Sustainable Consumption and Production in Asia and the Pacific

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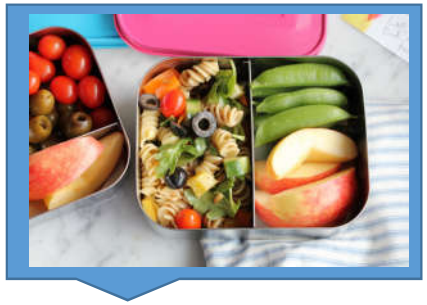
Guest lecture for Systems Engineering for Software Engineers (COMP3530)

Question 1. What did you have for dinner and where did it come from?

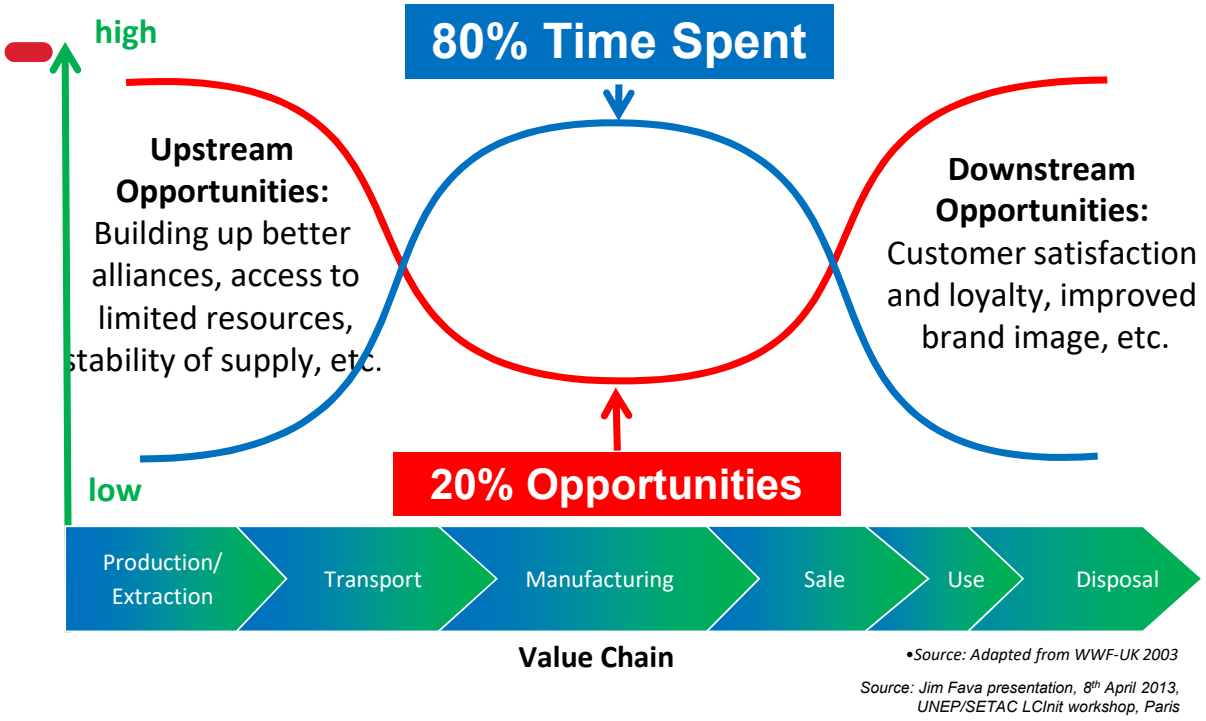
As consumers, what we buy comes from a production and consumption system

Think of product lifecycles and value chains



Agriculture production → Processing, distribution → Wholesale and retail → Consumer use → Disposal

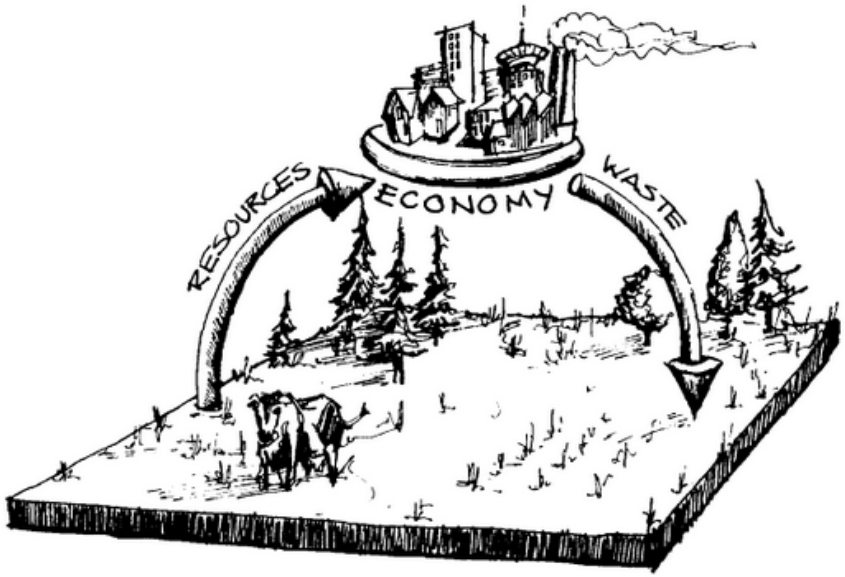
Life cycle thinking in business

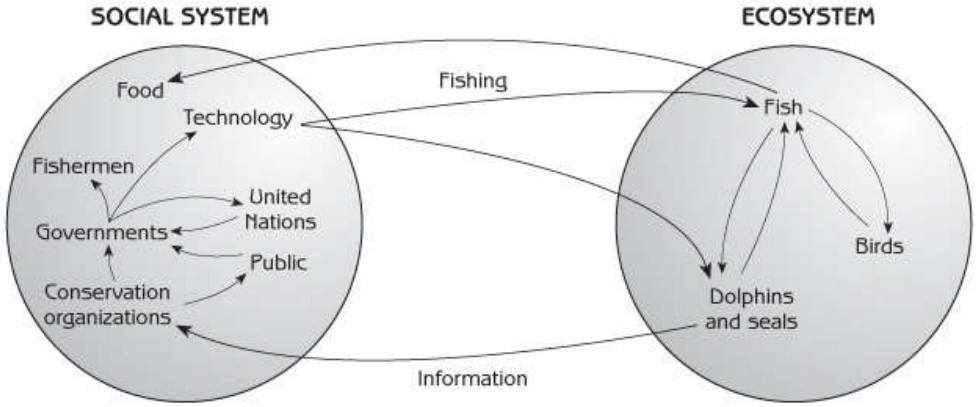


•*Source: Adapted from WWF-UK 2003*

Source: Jim Fava presentation, 8th April 2013, UNEP/SETAC LCInit workshop, Paris

Our consumption and production systems depend on a *finite* environment



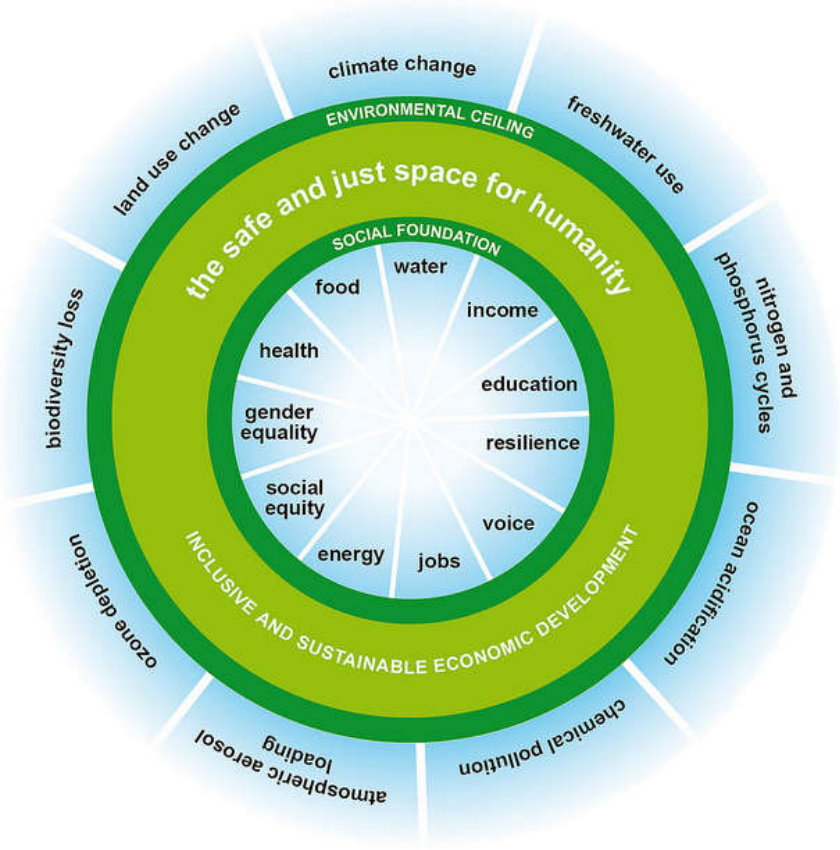


Sources: Wackernagel & Rees, 1998, Our ecological footprint: reducing human impact on the earth. Martin, 2001, Human Ecology Basic Concepts for Sustainable Development

Source: Goulburn Post, 2015

Q2. What parts of the environment are you concerned about?

Oxfam (2012) framework for a safe and just space for humanity

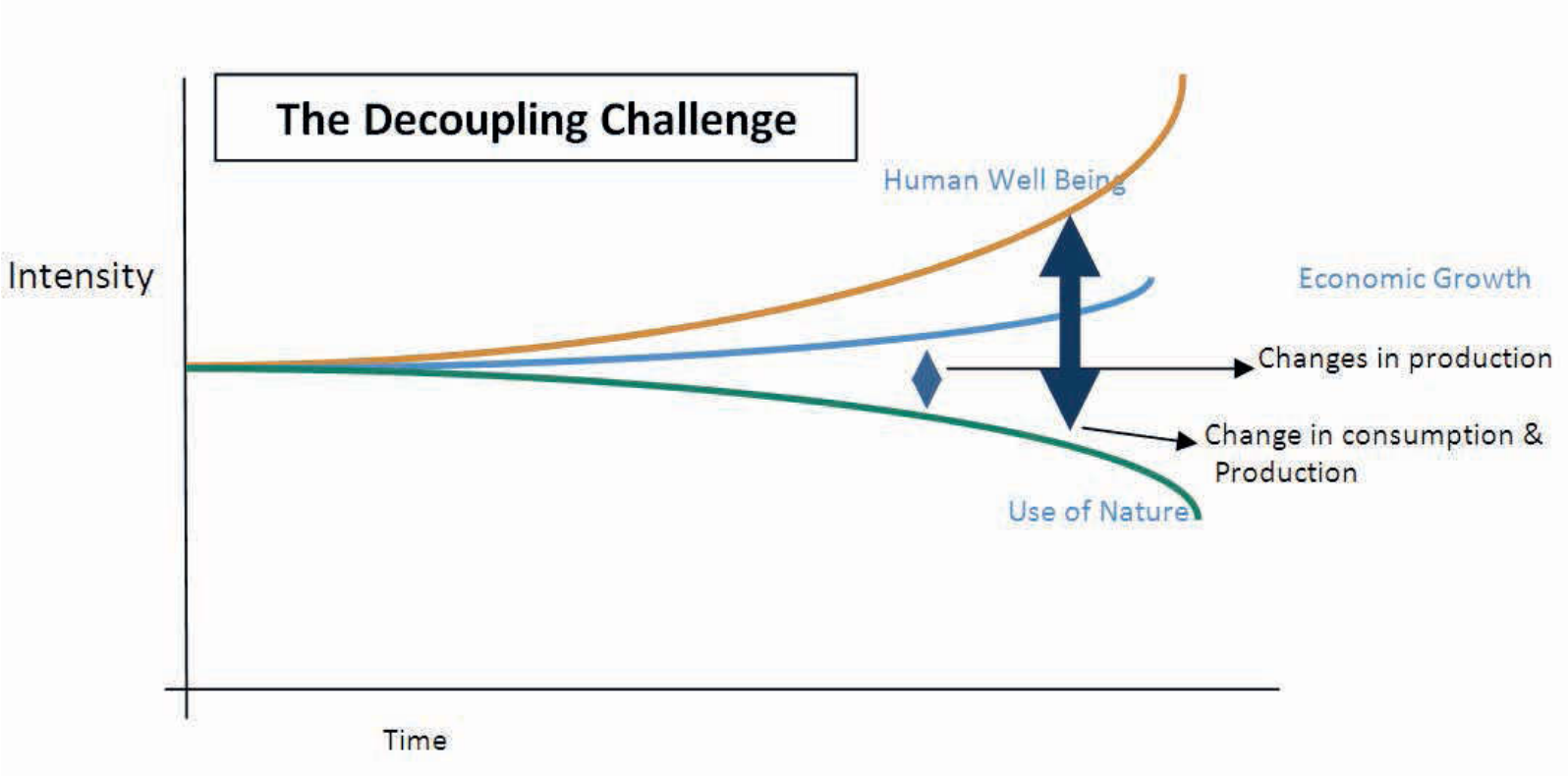


Introducing
Sustainable Consumption and Production

Simplest and most comprehensive definition (UNEP 2011):

SCP is a holistic approach to minimising the negative environmental impacts from consumption and production systems while promoting quality of life for all

Reducing negative environmental impacts through decoupling



Source: UNEP (2011)

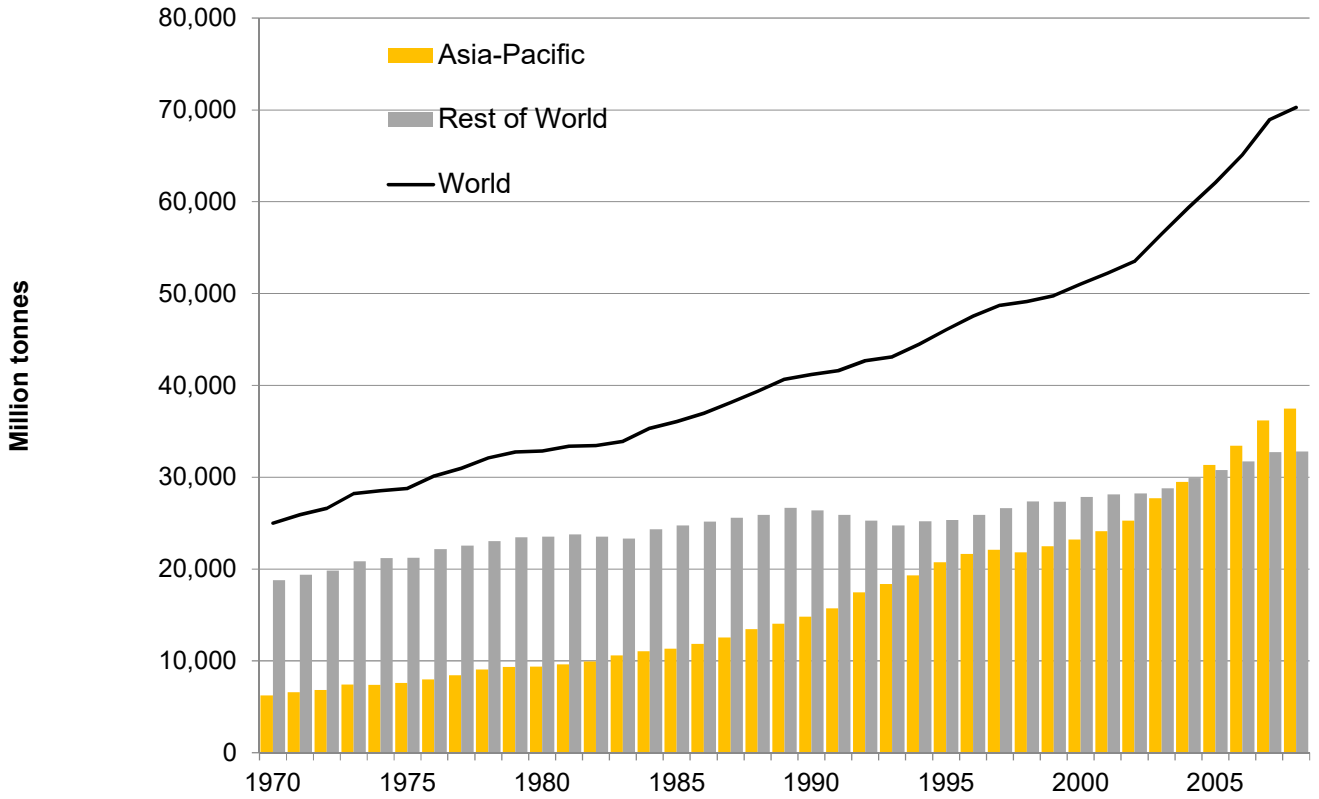
Q3. What’s the issue?

Indicators for a resource efficient and green Asia and the Pacific

https://youtu.be/mKnqWwgHHoc

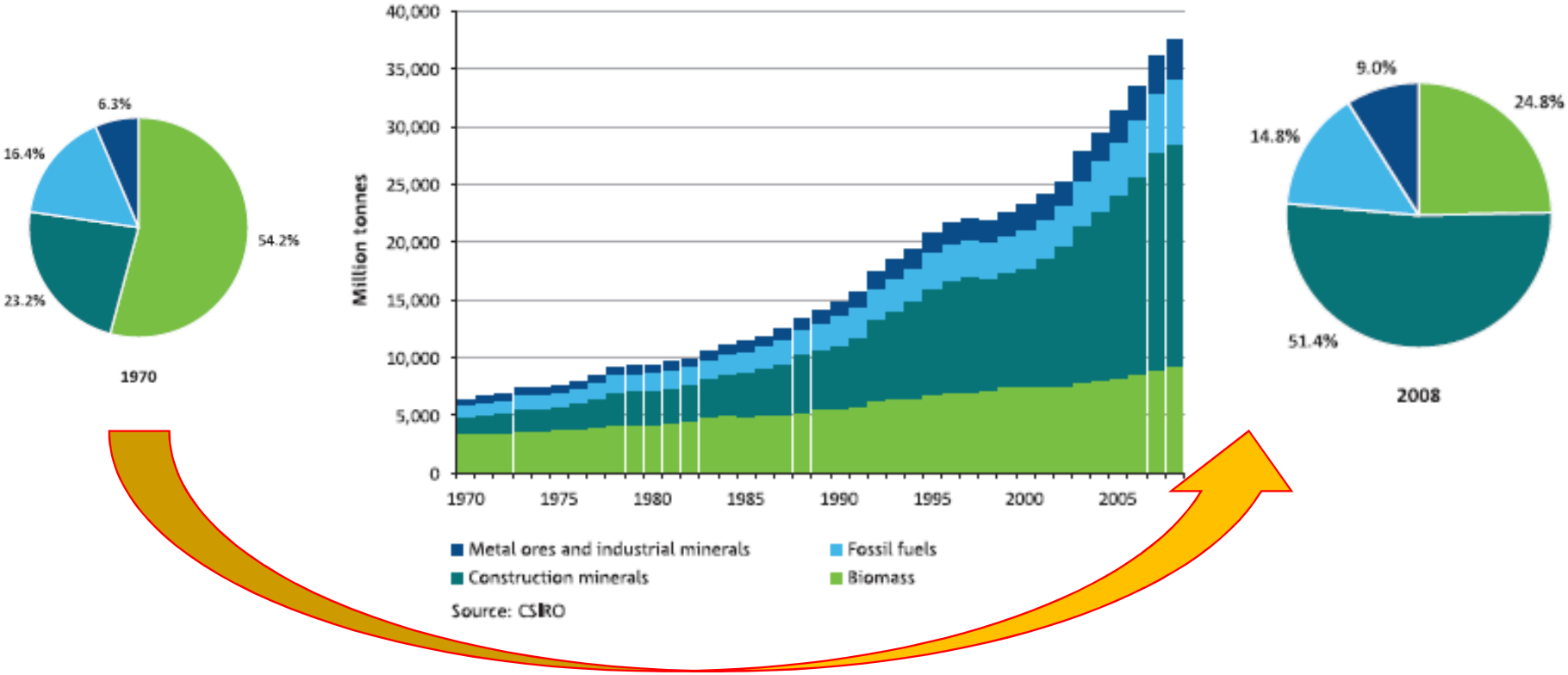
Asia-Pacific is the largest consumer of natural resources

Domestic Material Consumption (DMC) in Asia and the Pacific, the World and the Rest of the World, 1970-2008, in million tonnes



Source: West and Schandl, 2012. DMC refers to the apparent consumption of materials, i.e. intermediate and final consumption (DMC = Imports + Domestic Extraction – Exports).

Domestic material consumption: Asia and Pacific



Transition in Asian economies from biomass fuelled to industrialising, fossil fuelled economies

Source: CSIRO/UNEP, 2013

Q4. How do governments talk about issues?

United Nations system

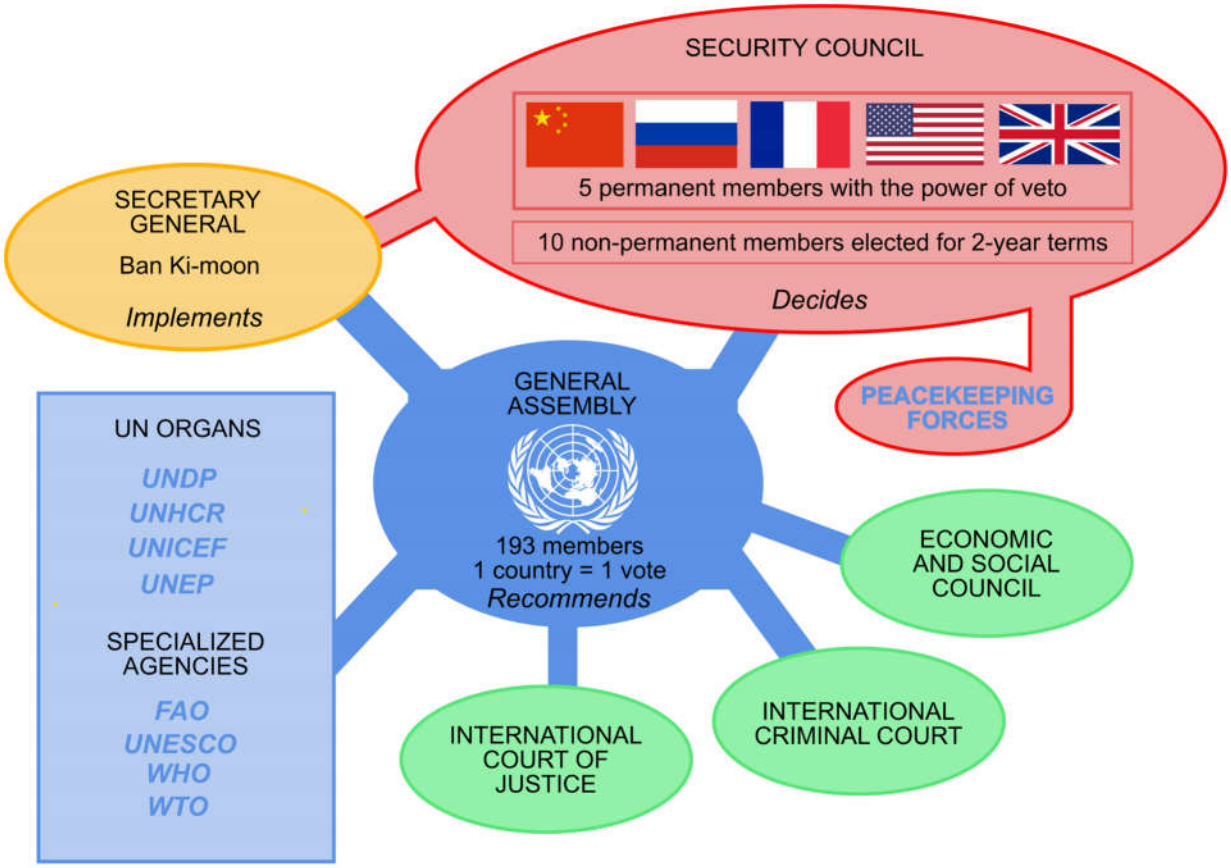
Relevant parts of the UN system:

- **Fora for member state representatives**, such as UN General Assembly, UN Security Council, UN Environment Assembly
- **International civil service** such as the Secretariat (Office of the Secretary General), programmes (UNEP, UNDP) and agencies (FAO, World Bank)
- **International Court of Justice**, for disputes between nations

The quick facts:

- Established 1945 , primary purpose to ensure peace
- 44,000 international staff, numerous consultants
- ~ $48bn budget in 2014, of which about ~$27bn (~55%) is spent on development
- New Secretary General Antonio Guterres took office in January 2017

A little bit about the UN



A little bit about the UN

A little bit about UNEP and my role

The United Nations Environment Programme (est 1972)

- 854 staff, 30 offices, total annual budget of $631m (2014-15)
- The role of the *United Nations Environment Programme is to be the leading* ***global environmental authority*** *that sets the global* ***environmental agenda****, that promotes the coherent implementation of the* ***environmental dimension of sustainable development*** *within the United Nations system and that serves as an authoritative* ***advocate for the global environment.*** (1997 restatement)

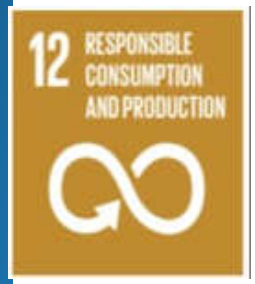
My role is *SCP project coordinator* within the *Responsible Industries and Valuechain Unit* in the *Technology, Industry and Economics Division.* I work on three projects with a combined value of ~$30m.

Q5. What frameworks are governments using to coordinate action?

The 2030 Agenda

On 27 September 2015, the heads of member nations, or their representatives, on behalf of their people, adopted the 2030 Agenda. Consists of:

- a Declaration
- 17 Sustainable Development Goals (SDGs) and 169 targets,
- means of implementation and renewed global partnership, and
- framework for review and follow-up (231 indicators)



Goal 12. Ensure sustainable consumption and production patterns

11 Targets

12.1 Implement the 10-Year Framework of Programmes on Sustainable Consumption and Production Patterns, all countries taking action, with developed countries taking the lead, taking into account the development and capabilities of developing countries

12.2 By 2030, achieve the sustainable management and efficient use of natural resources

12.3 By 2030, halve per capita global food waste at the retail and consumer levels and reduce food losses along production and supply chains, including post-harvest losses

12.4 By 2020, achieve the environmentally sound management of chemicals and all wastes throughout their life cycle, in accordance with agreed international frameworks, and significantly reduce their release to air, water and soil in order to minimize their adverse impacts on human health and the environment

12.5 By 2030, substantially reduce waste generation through prevention, reduction, recycling and reuse

12.6 Encourage companies, especially large and transnational companies, to adopt sustainable practices and to integrate sustainability information into their reporting cycle

12.7 Promote public procurement practices that are sustainable, in accordance with national policies and priorities

12.8 By 2030, ensure that people everywhere have the relevant information and awareness for sustainable development and lifestyles in harmony with nature

12.a Support developing countries to strengthen their scientific and technological capacity to move towards more sustainable patterns of consumption and production

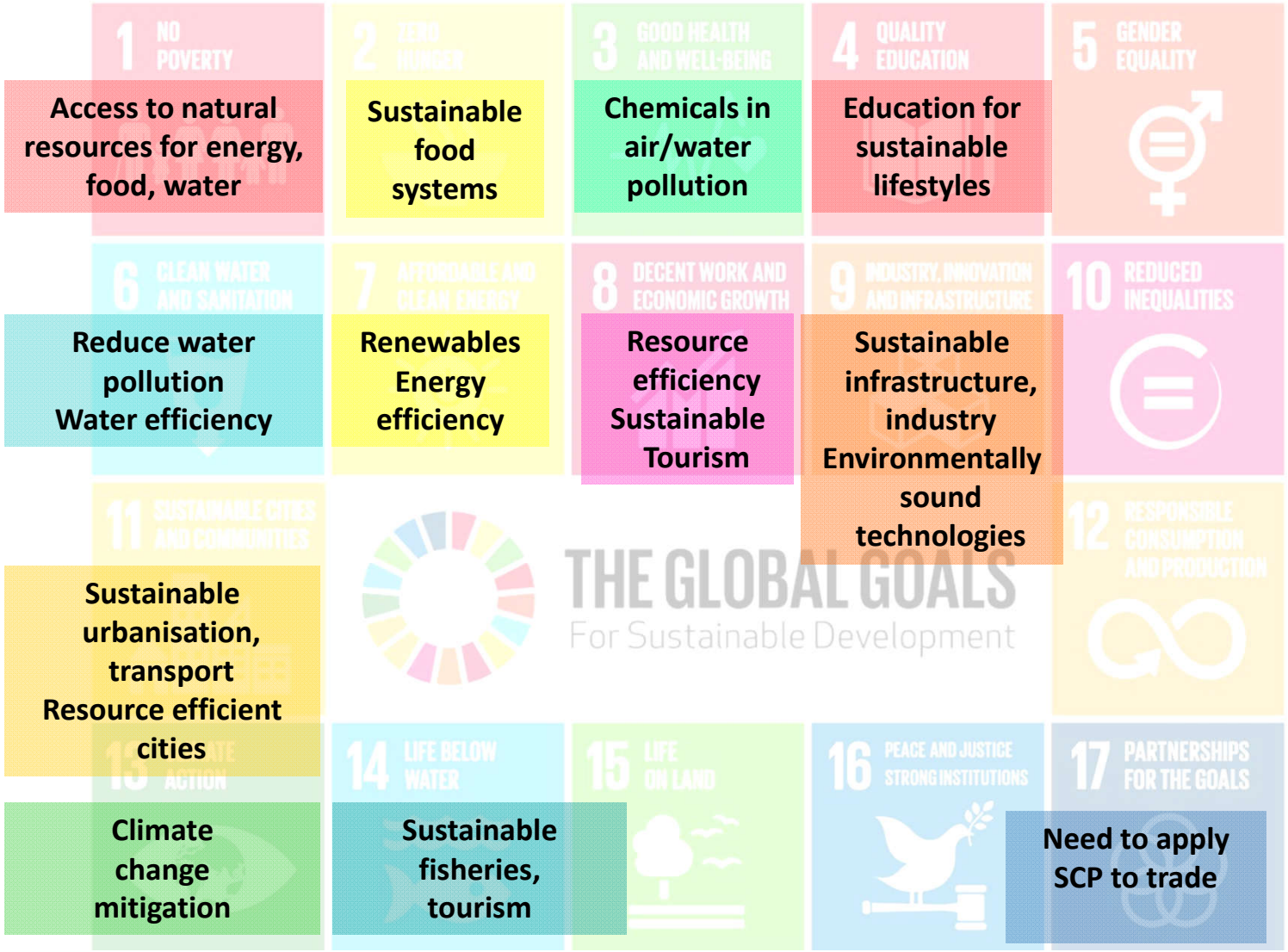
12.b Develop and implement tools to monitor sustainable development impacts for sustainable tourism that creates jobs and promotes local culture and products

12.c Rationalize inefficient fossil-fuel subsidies that encourage wasteful consumption by removing market distortions, in accordance with national circumstances, including by restructuring taxation and phasing out those harmful subsidies, where they exist, to reflect their environmental impacts, taking fully into account the specific needs and conditions of developing countries and minimizing the possible adverse impacts on their development in a manner that protects the poor and the affected communities

UNEP

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

Sustainable Consumption and Production aspects within other goals



Q6. What is being done inside the UN system?

UNEP activities for SCP

- 10 Year Framework of Programs on SCP (10YFP)
- International Resource Panel
- SWITCH and SWITCH II
- Eco-innovation
- REAL (Resource Efficiency through Life Cycle Thinking)
- PAGE (Partnership for Action on Green Economy)
- GG knowledge platform
- Life Cycle Initiative
- PEI (Poverty and Environment Initiative)
- SCP Clearinghouse
- Think.Eat.Save

…but how to make sense of these?

Understanding government projects and activities

Projects and activities as ‘tools’

Hood’s 1983 *Tools of Government* conceptual framework

- Nodality
- Authority
- Treasury
- Organisation

UN activities to implement the 2030 Agenda

To paraphrase Hood's (1983) framework:

1) Using its nodality (centrality) to **bring things together**:

- Bring information together, such as reporting on progress by member nations, such as the ESCAP annual statistics yearbook and UNEPlive
- Bring people and nations together, such as the High Level Political Forum (HLPF)
  - 2017: review progress of SDGs 1, 2, 3, 5, 9 and 14
  - 2018: review progress of SDGs 6, 7, 11, **12** and 15
  - 2019: review progress of SDGs 4, 8, 10, 13 and 16

Source: Fiafoundation, 2016

UN activities to implement the 2030 Agenda

To paraphrase Hood's (1983) framework:

2) Using its **authority to say things**:

- Making rulings, where it has jurisdiction, such as interpretations of UNCLOS
- For UNEP, this is recognizing and promulgating international standards (such as indicators for resource efficiency), establishing and supporting an International Resource Panel to make authoritative statements

3) Using its **treasury to buy things**:

- Buying services and products, such as food for the starving, water for the thirsty, and research for the starving academics
- For UNEP, this is the $674m budget less wages

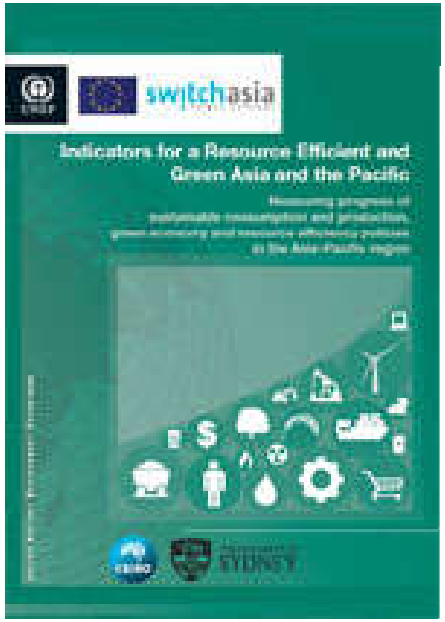
4) **Organisation** to **make or provide things**:

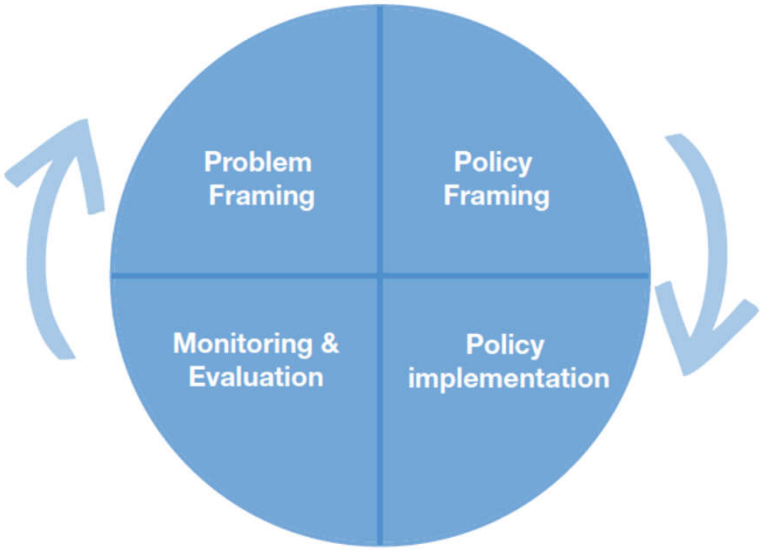
- Providing peacekeepers, interim authorities, building infrastructure, such as hospitals
- For UNEP, this is the what the 854 staff can construct themselves

Using nodality: providing indicators for resource efficiency and green Asia and Pacific

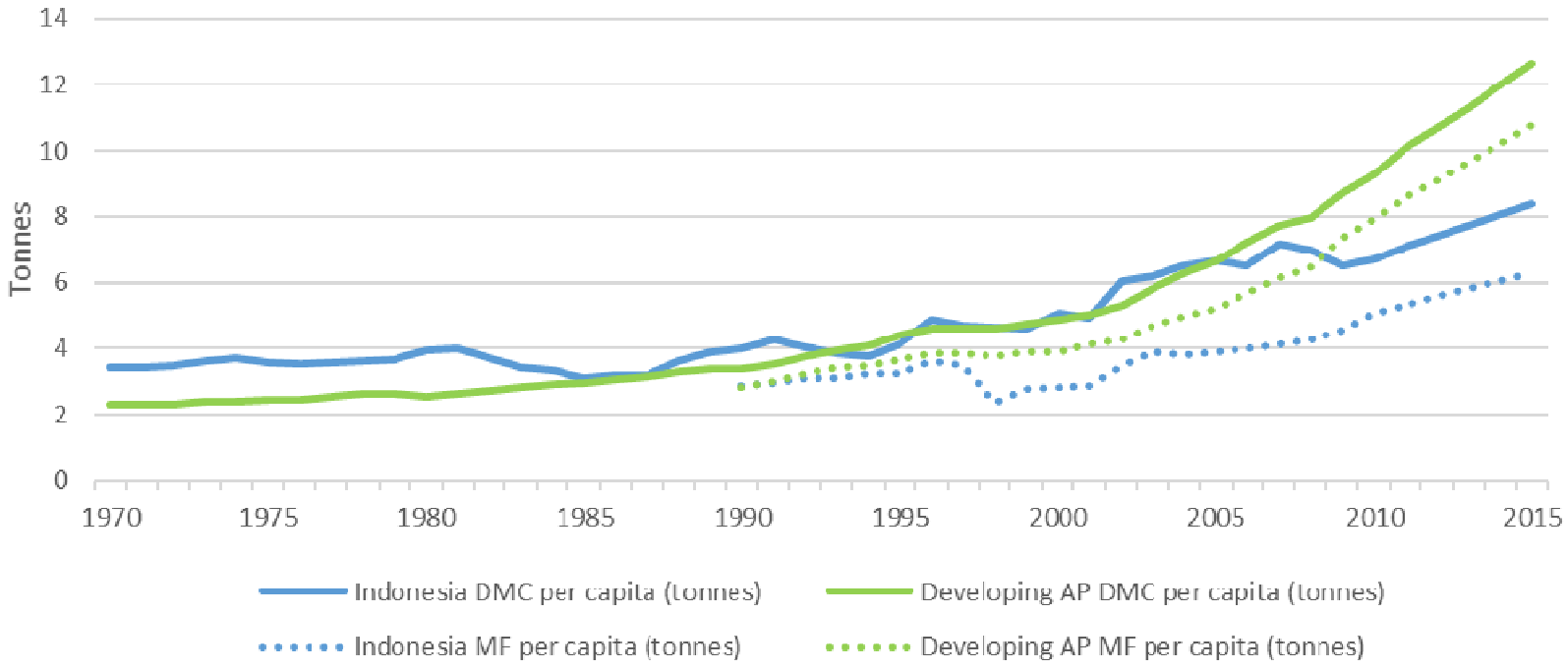
The foundation for policy engagement with many nations in Asia and the Pacific regions

- New data, new insights
- Raise awareness of issues
- Framing of policy problems
- Evidence based policy dialogue
- Practical basis for capacity building
- Data for follow up and review
- Open access UNEPlive database
- Verification through country data



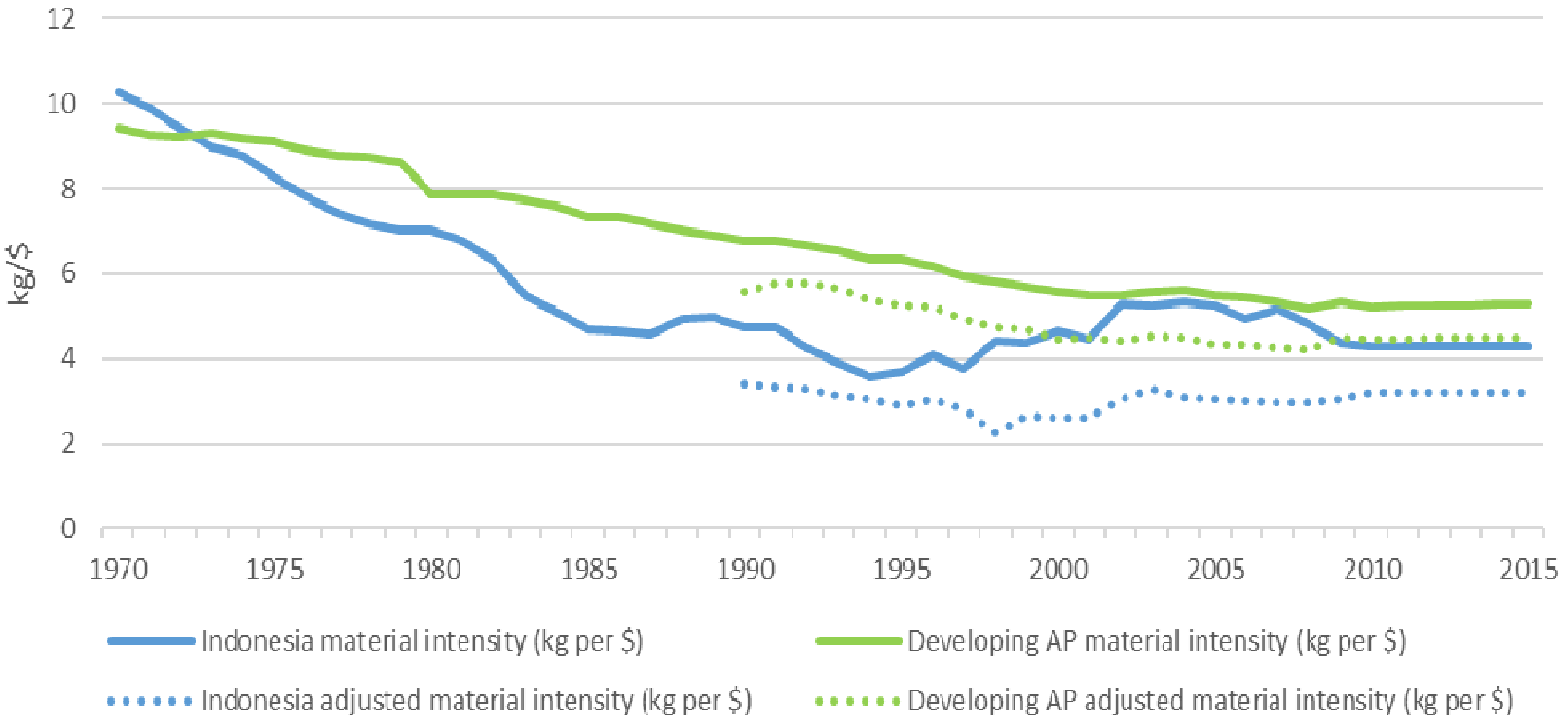


DMC per capita and MF per capita for Indonesia



Source: UNEPlive, https://uneplive.unep.org

Material intensity for Indonesia



Source: UNEPlive, https://uneplive.unep.org

Q7. What is being done outside the UN System?

Societies are changing… but we have a long way to go

Some individuals, organisations and governments are deliberately acting and changing themselves and their societies

The scale of challenge is enormous, particularly in our region

http://dilbert.com

Summary in Questions

Q1. What did you have for dinner and where did it come from?

Q2. What parts of the environment are you concerned about?

Q3. What's the issue?

Q4. How do governments talk about issues?

Q5. What frameworks are governments using to coordinate action?

Q6. What is being done inside the UN system?

Q7. What is being done outside the UN System?

Some references

Hood, C. 1983. *The Tools of Government*. Macmillan, London

Indicators for a Resource Efficient and Green Asia and the Pacific

http://www.unep.org/roap/Activities/ResourceEfficiency/IndicatorsforaResourceEfficient/tabid/1060186/Default.aspx

UN High Level Political Forum

https://sustainabledevelopment.un.org/hlpf

UNEP Consumer Information Program

http://unep.org/10yfp/Programmes/ProgrammeConsultationandCurrentStatus/Consumerinformation/tabid/106265/Default.aspx