HIGH-LEVEL POLITICAL FORUM
ON SUSTAINABLE DEVELOPMENT

Theme in 2018: Transformation towards sustainable and resilient societies

SIDS Perspectives,

Energy and Water

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Our future rides on our ability to integrate:

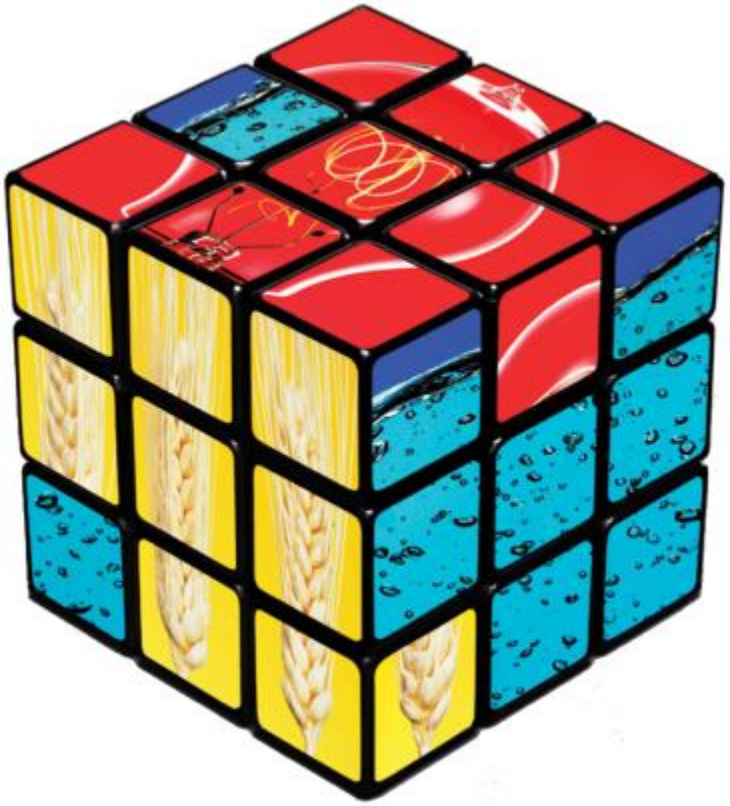
ENERGY

+

WATER

+

FOOD



A Puzzle for the Planet

Source: Scientific American, February 2015

Challenges

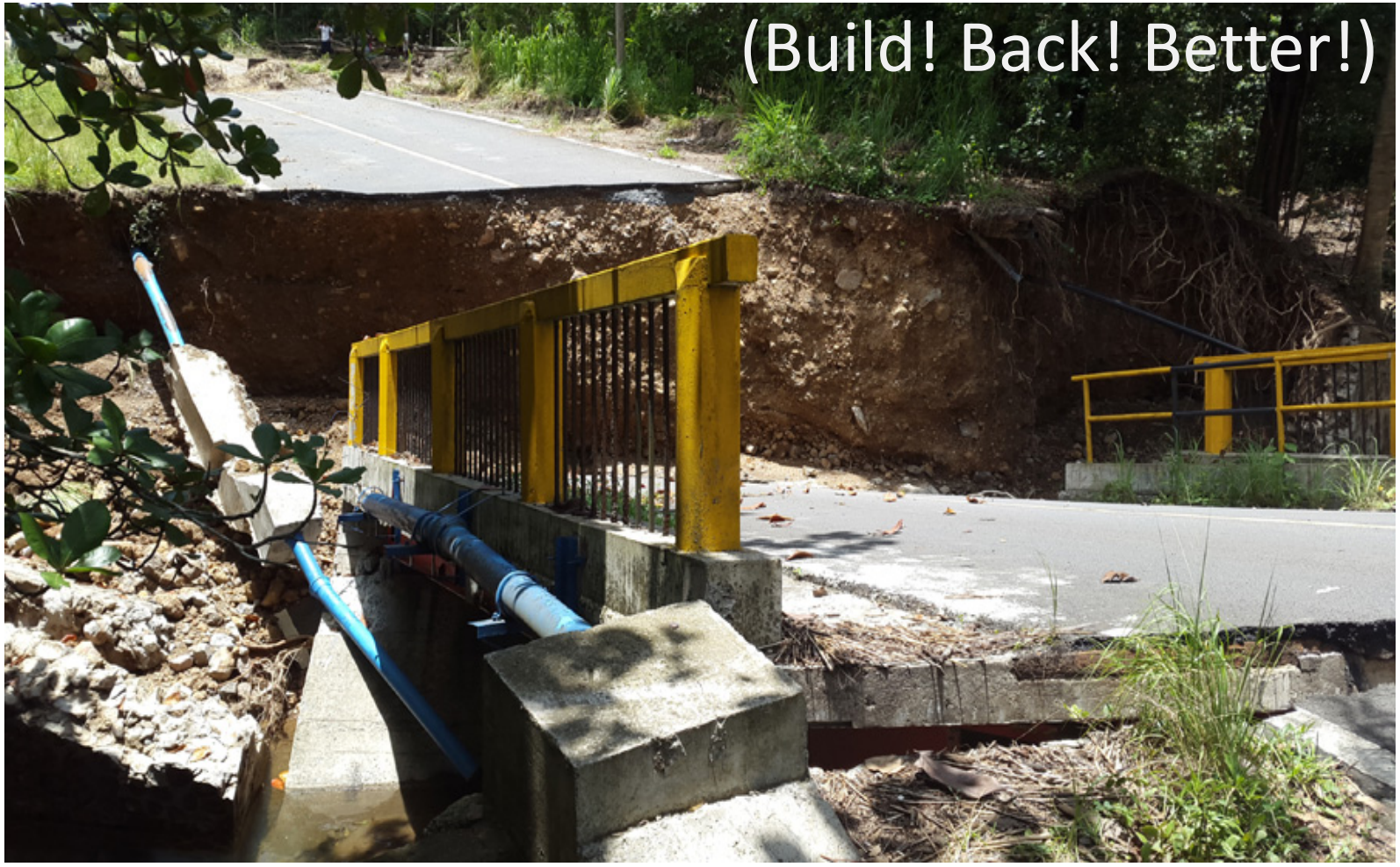
1. Policies to improve energy, water and food supplies often uncoordinated;
2. Ministries responsible for water fragmented: public works, infrastructure, environment, natural resources, agriculture and combinations;
3. Short term policy common and long term planning rare;
4. Outdated legal and institutional arrangements;
5. Poor financing structures and tariffing, dependency on Ministry of Finance;

Challenges

6. Limited financial planning for expansion, improving service, maintenance;
7. Inefficient designs, operations and waste of water (leaks and unaccounted for) and energy (pumping, $$$);
8. Watershed destruction (mining, agriculture) togther with …
9. Climate change and variability: extreme weather conditions: droughts and floods →
10. Reduced recharge of aquifer (groundwater) and other freshwater resources (rivers, lakes, wetlands);

Challenges

10. SIDS Water Supply sector infrastructure vulnerable to extreme weather and water-related hazards with escalating costs of related damage and losses;



Challenges

10. SIDS Water Supply sector infrastructure vulnerable to extreme weather and water-related hazards with escalating costs of related damage and losses;

    (Build! Back! Better!)

11. Some SIDS have high Water Stress Index;
12. Increasing demand, centralized systems and wasteful water use exacerbating the vulnerability of existing water supply systems and sources;
13. Limited water balance planning for “competing” uses: agricultural, public supply, industry;

From MDG to SDG

1. MDG's higher focus on water supply, but not always quality;
2. Expanded water supply → generate waste-water as water as transport medium;
3. Discourage and reduced use of traditional rainwater harvesting;
4. Limited resources to sanitation and wastewater management → pollution of fresh water resources;
5. SDG includes water quality, so MDG high coverage might fall;
6. Wastewater a fresh water resources!!;

Why would we want to waste our wastewater

Integrated Water Resource Management (IWRM)

1. Integrated and participatory process of planning water resources and water use by all stakeholders and partners.
2. Political, cross-sectoral process for sustainable development resolving conflicting of interests into creating win-win situation
3. Fresh water is a finite and vulnerable resource, essential to sustain life, development and the environment and recyclable
4. Women play a central role in the provision, management and safeguarding of water.
5. Water has an economic value
6. Water balance: in-out-reuse-recycle
7. Water Quality →Water Safety Planning (WHO)

GEF CREW+

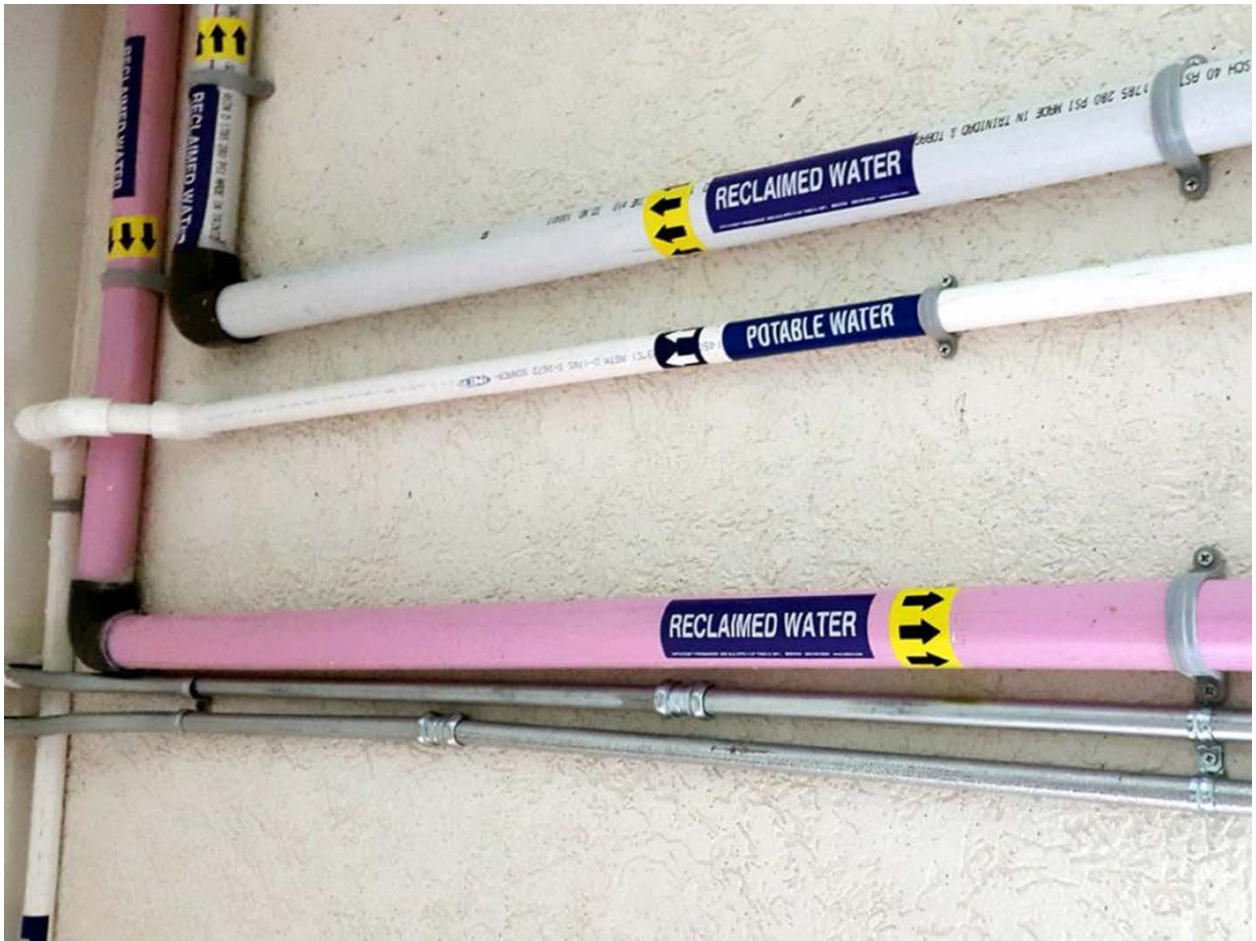
Caribbean Regional Fund for Wastewater Management:

1. Policy, legislative and institutional reform
2. Sustainable financing options
3. Promotion innovative small scale community based solutions to integrated wastewater management (IWWM)
4. Links to SDG's
5. Safe re-use of used water (aka wastewater)

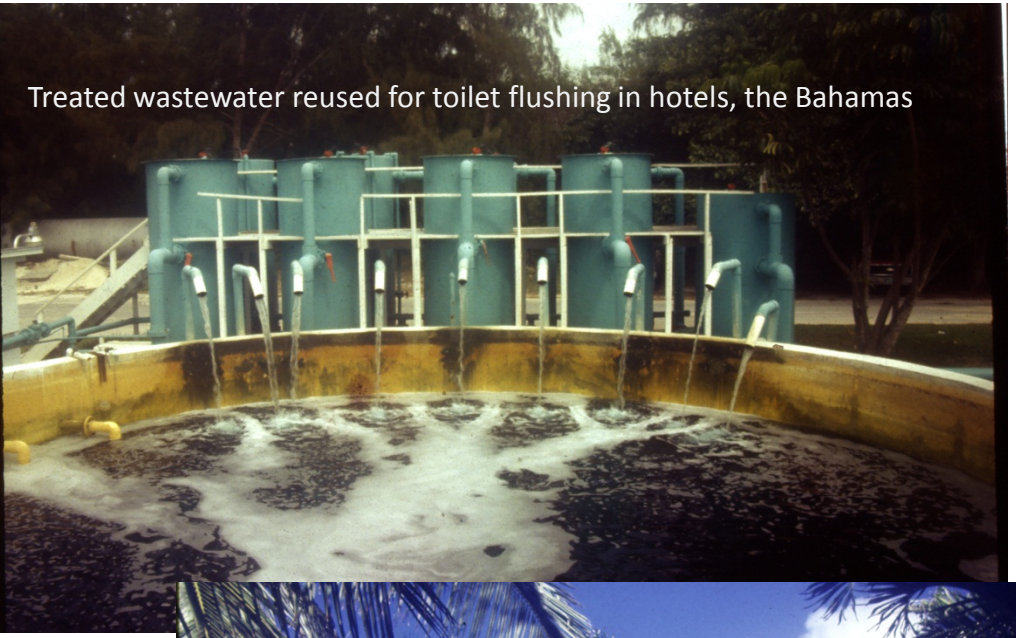
Integrated rainwater harvesting and reclaimed water

Goddard Building Complex, Barbados

Integration of rainwater harvesting and reclaimed water in dual plumbing system for large complexes (and hotels) for non-portable uses (flushing, irrigation, golf course!)



Wastewater as resource


Treated wastewater reused for toilet flushing in hotels, the Bahamas

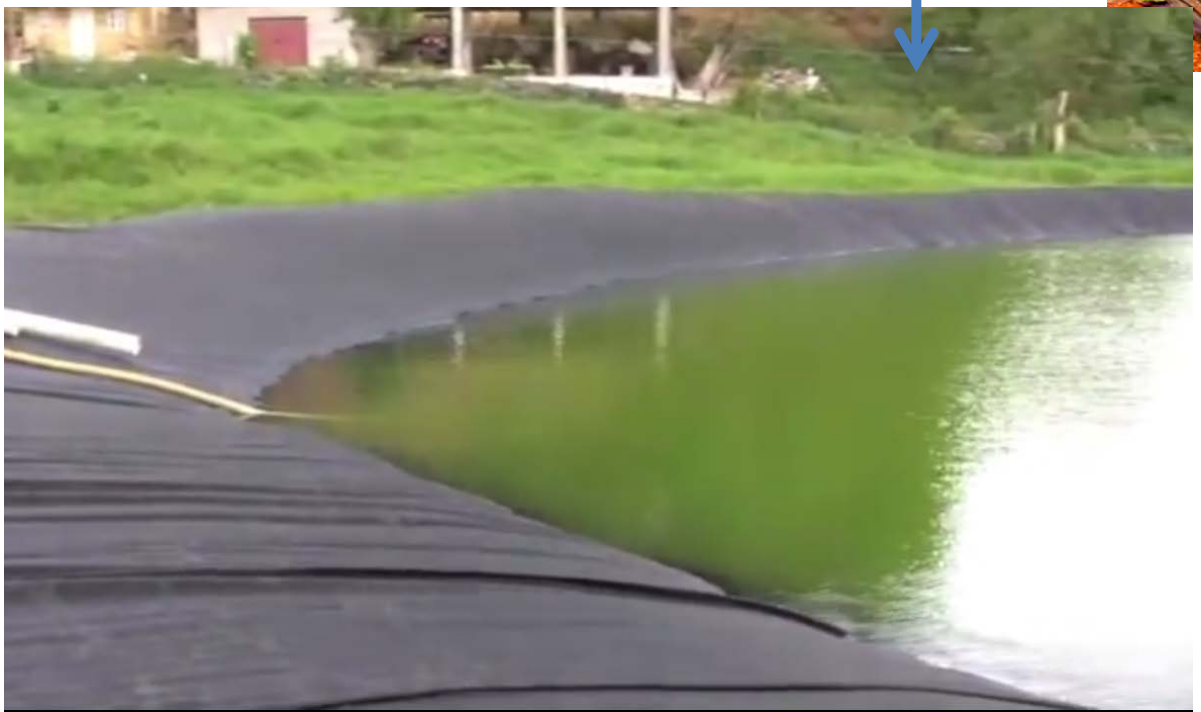

Sludge from wastewater used as fertilizer, Jamaica


Treated wastewater used for irrigating gardens around hotel at McKinnons Bay, Antigua

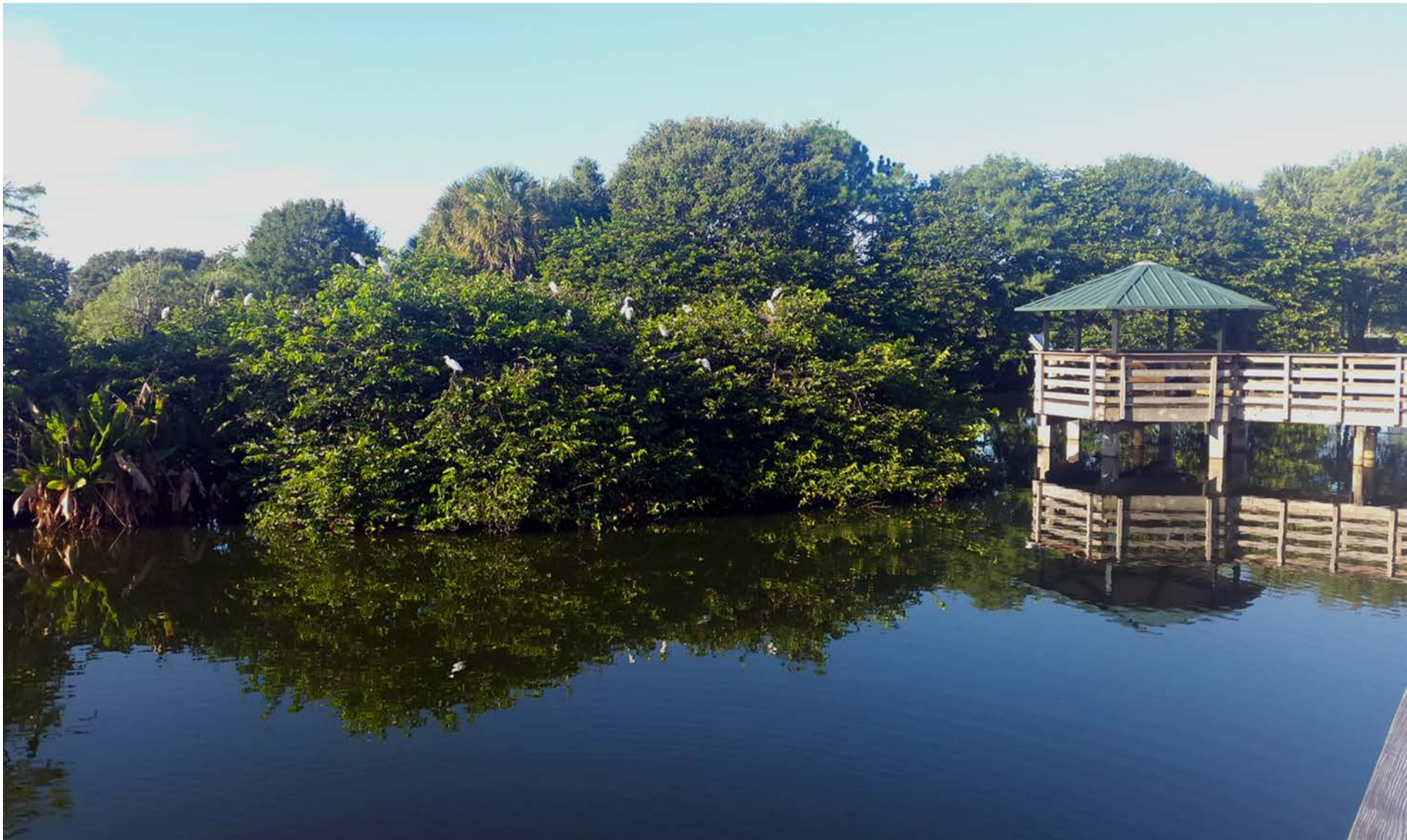
Wastewater reuse often perceived as “TREFU”

Irrigation food crops with treated wastewater

Rainwater harvesting with solar powered drip irrigation



Constructed Wetlands



Constructed Wetlands

1. Integrated WasteWater treatment option (SDG 3; SDG 6.3, 6.6);
2. Agriculture and food security: irrigation water for food production (SDG 3; SDG 2);
3. Coastal protection increase resilience to impact of Climate Change (SDG 13);
4. Ecosystem restoration, habitat reclamation, wildlife conservation, increase biodiversity: SDG 14-15);
5. Health: provide green spaces for healthy recreation (SDG 3);
6. Education: integration in science curriculum for schools, research options. (SDG 4);
7. Tourism: attractive tourism product (SDG 8);
8. Economic value: Jobs (SDG 8);