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Title: Large-Scale Population Displacement and the Environment: An Analysis of Deforestation Mitigation Programs in Teknaf Upazila, Cox's Bazar, Bangladesh



S. M. Hasan

A research paper submitted for the award of Master of Environmental Management and Development

Australian National University

November 2020

Dedication

To my father

'Indeed we belong to Allah, and indeed to Him we will return' (Quran 2:156)

Acknowledgments

Completion gives satisfaction. I am indebted to a few dedicated people to support me in various capacities to complete my research.

I am grateful to my supervisor Dr. Keith D Barney. He supervised me last year to develop, write, and complete this research. He invested his time and wisdom to give me courage and guidance—my special thanks to him for his amicable attitude.

Special gratefulness to Dr. Sarah Milne, convenor of the Research Project, for her dedication and direction throughout the project, who precisely mentored the research journey.

I thank two research interviewees, Professor Dr. Bina D'Costa, Australian National University, and John Nyirenda, Program Manager of SAFE Plus, for their prompt response, significant time, and contribution to this research.

The fellow course mates of this course, especially Md. Kabir Hossain and Meerah Hashmi assisted me in different ways. They must deserve my special thanks.

Lastly, my wife and a prominent critic of my writings, Mst Sabikun Naher, and daughter Zarin Nawar Ruponti sacrificed their time and my company. The best inspiration was my daughter's demand: '*Baba, tomar kaj kokhon sesh hobe? Ami tomar sathe khela korar jonno opekkha korchi.*' 'Dad, when will you finish your work? I am waiting to play with you'. Thanks to her for her tiring patience.

Abstract

There are approximately 1.2 million Forcibly Displaced Myanmar Nationals (FDMN) (also known as Rohingya refugees) accelerating pre-existing trends of deforestation in the Cox's Bazar region of Southeast Bangladesh—a sensitive area in terms of security, regional politics, and ecology. This research analyzed the issue of deforestation in the context of environmental narratives and media portrayals to find perspectives of different actors and the SAFE Plus program as a case study to compare the reflection of deforestation issue in Teknaf, Cox's Bazar between program document and media. The study is based mainly on secondary data through content analysis, reviewing program documents, and selected key informant interviews. Through analyzing the media news on forest degradation at Teknaf in connection with Rohingya refugees from the *Prothom Alo* and *The Daily Star* from 1 August 2017- 30 November 2018, the research found, firstly, there are significant differences between government perspectives and non-governmental perspectives on deforestation in Teknaf. Media framing analysis found that the government was accommodating and rigid to Rohingya and sympathetic to local host people. The non-governmental actors' perspectives included treating Rohingya as 'forest-destroyer,' 'scapegoats,' and 'victims of the situation.' There was the simplification of the deforestation problem, where Rohingya refugee was only to blame for deforestation in Teknaf. The media reproduced the voice of 'powerful' actors and skipped the voice of Rohingya refugees. Lastly, the SAFE Plus program document and media analyzed deforestation from the 'eco-centric' or 'apolitical approach.' The paper concludes with a discussion that, firstly, due to blaming Rohingya for deforestation, the other drivers of deforestation got 'public impunity.' Secondly, the media reflected the 'elite voice,' which may have far-reaching consequences for managing the Rohingya crisis. Lastly, the SAFE Plus program may be ineffective due to avoiding larger contexts and other drivers of deforestation during program design. Therefore, the paper recommends researching political solutions and educating Rohingya for repatriation, considering the larger socio-economic context in program design, and working on humanitarian representation in such crises.

Key words: Rohingya, environmental narratives, media framing, Cox's Bazar, SAFE Plus, deforestation

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Acronyms and Abbreviations

APDC	Asian Disaster Preparedness Center
BCAS	Bangladesh Center for Advance Studies
CCNF	Coast Trust and ‘Cox’s Bazar CSO NGO Forum
DRP	Displaced Refugee People
ECA	Ecologically Critical Areas
FAO	Food and Agriculture Organization
FD	Forest Department
FDMN	Forcibly Displaced Myanmar Nationals
HRW	Human Rights Watch
ICSG	Inter-sectoral Coordination Group
IOM	International Organization for Migration
IUCN	International Union for Conservation of Nature
LGP	Liquefied Petroleum Gas
MODMR	Ministry of Disaster Management and Relief
MoU	Memorandum of Understanding
MP	Member of Parliament
PA	Protected Areas
RRRC	Office of the Refugee, Relief and Repatriate Commissioner/ Refugee, Relief and Repatriate Commissioner

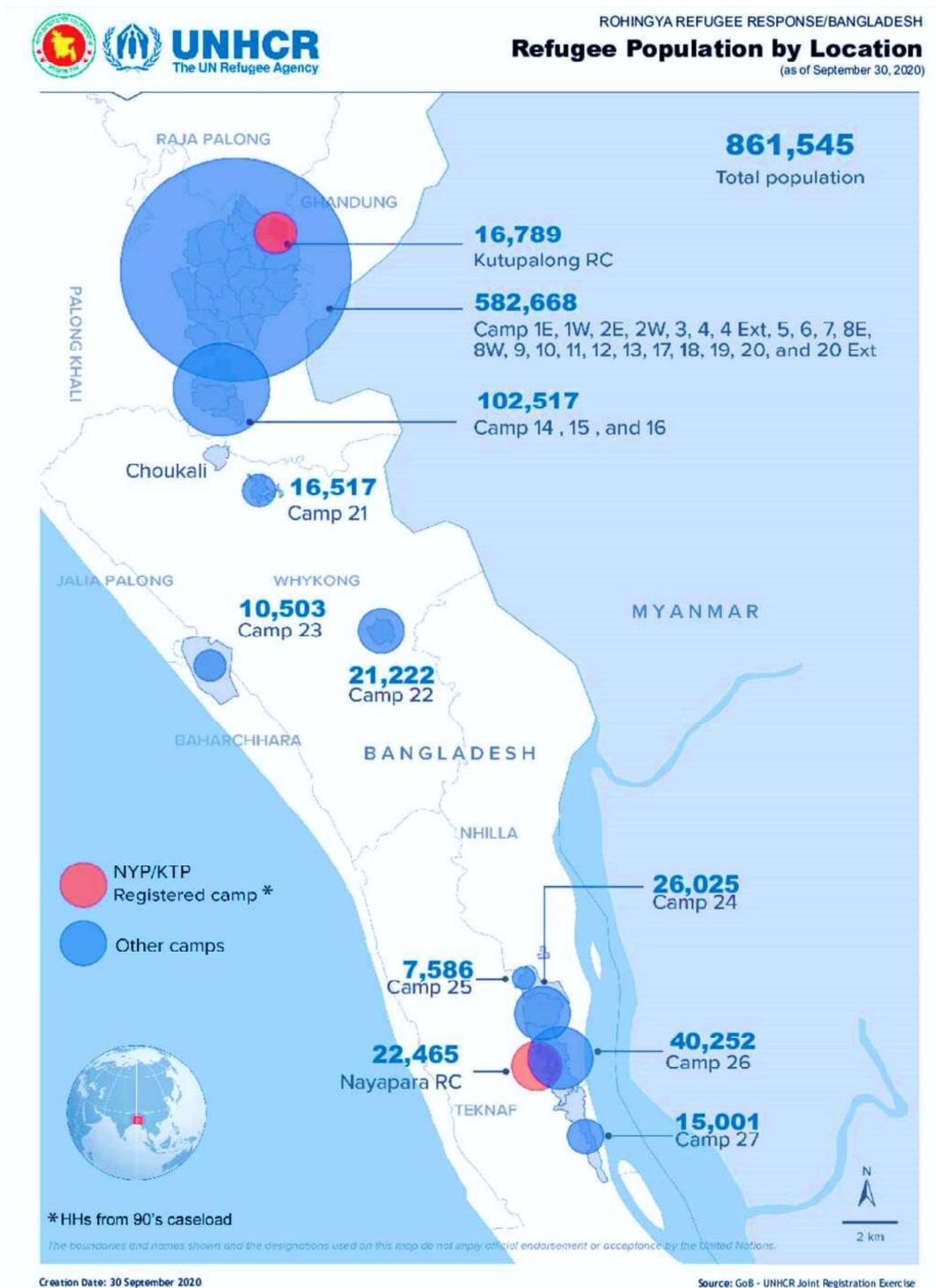
SAFE PLUS	Safe Access to Fuel and Energy Plus Livelihoods
TWS	Teknaf Wildlife Sanctuary
UN	United Nations
UNDP	United Nations Development Program
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNHCR	United Nations High Commission for Refugees
WFP	World Food Program

1. Introduction

A series of civil and military conflicts and natural disasters worldwide lead to widespread population displacement. According to the United Nations High Commission for Refugees (UNHCR), 79.5 million people are now displaced from their homes (UNHCR 2020). Among them, 26 million are refugees, and 4.2 million are stateless, of which around 85% and 73% are hosted by developing countries and neighboring countries (UNHCR 2020). Large-scale population displacement affects the host environment depending on cohort size, settlement patterns, and livelihoods (Black 1994). *Environmental Guidelines* of UNHCR (1996) identified multiple categories of the environmental impact of population displacement, such as natural resource degradation, irreversible impacts on natural resources, health, and social conditions; social impacts on local populations; and economic impacts. The environmental impact happens due to the increase of inhabitants, forest conversion to farmland, firewood collection, use of ground and surface water, fishing, and hunting (Martin 2005, p. 332).

The Rohingya refugee, also known as Forcibly Displaced Myanmar Nationals (FDMN) (ISCG 2020c, p. 2; MODMR 2019), are citizens of Myanmar. They fled to Bangladesh from Myanmar several times since 1942 (RRRC 2020) due to fear of persecution and genocide. After the independence of Bangladesh, around 200,000 Rohingya fled across the border to Bangladesh in 1978 (RRRC 2000). However, their exodus to Bangladesh became a regular event after they were denied citizenship Rohingya by the state government of Myanmar in the Burma Citizenship Law of 1982 (Rashid 2019, p.7). The largest cohort of more than 700,000 Rohingya entered Bangladesh from 2017 to 2018 (Rashid 2019, p.1) and took shelter at 32 camps (covering around 2,630 hectares) in Cox's Bazar District (ISCG 2020c, p. 2; MODMR 2019). Approximately 1.2 million Rohingya refugees live in Cox's Bazar (UNDP 2018a, p.24). (See **Map 1**) The influx of Rohingya refugees in an abbreviated period, their living in a small forest area, have accelerated the pre-existing trends of deforestation in Cox's Bazar, basically through fuel wood collection, building shelters, and wood selling to a local market to Rohingya and host people (Quader *et al.* 2020).

Map 1 Rohingya Population in Cox's Bazar by camp



Source: UNHCR (2020)

Cox's Bazar is a sensitive area in terms of security, regional politics, and ecology (Pennington 2018; RRRC 2019) for human trafficking (Bashar 2015); and vulnerable to militancy, arms, and drug trafficking (Rahman 2010); and prone to flooding, landslides,

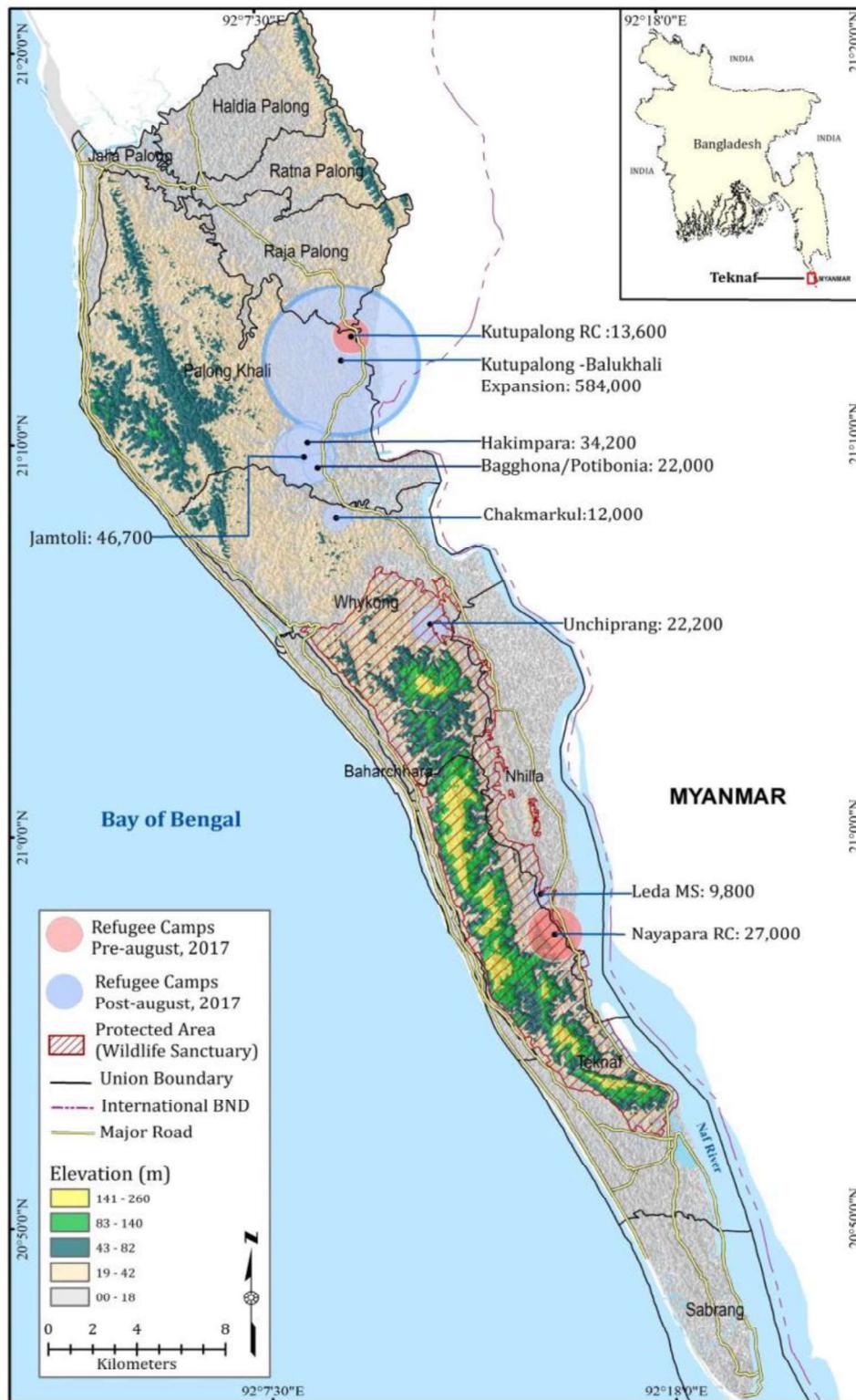
collapsed or damaged shelters, contaminated water overflowing latrines, and disease (World Vision 2020). After the Rohingya influx, social problems like forced prostitution creating fake Bangladeshi identity for Rohingya increased (Babu & Scott 2020, p. 10). Around 32% of shelters need to be renovated, and 45% of females feel unsafe (ISCG 2020b, p.38).

Cox's Bazar is covered by forest by 35% of its area (UNDP 2018a, p.24). It contains three Ecologically Critical Areas (ECA), two declared and one proposed Protected Area (PA), and 50 percent of the country's species (UNDP 2018, p.31). Teknaf Wildlife Sanctuary (TWS) is the inhabitant of rare endangered Asian elephants (UNDP 2018, p.37). Himchari National Park contains 56 species of reptiles, 13 species of amphibians, 286 species of birds, and more than 100 species of trees, shrubs, grasses, etc. (UNDP 2018, p.40). Inani National Park holds 443 plant species, 29 rare and extremely rare amphibians, 58 rare reptiles, 253 species of birds, and 39 mammals, among others (UNDP, 2018, pp.41-42). Nevertheless, the refugee influx has accelerated the impact on biodiversity-rich forest areas. Most camps are in the forest (see **Map 2**). After 2017, the number of camps increased (see **Map 3**).

The Bangladeshi government initially welcomed the Rohingya refugees on humanitarian grounds. As the Prime Minister of Bangladesh, Sheikh Hasina, said, 'We have the ability to feed 160 million people of Bangladesh, and we have enough food security to feed the 700,000 refugees' (Bearak 2017). However, hosting them for a long time is challenging because of the scarcity of land, settlement cost (Rashid 2019, p.8), and socio-economic impacts on host areas, including pressure on the local wage labor market, price of commodities, and public health impact both in Rohingya camps and host areas (UNDP 2018b, IC Net Limited 2018).

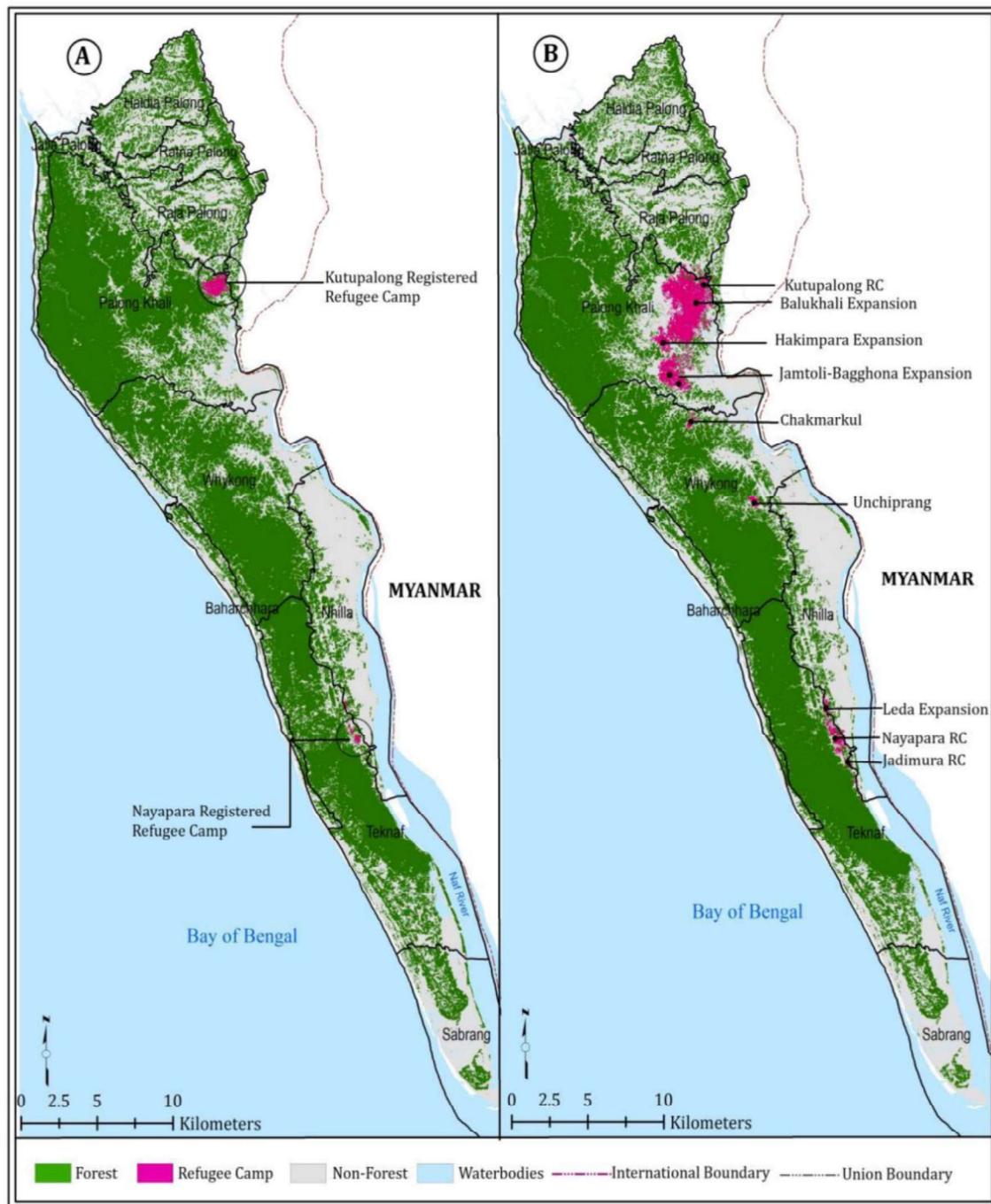
Bangladesh has tried to manage the Rohingya refugee crisis, firstly by signing a Memorandum of Understanding (MoU) with Myanmar to repatriate FDMN to Myanmar, which is not carried out because of multifaceted opposition both by the Government of Myanmar and the Rohingya themselves due to fear of persecution and unsafety. A relocation plan for around 100,000 Rohingya at Bashan Char, an island in the Bay of Bengal, has not been implemented due to widespread opposition from international development partners.

Map 2 Rohingya Camp in Cox's Bazar forest



Source: Hassan (2018)

Map 3 Rohingya camps in forest land comparison between pre-and post-2017



Source: Hassan (2018)

Third, electric fences are being built to separate Rohingya from the local community (Rashid 2020) and stop Rohingya from spreading to all parts of the country. Due to the delay and uncertainty in repatriation, Bangladesh is reluctant to receive more Rohingya refugees (HRW 2020).

Bangladesh is trying to manage the Rohingya crisis through different crosscutting programs with the assistance of the Inter-sectoral Coordination Group (ICSG) — field level secretariat of the Strategic Executive Group (SEG), a common platform for an international organization to manage the Rohingya crisis (ICSG 2020). After the Rohingya influx, UNDP (2018) found that the Rohingya influx increased the deforestation rate by using fuelwood from forests. Based on this status, Bangladesh and international organizations seek to lessen pressure on forest resources use by providing alternative cooking fuels like Liquefied Petroleum Gas (LPG) or Rice-husk charcoal to refugees and local people. An early and critical program is the *‘Joint Programme to Address Cooking Fuel Needs, Environmental Degradation and Food Security for Populations Affected by the Refugee Crisis in Bangladesh’* (also known as Safe Access to Fuel and Energy Plus Livelihoods (SAFE Plus), implemented by Food and Agriculture Organization (FAO), International Organisation for Migration (IOM) and World Food Program (WFP). It has four objectives: decreasing fuelwood purchase expenditure; engagement of local agriculturists to market and income generation; mentoring and training Rohingya refugees; and mitigating environmental impact through forest rehabilitation (UNDP 2020). This SAFE Plus program will be used as a case study of my research to show what environmental narratives about deforestation are reflected in the program document.

From the beginning, the mass media of Bangladesh has been covering Rohingya issues, including their forest resource use. There are 2,320 newspapers (both local and national), 1,781 online news sites, 72 radio stations, and 43 television channels (Wadud 2020, p. 8) create perceptions through disseminating views of different actors and preliminary information about the Rohingya crisis to people and policy makers. However, in Bangladesh, most media are owned by ‘businessman cum politicians.’ This ‘corpo-politicization’ (Mahmud 2013) has an indirect political influence (Wadud 2020, p. 8). As Internews (2017) wrote: ‘[I]ack of information, misinformation, and outright propaganda have driven the conflict, raising tensions on all sides, stoking rumors, emboldening extremist elements, and masking atrocities.’

Considering the role of media in addressing the deforestation aspect of environmental management of the Rohingya Refugee Crisis, it is critical to understand key environmental narratives in media and program documents. I will also ask for critical actors, perspectives on deforestation, socio-economic context, and chains of explanation framed by the media and program documents on the deforestation of Cox’s Bazar. There will be a comparison of

portrayals of deforestation issues between media framing and the SAFE Plus Program. The paper ends with a discussion of many key policy recommendations.

2. Conceptual framework and literature review

The ecological impact of refugees on affected areas is recognized to be complex. Tafere (2018) studied five East African countries (Ethiopia, Kenya, Rwanda, Sudan, and Uganda) to identify the impact of refugee influx on the environment. He suggested analyzing the impacts of a refugee through a lifecycle process or end-to-end process (place of origin, the journey to a displacement camp, the camp life, and the repatriation and reintegration processes). Tafere (2018, p.199) also argues for placing the environment as an integral part of the response; incorporating refugee issues in relevant policies of host countries; mandatory environmental assessment for environmental policy regime; and including environmental damages in policy actions.

The complexity of environmental problems may be understood from multiple perspectives of different actors during policy formulation (Milne et al. 2016, p.6). Political ecology, among others, has become a dominant framework to understand nature-society or human-environment interaction (Acheampong 2020), especially ‘how particular scholars make use of the concept of power to interpret human/society/nature relations, and how they privilege one particular perspective over others’ (Khan 2013, p. 460). There is a difference between political and apolitical ecology (Robbins 2012, p.13). The apolitical ecological approach—called the Neo-Malthusian view or ‘eco-scarcity’ arguments (Khan 2013, p.461)—blame proximate and local forces for ecological problems. Such as this approach is reinforced by the demographic explanation for the environmental crisis, theoretically underpinned by Thomas Malthus, supporting population growth is the cause of natural resource scarcity (Robbins 2012, p.13). From a political, ecological approach, Robbins (2012) suggests analyzing environmental issues considering a larger context. In deforestation, for example, how the different actors are explained in the process? Does it count systemic drivers to explain human-environment interaction, like deforestation, based on power relations among different actors? This will reveal the involvement of different actors in deforestation in the local context of Teknaf.

Another way to explain deforestation is through ‘environmental narratives’—an explanation of environmental cause and effect that emerge in contexts where environmental knowledge and social order are mutually dependent (Forsyth & Walker 2008, p. 17). This approach focuses on how the narratives become adopted as ‘truth’ because of the social process rather

than scientific reality (Forsyth 2003, p.96) based on power, access, representation, and construction of environmental problems (Davidsen 2010, p. 2). The concept of ‘discourse,’ a ‘shared meaning’ created by different actors without ‘objective knowledge,’ is related to this approach. According to Hajer (1995), discourse forms context, frames problems, and distinguishes some aspects of the situation (Milne et al. 2016, p.6). Therefore, it divulges different perspectives or viewpoints on a problem.

There are relatively few studies on the deforestation of Cox’s Bazar in connection with the Rohingya crisis. Tani and Rahman (2017) used a political ecology framework to analyze the mechanism and causes of deforestation in Teknaf ECA before the 2017 Rohingya exodus. They concluded that enterprise-led or capital-led deforestation is not evident in Teknaf (p.6). Ordinary people living around forests and consumers of trees are preventing forest regeneration (p.7). They used Rudel and Roper’s (1997) ‘immiserization’ model of deforestation, which supports that poor local farmers and people use forest resources due to a lack of economic alternatives and population pressure. In the case of Cox’s Bazar, as a livelihood activity, fuelwood harvesting and betel leaf cultivation lead to deforestation (p.7). Rohingya people, along with host people, use forest resources to meet up a primary livelihood. Ullah and Tsuchiya (2017, pp. 85-100) found that the people of Teknaf are involved in fuelwood collection in three ways: purchasing, collecting, and selling. Fuelwood is used for cooking and income generation. However, they did not show any connection between Rohingya and fuelwood marketing and distribution. Rohingya refugee is treated as encroacher in the forest. Irrespective of ethnicity, both Bengali and Rohingya have access to forests legally and illegally (Tani 2017, p.107). Rahman (2017, pp.113-125) studied the livelihood of Rohingya and its impact on TWS. Through a study of 65 Rohingya households, Rahman concluded that a low-level economic status pushed 23% of Rohingya to adapt cutting and setting of fuelwood from the forest as livelihood activities, which cause ‘severe deforestation’ (p.123).

The studies did not find any involvement of Rohingya in two main activities of deforestation: neither in betel leaf cultivation (for details, Rahman 2017) nor in fuelwood marketing and distribution in Teknaf (Ullah and Tsuchiya 2017). From their studies, the involvement of Rohingya in commercial fuelwood activities is insignificant. The impact of fuelwood collection on forests depends on patterns of supply, demand, and commercial linkage (Ullah and Tsuchiya 2017, p.86). In all the processes, the research did not reveal the commodity chain of deforestation with the fuelwood business in Teknaf. From the discussed studies, there

was a fuelwood business without significant involvement of Rohingya before the 2017 influx. It is necessary to understand, in the post-2017 influx, how much Rohingya are involved with the fuelwood business or daily consumption or whether they bought it from the market and the supplier of this fuelwood, significantly, how Rohingya were recognized in program document and portrayed in media regarding deforestation of Teknaf.

According to Bennett (2002), media framing is ‘choosing a broad organising theme for selecting, emphasising, and linking the elements of a story such as the scenes, the characters, their actions, and supporting documentation’ (Boykoff 2008, p.555). In an environmental crisis, media act ‘as both windows and drivers of informal and formal discourse’ (Cronin & Santoso 2010, p. 4). Media narratives help to disclose ‘how the values, framings, and actors evolved’ (Forsyth 2019, p. 597). Media, in tandem, ‘reflect’ and ‘affect’ social perception of an issue. Therefore, how the media portrays the issue of deforestation and its actors is a compelling factor in understanding its politics. Specifically, the media frame is used as a lens to ‘brings certain aspects of reality into sharper focus, while relegating other aspects to the background’ (Cronin & Santoso 2014, p. 5). This is how it tells the dominant voices of a particular group. In media framing, there are generally two frames, ‘frame 1’ often called ‘primary frame’ or ‘advocate’ (to support headlines), which could be found in the subheading or first paragraph. The rest is ‘frame 2’, often called ‘secondary frame’ or ‘adversary’ may be found as an alternative view to balance the earlier (Cronin & Santoso 2010, p.5). Identifying advocate and adversary not only helps to analyze the dominant actor of the narrative but also helps to reveal the comparative importance given by journalists (Cronin & Santoso 2010, p.5).

Some work has been done on media portrayals and narratives of the Rohingya Crisis. However, no one focus on the environmental perspective. For example, studies done on eastern and western media perspectives of the overall Rohingya crisis (Afzal 2016); similarities and differences of media portrayals in different countries (Isti’anah 2018, 2019); elite consensus or dissensus based on state’s preferences (Islam 2018); political view and repatriation (Ubayasiri 2019); changing the portrayals of Rohingya over the time (Wadud 2020); media representation of Rohingya (Chadha et al. (2018); media as a propaganda tool against Rohingya (Ebbighausen 2018); and role of state media of Myanmar (Lee 2019). The post-2017 Rohingya crisis lacks analysis from the perspectives of political ecology and environmental narratives in connection with media portrayals. A specific analysis of environmental policy and programs is yet to do. Therefore, I will focus on environmental narratives and media portrayals of deforestation as reflected in the SAFE Plus program.

3. Methods

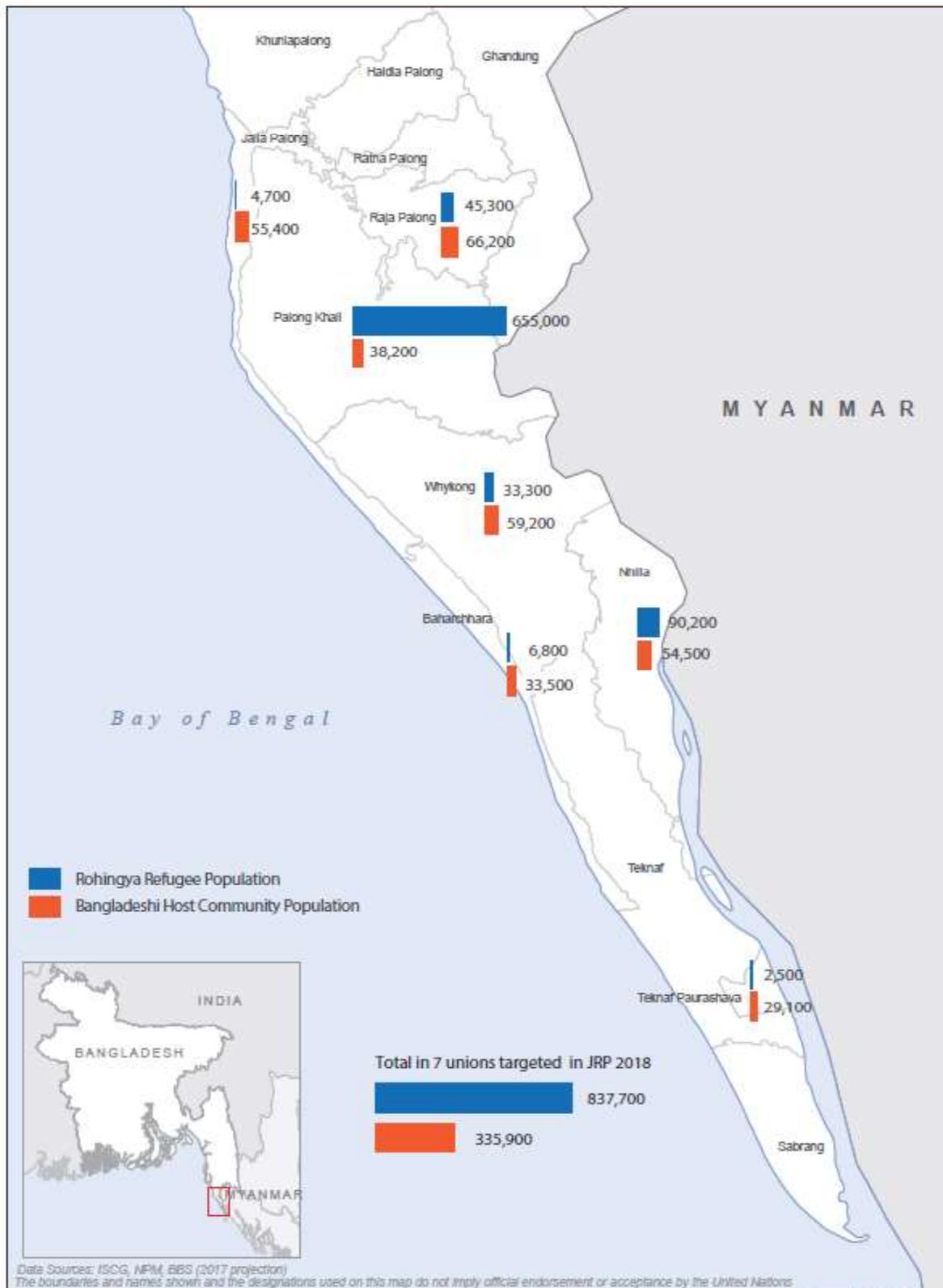
I will analyze the portrayals of deforestation at Teknaf, Cox's Bazar in media and program documents to reveal the actor's perspectives. Through examining environmental narratives as portrayed in two dailies (the Prothom Alo and The Daily Star) and SAFE Plus Program, I will reveal the gaps or simplification in portrayals of deforestation of Teknaf through media framing analysis, key informant interviews, and desktop study.

3.1. Study design

Study Area

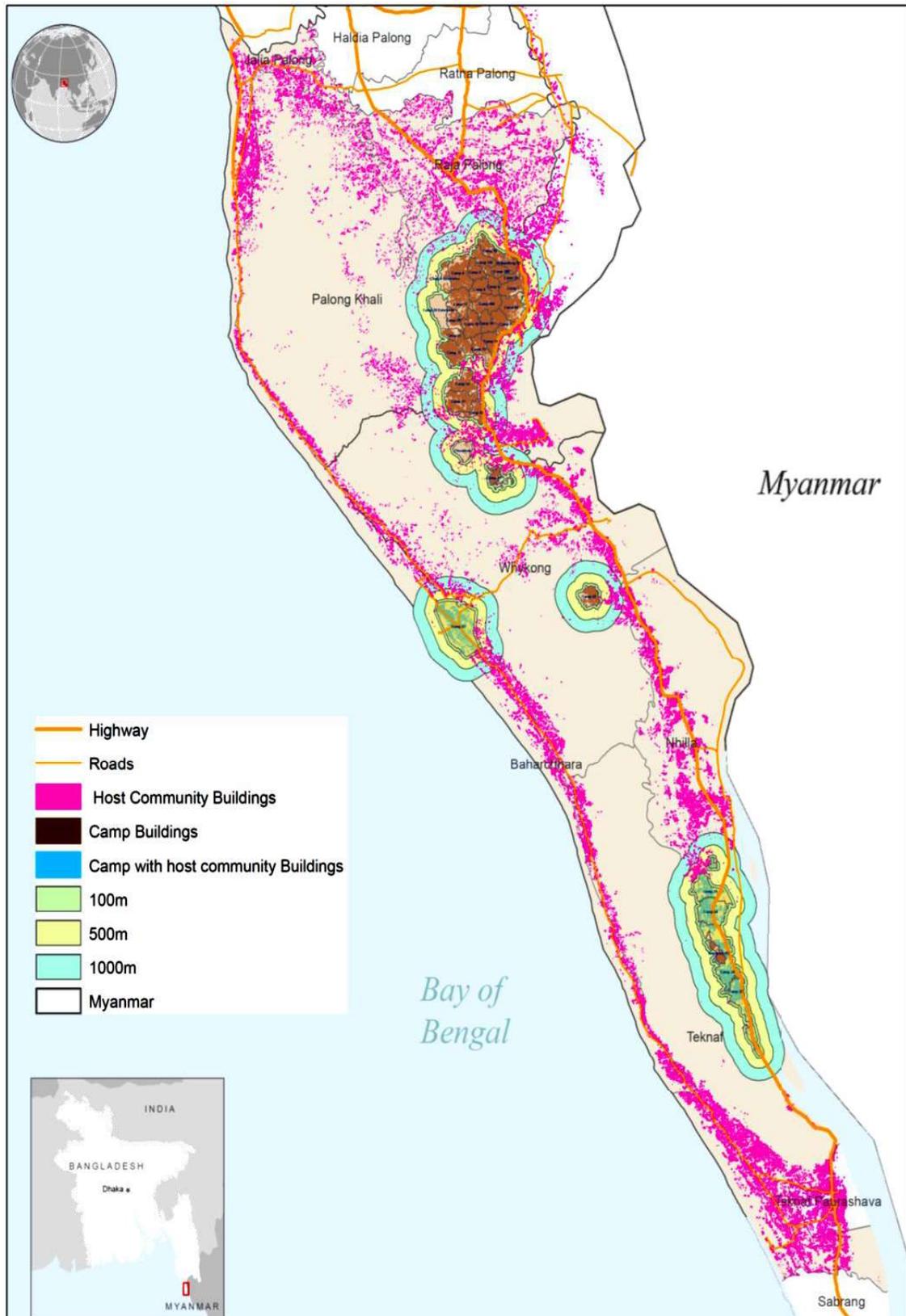
Teknaf Upazila, under Cox's Bazar District, is the south-eastern part of Bangladesh, bordered by Ukhia Upazila to the north, the Naf River and Myanmar to the east, and the Bay of Bengal to the western and south-eastern border. Mainly three communities are living, Bengali, Chakmas, and Rohingya refugees. The total area of Teknaf is 388.68 km² of which around 41% is forest cover, nearly 15000 hectares. 14,602 ha of land are under forest, of which 11,615 ha have been declared TWS. Teknaf has a resident population of 253,638 and a refugee population of 159,598 Rohingya (in eight camps) as of 30 April 2020 (ISCG 2020). (See **Map 4**). Often, Rohingya people leave nearby host communities (See **Map 5**).

Map 4 Host and Rohingya Refugee in Cox's Bazar



Source: ICSG (2018)

Map 5 Rohingya and Host Community Settlement in Cox's Bazar



Source: ICSG (2019)

Research Questions

This research aims to analyze the issue of deforestation in the context of environmental narratives and media portrayals to find perspectives of different actors and the SAFE Plus program as a case study to compare the reflection of the deforestation issue of Teknaf, Cox's Bazar between program document and media. Therefore, the research questions are:

1. What are the key environmental narratives of the Rohingya crisis that frame deforestation in Teknaf from government and non-government perspectives?
2. Are there gaps or simplifications in portrayals of deforestation in mass media versus in project documents regarding deforestation and its mitigation in Teknaf?
3. Are the programs likely to mitigate deforestation and loss of critical ecosystem services in the Teknaf Upazila of Cox's Bazar?

Limitation of study

I use primarily secondary data in this research. The unavailability of funding for this research and travel restrictions due to COVID-19 squeezed the scope of primary data collection. Apart from that, due to Ethics Approval, I cannot take interviews from Rohingya refugees, Bangladeshi nationals based on Bangladesh, especially Bangladeshi government officials.

3.2. Data collection

I collected data through literature review, SAFE Plus program document analysis, content analysis, and key informant interviews in this research. Due to time constraints and to keep the research small, I picked the forest loss or degradation of forest quality, the SAFE Plus program, and two national dailies from Bangladesh. The contents of newspapers were analyzed from 01 September 2017 to 30 November 2018. I selected this period because the SAFE Plus program was kicked off in November 2018. Therefore, the period from the start of the Rohingya refugee influx to the start of the deforestation program was selected to compare the portrayals of the issue between the program document and the media.

I reviewed the literature on the impact of Rohingya refugees on the forest environment. These include several baseline studies on the impact of Rohingya on the environment and host

communities from international organizations and the internet for real-time updates on the Rohingya crisis.

I selected the SAFE Plus program as a key document for analysis because this is the first and most comprehensive program on deforestation mitigation in Cox's Bazar. Moreover, this project was initiated in November 2018, around one year after the Rohingya refugee influx. This is very consumable for analysis with media portrays because of the early starting from the Refugee influx.

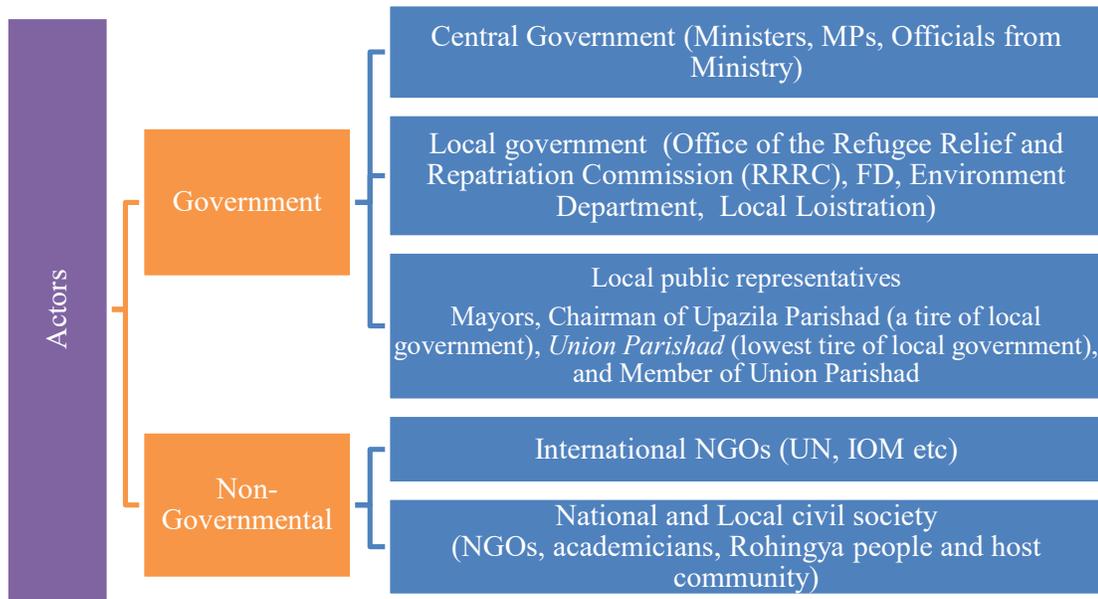
The central portion of data for my research comes from reviewing the two most circulated dailies: the Prothom Alo (Bengali) and the Daily Star (English). I collected the reports, interviews, and columns on the deforestation issue of the Rohingya crisis from 01 September 2017 to 30 November 2018 through internet searching. I used the 'Boolean method' of the words 'Rohingya,' 'Rohingya AND Environment,' and 'Rohingya AND Forest' in The Daily Star on www.dailystar.net. I found 20 news reports and columns within the period. In the Prothom Alo, I searched the Bengali world of Rohingya (রোহিঙ্গা) on www.prothomalo.com, and found 788 entries. After skimming all news, 19 News addresses the deforestation issue of Cox's Bazar.

I conducted two key informant interviews with the Program Manager, the operational head of the SAFE Plus program over telephone, and a professor from Australian National University, who have extensive knowledge of the Rohingya refugee crisis in Bangladesh. I asked each person to respond open-endedly on the environment and the Rohingya refugee crisis.

3.3. Data Analysis

I searched for different actors, sources of information, and voices of involved communities and narratives of deforestation depicted in newspapers. Then I broadly clustered the views of five different actors in two perspectives: government and non-governmental. (See **Figure 1**).

Figure 1 Actors related to Forest and Rohingya refugees in Teknaf, Cox's Bazar



Source: prepared by the author

In media framing analysis, I followed three steps. In the first step, I reviewed the headlines to reveal whether they created any narratives on deforestation. In the second step, I tried to find out the news's 'advocates' and 'adversaries' to reveal the main actors of narrative creation and the nature of voice like sympathetic or aggressive. This is also useful for discovering the dominant and missing voices in the reporting. In the third and last step, I compared the 'advocates' and 'adversaries' of news to divulge the ideology of the actor in a broader perspective. I translated the reports of the Prothom Alo from Bengali to English when I used these in the research.

I transcribed the audio transcript of the critical informant interview and translated it from Bengali to English where necessary.

4. Findings

I arranged the findings in three broad sub-headings according to research questions. Firstly, the findings illustrate contrasting perspectives of government and non-governmental actors on Rohingya and deforestation. Secondly, the media and program document simplified the complex issue of deforestation in Teknaf and blamed mostly Rohingya for deforestation. The last part discussed media portrayed whose voices of different actors on deforestation.

4.1. Government versus non-governmental perspectives on deforestation

Through media framing analysis, I find significant differences between the views of government and non-governmental actors on deforestation and Rohingya refugees. Media portrayed that the government actors have accommodative and rigid perceptions of Rohingya refugees. They are sympathetic to the host community. The non-governmental actors have 'anti-refugee and sympathetic perceptions' of Rohingya.

a. Government perspectives

The government is accommodative to Rohingya.

The Bangladeshi government demonstrated its accommodative attitude toward Rohingya by allocating forest land to build refugee camps despite knowing its adverse effects on the environment and society. During the mass influx in early September 2017, Asaduzzaman Khan Kamal, Bangladesh's Home Minister, informed allocating 2,000 acres of forest land in Cox's Bazar and promised to allocate more required area (Daily Star 2017). Up to September 2018, the government allocated 5835 acres of forestland (3811 acres natural forest and 2024 acres social forestry) for the Rohingya refugee to build shelter and relocate them from landslide-prone areas (Ejaj & Uddin 2018).

The government prioritized the Rohingya over the environment. For example, a high official of FD said, 'our main purpose is to protect people' (Gain 2018). The Minister for Environment and Forest and Climate Change acknowledged the loss of ecology due to Rohingya settlement and urged relocation and providing alternative cooking fuel (Moral & Islam 2017) without blaming Rohingya.

The government is in an extreme position.

The media showed the stern face of government actors regarding the use of forest land and their resources to build refugee shelters. In most cases, they blame the Rohingya without mentioning the source or method of analysis. For example, a Member of Parliament (MP) claimed in the National Parliament that Rohingya refugees damaged forests worth Tk 151 crore by cutting trees, and the entire environment in Cox's Bazar area had been damaged due to their influx (The Daily Star 2017a).

Government actors used strong voices, comments, or words to blame Rohingya for deforestation (**Table 1**). In these comments, they rarely mentioned another driver of deforestation.

Table 1 Comments of government actors on deforestation and Rohingya

NO	Comment	Commentator
1.	‘we cannot allow them to destroy our environment’ (The Daily Star 2017)	Law Maker
2.	Forests are being destroyed due to the ‘indiscriminate felling of trees’ and ‘desperate move to collect firewood’ by Rohingya refugees (Yousuf 2017)	FD Official
3.	‘Rohingya must be stopped from further expanding into forest’ (Gain 2018)	FD Official
4.	‘Rohingya are cutting trees even they are extracting roots of tree, if it continues, the whole forest would be destroyed’ (Rahman & Uddin 2018a)	FD Official
5.	‘Destroying hills and reserve forest is not accepted although Rohingya are being accepted from the humanitarian ground’ (Rahman & Uddin 2018a)	FD Official
6.	‘Reforestation’ and ‘social forestry’ is not possible, ‘that’s the price you pay when you decide to shelter a million refugees’ (Khan 2018)	FD Official

Source: produced by the author

Deprivation and resource competition between host people and Rohingya refugee

The government actors, primarily local government officials, focused on various socio-economic deprivations of host people due to the Rohingya influx. A Chairman of Union Parishad claimed that there is visual discrimination between host people and the Rohingya. The later are receiving commodities and cash in aid (Molla 2018). Apart from that, local government actors claimed that there is competition between host people and Rohingya refugees regarding access to forest resources. The RRRC and Vice Chairwomen of Teknaf Upazila Parishad asserted the host community's livelihood loss due to forest destruction by Rohingya refugees (Khan 2018).

b. Non-governmental perspective

A lukewarm welcome

Through media analysis, it is found that local people were welcoming to Rohingya initially when they were small in population. They became annoyed with the growing refugee number, and their accommodative attitude faded. For example, the President of ‘Teknaf Upazila Corruption Prevention Committee,’ a civil society organization, said:

‘the government throws away own child [host people] and adopts other [Rohingya refugee] to show humanity. Now we do not have any place to live. Trees and forests are cut down to make camps for them. It could be that one day we cannot stay in Teknaf’ (Rahman & Uddin 2017).

Academicians also criticized the government for allocating forest land for refugee camps. As Ainun Nishat, Emeritus Professor of BRAC University and renowned environmentalist, stated, ‘without any study and assessment, forest land and hill are flattened and changed the soil nature permanently. It is an injustice, and it cannot be accepted. The government has no right to damage the nature’ (Ejaj & Uddin 2018).

Rohingya as forest destroyer

Non-governmental actors, mostly local environmentalist groups, portrayed Rohingya as synonymous with forest destroyers in Cox’s Bazar. The media narratives represented Rohingya as the only driver of deforestation through inflated statistics. For example, the Forest and Environment Protection Council of Cox’s Bazar, a local environmentalist group, claimed that to be used around 10000 acres of forest land as Refugee Camps within one month (Rahman & Uddin 2017) and around 5500 acres destruction within two months (Uddin 2017). Although, according to FD, in the first month of the Rohingya influx, around 3875 acres of forestland is used for establishing the Rohingya camps (Rahman & Uddin 2017). The Coast Trust and ‘Cox’s Bazar CSO NGO Forum (CCNF)’ two other local environmental groups, said from their study that 2250 tons of wood are needed daily as fuel in refugee camps. The forest of Ukhia will be destroyed by 2019 if it continues (Prothom Alo 2018a).

Studies from international communities also predicted a horrible scenario of deforestation in connection with the Rohingya influx. For example, UNDP estimated deforestation per day as

ten football fields (Prothom Alo 2018), a total loss of 26,000 acres of forestland in the next 11 months (Mahmud 2018).

Rohingya as 'scapegoat'

Rohingya refugees were blamed for deforestation although deforestation in Cox's Bazar dates back before the influx of Rohingya. The Forest and Environment Protection Council predicted in June 2017, two months earlier of the Rohingya refugee influx, that 'more than 30 percent (28000 hectares) of the total hill and forest land in Cox's Bazar, 89,162 hectares, has been lost to grabbers'. Then there were only 150,000 Rohingya refugees in Cox's Bazar (Jinnat & Huq 2017). Moreover, FD allocated forestland to other government and non-governmental organizations before the Rohingya influx in 2017 to build a cantonment and marine drive (Gain 2018). Gain (2018) also claimed that the traditional garjan (*Dipterocarpus turbinatus*) forestland was destroyed due to the plantation of exotic trees.

The host people blamed Rohingya refugees for decreasing access to forest resources due to deforestation in Teknaf. A UNDP report asserts that 'deforestation linked to the influx have deprived or reduced host communities' access to firewood, timber for housing as well as forest fruits and other non-timber forest products' (Molla 2018). However, Nasrin Siraj, an anthropologist, tries to interpret these claims as an 'anti-refugee' mentality or perceptions about Rohingya. She claimed some economic opportunities for local people have increased due to the Rohingya influx, such as renting houses to Rohingya, currency exchange business, buying relief from Rohingya at a low cost, and boosting up the hotel business due to increasing activities by international organizations (Siraj 2017).

A humanitarian view Rohingya crisis

Some academicians treated the Rohingya crisis and its subsequent deforestation as exceptional. For example, ANM Muniruzzaman, security analyst and Chairman of the Bangladesh Institute of Peace and Security Studies said deforestation is a more significant part of the Rohingya crisis, and Rohingya has not to be blamed for this situation (Muniruzzaman 2018).

This situation was urged to consider from the humanitarian ground. Such as Atik Rahman, Executive Director of Bangladesh Center for Advance Studies (BCAS) and eminent environmentalist, said, 'we are passing thorough an emergency in Cox's Bazar. Whatever the

development initiative we are taking, we must consider 10 lacs Rohingya and local people (Khan 2018).

The international community also prioritized Rohingya over the environment. For example, an International Union for Conservation of Nature (IUCN) Officer said the ‘environment was the least priority’ (Khan 2018).

4.2.Human-environment interaction in media: actors and sources

Simplification of deforestation

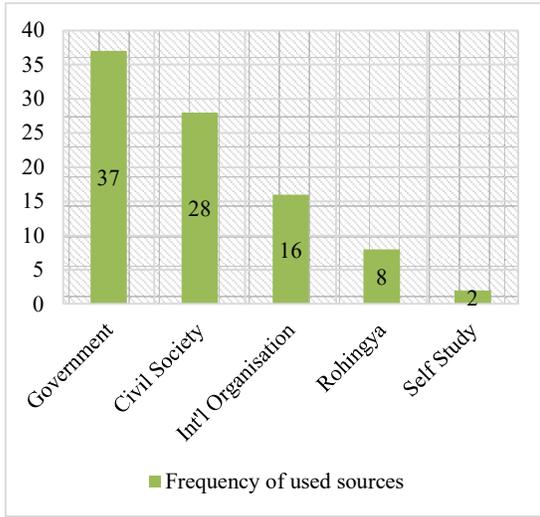
Media portrayals created a simplistic narrative of deforestation in Cox’s Bazar. Media reports did not consider the larger context and actors of deforestation. It reflected powerful but simplistic narratives about deforestation from the beginning of the influx. For example, a lawmaker said that ‘millions of tonnes of wood are being used by the Rohingya refugees for their cooking purpose each day’ (The Daily Star 2017). This is mere a simplification of deforestation and creates a negative perception of Rohingya, where Rohingya was established as the only driver of deforestation. Even the simplification is reflected in the new headlines. (Detail in **Section 4.3**)

The SAFE plus program document also mentioned that ‘at the current rate of firewood collection, estimated complete loss of forest by the end of 2019 in Ukhiya and Teknaf Upazilas’ (FAO, IOM & WFP 2018, p.3). This view supports the same analysis as the media do.

Who accused Rohingya?

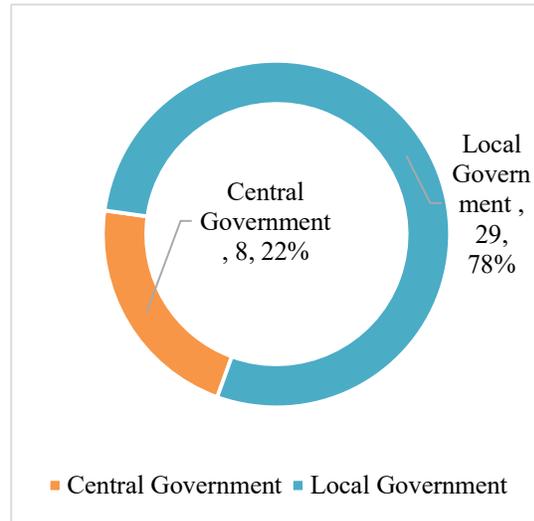
The results suggest that powerful actors' views are reflected in both media and the program document. In most cases, the voices of government institutions were used more than civil society, followed by international organizations in the reports where Rohingya were blamed for deforestation (**Figure 2**). Among government officials, the media portrayed a more negative view of the local government than the central government accusing Rohingya. Amongst 37 government sources, Media used the central government’s voice eight times, whereas 29 times local institutions (**Figure 3**).

Figure 2 Voices of different actors reflected in the reports where Rohingya were blamed



Source: produced by the author

Figure 3 Frequency of using sources to government sources to blame Rohingya



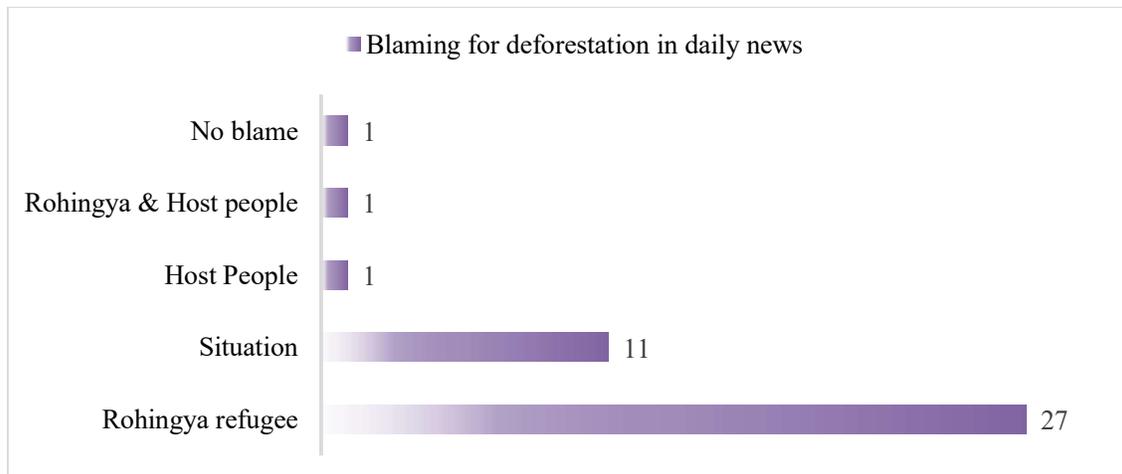
Source: produced by the author

4.3. Deforestation in media versus SAFE plus program

'Forest destroyer' and 'scapegoat' versus 'victim of the situation'

According to the findings, most of the cases in the media describe Rohingya people as 'forest destroyer' and blames Rohingya for deforestation. Rohingya was blamed on 27 of 39 news. In 11 cases, Rohingya are said to be involved in deforestation due to their socio-economic situation. Only in a particular case, host people are blamed. (Figure 4)

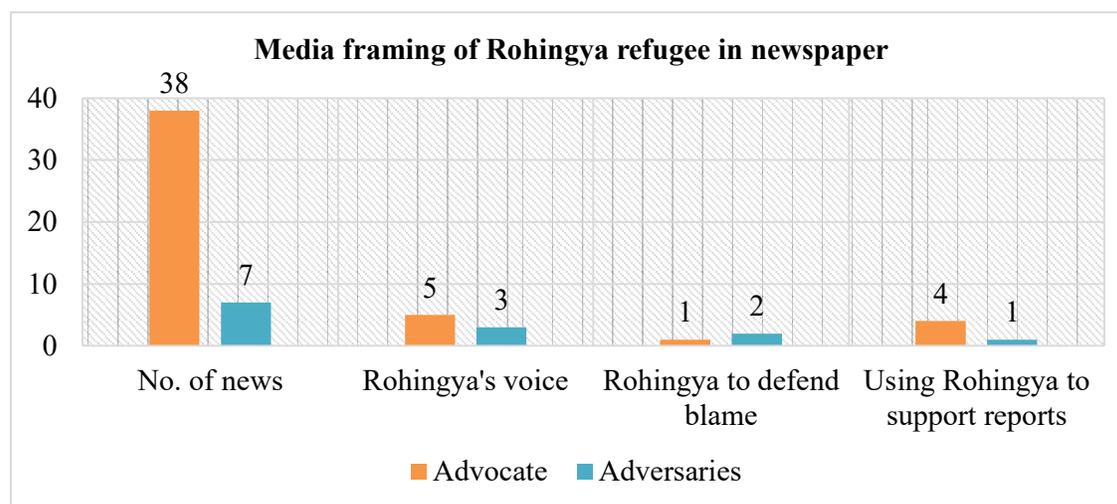
Figure 4 Blaming for deforestation in the daily news



Source: produced by the author

However, the media did not present the Rohingya's views on the deforestation allegation. Out of 39 selected news, 38 were 'advocate' (supporting or justifying headlines), and only seven had 'adversaries' (supporting or presenting alternative views of advocate). The media reflected Rohingya voices only eight times. Among them, five times for advocates and three times for adversaries. Their voices were used to support reporters' claims four times and alternative views once only. The media reflected the Rohingya voice only three times to defend the charge against them. (Figure 5)

Figure 5 Media framing of Rohingya Refugees in Newspaper



Source: produced by the author

In contrast to the media voice, the SAFE Plus program documented the Rohingya refugee regarding deforestation as victims of their situation. The SAFE Plus program document describes Teknaf's deforestation after the Rohingya influx in 3. Situation analysis' section (FAO, IOM & WFP 2018, pp.3-4). The document recognizes an acute lack of cooking fuel among Rohingya. 'Every day,...hundreds of Rohingyas,...walk kilometers to the forest areas to gather wood, sticks, roots, and leaves, facing many dangers including ...conflicts with the host communities.' (FAO, IOM & WFP 2018, p.4)

Drivers of deforestation: Rohingya versus Rohingya and host people

Both the SAFE Plus program document and media discussed actors of deforestation in Teknaf. I have found that in most cases, the media described Rohingya as a proximate driver of deforestation. The headlines of news create a negative perception of Rohingya with the

environment. It was found that out of 39 headlines, 25 headlines represent the negative involvement of Rohingya regarding forests (**Table 2**).

Table 2 Negative image of Rohingya in newspaper headlines

No	Headlines
1.	'Rohingyas damage forest worth Tk 151 crore in Cox's Bazar.'
2.	Trees, Hills Razed By Rohingyas
3.	Humanitarian response, at a cost: The Rohingya camps in Cox's Bazar present long-term environmental and ecological implications, along with more immediate dangers
4.	Rohingya Influx: Needs of affected locals 'ignored'
5.	Ukhia, Teknaf forests in grave danger: Says COAST Trust study
6.	Environment in Cox's Bazar in peril: Only a quick Rohingya repatriation can mitigate those
7.	Overuse of resources by Rohingyas threatens forests in Ukhia, Teknaf.
8.	Govt. allocates 2,000 acres for Rohingyas.
9.	মারাত্মক পরিবেশ বিপর্যয়ের আশঙ্কা, চার হাজার একর পাহাড় কেটে রোহিঙ্গা বসতি/ Environment is in severe danger: Rohingya settlement through cutting 4000 acres hills
10.	ফসলি জমিতে রোহিঙ্গা বসতি/ Rohingya settlement in agricultural land
11.	১০টি ফুটবল মাঠের সমান বন উজাড় প্রতিদিন/ Deforestation tantamount to 10 football fields per day
12.	রোহিঙ্গাদের আশ্রয় দেওয়া এলাকা বিপর্যয়ের ঝুঁকিতে/ Disaster risk of Rohingya settled area
13.	রোহিঙ্গাদের এক ঝুঁকি থেকে বাঁচাতে আরেক ঝুঁকি তৈরি করা হচ্ছে/ Risk minimizing measures for Rohingya creates another risk
14.	২০১৯ সালের মধ্যে উখিয়ার সম্পূর্ণ বন উজাড় হয়ে যাবে/ Forest of Ukhia will be completely disappeared by 2019
15.	রোহিঙ্গা বসতির কারণে ৬ হাজার একর বন উজাড়/ 6000 acres forest was vanished due to Rohingya settlement

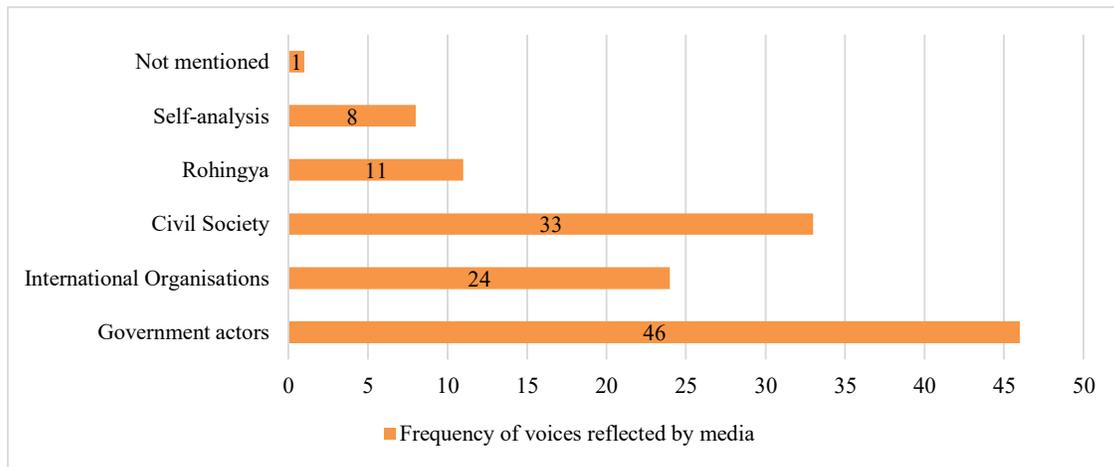
Source: produced by the author

The program document identified Rohingya and host people as fuelwood and forest resource users. The Program document states: 'Sustainable fuel wood management was challenging before the crisis. The influx of new Rohingyas has exacerbated this problem' (FAO, IOM & WFP 2018, pp.3-4). This indicates that there was fuel wood demand among locals before the Rohingya influx. After the influx, the competition over forest resources, including fuelwood, increased.

Voice reproduction: ‘powerful’ versus ‘international.’

Both the media and SAFE Plus program documents used information from various sources. The media used both primary and secondary sources, but mostly the voice of government actors. In 39 news, the media used government actors as sources or reflected their voices 46 times, followed by civil societies, which is 33 times. The media used the voice of international organizations 24 times as a source. However, it reflected the voice of the Rohingya only 11 times. (Figure 6)

Figure 6 Reflection of voice in media



Source: produced by the author

On the other hand, the SAFE plus Program report was produced based on ‘preliminary evidence’ from different international organizations and thus it produces the voice of the international community. (Table 3)

Table 3 Source of information for the SAFE Plus Program

No	Report name/ Institution	Type of Source
1	Rapid Assessment of Wood Fuel Demand and Supply for the Newly Arrived Rohingyas in Cox’s Bazar by WFP, FAO, IOM	International Organization
2	SAFE Rapid Assessment by WFP	International Organization
3	Biomass and Energy Assessment by FAO	International Organization
4	Refugee Influx Emergency Vulnerability Analysis by WFP	International Organization
5	Forest Department (FD) Bangladesh	Government
6	Asian Disaster Preparedness Center (APDC) Study	International Organization

Source: produced by the author

In comparison, media mainly depend on domestic sources like government, civil society, and international organizations. Safe Plus documents only depend on international organizations and a bit on the forestry department of Bangladesh. The findings suggest that Rohingya's voice is negligible in both media and SAFE Plus documents.

5. Discussion

In the above section, I sketch out that regarding the deforestation of Teknaf, the media simplified the issue of deforestation; it hides prominent and local actors of deforestation and only focuses on Rohingya. There are also contrasting perspectives of government actors, portrayals of Rohingya as forest destroyers and scapegoats of all problems, (re)production of a powerful voice by media. However, examining the implication of media portrayals is essential to find out the winner and loser of this whole issue. Why does the Bangladesh government have a contrasting perspective regarding Rohingya and deforestation Teknaf? And the implication of the Rohingya crisis of media's lean-to different actors except for Rohingya.

Who is getting public indemnity, and who is getting denunciation?

A clear understanding of the socio-economic process is essential for practical environmental management problems (Black 1994a, p. 114). However, without considering the more significant context deforestation problem in Teknaf, the media presented Rohingya as 'forest destroyers', thus hiding other drivers of deforestation. They were saved by simplifying a complex deforestation problem by creating simplistic media narratives. According to Forsyth & Walker (2008, p. 18), 'narrative "stabilize" complex and uncertain processes of environmental change into relatively simple and transferable summaries.' Through this simplification, the other drivers of deforestation, except the Rohingya, are getting indemnity publicly.

Both media and SAFE Plus documents recognized that population pressure is the cause of deforestation. Since the Rohingya are the majority, they consumed most of the fuelwood and chopped the tree down. Although, according to FD, Bangladesh lost around 450,000 acres of forestland where the government itself allocated 150,000 acres of forestland to government and non-governmental organizations for development work. Through land grabbing by

influential persons and organizations, Cox's Bazar experiences a heightened rate of forest land loss (Islam 2020). This apolitical or eco-centric view of the deforestation problem relegates the powerful land grabber. Even the 'systemic' driver of deforestation, the Myanmar state who pushed Rohingya here, according to a professor (2020, pres. comm. 15 October), is skipped from the discussion.

Media framing also saved Bangladesh Government. Managing forest land is the responsibility of the forest department and other institutions; as a professor said, pre-influx deforestation in Teknaf happened because of corporate interest. This includes rubber plantation, irresponsibility, failure of the forest department to protect the forest, and cantonment building (2020, pres. comm. 15 October). However, media discourse claimed it was Rohingya who did deforestation in Teknaf. This is one sort of 'public indemnity' of powerful and systemic drivers of deforestation through shouldering the liability to Rohingya, and they become 'scapegoats' through this negative connotation in the media. According to the Program Manager of SAFE Plus, this information might create a wrong perception among host people, thus providing speculation and wrong information (2020, pres. comm. 11 October). Such as Rohingya is highly under-represented in media and project documents. Their voices are rarely reflected, which also creates a perception among the host and management community that Rohingya have nothing to say, nobody is for them, or they are 'really' doing deforestation.

Binary perceptions of state on environment

My findings suggest that states have dual perceptions of humanity and the environment. Considering humanity, the government allocated forest land for Rohingya settlement on one hand but accused Rohingya of deforestation on the other. This duality of state on Rohingya and environment implied that a small state like Bangladesh must always trade off between humanity and the environment or local context.

The duality exists among the institutions across different scales. Local government actors, like Forest Department, RRRC, and local representatives, are more conservative about Rohingya than the central government. This difference may be happened due to the closeness to the event. Because not only the local organizations but also local civil society had the same perceptions as local actors. On the other, this may be a symbol of the communication gap between central authority and the local level. A third option hunches that local government institutions try to shoulder the liability of incapacity to protect forestland in Teknaf, which happened before coming to Rohingya, to 'subaltern' and 'voiceless' Rohingya.

Whose interests are reflected in the media?

The role of media in the Rohingya crisis in Bangladesh remains critical. Media are influenced by their ideology, business, and political connection. The Prothom Alo and The Daily Star, the most popular newspapers in Bangladesh, are owned by big corporate Transcom Group Bangladesh. These two newspapers exclude some actors in the deforestation of Teknaf in discussion in such a way that raises a question about their embeddedness. My findings through media framing analysis reveals that these media recurrently produced the voice of government, international organization, and civil societies. The production of ‘elite voice’ may have a few causes. Firstly, they are captured by powerful actors, at least informally. The reports are produced in such a manner that conceals what other things are happening at Teknaf. Secondly, as a professor said, newspaper reporters lack sympathy for a humanitarian crisis and training in writing with a compassionate approach (2020, pers. comm., 15 October). Too much dependency on other sources for generating reports indicates the media is lacking in producing ‘investigative’ reports in this humanitarian crisis.

The partiality of media representation during a humanitarian crisis may bring far-reaching consequences to the broader Rohingya crisis. The media framing of the deforestation issues in Cox’s Bazar may linger the refugee crisis because the proper representation of the refugee crisis and responses will assist the government in solving the crisis, as the Program Manager of SAFE Plus said (2020, pers. comm., 11 October). Media can change the perception of host people and create a positive attitude among locals to engage in Rohingya management.

Apart from this, Teknaf besets with several socio-economic problems like drug and human trafficking along with Rohingya and deforestation. The people who steal advantage of nature in Teknaf may exploit this vulnerable situation. Vulnerability among the Rohingya people leads to different socio-economic crimes like drug-smuggling, terrorism and fighting among the groups of Rohingya inside the camps, which become frequent (Rahman 2020). Therefore, the media’s biases toward particular actors will hide actual reality, creating a safe zone for the criminals to act more illegal activities, where Rohingya will be used as their first line of defense.

Question of effectiveness

The previous discussions bring up the question of the effectiveness of the deforestation mitigation program in Teknaf. The eco-centric view of deforestation analysis and blaming

only Rohingya people for deforestation in Teknaf through 'elite construction' indicate the risk of an unsuccessful policy or program. Although the SAFE Program manager said deforestation mitigation programs could not restore the lost ecology completely, they can stop further deforestation and ecosystem deterioration (2020, pers. comm., 11 October). However, it is necessary to consider 'not to move into a cycle of 'blaming' refugees for environmental degradation' (Black 1994a, p.114). The findings of this research prove that the program document and media framings were in the cycle of 'blaming' Rohingya and were not considering the socio-economic context of Teknaf and deforestation.

Rohingya refugees will live in Teknaf for a long time and leave in a sensitive ecological place with large numbers. Black (1994) identified three policy recommendations: it is essential to identify 'impact' and 'degradation,' then identify 'pre' and 'post' influx impact, and design appropriate policy based on this understanding (pp.272-275). However, this research concludes that the program does not consider the larger context of deforestation and does not meet the condition for an effective policy program.

The equal reach of the facilities all over the camp is critical. As the professor said, in big camps like Nayapara, or Kutupalong, all the facilities to mitigate deforestation are unavailable, especially in remote areas (2020, pers. comm., 15 October). As a result, despite deferent programs, refugees from remote areas in the camps again depend on fuelwood.

The ideological view regarding forests is a pressing issue. It may be possible to stop deforestation within camps or adjacent areas to camps. However, it depends on how efficiently the socio-political-economic landscape is considered during program design to mitigate deforestation. Media framing and SAFE Plus analysis show that the deforestation mitigation program may crate advantages for other drivers without considering the larger context. Again, this will create a 'social indemnity' of other drivers except Rohingya refugees.

Lastly, all the deforestation mitigation programs are being taken as a part of the Rohingya refugee crisis. For example, the program manager of SAFE Plus said this would not solve the political problem from where the problem emerges. This is to avoid other more significant crises (2020, pers. comm., 11 October). Similarly, a professor said deforestation mitigation depends on how effectively the systemic driver of deforestation in Teknaf is managed (2020, pers. comm., 15 October).

6. Conclusion

I begin this paper intending to analyze the issue of deforestation in the context of environmental narratives, portrayals of perspectives of different actors in media, and program documents in Teknaf Upazila of Cox's Bazar after the influx of Rohingya refugees in 2017. To fulfill the objectives, I reviewed 39 news published in the *Prothom Alo* and The Daily Star on deforestation concerning Rohingya in Teknaf from September 2017 to November 2018. Through media framing analysis, I tried to find five government and non-governmental actors' perspectives, including Rohingya refugees. Then I compared media discourses on deforestation with the SAFE Plus program document to reveal whether any differences were found regarding analyzing and reflecting the issue of forest degradation in media and program documents. Through media framing analysis, I found a simplification of the deforestation issue through eco-centric and apolitical ecological approaches in both media and program documents. Rohingya was portrayed as the primary driver of deforestation, and other drivers were not considered. I reveal a few contrasting perspectives of government, government, and non-governmental actors regarding deforestation and Rohingya refugees. Media portrayed that government actors welcomed and blamed Rohingya for deforestation simultaneously. It was also found that non-governmental actors had different perspectives. They treated Rohingya as a 'forest destroyer,' 'scapegoat' of all previous problems, although they received Rohingya positively initially. In comparison with media portrayals of the SAFE Plus document, it is found that they both reproduced the voice of influential actors and neglected the Rohingya voice significantly.

I discussed several issues relating to findings and research aim in the discussion section. Firstly, I argued why states have contrasting perspectives regarding Rohingya and deforestation in Teknaf. As a reason for the state's action, I claimed that the state was indecisive due to trade-off decisions between humanity and environmental protection. Regarding contrasting views between the central government and local government actors, I found that there might be a gap in perceptions and information among them. The local institution tried to shoulder its liability of failure to the Rohingya, saving the corrupt officials. Secondly, I focused on the winner and loser of negative portrayals of Rohingya and the simplification of the deforestation problem in media and program documents. I claimed that due to the simplification of the problem, the other drivers of deforestation in Teknaf will get a 'social indemnity.' This will encourage other drivers to blame Rohingya without a scientific basis and to make Rohingya a scapegoat in the future. In the third part of the discussion, I

argued that the biases of media to reflect the voices of different actors might have some negative impacts on the solution to the Rohingya crisis and deforestation mitigation in Teknaf. I claimed that media were embedded because of powerful actors that informally captured them and or there was a lack of training of media personnel about dealing with a humanitarian crisis. The probable impacts would be hiding the actual reality of deforestation, including benefiting local culprits, flowing misinformation to local people, creating mistrust about Rohingya, and hampering effective management of deforestation programs. Fourthly, in my discussion, I claimed that there are several factors to judge the effectiveness of environmental programs in Teknaf. These include the length of stay of Rohingya in Teknaf, availability of deforestation mitigation initiatives to all, ideological view of deforestation issue, long-term program as if Rohingya will be there for a long time, and considering systemic driver of deforestation.

Based on the discussion, I would like to present some recommendations for deforestation mitigation. Deforestation in Teknaf is a part of the Rohingya crisis, a political problem. As a part of a political solution, peace should be contracted in the mind of Myanmar people and the Myanmar government. Because, as the UNESCO constitution, ‘since wars begin in the minds of men, it is in the minds of men that the defenses of peace must be constructed’ (UNESCO 1945). Therefore, repatriation of Rohingya to Myanmar or any third country is necessary. In this regard, education will be the most effective tool for repatriation, transforming Rohingya from ‘undesirable victims’ to ‘desirable victims’, as a professor said (2020, pers. comm., 15 October). If Rohingya become educated, they become ‘desirable’ to all. Secondly, as a short-term mechanism, extra programs may be taken targeting young women for forest management, which should be in a larger context. Before that, the policy makers must be out of the ‘blaming cycle’ of Rohingya for deforestation. Thirdly, the media should portray the humanitarian crisis from the humanitarian aspect, where the voice of the marginalized community will be adequately reflected. By disseminating accurate information, the media may bridge the host and local community in this critical situation.

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