Circular Cities for Nature

Protecting biodiversity through local and regional circular economy strategies

A summary of peer exchange discussions and panels from the COP25 GPSC Peer Exchange event

Global Platform for Sustainable Cities | Resource Team

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Context

As global hubs of resource consumption and waste generation, cities are key actors in the transition towards consumption and production patterns that protect natural ecosystems and the services human life depends on. Such transition can be operationalized through the circular economy, which contributes to biodiversity protection through three main avenues:

- Reducing demand for primary resources;
- Avoiding the generation of waste and other pollution;
- Prioritizing regenerative resources and nature-based solutions.

Within the framework of the COP25 in Madrid, Spain, the GPSC Peer Exchange Session "Circular Cities for Nature: Protecting biodiversity through local and regional circular economy strategies" gathered three GPSC cities with peers from the global north and representatives from financial institutions and community-based organizations. This session offered them the opportunity to take part in an engaging discussion on local experiences implementing sustainability and circular approaches, as well as leveraging traditional knowledge in their urban planning initiatives to preserve biodiversity.

Speakers included the following experts:

- Aloke Barnwal, Sr. Climate Change Specialist, Programs Unit, Global Environment Facility (GEF)
- Mirko Kruse, Hamburgisches WeltWirtschaftsInstitut gemeinnützige GmbH; Hamburg Institute of International Economics (HWWI)
- Jeannette Gurung, Women Organizing for Change in Agriculture and Natural Resource Management (WOCAN)

Participant GPSC city representatives included:

- Pedro Hipolito Rodríguez Herrero, Mayor, City of Xalapa, Mexico
- Alexandra González Marín, Director of Environmental Affairs, City of Campeche, Mexico
- Pamela Lucía Bravo Ortiz, Deputy Secretary of Environmental Planning and Information, City of Lima, Peru

Other participant city representatives included:

- Mercè Rius, Director General, Environmental Quality and Climate Change, Government of Catalonia, Spain
- Risto Veivo, Development Manager, Climate, Development Policy and Sustainable Development, City of Turku, Finland

The session was a facilitated dialogue with the objective of creating a useful knowledge exchange for both GPSC and non-GPSC cities.

The GPSC Peer Exchange addressed the following questions:

- How can circular economy interventions focused on nature-based solutions be best financed at the city level?
- How is it possible to integrate gender considerations into circular economy projects that affect how natural resources are managed at the local level?
- What good practices from local circular economy projects led to biodiversity protection?
- How can cities ensure biodiversity protection remains a priority throughout the value chain?

The following summary captures the content and outcomes of the session, along with the speakers' presentations. The complete session description is available in Annex 1.

Circular development and biodiversity linkages

Wasteful consumption, pollution, and extractive production patterns are strong contributors responsible to the biodiversity collapse currently underway.

Plastic pollution, soil erosion, agricultural runoff, habitat loss and industrial contamination are all consequences of the way our economies produce, consume and dispose of materials and resources.

As the consumer of 75% of global resources and generators of half of all waste produced[1], cities are key actors of the transition towards consumption and production patterns that protect natural ecosystems and the services human life depends on. Such transition can be operationalized through a circular development approach, which contributes to biodiversity protection through three main avenues:

1. Reducing demand for primary resources by using what already exists.
   Example: reusing construction materials in the construction sector to prevent raw material extraction.
2. Avoiding the generation of waste and other pollution by making sure that waste does not materialize in the production cycle.
   Example: Nutrients recovery from wastewater to avoid runoff and emissions (See case study on page 7).
3. Prioritizing regenerative resources and nature-based solutions (NBS).
   Example: using natural drainage systems for rainwater collection and management to protect ecosystems in the long-term.

These three dimensions offer co-benefits to cities as they are cost-efficient, foster local production, bring job opportunities and encourage community participation.

The city representatives present at the Peer Exchange confirmed that the concepts mentioned above are not new to them, but that a lot has yet to be done to bring them into practice, especially in terms of integrating those concepts within urban planning strategies (Veivo, 2019).

Tools, such as the Solutions Gateway, can support cities providing them with detailed guidance and practice-oriented resources. Specifically, the Solutions Gateway is an open access (users can access online and register for free), online, low emission development platform for local and regional governments looking for relevant Low Emissions Development (LED) Solutions for their cities. The platform contains sectoral and cross-sectoral packages of activities, structured along local government responsibilities and spheres of influence, to support cities in the development of low-emission strategies, plans, and projects. The Solutions Gateway contents are based on proven technologies and practices, distilled into Solutions and Solution Packages which are drafted and peer-reviewed by experts of the respective field. To know more about this tool, please refer to the following link.

[1] UNEP (2013), *City-Level Decoupling* Paper: https://www.journals.elsevier.com/environmental-development/news/urban-resource-flows-and-the-governance

Experiences in biodiversity and circular economy: a financial and community-based perspective

How can circular economy interventions based on nature-based solutions be best financed at the city-level?

Mirko Kruse, researcher at the Hamburg Institute of International Economic (HWWI) and partner in the CLEVER cities project on nature based solutions presented diverse financing and nature based approaches in cities. The project CLEVER Cities builds upon Nature Based Solutions at the city level to tackle socio-economic and environmental challenges. Cities from around the world are involved in the CLEVER Cities project, with Hamburg, Germany; Milan, Italy; and London, UK in the front line[2].

Kruse emphasized several challenges that mostly impact cities such as rapid and increasing urbanization, climate change and rising sustainability pressures. These challenges, however, can be converted into opportunities to create transformation for a greener future. NBSs are an instrument to tackle these challenges and to address the gap between the potential for implementing NBSs and its current uptake.

The correct implementation of NBSs into sustainable urban and district plans will benefit cities both in socio-economic and environmental terms.

Many and well-known are the problems related to green financing, such as:

- Limited evidence base that explains how resources can be leveraged to support NBSs.
- Budgetary constraints as limited financial resources are mainly used for traditional approaches which are based on short-term strategy. This is strictly linked with the different time horizons that characterize the private sector and that not always align with political goals.
- Little room left for autonomous investments such as NBSs, because many municipal revenues are committed to specific tasks.
- Benefits of NBS and Return on Investment (RoI) can be long-term and may be outside the perspective of a private investment decision.
- Innovation is often associated with risk.

So, how do we change cities and districts to make them greener, more resource efficient and open for a better future? How do we contribute to an improved awareness and understanding of impact-driven financing and investment strategies for urban regeneration in relation to NBSs? First, it is important to be aware that there are several sources where the financial resources might originate and secondly it is important to start by identifying the most appropriate option for the city.

The main three financial sources presented during the session were:

1. **Private Sources**. Private finance generally faces two main challenges: (1) payoffs cannot easily be reaped by investors, and (2) payoffs are often long term and of high risk due to a lack of information about the underlying value of assets. Price instruments like municipal fees for water services, for example, can be a valuable tool in this context. Financial institutions can also help to invest in forward-looking environmental technology and nature-based solutions[3].

2. **Public Sources**. One of the problems, highlighted by Kruse, is related to the traditional way of thinking, especially when thinking about NBSs. When we look at a very practical example like

[2] To know more about each project, please click on "The Cities" in the project website: https://clevercities.eu/
[3] Perrin, M (2018). Impact-driven financing and investment strategies for urban regeneration: https://www.ecologic.eu/sites/files/publication/2019/2812-clever_cities_factsheet_3_web2.pdf

having trees along the streets, traditionally the first association is to link them to the environmental department, but that is not the only department involved. Trees positively impact human health and wellbeing. This means that the health department needs to be involved when we talk about green areas. NBSs can be funded by pooling resources from different municipal departments and by working together for a common goal.

Examples: municipal fees and public service charges are a substantial source of revenue that can be used for financing NBSs; a portion of tax revenue can be distributed across ecosystem services to set an incentive for providing green infrastructure.

3. **Public-Private Partnerships**. This financial source refers to a cooperative action between public and private entities. These partnerships aim to reduce the financial risks of the public sector for certain projects; to overcome the limitations that characterize public funds and to increase the quality and efficiency of public services. This public-private collaboration can create and catalyse synergies by pooling resources, skills, knowledge and institutional capacities in order to share the financial burden. This can be applied to the delivery of NBSs, especially when these solutions are too costly or complex for one party to bear[4].

   An example for this type of funding is the Natural Capital Financing Facility (NCFF)[5]; a financial instrument set up by the European Commission and the European Investment Bank (EIB). The NCFF offers loans and technical support to projects that are expected to have a positive impact on biodiversity and/or adaptation to the impacts of climate change[6], such as those that promote the conservation, restoration, management and enhancement of natural capital for biodiversity and adaptation benefits, including ecosystem-based solutions to challenges related to land, soil, forestry, agriculture, water and waste[7].

How is it possible to integrate gender considerations into circular economy projects that affect how natural resources are managed at the local level?

Jeannette Gurung, founder of the Executive Directorate of the Women Organizing for Change in Agriculture and Natural Resource Management (WOCAN), a global membership network, whose members are experts in agriculture, forestry, land-based resource management and are committed to gender equality (Gurung, 2019), followed Mirko Kruse presentation, focusing on the importance of incorporating gender considerations into resource management in circular economy.

Taking Mirko Kruse's presentation as a starting point, Gurung underlined the need to incentivize actions for women's empowerment in climate projects, to start measuring and quantifying women's empowerment and to channel funds directly to women. Cultural norms and gender norms in all countries produce situations where men and women have different knowledge and different rules to follow, but this is not always recognized in projects (Gurung, 2019). It is very important to change this perspective. Women play major roles as farmers, make around 70% - 80% of consumer decisions around

[4] Perrin, M (2018). Impact-driven financing and investment strategies for urban regeneration, page 45.
[5] The Natural Capital Financing Facility (NCFF): https://www.eib.org/en/products/blending/ncff/index.htm
[6] How to make use of the Natural Capital Finance Facility (NCFF) within an EIB-funded Urban Framework Loan: https://www.eib.org/attachments/documents/ncff_municipalities_en.pdf
[7] Perrin, M (2018). Impact-driven financing and investment strategies for urban regeneration, page 46.

the world[8], are managers of waste and water, but their work and knowledge is undervalued (Gurung, 2019).

Gurung explained that the existing gender gaps prevent women from having the same opportunities for leadership that men have in relation to biodiversity management or finance management for cities. Gurung suggests that this has to be acknowledged to solve the leadership gap between men and women. As an example of the progress made in this matter, in September at the UN Climate Action Summit, governments of Peru and Spain led 45 countries to commit to climate action that contribute to gender equality and empowerment of women[9] . Five actions were listed[10]:

1. Adopt and implement gender-responsive climate change action plans, policies or strategies.
2. Improve the evidence base by supporting women's knowledge platforms and quantifying the benefits and effectiveness of engaging women and girls in climate actions and other initiatives.
3. Track progress by including in their regular reporting to UN bodies and other related fora:
    i. efforts, actions, initiatives supporting the implementation of gender-responsive climate policies and programmes;
    ii. percentage of climate-related programmes that incorporate gender considerations.
4. Promote and enhance innovative tools that demonstrate and measure the transformative power of women's and girls' leadership in modifying patterns of consumption to reduce carbon emissions.
5. Support and promote initiatives that foster women's and girls' full participation and leadership in mitigation and adaptation measures, including in science, technology, research and development.

Unpaid labor is at the backbone of the agriculture system, forestry management, water management, climate contributions. This is not sustainable (Gurung, 2019).

WOCAM is trying to create ways to recognize women's role, work and knowledge in managing the natural environment. An example is the certification label they developed, which endorses projects that create increased social and economic benefits for women participating in economic development or environment projects, including those that provide renewable energy technologies, time and labor saving devices, forest and agriculture activities, and employment opportunities[11].

To know more about the W+ Standard for Women's Empowerment, please refer to the following website "WOCAN the W+ Standard for Women's Empowerment".

[8] Top 10 things everyone should know about women consumers: https://www.bloomberg.com/company/stories/top-10-things-everyone-know-women-consumers/
[9] Investing in gender equality for transformative climate actions: https://www.unwomen.org/en/news/stories/2019/9/news-investing-in-gender-equality-for-climate-actions
[10] Lead the transformation, raise ambition commit to climate actions that advance gender equalityand women's empowerment: https://www.unwomen.org/-/media/headquarters/attachments/sections/news%20and%20events/stories/2019/climatesummit-gender-en.pdf?la=en&vs=5957
[11] The W+ Standard website: http://www.wocan.org/what-we-do/wstandard

Experiences in biodiversity and circular economy: a local and regional perspective

What are good practices of how local circular economy projects led to biodiversity protection? Example from the City of Xalapa, Mexico

Challenges showcased

GPSC city represented by Pedro Hipolito Rodríguez Herrero, Mayor, City of Xalapa, Mexico

Pedro Hipolito Rodríguez Herrero acknowledged that most of the challenges and issues highlighted during the Peer Exchange also occur in his municipality.

In particular, Xalapa has issues related to solid waste management, in particular how to reduce the solid waste already produced and create a new paradigm in the city, which will drive the city toward a more efficient, smart and sustainable future. The new paradigm will also aim to decrease the necessity of materials and energy; to decrease the carbon footprint (energy consumption); and to reduce waste generation (Rodríguez, 2019).

Solutions reported by the city representative

Approved in 2018, the city of Xalapa has a new sustainable municipal plan (2018-2021)[12] in place, with a key goal to create a systemic endeavor that focuses on 3 areas: food, water and energy. By working on these areas, the benefits that are going to be obtained will have (1) **direct benefits**: inequality reduction; environmental protection; creation of an inclusive administration; improvement of citizens' security and promotion of economic development; and (2) **transversal benefits**: improvement of community wellbeing by respecting human rights, gender equality and fostering citizen participation.

Particular attention is focused on waste generation and reduction.

According to Rodriguez' presentation, 350 tons of waste is generated every day in Xalapa (14-16% cannot be recycled; 34-40% is recyclable; and 43-50% is organic waste). During the years little recycling has been done leading to the problem of abundant waste generation. Therefore, the main objective for the coming years is to reduce consumption patterns and to communicate the differences and uses of organic waste. The more citizens are involved and understand the implications, the more willing they will be to cooperate actively (Rodríguez, 2019).

Concluding, Rodríguez highlights the benefits of recycling, such as jobs creation due to the creation of a recycling system which involves citizens; restoration of local ecosystems by using organic waste as organic fertilizer which also lead to the production of healthy food for the community and the creation of urban gardens, where citizens can meet.

What good practices of local circular economy projects lead to biodiversity protection? Example from the City of Turku, Finland

City represented by Risto Veivo, Development Manager, Climate, Development Policy and Sustainable Development, City of Turku, Finland

The city of Turku is implementing a highly ambitious Climate Strategy, which aims to transform the city into one of the first climate-positive areas in the world by 2029[13] and a resource-wise city by 2040[14], i.e.

[12] Plan Municipal de Desarrollo 2018 – 2021: https://ayuntamiento.xalapa.gob.mx/web/pmd

[13] Turku Climate Plan 2029: https://www.turku.fi/sites/default/files/atoms/files/turku_climate_plan_2029.pdf

a city that ensures the sustainable use of natural resources and avoids waste and emissions. So far, they managed to cut one third of their green-house-gas emissions from the level of 1990 (Veivo, 2019) and the circular economy is seen as a tool to achieve the remaining cuts.

The city of Turku has worked on sustainable development for over 30 years and recently they have been very successful in implementing the SDG 6[15] and its sub-targets. At the same time, they created a strong synergy between holistic water management, climate action, circular economy and nature-based solutions and ecological benefits (Veivo, 2019).

Challenges showcased

For a long time, water management has been a real challenge in Turku, both in terms of potable water and wastewater management that caused the pollution of the Archipelago Sea. The most important ecosystem around Turku area is the archipelago, a very vulnerable ecosystem, which has not been protected or safeguarded adequately by the municipalities in the region for a long time.

Solutions reported by the city representative

To address the problem of bad water management, the whole region decided to work together by establishing a new joint water system for both the production of potable water and waste-water treatment. This new waste water treatment plant is part of the water-food-energy-NEXUS, serves 14 municipalities and over 300.000 inhabitants of the region, and it is good example of combining water, climate, energy and circular economy (Veivo, 2019).

River water is filtrated through a gravel ridge to recharge groundwater bodies (to know more about this process please refer to the following link). The process is very natural and energy-efficient and has helped recharge local aquifers. Wastewater from the 14 municipalities is treated at an energy-neutral wastewater treatment plant which features a heat pumping station. The heat pumping station extracts some of the thermal energy from the wastewater to produce one tenth of the heating requirements of the entire city. The water that is cooled down by the pumping station is also used for district cooling[16].

Finally, the sludge is used for producing biogas and fertilizers and starting from January 2020 it will also be used for transport fuel, allowing citizens to access clean carbon neutral fuel (Veivo, 2019).

This whole water system is cost and energy-efficient, universal (no-one is left without good quality drinking water and sanitation), nature-based and has dramatically improved the ecological state of the Archipelago Sea.

To know more about Turku's initiative, please refer to the following link.

[14] Turku 2029 – the northern Baltic's most interesting city: https://www.turku.fi/sites/default/files/atoms/files/turku_city_strategy_2018.pdf

[15] SDG 6: Ensure availability and sustainable management of water and sanitation for all.

[16] Waste Water Treatment Plant: https://www.turunseudunpuhdistamo.fi/in-english

What are good practices of how local circular economy projects led to biodiversity protection? Example from the Government of Catalonia, Spain

Challenges showcased

City represented by Mercè Rius, Director General, Environmental Quality and Climate Change, Government of Catalonia, Spain

Rius explained that regions present similar challenges to the ones cities face and in particular the lack of the necessary funding to invest in more sustainable development.

Solutions reported by the city representative

One initiative that has been undertaken by the Government of Catalonia to overcome the lack of funding is to use taxes to intervene both on a municipal and regional level. Municipalities, consortiums of municipalities or metropolitan areas are in charge of different plans but the money flows from the regional government.

Environmental taxes such as waste treatment taxes or property taxes, for example, are used to construct facilities; taxes applied to drinking water are used for wastewater treatment; a tax for CO^2 emissions from vehicles has been applied to address climate change and to protect biodiversity.

European regulations are already in place but sometimes are slow and general, so the Government of Catalonia is proposing voluntarily agreements with private companies or associations to go further and faster than the European legislation. An example is the ban of single use plastics in all government facilities, or the voluntary agreement arranged with companies to foster increase the use of recycled plastic in the creation of new bottles.

How can cities ensure biodiversity protection remains a priority throughout the value chain? Example from the City of Campeche, Yucatan Peninsula, Mexico

GPSC city represented by Ana Alexandra González Marín, Director of Environmental Affairs, City of Campeche, Yucatan Peninsula, Mexico

Challenges showcased

Ana Alexandra González Marín explained that many ecosystems and biodiversity areas in the Campeche state are under protection. Thanks to this, it is possible to see jaguars in natural reserves such as Calakmul or dolphins in the Laguna de Terminos. Despite being the oil capital of the country, Laguna de Terminos hosts a population of 400-700 dolphins thanks to efforts of its inhabitants.

Starting from 1994, protection laws have been introduced to stop the brutal hunting of wild species and to prevent unplanned land development.

The City of Campeche has been declared by UNESCO Cultural Heritage of Humanity[17]. One of its main problems is the pollution of the bay which has become an open dump site over the years. The mangroves that used to clean the water are endangered and insufficient to keep up with the level of pollution, lack of sewers and lack of sustainable urban planning.

As other participants mentioned during the session, another challenge for Campeche is linked to the political horizon which prevents medium- or long-term planning of projects. Efforts have been made by

[17] UNESCO. World Heritage List: https://whc.unesco.org/en/list/895

previous administrations through public works such as a mega sewage project (built around six years ago), which is expensive and still not functioning (González, 2019).

Much hope is placed in the SC-IAP project that is seen as the opportunity to solve an environmental problem which has turned into a public health problem as well.

Solutions reported by the city representative

Ana Alexandra González Marín reported other existing initiatives that Campeche is fostering to become greener and sustainable: banning the use of plastics in local congresses; protecting trees and green areas by increasing density instead of sprawling; promoting the use of bicycles by building a bike lane system; rediscovering practices such as rainwater harvesting and urban gardening (through free training and workshops). Finally, funding from UNDP has been used to finance a communitarian project to diminish pressure on natural resources.

How can cities ensure biodiversity protection remains a priority throughout the value chain? Example from the City of Lima, Peru

GPSC city represented by Pamela Lucía Bravo Ortiz, Deputy Manager of Environmental Planning and Information and Deputy Manager of Natural Resources of the Metropolitan Municipality of Lima, Peru.

Challenges showcased

Name: Metropolitan Municipality of Lima
Country: Peru
Population: 8 574 974
Area: 281,926 Km2
Population Density: 3208,8 hab/Km2
Green area index per inhabitant: 3.5 m2/inhab

Figure 1: Geographic and demographic characteristics of Lima

Ms. Bravo, explained that one of the challenges for Lima is the lack of water and the administrative division of the green areas (about 20 million hectares) in 19 different districts (causing administrative problems).

The city is situated in a desert area, with 19 coastal *lomas* and temporary vegetation only from June to August. This makes it challenging for the municipality of Lima to be compliant with the WHO parameters. According to WHO, the green area index per inhabitant should be at a minimum of 7.5 m2/inhabitants, while in Lima, the index measures 3.5 m2/inhabitants. They are trying to address this issue but it is particularly hard for the city to create green spaces because of the lack of water. At the moment they have only one water treatment plant in Lima, which is not enough for 8 mil people (approximately 1 million people in Lima do not have access to clean drinking water).

Another challenge is linked to the administration of the city itself, which is divided into 43 districts, which means 43 sub areas with competing priorities. This leads to disorganized population growth; lack of well-connected public services; lack of promulgation of municipal ordinances due to the different administrations' strategies.

Finally, unregulated metallic and non-metallic mining and solid waste pollution are other challenges to be tackled.

Solutions reported by the city representative

The project *Lomas of Lima Systems*[18] is trying to address the challenges listed above. On December 8, 2019, six years after the proposal began, the project was launched. It seeks to combine it with Lima's climate change strategy.

Conclusions

Aloke Barnwal, Sr. Climate Change Specialist of the Programs Unit at the Global Environmental Facility (GEF) summarized the main outcomes from the session. An effective urban sustainable integrated approach requires the administrations and stakeholders involved to:

- **Move from a linear to a circular economy**. Waste management is in many cases the main entry point to circular economy and it is generated because citizens are not optimizing resources in the right way.

- **Set specific targets** and look for examples or experiences from others that already followed a similar path. Setting targets is important because they help a city to define their urban development goals and how they would like to achieve them. Other cities facing similar challenges can help with their experience and lessons learned to set a baseline as a starting point. The city of Turku, for example, can share their experience regarding their aim to become carbon neutral by 2029 by showing how circular economy helped them in their process. Even if the context is different (the entire population of Finland is less than the population of Lima) there are common challenges that can be addressed in similar ways.

- **Finance nature-based solutions at the city-level.** Proven economic models for financial infrastructure exist, but there are few funding sources available for financing nature-based solutions. Platforms like the Global Platform for Sustainable Cities (GPSC) and projects like CLEVER Cities can help address these financing gaps by providing the necessary tools and methodologies for cities to implement and finance NBSs.

- **Initiate long-term planning**. Even if it is not easy because of the political scenarios and their different time horizons, long-term planning is required. Involving citizens might help in putting pressure on the administration to make sure to influence long-term planning. As Risto Veivo explained, the city of Turku realized that there was the need to integrate these discussions in a longer vision when they decided to design a climate plan with the goal to become a climate positive area by 2029. They calculated that there will be a payback time up to 15 years and the productivity of the investment up to 20 years.

  Ana Alexandra González Marín suggested that, when this is difficult to be implemented at a local level, a solution might be to cooperate with NGOs and programs like the GEF SC-IAP program that supports cities attempting to overcome this problem. Civil society can help by keeping history of the projects and initiatives and by disclosing what has not been transferred from one administration to another. NGOs can help create continuity between administrations.

[18] Article "Municipalidad de Lima presentó propuesta para proteger lomas": http://www.munlima.gob.pe/noticias/item/38827-municipalidad-de-lima-presento-propuesta-para-proteger-lomas

Finally, another solution that was only mentioned at the end of the peer exchange but that could be an interesting topic for future workshops, is to deepen this discussion by referring also to the use of data-based planning to mainstream data and by using advanced technology as a means for municipalities to be better informed in their decision making.

Aloke Barnwal concluded announcing that the SC-IAP project will have a new phase where an additional 24 cities will join the program. Together, with the first phase, the program will reach 17 countries and 51 cities. Cooperation will be essential. Successful cities are welcomed to cooperate with GEF and the Cities Based Organizations which will coordinate this new platform (C40, ICLEI, UNEP Cities and WRI) to help other cities become more sustainable.

Annex 1: Session Description

COP25 GPSC Peer Exchange

Circular Cities for Nature

Protecting biodiversity through local and regional circular economy strategies

Date: Monday, 09 December 2019
Time: 14:00-15:30
Venue: Polytechnic University of Madrid, room D
Organized by: ICLEI World Secretariat for the Global Platform for Sustainable Cities (GPSC)

Language: English
Contact: Giulia Salvaterra and Victoria Vital Estrada
E-mail: giulia.salvaterra@iclei.org and victoria.vital-estrada@iclei.org

Background

Wasteful consumption as well as polluting and extractive production patterns are responsible for the majority of the biodiversity collapse currently underway. At least 8 million tons of plastic end up in our oceans every year (IUCN, 2018). About a quarter of the Earth's ice-free land area is subject to human-induced degradation, mainly due to soil erosion from agricultural fields (IPCC, 2019). 300-400 million tons of heavy metals, solvents, toxic sludge and other wastes from industrial facilities are dumped annually into the world's waters. In addition fertilizers entering coastal ecosystems have produced more than 245,000 km2 of ocean 'dead zones' (IPBES, 2019).

As global hubs of resource consumption and waste generation, cities are key actors of the transition towards consumption and production patterns that protect natural ecosystems and the services human life depends on. Such transition can be operationalized through the circular economy (CE), which contributes to biodiversity protection through three main avenues:

- Reducing demand for primary resources: Much like nature, the circular economy aims at operating in closed loops and maintaining resources at their highest utility at all time, through strategies such as reusing, recycling or cascading materials across different sectors. This decreases pressure on raw materials, energy, water, air, land and products that are made of and depend upon ecosystems and their services (e.g. less sand extraction through buildings disassembly and construction materials reuse).
- Avoiding the generation of waste and other pollution: The circular economy aims at ensuring products and infrastructures are reusable and adaptable by design, so as to decrease waste outputs across the full lifecycle (e.g. compost to replace synthetic fertilizers and avoid nutrients runoff). Remanufacturing and reusing processes are also less polluting and emissive than primary production.
- Prioritizing regenerative resources and nature-based solutions: The circular economy aligns itself to the regeneration rate of renewable resources and leverages nature-based solutions where

possible. This allows protecting ecosystems while increasing the productive of resources (e.g. “Sponge city” initiative to recycle rainwater).

The circular economy framework clearly holds great promises for localizing biodiversity protection in systemic ways, but tradeoffs and challenges remain. What is the role of bio-resources in a circular economy and how can cities ensure biodiversity protection remains a priority throughout the value chain? How can the lifecycle biodiversity impacts of circular economy solutions be monitored by cities? How can circular economy interventions based on nature-based solutions be best financed at the city level? Finally, how can cities ensure local and traditional knowledge is leveraged?

This Peer Exchange Session organized by the Global Platform for Sustainable Cities (GPSC) will bring continuity to the presentations that have been discussed during the “COP25 GPSC Session: Integrating biodiversity, climate and land management” scheduled for Saturday 07 December 2019 at 10:30-11:30 in the NDC Partnership Pavilion with a particular focus on the integration of circular economy into urban planning in cities.

Methodology

An introductory thematic framing will explore the linkages between the circular economy and biodiversity protection through concrete examples.

An interactive panel discussion will explore current opportunities, challenges and tradeoffs in ensuring the circular economy has positive biodiversity impacts.

Finally, the session will then look into how four cities from four world regions have used circular economy solutions to protect local and regional biodiversity. Cities will present the co-benefits these solutions have yielded and the key success factors that have allowed their operationalization.

Session breakdown

Moderator: Ariel Dekovic, Head of Communications, ICLEI

Panel discussion: The challenges ahead (24 min)

- Aloke Barnwal, Sr. Climate Change Specialist, Programs Unit, Global Environmental Facility (GEF)
  Linking the circular economy and biodiversity (8 min)
- Mirko Kruse, Hamburgisches WeltWirtschaftsInstitut gemeinnützige GmbH; Hamburg Institute of International Economic (HWWI)
  Financing nature-based solutions for CE (8 min)
- Jeannette Gurung, Women Organizing for Change in Agriculture and Natural Resource Management (WOCAN)
  Incorporating gender considerations into resource management in CE (8 min)

Short round of Q&A for the panel (10 min)

Presentations: Experiences on biodiversity and circular economy at the local, regional, and national levels (36 min)

- Pedro Hipolito Rodríguez Herrero, Mayor, City of Xalapa, Mexico (6 min)
- Alexandra González Marín, Director of Environmental Affairs, City of Campeche, Mexico (6 min)
- Pamela Lucía Bravo Ortiz, Deputy Secretary of Environmental Planning and Information, City of Lima, Peru (6 min)
- Mercè Rius, Director General, Environmental Quality and Climate Change, Government of Catalonia, Spain (6 min)
- Risto Veivo, Development Manager, Climate, Development Policy and Sustainable Development, City of Turku, Finland (6 min)

Short round of Q&A for the panel (10 min)

Conclusion and wrap up (5 min)
Evaluation of session – complete evaluation form (5 min)

References

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