

**STRENGTHENING CAPACITY FOR ENVIRONMENTAL  
LAW IN THE ASIA-PACIFIC : DEVELOPING  
ENVIRONMENTAL LAW CHAMPIONS**

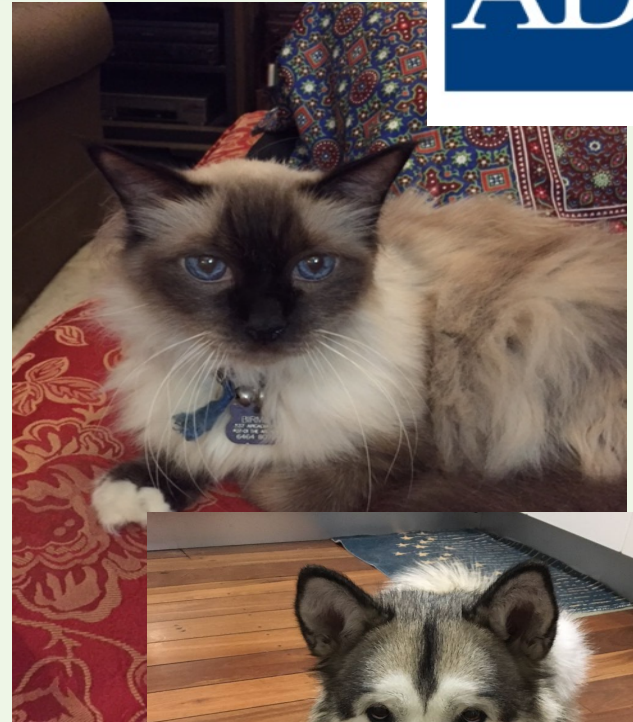
**Chiang Mai, Thailand, 19-23 June 2017**

**SESSION 2B: GLOBAL & REGIONAL ENVIRONMENTAL ISSUES**

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## LEARNING OUTCOMES

- **Session Content**
  - Enhanced awareness of current critical environmental issues, at both regional and national levels
- **Teaching Methodology**
  - Demonstration of “structured small group discussion” and
  - Report back methodology



# GEO -6 : 2016

- UNEP (now UN Environment) launched GEO (Global Environment Outlook) in 1995.

- See

<http://www.unep.org/geo/assessments/global-assessments/geo-2000>

- <http://www.unep.org/geo/assessments/regional>

- <http://www.unep.org/geo/assessments/regional-assessments/regional-assessment-asia-and-pacific>

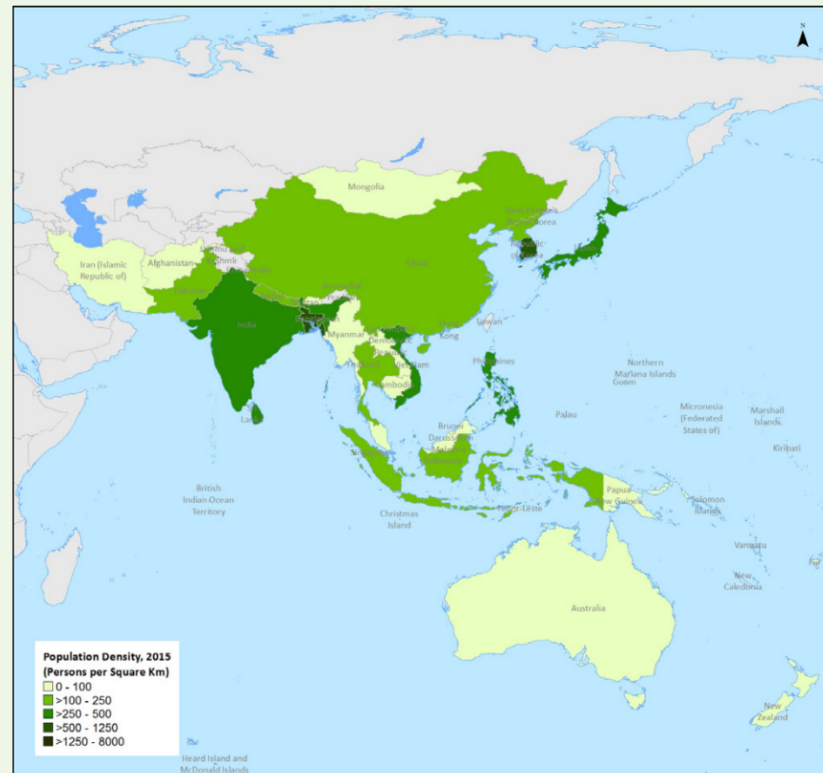
- [http://www.unep.org/geo/sites/unep.org.geo/files/documents/geo-6\\_ap\\_final\\_en\\_complete.pdf](http://www.unep.org/geo/sites/unep.org.geo/files/documents/geo-6_ap_final_en_complete.pdf)



# Asia and Pacific region

**Asia Pacific priority:**  
Increasing vulnerability

**UNEP Live data shows:**  
Between 1990-2014,  
natural disasters affecting  
4.5 billion people caused  
USD 1076 billion  
economic losses.



# Background, Nature and Purpose

- Decision to undertake regional assessments was taken at the Global Intergovernmental and Multi-stakeholder Consultation in Berlin, 21–23 October 2014.
- UNEP Secretariat and authors provide an objective evaluation and analysis of the state, trends and outlooks of the environment in the region to support environmental decision making.



# Policy-Relevant Questions

In this assessment, the judgment of experts is applied to existing knowledge to provide scientifically credible answers to policy-relevant questions ----

- What is happening to the environment and why?
- What are the consequences for the environment and the human population of Asia and the Pacific?
- What is being done and how effective is it?
- What are the future prospects for the environment?
- What actions can be taken to achieve a more sustainable future?



# Structure of Regional Assessment

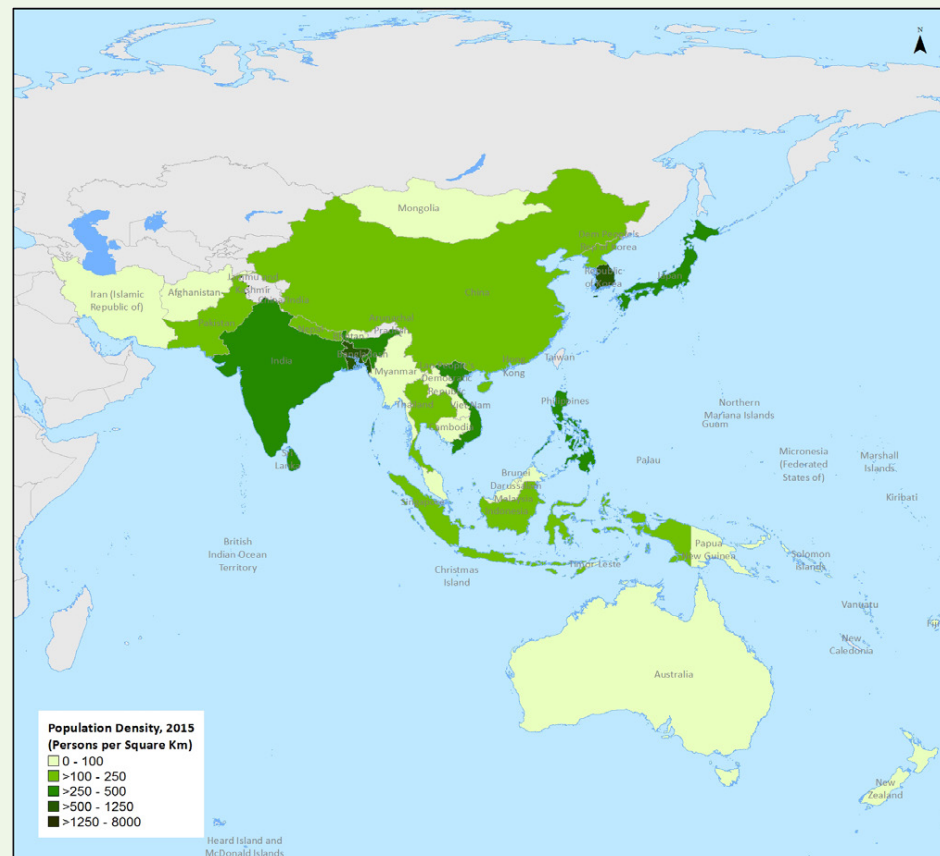
- Four chapters
  - Review of regional priorities
  - State of the region's environment for six key themes, air, land, biota, freshwater, coasts and oceans, and wastes
  - Policy responses to these environmental issues
  - Review of main trends that will affect the region's environment in the future and the needed action to achieve a more sustainable future





# Five GEO 6 Sub-regions in Asia and Pacific

1. Australia and New Zealand
2. Northeast Asia: China, DPR Korea, Japan, Mongolia and Republic of Korea
3. South Asia: Afghanistan, Bangladesh, Bhutan, India, Iran, Maldives, Nepal, Pakistan and Sri Lanka
4. Southeast Asia: Brunei Darussalam, Cambodia, Indonesia, Lao PDR, Malaysia, Myanmar, Philippines, Singapore, Timor-Leste, Thailand and Viet Nam
5. Pacific: Cooks Islands, Fed. States of Micronesia, Fiji, Kiribati, Marshall Islands, Nauru, Niue, Palau, Papua New Guinea, Samoa, Solomon Islands, Tonga, Tuvalu and Vanuatu.



# Overview of GEO 6

- Provides a comprehensive picture of the environmental factors contributing to human health and well-being at the regional level
- Demonstrates economic growth and improved access to basic services in the region
- Highlights the complexity of the interlinked environmental, social and economic challenges confronting decision makers



# Overall Picture

- Changing demography, lifestyles and access to basic services
- Increasing inefficiency in the use of resources
- Increasing vulnerability to the impacts of natural hazards and extreme events
- Increasing environmentally related health risks
- Widening gaps across the landscape of policies and legislation and their implementation



# KEY FINDINGS

- ACCELERATING ENVIRONMENTAL DEGRADATION WIDELY ACROSS THE REGION
- ADVERSE IMPACTS ON HUMAN WELLBEING
- ADVERSE IMPACTS ON ECO-SYSTEMS, WILDLIFE, NATURAL RESOURCES
- LACK OF WATER RESOURCES IS A MAJOR CONCERN
- MARINE ENVIRONMENT –Pollution, dwindling fish stocks; high seas need special protection



# Air Pollution

- Continuing increase in ambient concentrations of ozone and fine particles  
(E.g. short-lived climate pollutants such as black carbon)
- Transboundary pollution
- Indoor air pollution  
(burning poor quality fuels/  
biomass disproportionately  
impacts the health of women  
and children in this region)



# Land Degradation

- Intensified over most of the region, with consequent displacement of indigenous people, loss of biodiversity, and reduction in important forest products
- Additional implications for water resources in terms of soil water content and groundwater recharge
- Total forest area has increased in some areas of Asia since 1990 due to reforestation efforts, but there are significant sub-regional differences
- Continuous loss of wilderness, natural forest systems, mangroves and other natural systems to croplands and urban growth



# Threatened Biota and Ecosystems

- Threats to biodiversity: extensive agriculture, oil palm and rubber plantations, aquaculture and illegal wildlife trade
- Natural forest areas in Southeast Asia and the Pacific (recognized as global biodiversity hotspots) declined drastically in 1990–2015.
- Number of threatened mammal and plant species increased by more than 10% and 18% respectively in the last decade
- 75% of threatened birds on oceanic islands are also in danger from invasive species



# Threatened Biota and Ecosystems

- Threatened:
  - 25% of all conifers and cycad species
  - 20% of marine mammal species
- Bleaching of over 25% of hard warm-water corals in oceanic countries and Small Island States mainly due to high thermal stress
- Corals impacted by dumping of plastic debris and micro-plastic hazardous waste in the oceans





# Deterioration of Freshwater

- Water scarcity and deteriorating water quality throughout the region especially in Northeast and South Asia
- Frequency and intensification of flood and drought events
- Contamination of water sources from human and livestock sewage
- Widespread contamination of ground water by pharmaceutical and personal care products, nanomaterials, and organochlorides increase the exposure to human health risk, especially for women and young children.
- Water related diseases and unsafe water contribute to 1.8 million deaths annually and 24.8 million disability-adjusted life years in the region.



# Coasts and Oceans at risk

- 325 million more people expected to live in coastal zones by 2025
- About 60% of coastal mangroves in Asia and the Pacific have been cleared for development
- More than 80% of the region's coral reefs are at risk
- Severe erosion prevails on 25% to 33% of Southeast Asian coastlines
- An increasing concern: pollution caused by plastic debris and microplastics



# Increase in Waste Generation

- Municipal solid waste generation: expected to rise from 870 million tonnes in 2014 to 1.4 billion tonnes annually by 2030
- Complex waste streams: e-waste, food waste, construction/demolition waste, disaster waste and marine litter
- Uncontrolled dumping remains to be the main waste disposal method, leading to leachate run off, methane emission, spontaneous combustion, and other environmental problems
- Recent “waste to energy” investment programs can be enhanced to provide better waste disposal



# The Way forward:

## Sound Policies & Management for People & Planet

**THE SUSTAINABLE DEVELOPMENT  
GOALS (2015) BY 2030**





**1** NO POVERTY



**2** ZERO HUNGER



**3** GOOD HEALTH AND WELL-BEING



**4** QUALITY EDUCATION



**5** GENDER EQUALITY



**6** CLEAN WATER AND SANITATION



**7** AFFORDABLE AND CLEAN ENERGY



**8** DECENT WORK AND ECONOMIC GROWTH



**9** INDUSTRY, INNOVATION AND INFRASTRUCTURE



**10** REDUCED INEQUALITIES



**11** SUSTAINABLE CITIES AND COMMUNITIES



# THE GLOBAL GOALS

For Sustainable Development

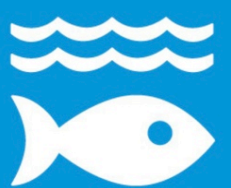
**12** RESPONSIBLE CONSUMPTION AND PRODUCTION



**13** CLIMATE ACTION



**14** LIFE BELOW WATER



**15** LIFE ON LAND



**16** PEACE AND JUSTICE STRONG INSTITUTIONS



**17** PARTNERSHIPS FOR THE GOALS



# Key Policy Messages

- Decarbonize development
- Improve resource efficiency
- Protect and enhance natural capital and ecosystem integrity
- Build resilience to natural hazards and extreme climate events



# Key Policy Messages

- Respond to environmental health risks
- Strengthen environmental governance for effective policy diffusion at multiple scales
- Strengthen science-policy interface and access to knowledge
- Enhance international/regional cooperation on climate, air quality and other environmental issues



- YOU ARE THE FUTURE!
- WORK AS PARTNERS – beyond boundaries
- EACH COUNTRY/CITY/PROVINCE/VILLAGE NEEDS GOOD ENVIRONMENTAL POLICY, LAW, GOVERNANCE AND MANAGEMENT (EMS)
- Laws are an important part of EMS.
- What else is needed?

