

## **Draft Nexus Message on Water- Energy-Food -Climate through an Urban Lens**

### **Building Integrated Approaches into Implementing the Sustainable Development Goals**

Some xxx from xx countries representing governments, intergovernmental organizations, academic institutions, companies, environmental and development organizations and other stakeholders met at an internationally supported conference at the University of North Carolina at Chapel Hill, from April 16-18<sup>th</sup> 2018 to explore how addressing interlinkages and an intersectoral approach can help implement the 2030 Agenda on Sustainable Development incorporating the Sustainable Development Goals.

Participants are united in the view that the Sustainable Development Goals will only be successfully achieved if they are pursued in an integrated way, and that the totality of interconnections or “Nexus” between the different goals or targets needs to be thoroughly analysed and understood in order to build coherent sets of integrated policies and action programmes for sustainable development.

The 2018 Conference is the second Nexus Conference that has been organized by the Water Institute of the University of North Carolina This year’s Conference had a particular focus of looking at the interconnections and nexus between the Water, Food, Climate and Energy Sustainable Development Goals, and specifically had a focus of looking at the Nexus through an Urban Lens. The following Nexus Message based on research, contributions and discussions associated with the Nexus 2018 event [was adopted unanimously by the participants] and is offered by them as a contribution to discussions at this year’s HLPF and other SDG implementation processes.

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## **Fostering Holistic Approaches into implementing the Sustainable Development Goals**

A Nexus Message from the Co-directors of the Nexus 2018: Water, Food, Climate and Energy  
through an Urban Lens Conference

at the University of North Carolina at Chapel Hill, April 16-18, 2018

### **1. INTRODUCTION**

In 2015 Heads of State agreed to 17 Sustainable Development Goals (SDGs) and 169 associated Targets and subsequently 230 Indicators to address the key challenges the world will have to face up to 2030.

As the successor to the Millennium Development Goals, these goals are universal and indivisible by their very nature. They address not just development but sustainable development, not the symptoms but the root causes of the key problems we face. Finally, they attempt to address the interlinkages between the different Goals.

In June 2018 Member States will start negotiating the Ministerial Declaration for the UN High Level Political Forum (HLPF) annual review. The 2018 theme of the HLPF is **“Transformation towards sustainable and resilient societies”**. It will review the following set of Goals and Targets although not reviewed this year we are also including SDG 2, all of which are relevant to the Nexus:

**GOAL 2:** End hunger, achieve food security and improved nutrition, and promote sustainable agriculture.

**GOAL 6:** Ensure availability and sustainable management of water and sanitation for all.

**GOAL 7:** Ensure access to affordable, reliable, sustainable and modern energy for all.

**GOAL 11:** Make cities and human settlements inclusive, safe, resilient and sustainable.

**GOAL 12:** Ensure sustainable consumption and production patterns.

**GOAL 15:** Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss.

**GOAL 17:** Strengthen the means of implementation and revitalize the Global Partnership for Sustainable Development.

The Sustainable Development Goals recognize that the world is a single complex system in which all the parts and subsystems constantly interact. Global problems such as persistent

poverty and climate change should be viewed from this perspective and thus, solutions and policy interventions should consider the leverages, synergies, and trade-offs within the system.

Guiding the 2030 Agenda and the Sustainable Development Goals are a set of critical principles that also guide our work on the Nexus. These are the purpose and principles of the Charter of the United Nation, the Universal Declaration of Human Rights. Other international agreements on human rights such as the Paris Agreement on Climate Change, the Addis Ababa Action Agenda, the New Urban Agenda and the Sendai Framework for Disaster Relief also need to be considered when considering the Nexus.

Addressing the Nexus is a way to combat inequalities within and among countries; to build peaceful, just and inclusive societies; to protect human rights and promote gender equality and the empowerment of women and girls; and to ensure the lasting protection of the planet and its natural resources, ultimately safeguarding human health and well-being for generations to come.

The ‘Nexus’ is being looked at from the perspective of the inter-sectionality of SDG goals and targets and thus its aligned with the “integrated and indivisible” and “universal” nature underpinning the SDGs agenda.

One way the UN is approaching this is through UNDP’s MAPS (Mainstreaming, Acceleration and Policy Support) approach is also aligned along a similar approach. MAPS seek to support countries with not only landing the SDGs agenda to national, sub-national and sectoral levels, but also helps identify the key “accelerators” along with a suite or combo of catalytic interventions designed to yield multiple dividends across goals and targets.

The key challenge of the ‘Nexus’ will be identifying and implementing policy and programmatic interventions along this approach. In this context, creating avenues, platforms and opportunities for identifying context-specific development solutions to address the challenged development and resource context across a range of countries merits adequate attention. Innovative development interventions bringing multiple stakeholders and actors together to address the multi-pronged challenges is essential for the implementation of the SDGs. For example, the efforts towards creating national and global SDG platforms provide one such avenue for multi-stakeholder and multi-sectoral exchange to foster sustainable development.

The Conference identified a number of challenges that should be addressed in this year’s High Level Political Forum’s Ministerial Declaration:

## **2. HIGHLIGHTING CHALLENGES TO DELIVERING THE SDGS BEING REVIEWED IN 2018**

### *2.1 Goal 6: Ensure availability and sustainable management of water and sanitation for all*

Water is a limited natural resource that needs to be managed for the benefit of the community, city, state and region. The World Health Organization estimates total global economic losses due to inadequate water supply and sanitation services at USD \$260 billion a year. Equitable approaches to water management and urban design should be part of any response to climate change and of all efforts to achieve sustainable development. This can be done through embracing a circular economy through effective infrastructure planning and

strategic land use in regions and investment in water, sanitation and hygiene. Fostering a holistic approach to water use and renewable energy can reduce energy and water consumption and decrease waste and greenhouse gas (GHG) emissions, helping to deliver a more efficient and sustainable resilient cities and regions. What is more, expanding access to energy, water, and land resources contributes to reducing poverty and achieving food security, with interrelated economic and environmental benefits.

Within the ongoing discussion of a circular economy, this conference explores the role of tradeoffs in enhancing resilience along the continuum of Water-Energy-Food Nexus. This would entail acknowledging that changes such as climate change and urbanization can be seen as prime movers and health and migration as impacts.

### *2.2 Goal 7: Ensure access to affordable, reliable, sustainable and modern energy for all*

To deliver the goal of the Paris Agreements of keeping the rising global temperatures below 2 degrees Celsius it is critical to move to a low carbon economy in the next 15 years. All types of energy generation consume water either through their process of accessing the raw materials or maintaining the power plants that generate the electricity. The move towards renewable energy not only contribute to climate change mitigation, but also in most cases, renewable energies can reduce the use of water (biofuels excluded). Therefore, it is essential to recognize sustainable and renewable use of energy as key for mitigating climatic risks and overconsumption of water resources. Key renewable energy sources such as solar and wind are very low in their use of water.

Energy has acted historically as a driver of development and the lack of sustainable energy offers a possible security concern in the future.

### *2.3 Goal 11: Make cities and human settlements inclusive, safe, resilient and sustainable*

Cities are critical to address the delivery of the SDGs. Most of the 169 SDGs targets can only be achieved through sustainable innovation by local communities and local actors including local authorities. The localization of the SDGs needs to become a priority and the role of cities in implementing the SDGs needs to be further recognized.

Urban areas are at the front of the challenges of climate change as they consume 78% of the world's energy and produce 80% of the world's Green House Gases (GHG). Currently, cities are caught in an unsustainable linear flow of energy. However, cities represent the planet's economic centers – accounting for 75% of global GDP and their populations and economy keep expanding, and thus, they also present an opportunity to foster and implement sustainable development and impact change.

Key to building sustainable cities and communities is the need to safeguard the health for all. As cities grow in importance on the global scale so will the need to construct urban environments that are not only sustainable but ensure the health and wellbeing of its inhabitants. A focus on the nexus with health will result in reduce health burdens, spiraling healthcare costs, and be able to achieve universal health care.

Urban areas need to be considered as part of their broader territorial landscape and climate, thus facilitating better incorporation of the broader ecological process of the region they

belong. This interlinkage between rural and urban areas as well as within the region at large needs to be addressed through a Nexus approach.

Urban areas need to develop resilience policies that take account of the Nexus while developing capacities to absorb future shocks and stresses to their social, economic and technical systems and infrastructures. As well, policies should include disaster and climate risks concerns as these increasingly pose a fundamental threat to cities and urban settlements. With cities emerging as engines of development, this is likely to have far more momentous an impact than envisaged.

The ability to address the different interlinkages will be critical to the success of any resilience strategies. There needs to be a serious dialogue on the enabling environments that cities need, including the role that local and subnational government play in intergovernmental bodies, and the willingness of U.N. member states to create them, will it be possible to roll-out far-reaching initiatives to achieve the ambitious 2030 Agenda.

#### *2.4 Goal 12: Ensure sustainable consumption and production patterns*

One of the critical challenges in that of the low consumer information and awareness has on transitioning to more sustainable consumption and production patterns. Consumers all over the world are demanding a greater ethical and sustainable focus from their products, yet information remains inaccessible and confusing in many cases. Regulation and incentives must come from the government, ensuring companies are forced to deliver clear, accessible information on the impact the manufacturing of a product has had on the planet.

National, sub-national and local governments should create strong frameworks for addressing sustainable consumption and production that integrates sector plans into a coherent plan that deals with necessary tradeoffs between the different Nexus elements. This would be achieved through procurement policies, which promote resource efficiency and reduce negative environmental impacts, as well as helping to accelerate sustainable business practice through targeted regulation. City dwellers, on average, consume much larger shares of the world's resources than rural dwellers. Ensuring that consumption levels of rich parts of society are reduced to sustainable levels while increasing access to affordable food and other essential resources to poorer urban populations will be essential to meet the SDGs.

#### *2.5 Goal 15: Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss*

Ecosystem and land degradation are both a cause and an effect of poverty and food insecurity. An ecosystems and landscapes approach to the interlinkages between the relevant SDGs and SDG15 should enable a better understanding and inclusion of the true valuation of nature when policy is being made. Ecosystems and land provide the foundation for sustainable agriculture and development addressing water security, energy provision and good health. We welcome the “4/1000 Initiative: Soils for Food Security and Climate” launched at in Paris at the Climate COP21 which aims to demonstrate that agriculture, and in particular agricultural soils can play a crucial role where food security and *Milestones*

There are 23 SDG targets that fall in 2020 or 2025 this includes one in SDG 6, one in SDG 11, one in SDG 12 and five in SDG 15. This requires a coherent approach by Member States on how these might be reviewed. There is a danger that without a coherent approach to all these targets there may be two classes of targets one being in the SDGs and the other outside. This year the Convention on Biological Diversity will start the process to set new 2030 targets as will the SAICM process for the SDG 12 target. These will not be SDG targets.

The United Nations Convention to Combat Desertification (UNCCD) will focus on target 15.3 on Land Degradation Neutrality. Currently 115 countries have committed to set LDN targets to better conserve and manage land and rehabilitate degraded terrestrial ecosystems. The SDG target of Land Degradation Neutrality is now a critical objective for UNCCD in its strategic framework for national implementation to 2030.

### **3. STRENGTHEN THE MEANS OF IMPLEMENTATION AND REVITALIZE THE GLOBAL PARTNERSHIP FOR SUSTAINABLE DEVELOPMENT**

#### *3.1 Policy coherence*

Policy coherence between levels (e.g. national to subnational to local) and among agencies (e.g. water and agriculture ministries) of government is important. Approaches that could be considered include: mandatory multi-agency task forces or collaborative work groups focused on Sustainable Development policy coherence; national and subnational government participation in and/or convening of subnational, watershed, or integrated landscape management platforms; outcome-based rather than prescriptive-practice regulatory policies that facilitate coherence.

#### *3.2 Filling Nexus Gaps between Goals/Targets and possible trade offs (to be filled in at the conference)*

#### *3.3 Governance structures and processes at the Regional, National, Subnational and local level as well as multi-level governance approaches. Governance is a critical issue when addressing the individual SDGs and their interlinkages.*

At the Regional level the UN Regional Commissions and Regional Multilateral Agreements secretariats need to be strengthened to address transboundary Nexus related issues.

Parliaments can use their parliamentary committee structures to work together to ensure coherence. Meetings of different parliamentary committees together should be explored as a way of ensuring that they are addressing Nexus related issues.

At all levels of government there are key ways that could enable more integrated approaches. These could include:

- A cross-departmental committee under the Prime Minister/Governor/Mayor, regularly convened together with a multi-stakeholder commission / board.
- An integrated SDG strategy should be produced which would then have an annual SDG Report which could then reflect implementation of other relevant agreements such as the Convention on biological Diversity, the Framework Convention on Climate Change, any poverty reduction strategies, and highlight the most important interlinkages.

- To support a Nexus approach, all stakeholders should be consulted and be part of the decision making and implementation processes. To support this governments should consider establishing (where non-exists) a national Multi-Stakeholder Commission on the SDGs this will help address power differences between stakeholder groups.

### *3.4 Science-policy interface*

The scientific community must undertake and deliver interdisciplinary and trans-disciplinary research that identifies new policy approaches and grounds them in robust science and local and traditional knowledge, defining what is and is not a cross-cutting issue, and providing policy makers with evidence and tools that match their needs for informed decision-making. Member States should look at how they can encourage Universities and Colleges to reward working in an inter- and trans-disciplinary way and report progress to the HLPF in their voluntary national reports. International and national scientific and professional associations, and the education system should create rewards, create funding programmes, and build capacities to address an inter-trans-disciplinary approach.

Member states should encourage and create the appropriate institutional structures that will allow for the ease and uptake of knowledge of the scientific community and local and traditional knowledge. Such structures should be of the appropriate scale and be certifiably recognized to be the interface for the nexus on science and policy.

### *3.5 Nexus Partnerships*

The implementation of the SDGs will include multiple delivery mechanisms. Governments, intergovernmental institutions, and individual stakeholders all have specific actions to take. Collaboration among actors will also be key, as agreed in Goal 17.

- A. Nexus ***Multi-Stakeholder Partnerships*** can play a role in delivering the SDGs and their Targets, particularly when governments, stakeholders, or sectors cannot create a solution to a challenge on their own or implement necessary changes by themselves. These partnerships should be based on guidelines and principles agreed by the UN General Assembly – including transparency, inclusiveness, equity, and accountability. Partnerships should neither replace action that should be undertaken by governments, nor should they take resources away from governments which might negatively impact their ability to do their work.
- B. Nexus ***Public Private Partnerships*** (PPPs), can also contribute in delivering the SDGs when companies or others are contracted to deliver certain services for public benefit. There is some controversy around the use of PPPs. We believe that the UN General Assembly should adopt a set of clear principle and guidelines for SDG related PPPs, learning from past failures and successes and guided by the principles identified in the Addis Ababa Action Agenda for PPPs. The Addis Ababa Action Agreement makes it clear that public-private partnerships (PPPs) should share risks and rewards fairly, include clear accountability mechanisms, and meet social and environmental standards.



### *3.6 Technology transfer or sharing*

New technology should be shared through the Technology Facilitation Mechanism and technology banks. These will enhance the ability of governments and stakeholders to address Nexus challenges and trade-offs. The Technology Facilitation Mechanism set out in the Addis Ababa Action Agenda should move beyond its online platform to support actual technology transfers via matchmaking. These matches should be between technology suppliers and technology seekers. In addition, there should also be matches between technology transfer service providers and enterprises.

### *3.7 Capacity Building*

The challenge of addressing the Nexus requires capacity building within intergovernmental organizations, national governments, sub-national governments, local governments, and stakeholders. These actors should have their capacity enhanced; this can be achieved through training, toolkits, and sharing of good practice on the Nexus.

The building of technical expertise is necessary since currently there is not sufficient training for integrated management to address nexus issues. Systems thinking, communication across sectoral and cultural differences, and collaborative leadership are critical skills for managers that must be taught regardless of discipline.

### *3.8 Financing the Nexus*

Addressing Nexus issues will require support for the development of integrated financing mechanisms that can accommodate the timeframes and the tradeoffs between the different elements of the Nexus.

Member States that have not done so should instruct Stock Exchanges to make it a listing requirement to produce Environment, Social and Governance Reports or explain why not. The Sustainable Stock Exchange Initiative and report progress through its UN members to the yearly Inter-Agency Task Force for Financing Development. Which should then report progress to the UN Finance for Development Forum in 2019, 2023, 2027 and 2030.

The development of the World Benchmarking Alliance to support the ranking of companies in their internalization of the SDGs (particularly around key indicators) is to be welcomed and supported.

Welcoming the decision by the Credit Rating Agency Moody's to weigh the impact of climate risks with US states and US municipalities' preparedness and planning for these impacts when they are analyzing credit ratings. Analysts for municipal issuers with higher exposure to climate risks will also focus on current and future mitigation steps and how these steps will impact the issuer's overall profile when assigning ratings. This should be expanded to other countries and other credit rating agencies.

Creating a robust pipeline of integrated investments (cleaner technologies) addressing Nexus issues will require support for social and environmental entrepreneurship as part of the development of sub-national natural resource use planning. Converting action plans into investable deals to unlock the private capital required to achieve the SDGs will need more institutional support and capacity-building than has heretofore been dedicated to this challenge. To support investment the World Bank and International Finance Corporation should consider

establishing an Earth Fund which would offer insurance for investment in Least Developed Countries.

### *3.9 Identifying Nexus indicators that might be useful at the national or sub-national level*

The United Nations Statistical Commission's Interagency and Expert Group on SDGs Indicators (IAEG-SDGs) agreed on 230 global indicators to monitor the implementation of the SDGs. The global indicators represent what Member States can report on at present. National, sub-national and local government as well as stakeholders are encouraged to develop supplementary indicators through a consultation process with their populations. In particular they are encouraged to pilot indicators that address the interlinkages between Goals.

The World Data Forum in Abu Dhabi in October 2018 offers the chance to develop a dialogue on how to develop better interlinkage indicators over the coming years and to pilot them in preparing for the reviews of the SDG indicators in 2020 and 2024.

### *3.10 Compiling nexus tools (will be filled out as we collect them)*

Since the first Nexus conference in 2011, there has been experimentation in models on how to address and to map out interlinkages, values and social priorities to help to prioritization and operationalization. In this era of experimentation, it is recognized that the models and frameworks have limitations. However, more important than the results of these models are the process of developing and using them as these processes build knowledge and shared understanding and are in themselves key components of successful governance structures and processes.

Discussing nexus tools will enable the discussion of interlinkages to become more tangible, allowing the aggregation of information from science and relevant stakeholders to the level of policymaking in a transparent way.

An example with relevance for discussions at the HLPF was discussed at the 2018 Chapel Hill Nexus Conference. The example relates to the Wastewater Reuse Effectiveness Index (WREI) a monitoring tool that aggregates bio-physical, institutional and socio-economic data to track effective response by Member States to risks that arise from inaction or rebound effects of developmental interventions spanning sectors as diverse as water quality, public health, groundwater management and public financing of infrastructure projects. The United Nations University (UNU) Sustainable Development Goal (SDG) Explorer features WREI as an example of how the science-policy divide can be bridged based on robust partnerships between UNHABITAT (custodian agency for SDG Target 6.3), Member states and the scientific community in Africa, Europe, Asia and South America (see link <https://unu.edu/projects/wastewater-reuse-effectiveness-index.html#outline>).

### *3.11 Education and public awareness for sustainable development*

Providing students with the skills to address cross-disciplinary approaches will be critical to building a society that can address Nexus issues. The education system at all levels should integrate system thinking into curriculums.

### *3.12 Information for implementation and decision making*

The development of two UN Regional Agreements on Access to Information, Public Participation and Decision Making (UNECE, UNECLAC) should inform and support other UN Regional Commissions in the development of similar instruments.

## **4. CONCLUSION: INTEGRATED IMPLEMENTATION OF THE SUSTAINABLE DEVELOPMENT GOALS (to be filled in at the conference)**

An integrated approach is vital to the implementation of the goals and targets of the Sustainable Development Goals and the 2030 sustainable development agenda. Creating governance structures and processes that promote an integrated approach to the goals and targets will be critical to their delivery. Building the capacities to successfully use such governance structures and processes will have to be part of the effort.

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i Tier system to assess availability of the indicators

- Tier 1 – internationally agreed methods and data widely available 82 (35%)
  - Tier 2 – agreed methods exist but data are not widely available 61 (26%)
  - Tier 3 – no agreed methods, no data 84 (36%)
- Multiple tiers 5 (2%)