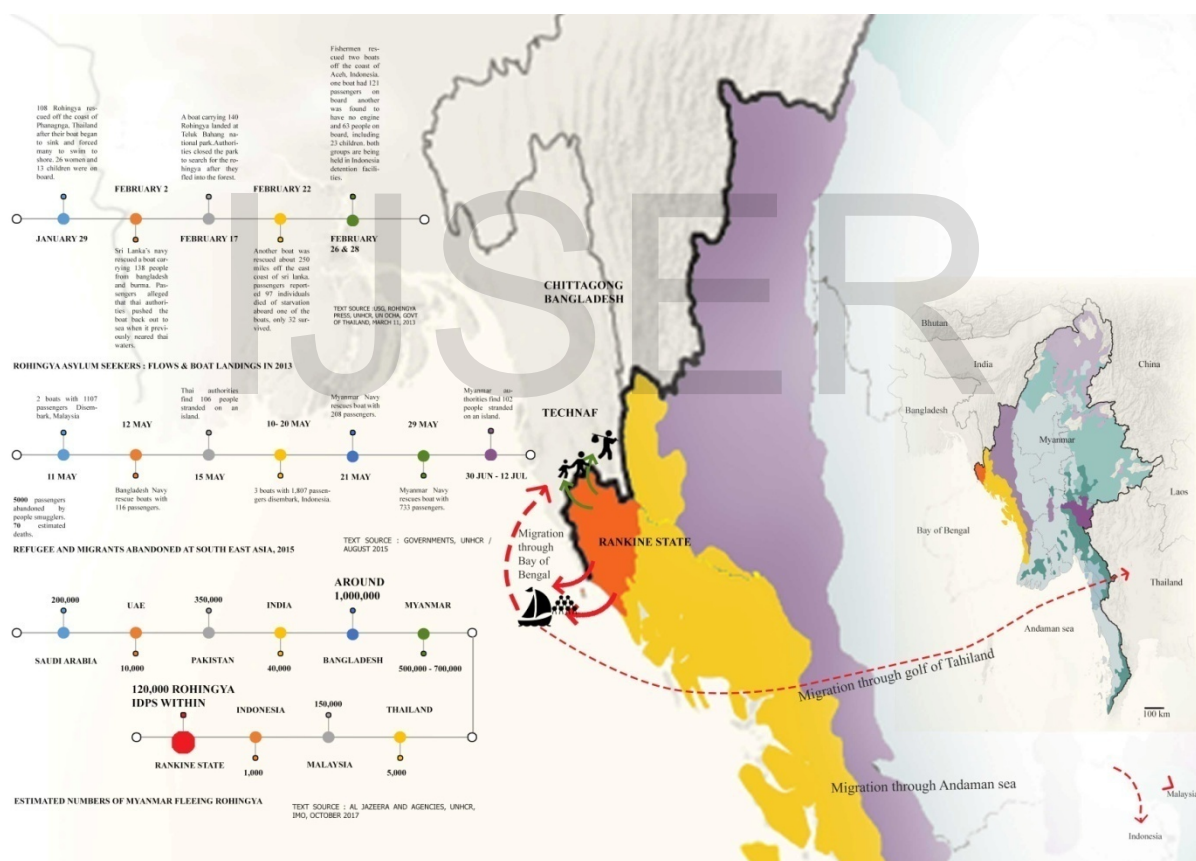


Figure 1 : History of Rohingya migration , Source : USG Rohingya press 2013; UNHCR- August 2015; Al Jazeera - 2017

Nonetheless, Denoted as "Ethnic Cleansing" by U.N. officials, this vulnerable Rohingya migrant has created humanitarian crisis along with environmental risks of the hill territory in Bangladesh, is yet to be uncharted to the world.

The Rohingyas in Bangladesh: A battle of life on the verge

A series of attacks on security posts along the Myanmar-Bangladesh border in October 2016 triggered another outbreak of ethnic violence in Rakhine. Local authorities blamed Rohingya militants for the attacks, prompting an inflow of military and police forces to hunt for those responsible and tighten security. Amid the security lockdown, tens of thousands of Rohingya were forced from their homes, many fleeing to Bangladesh. Reports in November indicated that the security presence was also preventing the entry of much-needed international aid, including food and medical care.^{ix} However, in 2016, there are approximately 32,000 registered Rohingya refugees in Bangladesh residing in two refugee camps, Kutupalong and Nayapara. These are managed by the Bangladeshi government together with the Office of the UN High Commissioner for Refugees (UNHCR) and other agencies.^x Moreover, the Bangladeshi authorities have refused to register newly arrived Rohingya as refugees since 1992, in an apparent attempt to dissuade further people from entering the country. As a result, there are an estimated 300,000 to 500,000 undocumented Rohingya refugees in Bangladesh. Tens of thousands live in several informal camps in Cox's Bazar, including Leda and Kutupalong makeshift camp (KMC), while others have settled in local villages or towns.^{xi} This influx has posed challenges to critical biodiversity areas such as:

- a. Teknaf wildlife sanctuary
- b. Himchari national park
- c. Inani protected area

Are getting degraded as well as the timber and other forest products are being overexploited.

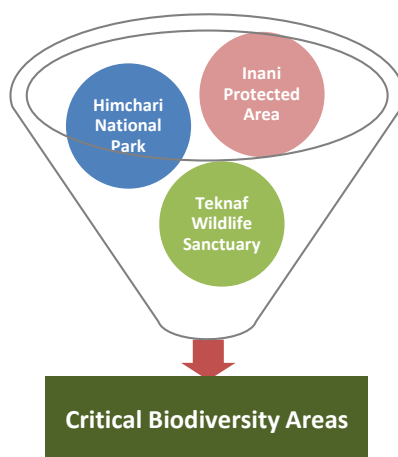


Figure 2 : Info-graphics of critical biodiversity areas

Refugee camps in Bangladesh

More than 600,000 Rohingya Muslims have fled into Bangladesh since the violence started on August 25

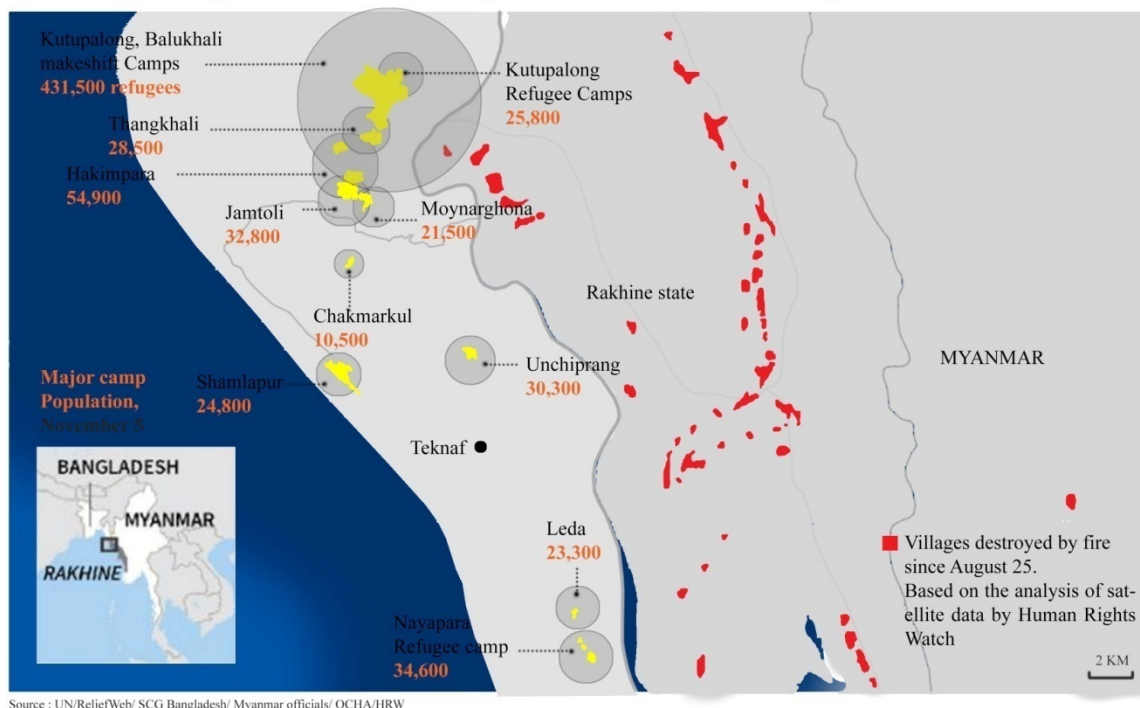


Figure 3 : Rohingya refugee camps in Southern part of Bangladesh, Source : UN/ Reliefweb/SCG Bangladesh/ Myanmar Officials/ OCHA/ HRW

Bangladesh: A country with immense possibilities with environmental risks

Bangladesh is one of the most densely populated countries in the world with 1700 inhabitants per sq.km which is more than 5 times as many as Germany (compare with some other countries). The World Bank has provided \$480 million USD for helping rohingyas in:

- Health
- Education
- Sanitation
- Social protection

Forest cover equivalent to 3-5 football fields are being cleared off almost every day, while at least 11 people have been killed by elephants due to human wildlife conflict. Needs 2,200 metric tons of firewood every day by cutting trees and bushes from forests. Made makeshift settlements at around 4000 acres of lands razing vast forest areas. UNDP assess that around next 12 months around 26,000 hectares of forest land would be destroyed as being the source of fire wood^{xii}. The total area of forest land in Bangladesh is 2.53 million hectares representing about 17.5% of the country's area^{xiii}. But the present scenario is far bad and degrading. We are already suffering from forest area crisis and if these refugees continue to ravage the forest then the condition will be worse than ever. Bangladesh Forest Department

manages 1.53 million hectares of forest land. The following is the table showing protected areas of Bangladesh:

Serial	Protected Areas	Forest Types	Bio-ecological zones	Area(ha)	Established
1	Bhawal National Park	Sal forest	3	5,022	1974/1982
2	Modhupur national Park	Sal forest	3	8,436	1962/1982
3	Ramsagar National Park	Sal forest	1	27.75	2001
4	Himchari National Park	Hill forest	9a	1,729	1980
5	Lawachara National Park	Hill forest	9b	1,250	1996
6	Kaptai National Park	Hill forest	9a	5,464	1999
7	Nijhum Dweep National Park	Coastal mangrove	8b	16,352	2001
8	Medha Kachapia National Park	Hill forest	9a	396	2004

Table 1: Protected areas Bangladesh (source:MoEF 2002)

Serial	Protected Areas	Forest Types	Bio-ecological zones	Area(ha)	Established
1	Rema-Kalenga Wildlife Sanctuary (WS)	Hill forest	9b	1,795	1996
2	Char Kukri-Mukri WS	Coastal mangrove	8b	40	1981
3	Sundarbans (East) WS	Natural mangrove	7a	31,226	1960/1996
4	Sundarbans (West) WS	Natural mangrove	7a	71,502	1996
5	Sundarbans (South) WS	Natural mangrove	7b	36,970	1996
6	Pablakhali WS	Hill forest	9a	42,087	1962/1983
7	Chunati WS	Hill forest	9a	7,761	1986

Table 2: Protected Wildlife sanctuaries of Bangladesh (source:MoEF 2002)

Furthermore, the study reveals different arrays of environmental disaster, possibilities of potential environmental risks of Rohingya migration, in order to draw the possible epilogue for the future of native environment with vulnerable Rohingya refugees.

Methodology:

The paper is based on quantitative research since numerical data have been collected using the techniques of questionnaires, interviews of resource person, mapping along with field observation. Both primary and secondary data have been used here.

Case Study and Analysis:

Environmental disasters that Rohingyas feel:

1. Due to monsoon rain world's biggest refugee camps faces misery
2. A dozen of people have died from landslides
3. Injuries are occurring due to slippery lands
4. Flood water mixes with latrine and spreads waterborne diseases
5. 200,000 Rohingyas face environmental risk
6. Forecasts predict around 2.5m rainfall occurs here during June to august
7. Landslides kill thousands of Rohingya as they take shelter under hills and cut hills

Existing environmental problems in Rohingya refugee camps:

- Shelter is the first basic need and these FDMN (Forcibly Displaced Myanmar Nationals) cut down trees to make shelter which is resulting in decrease of forest area and at the same time they are cutting hills which is increasing the possibility of landslides

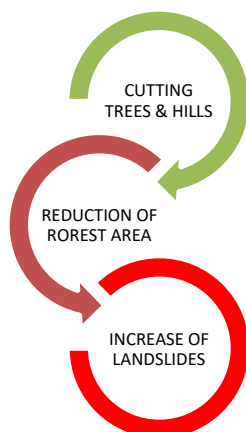


Figure 4 : Impact on environment & human life due to cutting of trees & hills

- Cutting down of massive amount of trees for the purpose of fuel generation is causing cascading impacts on environmental setting, stability of camp and surrounding areas
- Loss of vegetation , uprooting trees and forest cover has exposed soil surface to risk of erosion and landslide events

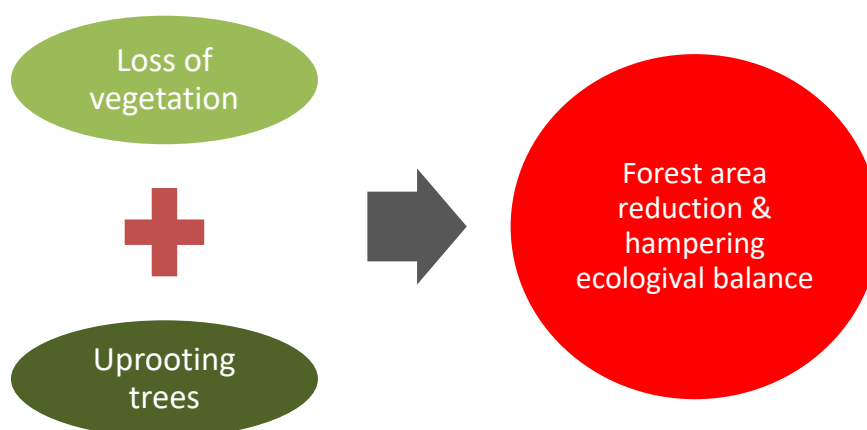


Figure 5 : Cause of ecological imbalance

- Establishment of shelters and raging forest have blocked elephant movement and loss of wildlife. As the Rohingya refugee influx started, encounters with elephants have caused 11 deaths and numerous injuries among the refugees in the Kutapalon camp and is on the rise.
- Excessive use of forest resources has been a potential concern between FDMN and local people .In most of the areas, the local residents have been cultivating crops with the leased land since the past. Irrigation was given from the water coming from the hills and so there were very good vegetables grown in hilly land where .Some of the cultivated crops includes rice, beans, vegetables etc. Since thousands of small houses have been constructed, the wastewater from those houses gets directly discharged into the downstream or lower area thus effecting the cultivable land ^{xiv}.
- Burning of fuel and water pollution are causing tremendous health impact inside the camp and peripheries
- Due to over exploitation and contaminations by human excreta and medical waste the depletion of safe water sources are occurring continuously
- Soil fertility deterioration is occurring and thus agricultural activities are getting hampered
- Uncontrolled population growth would further exacerbate the current environmental challenges
- Lack of evidence based scientific data on influx and its impact on the environment and surrounding periphery will make it difficult to undergo any development planning in future.
- Imbalanced influx has also caused air and noise pollution eminently, as lots of vehicular movement are occurring and, which is on the rise plays a great role in increasing the AQI (Air Quality Index) of the area.
- The Natural landscape of region has undergone changed significantly, as the number of refugees increases so the housing, fuel and other facilities also increases resulting in landscape change sand so alter of ecosystem balance will occur.
- Many safe water sources will lose serviceability due to pollution caused by multiple sources
- Severe impact on human health due to environmental degradation
- Socio environmental conflict between host and FDMN has already been experienced at different parts which will increase in future
- High population, deforestation, inefficient waste management causes indoor and outdoor air pollution.
- Increasing vehicular traffic effects wildlife and forest.
- Extinction of water sources has become a great threat due to increasing demand and high rate of contamination.
- Air and water couples with faecal sludge and hazardous waste resulting in drastic environmental degradation.
- Amplified human-wildlife conflict
- It is estimated that the equivalent of 3-5 football fields of forest are felled every day in the area^{xv}

- Important national and community forestry areas, which were already under significant pressure and threat before the unbalanced influx have been further degraded, resulted in limited opportunities for local communities depending on forestry projects to supplement their livelihoods. ^{xv}
- Timber and other forest products will likely be over exploited. ^{xv}
- Teknaf Sanctuary is the shelter of significant population of Asian elephants and many other threatened species which now constantly come into contact with refugee communities. Encounters between refugees and elephants have caused 11 deaths and numerous injuries among the refugees in the KutapaloncAMP ^{xv}.
- The extensive loss of groundcover vegetation in the camp has led to significant erosion which becomes evident in the rainy season. This loss is due to site clearance and the use of low-growing plants as firewood. Low-growing shrubs and grasses – which previously served to protect waterways, reduce surface heat, slow the runoff of rainwater, and bind loose soils which are no longer present in many parts of the camps now ^{xv}.
- Erosions contribute to landslides and also higher temperatures within the camp which have a major impact on downstream communities as waterways and agricultural fields become constantly polluted by sediments carried by runoff from the camp. Roots of the trees help the soil to stick together but after heavy rainfall the soil of that hill loses strength and lead to land slide. ^{xv}

Recommendations:

1. Conduction of Research Activities:

- Proper environmental survey
- Rigorous environmental impact assessment
- Estimation of economic loss
- Regular environmental monitoring
- National agencies and research institutes should come to protect conserved areas

2. Capacity building :

- Government must take leading role to combat forest destruction
 - Awareness rising for environmental conservation
 - Stake holders direct involvement

3. Forest cover protection :

- forest protection campaign and training
- development of natural forest rather than breeding new species

- plantation of alternative grass to protect top soil erosion
- conservation tree roots in subsoil conserved
- home scape gardening will increase greenery
- introducing agricultural activity of barren land
- involving DOF and local authority in conservation of forest
- conservation of vegetation since even the most unattractive little plant will provide soil stability

4. Ensure water supply :

- providing advocacy & technical facilities
- Rainwater harvesting ,
- excavation and re-excavation of water bodies to conserve rainwater for aquaculture, agriculture and domestic use

5. Alternate energy supply :

- Eco friendly or similar alternate energy to reduce fuel wood
- Bio gas from human excreta and solid waste can be effective long-term option for cooking , supply of LPG(Liquid petroleum Gas) might hinder biogas use
- Supply of inflammable cooking fuel should be avoided for risk of biohazards

6. Livelihood activities for environmental protection :

- Alternate livelihood option for the host & FDMN on forest resources
- Inclusive development program for both host and FDMN

7. Aid workers activities :

- law enforcement agency should record and monitor the activities of working group and contain updated data base
- decision makers should be more cautious in their decision making by drawing a mind-set about the links between the environment and refugee management

8. Waste management :

- effective awareness and monitoring for appropriate use of existing dustbin
- waste segregation at source for effective waste disposal like dumping
- conversion technology for waste into energy by setting biogas plant

9. Shelter making :

- non-biodegradable material should not be used rather geotextile should be used

10. Financial aid :

- Regular financial support for environmental protection from national and international agencies, stakeholders and so on.

Conclusion:

Bangladesh, a country with least forest area, is highly disaster prone and is under the risk of getting submerged if the global temperature keeps on rising. Migration of Rohingya refugee has created one of the biggest threats to the environment of the hill area of Bangladesh which needs to be addressed properly. Laws for the environmental management, conservation, protection and development in sustainable manner should be imposed and followed properly. Proper measures must be taken to raise awareness, develop alternate sustainable solutions for energy use and cooking. The existing natural resources shall be utilized in a sustainable way and steps should be taken to enrich environmental education in the country to mitigate humanitarian along with environmental disaster like Rohingya settlement.

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ⁱⁱⁱ Ethnic Arakanese with weapons walking away from a village in flames while a soldier stands by. Arakan State, Burma, June 2012. © 2012 Human Rights Watch

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