Resilient and Sustainable Cities: The Future of Urban Development

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Background/Objectives. By 2050, more than two thirds of the world population are projected to live in urban areas, and most of this urban growth will take place in lower and lower-middle income countries. But densely built-up urban spaces tend to come with challenges of their own. Therefore, there is a need to start ensuring today that these urban areas will be inclusive, safe, sustainable and resilient.

Oil and coal have changed the industrialized nations, but wind solar and even nuclear can and will play a major role in bringing the developing nations into the world economy. This will redefine energy production, environmental protection, and eliminate climate change. This presentation will look at the largest remediation the world has ever witnessed, decarbonization. We will discuss what must change, how much it will cost, and how funding is already in place without government regulation.

Approach/Activities. Emission (carbon) Trading Systems as valuable commodities.
Discussion of the following:

- How Environmental, Social & Governance (ESG) impacts investment.
- How transitioning to clean energy and electric vehicles will eliminate 70% of CO_2.
- Understand the funding mechanisms already at work in the “free marketplace” with impact investors.
- Learn about the positive “cause and effect” of electrification of cities.
- Legacy polluted sites will be remediated for their sequestration capability.
- How other groundwater pollution will also be addressed.
- How clean air will save billions in medical costs.
- How resilience fits our short-term needs while sustainability is for the future.

Fossil fuels have transformed the world for the past 250 years. The next industrial revolution with clean energy and sustainable supply chains will transform our neighborhoods and cities.

Results/Lessons Learned.

1. Urban transport systems need to become more sustainable
   Sustainable urban transport can include giving priority to bicycles over cars as done for example in Copenhagen where a bridge exclusively for bikes has been constructed, by introducing bus rapid transit (BRT) with dedicated bus routes like in Johannesburg, or cable cars as part of urban public transport systems to link hilly and often low-income urban communities to the city like in Medellin or La Paz.
2. Nature-based solutions work for cities, too
   Increasingly nature-based solutions are considered in urban climate change adaptation and disaster risk reduction. An example would be New York City’s greened rooftops and streets that can better manage storm water runoff and improve urban climate. China introduced the concept of ‘sponge cities’, cities with open spaces that can soak up floodwater and prevent disaster in ecologically friendly ways. A growing number of tools are supporting cities throughout the implementation phase, for example this one developed by UNU-EHS scientists.
3. Community networks can support urban disaster resilience
   Impacts from disasters such as floods or storms are often worst in densely populated urban areas. While the role of proper building codes and land-use planning has been

recognized in reducing disaster risks for a long time, increasingly social ties and community networks are on the agenda. When developing solutions for how to support the elderly during heatwaves, for example, finding help in the community is equally important to beneficial infrastructure.

4. Smart solutions can improve urban livelihoods
   For poor urban dwellers access to even basic urban services can be a challenge. If you live in an informal settlement and you do not have a proper address and a bank account, it is often difficult to sign up for basic necessities such as water and energy services. Digital technologies such as mobile money can change that. In Kenya, smart metering enables payment for utilities and transportation by means of mobile money, thereby providing more equal access. Furthermore, the mobile money services facilitate transfers between urban and rural areas and are particularly helpful for female-headed households.
5. Cities, countries and international bodies need to collaborate
   Urban sustainable development needs to be a top priority not only in cities but beyond urban boundaries. For this reason, Brazil enacted a City Statute and implemented a Ministry of Cities in 2003 to direct urban planning and to make it more sustainable and inclusive. Countries are also coming together on an international level, for example at the United Nations Conference on Housing and Sustainable Urban Development (Habitat III), in which 167 counties participated to focus on sustainable urban development and adopted the “New Urban Agenda”. While good ideas are getting implemented in different cities around the world, it is this kind of collaboration that can make a difference globally.