Multi-stakeholder Forum on Science, Technology and Innovation for the SDGs

New York, 5-6 June 2018

Meeting Summary for side event:

"Staying Within Planetary Boundaries: a roundtable on appropriate STI policies for emerging issues"

Conference Room A, New York, **6 June 2018, 6:30-7:45**

1. Objective of the side event

Rapid technological growth can cause many imbalances globally. The objective of this side event is to reflect on these imbalances and the development goals such as social justice, human rights, equity, and a healthy environment in regards to the theory of planetary boundaries. The concept of planetary boundaries was first developed by Stockholm Resilience Center and highlights nine processes and systems that regulate the stability and resilience of the Earth System – the interactions of land, ocean, atmosphere and life that together provide conditions upon which our societies depend. The speakers will present multiple perspectives, ideas, and new technologies that promote both discovery and accountability on 'hot' topics' and will work to formulate options for consideration as to how best to address or mitigate the issues.

2. Organizers & Participation

Organizers:

- United Nations Industrial Development Organization (UNIDO)
- UN Major Group for Children and Youth (UN MGCY)

Participation:

Panelists:

- Ana Louisa,
- Sajith, UN Major Group Of Children and Youth, Colorado School of Mines
- Pedro Piqueras, South Coast Air Quality Management District, Southern California

Moderator:

- Ruby Lang, UN MGCY & Engineers Without Borders

3. Major issues discussed in the session (in bullet form) (**gaps**)
    - Nature has been perceived as being inexhaustible in the past, but as the world population has grown we are realizing that our current rate of consumption is not sustainable. Indeed, the rate of resource consumption is faster than the rate of natural regeneration, thus signaling planetary boundaries and biologic carrying capacities that must be respected to stay within safe operating space that allows for life to prosper.
    - Cities cover only 3% of the earth but account for 60-80% of emissions
    - A green economy must be looked at from a social and environmental perspective in order to be sustainable
    - Some mechanisms to help countries meet air quality and water regulations are only applicable to developed countries, need to promote more transfer of knowledge and practice
    - The prices corporations pay for emissions do not reflect the negative externalities or the damage we inflict on nature
    - Market mechanisms are not there to fix inequalities, at best they only reassign it, which is why other types of policies are needed
    - Loading the solution of a big problem unto one form of technology will not be able to fix it
    - We tend to get too comfortable on new and exciting solutions and then we begin to over consume with them
    - A lot of new technology has not made its way to developing countries, so it is important to assess needs with respect to available technology
    - It is hard for LDCs to catch up industrially without emitting a lot
    - What happens during transitions is especially important since it can be a time to influence the trajectory of development and avoid technological lock-in
    - Using local and indigenous knowledge and bringing locals into the conversation would make it more effective at a community level, and aid in the implementation of new and relevant technologies

4. Main outcome (**Potential solutions to the gaps**)
    - We need long term solutions for sustainable systems in towns and cities.
    - Sustainable and affordable housing needs to be an option for areas of high population growth.
    - In regards to cities, when planning to build or rebuild we must think about how we can reduce the impact we have (ex. how can buildings be built to be more efficient) and build with sustainability in mind.
    - The event focused on educational pieces and recommendations for Best Management Practices. It also highlighted the emerging innovations such circular economy, recycling of materials.
    - A key element for green economy is to look at it from a social and environmental perspective, use knowledge about negative practices to shift behaviors, etc.
    - For regulations of pollutants, establishing trade market within and customized to a community could help incentivise progress toward reducing emissions. It creates a pool of resources that can be used in the state to invest in communities but has to be done by putting limits on how

many permits are given, making laws on how long they can keep the permit and the cap is must decrease every year.

- Much more thought and observations of the current natural system needs to be considered when developing technological solutions.
- Education is key for the public, the government and the scientists. This is education on traditional knowledge as well as policy and acidemia knowledge.

5. Key recommendations for action (in bullet form) (**actions to implement solutions**)
   - A multi-disciplinary approach and framework is needed to tackle the cross-cutting goals
   - Integrate science and technology with regards to sustainability in the early stages of cities so we can reduce emissions.
   - Guiding people and communities into using appropriate and context specific building techniques will aid in reducing energy consumption
   - A holistic and systematic approach is needed to maximize the positive effect
   - A clear set of metrics and indicators is needed to measure progress within each boundary
   - More targeted education and engagement of key stakeholders
   - More local and regional multi-stakeholder and multi-agency collaboration and cooperation
   - Use more building materials that disappear organically
   - The government should play a role in interpreting the right solutions for each community by using knowledge about negative practices that add to consumption