

CLIMATE ACTION PATHWAY

HUMAN

SETTLEMENTS

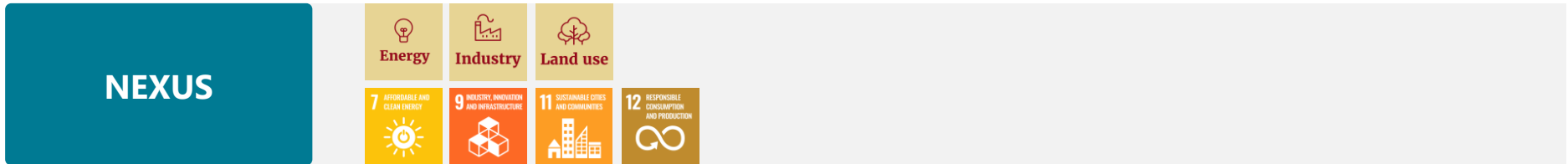
Action Table

November 2019



CIRCULAR ECONOMY PERSPECTIVE FORMS PART OF ALL HUMAN SETTLEMENT SOLUTIONS WHICH CONSIDER ADAPTATION, MITIGATION, RESILIENCE, AND LOCAL KNOWLEDGE

Mitigation
Adaptation



Policies (national, subnational and local)	By 2020	By 2030	By 2050
	<ul style="list-style-type: none"> National and subnational governments develop long-term, integrated resilience and decarbonization plans and disclose these. National governments include integrated, sustainable urban development and resilience, disaster risk reduction in NDCs; 	<ul style="list-style-type: none"> Incentives for locally adapted solutions (e.g. in architecture) in place. Procurement policies are aligned with circular economy principles. sustainable, climate proof urban development and resilience policies part of national budgets. 	<ul style="list-style-type: none"> Governments embrace as policy basis shared vision for net-zero, compact, connected and clean cities with decent living standards for all, with coordination across levels and sectors of government by mid-century in place. National and local policies aligned and focused on circular economy principles. Elevate the consistency and quality of city data to foster better-informed climate and energy policy, research, and investment decisions.

<h2>Finance and Investment</h2>	<ul style="list-style-type: none"> ▪ Bilateral/multilateral development country assistance strategies include resilience and decarbonization component. ▪ Finance institutions make available capitalization and access to funding sources for mitigation, resilience, and adaptation outcomes in human settlements. ▪ Finance and investment institutions use circular economy principles as basis for funding and investment decisions. ▪ Accelerate the capacity of local authorities to deliver investable projects and access finance solutions to implement their climate and energy commitments at scale. ▪ Redirect national research and innovation funding towards city/local government/urban advancements through systems-level change. ▪ Promote regulatory shifts to enhance cities' ability to finance and implement their bold climate commitments.
<h2>Technology and Innovation</h2>	<ul style="list-style-type: none"> ▪ Research institutions increase R&D on locally adapted solutions (including traditional building techniques), circular economy, sustainable innovation in delivering climate and energy action and their applicability to scale.
<h2>Business and Services</h2>	<ul style="list-style-type: none"> ▪ Businesses and service providers form coalitions with state, regional, city, and local governments for coordinated climate and resilience action in human settlements. ▪ Businesses and local and subnational governments increasingly commit to Paris Agreement. ▪ Businesses and service providers apply R&D results in city development. ▪ Businesses and service providers harmonize data frameworks and create a strategy to connect cities to high-impact, user-friendly tools that eliminate barriers to data collection, planning, and monitoring
<h2>Civil Society</h2>	<ul style="list-style-type: none"> ▪ Civil society including traditional and indigenous groups, in community-take part in human settlements-related planning. ▪ Civil society engages in awareness-raising activities for changing lifestyles in line with low-carbon and climate-resilient, sustainable, integrated urban development. ▪ Civil society participates in human-settlements related decisions



EXISTING INITIATIVES

<u>GlobalABC regional roadmaps</u>	Regional roadmaps towards zero emission, efficient, and resilient buildings and construction.
<u>GlobalABC regional roundtables</u>	Regional Roundtables for integrated policy planning and best practice exchange.
<u>RegionsAdapt</u>	Global initiative to support regional governments to act, collaborate and report on adaptation
<u>ICLEI's Circular Development Pathway</u>	Supports local and regional governments to decouple urban and economic development from resource consumption and factor environmental and social costs into the price of goods and services.
<u>C40 Deadline 2020</u>	Cities develop integrated and inclusive plans to keep global temperature rise below 1.5C, adapt to the impacts of climate change, and deliver wider social, environmental and economic benefits.
<u>GCoM Data4Cities</u>	Data4Cities aims to inform local governments how and why climate change is happening, inform climate mitigation and adaptation strategies for cities, and provide the evidence that governments, private sector partners, and citizens need to increase their support for local climate action
<u>GCoM/WRI Data Portal for Cities</u>	This free platform provides disaggregated, standardized and open data in effort to help more cities access activity data and emission factors that support greenhouse gas emissions (GHG) inventories and fact-based climate action planning. This can free up resources for cities to focus on climate action, and support NDC implementation by enabling great city ambition.
<u>GCoM/Google Environmental Insights Explorer (EIE)</u>	EIE analyzes Google Maps data to provide rich insights with third-party data and standard greenhouse gas (GHG) emissions factors, deriving carbon estimates and reduction potential for cities around the world.
<u>GCoM Common Reporting Framework</u>	Streamlines measurement and reporting procedures, and ensures robust climate action planning, implementation and monitoring.



FURTHER REFERENCES

UNEP/IEA (2018): 2018 Global Status Report. Towards a zero emission, efficient, and resilient buildings and construction sector

UN-Habitat 2017, Sustainable Urbanization in the Paris Agreement

UNEP (2018): A guide for incorporating building actions in NDCs.

Impact
2

ACCESS TO FINANCE AND INNOVATIVE FINANCIAL MODELS TO SUPPORT LOCAL AND SUBNATIONAL CLIMATE ACTION INCREASED

Mitigation
Adaptation

NEXUS

Energy

7 AFFORDABLE AND CLEAN ENERGY
9 INDUSTRY, INNOVATION AND INFRASTRUCTURE
11 SUSTAINABLE CITIES AND COMMUNITIES
12 RESPONSIBLE CONSUMPTION AND PRODUCTION

	By 2020	By 2030	By 2050
Policies (national, subnational and local)	<ul style="list-style-type: none"> National and local governments include budget on local and subnational climate action. 	<ul style="list-style-type: none"> Governments put in place national price on carbon that reflects its true social cost and redirects funding towards investment in low carbon, resilient infrastructure established. 	
Finance and Investment	<ul style="list-style-type: none"> Funding agencies have in place project preparation facilities focused on subnational infrastructure projects, with attention to early-stage project development. Finance and investment institutions support local and subnational governments in becoming creditworthy, in 	<ul style="list-style-type: none"> Development banks and climate funds earmark a proportion of funding for climate action planning and investments in urban areas. New regional finance institutions that can lend to local and subnationals (e.g. Green Cities Development Bank) created 	<ul style="list-style-type: none"> Finance and investment institutions put in place guarantees or credit enhancement for local and subnationals. SDBs produce expert data on subnational climate finance fluxes and play a key role in the resilience of the financing cycle of local net zero projects/action plans.



	<p>gaining greater authority and autonomy over own-source revenues and becoming empowered to take on debt (e. g. green bonds).</p> <ul style="list-style-type: none"> ▪ Upgrading of Subnational Development Banks (SDBs) to act as intermediaries and support institutions to subnational access to climate financing: The Global Alliance for SDBs sets its roadmap for action in different continents and creates momentum for better integration in the “glocal” climate finance value chain and channeling ▪ Support the definition and implementation of a Global Action Framework on Localizing Climate Finance by 2020. ▪ Finance institutions jointly with national government develop Global Action Framework on Localizing Climate Finance by 2020. ▪ SDBs are systematised entry points for enhancing subnational climate financing to local projects - The Global Alliance has allowed to build solid domestic pipelines of projects and have expanded the market segment for subnational climate financing for both public and private investors, at both domestic and international levels.
<p>Technology and Innovation</p>	<ul style="list-style-type: none"> ▪ National governments orient national research budgets toward research and innovation on subnational climate action priorities ▪ Technology providers pilot technology solutions in cities and local governments, creating pathways for scalability. ▪ Cities take technology solutions in cities and local governments to scale.
<p>Business and Services</p>	<ul style="list-style-type: none"> ▪ Businesses develop robust, financeable, investor-friendly projects focused on subnational climate action.



EXISTING INITIATIVES

<u>GlobalABC regional roadmaps</u>	Regional roadmaps towards zero emission, efficient, and resilient buildings and construction
<u>GlobalABC regional roundtables</u>	Regional Roundtables for integrated policy planning and best practice exchange
<u>Transformative action programme</u>	Strengthening local government's capacity to access climate finance and attract investment.
<u>Urban-LEDS</u>	An EU funded initiative promoting integrated low emission and resilient development in 8 countries, by working with local and national governments on climate action planning, financing and governance, implemented by UN-Habitat and ICLEI.
<u>CDP's matchmaker initiative</u>	Matchmaker advances implementation of climate resilient infrastructure projects through project data disclosure and stakeholder consultation.
<u>Cities Climate Finance Leadership Alliance</u>	A coalition of leaders committed to deploying finance for city level climate action at scale by 2030.
<u>Global Alliance for Subnational Development Banks (SDBs)</u>	Global multi-stakeholder coalition of SDBs & Central governments and development partners for professional intermediated access to climate finance for Local and Regional Governments, led by Cameroon, RIAFCO and FMDV
<u>C40 Cities Finance Facility</u>	Supports cities to prepare and deliver climate change projects
<u>GCoM's Invest4Cities Initiative</u>	This initiative works to provide value to signatory cities by mobilizing the critical financing and technical assistance cities require to access investment in key ways
<u>City Climate Finance Gap Fund</u>	Addresses the critical lack of grant funding necessary to mature pipelines of projects to increase high quality bankable climate friendly urban infrastructure projects



<u>Global Urbis</u>	Provides cities on a global scale with financing and technical assistance to mobilize significant private investment.
<u>GCoM/European Investment Bank Global Climate City Challenge</u>	Addresses key technical and financing barriers to strengthen investment in green projects and programmes essential to improve resilience to a changing climate in cities home to millions of people.

FURTHER REFERENCES

<u>UNEP/IEA (2018): 2018 Global Status Report. Towards a zero emission, efficient, and resilient buildings and construction sector</u>	<u>Integrating human settlements issues into National Adaptation Plans</u>
<u>UNEP (2018): A guide for incorporating building actions in NDCs.</u>	<u>ICLEI: Transformative Actions Program Knowledge Center</u>
<u>UNEP (2016): Global Roadmap towards low-GHG and resilient buildings</u>	<u>Cities Climate Finance Leadership Alliance</u>



CAPACITY DEVELOPMENT IN LOCAL GOVERNMENTS PRIORITIZED AND SUPPORTED

Mitigation
Adaptation

NEXUS

Energy

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	By 2020	By 2030	By 2050
Policies (national, subnational and local)	<ul style="list-style-type: none"> ▪ Policies on systematic knowledge and capacity exchange between national and local governments. ▪ Subnational governments engage in city to city cooperation and peer exchanges and engagement in networks to support capacity development and knowledge sharing. ▪ Create domestic climate financial expertise hubs (FinHubs) offering local and regional governments the required professional advisory support to project preparation and deal closing 	<ul style="list-style-type: none"> ▪ National government policies on access to technology, knowledge, and funding required for Paris-compatible climate actions. ▪ “FinHubs” have enhanced significantly the quality of projects presented to public and private investors and initiated a complete renewal of financial models, instruments and solutions available on the market 	



<h3>Finance and Investment</h3>	<ul style="list-style-type: none"> Finance and investment institutions make available funding for technical assistance for local and subnational governments to develop Paris-compatible climate actions (mitigation and adaptation) plans. Finance and investment institutions put in place technical assistance funding to develop local and subnational capacity to prepare and execute sustainable infrastructure projects.
<h3>Technology and Innovation</h3>	<ul style="list-style-type: none"> Technology provides increase access to early warning and assessment, disaster risk preparedness and response tools.
<h3>Business and Services</h3>	<ul style="list-style-type: none"> Service providers systematically work with local and subnational government to strengthen capacity to carry out vulnerability assessments, anticipate climate change impacts, run cost-and-benefit evaluations related to adaptation measures, and effectively plan adaptive pathways.
<h3>Civil Society</h3>	<ul style="list-style-type: none"> Youth and students engage in mentorship opportunities to support intergenerational links and teaching in subnational climate action, while building the next generation workforce.

EXISTING INITIATIVES

<p><u>GlobalABC regional roadmaps</u></p>	<p>Regional roadmaps towards zero emission, efficient, and resilient buildings and construction</p>
<p><u>GlobalABC regional roundtables</u></p>	<p>Regional Roundtables for integrated policy planning and best practice exchange</p>



<u>GlobalABC science-based targets</u>	Science-based target initiative applied to buildings and construction
<u>GlobalABC national alliances for buildings</u>	National alliances towards a zero emission, efficient, and resilient buildings and construction sector
<u>RegionsAdapt</u>	Global initiative to support regional governments to act, collaborate and report on adaptation
<u>Urban-LEDS</u>	An EU funded initiative promoting integrated low emission and resilient development in 8 countries, by working with local and national governments on climate action planning, financing and governance, implemented by UN-Habitat and ICLEI.
<u>CDP's cities, states and regions platform</u>	CDP provides the global platform for cities, states and regions to measure, manage and disclose their environmental data.
<u>Subnational Climate Finance Expertise Programme - PEFCLI</u>	A partnership between FMDV-Moroccan Government and Local and Regional Governments Associations on setting a domestic Financial Expert Hub for subnational Climate Financing

FURTHER REFERENCES


<u>UNEP/IEA (2018): 2018 Global Status Report. Towards a zero emission, efficient, and resilient buildings and construction sector</u>	<u>UNEP (2016): Global Roadmap towards low-GHG and resilient buildings</u>
<u>UNEP (2018): A guide for incorporating building actions in NDCs.</u>	

Impact
4

PARTICIPATORY GOVERNANCE INCLUDING GOVERNMENTS AT NATIONAL AND LOCAL LEVEL, CIVIL SOCIETY, RESEARCH, AND PRIVATE SECTOR PRIORITIZED

Mitigation
Adaptation

NEXUS



	By 2020	By 2030	By 2050
Policies (national, subnational and local)	<ul style="list-style-type: none"> ▪ Governments put in place taskforce to facilitate vertical integration of climate policies at the local, subnational, and national level and ensure that subnational climate actions are incorporated into NDCs and NAPs. ▪ Governments put in place financial incentives to encourage cross-jurisdictional/metropolitan governance models that can facilitate coordination across boundaries. 	<ul style="list-style-type: none"> ▪ Platform for vertical integration of climate policies and incorporation of subnational climate actions established. ▪ Governments establish long-term, structured and regular dialogue and engagement of local and sub-national governments as well as other stakeholders from civil society, research, and private sector established. 	<ul style="list-style-type: none"> ▪ Governments put in place budgetary needs for participatory governance from the start.
Finance and Investment	<ul style="list-style-type: none"> ▪ Finance institutions put in place funding window and/or criteria incorporating needs of all stakeholder groups. 		



<h2>Technology and Innovation</h2>	<ul style="list-style-type: none"> Technology providers focus on R&D centered on climate scenarios and their effect on vulnerability
<h2>Business and Services</h2>	<ul style="list-style-type: none"> Business engage in coalitions with state, regional, city, and local governments to strengthen dialogue with national government on vertical alignment. Businesses and service providers engage in platform for stakeholder dialogues to enable integrated urban planning.
<h2>Civil Society</h2>	<ul style="list-style-type: none"> Civil society engages in on the ground consultation and raising awareness

EXISTING INITIATIVES

<p><u>GlobalABC national alliances for buildings</u></p>	<p>National alliances towards a zero emission, efficient, and resilient buildings and construction sector</p>
<p><u>RegionsAdapt</u></p>	<p>Global initiative to support regional governments to act, collaborate and report on adaptation</p>
<p><u>Ambitious City Promises</u></p>	<p>Citizens engagement strategies to drive climate action at the local level.</p>
<p><u>Urban-LEDS</u></p>	<p>An EU funded initiative promoting integrated low emission and resilient development in 8 countries, by working with local and national governments on climate action planning, financing and governance, implemented by UN-Habitat and ICLEI.</p>
<p><u>Building the Climate Resilience of the Urban Poor</u></p>	<p>Building the Climate Resilience of the Urban Poor is a new UN-Habitat-led cooperative initiative launched by President Kenyatta of Kenya at the Climate Action Summit in New York City in September 2019.</p>

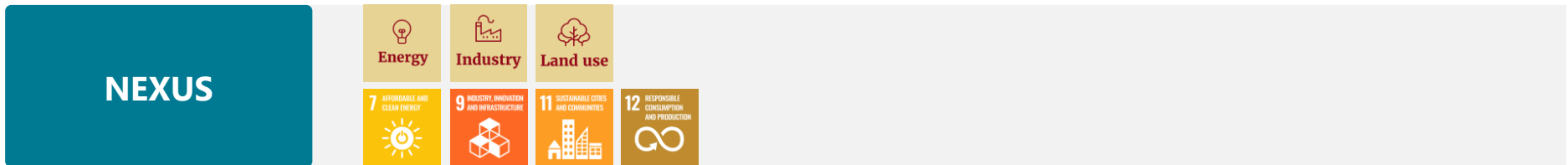


<p><u>CDP, C40 and WBCSD's new City-Business Climate Alliance</u></p>	<p>Provides a blueprint for how city government and businesses across the world can break down barriers to cooperation and collaboration.</p>
<p><u>Coalition for Urban Transitions</u></p>	<p>Supports national governments to secure economic prosperity and tackle the climate crisis by transforming cities.</p>
<p><u>GCoM's Innovate4Cities Initiative</u></p>	<p>This city-focused research and innovation initiative addresses critical data, innovation and technological gaps to enable cities to take accelerated and more ambitious climate action.</p>

Impact
5

SOCIAL AND ENVIRONMENTAL JUSTICE CONCERNS INCLUDED IN URBAN AND DEVELOPMENT PLANNING, CONSIDERING THE NEEDS OF VULNERABLE GROUPS

Adaptation



	By 2020	By 2030	By 2050
Policies (national, subnational and local)	<ul style="list-style-type: none"> City-to-city partnerships on social and environmental justice concerns across geographic boundaries, e.g. on ecosystems, oceans, coastal management, resilience. 	<ul style="list-style-type: none"> Governments incorporate relevant budgetary needs from the start. 	<ul style="list-style-type: none"> Governments systematically provide space for stakeholders to express social justice concerns in multi-stakeholder dialogues and ensure representation of vulnerable groups. Governments have inclusive planning processes in place at all levels of government.
Finance and Investment	<ul style="list-style-type: none"> Finance institutions put in place funding window and/or criteria that incorporate environmental and social justice concerns. 		



<h2>Technology and Innovation</h2>	<ul style="list-style-type: none"> ▪ Researchers focus on R&D centered on climate scenarios and their effect on social and environmental justice as well as vulnerability. ▪ R&D with a focus on climate scenarios and their effect on social and environmental justice as well as vulnerability mainstreamed.
<h2>Business and Services</h2>	<ul style="list-style-type: none"> ▪ Businesses engage in stakeholder dialogues to enable integrated urban and territorial planning. ▪ Businesses include advisory boards representative of the population of the community at-large.
<h2>Civil Society</h2>	<ul style="list-style-type: none"> ▪ Civil society engage through on the ground consultation and raising awareness.

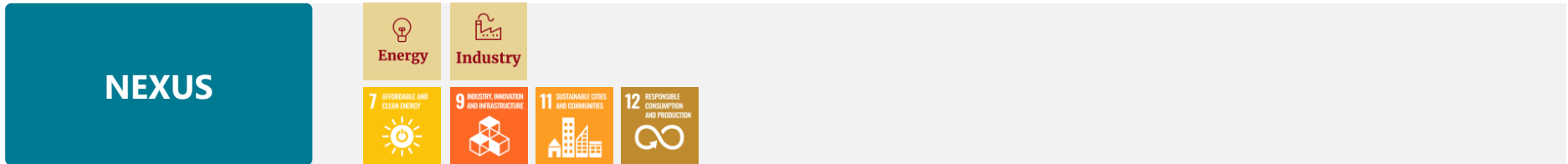
EXISTING INITIATIVES

<p><u>GlobalABC national alliances for buildings</u></p>	<p>National alliances towards a zero emission, efficient, and resilient buildings and construction sector</p>
<p><u>Urban transition alliance</u></p>	<p>Embedding social equity in development plans</p>
<p><u>Building the Climate Resilience of the Urban Poor</u></p>	<p>Building the Climate Resilience of the Urban Poor is a new UN-Habitat-led cooperative initiative launched by President Kenyatta of Kenya at the Climate Action Summit in New York City in September 2019.</p>
<p><u>C40 Climate Equity Pledge</u></p>	<p>Ensuring that efforts to address climate change help create sustainable cities for all</p>

Impact
6

SYSTEMATIC DATA COLLECTION ACROSS ALL LEVELS OF GOVERNMENT IN PLACE TO ENABLE INTEGRATED PLANNING

Mitigation
Adaptation



	By 2020	By 2030	By 2050
Policies (national, subnational and local)	<ul style="list-style-type: none"> Governments appoint data collection focal point in local and national government levels. National governments support downscaling of national or regional data to aid and accelerate decision making processes. 	<ul style="list-style-type: none"> Governments put in place a central platform on data collection on main elements of human settlements including urban planning, buildings, transport, waste, water, and land-use. 	<ul style="list-style-type: none"> Governments include funding needs for data collection and analysis included in annual budgets.
Finance and Investment	<ul style="list-style-type: none"> Finance institutions make available funding window on data collection needs and analysis inclusion in annual budgets. 		



<h3>Technology and Innovation</h3>	<ul style="list-style-type: none"> Technology providers coordinate with leading companies to release data and city-specific information, where appropriate, for public benefit and related to climate action. Technology providers make available automation and machine learning capabilities to create actionable intelligence for cities at the local level.
<h3>Business and Services</h3>	<ul style="list-style-type: none"> Leading companies to release data and city-specific information, where appropriate, for public benefit and related to climate action. All companies to release data and city-specific information, where appropriate, for public benefit and related to climate action.
<h3>Civil Society</h3>	<ul style="list-style-type: none"> Regular consultation with civil society on data collection and channels for civil society input.

EXISTING INITIATIVES

<p><u>RegionsAdapt</u></p>	<p>Global initiative to support regional governments to act, collaborate and report on adaptation</p>
<p><u>CDP's data collection and benchmarking tool</u></p>	<p>Cities can compare their efforts to other cities and what actions they could be taking to address specific challenges</p>
<p><u>Urban-LEDS</u></p>	<p>An EU funded initiative promoting integrated low emission and resilient development in 8 countries, by working with local and national governments on climate action planning, financing and governance, implemented by UN-Habitat and ICLEI.</p>
<p><u>Building the Climate Resilience of the Urban Poor</u></p>	<p>Building the Climate Resilience of the Urban Poor is a new UN-Habitat-led cooperative initiative launched by President Kenyatta of Kenya at the Climate Action Summit in New York City in September 2019.</p>
<p><u>Global Covenant of Mayors for Climate and Energy</u></p>	<p>An international coalition of cities and local governments with a shared long-term vision.</p>

FURTHER REFERENCES

UNEP/IEA (2018): 2018 Global Status Report. Towards a zero emission, efficient, and resilient buildings and construction sector

WRI, C40 Cities, ICLEI (2014): Global Protocol for Community-Scale Greenhouse Gas Emission Inventories

UNEP (2018): A guide for incorporating building actions in NDCs.

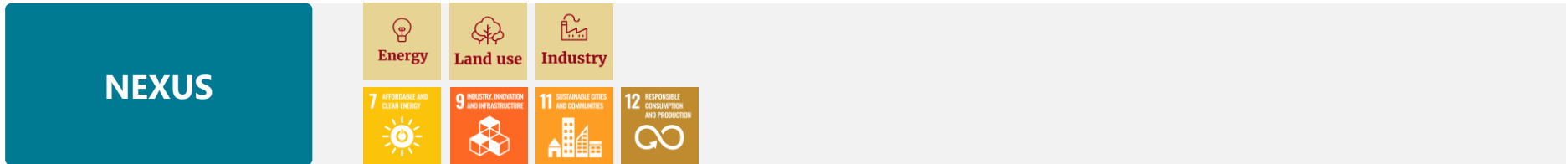
Global Covenant of Mayors (2018): Common Reporting Framework

UNEP (2016): Global Roadmap towards low-GHG and resilient buildings



BUILDING SECTOR TRANSFORMED THROUGHOUT BUILDINGS LIFECYCLE FOR EXISTING AND NEW BUILDINGS

Mitigation
Adaptation



	By 2020	By 2030	By 2050
Policies (national, subnational and local)	<ul style="list-style-type: none"> ▪ New building regulation considers the entire lifecycle of a building including materials, operations, embodied carbon, when putting in place regulations. ▪ Governments put in place required ambition in regulation and NDCs involving all stakeholders in the sector's value chain; ▪ Governments put in place national programs to mandate reporting and disclosure of energy performance. 	<ul style="list-style-type: none"> ▪ Governments have in place comprehensive, performance-based building energy codes for all new and existing buildings ▪ Governments have in place comprehensive energy efficiency requirements for all major refurbishments and renovations ▪ Governments have in place preferential energy efficiency criteria in public procurement. ▪ Governments put in place large scale municipal retrofit programs 	<ul style="list-style-type: none"> ▪ Governments adopt lifecycle policies for all new and existing buildings. ▪ Governments have in place national incentives for large scale energy retrofit (commercial and residential) ▪ Governments have policy in place renovation and use of vacant buildings for vulnerable groups.



<h2>Finance and Investment</h2>	<ul style="list-style-type: none"> Develop Programme for Energy Efficiency in Buildings (PEEB) offering financing options for energy efficiency in buildings. Governments and finance institutions collaborate for wide-spread PACE financing. Finance institutions put in place finance mechanism to pool large scale retrofit programs. Local governments and cities collaborate for city-wide programs to promote energy efficiency in commercial and residential buildings. Finance institutions include energy efficiency criteria in all refurbishment efforts Finance institutions include energy efficiency criteria in all buildings-related loans.
<h2>Technology and Innovation</h2>	<ul style="list-style-type: none"> Innovators prioritize R&D on zero-emissions and energy-positive buildings for all (including affordable housing) in developing countries. Technology and innovation providers put in place product-service systems approach for buildings.
<h2>Business and Services</h2>	<ul style="list-style-type: none"> Businesses join coalitions to promote retrofit, encourage growth of high performance buildings and address the performance gap. Businesses systematically engage in tracking and disclosure energy performance of buildings. Business consider cultural identify conserved within the building stock when renovating or repurposing building Business and governments collaborate to put in place building passport for all buildings. Businesses put in place behavioural incentives (e.g. light sensors, smart meters) to maximize energy efficiency.
<h2>Civil Society</h2>	<ul style="list-style-type: none"> Households engage in behaviour change for energy efficiency and retrofit measures.

EXISTING INITIATIVES

<p><u>GlobalABC regional roadmaps</u></p>	<p>Regional roadmaps towards zero emission, efficient, and resilient buildings and construction</p>
<p><u>GlobalABC regional roundtables</u></p>	<p>Regional Roundtables for integrated policy planning and best practice exchange</p>



C40 Net Zero Carbon Buildings

Cities commit that all new buildings operate at net-zero carbon by 2025 and all buildings by 2050.

FURTHER REFERENCES

UNEP/IEA (2018): 2018 Global Status Report. Towards a zero emission, efficient, and resilient buildings and construction sector

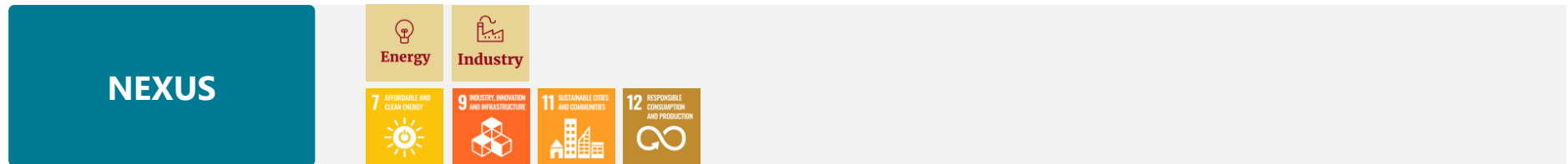
UNEP (2016): Global Roadmap towards low-GHG and resilient buildings

UNEP (2018): A guide for incorporating building actions in NDCs.

Impact
8

FUTURE ENERGY DEMAND REDUCED THROUGH ENERGY EFFICIENCY AND EFFECTIVE DESIGN, REMAINING DEMAND COVERED THROUGH RENEWABLE ENERGY

Mitigation
Adaptation



	By 2020	By 2030	By 2050
Policies (national, subnational and local)	<ul style="list-style-type: none"> ▪ Cities take up city-wide inventory on status of building design in given city. ▪ NDCs include building design requirements avoiding cooling/heating needs into NDCs. ▪ Governments commit to increase building as well as industrial energy efficiency and shift to clean energy. ▪ Cities commit to cover remaining energy needs through 100% clean energy. ▪ Governments put in place incentives prioritizing clean energy. 	<ul style="list-style-type: none"> ▪ Policies include incentives for effective building design for developers. ▪ Code implementation and enforcement is based on vertical integration. ▪ Building design requirements avoiding cooling/heating needs included in building energy codes. ▪ Incentives for effective building design for developers in place. ▪ Increasing number of policies focus on building as well as industrial energy efficiency and shift to clean energy. 	<ul style="list-style-type: none"> ▪ Cities incorporate clean and efficient district energy systems into urban planning. ▪ All national and subnational governments cover the remaining energy needs through 100% clean energy. ▪ Clean and efficient district energy systems incorporated into all urban planning policies. ▪ All public procurement prioritizes clean energy and energy efficiency.



<h2>Finance and Investment</h2>	<ul style="list-style-type: none"> Finance institutions put in place dedicated funding for urban development projects, which can be directed toward sustainable urban development projects. Finance institutions put in place dedicated funding window for infrastructure projects, which can be directed toward sustainable infrastructure projects. Finance institutions put in place financial incentives for developers to prioritize effective building design. Finance institutions put in place demand side financial incentives to spur demand for efficient building design. Finance institutions put in place incentives to encourage renewable energy generation in buildings and at district level.
<h2>Technology and Innovation</h2>	<ul style="list-style-type: none"> R&D into highly efficiency building design, considering the building within its neighbourhood. R&D in energy efficiency (e.g. building design), and clean energy solutions including district energy, microgrid, smart grid and district energy solutions.
<h2>Business and Services</h2>	<ul style="list-style-type: none"> Business join alliances to implement energy efficiency measures in buildings. Developers and architects promote business models focused on zero-emission buildings.
<h2>Civil Society</h2>	<ul style="list-style-type: none"> NGOs and household level engage in building design promotion/discussion, in particular, groups working on affordable housing. Households shift to clean energy providers.

EXISTING INITIATIVES

<p><u>GlobalABC regional roadmaps</u></p>	<p>Regional roadmaps towards zero emission, efficient, and resilient buildings and construction</p>
<p><u>GlobalABC regional roundtables</u></p>	<p>Regional Roundtables for integrated policy planning and best practice exchange</p>



<u>GlobalABC national alliances for buildings</u>	National alliances towards a zero emission, efficient, and resilient buildings and construction sector.
<u>GlobalABC science-based targets</u>	Science-based target initiative applied to buildings and construction
<u>SEforALL DES</u>	District Energy in Cities Initiative

FURTHER REFERENCES

UNEP/IEA (2018): 2018 Global Status Report. Towards a zero emission, efficient, and resilient buildings and construction sector

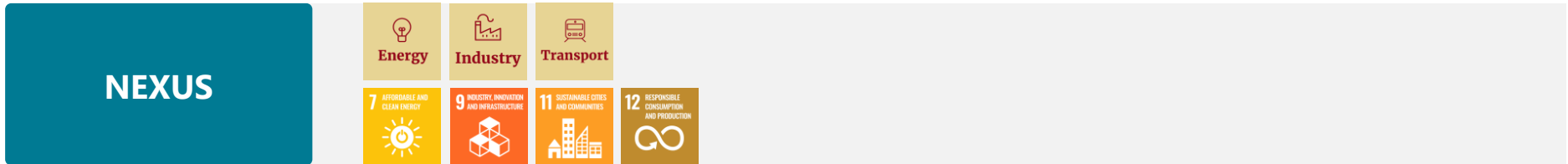
UNEP (2016): Global Roadmap towards low-GHG and resilient buildings

UNEP (2018): A guide for incorporating building actions in NDCs.



INTEGRATED, LOW-CARBON, CLIMATE RESILIENT URBAN PLANNING IS THE NORM

Mitigation
Adaptation



	By 2020	By 2030	By 2050
Policies (national, subnational and local)	<ul style="list-style-type: none"> ▪ Governments put in place development controls for moderate risk areas. ▪ Local governments commit for all infrastructure to be climate proof-regarding mitigation, adaptation, and resilience. ▪ Local governments undertake city-wide climate hazards and vulnerability assessment. ▪ Local governments undertake inventory of current state of city infrastructure identifying weak spots/high-impact areas for resilience and climate mitigation and opportunities for cross-sectoral optimization. 	<ul style="list-style-type: none"> ▪ Governments establish urban design requirements that incorporate climate mitigation and adaptation measures (e.g. green zoning, energy efficiency standards at neighbourhood level, sustainable drainage systems). ▪ Local governments ban development in high risk areas. ▪ Local governments link city zoning to national development plans/national climate plans. ▪ Local governments include district energy planning into urban planning and neighbourhood design. ▪ Local governments follow policy on urban design requirements that incorporate 	<ul style="list-style-type: none"> ▪ Cities put in place policy to consider climate change (both adaptation and resilience, as well as mitigation) first whenever undertaking renewal/upgrade/new developments in city infrastructure, both above and below ground. ▪ Cities adopt a cross-sectoral approach and jointly consider grey, green and blue infrastructure when undertaking renewal/upgrade/new developments in city infrastructure. ▪ Local governments adopt policy to prioritize low-carbon, resilient eco-districts approach for all new district development.

	<ul style="list-style-type: none"> Local government have climate adaptation and resilience plans in place. 	<p>climate mitigation and adaptation measures (e.g. green zoning, energy efficiency standards at neighbourhood level, sustainable drainage systems).</p>	<ul style="list-style-type: none"> National and local governments have in place fiscal incentives (taxes/exemptions) to prioritize climate-proof infrastructure
<h3>Finance and Investment</h3>	<ul style="list-style-type: none"> Finance institutions launch finance mechanisms that enable land value capture. 	<ul style="list-style-type: none"> Finance institutions put in place funding window on development of eco-districts. Public finance institutions put in place financial incentives for green zoning and energy efficiency performance standards, as well as district energy considerations. 	
<h3>Technology and Innovation</h3>	<ul style="list-style-type: none"> Technology providers prioritize R&D on urban and vertical farming as well as urban biodiversity. Technology providers engage in R&D on high-efficiency urban planning. 	<ul style="list-style-type: none"> Technology providers engage in R&D into climate proof infrastructure above and below ground. Technology providers engage in R&D into cross-sectoral approaches when upgrading/ renewing city infrastructure 	
<h3>Business and Services</h3>	<ul style="list-style-type: none"> Developer and companies engaged in urban planning pledge including energy efficiency, resilience, and renewable energy considerations when developing neighbourhoods. 	<ul style="list-style-type: none"> Infrastructure providers adopt business models for low-carbon, resilient infrastructure. Private sector embarks upon effective reform of overarching frameworks and champions reforms towards minimum lot areas, maximum building heights, plot coverage ratios and land use restrictions, while safeguarding green space and avoiding the displacement of disadvantaged residents. 	<ul style="list-style-type: none"> Private sector includes energy efficiency, resilience, and renewable energy considerations when developing neighbourhoods.
<h3>Civil Society</h3>	<ul style="list-style-type: none"> Engage diverse stakeholders in urban planning, in particular, disadvantaged and vulnerable groups engage in urban planning decision. 	<ul style="list-style-type: none"> Neighbourhood representatives engage with local government on city infrastructure decisions. 	



EXISTING INITIATIVES

<u>GlobalABC regional roadmaps</u>	Regional roadmaps towards zero emission, efficient, and resilient buildings and construction
<u>GlobalABC regional roundtables</u>	Regional Roundtables for integrated policy planning and best practice exchange
<u>SEforALL DES</u>	District Energy in Cities Initiative
<u>GlobalABC national alliances for buildings</u>	National alliances towards a zero emission, efficient, and resilient buildings and construction sector
<u>Urban Pathways</u>	Supporting Low Carbon Plans for Urban Basic Services in the context of the New Urban Agenda, supporting cities in India, Kenya, Vietnam and Brazil to develop Low Carbon Plans for urban mobility, energy and waste management services.

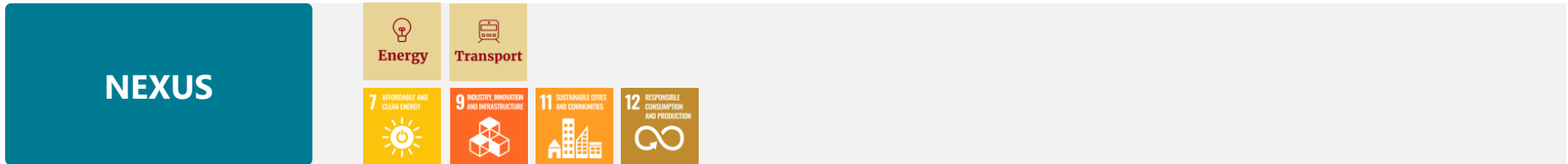
FURTHER REFERENCES

<u>UNEP/IEA (2018): 2018 Global Status Report. Towards a zero emission, efficient, and resilient buildings and construction sector</u>	<u>UNEP (2016): Global Roadmap towards low-GHG and resilient buildings</u>
<u>UNEP (2018): A guide for incorporating building actions in NDCs.</u>	



CITIES PLANNED AND DESIGNED TO REDUCE TRANSPORT DEMAND, AND PROMOTE LOW-CARBON, RESILIENT PUBLIC TRANSPORT MODES AND NON-MOTORIZED TRANSPORT

Mitigation
Adaptation



	By 2020	By 2030	By 2050
Policies (national, subnational and local)	<ul style="list-style-type: none"> Local governments adopt policy on planning requirements for walking and cycling infrastructure. National governments adopt a national policy for the definition and evolution of "clean" and "efficient" modes including clean energy provision – to give clear signals to users/market. Local governments introduce transportation demand management (TDM) policies (e.g. congestion charge) and low emission zones. Local governments implement congestion charges and low emission zones. 	<ul style="list-style-type: none"> Local governments put in place local transport policy priority for public transport (including metro, light rail, and bus rapid transit) and non-motorized transport. Governments adopt comprehensive parking policy (maximum standards in buildings, pricing and enforcement) to prioritize public transport, non-motorized transport, and efficiency/clean modes. Local governments promote economic models to assess health benefits of increased walking and cycling. 	<ul style="list-style-type: none"> Local governments adopt policies on national and local urban design standards requiring compact, connected, mixed use neighbourhoods that promote sustainable mobility.

	<ul style="list-style-type: none"> Local governments prioritize public transport through priority lanes and fiscal incentives.
Finance and Investment	<ul style="list-style-type: none"> Developers pledge to fund percentage of public transport services.
Technology and Innovation	<ul style="list-style-type: none"> Technology providers work with local governments providing technologies for monitoring and enforcement of on street prioritization for public transport (e.g. bus/light rail lanes, parking management). Technology providers support technologies for dynamic management of street space. Technology providers enhance digital infrastructure to connect public and private transit technology.
Business and Services	<ul style="list-style-type: none"> Businesses prioritize clean energy and electrification of all transport modes in cities.
Civil Society	<ul style="list-style-type: none"> Civil society supports public campaigns and other efforts to increase walking and cycling.

EXISTING INITIATIVES

<u>ITF Decarbonising Transport project</u>	Provide policy options and impact analyses for decision making
<u>EV100</u>	Accelerate the transition to electro-mobility
<u>EcoMobility Alliance</u>	Ambitious cities committed to sustainable transport

<u>Urban-LEDS</u>	An EU funded initiative promoting integrated low emission and resilient development in 8 countries, by working with local and national governments on climate action planning, financing and governance, implemented by UN-Habitat and ICLEI.
<u>C40 Green and Healthy Streets</u>	Cities commit to procuring, with our partners, only zero-emission buses from 2025; and ensuring a major area of our city is zero emission by 2030.
<u>Urban Pathways</u>	Supporting Low Carbon Plans for Urban Basic Services in the context of the New Urban Agenda, supporting cities in India, Kenya, Vietnam and Brazil to develop Low Carbon Plans for urban mobility, energy and waste management services.

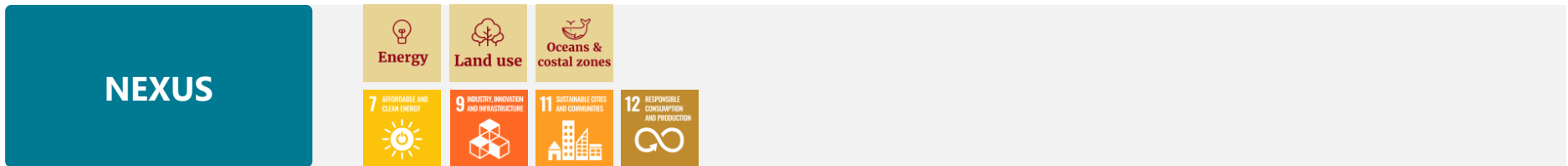
FURTHER REFERENCES

[ICLEI EcoMobility Alliance Knowledge Platform](#)



CITIES PRODUCE ZERO WASTE INCLUDING FOOD WASTE

Mitigation
Adaptation



	By 2020	By 2030	By 2050
Policies (national, subnational and local)	<ul style="list-style-type: none"> ▪ Governments adopt policies that promote holistic solutions based on the waste management hierarchy (avoid, reduce, reuse, recycle, recover, treat, dispose). ▪ Local governments introduce campaigns on food waste targeting retail and households, schools, etc. ▪ Governments ban non-recyclables, e.g. single plastics. 	<ul style="list-style-type: none"> ▪ Local governments expand recycling collection for residential, commercial, industrial, public buildings (e.g. hospital, schools). ▪ National governments ban open dumping and burning of waste ▪ Local governments introduce campaigns on food waste targeting retail and households, schools, etc. ▪ Local governments introduce food waste collection programs. 	<ul style="list-style-type: none"> ▪ Governments put in place mandatory design for assembly guidelines and implement mandatory construction waste reuse. ▪ Fiscal incentives for material recovery and sustainable waste management in place.
Finance and Investment	<ul style="list-style-type: none"> ▪ Investors increase investment in material recovery facilities 		



<h2>Technology and Innovation</h2>	<ul style="list-style-type: none"> ▪ R&D to scale up facilities that can turn sewage and organic waste (including food waste) into energy, and fertilizer.
<h2>Business and Services</h2>	<ul style="list-style-type: none"> ▪ Businesses recycle/take back waste in key sectors (e.g. food waste campaigns, hospitals and pharmaceutical, electronics product take backs). ▪ Businesses work with local governments on optimizing waste collection management. ▪ Businesses work with local governments on source to sea management practices. ▪ Businesses to incorporate the use of reused materials (e.g. through tax incentives, etc.).
<h2>Civil Society</h2>	<ul style="list-style-type: none"> ▪ Civil society engages in education and awareness campaigns

EXISTING INITIATIVES

<p><u>Circular Turku:</u></p>	<p>Collaboration for resource wisdom in the Turku region.</p>
<p><u>Urban Pathways</u></p>	<p>Supporting Low Carbon Plans for Urban Basic Services in the context of the New Urban Agenda, supporting cities in India, Kenya, Vietnam and Brazil to develop Low Carbon Plans for urban mobility, energy and waste management services.</p>
<p><u>C40 Towards Net Zero Waste</u></p>	<p>Cities commit to reducing municipal solid waste generation per capita by at least 15% by 2030 compared to 2015; and reducing the amount of municipal solid waste disposed to landfill and incineration by at least 50% by 2030 compared to 2015, and increase the diversion rate away from landfill and incineration to at least 70% by 2030.</p>



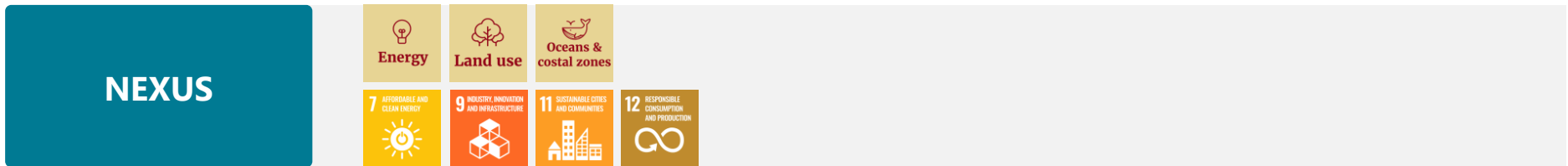
FURTHER REFERENCES

[ICLEI & Partners \(2019\) Urbans Wins Cities Zero Waste Best Practices Database](#)



HUMAN SETTLEMENTS INTEGRATE SUSTAINABLE LAND-USE AND NATURE-BASED SOLUTIONS

Mitigation
Adaptation



	By 2020	By 2030	By 2050
Policies (national, subnational and local)	<ul style="list-style-type: none"> Local governments develop policies and incentives on urban green spaces. Local governments adopt annual sustainable land-use targets for cities. 	<ul style="list-style-type: none"> Local governments adopt urban farming policies for city households. Sustainable land-use budgetary implications included in annual budgets. 	<ul style="list-style-type: none"> Governments introduce ecosystem restoration into city planning.
Technology and Innovation	<ul style="list-style-type: none"> R&D on urban and vertical farming as well as urban biodiversity. 		



<h2>Business and Services</h2>	<ul style="list-style-type: none"> Developers pledge to create urban green spaces ('create as much as you take'). Business work with governments adopting holistic, resilient urban planning business models considering green, blue, and grey infrastructure. Developers create urban green spaces ('create as much as you take').
<h2>Civil Society</h2>	<ul style="list-style-type: none"> Civil society engages in education and awareness campaigns on urban and vertical farming, green spaces, and urban biodiversity.

EXISTING INITIATIVES

<p><u>Cities with nature</u></p>	<p>Enhancing the value of nature in and around cities</p>
<p><u>UNA: Rivers for life</u></p>	<p>Urban natural assets for Africa</p>
<p><u>Urban Pathways</u></p>	<p>Supporting Low Carbon Plans for Urban Basic Services in the context of the New Urban Agenda, supporting cities in India, Kenya, Vietnam and Brazil to develop Low Carbon Plans for urban mobility, energy and waste management services.</p>
<p><u>CDP's forest module</u></p>	<p>Showcases how state and regional governments manage deforestation and/or forest degradation within their jurisdiction, contributing to future assessments related to the New York Declaration on Forests (NYDF)</p>



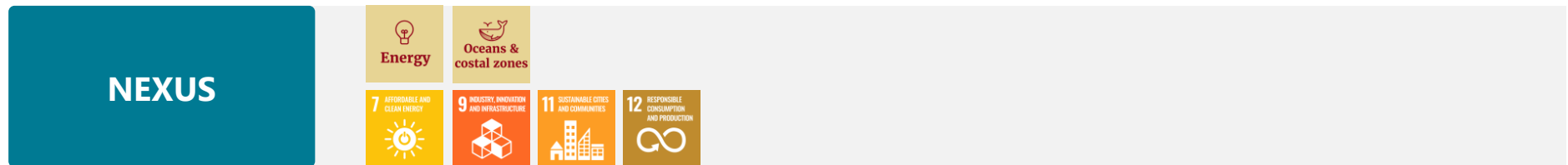
FURTHER REFERENCES

ICLEI, Stockholm Resilience Center (2018) Sustainable River-based Urban Planning for Sub-Saharan Africa: Guidelines and Case Studies

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13

CITIES INTEGRATE SUSTAINABLE WATER USE

Mitigation
Adaptation



	By 2020	By 2030	By 2050
Policies (national, subnational and local)	<ul style="list-style-type: none"> Local governments adopt equitable water tariffs that enable to maintain the system while incentivizing sustainable use (e.g. use for ecosystem protection). 	<ul style="list-style-type: none"> Governments put in place fiscal incentives for sustainable water management. 	<ul style="list-style-type: none"> Local governments integrate water-use considerations in urban planning in basin/watershed context. Governments adopt policies incentivizing circular water systems.
Finance and Investment	<ul style="list-style-type: none"> Finance institutions work with governments to increase investment in water reduce/recycling/recovery facilities. 	<ul style="list-style-type: none"> Finance institutions open funding window on circular water systems. 	



Business and Services

- Businesses work with governments accelerating repairs to minimize water loss.
- Businesses adopt business models promoting value extraction from waste water, e.g. nutrient recovery, heat recovery, water cascading.

Civil Society

- Civil society engages in water-saving campaign, including virtual water.