APT REPORT

ON HIGH-PRIORITY TARGETS IN GOAL 11 OF SDGS FOR SMART SUSTAINABLE CITIES IN THE APT REGION

Edition: April 2023

The 35th APT Standardization Program Forum (ASTAP-35)
17 – 20 April 2023
Bangkok, Thailand

(Source: ASTAP-35/OUT-15)

CONTENTS

1   **Scope**

In 2015, the United Naitons defined Sustainable Development Goals (SDGs, https://sustainabledevelopment.un.org/sdgs). The SDGs indentify 17 goals and 169 targets for social and economic development issues to be solved by 2030. The 11th goal of the SDGs (Goal 11 of SDGs) identifies targets for sustainability of cities and humans. This report collects social issues and best practices for the issues related to SDGs Goal 11 and considers high-priority targets in Goal 11 of SDGs for APT member countries.

2   **References**

[ITU-T Y.4900] "Overview of key performance indicators in smart sustainable cities," https://www.itu.int/itu-t/recommendations/rec.aspx?rec=12627

[SDGs] "THE 17 GOALS | Sustainable Development," https://sdgs.un.org/

3   **Terms and Definitions**

3.1   Terms defined elsewhere

3.1.1   Smart sustainable city (SSC) [ITU-T Y.4900]

A smart sustainable city (SSC) is an innovative city that uses information and communication technologies (ICTs) and other means to improve quality of life, efficiency of urban operation and services, and competitiveness, while ensuring that it meets the needs of present and future generations with respect to economic, social, environmental as well as cultural aspects.

3.1.2   Sustainable Development Goals (SDGs) [SDGs]

The 2030 Agenda for Sustainable Development, adopted by all United Nations Member States in 2015, provides a shared blueprint for peace and prosperity for people and the planet, now and into the future. At its heart are the 17 Sustainable Development Goals (SDGs), which are an urgent call for action by all countries - developed and developing - in a global partnership.

3.2   Terms defined in this Report

None

4   **Abbreviations and Acronyms**

ICT	Information and Communications Technology
SDGs	Sustainable Development Goals
SSC	Smart Sustainable City

5   Smart Sustainable Cities and SDGs

  A lot of cities or communities have introduced Smart Sustainable City solutions in order to solve social issues. Since the social issues are different from city to city (or from region to region), various Smart Sustainable City solutions have been developed for the different social issues.

  In order to recognize common social issues to be solved, the United Nations defined Sustainable Development Goals (SDGs) in 2015. SDGs identify 17 goals and 169 targets for social and economic development issues to be solved by 2030. The 11th goal of the SDGs (Goal 11 of SDGs) identifies ten targets for sustainability of cities and humans. Table 1 shows the ten targets in Goal 11 of SDGs. It is important for us to take the targets in Goal 11 of SDGs into consideration for achievement of sustainable sities.

  In the APT region, there are a lot of countries and cities with various social issues. Each country has different priority levels regarding the targets defined by SDGs. For providers of Smart Sustainable City solutions, it will be useful to recognize high-priority targets of countries when they consider to develop optimal solutions for each country. Besides, it is also useful for country/city government to know status of neighboring regions when it makes policies to achieve the goals and targets.

Table 1: Targets in Goal 11 of SDGs

11.1	By 2030, ensure access for all to adequate, safe and affordable housing and basic services and upgrade slums.
11.2	By 2030, provide access to safe, affordable, accessible and sustainable transport systems for all, improving road safety, notably by expanding public transport, with special attention to the needs of those in vulnerable situations, women, children, persons with disabilities, and older persons.
11.3	By 2030, enhance inclusive and sustainable urbanization and capacity for participatory, integrated and sustainable human settlement planning and management in all countries.
11.4	Strengthen efforts to protect and safeguard the world's cultural and natural heritage.
11.5	By 2030, significantly reduce the number of deaths and the number of people affected and substantially decrease the direct economic losses relative to global gross domestic product caused by disasters, including water-related disasters, with a focus on protecting the poor and people in vulnerable situations.
11.6	By 2030, reduce the adverse per capita environmental impact of cities, including by paying special attention to air quality and municipal and other waste management.
11.7	By 2030, provide universal access to safe, inclusive and accessible, green and public spaces, in particular for women and children, older persons and persons with disabilities.
11.a	Support positive economic, social and environmental links between urban, peri-urban and rural areas by strengthening national and regional development planning.
11.b	By 2020, substantially increase the number of cities and human settlements adopting and implementing integrated policies and plans towards inclusion, resource efficiency, mitigation and adaptation to climate change, resilience to disasters, and develop and implement, in line with the Sendai Framework for Disaster Risk Reduction 2015–2030, holistic disaster risk management at all levels.

11.c	Support least developed countries, including through financial and technical assistance, in building sustainable and resilient buildings utilizing local materials.

6   Issues and Best Practices related to SDGs Goal 11 in the APT Region

6.1 Australia

6.1.1 South East Queensland's Water Security Program
- **Source**   : https://sdgs.org.au/project/south-east-queenslands-water-security-program/
- **Overview :** Across Australia planning is needed to consider climate extremes, including drought and flood, in ways that reflect the values of the community. This program includes planning for extreme weather to improve the resilience of supply and adapt to changing conditions such as climate change to secure South East Queensland with drinking water for 30 years.

   Extensive community consultation and forums helped shape the program. Water infrastructure investments, particularly new sources of water are long-term decisions. The cost, benefits and implications will be felt by generations to come. South East Queensland's Water Security Program helps to make the right decisions based on community values for the region at the right time.
- **Phase**   **:** On going
- **Target**   **:** 11.5

6.1.2 Economic Independence on Traditional Land
- **Source**   : https://sdgs.org.au/project/manungurra-aboriginal-corporation/
- **Overview :** This program demonstrates how Aboriginal and Torres Strait Islander people can exercise self-determination through long-term economic planning. This program supplies and installs solar panels to communities on the traditional country. The solar panels delivered energy that was 50% cheaper than energy from diesel generators, which had been providing power.

   The significant decrease in the cost of power meant traditional owners could afford to move back to the communities, which contributed to them growing to full capacity, from two permanent adults to 30–40 adults and children.
- **Phase**   **:** Completed (June 2016)
- **Target**   **:** 11.1, 11.a

6.1.3 Solar My School
- **Source**   : https://sdgs.org.au/project/solar-my-school/
- **Overview :** Solar my School is a free Council program helping schools install solar power, and access the financial, educational and environmental benefits of clean green energy. It helped to install solar power on public, private and Catholic schools in Sydney's Eastern Suburbs.
- **Phase**   **:** Completed (May 2017)
- **Target**   **:** 11.6

6.1.4 The Bogie Bulk Buy
- **Source**   : https://sdgs.org.au/project/the-bogie-bulk-buy/

- Overview : The program installed half a megawatt of solar in the small shire of Strathbogie in under one year, avoiding over 25,000 tCO2-e, with approximately $250,000 of annual community savings on 'black' energy now going back into local families and communities.
- Phase : Completed (July 2017)
- Target : 11.6

6.1.5 Educating Remote Communities about Water Efficiency
- Source : https://sdgs.org.au/project/educating-remote-communities-about-water-efficiency/
- Overview : Remote Indigenous communities in the Northern Territory are vulnerable to critical water shortages. This project is helping to educate and build capacity.
  The region faces a strong cultural, language and distance divide with their remote communities that create challenges for delivering water efficiency messaging. To meet these challenges, in 2012, this program employed, mentored and trained four local Indigenous Water Conservation Ambassadors to educate the remote community of Galiwin'ku on positive water behaviours and water efficiency.
- Phase : On going
- Target : 11.5, 11.a

6.2 India

6.2.1 Urban households in katcha houses
- Source :
https://www.niti.gov.in/writereaddata/files/SDG_3.0_Final_04.03.2021_Web_Spreads.pdf
- Overview : As per the 76th round of the National Sample Survey, 0.80 percent of the urban households in India live in katcha houses (their walls are made of bamboo, mud, grass, reed, etc.). The target is to have housing for all, with no household living in a katcha house. Among the States, Arunachal Pradesh had the highest percentage of its urban population living in katcha houses (8.9 percent). Among the Union Territories (UTs), Delhi had the highest proportion of urban house-holds with katcha houses at 0.80 percent. Two States namely Goa and Meghalaya and five UTs have achieved the target.
- Phase : On going
- Target : 11.1

6.2.2 Road accidents
- Source :
https://www.niti.gov.in/writereaddata/files/SDG_3.0_Final_04.03.2021_Web_Spreads.pdf
- Overview : In urban areas, for every 1,00,000 population, 12 persons were killed in road accidents in 2019. Himachal Pradesh witnessed the highest rate of deaths due to road accidents at 43 per 1,00,000 population, while Nagaland recorded the lowest at 1 person per 1,00,000 population in urban areas. The target is to halve the number of deaths from road traffic accidents (from the base year 2015). Nine States namely Goa, Gujarat, Kerala, Meghalaya, Mizoram, Nagaland, Manipur, Tripura and West Bengal have achieved the target.
- Phase : On going
- Target : 11.2

6.2.3 Municipal solid waste processed
- Source :
https://www.niti.gov.in/writereaddata/files/SDG_3.0_Final_04.03.2021_Web_Spreads.pdf

- Overview : As of November 2020, only 68.1 percent of the total municipal solid waste generated gets processed against a target of 100 percent. Himachal Pradesh leads the country with 98.1 percent of its MSW getting processed, followed by Chhattisgarh at 93 percent. Among the UTs, Andaman and Nicobar Islands leads with 95.6 percent, followed by Chandigarh at 91.9 percent. On the other hand, West Bengal and Puducherry process less than 15 percent of their MSW.
- Phase   : On going
- Target   : 11.6

6.2.4 Urban households with drainage facility
- Source   :
https://www.niti.gov.in/writereaddata/files/SDG_3.0_Final_04.03.2021_Web_Spreads.pdf
- Overview : According to the 76th round of the National Sample Survey 2018, 87.6 percent of urban households in India have a drainage facility, while the target is to achieve 100 percent saturation. Haryana and Uttarakhand are the best perform-ing States with drainage facility in 97.4 percent of urban households. Only 33.3 percent of urban households in Manipur have a drainage facility. Among the UTs, Chandigarh has the highest percent of urban households with drainage facil-ity at 98.9 percent, while Lakshadweep has the lowest at 48.1 percent.
- Phase   : On going
- Target   : 11.6

6.3 Indonesia

6.3.1. Programme for Earthquake and Tsunami Infrastructure Reconstruction Assistance
- Source   : https://www.id.undp.org/content/indonesia/en/home/projects/PETRA.html
- Overview : The Sulawesi / Lombok Programme for Earthquake and Tsunami Infrastructure Reconstruction Assistance ('PETRA' in short) has been designed to contribute to such transition. The ultimate goal of PETRA is to contribute to the rehabilitation and reconstruction of key infrastructure to support the resilient recovery of disaster-affected communities in both provinces. PETRA will deliver two outputs, namely: (a) Rehabilitation and reconstruction of partially and fully damaged infrastructure for critical public services which consider gender needs and other gender concerns; and (b) Rehabilitation of affected communities' economic infrastructure to promote more resilient and sustainable livelihoods for both men and women.
- Phase   : On going (January 2021~December 2022)
- Target   : 11.5

6.3.2.   Climate Support (ESCAP)
- Source   : https://indonesia.un.org/en
- Overview : ESCAP supports Indonesia, through cooperation with LAPAN Indonesia in building the Pan-Asia Partnership for Geospatial Air Pollution Information. Ground-data collected by the Government of Indonesia will fill information gaps to help build more evidence-based policy making to address air quality issues. The data will improve the accuracy of air quality forecasts, top-down emission rates and understanding on long-range transport of air pollutants.
- Phase   : On going (January 2021~December 2022)
- Target   : 11.6

6.3.3. Plastic Smart and Waste Wise Cities in Indonesia
- **Source** : https://indonesia.un.org/en
- **Overview :** The general objective of this project is to prevent marine litter through evidence-based City Action Planning in selected 9 cities in Indonesia (Bogor, Depok, Jakarta), the Philippines (Manila), Thailand (Hatyai, Ko Samui, Songklah, and Surat Thani) and Vietnam (Hue). UN-Habitat will support WWF offices (in Indonesia, Philippines, Thailand and Vietnam) in building capacity on evidence-based solid waste management action planning of the cities involved in WWF's Plastic Smart Cities Initiative in South East Asia, namely Bogor, Depok, Jakarta in Indonesia, Manila in the Philippines, Hatyai, Ko Samui, Songklah, and Surat Thani in Thailand and Hue in Vietnam.
This will be done through online training of the WWF staff, 3rd party consultants and municipality staff of the selected cities on the Waste Wise Cities Tool (WaCT). Furthermore, UN-Habitat will remotely support WWF, 3rd party consultants and the municipality staff when they apply the WaCT and ensure the quality of the data collection and analysis.
- **Phase** : On going (July 2021~April 2022)
- **Target** : 11.6

6.3.4. Making Cities Resilient 2030 Initiative
- **Source** : https://indonesia.un.org/en
- **Overview :** Through the global Making Cities Resilient 2030 Initiative, providing technical support to local government authorities in the identification of hazards and disaster risks, and the development of local disaster risk reduction action plans in-line with the Sendai Framework for DRR in an inclusive manner to build their resilience to disasters and increase sustainable development.
- **Phase** : On going (February 2021~December 2025)
- **Target** : 11.b

6.4 Japan

6.4.1. Promotion of Agriculture and rural area development
- **Source** : https://www5.cao.go.jp/keizai-shimon/kaigi/cabinet/2021/decision0618.html
https://www.cas.go.jp/jp/seisaku/seicho/index.html
https://www.maff.go.jp/j/keikaku/k_aratana/
https://www.chisou.go.jp/sousei/mahishi_index.html
- **Overview :** - To enhance agricultural competitiveness, this project develops new agricultural lands. It also develops new irrigation system and improves existing irrigation facilities for national resilience, energy saving, and disaster prevention and mitigation.
- **Phase** : On going
- **Target** : 11.a

6.4.2. Research Promotion to Solve Global Issues using Satellites
- **Source** : https://sharaku.eorc.jaxa.jp/GSMaP/index_j.htm
https://www.eorc.jaxa.jp/jjfast/
https://sentinel-asia.org/
- **Overview :** This project develops earth observation satellites and promotes related research for solving social issues on disaster response and climate change. This project includes (1) Flood forecasting integrating JAXA Global Rainfall Watch (GSMaP) and ground level data (2) Promotion of an international project "Sentinel Asia" for disaster monitoring in the Asia Pacific region, (3) Forest monitoring by JICA-JAXA Forest Early Warning System (JJ-FAST),

(4) Greenhouse gas observation and reduction effort by Greenhouse gases Observing SATellite (GOSAT).
- **Phase**   **:** On going
- **Target**   **:** 11.b

6.4.3. Development of Fishery Infrastructure
- **Source**   **:** https://www.jfa.maff.go.jp/j/gyoko_gyozyo/g_hourei/index.html
http://www.jfa.maff.go.jp/j/policy/kihon_keikaku/index.html
https://www.kantei.go.jp/jp/singi/nousui/index.html
https://www.cas.go.jp/jp/seisaku/kokudo_kyoujinka/5kanenkasokuka/index.html
- **Overview :** This project includes the following activities: (1) Strengthening of the distribution function of the base fishing port and development of aquaculture bases in order to stably supply safe and high-quality marine products and to achieve the growth of fishery industry by expanding exports. (2) Development of fishing grounds in response to environmental changes, creation of seagrass beds and tidal flats, and strengthen of fishing port facilities for sustainable fishery production. (3) Improvement and removal of existing fishing port facilities and improvement of living and working environments.
- **Phase**   **:** On going
- **Target**   **:** 11.a

6.4.4. Promoting of Sharing Economy
- **Source**   **:** https://www.chisou.go.jp/sousei/about/mirai/list02/pdf/index_s-03.pdf
- **Overview :** Sharing economy is expected to promote the utilization of all idle assets and to contribute to achieve a sustainable society. Collaborating with the Sharing City Promotion Council, this project creates new use cases and promote their adoption in various cities. It also promotes local governments' achievement of the SDGs by making use of the sharing economy.
- **Phase**   **:** On going
- **Target**   **:** 11.3

6.5 Singapore

6.5.1. Integrated Land Use Planning
- **Source**   **:**
https://sustainabledevelopment.un.org/content/documents/19439Singapores_Voluntary_National_Review_Report_v2.pdf
- **Overview :** The Concept Plan and Master Plan map out the directions for Singapore's growth and introduce new and innovative approaches to planning and development. For example, in Master Plan 2014, URA identified future growth areas to meet a wider range of economic needs such as business expansion and diversifying employment areas.
As part of the plan, the Jurong Lake District in the western part of Singapore was identified as a new mixed-use business district.
- **Phase**   **:** On going
- **Target**   **:** 11.3

6.5.2. Housing a Nation
- **Source**   **:**
https://sustainabledevelopment.un.org/content/documents/19439Singapores_Voluntary_National_Review_Report_v2.pdf

- Overview : Over 80% of Singapore's resident population live in public housing built by the Housing and Development Board (HDB). More than nine in ten of these resident households in public housing own their flats. Public housing is heavily subsidized to ensure that it is highly affordable. We have put in place a progressive system of housing grants, on top of subsidized purchase prices for new HDB flats. As a result, most first-time home buyers today use less than a quarter of their monthly income to pay their housing loans. This is well below the international benchmark of 30% to 35% of monthly income allocated to housing.
- Phase   : On going
- Target   : 11.1, 11.3

6.5.3. Building Safety
- Source   :
https://sustainabledevelopment.un.org/content/documents/19439Singapores_Voluntary_National_Review_Report_v2.pdf
- Overview : The Building and Construction Authority (BCA) champions a strong culture of safety awareness and regulation in the built environment sector. Through regular reviews, BCA upholds high safety standards while ensuring that the regulatory regime remains relevant even as projects grow in size and engineering complexity. The design and construction of buildings in Singapore are regulated under the Building Control Act and Regulations.
- Phase   : On going
- Target   : 11.1, 11.3

6.5.4. Promoting Public Transport
- Source   :
https://sustainabledevelopment.un.org/content/documents/19439Singapores_Voluntary_National_Review_Report_v2.pdf
- Overview : We aim for 75% of morning and evening peak journeys to be made using public transport by 2030, and at least 85% by 2050. To achieve this, Singapore's rail network will be expanded from 230 kilometres today to 360 kilometres by 2030, enabling eight in ten households to be within a ten minute walk of a train station, and 85% of public transport journeys of less than 20 kilometres to be completed within 60 minutes. In addition, we will be extending our bus networks and enhancing their service levels. In 2012,
the Bus Service Enhancement Programme was introduced to provide commuters with better connectivity, more comfortable journeys, and shorter waiting times. Between 2012 and 2017, we added 1,000 Government-funded buses and rolled out 80 new bus services to improve connectivity to major transport nodes and key community and commercial facilities.
- Phase   : On going
- Target   : 11.2

6.5.5. Inclusive Transport
- Source   :
https://sustainabledevelopment.un.org/content/documents/19439Singapores_Voluntary_National_Review_Report_v2.pdf
- Overview : We continue to put in measures to guarantee the accessibility of public transport to all, including the elderly, disabled, visually-handicapped, and families with young children. Since 2006, all our train stations have been equipped with at least one barrier-free entrance with a lift, a tactile guidance system, and wheelchair-accessible toilets. More than 85% of train stations now have barrier free access routes from the station entrance to the station platforms. Priority queue zones for passengers in need for boarding of trains, public buses and lifts were introduced in 2015, and have been implemented in 20 train stations and nine bus interchanges

to date. Since April 2017, our public buses are also equipped to allow parents to board with children in open strollers. By 2020, all public buses will be wheelchair-accessible.
- Phase   : On going
- Target   : 11.2

6.5.6. Safer Streets
- Source   :
https://sustainabledevelopment.un.org/content/documents/19439Singapores_Voluntary_National_Review_Report_v2.pdf
- Overview : To make our streets safer for the elderly and persons with disabilities, 50 "Silver Zones" will be implemented by 2023 in areas with high senior resident populations, amenities which seniors frequent, or higher accident rates involving senior pedestrians
- Phase   : On going
- Target   : 11.2, 11.3

6.5.7. Green Spaces
- Source   :
https://sustainabledevelopment.un.org/content/documents/19439Singapores_Voluntary_National_Review_Report_v2.pdf
- Overview : Despite our land constraints, close to 10% of land in Singapore is set aside for parks and nature conservation.
Today, more than 80% of households live within 400 meters or a ten-minute walk to a park. We aim to expand this to more than 90% of households by 2030, by creating more neighborhood and regional parks. One of our most iconic regional parks is the Singapore Botanic Gardens (SBG).
- Phase   : On going
- Target   : 11.4, 11.7

7   Questionnaire Results for High-Priority Targets in SDGs Goal 11 of

7.1 China

7.1.1 High Priority Targets in SDG 11

   11.1, 11.2, 11.3, 11.5 11.6, 11.7, 11.b, 11.c

7.1.2 Specific Issues (Problems) regarding the High-priority Targets
It is needed to strengthen the construction of urban infrastructure, including roads, bridges, transportation, energy, water supply, waste disposal and recycling , and ICT infrastructure etc, so as to make the city better.

7.1.3 Planning Actions or Policies towards the High-priority Targets
Based on existing cases governments set specific goals for each cities or regions;
Make planning for these specific goals;
Increase capital investment in infrastructure construction;
Make long-term planning for urban construction.

7.2 Indonesia

7.2.1 High Priority Targets in SDG 11

    11.1, 11.2, 11.4, 11.5, 11.6, 11.a, 11.b, 11.c

7.2.2 Specific Issues (Problems) regarding the High-priority Targets

    1. Digital Literacy Gap need to be enhancing further equally from big city to rural areas in countrywide coverage

    2. Coordination amongst central, regional and village government must be in synchronize ways

    3. Development of Strategic Infrastructure including ICT for urban, sub urban & rural areas shall be prioritized and tightly manages

    4. Adoption International Standard or National Standard in data collection method for data driven planning to drive toward and achieve Smart & Sustainable Cities

7.2.3 Planning Actions or Policies towards the High-priority Targets

    1. Developing more nationwide digital talent with support from all ICT ecosystem stakeholder in country

    2. Developing Presidential Decree and Law to aligning all regulation as well as coordination amongst all public regulators

    3. Development of Public Strategic Infrastructure start from backbone through access to the household

    4. Develop Single Open Data Platform, include Data Governance, Data Flow, Personal Data Protection and Cyber Security

7.3 Japan

7.3.1 High Priority Targets in SDG 11

    11.1, 11.2, 11.3, 11.4, 11.5, 11.6, 11.7, 11.a, 11.b, 11.c

7.3.2 Specific Issues (Problems) regarding the High-priority Targets
The Government of Japan established "the SDGs Promotion Headquarters" and published "the SDGs Implementation Guiding Principles". Following issues are excerpts related to SDGs Goal 11 from "Specific Measures to Achieve the Sustainable Development Goals", which is the annex of the Principles. They are assigned as two of prior areas and policies.

- Creating Growth Market, Revitalization of Rural Areas, and Promoting Technological Innovation
- Sustainable and Resilient Land Use, Promoting Quality Infrastructure

[Information for reference]
"The SDGs Implementation Guiding Principles" (Provisional Translation)
https://www.kantei.go.jp/jp/singi/sdgs/dai2/siryou1e.pdf

"Specific Measures to Achieve the Sustainable Development Goals" (Provisional Translation)
https://www.kantei.go.jp/jp/singi/sdgs/dai2/siryou2e.pdf

Summary (Provisional Translation)
https://www.kantei.go.jp/jp/singi/sdgs/dai2/siryou3e.pdf

7.3.3 Planning Actions or Policies towards the High-priority Targets
   Following actions are excerpts related to SDGs Goal 11 from "Specific Measures to Achieve the Sustainable Development Goals".

・   Promote measures for regional reinvigoration and correct the excess concentration of population in the Tokyo Metropolitan area, enable young people to have jobs and families and resolve problems unique to each local area, thereby overcoming the problems of population decline and diminishing local economies. [11.3 / 11.a]

・   Facilitate the development of social infrastructure, and build a nation resilient to disasters. Change the urban structure to a sustainable one and promote PPP/PFI for the development and operation of public facilities. [11.2 / 11.5 / 11.7 / 11.b]

・   Foster rural-urban exchange strategically by deepening collaboration between agriculture, forestry and fisheries and various sectors such as tourism, education and social welfare through mutual cooperation of relevant ministries. In particular, aiming to attract foreign tourists to farming villages, support rural areas in enhancing readiness to receive them, conducting promotion, providing farming experiences by farm stay and other measures. [11.a]

・   Foster the implementation of the "FutureCity" Initiative to create environmental, social and economic value, share success stories and findings of cities in Japan and abroad, and support the creation of city networks for the development of autonomous and sustainable cities. [11.a]

・   Steadily implement the Fundamental Plan for National Resilience (decided by the Cabinet in June 2014) and the Action Plan for National Resilience. At the same time support local governments in formulating and implementing Fundamental Plans for Regional Resilience and encourage the private sector to conduct activities that contribute to national resilience. [11.5 / 11.b]

・   Based on the Housing Life Master Plan approved at the March 2016 Cabinet Meeting, provide young households, households raising children, and households with elderly people with residential environments where they can live with peace of mind, and assure the stability or housing for those who require special housing consideration. [11.1]

・   Develop "national land promoting active interaction-led regional revitalization" as described in the National Spatial Strategy (decided by the Cabinet in August 2015), maintain the vitality of regions against the background of an aging society and decreasing population, and work for the sustainable management of cities where citizens including the elderly can lead their lives with peace of mind, being provided with sufficient services for daily life,

such as medical, welfare and commercial services. To this end, foster the establishment of a "compact and networked structure" to connect cities where necessary functions are provided in a compact manner via surrounding transportation network. [11.2 / 11.3 / 11.a]

- Implement measures to rebuild disaster-resistant houses and local communities in areas afflicted by the earthquake as well as to rebuild infrastructure, recreate communities, and revitalize industries and businesses toward 2020. Also, in and after 2020, continue to implement national measures for the recovery and revitalization of Fukushima Prefecture. [11.5]

- Aim to make infrastructure investment sufficient in quality and quantity. Realize this aim by cooperating with other countries and international organizations as well as mobilizing more funds and know-how from the private sector, through "Partnership for Quality Infrastructure (PQI)" announced by Prime Minister Abe in May 2015 and "Expanded PQI" announced by Prime Minister in May 2016 just before the G7 Ise-Shima Summit. [11.1 / 11.2 / 11.3 / 11.5 / 11.6 / 11.7 / 11.a / 11.b / 11.c]

- Based on the Sendai Cooperation Initiative for Disaster Risk Reduction, which Prime Minister Abe announced at the 3rd UN World Conference on Disaster Risk Reduction in March 2015, give financial support of 4 billion dollars for the implementation of the Initiative over four years from 2015 to 2018 and help develop 40,000 government officials and local leaders who can play leading roles in the efforts made by the national government of each country for disaster risk reduction. [11.5 / 11.b]

- Hold tsunami awareness raising and disaster risk reduction-related events to foster the implementation of tsunami emergency drills and raise people's awareness for disaster risk reduction, thereby popularizing the "World Tsunami Awareness Day (5th November)" [11.5 / 11.b]

- In line with the Law on the Promotion of International Cooperation for Protection of Cultural Heritage Abroad (enacted in 2006), to protect and safeguard endangered cultural heritage sites in developing countries in particular, provide support for necessary restoration with UNESCO etc. [11.4]

8   Consideration

Table 2 and 3 summarize best practices introduced in Chapter 6 and the questionnaire responses introduced in Chapter 7, respectively. We need to note that limited number of cases is described in Table 2 and more cases are introduced in each city. However, Table 2 shows that there many initiatives for housing issues (11.1) and environment issues (11.6). These are common issues to all humankind, regardless of the geographical scale or economic scale of nations or cities. It can be said that these seem high priory issues. In addition, combining with the questionnaire responses in Table 3 into account, transportation (11.2) and disaster response which directly affects human life (11.5) seem important issues.
  Differences according to geographical scale were also observed. For example, Australia with a vast land area has initiatives for urban-rural area link (11.a), while Singapore with small land

area and undergoing urbanization has initiatives for transportation (11.2) and urbanization (11.3).

Table 2 Best: practices described in this report

	11.1 Housing	11.2 Transport	11.3 Urbanization	11.4 World Heritage	11.5 Disaster	11.6 Environment	11.7 Green	11.a Urban-rural link	11.b Integrated Policy and Plan	11.c Developing Country Support
Australia	✔				✔	✔		✔		
India	✔	✔				✔				
Indonesia					✔	✔			✔	
Japan			✔					✔	✔	
Singapore	✔	✔	✔	✔		✔				

Table 3: Questionnaire responses

	11.1 Housing	11.2 Transport	11.3 Urbanization	11.4 World Heritage	11.5 Disaster	11.6 Environment	11.7 Green	11.a Urban-rural link	11.b Integrated Policy and Plan	11.c Developing Country Support
China	✔	✔	✔		✔	✔	✔		✔	✔
Indonesia	✔	✔		✔	✔	✔		✔	✔	✔
Japan	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔

9   Conclusion

This report considered high-priority social issues from relationship between Smart City best practices and the Goal 11 of SDGs. It was observed that there are many initiatives for housing issues and environment issues which are common issues to all humankind regardless of geographical scales of countries or cities. These are high-priority issues. Combining with questionnaire responses, transportation and disaster responses which are also issues regardless of geographical scales are also high-priority issues. On the other hand, difference tendencies depend on geographical scales were also observed.

  It is expected to promote the introduction of ICT solutions to solve the above high-priority issues in the APT region. The ICT industry should refer to the initiatives described in this report to promote the development of solutions for the high-priority issues.

Appendix: Questionnaire on High-Priority Targets in Goal 11 of SDGs for Achievement of Smart Sustainable Cities

Question 1: Primary Contact Information

Date		Country	
Organization		Name	
Email		Telephone	

Question 2: High priority targets in SDG 11

Please choose one or more items.

Table 1: Targets in Goal 11 of SDGs
(Make cities and human settlements inclusive, safe, resilient and sustainable)

☐	11.1	By 2030, ensure access for all to adequate, safe and affordable housing and basic services and upgrade slums.
☐	11.2	By 2030, provide access to safe, affordable, accessible and sustainable transport systems for all, improving road safety, notably by expanding public transport, with special attention to the needs of those in vulnerable situations, women, children, persons with disabilities and older persons.
☐	11.3	By 2030, enhance inclusive and sustainable urbanization and capacity for participatory, integrated and sustainable human settlement planning and management in all countries.
☐	11.4	Strengthen efforts to protect and safeguard the world's cultural and natural heritage.
☐	11.5	By 2030, significantly reduce the number of deaths and the number of people affected and substantially decrease the direct economic losses relative to global gross domestic product caused by disasters, including water-related disasters, with a focus on protecting the poor and people in vulnerable situations.
☐	11.6	By 2030, reduce the adverse per capita environmental impact of cities, including by paying special attention to air quality and municipal and other waste management.
☐	11.7	By 2030, provide universal access to safe, inclusive and accessible, green and public spaces, in particular for women and children, older persons and persons with disabilities.
☐	11.a	Support positive economic, social and environmental links between urban, peri-urban and rural areas by strengthening national and regional development planning.
☐	11.b	By 2020, substantially increase the number of cities and human settlements adopting and implementing integrated policies and plans towards inclusion, resource efficiency, mitigation and adaptation to climate change, resilience to disasters, and develop and implement, in line with the Sendai Framework for Disaster Risk Reduction 2015–2030, holistic disaster risk management at all levels.
☐	11.c	Support least developed countries, including through financial and technical assistance, in building sustainable and resilient buildings utilizing local materials.

Question 3: Specific issues (problems) regarding the high-priority targets

Question 4: Planning actions or policies toward the high-priority targets