Healthy City Design 2017 International Congress, London, 16-17th October

SDG monitoring and the New Urban Agenda: An opportunity not to miss !

Dr Graham Alabaster,
Chief, Waste Management & Sanitation
UNHABITAT
graham.alabaster@un.org

A Changing World

- Globally, today 54 per cent of the world's population is urban compared to 30% in 1950. By 2050, 66% will be urban
- Close to half of the world's urban dwellers reside in relatively small settlements of less than 500,000 inhabitants, while only around one in eight live in the 28 mega-cities with more than 10 million inhabitants.
- Current conflict situations have resulted in unprecedented migration. Many are now living in extremely poor conditions, with inadequate basic services and lack of access to health care. These conditions are not unlike the low income settlements in other parts of the world. Monitoring health status in transient populations very difficult
- This results in both immediate "visible" health problems and under-lying conditions (insecurity, stress, mental health issues)

Incorporating health into development goals was particularly important in light of:

- Our planet's rapid and dramatic urbanization
- Soaring increase in urban housing & transport energy use and pollution/climate emissions
- Health and equity impacts from environmentally unsustainable development




Major social and environmental development challenges

1. Outdoor air pollution → 3.3 million deaths/yr – mostly urban *(Lancet, 2012)*
2. Physical inactivity → 3.2 million deaths/yr - mostly urban *(WHO, 2009)*
3. Traffic injuries → 1.3 million deaths/yr - mostly urban *(WHO, 2009)*
4. Water & Sanitation → 25% of urban residents globally lack access to good sanitation. Safe drinking water also a problem for urban poor *(WHO, 2009)*
5. Climate Change → 140,000 deaths/yr – Coastal cities vulnerable *(WHO, 2009)*
6. Household Air Pollution →3.5 million deaths/yr *(Lancet, 2012)*: 25% of urban residents in low-income cities and 70% in least developed cities cook on primitive coal/biomass stoves.

The New Urban Agenda

- The NUA adopted by Government at Habitat III in Quito saw a much greater emphasis on health as a key component for sustainable urbanization

  - In the NUA there was a balanced understanding that health and well-being are considered together. Both NCD and CD considered. Need to consider both health and non-health actors

  - Particular reference to WHO and air-quality guidelines, ending epidemics of (among others) AIDS/TB/Malaria

  - Special relevance to provision of basic services (water, wastes) and its role in health prevention. Reference to poor health resulting from extreme climate events: heatwaves, dust, Vector-borne diseases

  - Understanding health inequity

  - **Missing** the unprecedented issue of health systems collapse in the light of: conflict, climate, ageing, AMR etc

Synergies between Monitoring the NUA and The Sustainable Development Goals

- The SDGs present a real opportunity to link monitoring the implementation of NUA (not just SDG 11, but 3, 6 etc). An effective cross mapping of the indicators between health and urban (and some other goals) is needed. Global monitoring/National monitoring
- The SDGs will be measured in all countries so a means has to be found to encourage all members states to participate at a level commensurate with their resources
- Member States are concerned about the cost of monitoring and how it will impact on budgets. The indicators with the most usefulness with be those with clear outcomes/actionable
- Addressing inequities: Mapping of populations without spatial reference is meaningless (health and soci-economic status) Urban Heart, CPI
- **Localising the measurement of SDGs is important**

Key Interventions

1. **Rapid transit, safe walking & cycling networks** – **MORE** physical activity; safe mobility for vulnerable; **LESS** traffic injury, obesity, cancers, and cardiovascular disease
2. **Green housing design & water & sanitation** – **LESS** chronic respiratory disease and diseases of poverty (e.g. TB, diarrhoea) due to better ventilation/damp control; **LESS** heat stress and cold exposures; **LESS** injuries; **MORE** mental health.
3. **Shift from coal to LPG, biogas and other clean household energy sources** – **LESS** childhood pneumonia; chronic pulmonary disease/cancers; injuries.
4. **Urban & peri-urban fresh food markets/gardens** – **LESS obesity; MORE** physical activity, green spaces & social interaction; healthier diets & food security/farm employment
5. **Parks & watersheds** – **LESS air & water pollution, urban heat island effect & obesity; MORE** physical activity & social benefits

Health as part of SDG goals can make our built environments healthier, more vital & liveable

And… preserve people as the priority of development

Tackling energy, air and water pollution and climate is not just a technical fix, its about health & well-being

The Planning of Manhattan

The Plan of Manhattan was originally formulated when the City Council in February 1807, with State help in planning future Streets. The Council said its Goal was «laying out Streets..... In such a manner as to unite regularity and order with public convienience and benefit and in particular to promote the health of the city»

In March 1807 the council appointed a 3 member commission to establish the comprehensive street plan (Morris, Rutherford and De Witt). A month later state legislature gave the commissioners exclusive power to lay put streets, roads and public squares

There was much hostility but the plan was published in March 1811. It was based on goals of «free and abundant circulation of air to stave off disease». Right angles were also favoured as straight-sided and right-angled houses were the most cheap to build. Each Avenue was to be 30m wide

Concluding comments

- Smart Cities/IT/Health WHO-ITU-UNHabitat
- Local-authority led disaggregated monitoring of health and social-economic conditions: operationalising the SDGs at local level
- Designing multi-sectoral initiatives with co-benefits supported by under-exploited funding sources (green climate fund). Partnerships needed !
- Look at the policy drivers which brought about reform historically. The planning of Manhattan, The great Stink in London. Political windows of opportunity of local authorities
- Although national and sub-national finance will continue to dominate, external finance and ODA need to consider new and innovative financing instruments (EIB)
- Focus on failure to consider the crippling costs of preventable disease

UN HABITAT

FOR A BETTER URBAN FUTURE

www.unhabitat.org

resilience brokers

resilience.io - integrated city-region systems model to scale healthy city design

Stephen Passmore
Technology Director
The Ecological Sequestration Trust

"Working to enable 5 billion people to live safe, healthy and fulfilling lives by 2030"

resilience brokers capital

resilience.io

ecological sequestration trust

ecological sequestration trust

UK Charity 2011 speed up and scale up transformative urban/rural development

Operate in space between private, public, knowledge and civil society sectors

Leading experts foster integrated systems thinking and collaborative approaches

Develop tools and demonstrators to support implementation of post 2030 agenda

resilience brokers

Systems level understanding

"When you try to pick anything out by itself, you find it hitched to everything else in the universe."

John Muir

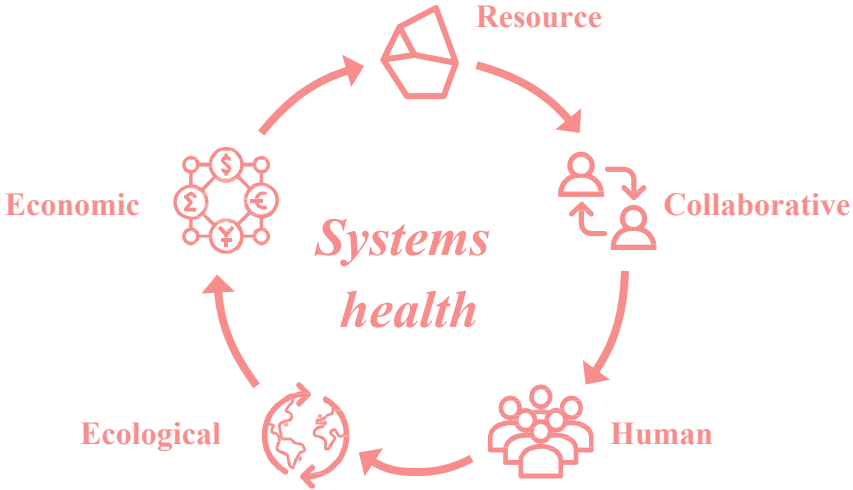
"There is no point in running fast unless you are running in the right direction"

Mahatma Gandhi

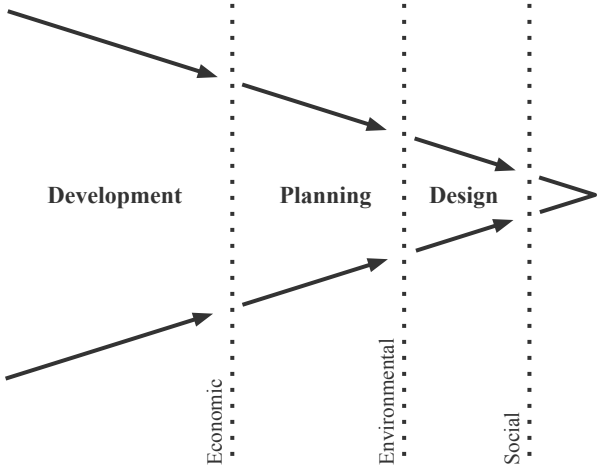
resilience brokers

The CHEER systems health approach

Harnessing disparate data sources and scientific evidence for decision-making by integrated modelling of social and natural systems and their interlinkages; economics related to human well-being; and the health of ecological systems

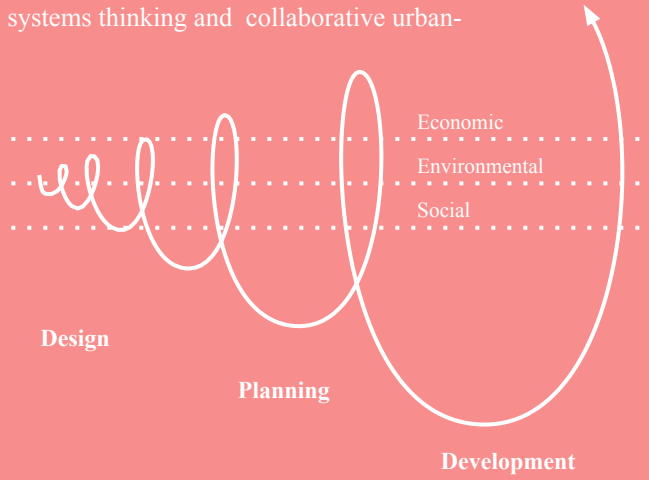


Current approach



CHEER systems health approach

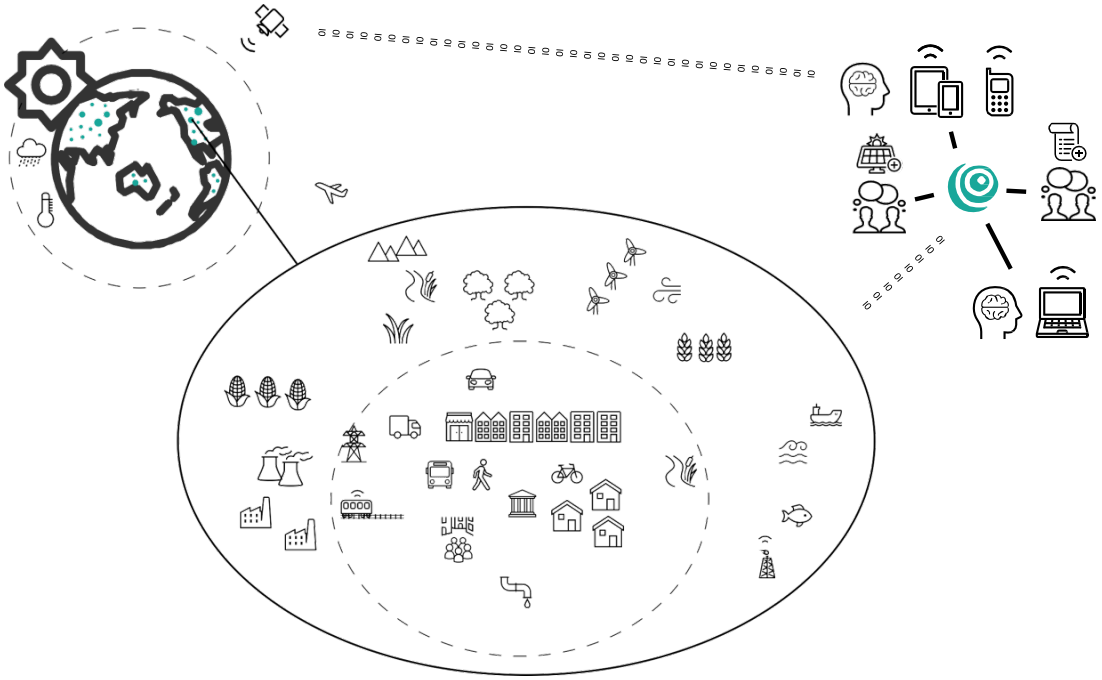
Increasing investment and shared stakeholder value through interactive design, systems thinking and collaborative urban-rural approaches



resilience.io

An integrated Earth-human systems modelling platform for city-regions

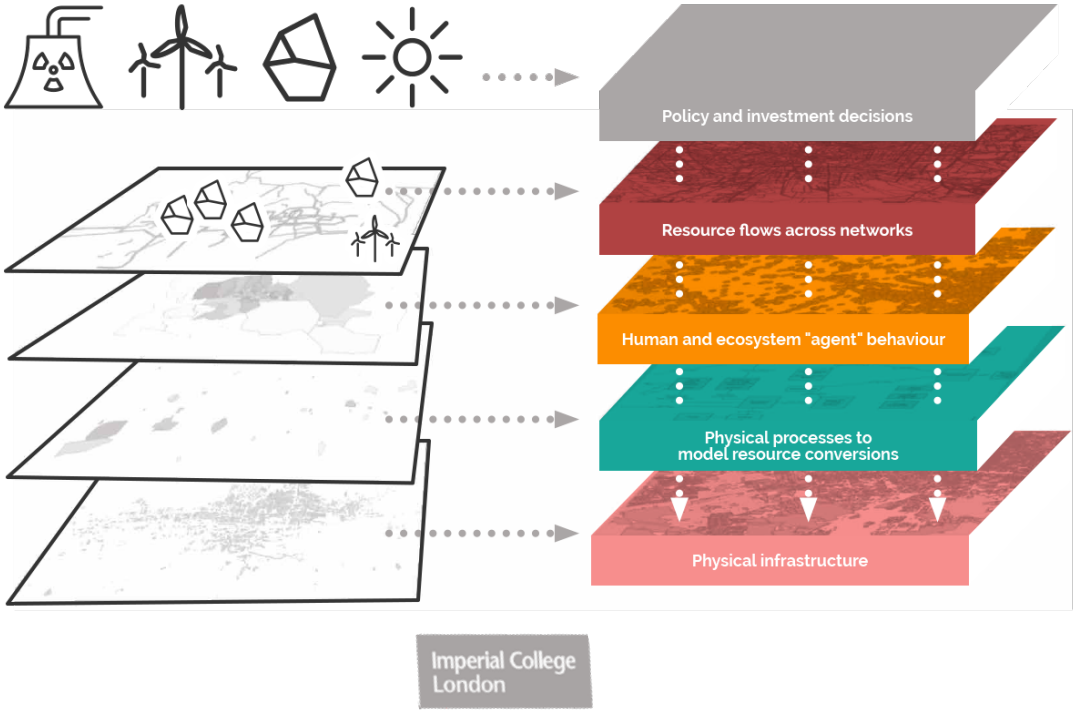
City + Planet + People



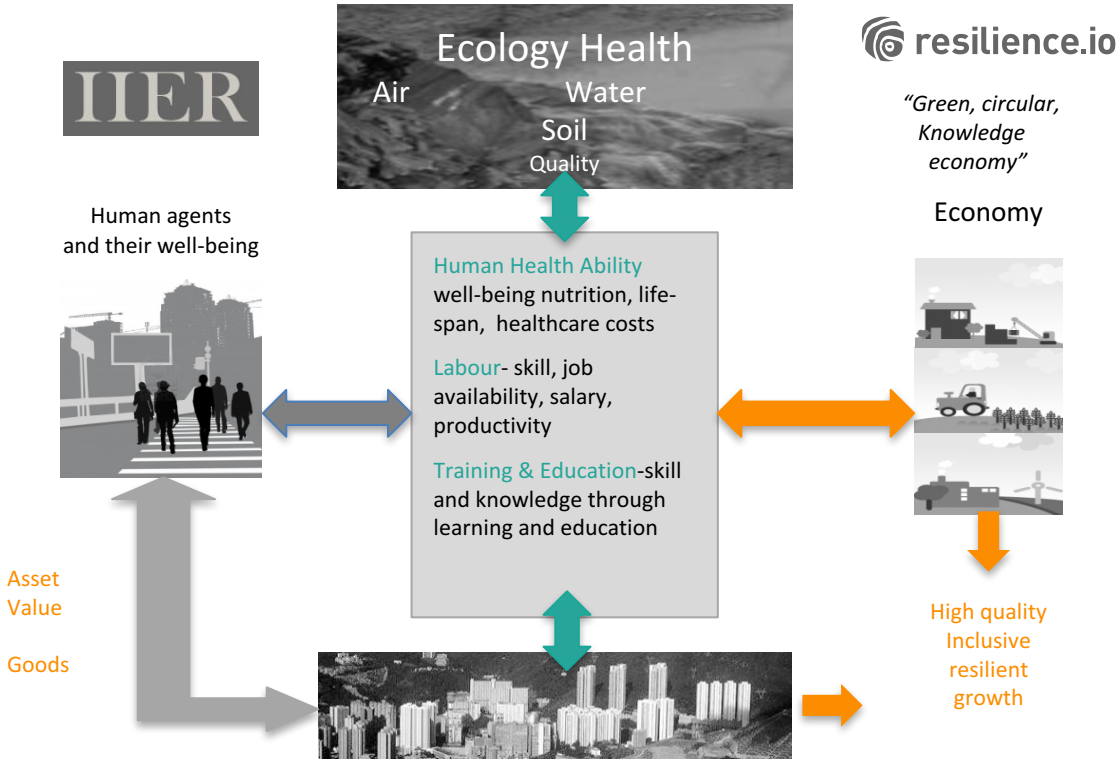
resilience.io

Social Science - An **Agent Based Model** simulates the population of the entire city-region, their choices, consumption patterns and behaviours.

Natural science - A growing library of input-output **Process Blocks** that describe all of the energy and materials flows of a city-region system. These processes are geo-located to build up an integrated systems network based on actual city function.

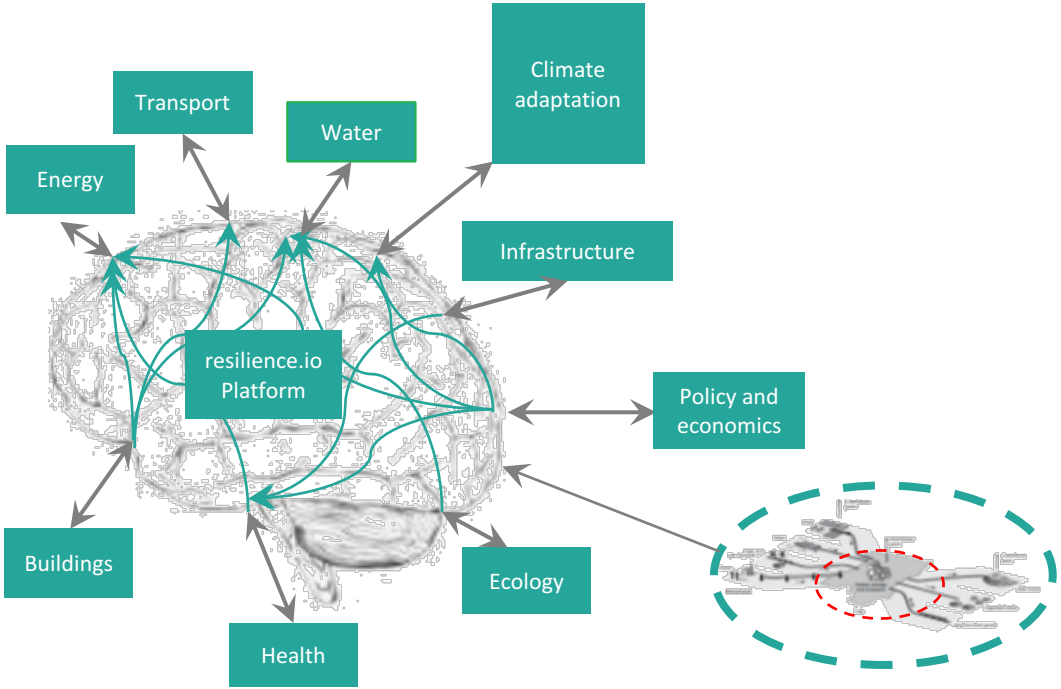


resilience.io



resilience brokers

Regional collective intelligence (consciousness)



resilience.io

Decisions - Investment in infrastructure

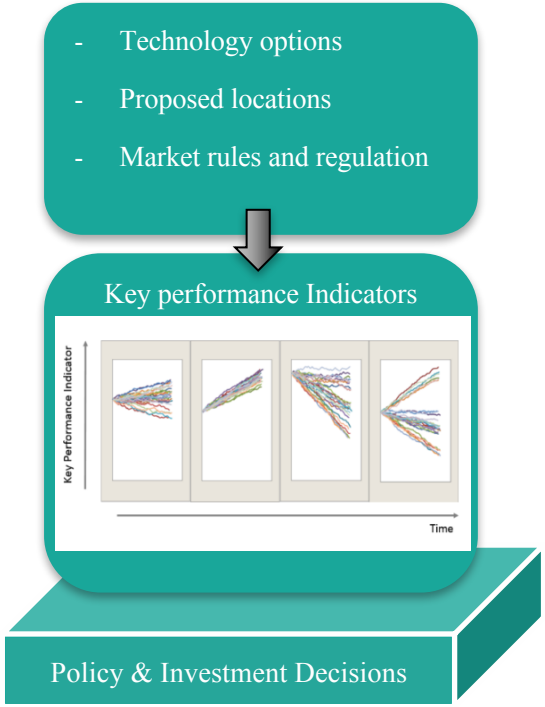
- Energy, Water, Transport, Housing, …
- Local, foreign, government, private, …

Decisions - Market Policies and planning

- Taxation, tariffs, quota, subsidies, …
- Land use plans, regulations, …

Indicator outcome range (5-20 years)

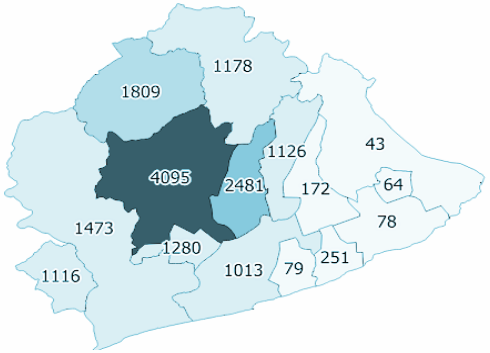
- Sector resource and energy flows
- Effects on imports & exports
- Wastes & Emissions (CO2, CH4,…)
- Employment, income, in(equality)
- Human health & well-being indicators
- Sector economic activity / GDP
- Access to service / %

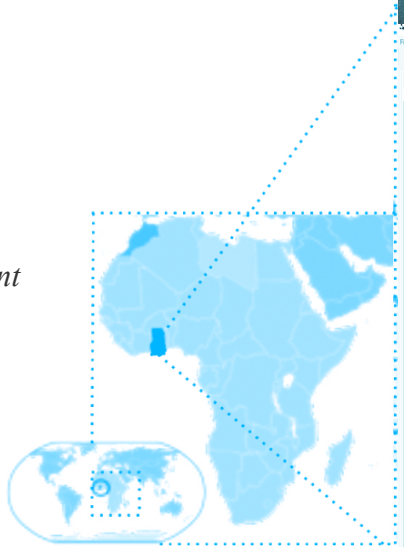


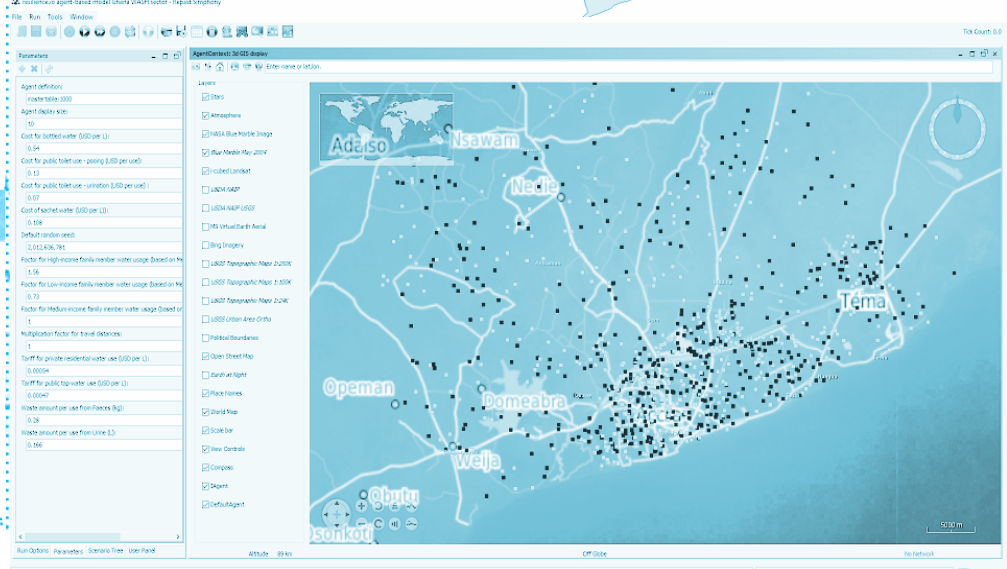
resilience.io

Meeting Accra SDG 6 targets

Integrated systems modelling allowing smart collaborative decision making for investment

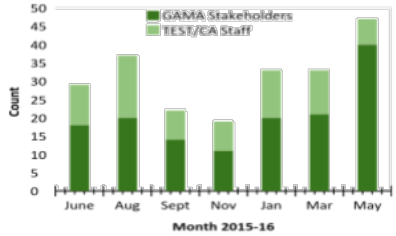






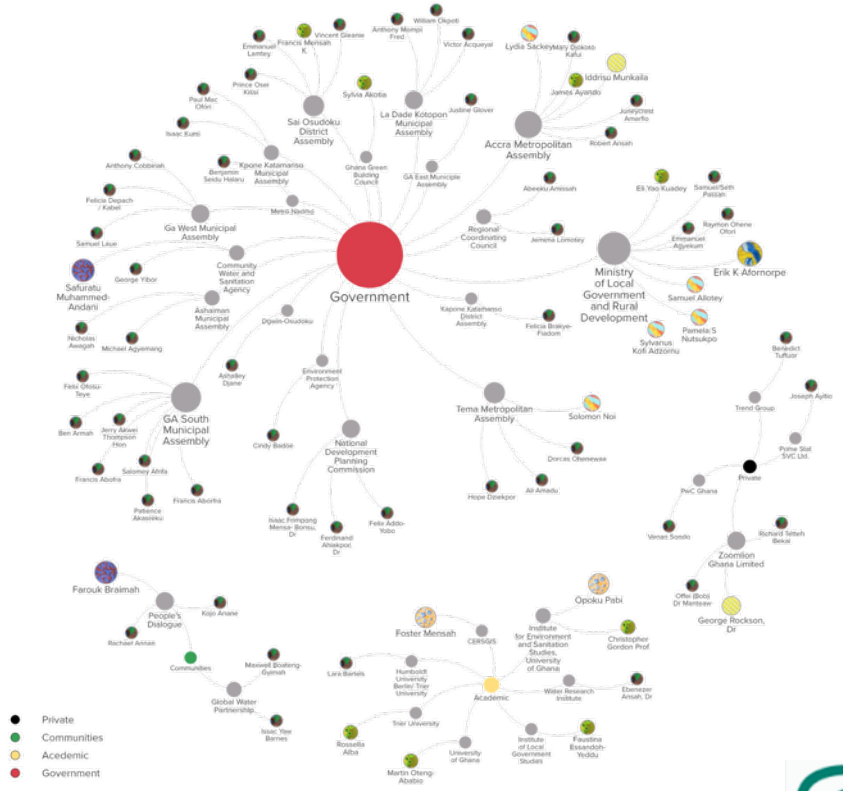
Ghana collaboratory

Greater Accra Metro Area Technical Group



MLGRD “helps to consider the complexities and difficulties faced in planning and implementation of WASH sector”

Private Sector “Can use resilience.io to better evaluate resilient initiatives and work in PPP to deliver new infrastructure around GAMA”



Future Earth

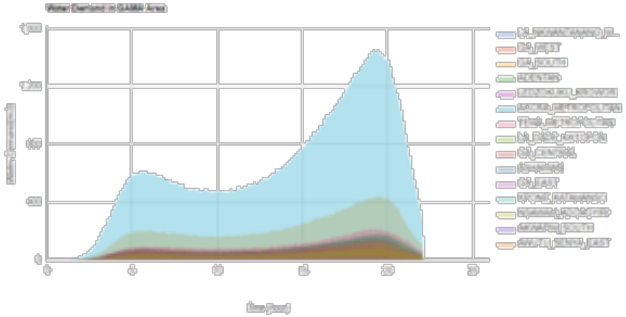
Open access data

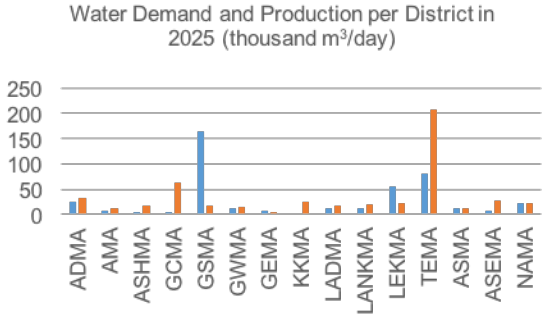
The direct link is: https://africaopendata.org/dataset/greater-accra-population-socio-economics-and-water-access

- Population socio-economics
- Water access
- Tariffs
- Water and sanitation infrastructure in place
- Infrastructure investment and operation cost,
- Water quality data
- Water use per person
- Water flow data and estimates,
- Treatment capacity values
- and rainfall data.

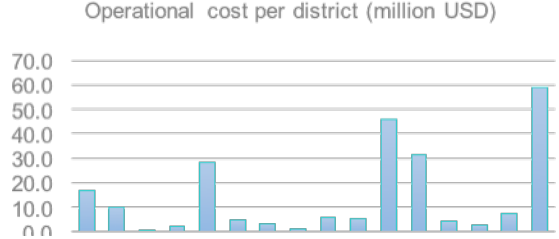
Actionable evidence

Demand

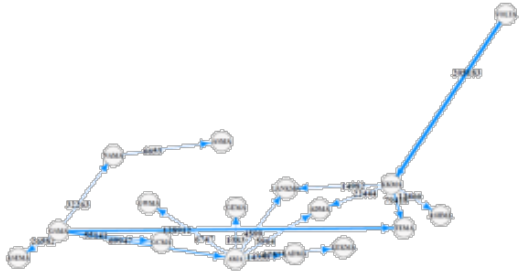




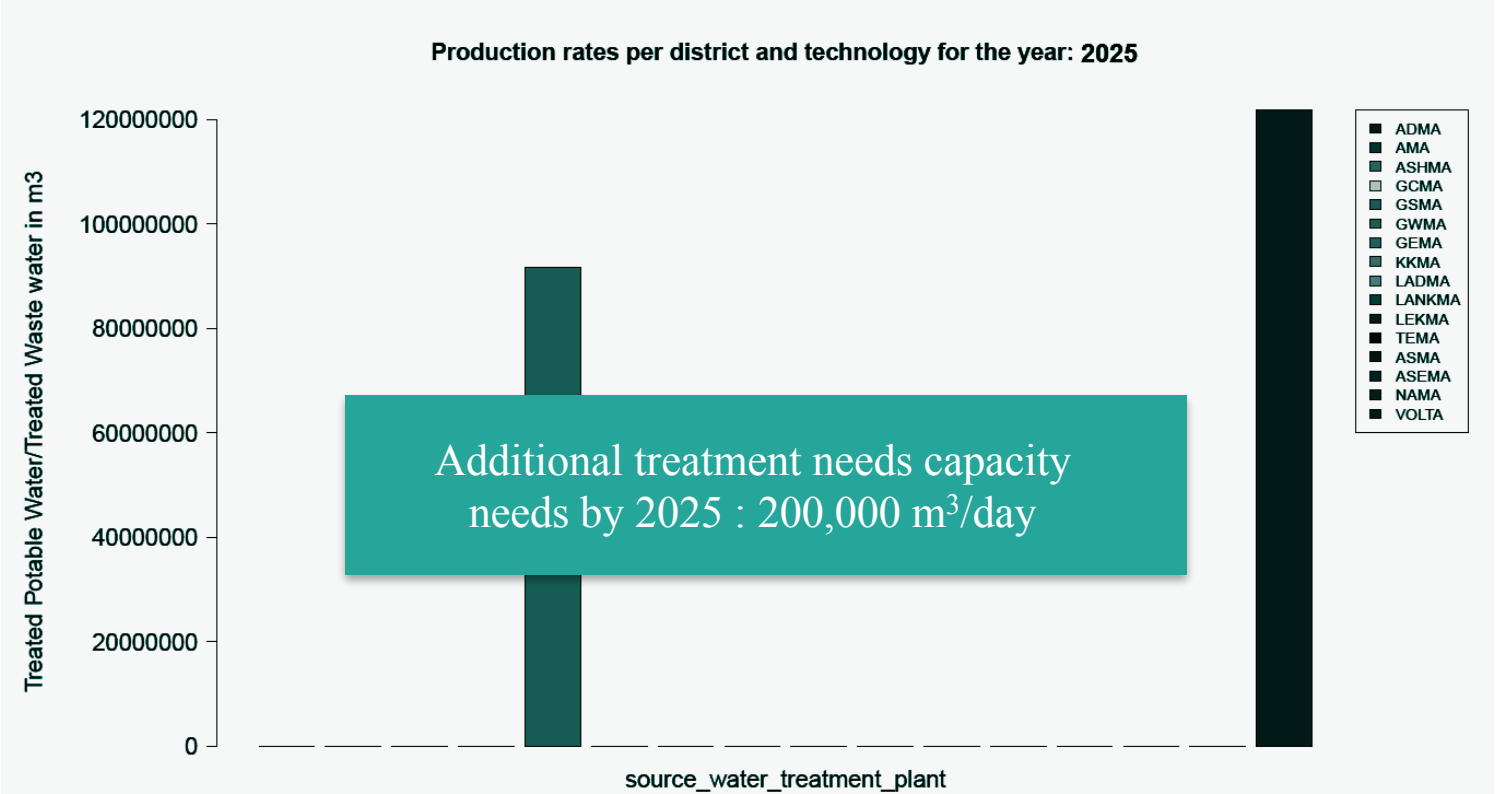
Cost



Infrastructure

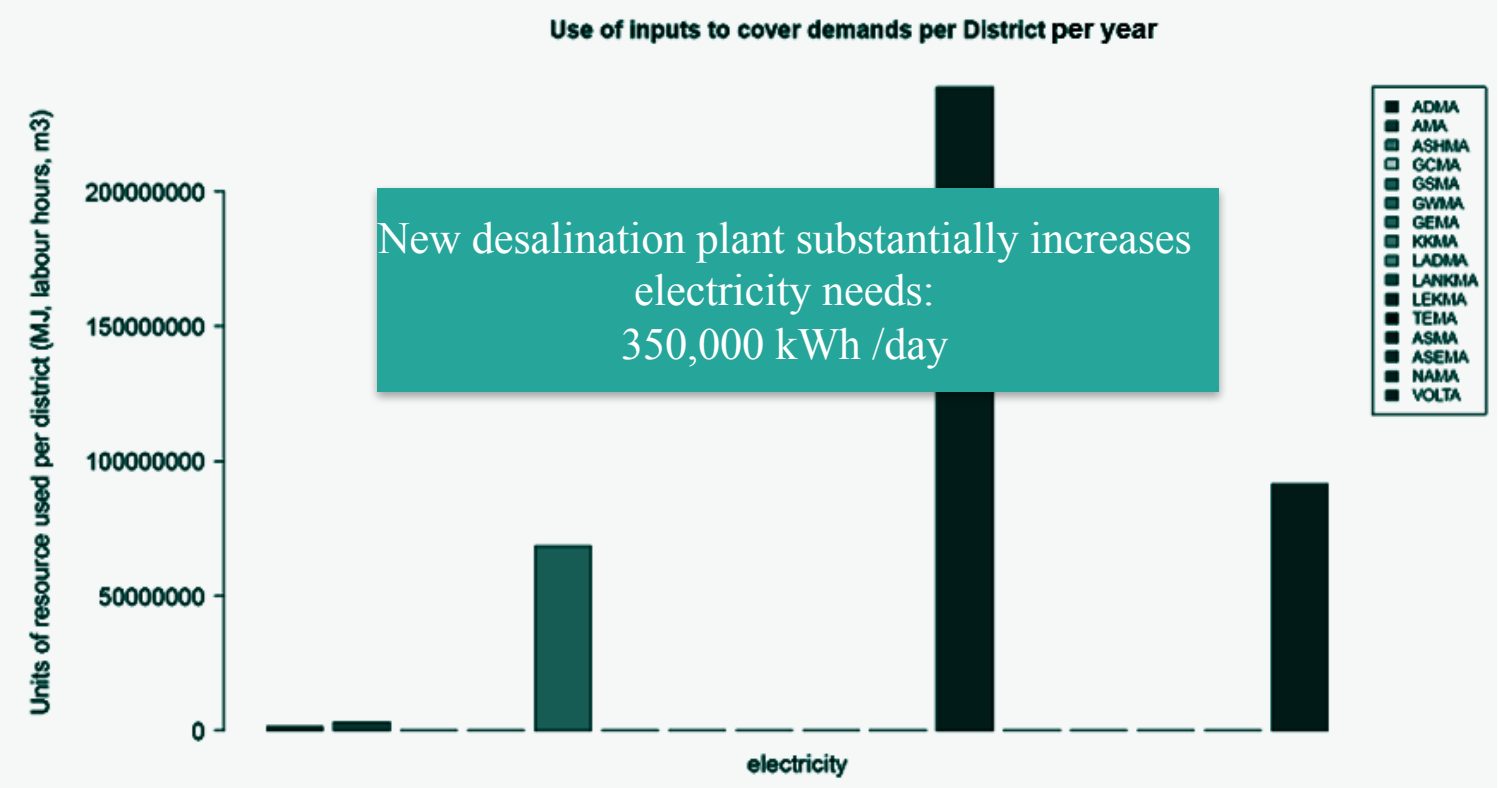


What technologies & capacity needed?



6 CLEAN WATER AND SANITATION

How will other sectors be affected



Will it be affordable?

GAMA – 15 MMDA values	2015 (million USD)	2025 (million USD)
Total operational costs per year	55.6	80.5
Revenues from public toilet use	33.0	82.0
Costs per Citizen per year (USD)	12.7	11.6

GAMA – 15 MMDA values	2015	2025
Greenhouse emissions in tonnes per year	2011	7516
Total jobs for sewerage system	82	625

resilience brokers

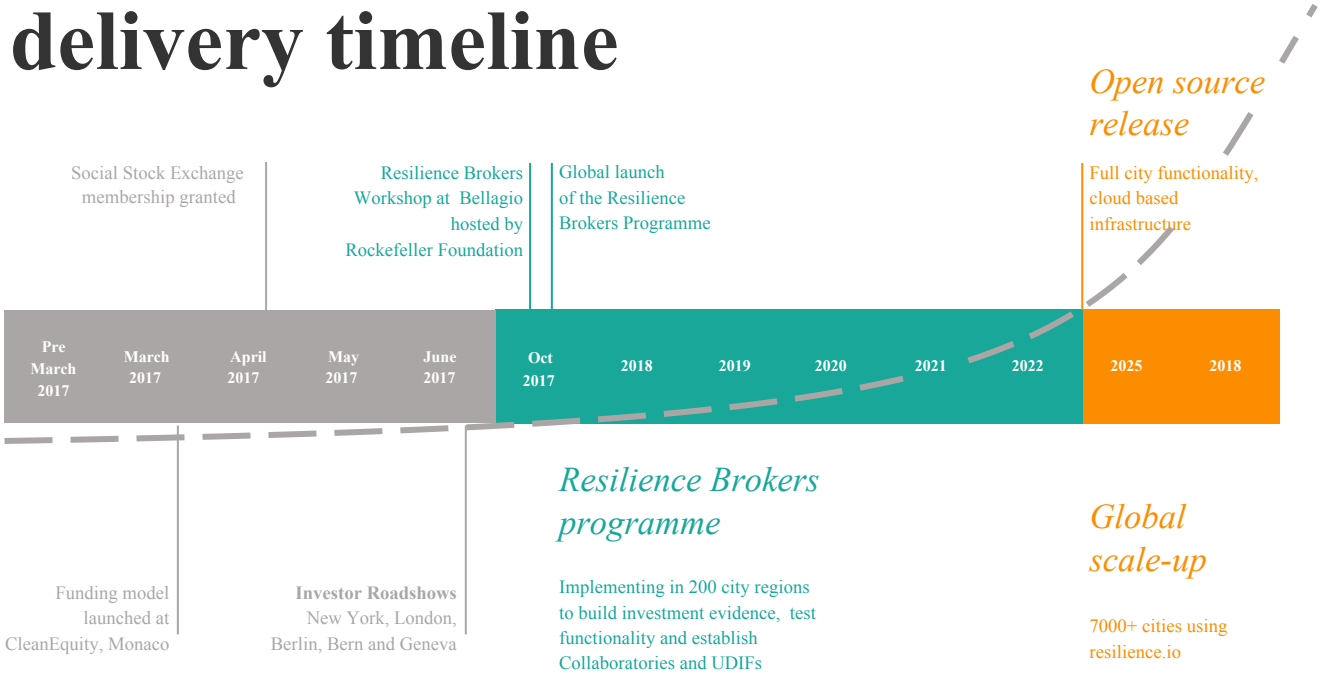
Programme delivery timeline

2011 Ecological Sequestration Trust established

2013 resilience.io global proof of concept & design

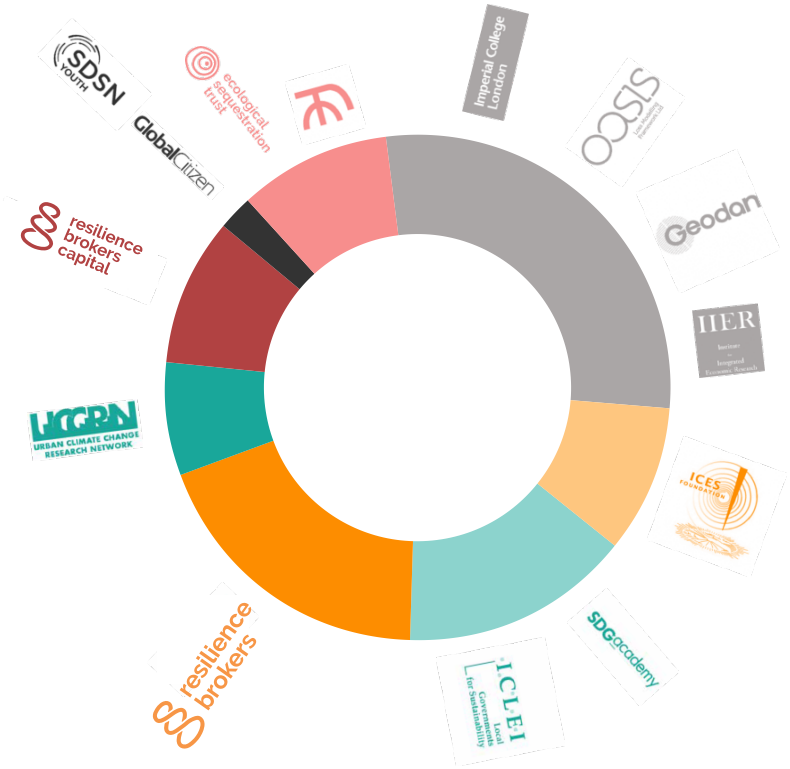
2015 resilience.io functional, technical and data specification

2016 Accra regional pilot



Programme elements

- $27m resilience.io development
- $9m Earth Systems
- $14m Training and capacity building
- $18m Science and technology research
- $7m Knowledge and evaluation network
- $9m Capital mobilisation and UDIFs
- $2m Global youth and citizen engagement
- $10m Programme management and governance



resilience brokers

Stephen Passmore

Technology Director

stephen.passmore@resiliencebrokers.org

@StephenPassmore **#weareresiliencebrokers**