

Current water challenges and prospective opportunities in the Arab region: bold steps in the right direction

Hammou LAAMRANI

GIZ Advisor

LAS Advisor

OUTLINE

- **Where we do stand?**
- **Where are we heading?**
- **What could we do better?**
- **Concluding remarks**

Water is a global challenge

2013	2014	2015	2016	2017
Major systemic financial failure	Fiscal crises	Water crises	Failure of climate-change mitigation and adaptation	Weapons of mass destruction
Water supply crises	Climate change	Rapid and massive spread of infectious diseases	Weapons of mass destruction	Extreme weather events
Chronic fiscal imbalances	Water crises	Weapons of mass destruction	Water crises	Water crises
Diffusion of weapons of mass destruction	Unemployment and underemployment	Interstate conflict with regional consequences	Large-scale involuntary migration	Major natural disasters
Failure of climate-change mitigation and adaptation	Critical information infrastructure breakdown	Failure of climate-change mitigation and adaptation	Severe energy price shock	Failure of climate-change mitigation and adaptation

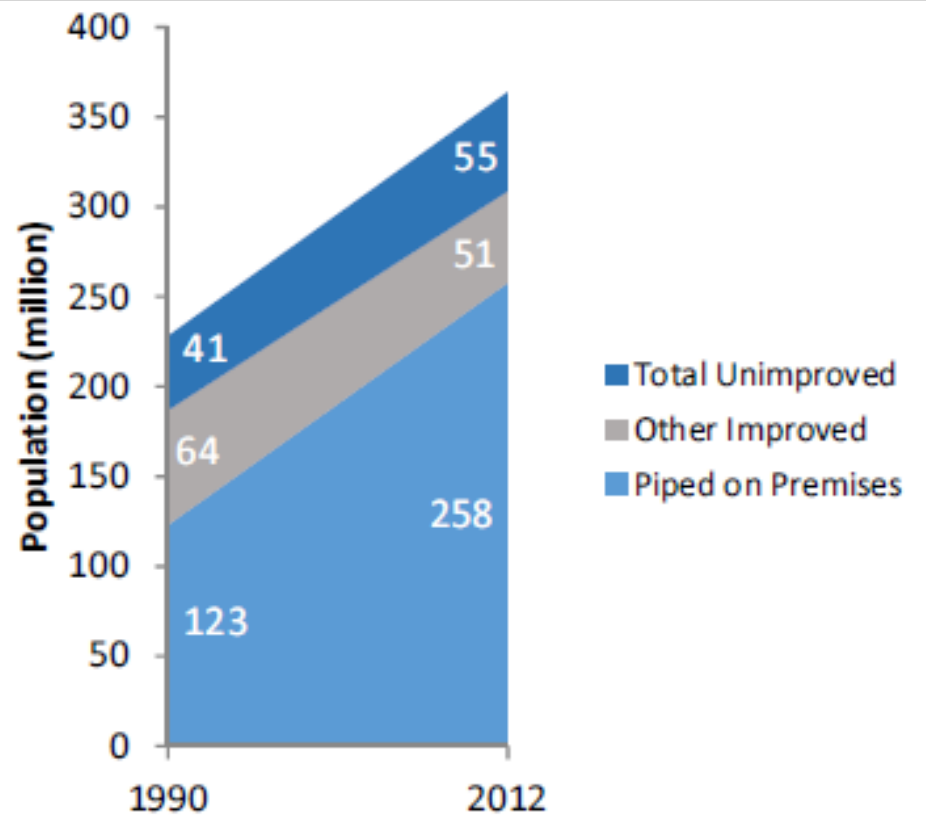
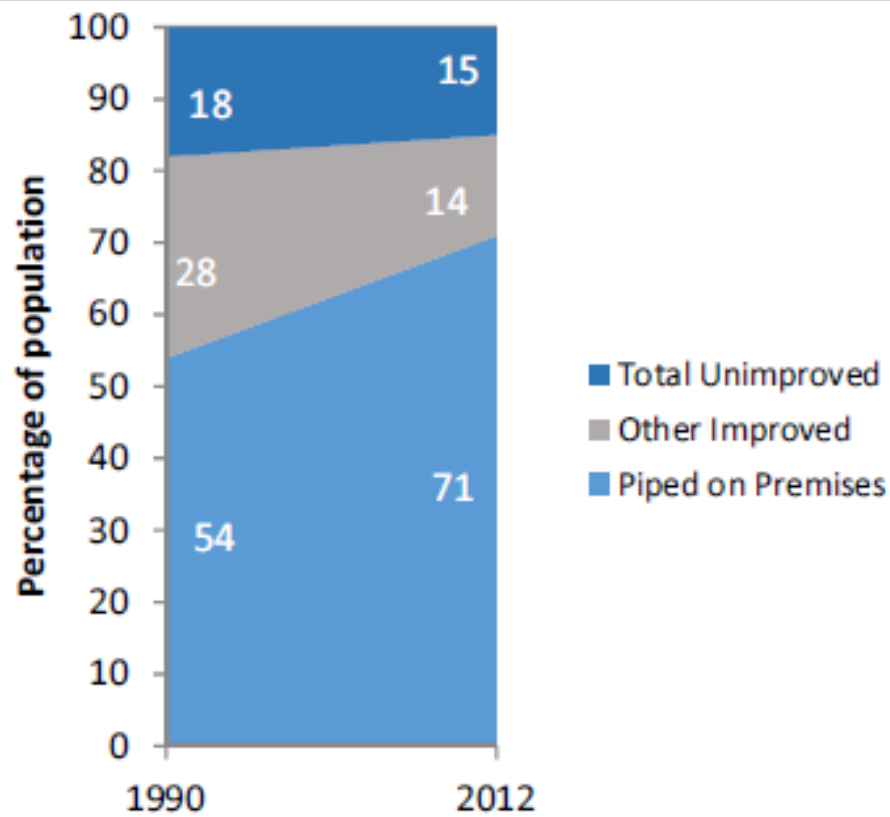
■ Economic
 ■ Environmental
 ■ Geopolitical
 ■ Societal
 ■ Technological

Multiple Challenges: Multiple paradoxes

- 15% is land arable
- 2/3 of renewable resources are transboundary
- Driest region in the world: limited renewable resources, quality degradation
- 50 % of global desalination, after 60 years technology imported
- Lowest tariff, Low efficiency, low productivity in the largest consumer sector
- High physical loss in all sectors
- Groundwater use not sustainable: the tragedy of common pool resources
- Wastewater treatment and reuse: differential progress
- Institutions are not performing as they should be, sectors in silos: Incoherent policies
- Water is a “state business”, heavily subsidized, not factored in the cost of production
- “Illusion of abundance”, cultural and behavioral...water is not a business case

Bright spots: here and there

- **Governments are doing their best... but their best is not enough for a water secure region**
 - Heavy investments in infrastructure O & M
 - New and revised water strategies and action plans: Unified strategy
 - New regulations
 - Water utilities reforms taking shape
- **Access to water and sanitation services to poor man and woman**
- **Improving irrigation techniques**
- **Reduce, Reuse, Recycle projects steady increase**
- **Non Conventional Water, Reduction of loss**
- **Economic instruments**
- **Awareness at all levels is picking up: Information yes, attitude not enough**
- **Reviving secular best practices “Al Waqf”**



Opportunities

- **Technologies are moving fast and getting cheaper**
- **The global development agenda: SDGs, NDCs, DRR open new venues for water sector**
- **The global agenda will not create highest level political commitment needed, it will likely help Arab States to plan, set targets, monitor and measure their progress**
- **Food Security, Climate change, oil prices, renewable energy cost: Stressors in favor of a more secure water future**
- **Vision shifting from resources based economies to knowledge economies**
- **Interlinkages : growing awareness**

Questioning the “established truism”

- **Scarcity is not news for the Arab Region: Human civilizations have been rising and declining under water scarcity**
- **The holding capacity of the ecosystem has naturally changed over time**
- **Population is an asset when more 2/3 are below 30.**
- **Urbanization is the natural trend in Human history and will continue to do so as cities will generate 80% of the GDP in some countries**
- **Climate change is just one of the many changes the region will face : the adaptive capacity and resilience is the way to go**

The future endowment for the Arab region

- **The sea and the sun**
- **Human intelligence : Science and Technology, cheap energy, hydroponics, water from air**

Installed Wind Power Capacity in MENA Region

Figure 3. Installed Wind Power Capacity in the MENA Region, 2005–2012

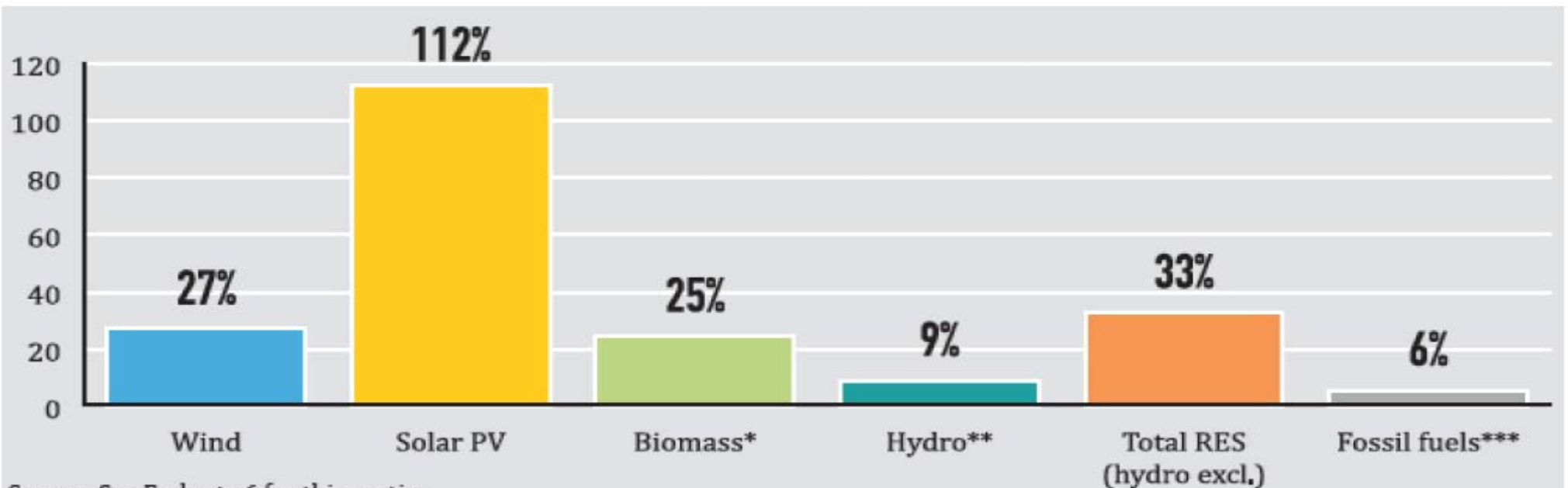


Source: See Endnote 13 for this section.

Note: Capacity data are rounded to the nearest 5 MW.

Source: MENA Renewables Status Report 2013

Annual average growth rate of electricity production by source in the MENA Region, 2008–2011



Source: See Endnote 6 for this section

In 2010, Iran and Morocco started to operate the first CSP plants in the MENA region, and in 2011, Algeria and Egypt started to operate their first CSP plants; therefore, it is not possible to calculate the average annual growth rate for CSP power generation from 2008 to 2011

*Average annual growth rate for biomass power generation is from 2009 to 2011.

** Average annual growth rate for hydropower generation includes 2010 data for Lebanon and Syria.

*** Average annual growth rate for fossil fuel power generation includes 2010 data for Lebanon, Syria, and Yemen.

Source: MENA Renewables Status Report 2013

Renewable energy support policies and targets in MENA

		Renewable Energy Targets	Renewable Energy Strategy or Plan	Regulatory Policies						Fiscal Incentives				Public Financing	
				FIT (incl. premium payment)	Electric utility quota obligation/RPS	Net metering	Biofuels obligation/mandate	Heat obligation/mandate	Tradable REC	Capital subsidy, grant, or rebate	Investment/production tax credits	Reduction in sales, energy, CO ₂ , VAT, or other taxes	Energy production payment	Public investment, loans, or grants (incl. R&D)	Public competitive bidding
NOEC	Algeria	✓	✓												
	Bahrain	✓													
	Egypt	✓	✓	D											
	Iran	✓	✓												
	Iraq	✓	✓												
	Kuwait	✓													
	Libya	✓													
	Oman	✓													
	Qatar	✓													
	Saudi Arabia	✓		D											
	Syria	✓													
	UAE	✓	✓	D											
	Yemen	✓	✓												
Total NOEC		13	6	3 3D	2	2	0	1	0	3	2	2	3	8	8

Is about capacities?

- **World class technical capacities (Public sector is loosing a large pool of competences, retirement, private sector and International organizations attracting and retaining competences)**
- **Gap in policy and institutional performance experts**
- **Gap in socio-economics**
- **Whose capacity matters**

Is it about RD?

- **A common thread in Arab region: the gap between science and policy: Need for coherence and above all, need for mutual accountability**
- **Regional and sub-regional shared resources and investments, larger funding : patents are expensive**
- **Scaling up innovation and best practices**
- **Ensuring continuity: The water competences are aging and retiring**

Meanwhile what should we do

- “ Never subsidize a scarce resource” : Sustainable cost recovery with social equity.
- The region is to craft its development outlook factoring for “ less water and more people”:
- Technology has promises... technology needs to come from the region
 - Do for the renewable energy what we failed to do for desalination as a region
- Adequate policies (what agriculture we want should be substituted by what agriculture our environment can afford for a water secure future)
- Adequate policies are not enough... Without enforcement and accountability of the public policies are just “roses in the desert wasting their perfume” Dr. Sadeq El Mahdi
- Uncertainty in today's world will grow: We don't know what water management is going to mean in 30 years time. Better start now!

Concluding remarks (1)

- **We should not worry about the future... we should just prepare for it:**
- **The current resources can meet the demand of the Arab region with a 30% increase population compared to today's population: We can save 30% Water, 30% Food, 30% Energy that is wasted today: that's next to 50% of the total subsidies with high opportunity cost!**
- **Demand management is where more water is!**
- **"New water": Reuse 7 times (consumptive use is only a small proportion).**

Concluding remarks (2)

- **Unless the highest political (not only policy) is committed to change and to sustain the change not much will change**
- **We need to put our faith and resources in Science and Technology, grounding, funding, patenting, educating.**
- **Technology is just technology, Performing institutions are equally important, performing institutions are made of competences. Competences are built as part of a strategy for the Arab Development outlook**
- **Solutions to water might come from outside water. Agriculture is already steadily getting less water in many Arab countries. Renewable energy is growing, creating wealth, creating employment creating growth.**

The order does not matter

- **Innovation Implementation scaling up**
- **Innovation Implementation scaling up**
- **Innovation Implementation scaling up**

That is the future we need to change today

THANK YOU

