Implementing SDG 11 – key elements, challenges and opportunities

Module 4: SDGs - Sustainable Cities and Communities
2018 Executive Training Course for Policymakers on
the 2030 Agenda and the Sustainable Development Goals (SDGs)
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The 2030 Agenda for Sustainable Development

- This Agenda is a plan of action for people, planet and prosperity.
- All countries and all stakeholders, acting in collaborative partnership, will implement this plan.
- As we embark on this collective journey, we pledge that no one will be left behind.
- The 17 Sustainable Development Goals and 169 targets which we are announcing today demonstrate the scale and ambition of this new universal Agenda.

UNITED NATIONS SUSTAINABLE DEVELOPMENT SUMMIT 2015
25-27 SEPTEMBER

Goal 11: Make cities and human settlements inclusive, safe, resilient and sustainable

11.1 By 2030, ensure access for all to *adequate, safe and affordable housing and basic services and upgrade slums*

11.2 By 2030, provide access to *safe, affordable, accessible and sustainable transport systems* for all, improving road safety, notably by expanding public transport, with special attention to the needs of those in vulnerable situations, *women, children, persons with disabilities and older persons*

11.3 By 2030, enhance inclusive and sustainable urbanization and capacity for participatory, *integrated and sustainable human settlement planning and management* in all countries

11.4 Strengthen efforts to *protect and safeguard the world's cultural and natural heritage*

11.5 By 2030, significantly reduce the number of deaths and the number of people affected and substantially decrease the direct economic losses relative to global GDP caused by *disasters, including water-related disasters*, with a focus on protecting the poor and people in vulnerable situations

Goal 11: Make cities and human settlements inclusive, safe, resilient and sustainable

11.6 By 2030, reduce the *adverse per capita environmental impact of cities*, including by paying special attention to *air quality and municipal and other waste management*

11.7 By 2030, provide *universal access to safe, inclusive and accessible, green and public spaces*, in particular for women and children, older persons and persons with disabilities

11.a Support positive *economic, social and environmental links between urban, peri-urban and rural areas* by strengthening *national and regional development planning*

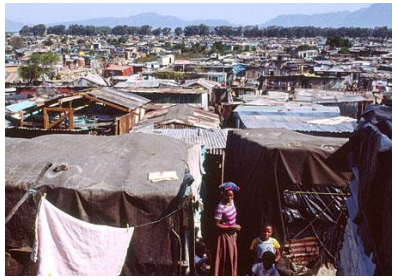
11.b By 2020, substantially increase the number of cities and human settlements adopting and implementing integrated policies and plans towards *inclusion, resource efficiency, mitigation and adaptation to climate change, resilience to disasters,* and develop and implement, in line with the Sendai Framework for Disaster Risk Reduction 2015-2030, *holistic disaster risk management at all levels*

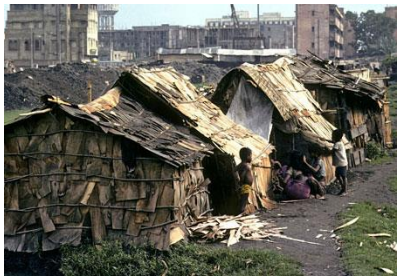
11.c Support *least developed countries*, including through *financial and technical assistance, in building sustainable and resilient buildings* utilizing local materials

(Source: *Transforming our world: the 2030 Agenda for Sustainable Development. UN*)

Urban trends & issues

- Today over 50% of the world population already live in cities & urban areas; expected to be more than 70% by 2050, with almost all the growth occurring in the developing world.
- 95 % of urban expansion in the next four decades will take place in developing world, with Asia and African alone contributing around 86%.
- Over next four decades, Africa's urban population will soar from 414 million to over 1.2 billion & Asia from 1.9 billion to 3.3 billion
- Over the next four decades, India will add another 497 million to its urban population, China – 341 million, Nigeria – 200 million, the US – 103 million, and Indonesia – 92 million
- 700 million people live in slums today and the number keeps rising.





Sources: compiled from UN DESA, 2011 & United Nations, 2012, UN HABITAT, 2016
http://www.un.org/en/sustainablefuture/cities.shtml#overview

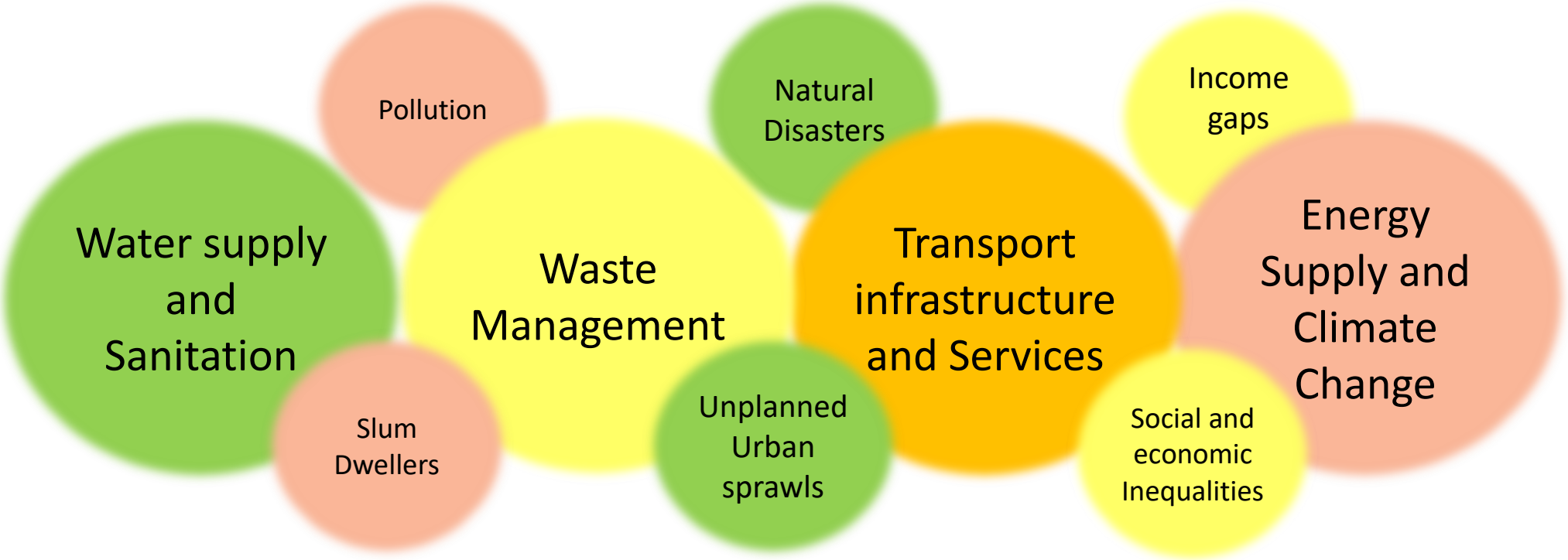
Urban trends & issues - 2

- The world's cities occupy just 3 per cent of the Earth's land, but account for approx. 60-80 % of energy consumption, 75% GHG emissions, 80% of global GDP, consume 70% of all resources, generate 70% of global waste.
- Rapid urbanization is exerting pressure on fresh water supplies, sewage, the living environment, and public health.
- The World Bank estimates that the cost of air pollution health damages is about US $1 billion a year in cities, such as Bangkok and Jakarta.
- OECD estimates the cost of Air Pollution for OECD + People's Republic of China & India to be about US $ 3.5 trillion in terms of value of lives lost and ill health (OCED, 2014)
- Growing vulnerability of coastal cities due to climate-related disasters, such as floods, storms and sea level rising

Source: ADB, World Bank

Sources: compiled from UN DESA, 2011 & United Nations, 2012, UN HABITAT, 2016
http://www.un.org/en/sustainablefuture/cities.shtml#overview

Main Urban Challenges



Environmental footprints of cities are quite alarming and can threaten the natural resources required to sustain the economic development and poverty alleviation rates. Maintaining economic growth, while creating sustainable livable cities for all, is the biggest urban challenge.

Sources: compiled from UN Environment, & United Nations, 2012, UN HABITAT, 2016, http://web.unep.org/asiapacific/sustainable-cities

Implementing SDG 11

- Integrated planning and management:

  11.3: By 2030, enhance inclusive and sustainable urbanization and capacity for *participatory, integrated and sustainable human settlement planning and management* in all countries

  11.a: Support *positive economic, social and environmental links between urban, peri-urban and rural areas* by strengthening *national and regional development planning*

  <= **11.1: adequate, safe and affordable housing and basic services and upgrade slums**

  11.4: the world's cultural and natural heritage

  11.7: universal access to safe, inclusive and accessible, green and public spaces

Implementing SDG 11 - continued

- Transport and Mobility:

  11.2: By 2030, provide access to *safe, affordable, accessible and sustainable transport systems* for all, improving road safety, notably by expanding public transport, with special attention to the needs of those in vulnerable situations, *women, children, persons with disabilities and older persons*

  <= direct relevance to **7 SDGs (1, 3, 8, 9, 10, 11, 13)**

- Reducing environmental impacts:

  11.6: By 2030, reduce the *adverse per capita environmental impact of cities*, including by paying special attention to *air quality and municipal and other waste management*

  <= **SDG 12:** Sustainable consumption and production patterns
  SDG 13: Climate change
  SDG 14 – 15: Oceans, seas and marine resources as well as terrestrial ecosystems

Implementing SDG 11 - continued

- Disaster risk reduction:

  11.5: By 2030, significantly reduce the number of deaths and the number of people affected and substantially decrease the direct economic losses relative to global GDP caused by *disasters, including water-related disasters*, with a focus on protecting the poor and people in vulnerable situations

  11.b: By 2020, substantially increase the number of cities and human settlements adopting and implementing integrated policies and plans towards *inclusion, resource efficiency, mitigation and adaptation to climate change, resilience to disasters*, and develop and implement, in line with the Sendai Framework for Disaster Risk Reduction 2015-2030, *holistic disaster risk management at all levels*

- Overall:

  11.c Support *least developed countries*, including through *financial and technical assistance, in building sustainable and resilient buildings* utilizing local materials

  SDG 5: Gender equality and empower all women and girls

  SDG 16: Peaceful and inclusive societies & justice for all

  SDG 17: Global Partnership

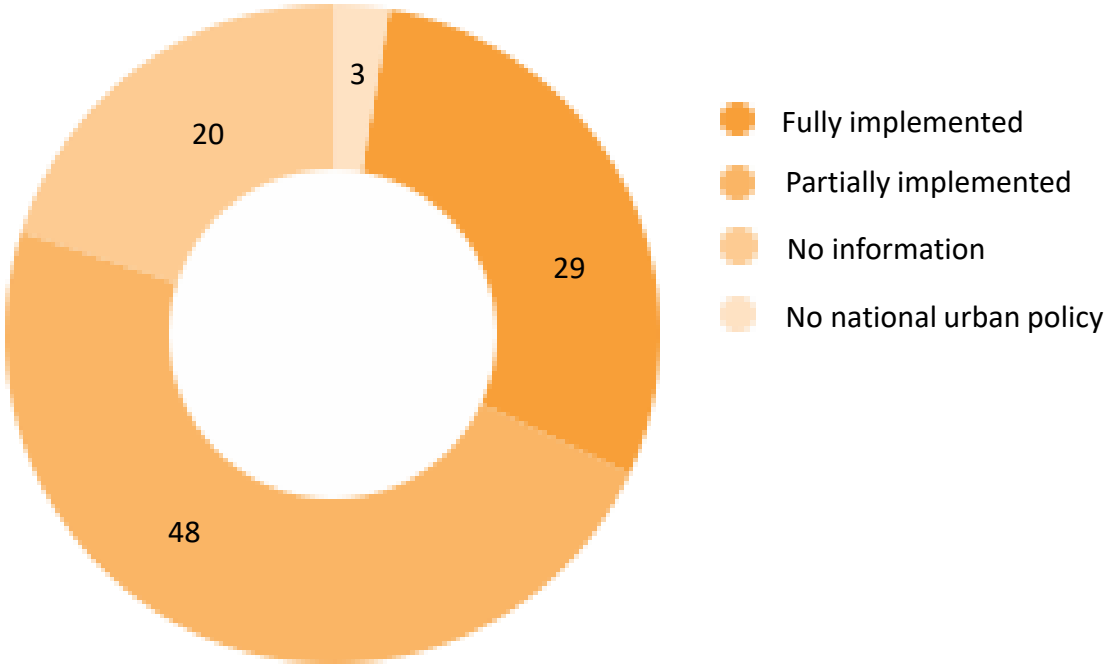
implementing a national urban policy

11 SUSTAINABLE CITIES AND COMMUNITIES

More than 75 per cent of countries are engaged in coordinated urban planning

- National urban policies provide structure and organization to the often-haphazard process of urbanization.
- With input from regional and local levels, a national urban policy or regional development plan can ensure coordinated efforts among all levels of government and provide the best opportunity for sustainable urbanization.
- These policies and plans promote stronger connections between urban, peri-urban and rural areas by linking sectorial policies that affect national, regional and local governments.

Proportion of countries in various stages of implementing a national urban policy, 2017 (percentage)



Note: Information in chart is based on data from 193 countries.

Source: The Sustainable Development Goals Report 2017

Integrated Planning and Management

- **The proportion of urban populations living in slums has declined by 20 per cent since 2000, but their numbers continue to grow**
  - The proportion of the urban population living in slums worldwide fell from 28 per cent in 2000 to 23 per cent in 2014.

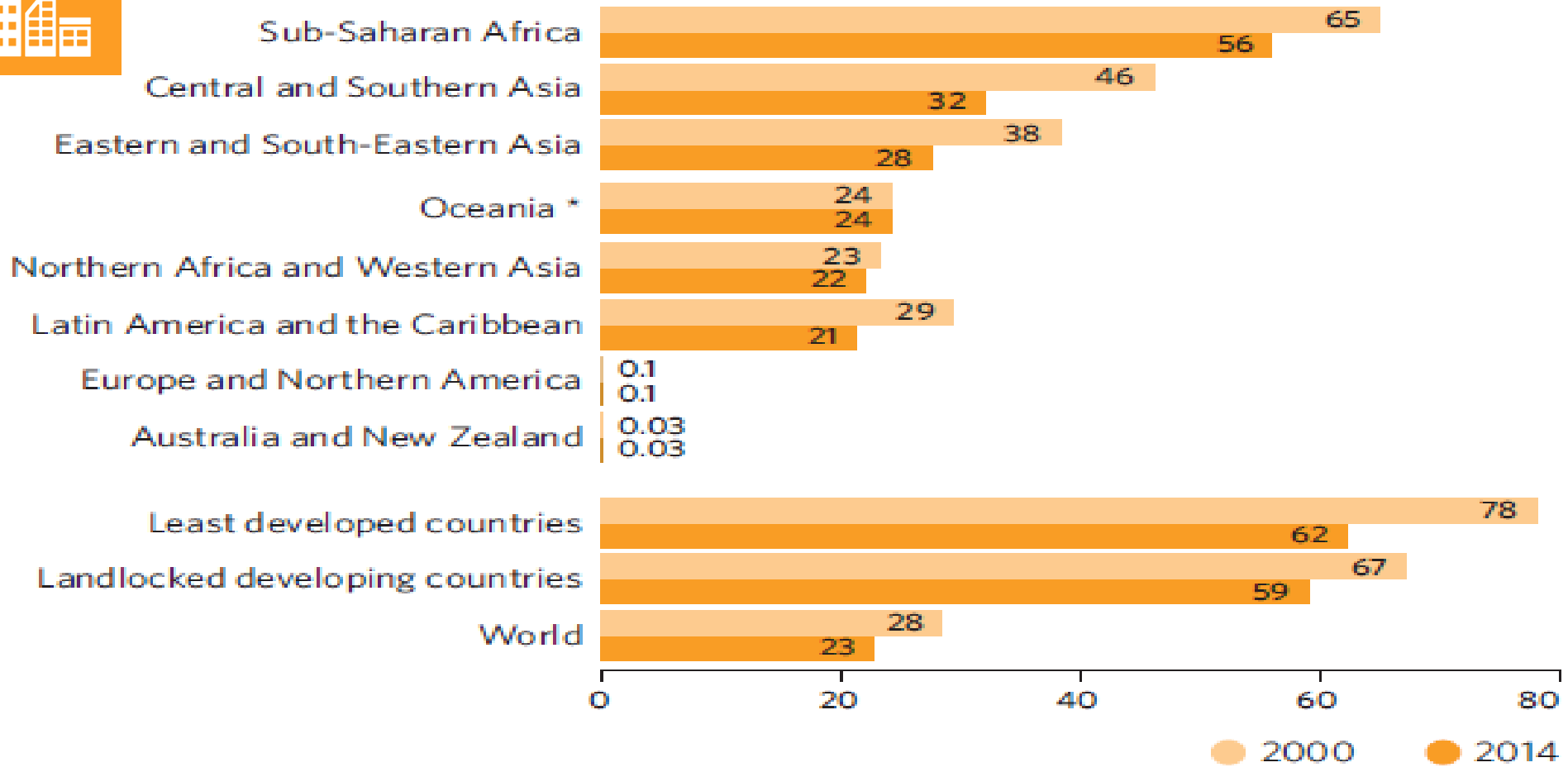
  ⇔the absolute number has continued to grow from 792 million in 2000 to 880 million in 2014 (estimate)

  <= owing to accelerating urbanization, population growth and lack of appropriate land and housing policies.

  ⇒substandard living conditions and the lack of basic services hit children and youth the hardest, diminishing their prospects for good health and education, with potentially lifelong consequences for their cognitive and social development.

Source: The Sustainable Development Goals Report 2017

Proportion of Urban Population living in slums, 2000 & 2014 (average)



Source: The Sustainable Development Goals Report 2017

Integrated Planning and Management

- **The expansion of urban land is outpacing urban population growth**
  - From 2000 to 2015, in all regions of the world, the expansion of urban land outpaced the growth of urban populations.

  = the average ratio of the land consumption rate to the population growth rate > 1, increasing from 1.22 between 1990 and 2000 to 1.28 between 2000 and 2015.

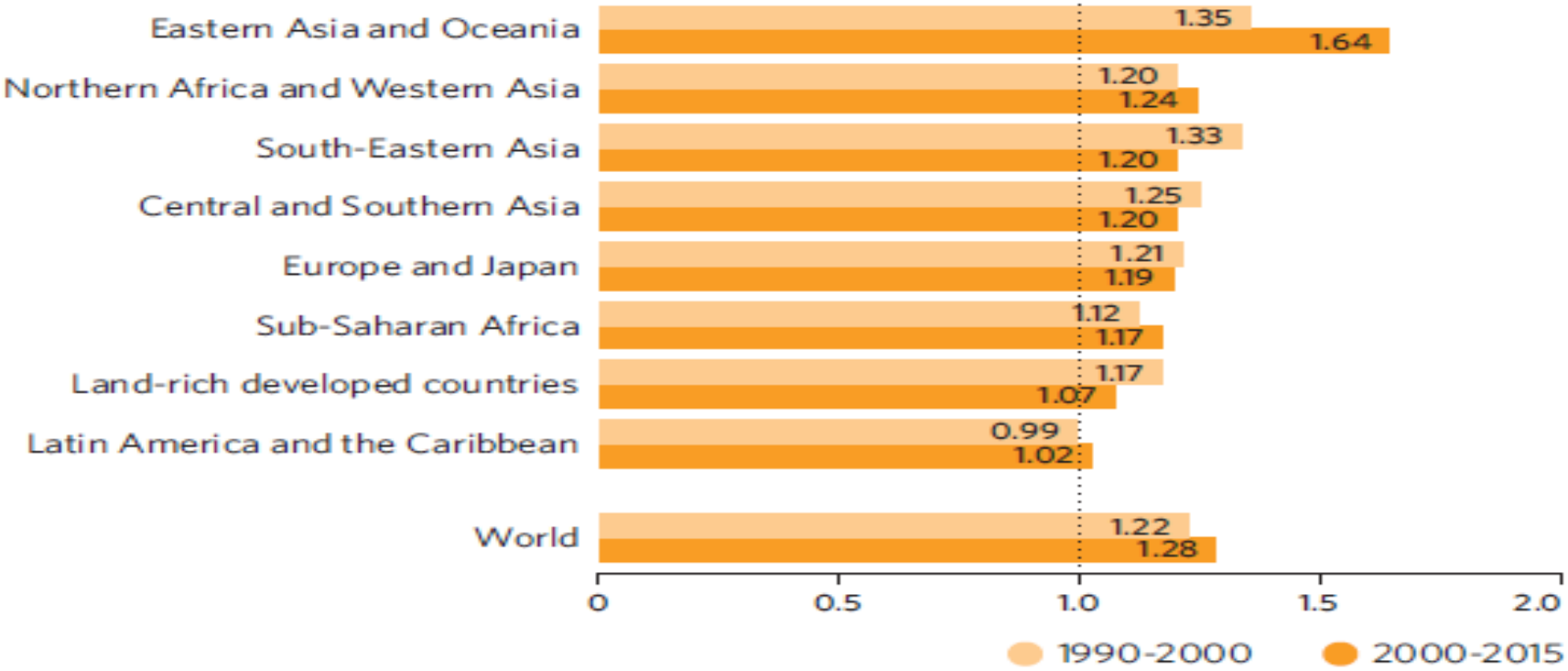
  $\Rightarrow$ Cities are becoming less dense as they grow, with unplanned urban sprawl negatively affecting the sustainability of urban development.

  $\Rightarrow$ Understanding the relationship between population shifts and urban land can help policymakers and planners ensure that cities remain economically productive and environmentally sustainable.

Source: The Sustainable Development Goals Report 2017

Urban sprawl, 1990-2000 & 2000-2015 (average)

Average ratio of land consumption rate to population growth rate, 1990-2000 and 2000-2015



Note: This chart includes a combination of SDG regional groupings and regional groupings from UN-Habitat. "Europe and Japan" includes European countries and Japan; "Land-rich developed countries" includes Australia, Canada, New Zealand and the United States of America; and "Eastern Asia and Oceania" excludes Japan, Australia and New Zealand.

Source: The Sustainable Development Goals Report 2017

Integrated Regional Development Planning (IRDP)

- A process of planning that can **transcend sectors** as well as **administrative boundaries**
- A holistic and integrated approach to sustainable development
- Designed to specifically **address the needs at the local level** and problems that affect people at the local level
- Seeks to address **community empowerment** and **capacity development**.

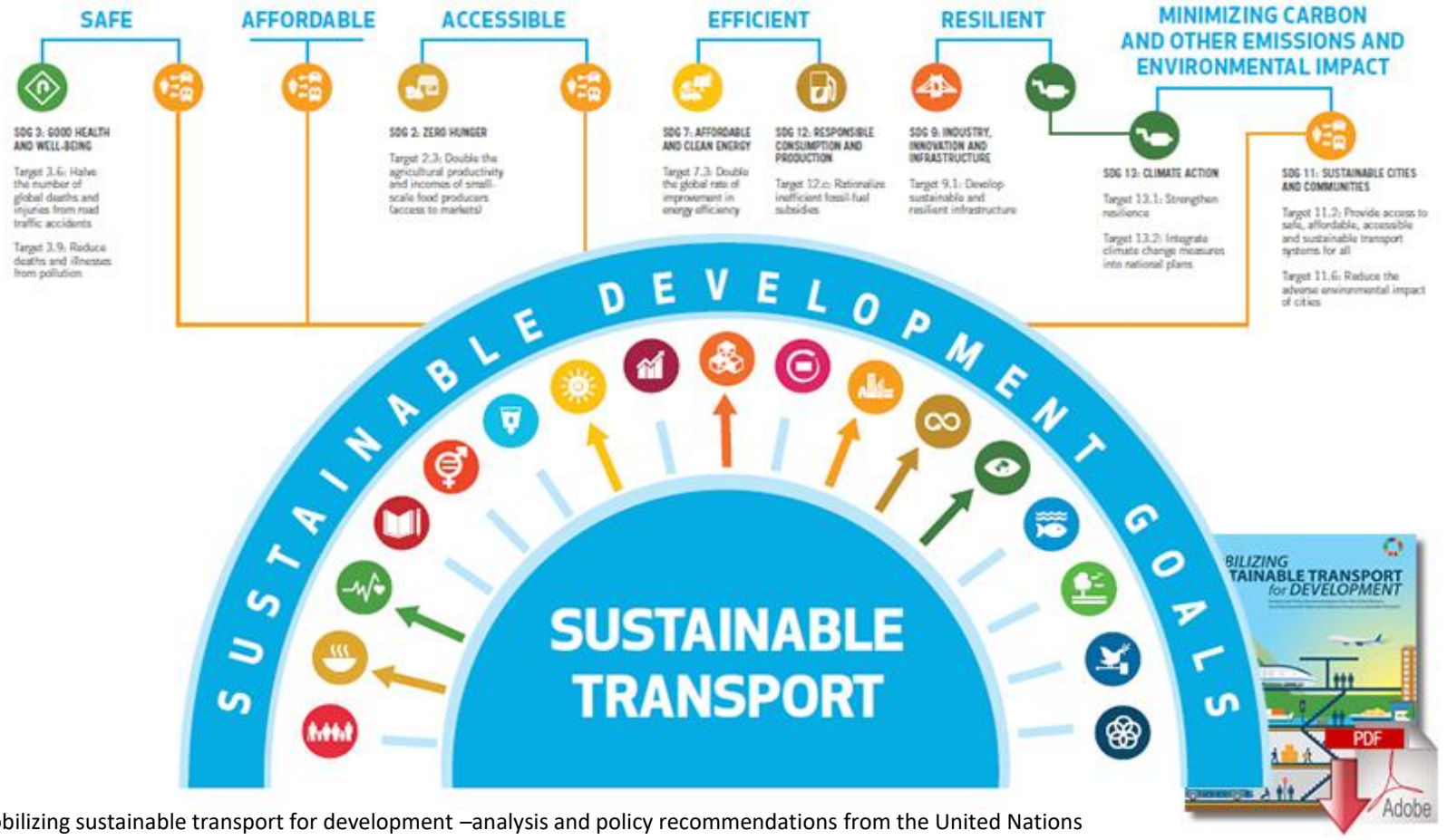
IRDP and Sustainable Development

Integrated Regional Development Planning (IRDP):

- A **useful tool** for **Sustainable Development**
- Attempts to **integrate three pillars** of sustainable development: economic growth; social development and environmental protection
- Employs **participatory planning**
- Promotes dialogue among competent administrations in the same territory to articulate **coherent solutions**

Transport and Mobility

- **Sustainable transport and mobility are fundamental to progress in realizing the promise of the 2030 agenda for sustainable development and in achieving the 17 SDGs (Global Mobility Report, 2017). Sustainable transport has direct relevance to 7 SDGs (1, 3, 8, 9, 10, 11, 13)**



Mobilizing sustainable transport for development –analysis and policy recommendations from the United Nations Secretary-General's high level advisory group on sustainable transport, Oct 2016

Transport and Mobility

The Sustainable Mobility for All (SuM4All): a global multi-stakeholders partnership with a goal to make the mobility – equitable, efficient, safe and green (clean)

- **Safety** – Improve the safety of mobility across all modes of transport by avoiding fatalities, injuries, and crashes from transport mishaps across all modes of transport, thus averting public health risks, and social and economic losses associated with unsafe mobility.
- **Universal Access** – to ensure that everyone (the elderly, children, women, families and people with disability) has access to the transport needed, and "***no one is left behind***" to take advantage of social, economic and environmental benefits for current and future generations. Equity and inclusiveness are the core of the global mobility objectives.
- **Efficiency** – This objective seeks to ensure that transport demand is met effectively, at the least possible cost. Since efficiency cuts across multiple aspects-the optimization of resources (i.e., energy, technology, space, institutions, and regulations) to generate an efficient transport system or network.
- **Green Mobility –** This objective aims to address climate change through mitigation and adaptation, and to reduce both air and noise pollution.

Source: Sustainable Mobility for All. 2017. Global Mobility Report 2017: Tracking Sector Performance. Washington DC, License: Creative Commons Attribution CC BY 3.0

Urban Mobility Situation in Asia Cities

Urban mobility situation in Dhaka, Bangladesh

Traditional mobility solutions are not enough for future mobility situation. It needs significant improvements on overall policy, planning, infrastructures, technology, and financing.

Integrated transport system allow people to move easily from one point to another and address the last mile connectivity.

Vehicles and transport infrastructure should be the part of the intelligent network which helps to improve the safety, efficiency and the traffic flow of the city.

Traffic congestion in Lahore, Pakistan

Air pollution in Kathmandu, Nepal

Air pollution problem in PR China

Walking still a chore in Jakarta, Indonesia

	Traditional mobility solutions	New mobility services	
Individual-based mobility	Private car ownership	Car sharing: peer to peer	A peer-to-peer platform where individuals can rent out their private vehicles when they are not in use
	Taxi	E-hailing	Process of ordering a car or taxi via on-demand app. App matches rider with driver and handles payment
	Rental cars	Car sharing: fleet operator	On-demand short-term car rentals with the vehicle owned and managed by a fleet operator
Group-based mobility	Car pooling	Shared e-hailing	Allows riders going in the same direction to share the car, thereby splitting the fare and lowering the cost
	Public transit	On-demand private shuttles	App and technology enabled shuttle service. Cheaper than a taxi but more convenient than public transit
		Private buses	Shared and Wi-Fi-enabled commuter buses available to the public or to employees of select companies. Used to free riders from driving to work

Source: McKinsey analysis

There were 4,80,652 road accidents in India in 2016, (source: Ministry of Road Transport, India)

Source: UNCRD presentation at Public Symposium on "Localizing SDGs in Chubu Region," C.R.C. Mohanty, Feb. 2018

Urban Mobility - Good Practices

Cambodia's first accessible tuk tuk

Korea case: Safe sidewalk with protection fences, creating a safe walking environment for children.

Japan case: a person riding in the subway in a wheelchair.

- **A city should provide equal opportunity for the mobility options for everyone, including those with a disability.**
- **A city should have continuous accessible paths of travel linking public transport, parking, retail, business, and entertainment areas.**

Hong Kong Case: Inclusive cycling routes from Sha Tin to Tai Po

Shibuya Crossing, Tokyo, Japan

Accessible taxi available in Narita airport

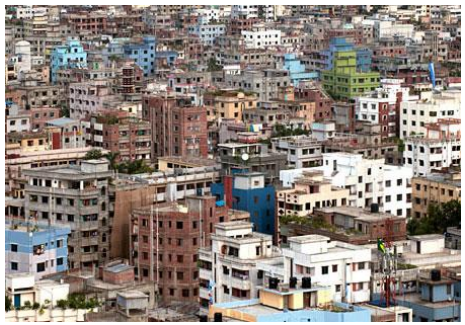
Source: UNCRD presentation at Public Symposium on "Localizing SDGs in Chubu Region," C.R.C. Mohanty, Feb. 2018

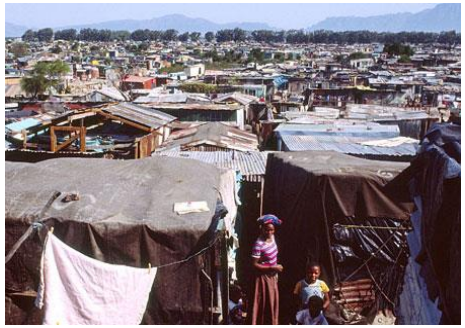
Reducing environmental impacts

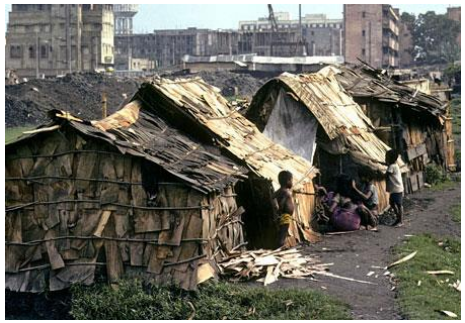
Resources management & waste management

- Major policy gaps

- Prevailing economic system does not provide adequate incentives for resource conservation and efficient resource allocation / 3Rs & resource efficiency are not part of macro economic policies as waste is conventionally thought of having no "economic" value.
- Prevailing production and consumption patterns do not effectively integrate resource efficiency, contributing to growing quantities of wastes that must be managed for final disposal; SMEs are major concern.
- As Asian industrial economies continue to grow, the region will generate more toxic chemicals & hazardous wastes, mostly coming from industrial, agriculture, and manufacturing processes, but current waste management policies are not linked with bio-diversity conservation/protection of ecological assets – fresh waster resources, coastal & marine ecosystem, etc.



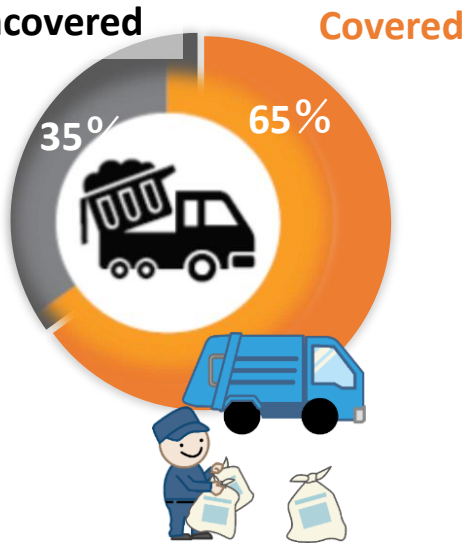




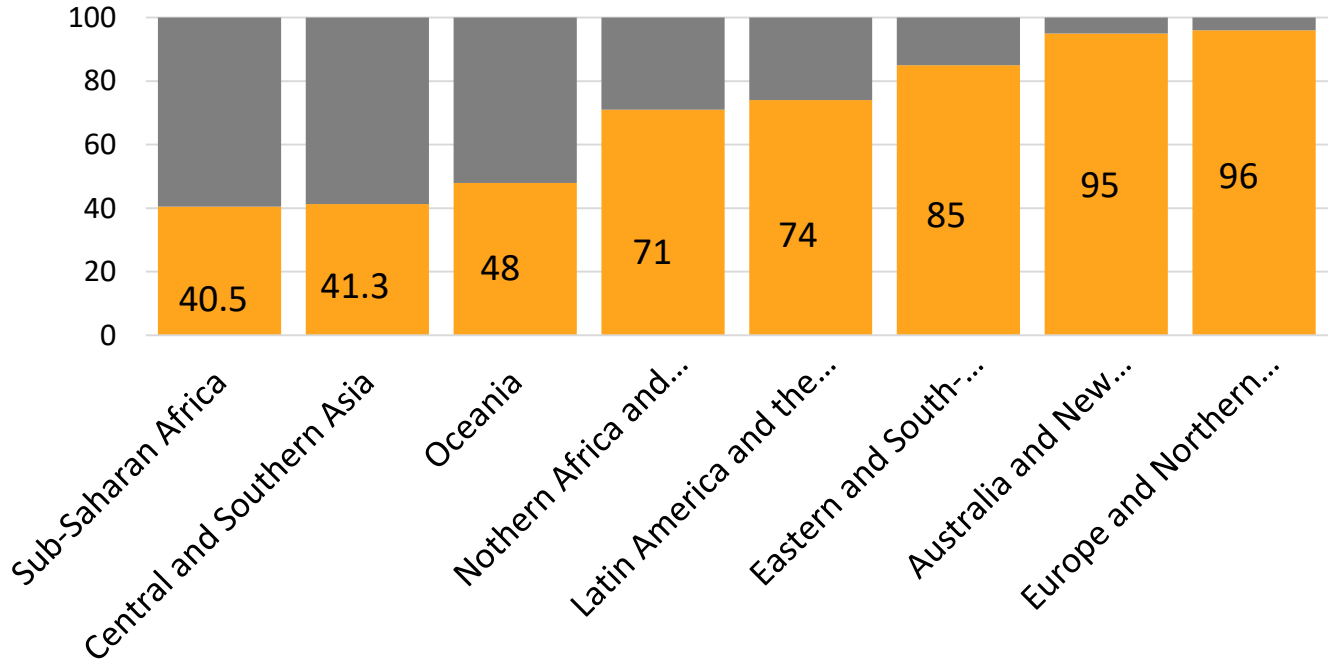
Source: UNCRD

Coverage of Municipal Waste Collection

In World (%)



By Region (%)

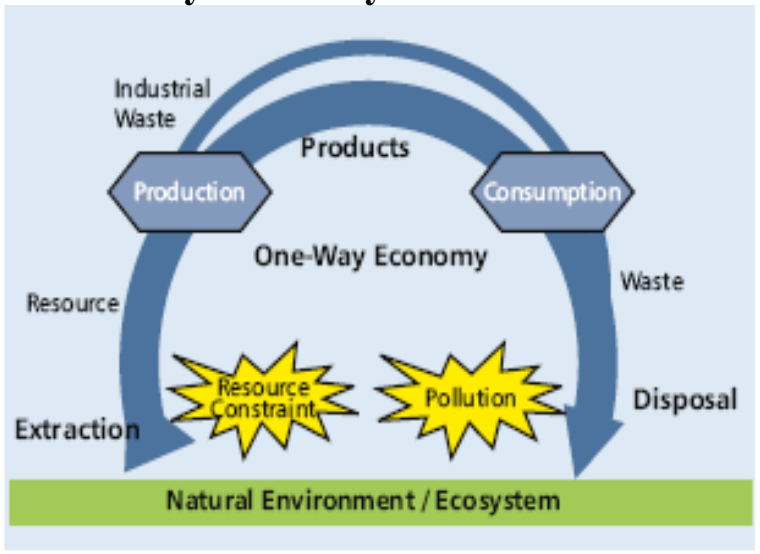


Note: Information in charts is based on data from cities in 101 countries

Source: The Sustainable Development Goals Report 2017

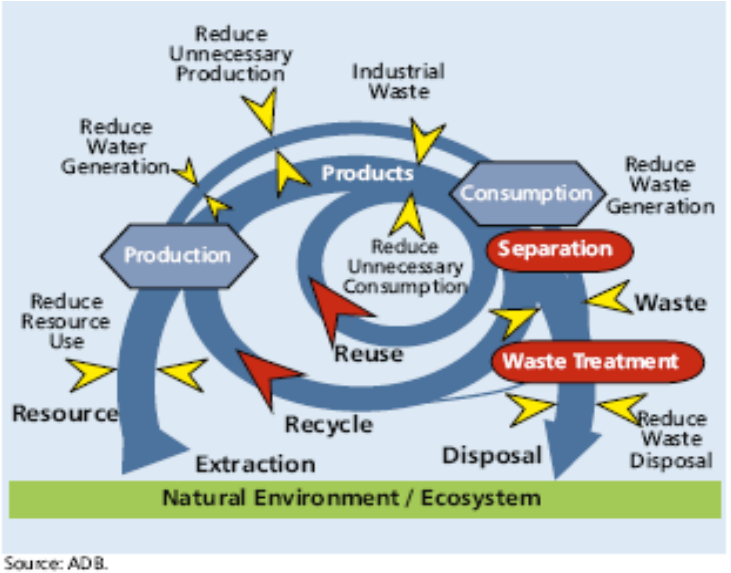
Which path the cities should follow?

1. One-way Economy?



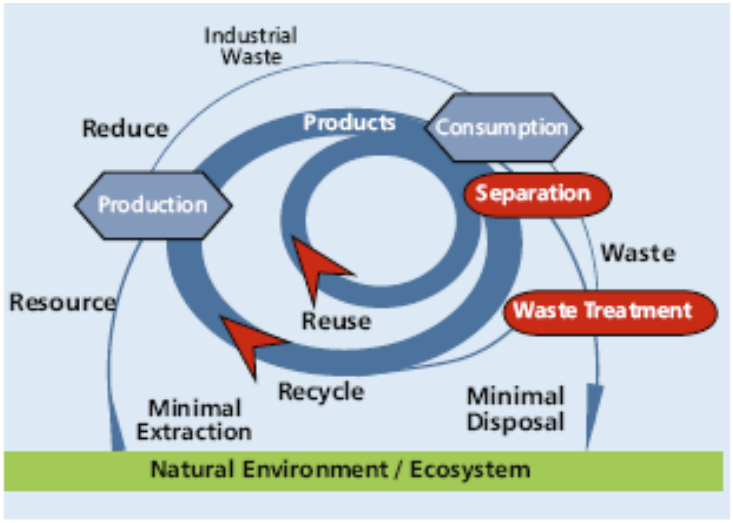
Source: ADB.

2. More resource efficient economy?



Source: ADB.

3. Closed Loop Economy?



Source: ADB.

Source: UNCRD

Resource efficiency => minimize per unit product or services

- Raw material input ⇩
- Water input ⇩
- Energy input ⇩
- Emission, pollution, waste generation ⇩

Resource efficient economy

1. **one way economy** -> a little effort is made to reduce the amount of materials consumed in production and hence the wastes are produced. Also little effort is made to reuse or recycle those wastes which mainly go for landfill.

   ⇒ *Absence of a science based policy for resource efficient economic development;*

2. **greater resource efficiency** -> by reducing consumption and waste of materials, and by reusing and recycling waste/byproducts minimize (per unit of product or services) – quantity of input raw material/energy /water as well as pollution /emission/environmental impact of the residual materials flow that flow to disposal sites.

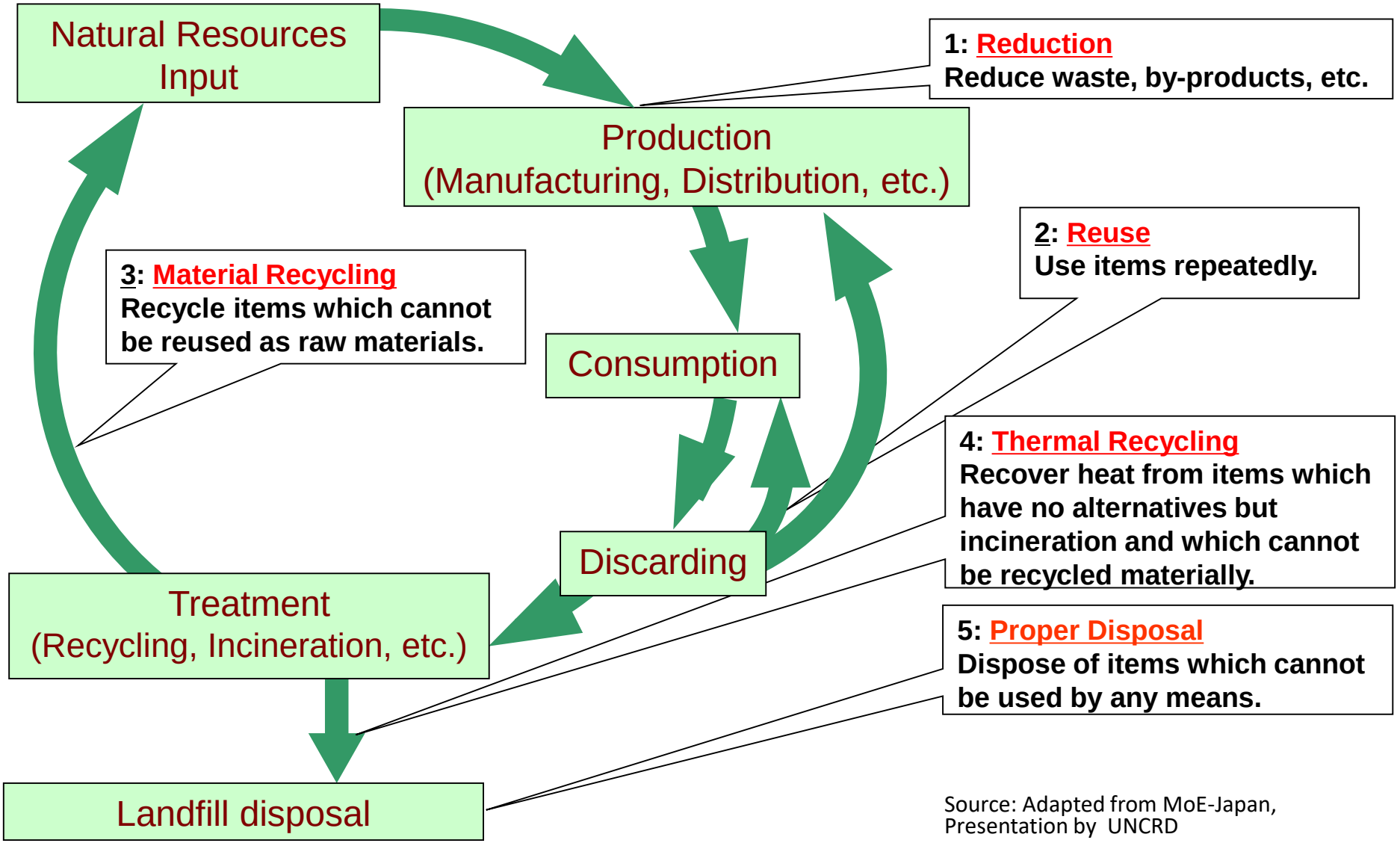
   ⇒ *science based policy for resource efficient economic development*

3. **closed-loop economy** -> nearly all waste/outputs either become inputs to other manufacturing processes or are returned to natural systems as benign emissions rather than as pollutants.

   ⇒ *science based policy for resource efficient closed-loop economic development with a high level of cooperation between science-policy-business-community*

Source: UNCRD

3Rs offer an environmentally friendly alternatives for moving towards resource efficient and zero waste society and to deal with impact of growing wastes on human health, economy and natural ecosystem….



Source: Adapted from MoE-Japan, Presentation by UNCRD

Consequences of linear economy: Plastics issue – vast implications on coastal and marine environment

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- Plastics carry hazardous chemicals in marine environment (e.g., PCBs)
- More than 200 species of animals are known to have ingested plastic debris, including birds, fish, turtles and marine mammals.
- Transfer of chemicals from ingested plastics to biological tissue has been confirmed (bio-magnification).
- Micro-plastics (size < 5 mm) in coastal and marine environments is a critical problem, including bio-accumulation of hydrophobic persistent organic pollutants (POPs) like PCBs, DDTs, HCHs and others from the plastics through ingestion or food-chain (fist to fish and fish to people),

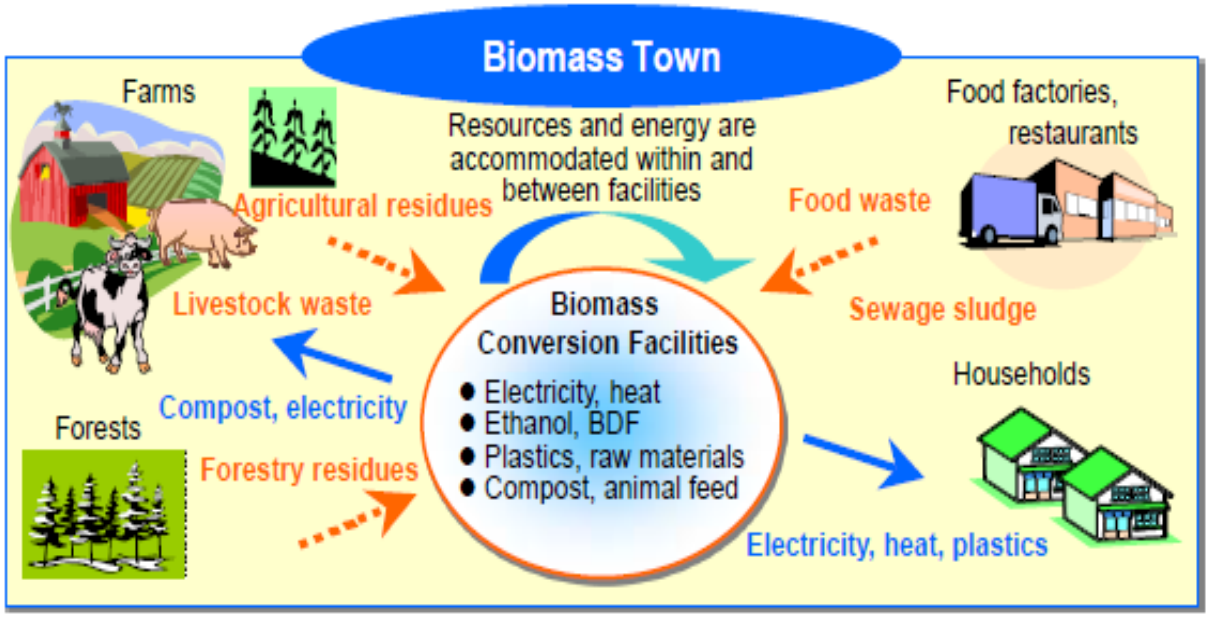
(Source: Prof. Hideshige Takada and 6th Regional 3R Forum in AP, 2015)

Source: http://surfingindia.net/

Source of photos: UNEP, http://www.unep.org/regionalseas/marinelitter/publications/gallery/default.asp

Source: UNCRD presentation at Public Symposium on "Localizing SDGs in Chubu Region," C.R.C. Mohanty, Feb. 2018

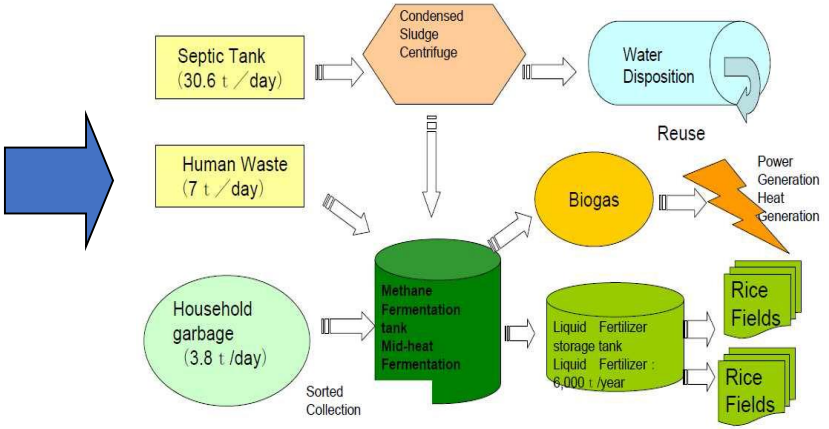
A sustainable and resource efficient city is a complete inbuilt zero waste system - Biomass Town Concept, Oki Town, Japan



MAFF Japan 2005; MAFF 2011

Case study: Oki town / Fukuoka Pref. (17,500 inhabitants):

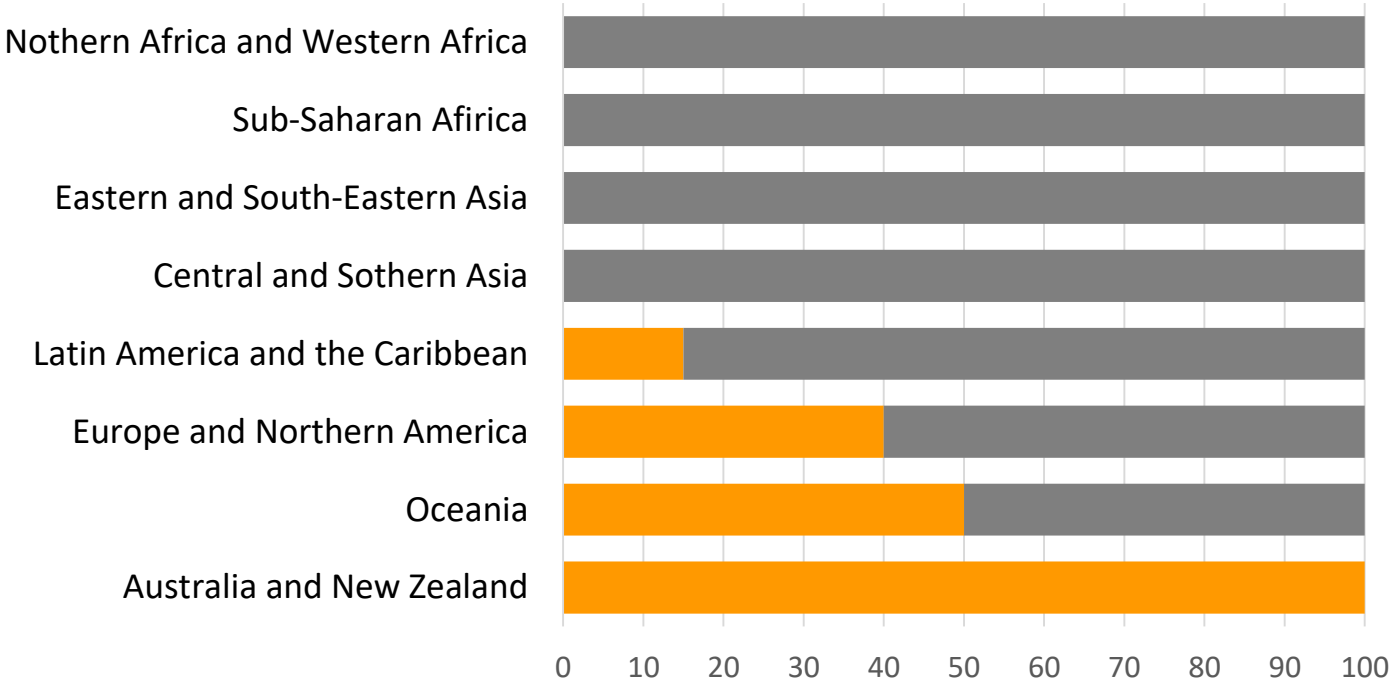
- Methane fermentation from household garbage.
- 166,209 kWh for self utilization
- Production liquid fertilizer: 6000 tons per year
- Fertilizing 100ha of paddy field
- Reduction of 44% in house hold waste generation
- Reduction of 20 million yen in incineration cost (Approx. 205,000 US$) per year.
- generating new green jobs



Source: UNCRD

Urban Air Quality

Proportion of the urban population living in areas that meet the annual WHO air quality guideline value, 2014 (percentage)

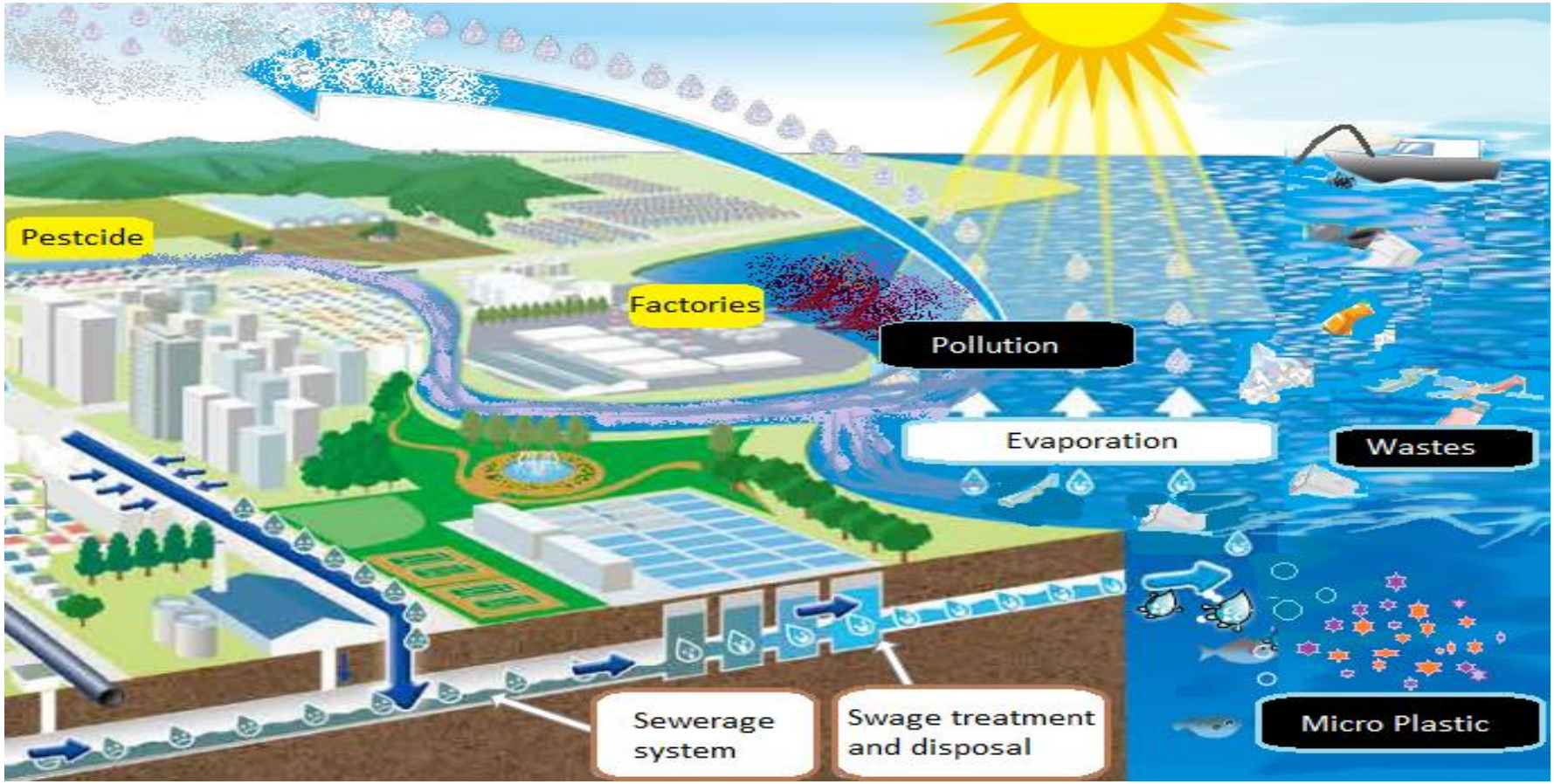


Particulate matter of a diameter less than 2.5 micrometers (PM2.5)/ year

Source: The Sustainable Development Goals Report 2017

Achieving Sustainable Cities with Clean Water, Clean Land and Clean Air through 3R and Resource Efficiency

A 21st Century Vision for Our Communities



Source: UNCRD

Poverty and vulnerability to environmental risks and natural hazards and disasters

Disasters (even small-scale ones) perpetuates the cycle of poverty

- Increase vulnerability
- Destroy assets and means of livelihoods (including house and/or plot)
- Reduce coping capacity (and options) for next disaster
- The reduced financial means may lead to bad or hazardous choices, such as:
  - Reducing food intake quantity and quality;
  - Cut down education expenses; and even
  - Rebuilding on other disaster-prone sites…

and those will be worsening the urban poor's vulnerability on the long run

Source: UNCRD

Increasing resilience as integral part of transport policy, planning, and development

- Rise in frequency and magnitude of natural disasters (flood, earthquake, cyclones, landslides, etc.)
- Climate resiliency is not yet a major element in the current transport policy, planning, and urban/transport infrastructure and services development resulting in unprecedented damages to both human life and economy during such extreme events;
- In the current state, urban/transport infrastructures in Asia are vulnerable to effects of climate change, and these vulnerabilities are yet be addressed in the design, construction, and geometry of roads, railway tracks, and other transport infrastructure, including the drainage system of cities.

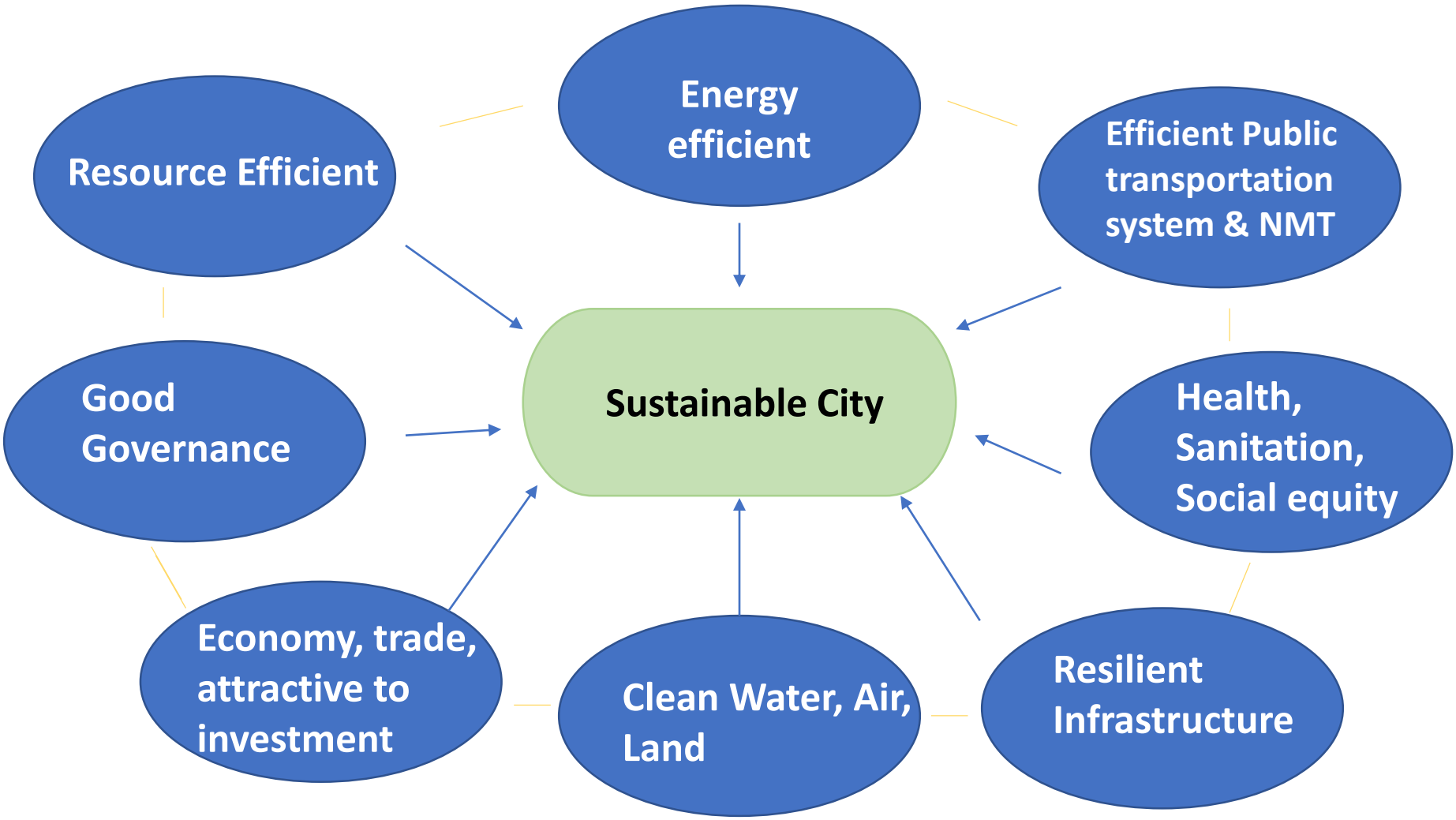
Source: UNCRD

Stakeholders and their roles

Governments cannot address those issues alone, but in partnership with a wide range of actors where, besides leading the decision-making and implementation processes, governments act as enablers.

- Central governments: setting national priorities, making policy reforms (institutional, legislative and financial), creating an enabling environment
- Local authorities: coordination and guiding the direction of growth and development of urban areas, integrating Transport policies + Disaster Risks Reduction strategies, measures, plans and programmes and their integration into official urban planning and management systems
- Civil Society: brings knowledge of needs and reality on the ground; participate in environment + disaster risk assessment, in development and implementation of community or local risk reduction strategies; watchdogs monitoring interventions and process (in particular, if they are transparent and in line with MDGs & DGs)
- Private Sector: can contribute with technical and financial resources in (re)building sustainable and resilient infrastructures
- International Community: can provide support in terms of policy, technical advice and capacity building

GOAL


Energy efficient
Resource Efficient
Efficient Public transportation system & NMT
Good Governance
Sustainable City
Health, Sanitation, Social equity
Economy, trade, attractive to investment
Clean Water, Air, Land
Resilient Infrastructure


Thank you