

# “Climate Change, Natural Disasters, Immigrants & Refugees”

**Triantafyllos Karatrantos**

*Political Scientist – Expert on Security Issues, Lecturer  
at the National Security School, Athens*



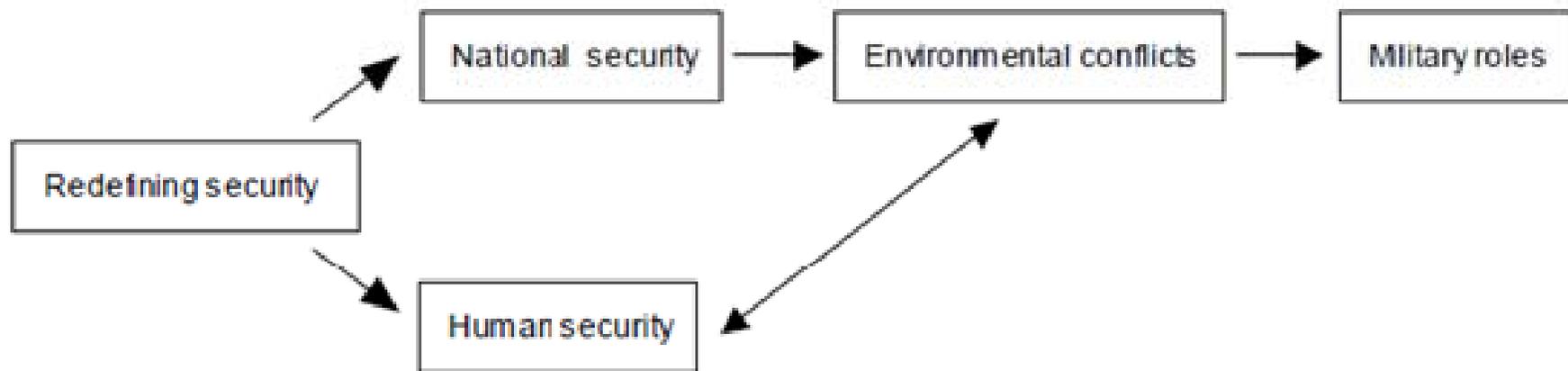
# Climate Change & Security

- Climate change represents the latest in a series of environmental drivers of human conflict (drought, desertification, land degradation, failing water supplies, deforestation, fisheries depletion, and even ozone depletion)
- dealing effectively with climate change would necessitate drastic changes to the use of fossil fuels, climate change quickly became an economic and energy policy issue.
- The language of climate change has shifted once again.  
Climate change is now being recast as a threat to international peace and security.

# Climate Change as a Threat

- Over the long term, climate change will lead to additional resource scarcity and environmental degradation, and may thus amplify or trigger social and political tensions, conflicts and security problems. The impacts of climate change will thus additionally impair the capacity of societies to transform conflicts in a constructive and peaceful manner, and will constrain the capacity of state institutions to deliver key services and ensure public order and stability
- climate change is best viewed as **a threat multiplier**, which may create or exacerbate insecurities and tensions from the individual to the international level.

# A multi-dimensional concept



*Figure 1: A Guide to Environment – Security Linkages*

# Forms of Conflicts

1. Conflict over resources,
2. Economic damage and risk to coastal cities and critical infrastructure,
3. Loss of territory and border disputes,
4. Environmentally-induced migration,
5. Situations of fragility and radicalization,
6. Tension over energy supply,
7. Pressure on international governance

# UN

- In 1987, the «Brundtland Report» introduces in the discussion the notion of environmental security.
- In 1994, UNDP described the concept of Human Security, with environmental threats being its basic pillar.
- In “2004 Report of the High-level Panel on Threats, Challenges and Change”, climate change was listed as a threat to human security and as a “threat multiplier”.
- In 2007, after the suggestion of the United Kingdom, a discussion about Climate, Energy and Security took place in the Security Council.
- The General Assembly of the United Nations (U.N.) adopted on 3 June 2009 a draft resolution on “Climate change and its possible security implications” (A/63/281), which has been proposed by the Pacific Small Island Developing States (PSIDS). The resolution was adopted by a consensus and 101 states supported it. For the first time in the history of the U.N., the United States co-sponsored a climate protection resolution.

# NATO

- Based on a broad definition of security that recognizes the importance of political, economic, social and environmental factors, NATO is addressing security challenges emanating from the environment. This includes extreme weather conditions, depletion of natural resources, pollution and so on – factors that can ultimately lead to disasters, regional tensions and violence.
- NATO is currently conducting these initiatives via its Science for Peace and Security programme, the Euro-Atlantic Disaster Response Coordination Centre (EADRCC) and Partnership for Peace Trust Fund projects. It is considering enhancing its efforts in this area, with a focus on civil emergencies, energy efficiency and renewable power, and on helping member and partner countries address the impact of climate change in vulnerable regions.

# European Security Strategy

- Climate change is one of the biggest challenges mankind faces in the coming years. Rising temperatures, melting glaciers and increasingly frequent droughts and flooding are all evidence that climate change is really happening. The risks for the whole planet and for future generations are colossal and we need to take urgent action. For several years now the European Union has been committed to tackling climate change both internally and internationally and has placed it high on the EU agenda.
- «Global warming and environmental degradation is altering the face of our planet» **Report on the Implementation of the European Security Strategy - Providing Security in a Changing World** – 2008. p.1

# Internal Security Strategy

- **Increase Europe's resilience to crises and disasters**
- The cross-sectoral threats posed by natural and man-made crises and disasters necessitate improvements to long-standing crisis and disaster management practices in terms of efficiency and coherence. This is to be achieved through:
- **making full use of the solidarity clause:** a proposal on the application of the solidarity clause is to be adopted;
- **developing an all-hazards approach to threat and risk assessment:** guidelines for disaster management are to be drawn up, national approaches are to be developed, cross-sectoral overviews of possible risks are to be established together with overviews of current threats, an initiative on health security is to be developed, and a risk management policy is to be established;
- **linking the different situation awareness centres:** links between sector-specific early warning and crisis cooperation systems are to be improved, and a proposal for better coordination of classified information between EU institutions and bodies is to be adopted;
- **developing a European Emergency Response Capacity for tackling disasters:** the establishment of a European Emergency Response Capacity is to be proposed.

# AESEAN

- Enhance joint effective and early response at the political and operational levels in activating the ASEAN disaster management arrangements to assist affected countries in the event of major disasters;
- Enhance civilian-military coordination in providing effective and timely response to major natural disasters;
- Finalise the SOP for Regional Standby Arrangements and Coordination of Joint Disaster Relief and Emergency Response Operations for establishing joint operations in providing relief aid to disaster affected areas of Member States in line with the ASEAN Agreement on Disaster Management and Emergency Response (AADMER);
- Work towards effective interface on disaster management between ASEAN and other ASEAN-related bodies such as the ASEAN Regional Forum (ARF), ASEAN Plus Three and East Asia Summit (EAS) in a manner that will enhance ASEAN's disaster management capacities;
- and Develop ARF strategic guidelines for humanitarian assistance and disaster relief cooperation.
- **AESEAN Political- Security Community Blue Print**

# Regional Vulnerability to Climate Change 1/2

- Southeast Asia is highly vulnerable to climate change:
- a large proportion of the population and economic activity is concentrated along coastlines;
- the region is heavily reliant on agriculture for livelihoods;
- there is a high dependence on natural resources and forestry;
- and the level of extreme poverty remains high.
- A study carried out by Asian Development Bank (ADB) revealed that the mean temperature in the region increased by 0.1 to 0.3 degree Celsius per decade between 1951 and 2000;
- rainfall trended downward from 1960 to 2000;
- and sea levels have risen 1 to 3 millimetres per year.
- Heat waves, droughts, floods, and tropical cyclones have also become more intense and frequent.

### Climate change VULNERABILITY MAP OF SOUTHEAST ASIA

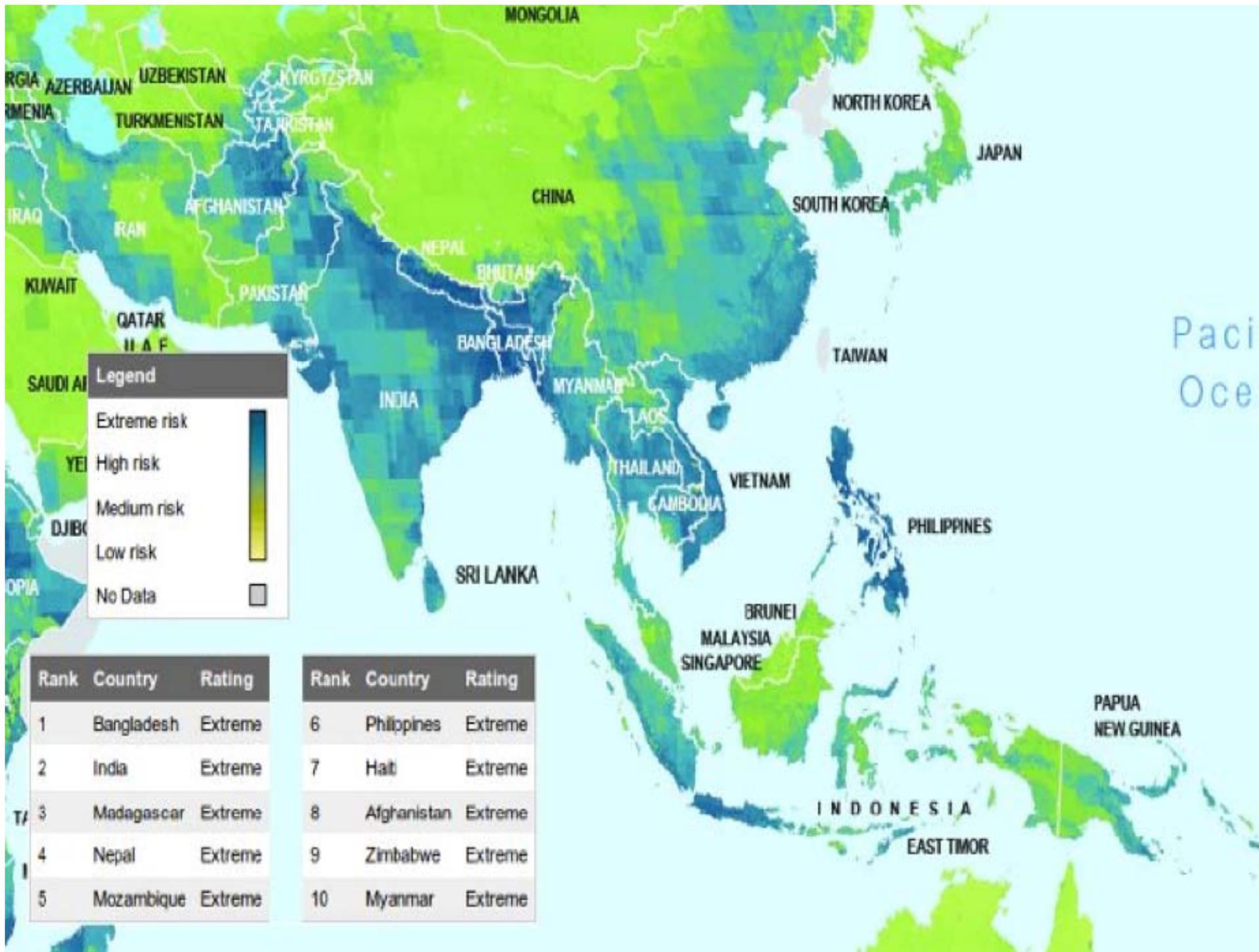


CLIMATE CHANGE VULNERABILITY			
0.00 - 0.06	0.15 - 0.20	0.31 - 0.39	0.66 - 1.00
0.06 - 0.11	0.20 - 0.25	0.39 - 0.49	
0.11 - 0.15	0.25 - 0.31	0.49 - 0.66	

Source: Economy and Environment Program for Southeast Asia

# Regional Vulnerability to Climate Change 2/2

- The same study projects a 4.8 degrees Celsius rise in mean annual temperature and a 70 centimetres rise in mean sea level by 2100 in Indonesia, the Philippines, Thailand and VietNam.
- A rise in sea level would result in major problems for many of ASEAN's largest coastal cities, such as Jakarta, Bangkok and Manila.
- Millions of people may have to be resettled and massive expenditures incurred to protect the coastal cities.
- Projections of economic losses by the ADB study include a decline up to 50 percent of rice yield potential by 2100 and a loss of 6.7 percent of combined gross domestic product (GDP) each year by 2100.
- Other effects of climate change to the region include an increase of GHGs in the atmosphere partly due to low carbon sequestration potential of forests, increasing water stress, as well as adverse impact on human health.



# Climate Change and Disasters 1/3

- In recent years, several ASEAN countries have suffered from natural disasters such as drought, sea level rise, and typhoon. Indonesia and Thailand were hit by tsunami in 2004, earthquake happened in Myanmar in 2012, and also Philippines and Vietnam suffered from Taiphon Haiyan in 2013.
- According to a study conducted by the Asian Development Bank (ADB) in 2009, there are three contributing factors to ASEAN's vulnerability: growing population, long coastlines, and high concentration of people and economics activities in coastal areas.

# Climate Change and Disasters 2/3

- The ASEAN region sits between several tectonic plates causing earthquakes, volcanic eruptions and tsunamis.
- The region is also located in between two great oceans namely the Pacific and the Indian oceans causing seasonal typhoons and in some areas, tsunamis.
- The countries of the region have a history of devastating disasters that have caused economic and human losses across the region.
- Almost all types of natural hazards are present, including typhoons (strong tropical cyclones), floods, earthquakes, tsunamis, volcanic eruptions, landslides, forest-fires, and epidemics that threaten life and property, and droughts that leave serious lingering effects.

# Climate Change and Disasters 3/3

- Some of the major disasters of recent times in the region are:
- the December 26, 2004 Indian Ocean tsunami,
- September 16, 1990 Luzon earthquake (Philippines),
- June 1991 volcanic eruption of Mount Pinatubo (Philippines),
- September 1997 forest-fire (Indonesia) and many others. Climate change is expected to exacerbate disasters associated with hydro-meteorological hazards.
- 1997 (Vietnam) droughts
- 2005 (Thailand) droughts
- May 26, 2006 Yogyakarta earthquake (Indonesia),
- catastrophic floods of January 2007 and October 2008 (Vietnam),
- September 2009 cyclone Ketsana (known as Ondoy in the Philippines),

# The Regional Nature of Disasters

- Often these disasters transcend national borders and overwhelm the capacities of individual countries to manage them.
- Most countries in the region have limited financial resources and physical resilience.
- Furthermore, the level of preparedness and prevention varies from country to country and regional cooperation does not exist to the extent necessary.
- Because of this high vulnerability and the relatively small size of most of the ASEAN countries, it will be more efficient and economically prudent for the countries to cooperate in the areas of civil protection, and disaster preparedness and prevention.

# The Variable of Climate Change

- Climate change is expected to be a major contributor to extreme temperature, floods, droughts, intensity of tropical cyclones, and higher sea levels.
- Based on recent studies, climate change is expected to manifest itself in terms of:
  - Rise in temperature
  - Variation in precipitation
  - Extreme weather events
  - Sea level rise

# Vulnerability Impacts

- These climatic changes are likely to influence people's vulnerability adversely affecting livelihoods and in turn contribute to poverty.
- Vulnerability to these hazards is also increasing, due to continuing poverty and social vulnerability, poorly planned urbanization, environmental degradation, and population growth.
- Climatic variability has both a short term and long-term impact: it can increase the vulnerability of society causing sudden loss of income and assets, sometimes on a periodic basis or otherwise in the long term, on a gradual basis.

# Typhoons

- Typhoons are the most prevalent hazard in the region, causing destruction to human life, buildings, agriculture and infrastructure alike, while causing flooding and landslides/mudslides.
- The region provides compelling evidence of the destructive power of such disasters.
- For example, the tropical cyclone Nargis of May 2008 in Myanmar killed over 133 thousand people, affected over 2.4 million people and caused an estimated economic loss of over \$ 4 billion. Over 600 thousand hectares of agriculture land was flooded, killing about 50 per cent of the draught animals.
- In the same year, on June 21, 2008, Typhoon Fenghsen in the Philippines killed 573 and affected at least 4 million people in just four hours.
- In October 2009, cyclone Pepang (Parma) in the Philippines killed 539 people, affected 4.5 million and caused an estimated economic loss of \$592 million.

# Typhoon Ketsana 1/2

- Typhoon Ketsana, one of the most destructive typhoons in recent years, caused severe damage in the Philippines, Vietnam, Cambodia, Laos, and Thailand.
- A low-pressure cell originated in the Western Pacific Ocean, intensified into a tropical depression on 24th Sept. 2009 and transformed into the tropical storm called Ketsana on the morning of the 26th Sept.
- The storm moved westward across Central Luzon Island of Philippines to the central part of the South China Sea and reached typhoon status by the afternoon of 28th Sept.
- It continued to move west and made landfall over Vietnam, before downgrading into a tropical storm by the evening of the 29th Sept.
- It downgraded again to a tropical depression while passing across the Lao P.D.R. to the north-eastern part of Thailand.
- After passing across Vietnam, Lao P.D.R. and entering the north-eastern part of Thailand, it produced widespread rain, especially in the lower part of the north-eastern Thailand.
- Flash floods were reported in several areas of the lower part of north-eastern and central Thailand.

# Typhoon Ketsana 2/2

- Typhoon Ketsana, which weakened to a tropical depression when it approached Thailand, affected approximately 40 provinces of north-eastern, northern and southern parts of Thailand. Two people were killed and 2.9 million people were affected.
- There were 44 houses destroyed, 4,683 houses partially damaged, and 821,300 acres of agricultural area were destroyed.
- The total damages were estimated at \$ 20.3 million

# Super-Typhoon Haiyan

- This spate of storms included Super-Typhoon Haiyan, the storm that made landfall in the Philippines with maximum sustained winds estimated at 195 mph – the highest in recorded history to make landfall anywhere in the world.
- Bryan Norcross, the Senior Hurricane Specialist from the Weather Channel called it “the most perfect storm” he’s ever seen.
- Where the storm first hit land, on the east coast of the Philippines’ Samar Island, towering waves on top of a massive storm surge crashed against the coast, creating high water marks 46 feet above mean sea level – the highest level recorded from a tropical cyclone in at least a century.
- The result was that more than 7,000 people died around Tacloban, making Super-Typhoon Haiyan the deadliest typhoon in Philippine history.
- Filipinos are accustomed to typhoons – they make landfall nearly every year;
- the country’s government institutions and its culture are prepared to
- weather the storms.
- Haiyan simply overwhelmed their ability to cope.

# Risk Patterns

- risk patterns for the ASEAN countries:
- **Cambodia:** floods represent the dominant risk followed by droughts
- **Indonesia:** forest (wild) fires, earthquakes and tsunamis, and floods represent the dominant risks followed by volcanoes, droughts, and landslides
- **Lao PDR:** cyclonic storms, and floods are the dominant risks followed by droughts
- **Malaysia:** floods are the dominant risks followed by forest fires, tsunamis, and cyclonic storms
- **Myanmar:** cyclonic storms are the dominant risk followed by tsunamis, floods and forest-fires
- **Philippines:** typhoons (cyclonic storms) are the dominant risk followed by floods, earthquakes; volcanoes, droughts, and landslides
- **Thailand:** floods are the dominant risk followed by tsunamis, cyclonic storms, and droughts
- **Vietnam:** cyclonic storms, and floods are the dominant risk followed by droughts, and landslides

# Illegal Migration and Refugees 1/3

- During decades of militarization in Myanmar, millions of people left the country illegally in search of security and a better life elsewhere.
- The vast majority became undocumented migrant workers in Thailand, Malaysia and beyond. A much smaller population is registered as refugees with the UNHCR: around 130,000 people in camps in Thailand, around 150,000 in Malaysia and more than 10,000 in India.
- To varying degrees, these people rely on international aid and assistance to support their lives in exile. Refugees in camps in Thailand are forbidden to leave the camp and are entirely dependent on external aid for food, shelter and other necessities of survival.
- In India and Malaysia, refugees are not confined to camps and can find (informal) employment to survive, but they continue to depend on the UNHCR and other organizations for protection and other assistance.

523,592

Refugees and asylum-seekers

2,361

Identified unaccompanied minors

1,393,736

Stateless persons

20,000

Estimated irregular maritime departures in 2014

- Since 2014, approximately 94,000 refugees and migrants are estimated to have departed by sea from Bangladesh or Myanmar, including 31,000 departures in the first half of 2015.
- Although no departures have been reported since May, this still represents a 34 % increase compared to the first half of 2014.
- Over 1,100 people are now estimated to have died at sea along this route since 2014, including an estimated 370 deaths in 2015.

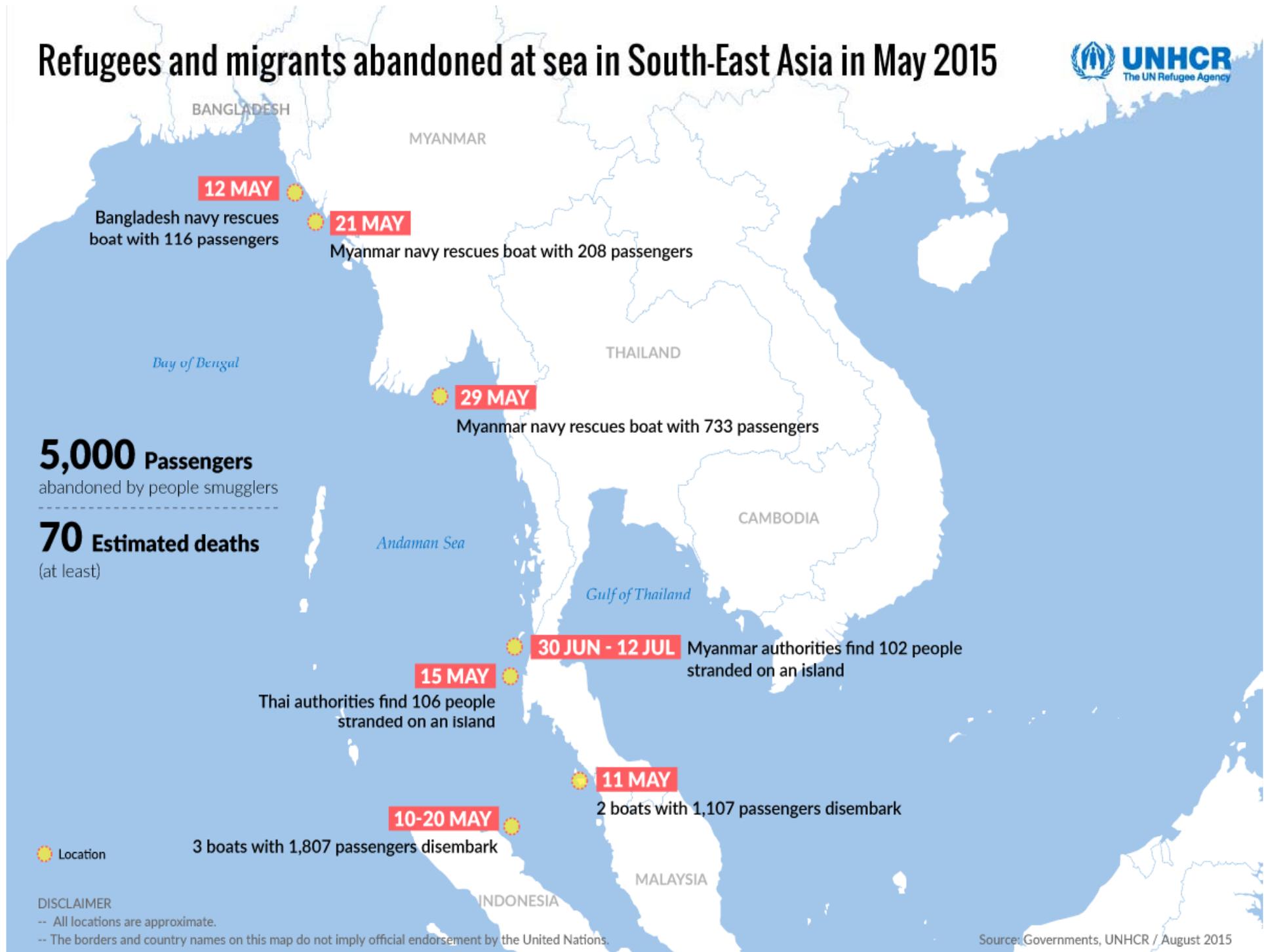
A total of **2.7 million** people of concern including **1.4 million** stateless and over **700,000** internally displaced.

#### By country of origin

Country	Total Refugees and Asylum-seekers
Myanmar	500,364
Sri Lanka	4,786
Afghanistan	4,282
Pakistan	3,077
Others	11,083
<b>Total</b>	<b>523,592</b>

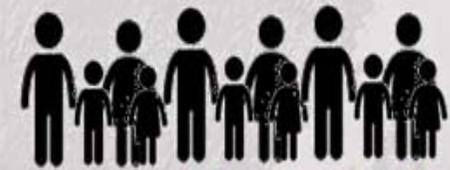


# Refugees and migrants abandoned at sea in South-East Asia in May 2015



# Illegal Migration and Refugees 2/3

- Men, women and children risk being starved, constrained, beaten and forcibly separated.
- Women and girls are particularly at risk of sexual violence.
- Previously once ashore but now also on smugglers' boats, they are detained, sequestered and held for ransom. Non-payment can result in death.
- What may have begun as a voluntary journey is transformed into something no one would choose.
- The scale of deaths is unknown but, as the recent discovery of mass graves in smugglers' camps attests, it is likely to be even higher than the 1.2 percent of travelers estimated to perish from disease or mistreatment.



**88,000**

People recently departed from  
the Bay of Bengal



**63,000**

Jan-Dec 2014



**25,000**

Jan-Mar 2015

BANGLADESH

MYANMAR

THAILAND

MALAYSIA

INDONESIA

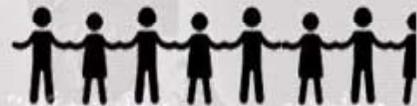
Bay of Bengal

Andaman  
Sea

Strait of  
Malacca

**1,050**

estimated deaths or  
missing at sea



**750**

Jan-Dec 2014



**300**

Jan-Mar 2015

# Illegal Migration and Refugees 3/3

- An estimated 63,000 people are believed to have traveled by boat in an irregular and dangerous way in the Bay of Bengal and Andaman Sea in 2014.
- Another 25,000 joined them in the first quarter of 2015.
- They are part of a complex, mixed migratory movement composed of refugees, stateless people and economic migrants.
- Unregulated and, until recently, inconspicuous, the scale of the movement has tripled since 2012 and the level and scale of abuse suffered by voyagers is unprecedented in recent times.

# The Way Forward

## **(I) the sea journey and disembarkation**

1. Strengthen Search and Rescue (SAR) Operations
2. Establish effective, predictable disembarkation to a place of safety

## **(II) reception, treatment upon arrival and regional responsibility-sharing**

1. Establish or enhance reception facilities
2. Identification and treatment of those with international protection needs
3. Facilitate solutions for persons in need of international protection
4. Support for returns of those not in need of international protection
5. Reinforce the gathering, sharing, analysis and use of information related to movements by sea
6. Capacity building in countries of transit and first asylum
7. Expand legal alternatives to dangerous movements

## **(III) the root causes**

1. Humanitarian, human rights and particularly development needs in source countries

# Climatic Migration 1/6

- Migration across the Bay of Bengal has a long history, but it has recently reemerged in the international spotlight, along with debates about the push and pull factors that have prompted thousands of people to risk their lives at sea rather than remain in Myanmar or Bangladesh.
- Yet there is one important factor missing from this discussion: climate change.

# Climatic Migration 2/6

- In the coming decades, migration across the Bay of Bengal is likely to increase as the impacts of climate change become more frequent and severe.
- Predictions indicate that climate change will dramatically affect countries ringing the Bay, and climate change migration in wider South and Southeast Asia will be extensive.
- The persecution and poverty in Bangladesh and Myanmar that is prompting the present population movement needs to be understood and addressed.
- these two countries will be among the hardest hit by climate change.
- The impacts of climate change will produce increasing migration as the environment is degraded, extreme weather events intensify, and economic conditions deteriorate.

# Climatic Migration 3/6

- Bangladesh's geography—low elevations from the sea and many floodplains—combined with its reliance on resources, and high population density and levels of poverty, makes it particularly vulnerable to sea-level rise, high temperatures, and extreme floods and cyclones.
- Bangladesh already endures the most severe storm category cyclones, which are expected to increase in frequency.
- Sea-level rise will inundate even larger areas than would otherwise occur from extreme weather events, which could cause up to 40% of productive land to be in lost in the southern part of the country. It would also put an estimated 15 to 18 million people at risk of displacement.
- Flooding will cause severe losses of land, lives, and homes.
- A 2.5 degree Celsius warming from pre-industrial temperatures could increase flooded areas by as much as 29%.
- Risk to water and food security is very high; 20 million people in the coastal area are already affected by salinity in drinking water, and this will worsen with further contamination of water sources from climate change impacts.

# Climatic Migration 4/6

- Myanmar is similarly at risk food security is under threat from rising temperatures and sea level.
- Myanmar is second on the Global Climate Risk Index of countries most affected by extreme weather events from 1994-2013, with such events expected to increase with rising temperatures. Bangladesh is sixth on this list.
- Myanmar most recently ranked lower than Bangladesh on the Global Adaptation Index, the two falling at 158th and 142nd respectively out of 180 countries, due to exposure and lack of ability to adapt to climate change impacts.
- Similarly, Climate Central puts Bangladesh at the fifth and Myanmar the tenth most at-risk countries in the world as a result of climate change.

# Climatic Migration 5/6

- The scope and scale of migration produced by the impacts of climate change will be extensive, although it will not always be easy to draw direct connections between environmental changes and the conditions that cause specific individuals to move.
- Indeed, such migration will often appear to be economic, as livelihoods and everyday living conditions are made increasingly difficult.
- Vulnerable and poor populations will be among the first to be displaced; whether people are driven to move by persecution or by economic desperation, the impacts of climate change will both help to generate—and increase susceptibility to—these conditions.
- A reduced ability or capacity to adapt will also mean that many will be forced to migrate to survive.

# Climatic Migration 6/6

- As climate change triggers increasing migration, claims for legal protection or status in countries of arrival will be even more difficult to establish, given the complexity of factors prompting migration.
- Environmental change does not impact people in isolation, and a decision to move is often motivated by a number of factors that makes it difficult or imprudent to categorize people on the basis of such change.
- These drivers complicate traditional notions of refugees and migrants, underscoring the importance of finding new ways to address migration and the needs of people who move.

# ‘Lessons learned’ from global and regional institutions

- In the face of such challenges, it is crucial that the International Community and its institutions take effective action with regard to:
- **Predicting Instability.** This entails increased monitoring, risk assessments, and early warning in an effort to discern dangers of impending and future conflicts at an early stage.
- **Preventing Conflict.** This encompasses a range of policy instruments and measures intended to avoid a situation where increasing pressures translate into growing tensions and armed conflict.
- **Managing Conflict.** Of course, there are conflict situations (such as Darfur) that are the product of environmental and associated pressures. These, and possible future cases, need to be dealt with more effectively, in an effort to end violence and counter instability.
- **Recovery and Transition.** Even after a conflict has been terminated, there are continued challenges. There is a high risk that countries emerging from conflict will fall back into war and violence. To work towards a sustainable peace, post-conflict restoration and reconstruction will need to encompass environmental and resource aspects.

# Building Resilience

- Climate-related hazards – such as floods, wildfires, storms, droughts, and hurricanes – endanger the lives of millions around the world.
- In some situations, resilient communities and capable governments are able to prevent exposure to a natural hazard from becoming a *disaster, a situation* where large impacts on the local population occur.
- However, in other instances, an absence of investments in risk reduction and preparedness make communities vulnerable to large-scale loss of life, humanitarian emergencies from the dislocation of local populations, and emergent food insecurity and disease risks.
- In such situations, civilian agencies are often overwhelmed.

# Policy Proposals

- develop information on countries and areas within the region that are at greatest risk, the nature and scope of climate impacts, and ways to address them;
- raise awareness of climate issues with partner nations and their militaries;
- take an interagency approach to addressing topics related to climate change ;
- include these topics in theater campaign plans; and
- work to enhance host nation capabilities to plan and respond to natural disasters consequent to climate change

- Thank you very much

[tkaratrandos@gmail.com](mailto:tkaratrandos@gmail.com)