

Water & Energy Transition: a fuel for resiliency

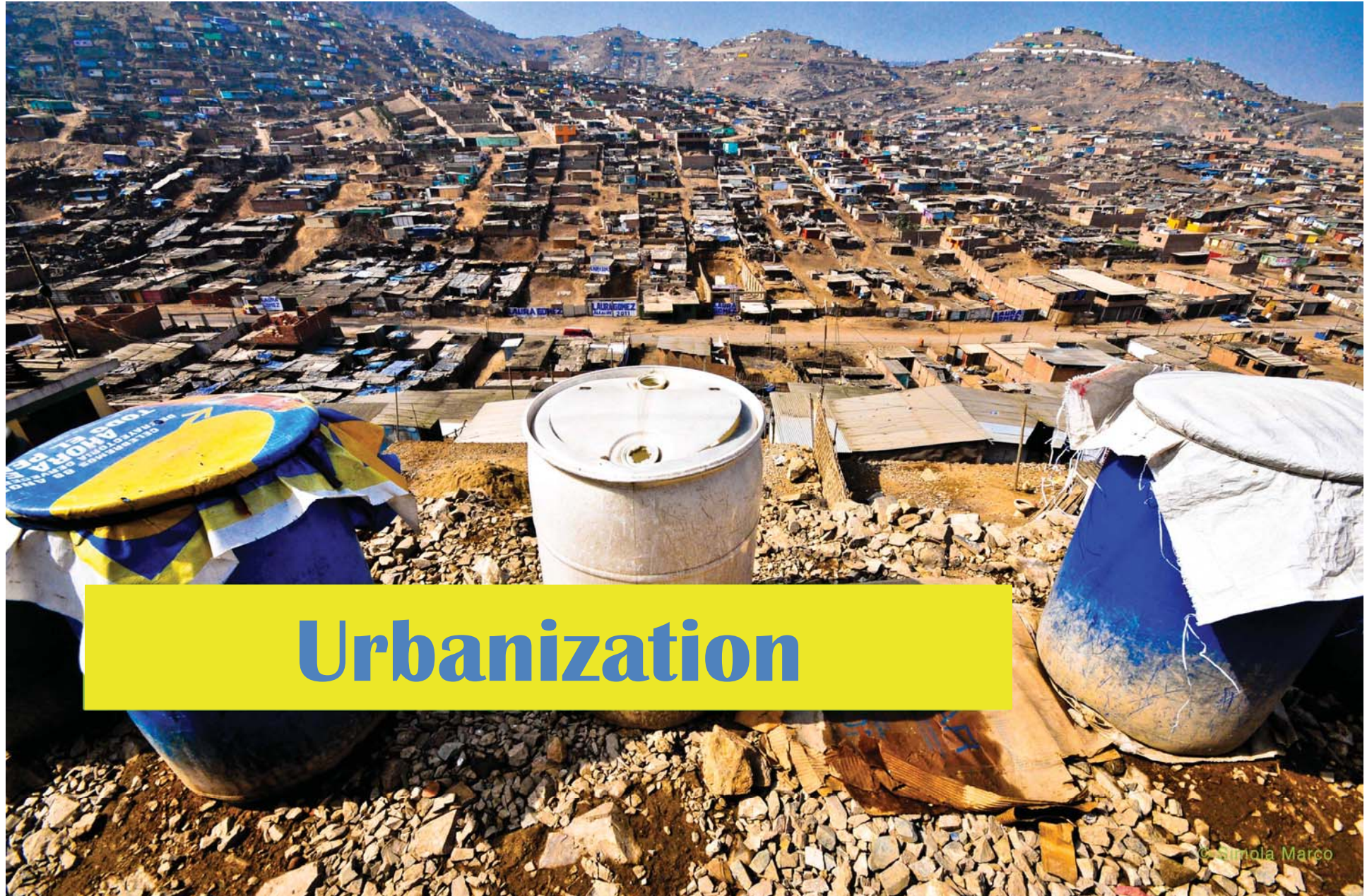


Loïc Fauchon, Honorary President of the World Water Council
8th meeting of the High-level Experts and Leaders Panel on Water
and Disasters (HELP)

Jakarta, Republic of Indonesia – 1 November 2016

TOGETHER WE MAKE WATER & ENERGY GLOBAL PRIORITIES





Urbanization

What findings since our last meeting?

- **Cities have an increasingly important place :**
 - 740 million people in 1950, around 4 billion people in 2015 and around 7 billion people in 2050
 - By 2030, the area covered by cities could triple
- **Developing regions are particularly concerned by urbanization :**
 - In 2015, 79 % of megacities are located in Latin America, Asia and Africa
 - By 2030, the urban population of developing countries will double

Low income countries account for only 9% of the world's disasters but almost 50% of the fatalities

Demography

What findings since our last meeting?

- **Urban and rural areas are interlinked:**
 - **Water-related disasters affect more rural areas in terms of injuries and deaths whereas urban areas are more affected in terms of economic losses**
 - **Disasters and climate changes create environmental displaced people, great number of these being rural communities forced to live in slums**
 - **Cities are depending on resources mostly coming from the countryside**
 - **Agriculture, livestock and fisheries have suffered about a ¼ of the total economic losses caused by climate disasters in developing countries**

Droughts might be responsible for about 90% of losses in agriculture of the Sub-Saharan countries, where it provides about ¼ of gross domestic product.



Droughts

© Riyad Mohammed

What findings since our last meeting?

- City and country dwellers are increasingly vulnerable to...

- **TSUNAMI**

Many cities have been built along tsunami-prone coasts.

- **STORMS**

Many urban areas are exposed to cyclones, storms and heavy rains.

- **FLOODS:**

Flash floods have disastrous consequences, especially because of the location of housings on river banks or in delta areas.

- **DROUGHTS**

Are progressing. They create environmental displaced people, pressuring on housing, employment, basic services, food supply ... and swelling slums

The cost of natural disasters is growing with economic growth: \$1.5 trillion in damage worldwide between 2003 and 2013

Floods



© Camille Morrency

Towards resilient towns and countries

WHAT IS RESILIENCY?

- **Capacity to cope with climate evolutions, natural disasters, urbanization**
- **Capacity to protect populations and secure economic, cultural and environmental heritage**
- **Capacity to reduce the impact of crises and improve global performance**



Resilient territories

© Altamir Ali

Towards resilient towns and countries

RESILIENT TERRITORIES SOULD CONCILIATE

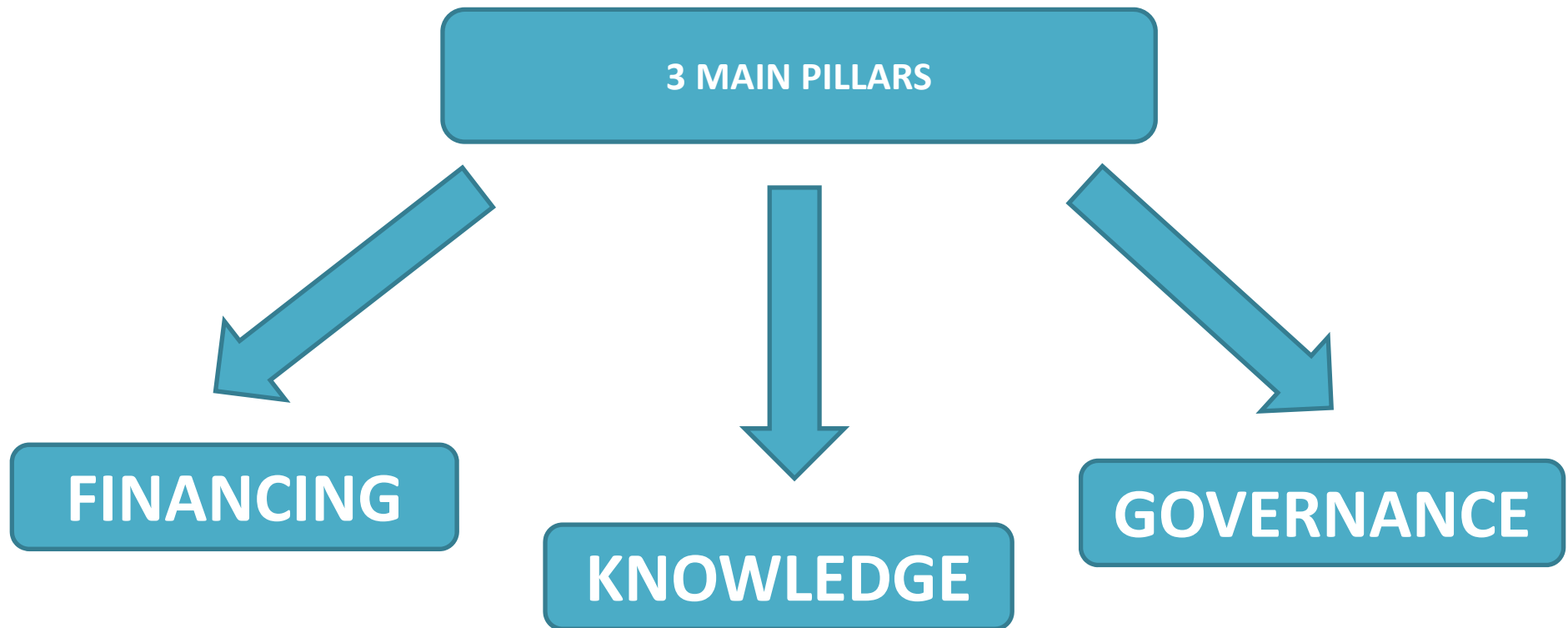
- **Efficiency and Sustainability**
- **Human Development and Nature Conservancy**
- **Increased Supply and Controlled Demand**
- **Preparedness Duties and Response Rights**

An aerial photograph of the Rade de Toulon, showing a vast expanse of water with several islands and a large urban area on the coast. The foreground is dominated by a dense forest of green trees, with some buildings and roads visible. The sky is a clear, pale blue.

Resilient territories

Rade de Toulon © C. Moirenc pour la SCP

Resiliency is built on



A photograph of a school cafeteria where many young children are seated at long tables covered with white cloths, eating their lunch. Several adults, likely school staff or teachers, wearing white lab coats and hairnets, are standing and supervising the children. The room has large windows on the right side, and there are framed pictures on the walls. The overall atmosphere is busy and organized.

Sustainability

Financing for resiliency

- **Financing adaptation measures would only represent 0,38% of the world's GDP**
- **Adaptation costs of the 20 largest cities of the world vary from 15 million in Addis Ababa to 1 600 million in NYC (London University College)**
- **The G7 InsuResilience Initiative is aiming at increasing the number of people covered by individual insurance policy from 100 to 400 million in developing countries by 2020.**
- **Investment in Resilience pay off with every dollar bringing a return of 4 dollars (Rockefeller Foundation)**



Financing

Governance for resiliency

- **Under the New Urban Agenda (Habitat III Quito), promoting the development of resilient infrastructures, which will reduce risks and impacts, especially in informal settlements**
- **Forming economic and political leaders to risks management and inclusive resilient policies**
- **Appointing in each cities and rural communities a Resilience Officer to promote and coordinate resilient initiatives**
- **Facilitating parliamentarian action for resilience, through laws and regulation, national budgets and international treaties**



Governance

Knowledge for resiliency

- **Elaborating urban risks prevention plans**
- **Building resilient capacities for local authorities**
- **Promoting good practices for the public at large**
- **Adapting school programs and trainings**
- **Building on innovative medias and social networks**

Knowledge



Urban development requires more resources

- **Water**

The urban water consumption is likely to double by 2025 due to rapid urban population growth, inadequate planning, pollution, poverty, competing demands on the resource...

- **Energy**

Cities account for between 60 to 80% of energy consumption and generate as much as 70% of the human-induced greenhouse gas emissions primarily through the consumption of fossil fuels for energy supply and transportation.

Water & Energy

A photograph of an industrial facility, possibly a refinery or chemical plant, silhouetted against a hazy, orange-tinted sky at sunset or sunrise. The facility includes several tall distillation columns, a large crane, and various pipes and structures. In the background, a forested hill is visible. The foreground shows some trees and a road.

Water and energy transition: fuel for resiliency

- **A significant change in water and energy policies**
 - **Make buildings and housings more energy-efficient**
 - **Give priority to clean transport**
 - **Making today wastes tomorrow materials**
 - **Building Up Renewable Energy**
 - **Fight against energy and water poverty**
- **Inclusive Green growth policies, leading the way to resilient communities of city or country dwellers, are operating as fuel for resiliency**

Water & Energy

What can water operators do?

ADAPTATION AND RESILIENCE

- **Recycling and reusing water to save water and energy and prevent tensions on different uses**
- **Adapting waste water processes to heavy rains**
- **Securing supply and storage urban systems**
- **Optimizing the efficiency of water networks**



Increasing the supply

réservoir du Vallon Dord à Marseille © C. Moirenc pour la SGP

What can water operators do?

CIRCULAR ECONOMY AND ENVIRONMENTAL FOOTPRINT

- **Treating and recycling waste water to produce heat and use less energy**
- **Developing smart networks to build the city of tomorrow (“positive energy”)**
- **Producing renewable energies**



Managing the demand

Towards “Sponge” cities

WHAT IS A SPONGE CITY?

Sponge City is an urban development paradigm that enable buildings, roads, green spaces, water system and other ecosystems to play full role to naturally store, infiltrate, detain and treat storm runoff, by strengthening the urban planning and development management.

Sponge cities is building a technical architecture of “Infiltration, Detention, Retention, Purification, Reuse, Discharge”.

In 2015, more than 130 cities applied for a demonstration of sponge city.



**OUR RESPONSIBILITY IS TO PREVENT PERIODIC
DISASTERS FROM BECOMING PERMANENT**



THANK YOU

worldwatercouncil.org