CIRCULAR DEVELOPMENT:
Driving Integrated Planning and Policies

Striving to achieve socio-economic progress for their constituents, cities consume 75% of global resources and are responsible for the half of all waste produced. Many of these resources are finite, even renewable resources depend on balanced, planetary cycles for regeneration and replenishment. Additionally, materials management - extraction, processing, transportation, disposal - is responsible for over 50% of all GHG emissions.

To support local governments in providing social benefits while respecting ecological boundaries, ICLEI has identified Circular Development as one of its five integrated pathways towards sustainable urban development.

Circular urban systems are regenerative systems in which resource inputs, waste and externalities are minimized by closing or slowing material loops. When designed well, circular development projects can drive socio-economic progress by encouraging equitable and sustainable access to resources. They can also support job creation and strengthen local economies.

To take advantage of these benefits and invest in an economic model that prioritizes resources and people, local governments may consider the following key entry points (e.g. activities, tools or methodologies) to circular development:

**Urban systems integration**
Cities can look for synergies between material resources (water, energy, solid waste etc.) and urban space resources (green space, built environment and transport infrastructure). Systems integration often requires technical as well as organizational and governance changes to be able to cut across disciplines and create links between systems that were previously separated. Though often overlooked, nature-based solutions represent a cost-effective way to ensure circular interventions have cumulative benefits.

**Business engagement**
Implementing circularity requires businesses to fundamentally change their product design, production processes and marketing activities. This challenge can represent an opportunity for cities to create local value and employment and influence global supply chains. Early-market engagement activities, creating exchange platforms on local or regional material flows or designing incentives for the market uptake of ecologically-designed products and infrastructures are some of the many ways local governments can support businesses in delivering circular solutions.

**Social equity**
Circular development is an opportunity to reconnect people with resources at the local level through changing how resources are allocated and accessed, creating circular jobs, increasing community-based stewardship or making the impacts of unsustainable consumption more visible to the end-user. Circular projects must be designed so that they create tangible benefits for the local population, especially vulnerable groups. In developing economies, the well-being and empowerment of informal workers is vital for the sustainability of local circular projects.

**Circular public procurement**
Public procurement is a powerful intervention tool to develop more circular products and infrastructures and influence the supply chain to shift away from the linear model. Circular principles can be embedded in public procurement through initiatives such as lifecycle costing, local sourcing, encouraging low energy and water footprints and cradle-to-cradle management of resources.

**Lifecycle planning**
Resource consumption at the city level must be redesigned to better address the lifecycle impacts of resource use. Lifecycle planning helps identify and mitigate negative impacts across a product or infrastructure’s entire lifecycle. Increasingly, analytical lifecycle tools exist at the regional and city level to capture environmental, social and economic impacts.

**Green Circular Cities Coalition**
ICLEI’s Green Circular Cities Coalition is an opportunity for cities across the world to become global leaders in urban circular economy transitions. The Coalition, based in East Asia, provides a platform to connect cities, experts, businesses, and other relevant stakeholders to foster circular development through knowledge and experience exchange, mutual learning and technical support. Participating local governments include Changchun (China), Bonn (Germany), Turku (Finland), Nagano and Yokohama (Japan). To join the Green Circular Cities Coalition please contact Merlin Lao (Program Manager, ICLEI East Asia Secretariat): merlin.lao@iclei.org
ICLEI’s Circular Development Activities

ICLEI’s circular development projects and initiatives tackle issues of production, consumption and waste prevention from multiple perspectives and span a diverse set of resource flows.

**Monitoring and planning tools**
Through the CityLoops project, ICLEI and partners are developing a series of in-depth methodologies and tools aimed at closing the loops of urban material flows at the local level (specifically organic and construction and demolition waste flows, including soil) and conducting demonstration programs in six small-to-medium sized European cities, including Porto (Portugal) and Mikkeli (Finland).

**Waste prevention**
The UrbanWins Project studies how cities consume and discard resources and products in order to develop innovative plans and solutions aimed at improving waste prevention and management in eight pilot cities: Cremona, Turin, Albano Laziale, Pomezia (Italy), Sabadell, Manresa (Spain), Leiria (Portugal) and Bucharest (Romania). Active participation from all stakeholders is facilitated through in person and online urban forums.

**Plastic waste**
ICLEI Europe is working with several cities to improve the plastic packaging value chain from a circular development approach. Several European cities are conducting pilot projects, including the development of smart containers for separate waste collection, improvement of transport routes and sorting technologies and - as in Zaragoza (Spain) and Arnhem (the Netherlands) - creation of innovative formats and testing materials that improve recyclability.

**CiBiX**
CiBiX is ICLEI’s City-Business Collaboration Accelerator program, a service that helps local governments define sustainability challenges and finds businesses to solve them. By bringing businesses and cities together during early-engagement dialogue workshops, CiBiX helps identify collaboration barriers, new opportunities and innovative partnership models to address urban challenges through sustainable and circular solutions.

**Carbon accounting**
Having developed the “Recycling and Composting Protocol for GHG emissions accounting”, ICLEI USA is now working with the World Resources Institute to develop and incorporate a “Forest Accounting Appendix” into the US Community Protocol for Accounting and Reporting Community GHG emissions in order to better address scope 3 emissions related to production and consumption.

**Integrated waste solutions**
ICLEI South Asia supports integrated waste solutions by providing technical support for assessing urban waste management baselines and engaging all relevant stakeholders in Hyderabad, Warangal and Pimpri Chinchwad (India) in order to design potential waste management solutions and strategies.

**Circular public procurement**
ICLEI supports municipalities to embed circular principles in their public procurement by considering the whole life-cycle of goods and services. Good practices and resources on circular procurement are shared through the Global Lead City Network on Sustainable Procurement - which includes Tshwane (South Africa), Auckland (New Zealand), Oslo (Norway), Seoul (South Korea) and 10 other local governments - and the Procure+ European Sustainable Procurement Network, which connects over 40 public authorities, including Copenhagen (Denmark), Barcelona (Spain) and Budapest (Hungary).

**Food systems**
ICLEI-RUAF CITYFOOD accelerates local and regional government action on sustainable and resilient city-region food systems. CITYFOOD combines networking with technical expertise through training and policy guidance for its 27 members, including Baltimore (United States), Anusha (Tanzania), Malmö (Sweden) and Belo Horizonte (Brazil) which have strong circular development programs. Well-designed food systems reduce food waste, promote reuse and protect and restore ecosystems.

**Urban Nexus**
Since 2013, ICLEI has been working with UNESCAP and GIZ in cities to create frameworks that enable synergies between sectors, jurisdictions and technical domains – the urban nexus. Our approach guides stakeholders to identify and pursue these synergies to increase institutional performance and optimize resource management and service quality. Participating local governments include Dar Es Salaam (Tanzania), Tianjin (China) and Medellin (Colombia).

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