



United Nations
Economic Commission for Africa



The 14th Annual Session of Global Forum on Human Settlements Outcome Document



Group shot of all participants at the opening session

Theme: Sustainable Development of Cities and
Human Settlements in the Digital Era

Date: 5 – 6 September 2019

Venue: The United Nations Conference Center in Addis Ababa (UNCC-AA)

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▲ *Speakers at the opening of GFHS 2019: (from left to right)*

Dr. Taj Hamad, Oudom Wang, Dr. Seleshi Bekele, Andrew Rugege, Oliver Chinganya, Haifeng Lu, Roi Chiti

As one of the most important global congresses on urban agenda, sustainable cities and human settlements, as well as an observance of Urban October, GFHS 2019 was successfully held on 5-6 September at UN Conference Center in Addis Ababa, Ethiopia. Dr. Eng. Seleshi Bekele, Minister of Water, Irrigation and Energy of Ethiopia, H.E. Raila Odinga, former Prime Minister of Kenya, High Representative for Infrastructure Development at the African Union Commission, and Mr. Oliver Chinganya, Director, African Center for Statistics and Officer-in-Charge of the United Nations Economic Commission for Africa (UNECA) attended and addressed the forum. The outcome document – Addis Ababa Declaration was adopted at the closing session, thus providing inputs to the World Urban Campaign activities and World Urban Forum 2020 in Abu Dhabi in February 2020.

Themed as “Sustainable Development of Cities and Human Settlements in the Digital Era”, GFHS 2019 was designed to provide a valuable platform for high-level dialogue among participating stakeholders from around the world and to look for leapfrogging opportunities that digital revolution is bringing for making cities greener, smarter and more sustainable. It also



▲ *Dr. Seleshi Bekele*



▲ *H.E. Raila Odinga*



▲ *Oliver Chinganya*



▲ *Lu Haifeng*

commits to support Africa in developing digital economy, to drive progress towards sustainable urbanization, and to enhance pragmatic cooperation in the context of the “Belt and Road Initiative”.

Dr. Eng. Seleshi Bekele stated that “Ethiopian's effort to use modern and digital technologies offers tremendous opportunities to improve efficiency. We are trying to upscale the use of innovative technology to transform the quality of life in cities and in the nation at large.”

H.E. Raila Odinga pointed out in his special remarks that “this forum is very important. Africa is facing tremendous opportunities for development. We need to strive for infrastructure development, including transportation, energy, housing, digital facilities, and turn resources into product exports. Africa is a sleeping lion, and it is time to wake up this lion.”

Mr. Oliver Chinganya emphasized that “in Africa, 900 million people live in informal settlements, and 60-70% of urban residents reside in slums. When discussing smart cities and digital citizenry, it is equally important to remember that perhaps only a third of Africans are on the internet and half own a mobile phone. The digital infrastructure is far from the world's best in terms of speed, volume and reliability. Early estimates suggested that Africa needs about \$5 billion a year for ICT infrastructure.”

GFHS Secretary General Mr. Lu Haifeng shared that “carbon-based green city” and “silicon-based smart city” are the two major urban development trends. Combining the two will help sustain and green the economy while making cities and communities smart and sustainable. The Global Forum on Human Settlements will actively promote a full range of economic and cultural exchanges and cooperation in Africa and other regions, promoting sustainable development particularly in Africa in the context of the “Belt and Road Initiative”.



Plenary session of GFHS 2019



▲ *Speakers at plenary session 2, GFHS 2019: (from left to right)*

Meshack Van Wyk, Prof. Maarten Hajer, Dr. Amos Makarau, Choudhury Rudra Charan Mohanty, Pam O'Connor, Adjei Tawiah, Shen Tao



▲ Ceremony of Making Commitments to SDGs: 10 delegates representing cities, businesses, and civil society announced commitments to scale up local efforts towards achieving the SDGs.

The forum was co-organized by Global Forum on Human Settlements (GFHS), United Nations Economic Commission for Africa (UNECA), International Telecommunication Union (ITU), the World Urban Campaign (WUC), in cooperation with Universal Peace Federation (UPF), Global One Belt One Road Association (GOBA), Global Blockchain Alliance (GBA), World Association of Non-Governmental Organizations (WANGO), Belt and Road African Studies Alliance, Silk Sustainable Development Institution and concerned Ethiopian government agency.

Approximately 500 major stakeholders from more than 50 countries joined many ministers, mayors, well-known experts, business and social leaders in working out innovative solutions and fostering partnerships. Some of the distinguished guests include Mr. Mesfin Assefa, State Minister, Ministry of Urban Development and Housing, Ethiopia; Ms. Jenipher Kacha Namuyangu, Minister of State for Local Government, Uganda; Mr. Andrew Rugege, Regional Director for Africa, ITU; Dr. Amos Makarau, Director, Regional Office for Africa, World Meteorological Organization; Mr. Roi Chiti, Project Leader, World Urban Campaign; Mr. Choudhury Mohanty, Coordinator of Environment Programme, UNCRD/UN DESA; Dr. Taj Hamad, Vice Chairman of Global Forum on Human Settlements; Prof. Oudom Wang, Chairman of Global One Belt One Road Association; Mr. Serge Salat, Member of International Resource Panel, Leading Expert of International Green Model City Standards 3.0; Mr. Vicente Guallart, Founder, Institute for Advanced Architecture of Catalonia; Former Chief Architect of Barcelona City Council; Prof. Maarten Hajer, Expert on International Resource Panel, UNEP, Professor of Urban Futures, University of Utrecht, among others. Ten delegates representing cities, businesses, academia and civil society announced commitments to support the implementation of the 17 Sustainable Development Goals, which will scale up the local efforts towards achieving the SDGs.



▲ GFHS and UNECA jointly organize the closed-door meeting to promote in-depth cooperation between public and private sector



▲ Parallel session of GFHS 2019

GFHS 2019 happened very timely in addressing the key issues including: smart sustainable cities and communities; digital technology, innovation, and sustainability in Africa; the World Urban Campaign: connecting global sustainability agendas and private sector local actions; smart green building, renewable energy and urban resilience; International Green Model City Initiative: greener, smarter future cities; financing for sustainable urban infrastructure; blockchain technology and smart city governance; family values and happiness in cities, among others. These in-depth discussions help to capture opportunities in the digital age, support smart city development and the use of digital technologies to make cities and human settlements inclusive, safe, resilient and sustainable.

The 2019 Sustainable Cities and Human Settlements Awards Ceremony (SCAHS) once again became a highlight of the event. 26 organizations and individuals from around the world were commended, such as City of Vitoria-Gasteiz, Spain; Wuhan Changjiang New Town Starting Area Urban Design; Mara Naboisho Conservancy, Masai Mara; Zoma Museum, Addis Ababa, Ethiopia; Greenway planning and design: Growing an Urban Mosaic in Saint Louis; Li Zhenguo, Founder and CEO of LONGi Green Energy Technology; well-known architect Mick Pearce; Social housing project from Johannesburg; Guiyang•Sunac City. The complete list of award winners can be accessed by clicking the link: <http://www.gfhsforum.org/award>.



▲ “Global Green City” award is presented to winning cities by Mr. Oliver Chinganya, Director, African Center for Statistics and Officer-in-Charge of UNECA



▲ “Global Human Settlements Outstanding Contribution Award ” is presented to winners by H.E. Raila Odinga, former Prime Minister of Kenya, High Representative for Infrastructure Development at the African Union Commission

In the meantime, the International Green Model City Initiative welcomed new partners through presenting commemorative plaque to Wuhan Changjiang New Town Administration Committee, China; City of Johannesburg, South Africa; City of Accra, Ghana; Forest City, Malaysia; Torroella de Montgrí L'Estartit, Spain; Red Star Macalline Holding Group, China, and others.

The forum finally adopted the outcome document – Addis Ababa Declaration which emphasizes: the development of digital technology should adopt a people-oriented approach and put safety as the top priority; the urban master plan should integrate

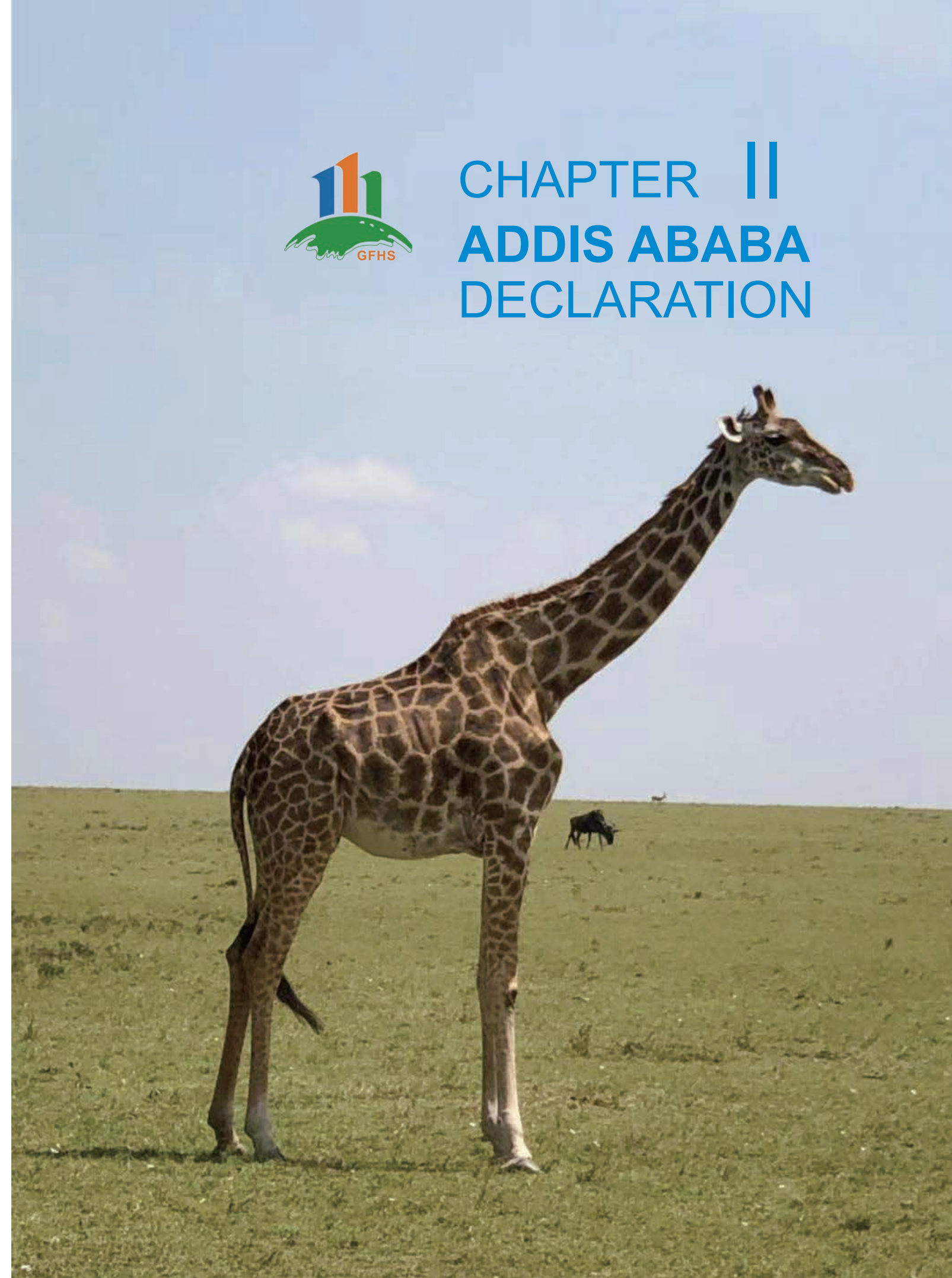


▲ Commemorative plaques are awarded to the new partners of International Green Model City Initiative

green city and smart city development, advocating compact and polycentric urban form, promoting a mixed-use and more livable community, ensuring environmental efficiency by encouraging the reuse and recycle of different resources, as well as improving productivity and prosperity; the foundation of a smart city is to integrate data, enable sharing of information, strengthen connectivity and realize in-depth development of digital resources; using applicable and affordable digital technologies in urban planning, construction and management is vital in ensuring that the benefits of these technologies are shared by all; it is essential to invest in expanding the people’s digital capacity through education, cultivating the spirit of innovation, and promoting the development of green economy; and the design and construction of communities and buildings should be fully adapted to the characteristics of the digital age, that is “innovative, convenient, efficient, green and inclusive”.



CHAPTER II ADDIS ABABA DECLARATION





▲ Mr. Andrew Rugege, Regional Director for Africa, ITU reads out the “Addis Ababa Declaration” at the closing session

Addis Ababa Declaration

Harnessing the power of digital revolution for urban sustainability and prosperity for all

Countries around the world are making great strides toward building a more inclusive global information society. The digital revolution is in the ascendant. Whilst information technology and the digital economy are driving economic and social transformation worldwide, they are also triggering profound changes in urban development and human settlements. These changes are reshaping our cities and communities, and at the same time altering our production mode and lifestyle. It is important to explore the opportunities and challenges that the digital revolution brings in order to ensure that no one is left behind in the process.

Therefore, the 14th Annual Session of Global Forum on Human Settlements was held on September 6 2019 at the United Nations Conference Center in Addis Ababa, Ethiopia. The participants have realized the importance of “sustainable development of cities and human settlements in the digital era” and discussed the ways in which digital technologies can be harnessed to make cities inclusive, safe, resilient, prosperous and sustainable.

We, the participants of the 14th Annual Session of Global Forum on Human Settlements, acknowledge that:

1. Africa’s increased interest in emerging disruptive technologies such as digital technology and renewable energy technologies give Africa a ‘late-comer’ advantage to leverage urbanization for sustainable development. Investment in connectivity infrastructure and decentralized sustainable energy systems, and leveraging ICT to promote distributed service and industrial

economies, would help to create an inclusive and productive urban economy. At the same time, strengthening international cooperation and technology transfer will support smart sustainable urban development in both developed and developing regions.

2. Digital transformation and the continuous process of society and economy-wide adoption of digital technologies to fundamentally change the way services and/or solutions are ideated, planned, designed, deployed and operated is essential for countries and regions. Digital transformation allows services to citizens to be personalized, paperless, cashless, presence-less, frictionless and consent-based.

3. Digital technologies offer significant potential in improving resource management, energy efficiency and knowledge and information exchange. The use of these technologies which consequences are being seen in critical societal changes and their spatial configurations can make urban planning smarter and more efficient. They have great prospects in improving the quality of life for all inhabitants of cities and other communities, leaving no one and no territory behind.

4. The digital economy has achieved fruitful results in transforming the traditional economy by dramatically improving existing production and consumption patterns. These powerful technologies offer new opportunities for many. It is expected that they will fundamentally challenge the existing economic structure and will have far-reaching consequences that if well governed will result in enhanced prosperity for all.

5. The digital revolution has had unprecedented impacts on human society. Human’s ethical values as well as the social and economic systems are being confronted by the disruptions brought on by different digital technologies. In particular, a growing number of jobs are being replaced by artificial intelligence and other emerging technologies, which is causing a shifting of power and required skills.

6. Digital security has become increasingly important and urgent. Business and private information, from the state to the city, from the grid to the bank, from the organization to the individual, are increasingly vulnerable to a wide-range of cyber threats and risks. Once a digital security is compromised, it may cause the entire system to be completely collapsed.

7. A digital economy that is controlled and driven by a small number of institutions can exacerbate the polarization between the rich and the poor. Having public data and digital technologies concentrated in the hands of a few may risk widening the social and economic disparities between different population groups, which does not align with the ultimate goal of the 2030 Agenda for Sustainable Development, that is to “leave no one behind”.

8. Whilst increasingly powerful digital technologies may affect the ecosystems, they cannot fundamentally alter the law of nature. That is, artificial intelligence cannot stop environmental pollution and climate change from happening, even though the technology may assist humans to better monitor them and reduce their impact.

To this end, we, the participants of the 14th Annual Session of Global Forum on Human Settlements, declare that:

1. **Taking adaptive, innovative and collaborative approach.** The solution to African urban challenges lies neither in the top-down command and control system nor in the bottom up self-development. What is needed is light touch top-down planning to provide guidance frameworks and structures while allowing adaptation and innovation to suit diverse needs, and bottom-up initiatives that are spontaneous, adaptive and collaborative.



2. Putting people first. The development of digital technology should adopt a people-oriented approach. Initiatives such as the United for Smart Sustainable Cities offer a useful platform to engage in global dialogues on the digital revolution and to develop consensus on key issues through an inclusive process. To address challenges such as data security and big data ethics, the views of every population group and every sector must be represented in the decision-making process and international platforms offer the best way to do so.

3. Using international standards and best practices as guidance to drive the digital revolution and sustainable urban planning. International standards such as ITU-T Recommendations, International Green Model City Standards, as well as ITU-D reports and other publications, provide requirements, specifications, best practices and/or other important guidelines that would make cities more inclusive and sustainable. These standards and best practices offer guidance on making urban strategies and plans that make cities and communities greener and smarter, promote a mixed-use and more livable community, ensure environmental efficiency by encouraging the responsible use, reuse and recycle of different resources, as well as sustainably producing energy and food that are clean and safe.

4. Integrating data. The foundation of a smart city is to establish a secure, cross-industry, cross-sectoral big data system with effective policy and regulations. Such data system provides the crucial information on how to improve social services, energy production and consumption patterns, transportation and other aspects of a city's sustainable performance.

5. Applicable technology. Using applicable and affordable digital technologies as well as inclusive and innovative processes in urban planning, construction and management is vital in ensuring that the benefits of these technologies are shared by all. This is particularly important in order to support the implementation of the New Urban Agenda and the achievement of the SDGs, reducing and preventing pollution and resource depletion, improving ecosystems sustainable management and addressing climate change.

6. Investing in talents. To support sustainable urban development, cities, especially those are located in the late-developing regions, should strengthen their digital infrastructures and invest in expanding the people's digital capacity through education. Prepare the younger generation to capture the opportunities that the digital revolution have to offer by cultivating the spirit of innovation, promoting the development of green economy, and giving them the tools and knowledge that would allow them to leapfrog the traditional industrialization paradigms.

7. Innovative design and infrastructure. The design and construction of public space and buildings should be fully adapted to the opportunities of the digital age, to strengthen communities' resilience and social cohesion. Among other, expanding and rearchitecting the digital infrastructures to ensure they are stable, efficient, versatile and allowed for rapid iteration. Public spaces should be designed to enable expanded access through digital systems and applications. Buildings should also be reconfigured to reduce energy consumption and leverage the adoption of renewable energy and other digital solutions.

We call on all concerned stakeholders to act together in harnessing the power of digital revolution, to advance sustainable urban development promoting sustainable and resilient communities and the achievement of the 17 Sustainable Development Goals.



▲ Awarders and awardees at Sustainable Cities And Human Settlements Awards Ceremony 2019



CHAPTER II RECOMMENDED VIEWPOINTS

Twenty Recommended Statements and Viewpoints

1. We reaffirmed that the major drivers of change in urban settings such as ICT, innovation, clean and renewable energy, electrified vehicles and trains, advancement in efficient buildings, sustainable waste management, and the like will leapfrog developing countries to create new and modern urban and peri-urban settlement, as there is no lock in and these advancements provide late comer advantage.

2. We underscored that the socio-economic and socio-ecological challenges of the 21st century coupled with the disruptive impact of emerging technologies require new set of strategic leadership. At the core of this new set of strategic leadership is the ability to effectively manage and utilize the dynamic tension between lock-in and leapfrogging effects of technological regimes.

3. We acknowledged that "carbon-based green city" and "silicon-based smart city" are the two major urban development trends. Combining the two will help upgrade and green the economy, while making cities and communities more sustainable. In view of this, the concepts of "circular economy" and "information and knowledge society" should be at the centre of smart sustainable city transitions.

4. We realized that emerging technologies and knowledge systems create more favourable conditions for combining top-down strategic planning with bottom-up operational planning that create more jobs and reduce poverty at the local level.

5. We reaffirmed that sustainable urban development must tackle various different problems simultaneously through an integrated approach that is policy-oriented, technology-driven, and community-based, and attaches importance to climate-land-energy-water-biodiversity nexus.



6. We emphasized that cities will not be smart when policies are not. In re-inventing our cities or developing new ones, we need to ensure all levels of governments sit with local communities and business sector to come up with a shared plan that ensure the city delivers on jobs, housing, public services and the environment.

7. We stressed that local authorities will have to become more politically powerful as they are in the position to cope with huge movements of people in search of water, food, work and energy. Also, each and every one of us takes responsibility for sustainable development.

8. We called for a shift from corporatist urban governance to entrepreneurial urban governance, from competing cities paradigm to cooperating cities rooted in inclusive eco-economics and from a vulnerable hierarchical government to collaborative governance with urban citizenry.

9. We also called for building neighbourhoods rather than providing housing. Neighbourhoods should be the strategic point of our efforts in human settlements.

10. We stressed that government can never fund civil society effectively unless genuine commitment is made to independently support civil society efforts and specifically to back up pilot innovations initiated by civil society, thereby helping create documentation of experiences and lessons for replication.

11. We noted that in some developing countries, there is no comprehensive legal or policy framework to promote social cohesion. Therefore, social and economic rights, such as the right to healthcare, education, food, housing and social security should be constitutionally entrenched, and citizens should be conferred legal entitlements.

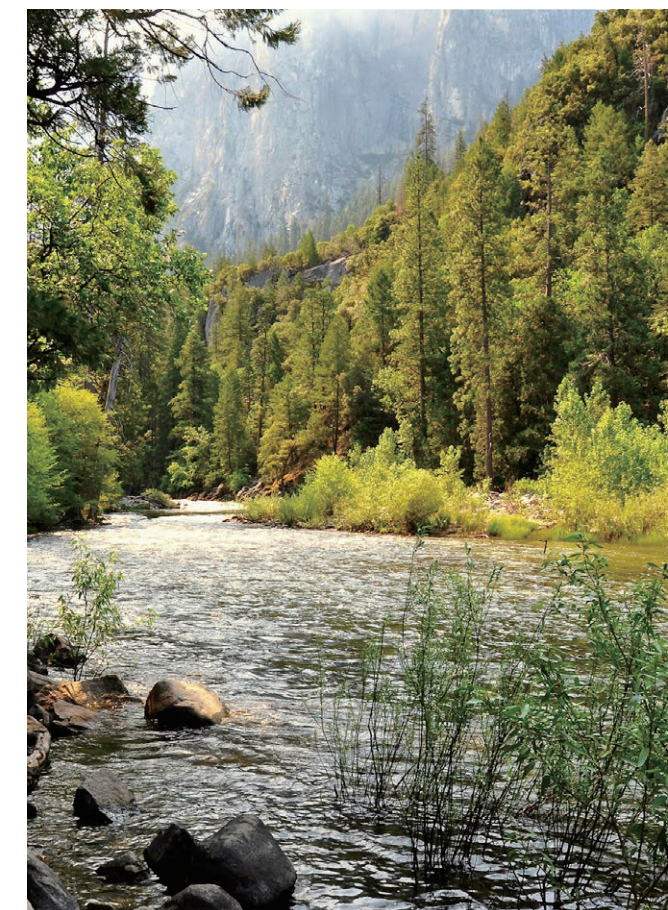
12. We recommended that the roadmap for smart city development should focus on forging high-quality application, build up united platform empowering service, industry and city management, and incubate self-recycling and multi-level industrial ecosystem, and comprehensively address the security issue of IOT.

13. We realized that the gap and barrier to inclusive growth is mainly caused by lack of municipal focus and inadequate data. This all comes down to trust. Hence, it is recommended to create digital local trust-based tools, to invest on neighborhood level trust and governance tools and processes to enable local ownership and sharing of assets, and to make policies that ensure such tools do not exclude or create disadvantages to sectors and groups within the urban society.

14. We called for developing the new bioeconomy based in natural and forest solutions and reinventing cities using natural building materials such as cross-laminated timber, cross-laminated bamboo, to achieve green growth and eradicate poverty.

15. We acknowledged that in the next 2-3 years, solar will become the most economical power source in most parts of the world. In future, global energy internet could balance power supply and demands to realize energy sharing and to accomplish the persistent power supply day and night.

16. We recommended that local governments should integrate positive social, environmental and economic outcomes



into the strategic design of projects to build a stronger demand side and expand financing channels. In the meanwhile, rather than depending excessively on outside supply driven funds, cities should increase their creditworthiness and self-sufficiency. Insurance is part of building financial resilience.

17. We reaffirmed that functional families are the foundation of strong healthy human settlements in cities in this digital era. Functional families have values that contribute to happy co-existence in human settlements. The recipe for happy human settlements lies in embracing digitization with values entrenched in true love, charity, inclusivity, empathy and warmth.

18. We emphasized that in Africa, 900 million people live in informal settlements, and 60-70% of urban residents reside in slums. When discussing smart cities and digital citizenry, it is equally important to remember that the digital infrastructure is far from the world's best in terms of speed, volume and reliability. Early estimates suggested that Africa needs about \$5 billion a year for ICT infrastructure.

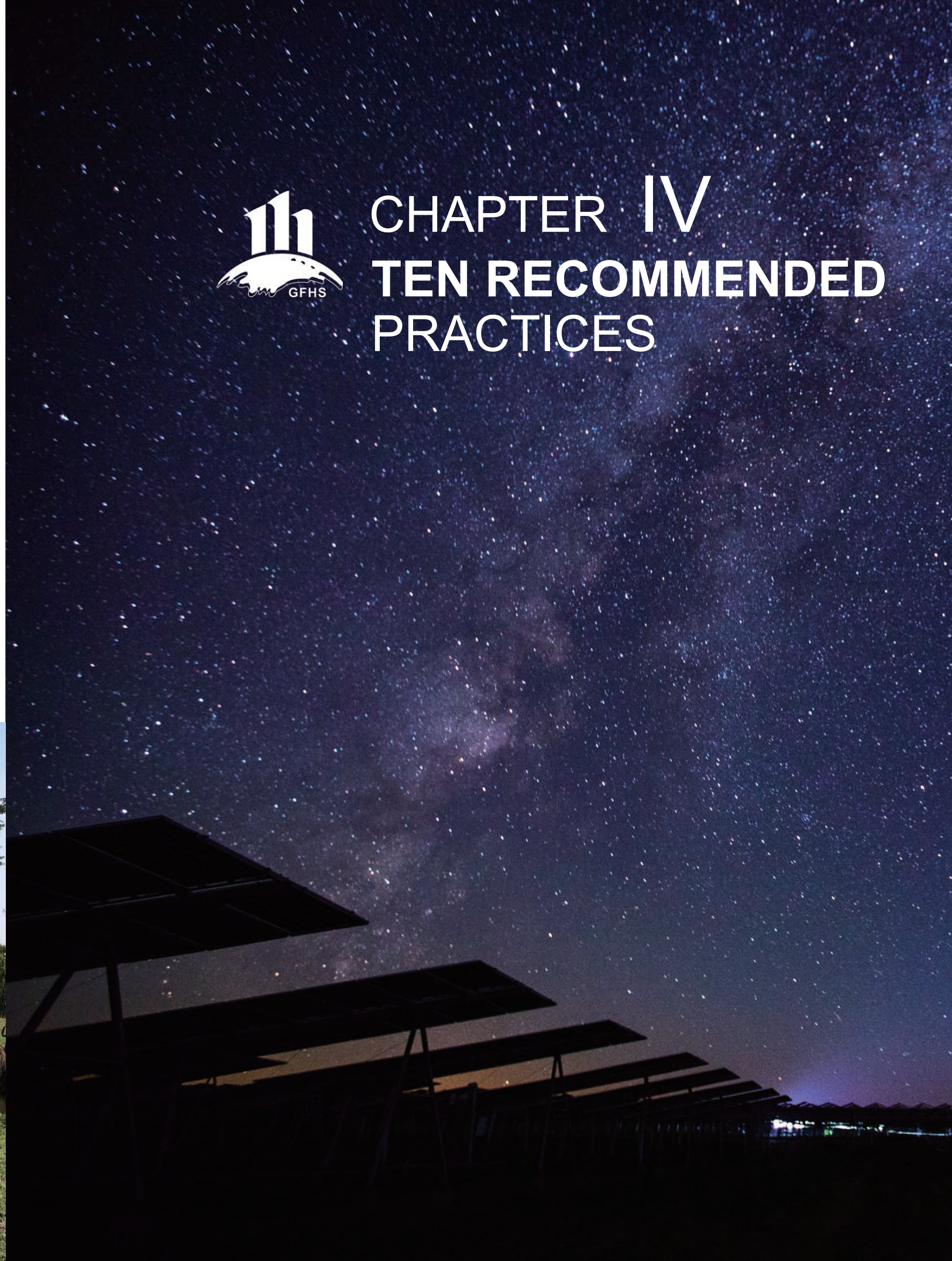
19. We stressed that Africa's possibility for transformative development is dependent on its ability to create a dynamic innovation space that is responsive to the specific context of resource and needs of its people, and Africa should develop their own model of urban development through nature-based and climate-resilient initiatives.

20. We realized that Public-Private Partnership opens the African infrastructure market to non-African providers, leading to asymmetrical contracts. Governments have to put in place strong regulatory agencies and anti-monopole laws to ensure fair and managed competition in the market. In smaller cities where infrastructure market is small, governments have to democratize project ownership and use insurance institutions to mitigate risks.



CHAPTER IV

TEN RECOMMENDED PRACTICES



Ten Recommended Practices

1. 4 Billion Trees National Greening Program has been initiated by Ethiopian Government to synergize human, financial, and institutional resources to maximize green urban and rural areas thereby reversing national level of deforestation. In this endeavour, Ethiopia delivered on ambitious project of planting 4 billion trees in a season from June to August, and break the world record by planting over 353 million trees a day. Out of the 4 billion, 533 million seedlings were planted in the urban and peri-urban areas. The project will significantly help tackle the effects of deforestation and climate change in the drought-prone country, while influencing more countries and cities to follow suit.

2. As an innovative greener urban development action plan, IGMC Initiative aims to use IGMC Standards 3.0 as an effective planning tool for assessing and guiding sustainable urban development and conducting pilots through providing innovative concepts, integrated strategies and methodologies, benchmarks and monitoring framework as well as demand-oriented solutions. Applying the IGMC Standards is expected to help enhance assets value and urban competitiveness and facilitates sustainable cities and human settlements for all. This year, IGMC Initiative global network has continually expanded by welcoming

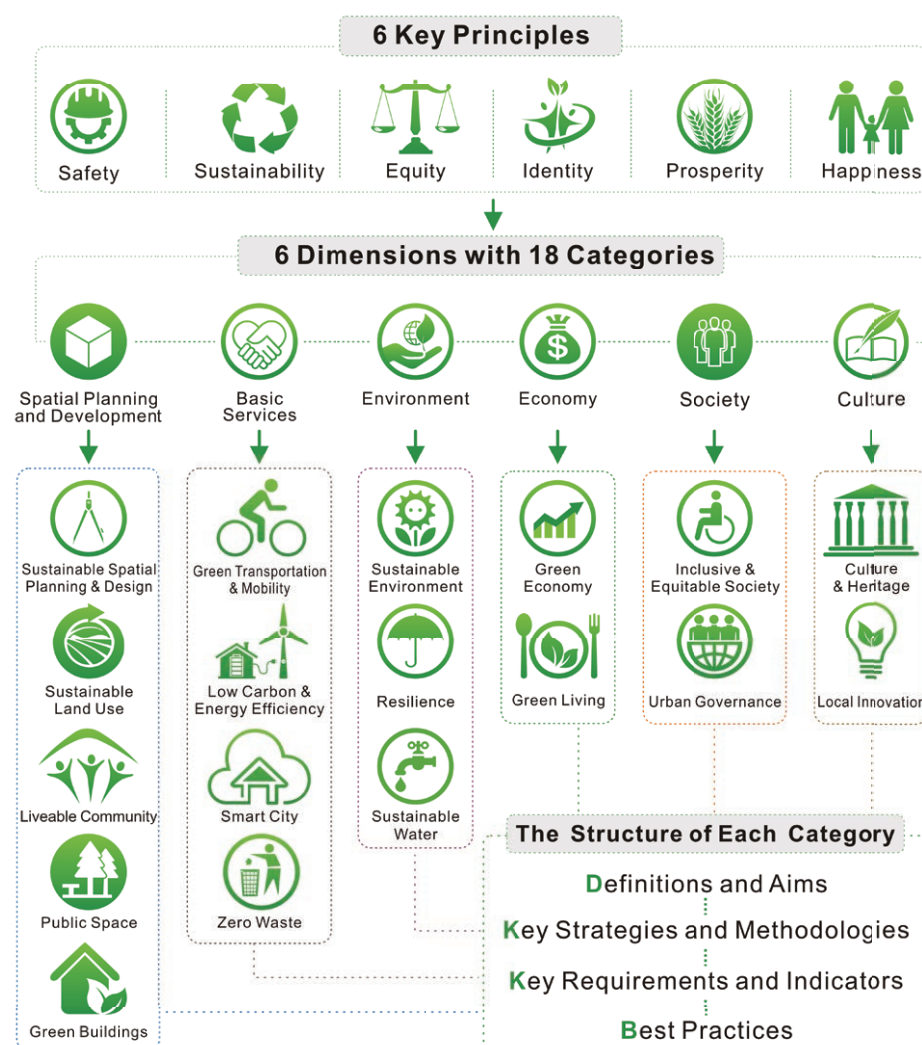
the new partners including Wuhan Changjiang New Town Administration Committee, China; City of Quezon, the Philippines; City of Johannesburg, South Africa; City of Accra, Ghana; Forest City, Malaysia; Red Star Macalline Holding Group, China, among others.

3. As a water-wise resilient city, Bahar Dar has put eco-hydrology in place to sustainably manage the quantity, quality and risks of flooding. In the city, wetlands and natural drainage landscapes help absorb peaks in water supply, and at the same time wetlands are designed to store and recycle rainwater and address the challenge of flood safety. Wetlands are also used to filter wastewater effluent, thus reducing wastewater treatment requirements. This integrated system of wetlands that composes a lake within the city could, in addition to conserving biodiversity, be integrated with ecotourism and the developing of livelihood option for local communities through urban agriculture.

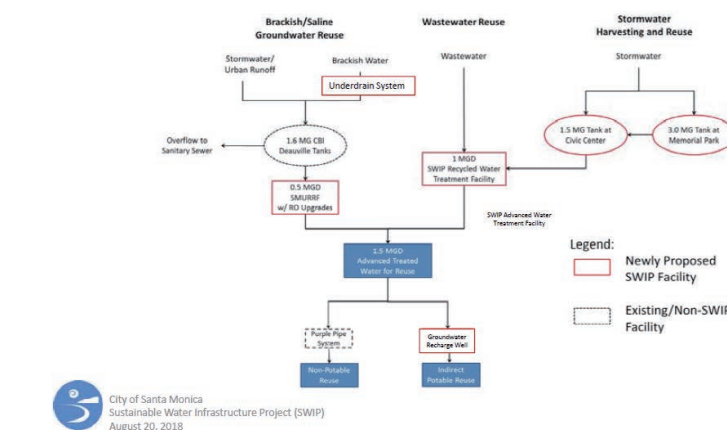


▲ Blue and green infrastructures in Bahar Dar

Diagram of the Structure of the International Green Model City Standards 3.0



4. The Sustainable Water Infrastructure Program (SWIP) in Santa Monica consists of three elements including: a modular reverse osmosis unit, a new shallow brackish and saline groundwater extraction well, and new solar panels for energy offset; a below grade stormwater and sewer treatment facility with 1 million gallons per day capacity; and two new stormwater harvesting tanks with 4.5 million gallon capacity. This project will harvest up to 4.5 million gallons of stormwater, recycle 1.0 million gallons per day of municipal wastewater, including future indirect potable reuse via aquifer recharge, treat up to 0.5 million gallons of stormwater and/or brackish-saline-impaired groundwater, and conserve over 1,680 acre-feet per year of groundwater or imported water. This program will ensure environmental sustainability, improve beach and bay water quality, and guarantee the long-term yield of its groundwater resources.



▲ The Sustainable Water Infrastructure Program

5. Johannesburg has been taking bold action to combat climate change through innovative transport technology. The Rea Rea Vaya bus rapid system - the first in Africa and operated since 2009 achieves a ridership of up to 53000 passengers per day and has achieved a Green House Gas emissions reduction of approximately 46000 tons in Carbon Dioxide. Another innovation aimed at making its public transport system more sustainable includes the use of Compressed Natural Gas through the acquisition of 150 buses which are used by its own bus company, Metrobus. In the pipeline an electric vehicle fleet is being planned, which will be able to reduce the city's use of internal combustion vehicles by 50% by the year 2040.

6. A series of transformative actions have been implemented in Vitoria-Gasteiz, Spain to mitigate and adapt climate change through nature-based solutions. The Vitoria-Gasteiz Green Belt is a system of periurban parks of high ecological and landscape value, strategically linked by means of eco-recreational corridors. For over 30 years now, the city has invested in its 833-hectare



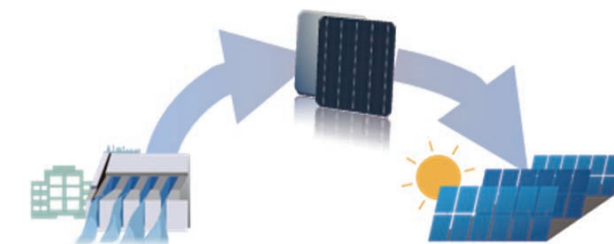
▲ Vitoria-Gasteiz Green Belt

green belt that will soon cover 950 hectares, in a successful mobility shift, an extensive network of parks and city walks and sustainable water-management systems. The semi-natural green belt has been working in progress since the early 1990s, with a lot of work and investment in reclaiming degraded areas such as gravel pits and drained wetlands. It links the city and the countryside - two of its suburban, restored wetland areas have been recognised for their significant natural value with international protection status. They are also efficient water retention and purification areas, parks and visitor centres, minimizing the flow of river water into the city's sewage treatment network.

7. Advanced Energy Communities Program has been carried on in Bassett-Avocado in California to provide disadvantaged communities with access to state of the art energy solutions, reduce and optimize community energy demand in disadvantaged communities, and generate & store local renewable energy in disadvantaged communities. Key design elements include prosumer network – 50 single family households equipped with solar and storage; smart community solar + storage – 1.2MW system designed to serve 235 residential participants; blockchain community network – monitors community assets and verifies carbon emission credits and electricity production; community action – targeted community engagement, outreach and workforce development; mobile grid – public EV charging stations with EV vanpooling and microtransit services; and microgrid resilience hub – dedicated solar and storage system to allow for at least 4 hours of electricity resiliency at a community center.

8. Mr. Li Zhenguo is the founder and president of Xi'an-based LONGi Green Energy Technology Co., Ltd. As the world's leading solar energy technology company and the world's largest manufacturer of monocrystalline silicon wafers, LONGi has

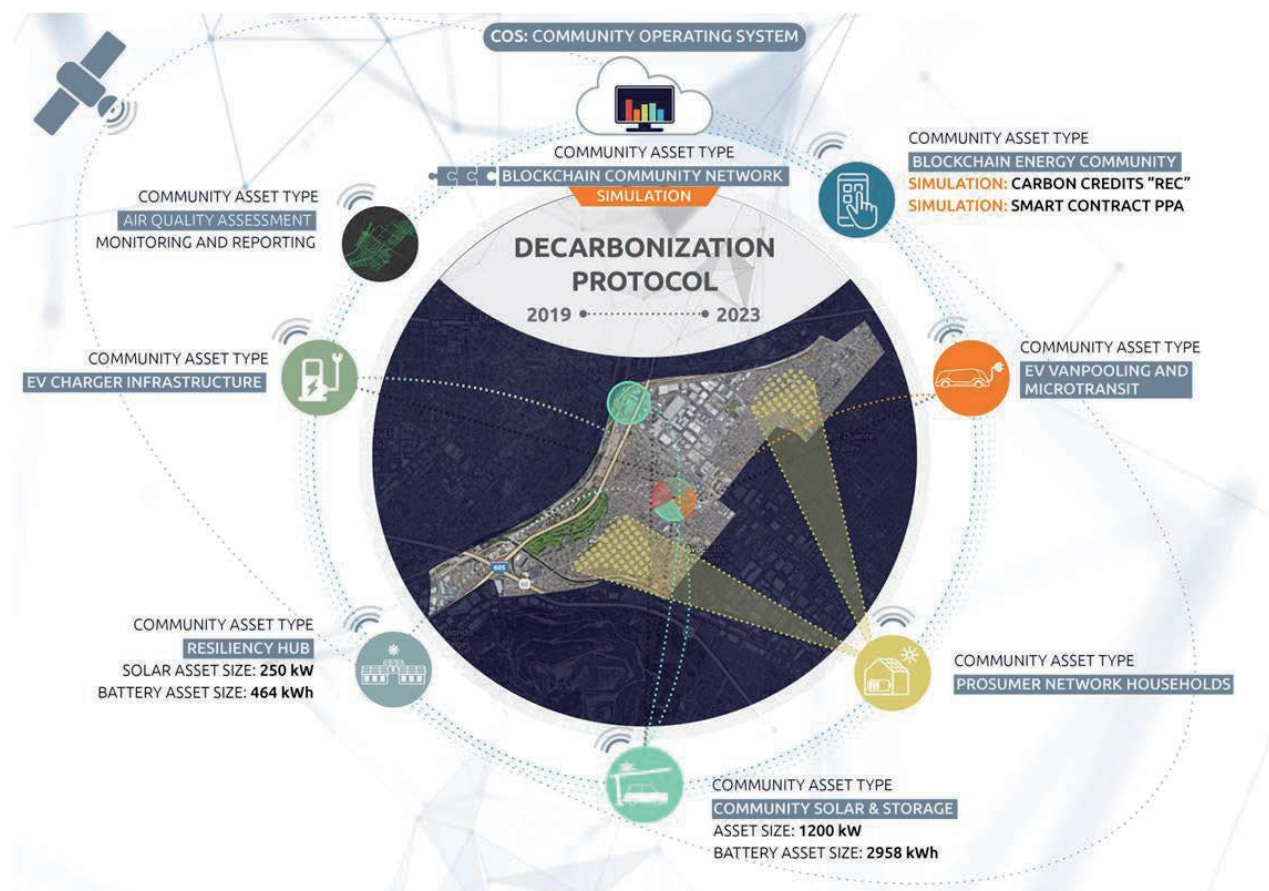
been effectively reducing greenhouse gas emissions, promoting the transformation of the world's energy structure, and exerting enormous social and environmental benefits with efficient production capacity and output. Mr. Li decided to adopt the green manufacturing development mode of "producing clean energy with clean energy" for LONGi Group. Since 2015, LONGi has laid out its main production facilities in Yunnan, China and Kuching, Malaysia, where hydropower is the main energy source. Mr. Li believes that the PV industry plays an important role in determining the future of the earth, and that "100% renewable energy power generation" is the most effective way to achieve the goal of temperature control. He put forward the development model of "Solar for Solar", through which PV can play a positive role in ecological restoration and the fight against climate change and realize "negative carbon earth".



▲ Clean energy produces clean energy

9. Biomimicry architecture leads the path to sustainable design. The Eastgate in Harare, Zimbabwe designed by the well-known architect Mr. Mick Pearce remains as a great example of the science of biomimicry. The building has no air-conditioning or heating but regulates its temperature with a passive cooling system inspired by the self-cooling mounds of African termites. What makes it unique is that it is not only ventilated, cooled and heated entirely through natural means, but it works. Its ventilation costs one-tenth that of a comparable air-conditioned building and it uses 35percent less energy than six conventional buildings in Harare. In the first five years alone the building saved its tenants \$3.5million in energy costs. Through using models from nature and copying natural processes, biomimicry architecture can make a balance between the natural, social and economic environments.

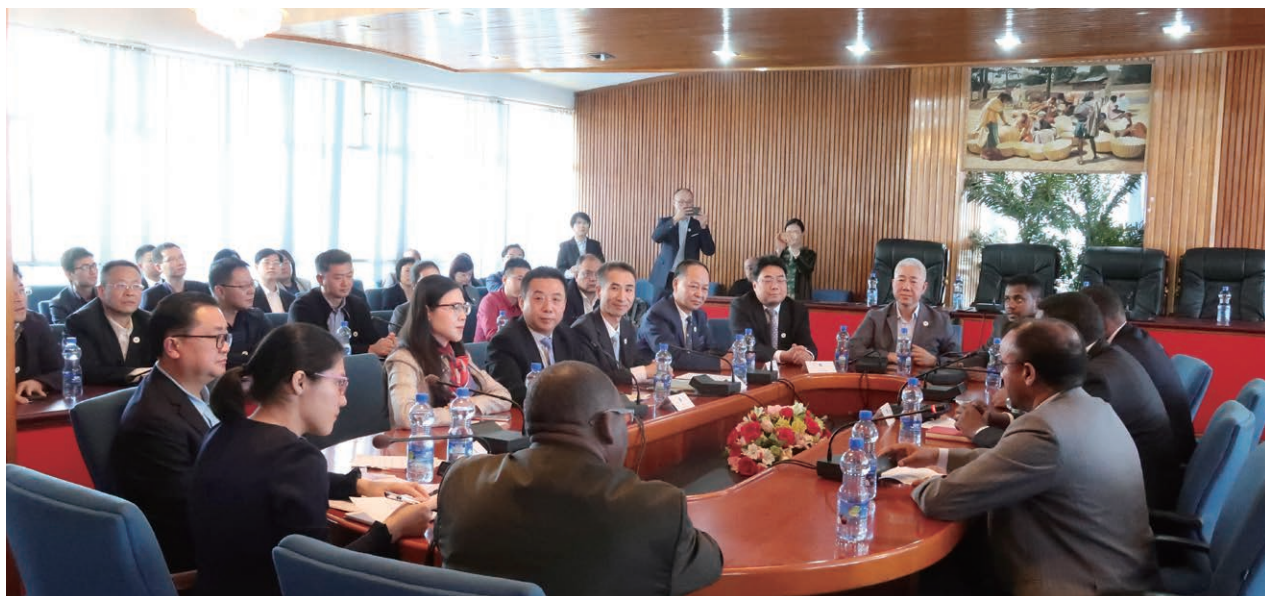
10. Zoma Museum located in Addis Ababa, Ethiopia is seen as a regenerative effort characterized by a wonderful combination between art and sustainability. Built on reclaimed land that was previously the site of an informal dumping ground, the compound includes an exhibition gallery, a library, a children center, an edible organic garden, a kindergarten, an art and vernacular architecture school, an amphitheater, a restaurant, a barn with a biogas facility and a museum shop. Sustainable construction methods like wattle and daub, cob and drystone walls come together to create a unique and futuristic landscape, complemented by a beautifully lush and organically cultivated vegetable garden. In line with a participatory approach, the inhabitants of the neighborhood are employed in the facility. In short, it represents an excellent practice that fosters local innovation, promotes economic growth, strengthens social inclusion, safeguards ecological environment, and protects traditional arts and culture.



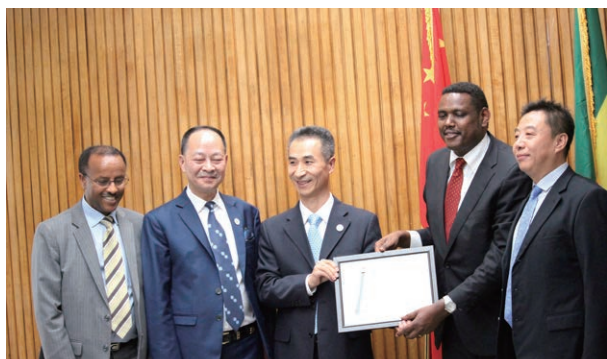
Green facade

Eastgate seen from the south-east, in front of Harare's glass and concrete towers. Designed by Mr. Mick Pearce

Site visits during GFHS 2019



▲ GFHS delegation visit the Ministry of Foreign Affairs, Ethiopia and meet with State Minister Markos Tekle and concerned senior officials, 4 September 2019



▲ GFHS Secretary General Lu Haifeng and State Minister Markos Tekle exchange presents during the visit to the Ministry of Foreign Affairs, Ethiopia, 4 September 2019



▲ Building facades of Zoma Museum in Addis Ababa



▲ Visit to Zoma Museum, a sustainable tourism project with good combination of arts and sustainability

Mainstream Media Reports



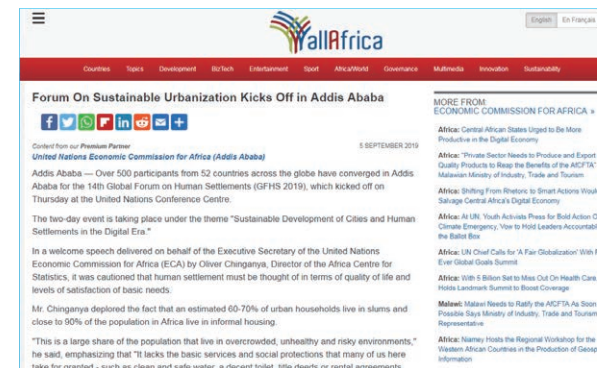
▲ United Nations News report



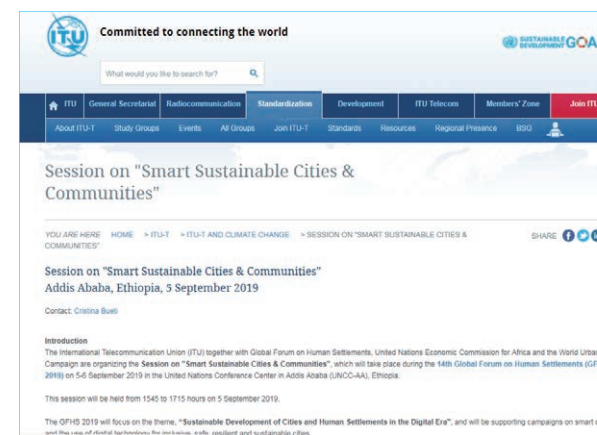
▲ UNECA website report



▲ Media report in Kenya



▲ AllAfrica report



▲ ITU website report



▲ Media coverage in Spanish cities



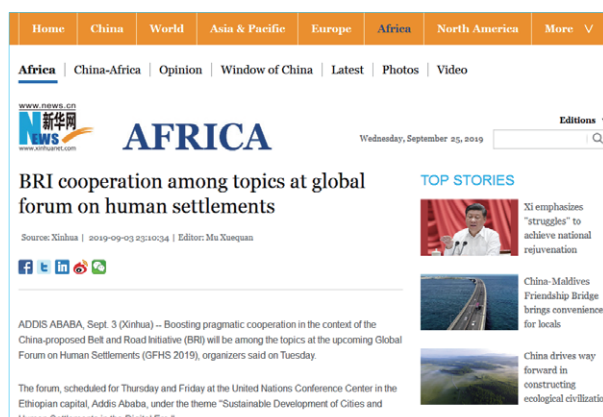
▲ Website coverage by the Ministry of Foreign Affairs, Ethiopia



▲ Report by People's Daily



▲ Report by Global Times



▲ Report by Xinhua Net



▲ Report by China Global Television Network

Web links:

<https://www.uneca.org/stories/forum-sustainable-urbanization-kicks-addis-ababa>

<http://gfhsforum.org>

<http://www.worldurbancampaign.org/gfhs-harnessing-power-digital-revolution-urban-sustainability-and-prosperity>



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