

Expert Group Meeting on Urban Nexus and Implementation of Urban- and Resource-related Global Agendas *Bangkok, 10-11 November 2016*

SUMMARY OF DISCUSSIONS

Background

The Expert Group Meeting on “Urban Nexus and Implementation of urban- and resource-related global agendas”, took place on 10 and 11 November 2016 in Bangkok, Thailand, and was organized by ESCAP in partnership with GIZ. The meeting was organized in the context of the project “Integrated Resource Management in Asian Cities: the Urban Nexus”(thereafter called “Urban Nexus Project”), financed by the German Federal Ministry for Economic Cooperation and Development (BMZ) and implemented by GIZ, in partnership with ESCAP and ICLEI.

The meeting was opened by Mr. Lorenzo Santucci, Chief, ad-interim, Sustainable Urban and Development Section, Environment and Development Division, ESCAP and Mr. Peer Gebauer, Minister and Deputy Head of Mission and Permanent Observer to ESCAP, Embassy of the Federal Republic of Germany to Thailand. Two opening presentations by Mr. Kyungkoo Kang, Economic Affairs Officer, ESCAP and Ms. Ruth Erlbeck, GIZ Project Director, Urban Nexus Project, provided an overview of urbanization and resource consumption trends in the Asia-Pacific region, as well as background and approach of the Urban Nexus Project.

Representatives of ESCAP and GIZ , other experts familiar with ‘urban nexus’ and related concepts from across the globe, as well as local government representatives from selected Urban Nexus Project partner cities, gathered over two days to deliberate and further develop the conceptual framework behind the urban nexus, and highlight how urban nexus can contribute to achieving urban- and resource-related Sustainable Development Goals (SDGs) as well as support the implementation of the New Urban Agenda. The Urban Nexus approach, introduced by the landmark Bonn 2011 Conference is considered an action-oriented guiding principle and tool for the cross sectoral implementation and monitoring of the SDGs, guided by the vision of a circular economy.

The first session presented the initial findings of a research paper on conceptualizing the urban nexus commissioned by ESCAP. Thereafter, four sessions allowed discussing and identifying the key elements of an ‘urban nexus’ framework, including the enabling factors, lessons learned from implementation on the ground and potential benefits of integrating the urban nexus approach into policy planning and development processes, in support of the implementation of global agendas. These sessions facilitated the formulation of recommendations for the final session, as well as provided an opportunity for the experts to share their feedback on the draft research paper.

The meeting highlighted the importance of an integrated approach in dealing with the challenges associated with unprecedented urban growth and changing consumption patterns of a growing middle class that have placed significant pressure on the region’s limited resources and resulted in negative environmental impacts. The urban nexus approach offers multiple benefits and provides integrated, cross sectoral, holistic as well as practical solutions to challenging and persistent problems in terms of sustainable resource use. The meeting also reiterated the relevance of the nexus approach for the implementation of key global sustainable development agendas, including the 2030 Agenda for Sustainable Development, the New Urban Agenda, as well as the Sendai Framework for Disaster Risk Reduction, and global commitments related to climate change.

Conceptualizing the Urban Nexus

Participants noted that the basic understanding of the nexus between water, energy and food security is there. Land and land-use, however, is part and parcel of the nexus sectors of water, energy and food, as land is required for water, energy and food production and is a resource becoming increasingly scarce in the region. However, the nexus is a difficult concept to operationalize and is hence hardly considered, documented and pursued by policymakers in a structured manner. This is due to the complexity of the nexus, as well as the fact that the national and local governments still often plan along sectoral lines. Yet, the concept of nexus is emerging and gaining recognition globally in the sustainable development discourse, and is well aligned with recent global sustainable development agendas. This concept requires a different way of thinking in terms of moving away from a traditional and unsustainable linear economy to a circular one that can close, as far as physically possible, the resource loop and is more sustainable. In order to cope with the complexity of the nexus approach it is important to showcase how this approach can bring a new way of improving practical aspects of urban life and urban management functions.

The following key considerations were raised in relation to the concept of the urban nexus:

- i. *Conflicts* – At the heart of the quest to minimize trade-offs and optimize synergies is the difficult balancing act of handling conflicts, be they sector-based, actor-based or scale-based. At the moment, feedback, synergies and trade-offs between components of urban systems are still poorly understood.
- ii. *Nexus actors and interests* – To understand the dynamics of urban nexus in practice, there is a need to extend the discussion beyond physical resources to include a nexus of actors and their interests. The economic and political interests and power working in favour and against nexus practices and projects are as crucial as the techno-managerial aspects of urban nexus. Moreover, more attention should be given to community-led nexus solutions.
- iii. *Social justice* - The goal of social justice is central in the conceptualization of urban nexus. The securitization of the resources and their linkages brings in the question of ‘security for whom’ – nation-state, individuals, international supply chain, etc.

Keeping in mind the critical importance of rural-urban linkages and of peri-urban areas in ensuring the sustainable management of natural resources, the entire conceptualization has to consider the nexus dynamics as an outcome of cross-scale interactions, while subtly draw the boundaries in the interest of local level policy-makers. For example, in calculating the ecological resource footprints, it is critical to define the boundaries and a quantitative analysis of benefits emerging from such integrated approaches. Moreover, participants noted the importance of quantifying benefits from urban nexus to facilitate better decision making and highlighted the potential role that big data could play in this regard. However, the problems associated with having reliable baseline data and the capabilities to manage big data were also discussed and seen as a major challenge for monitoring and reporting on the achievements of cross sectoral nexus projects as well as the effective implementation of internationally agreed development agendas.

Sustainable infrastructure is key to economic growth as well as social and ecological development from the socio-technical system’s standpoint. Within an urban context, such investments could drive the urban nexus approach by linking resource crisis, socio-technical considerations and its components with the need for realistic urban planning and resource security. Human, physical, social and natural capital are also essential contributing factors to this in addition to the non-physical aspects, including policy, legal, technology and governance to further crystallize the ‘urban nexus’ framework.

Urban Nexus in Practice

In support of the theoretical approach, a number of case-studies from the region highlighted the expected benefits and a greater need to quantify the input-output ratios of critical resources and co-benefits.

The city of Naga, Philippines, shared its experience in integrating nexus thinking into its comprehensive land use plan. Silo thinking had previously prevented integration and the main barrier in its implementation was being able to divide responsibilities among concerned stakeholders, while keeping them connected in a loop. An urban nexus approach promotes vertical and horizontal collaboration. Thanks to ‘Nexus Task Forces’ at the local level, and the engagement at the provincial and national level of multiple sectoral ministries and departments as well as the national planning agency, the National Economic and Development Authority (NEDA), it was possible to mainstream the nexus as a sustainable urban planning tool. Whereas in Ulaanbaatar, Mongolia urban nexus activities included studies on thermo-technical retrofitting of public buildings (state-owned schools and kinder gardens) and apartment buildings including business models.

In China, many cities are taking action on water-energy-food security by setting up ‘urban growth boundaries’ and introducing high-density compact urban areas to encourage land-use efficiency. They are also promoting outcome-based energy-efficient buildings, converting abandoned areas into arable land for urban farming, adopting a “sponge city” approach and re-evaluating efficiency in industrial parks. However, these solutions need to be integrated through the development and implementation of a coherent policy encouraging an institutional framework of inter-agency cooperation.

Moreover, a case study from Delhi highlighted the need for establishing a broader nexus – “water-energy-pollution” nexus – where implications of energy production and supply, related water consumption and environmental pollution (air and water) are embedded. The right combination of energy efficient building designs, energy and water saving technologies both in the production and supply chains, as well as informed behavioural choices can lead to substantial reductions in energy and water demand and hence, pollutant emissions. Such nexus can demonstrate evidence-based gains and provide a meaningful insight into the future sustainability of the economic growth and human settlement in growing megacities like Delhi.

In Jakarta and other Indonesian cities, environmental challenges emanating within the city radiate out beyond city boundaries. Thus, creating administrative boundaries to deal with water-energy-food security maybe a major challenge, and the importance of urban and spatial planning to avoid negative consequences was underlined. It was also highlighted that community-based initiatives can contribute a lot as people can be active agents of change. Emphasis was laid on building awareness among communities and strengthening their role in the implementation process to make urban nexus initiatives work.

Overall, it was noted that while it is important to learn from various experiences, caution needs to be exercised in drawing universal conclusions, as nexus practices are always spatially contingent.

Enabling Factors for Urban Nexus

The urban nexus approach needs to work within existing institutional arrangements and governance frameworks, however, it challenges existing structures, sector policies and procedures at global, regional, national, provincial and local level. It is vital to build up the capacity of existing ministries

and institutions, bearing in mind that most governments still operate under an institutional set-up which is sector-specific and may not provide incentives for collaboration. Key success factors identified for the effective adoption of an urban nexus approach included: (i) inclusion of the social dimension as a critical component for the development and promotion of nexus approach (ii) enhancing public awareness and encouraging community-level engagement (iii) clear mandates and commitments amongst sectors and departments in terms of power sharing and in the decision-making process (iv) shifting from agency-centered to multi-stakeholder approaches (iv) behavioral changes to promote efficient consumption patterns (v) a mix of incentives and regulations to curb consumption and to adopt efficient technologies (vi) strengthening communication between central government and municipalities (vii) promote decentralization as appropriate, based on the principle of subsidiarity (viii) simplification of the urban nexus approach at the implementation level by focusing on practical areas of urban life and management.

Urban Nexus and Urban-related SDGs and the New Urban Agenda

This session looked at the recently adopted global agendas and in particular the 2030 Agenda for Sustainable Development and the New Urban Agenda, and discussed how the urban nexus approach can help in their implementation. The urban nexus is a cross-cutting concept that adds value to urban initiatives and supports policy-makers to come up with coherent policies that can fulfill multiple goals and targets, both at local, provincial and national levels.

For example, the urban nexus directly supports the achievement of Target 8.4 to improve global resource efficiency in consumption and production and endeavor to decouple economic growth and environmental degradation. Similarly, by encouraging adoption and implementation of integrated policies and plans towards resource efficiency, it supports the achievement of Target 11.b. Also, adopting an urban nexus approach would support the implementation of a number of other targets indirectly. For example, by promoting sustainable waste management, clean energy and water, and improved sanitation, the nexus approach contributes to improved health outcomes. Besides, urban nexus also enhances the capacity of local governments to strengthen domestic resource mobilization and thereby contributes to the implementation of Target 17.1. Thus, nexus initiatives can deliver multiple benefits and contribute towards the achievement of several SDGs. Moreover, as effective implementation of the SDGs will not be possible without an integrated approach, the nexus initiatives directly provide for such an approach.

Similarly, by developing synergies across sectors through integrative solutions, including but not limited to, peri-urban agriculture, comprehensive land use planning, integrated waste and waste water management, energy plus housing, the urban nexus supports cross-cutting commitments

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