

Thailand's

Voluntary National Review

on the Implementation of the 2030 Agenda
for Sustainable Development

JUNE 2017



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Main Message for Thailand's Voluntary National Review

Introduction

Thailand attaches great importance to the concept of sustainable development which has long taken root in the country. The country has been guided by the Sufficiency Economy Philosophy (SEP), conceived by His Majesty the Late King Bhumibol Adulyadej. SEP has been adopted as the core principle of National Economic and Social Development Plan since 2002. The current constitution has integrated SEP and sustainable development as integral parts.

The development approach based on SEP is in conformity with the core principle of the 2030 Agenda and can serve as an approach to support the realization of the SDGs. SEP promotes sustainability mindset and provides guidelines for inclusive, balanced and sustainable development. Therefore, SEP will continue to be our guiding principle in completing the unfinished MDGs business and achieving the SDGs. The cabinet has decided on 25 October 2016 to promote the application of SEP for SDGs in all areas and at all levels. Thailand has also been actively sharing SEP as a development model to the international community especially since her G-77 chairmanship in 2016.

Main Highlights

Mainstreaming the SDGs

SEP and SDGs have been integrated in the 20 – Year National Strategy Framework and the 12th National Economic and Social Development Plan (2017 – 2021). As a result, plans and budgeting of all government agencies will be in line with SEP and SDGs.

National Mechanism for Sustainable Development

The National Committee for Sustainable Development (CSD), chaired by the Prime Minister, is Thailand's main and highest mechanism responsible for the country's sustainable development. It has 37 members from public, private academia and civil society, with the Secretary-General of National Economic and Social Development Board (NESDB) as the secretariat.

The main task of CSD is formulating policies and strategies on national sustainable development and oversight their implementation, including the SDGs. It has established three sub-committees to advance the three inter - connected processes namely mobilizing the SDGs, raising awareness on sustainable development and the application of SEP, and compiling data and statistics to support the implementation and monitoring of the 2030 Agenda.

Three taskforces were established and respectively tasked with (1) reviewing and recommending legal, economics and social measures necessary for achieving the SDGs; (2) coordinating works by numerous agencies, and priority setting; and

(3) preparing report on Thailand's progress, challenges, and recommendation in implementing the 2030 Agenda including the VNR.

Key progress by the CSD

CSD has undertaken several steps to advance the SDGs implementation including establishing coordinating body for each of the SDGs, formulating roadmaps for all 17 SDGs, identifying 30 priority targets, synthesizing examples of SEP for SDGs model projects, examining gaps and discrepancies between the national baselines and the proposed global indicators.

Raising SDGs Awareness and Creating Ownership

Representatives of private sector, academia and CSOs were invited to be in the CSD and its subsidiaries. Several rounds of stakeholders' engagement has been conducted including with the private sector, CSO of various constituencies, youth as well as the members of National Legislative Assembly. As a result, these stakeholders are making contributions in accordance with their respective roles and expertise. Global Compact Network Thailand and other private entities are very active in mainstreaming SDGs and UN Guiding Principles on Business and Human Rights into business operations. CSOs organized their own SDGs regional forums to present their views, concerns, and priorities under the SDGs. The CSOs have also produced their own VNR reports to supplement the Government's VNR report. Their inputs as well as contributions from other stakeholders will further synergize Thailand's efforts to achieve the SDGs.

Voluntary National Review - A process

Thailand views the VNR as a process to engage and to create ownership more than a report-making exercise.

The VNR taskforce comprises lead agencies of 17 SDGs and the National Statistical Office. Several rounds of consultations were conducted to gather relevant information. The content of the report derived from two processes: assessing progress and learning from communities.

The report provides a snapshot of significant progress in 2016 together with approaches and good practices applied in 17 SDGs, especially the SEP for SDGs model projects studied and selected from diverse areas and sectors, as well as challenges faced in achieving some of the goals. Background on data collection and indicators together with statistical annex are also presented.

The Ministry of Foreign Affairs, as chair of VNR Taskforce in collaboration with local universities, organized regional engagement sessions to update stakeholders on the national SDGs implementation and gather their views on how the country should proceed to achieve the SDGs. Greater awareness and ownership have been generated along the process and the report drafting taskforce actually has gotten to appreciate local wisdom and community strength and learned more.

The Progress

Built on the achievement in the Millennium Development Goals, Thailand has a solid foundation for implementing the 2030 Agenda for Sustainable Development. Here are the snapshots on status, early progresses and challenges.

Goal 1: Thailand has achieved the MDGs target on poverty and hunger, reducing the number of people living in poverty and hunger by half. However, poverty remains in many manifestations and inequalities persist. Around 7.2 per cent of population lives under the national poverty line, the number could reach 15.5 per cent if we include those who are slightly above the line. Measures such as SEP villages seek to increase income and reduce expenditure for those in the rural area. The government has started a registration scheme to provide support to the poor. In 2016, 17,469 million baht (approximately 485 million US Dollar) was provided to 7.5 million registered low income-earners through the national e-payment system to further support their livelihood. It is expected that the scheme will benefit around 12 million qualified registrants in 2017.

Goal 2: Thailand, also known as “Kitchen of the World”, has successfully reduced the proportion of undernourished population from 34.6 per cent to 7.5 per cent during the MDGs era. Efforts to provide the poor and vulnerable groups with access to adequate, safe and nutritious food will be further highlighted in the 20 – Year National Strategy Framework on healthcare. Measures, including law, have been taken to reduce stunting and wasting in children under 5 year of age. Thailand strives to ensure sustainable food production system through promoting practice of sustainable agriculture in the forms of organic farming and the “New Theory Farming” under the SEP concept, with the target to increase the area of sustainable agriculture farming at 80,000 hectare per annum.

Goal 3: Universal Health Coverage (UHC) has been a crucial factor in the improvement of healthcare service in Thailand with current coverage stands at 99.87 per cent. We also attach great importance to preventive medicine. As a result, maternal and neonatal mortality rates are well below the global targets thanks to 99.6 per cent of birth attended by skilled health personnel. New cases of pandemic diseases are also on the decline. The government is determined to reduce the number of road traffic accident through legal measures and promoting safe driving behavior to bring down the second most cause of death.

Goal 4: More than 90 per cent of school age children are enjoying subsidized 15- year basic education available to all children in the land, regardless of their nationalities or migrant status. The government is promoting vocational study in particular dual education with an aim to increasing quality workforce in real sectors. We are working harder to advance the quality of education at all levels under the 12th Education Plan (2017-2021) and the National Education Plan 2017-2036.

Goal 5: Gender equality is another success story from the MDGs. Girls enjoy equal access to quality education as boys do. In fact, they even do better in higher education. Female are now accounted for 60 per cent of the workforce and hold a handsome share of 38 per cent of executive level in private sector. The current

constitution calls for gender responsive budgeting, on which a pilot project is being implemented in Surat Thani province. Elements of SDG 5 will be incorporated in the Women Development Strategy 2017-2021.

Goal 6: Almost 100 percent of households have access to safe and affordable drinking water as well as sanitation facilities. However challenge remains in remote rural areas where we are doubling our effort to address the situation. The Water Resource Management Strategic Plan 2015 – 2026 has provided a holistic approach both in terms of water-use efficiency and water resource infrastructure to ensure that Thailand can meet her future demand.

Goal 7: Thailand imports more than 70 per cent of energy for domestic consumption each year. The 20 – Year Integrated Energy Plan (2015-2036) is the road map for the country’s energy security. Thailand is trying to diversify the source of energy focusing on domestic source, improve energy efficiency and promote community participation in energy management. Thailand seeks to increase the proportion of alternative energy from 13.83 per cent to 30 per cent by 2036. Currently Thailand has the highest solar power capacity among ASEAN members.

Goal 8: The 20 – Year National Strategy Framework aims to raise Thailand to become a high – income country by 2036. In addition to the projected growth from agriculture, manufacturing and service sectors, the 12th National Economic and Social Development Plan (2016 – 2020) aims to strengthen national competitiveness with service and digital based economy, enhance skill of the workforces and provide labor protection and welfare.

Goal 9: Thailand has been actively promoting connectivity within and beyond borders for years. The draft 20 –Year Transportation Development Strategy (2017-2036) aligns with the SDGs in providing effective, green and safe, inclusive and innovative transport for all. At the same time the Thailand 4.0 policy will boost value added in manufacturing sector through promoting greater utilization of creativity, technology and innovation while ensuring environmental friendly practices. The development of STI capacity will have a central role in this endeavor.

Goal 10: Addressing inequality became one of the main targets in recent national development plans. In 2015, income of the bottom 40 per cent of population grew 6.05 per cent comparing to the national rate of 1.66 per cent. Thailand aims to increase the income growth of the bottom 40 to 15 per cent per annum during the next 5 years. Various schemes have been implemented to support and generate income for the poor such as micro financing, providing financial support, welfare and benefit for low income – earners , establishing social enterprises at every province to support communities development.

Goal 11: Thailand is aligning new urban development plan with the New Urban Agenda. Land ownership and land distribution will be addressed with legal measures. The government is developing a 10 – Year housing development strategy, targeting at 2.72 million households living in inferior housing condition or informal settlement. In addition, 22,434 million bath (approximately 623 million US Dollar) preferential housing loan has been made available to the low and middle income population. Already trained in 972 communities in 2016, the Community Based

Disaster Risk Management program based on the Sendai Framework for Disaster Risk Reduction will be further expanded to local communities nationwide.

Goal 12: The concept Sustainable Consumption and Production is closely related with SEP which advocates a balanced lifestyle that promotes growth and conserves the environment at the same time. In this regard, Thailand has developed the “SCP roadmap 2017- 2036” to further promote the SCP concept in different sectors, and implemented various medium and long term plans and strategies on green industry, chemical and waste management, environmental management, green procurement, as well as various green labeling schemes to ensure the achievement of SDG 12.

Goal 13: Thailand is one of the countries with high vulnerability to the impact of climate change. This places the issue among national priorities. Consequently measures on climate change has been incorporated in the National Economic and Social Development Plan since 2012 and also integrated in the 20 – Year National Strategy Framework (2017-2036). Thailand’s Climate Change Master Plan (2015-2036) aims to enhance adaptation and mitigation capacity of various sectors. 17 provinces and 32 municipalities have been trained and developed climate action plan for their respective constituencies, complementing their provincial disaster risk reduction plans.

Goal 14: The Coastal reforestation program has resulted in 5.24 per cent increase of mangrove forest area during 2004 – 2014, returning to its former health. Currently, areas under different marine resource and ecological management regimes account for 15.68 per cent of total marine area in Thailand, including 18,136 square kilometers of protected marine and coastal areas. The National Plan of Action to prevent, deter and eliminate IUU fishing was designed to fulfill Thailand’s responsibilities to marine fisheries resources both inside and outside Thai waters.

Goal 15: Thailand has set a target of increasing forest area from 31.6 percent of land area to 40 per cent through various forestation schemes and financial mechanisms. Authorities are also working with communities in forest areas to uplift their well-being, providing alternative means of income and reducing the need to deforest or endanger biodiversity. The Elephant Ivory Act 2015 has been proven to be effective in controlling illicit ivory trade and possession, demonstrating Thailand’s determination in combat wildlife trafficking.

Goal 16: SEP inspired initiatives such as alternative development and the United Nations Rules for the Treatment of Women Prisoners and Non-Custodial Measures for Women Offenders – the Bangkok Rules, have been identified as measures to promote and support peaceful society. Thailand has the “zero tolerance for human trafficking” policy and continues efforts in prevention, protection, prosecution and partnership. On combating corruption, another national agenda, several legal measures have been enacted and amended. The establishment of Criminal Court for Corruption and Misconduct Offence in 2016, for example, will help reduce the time to finalize such cases more quickly.

Goal 17: Thailand firmly believes that only through partnership we can achieve the inclusive and sustainable development. Thailand has created enabling environment for the private sector to enhance MOI in other developing countries. The Duty Free Quota Free regime for LDCs has been implemented since 2015, complementing Thailand's outbound investment promotion in developing countries. For years, Thailand International Cooperation Agency (TICA) and Neighbouring Countries Economic Development Cooperation Agency (NEDA) have been providing cooperation on sustainable development in terms of technical assistance, financial grants and concessional loans as well as development projects. One of the legacies of Thailand's G-77 chairmanship in 2016 is the "SEP for SDGs Partnership" with ongoing SEP model projects in 10 countries from different continents and many more projects in the pipeline. Thailand is actively promoting regional cooperation on sustainable development. Thailand has supported UN Office for South-South Cooperation to resume its regional office in Bangkok. Thailand is the Coordinator of the Association of Southeast Asian Nations (ASEAN) to promote complementarities between the ASEAN Community Vision 2025 and the 2030 Agenda and the prime mover and coordinator in promoting sustainable development in the Asia Cooperation Dialogue (ACD) and the Conference on Interaction and Confidence-Building Measures in Asia (CICA) respectively.

Conclusion

VNR is not only about reporting or sharing our good practices and challenges. Thailand believes that the VNR process has provided countries with opportunities to take stock on sustainable development efforts and strengthen SDGs implementation as well as mobilize public awareness and contribution. It will serve as a solid foundation for future SDGs follow up and reviews, and bring about concerted efforts from all stakeholders for achieving the SDGs. VNR is a practical tool and an engaging process that should be encouraged.

1. Executive Summary

For many years Thailand has attached great importance to sustainable development. The country has adopted His Majesty the Late King Bhumibol Adulyadej's Sufficiency Economy Philosophy (SEP) as the core principle of National Economic and Social Development Plan since 2002.

SEP, which is in conformity with the 2030 Agenda for Sustainable Development, has served as a foundation of the 12th National Economic and Social Development Plan (2017 – 2021) and the 20-Year National Strategy Framework (2017-2036). The Royal Thai Government has committed to applying SEP for SDGs in all areas and at all levels and sharing SEP as a development model with the international community, especially since Thailand's G-77 chairmanship in 2016.

National Mechanism

The Royal Thai Government has undertaken a whole of Government and Society approach in the effort to advance SDGs in Thailand. The National Committee for Sustainable Development (CSD) chaired by the Prime Minister is Thailand's main mechanism at the highest level that is responsible for the country's sustainable development. It comprises representatives of agencies concerned, private sector, academia, and the civil society, with the Secretary-General of the National Economic and Social Development Board (NESDB) as the secretariat.

The main task of CSD is formulating policies and strategies on national sustainable development and overseeing the implementation of these policies and strategies, including the SDGs. It has established three sub-committees to advance three interconnected processes namely implementing the SDGs, raising awareness on sustainable development and SEP application, and compiling data and statistics to support the implementation and monitoring of the 2030 Agenda.

In addition, three taskforces have been established in order to (1) review and provide recommendations on legal, economic and social measures necessary for the achievement of the SDGs, (2) coordinate the work of agencies and set priorities, and (3) prepare a report on Thailand's progress, challenges and recommendations in the achieving the SDGs..

Through the above mentioned sub-committees and taskforces, CSD has undertaken several steps to advance SDGs implementation including establishing a coordinating body for each of the SDGs, formulating roadmaps for all 17 SDGs, identifying 30 priority targets, synthesizing examples of SEP for SDGs projects, and examining gaps and discrepancies between national baselines and proposed global indicators.

Stakeholder Engagement

Apart from the presence of representatives of the private sector, academia and civil society organizations (CSOs) in the CSD and its subsidiary structures, the Royal Thai Government has conducted several rounds of stakeholder engagement. It has engaged the private sector, CSOs of various constituencies, youth as well as members of the National Legislative Assembly in implementing the SDGs. These

stakeholders have made contributions in accordance with their respective roles and expertise. The Global Compact Network Thailand and other private entities are very active in mainstreaming SDGs and UN Guiding Principles on Business and Human Rights into their business operations. CSOs have organized their own regional forums to present views, concerns, and priorities related to SDGs. The CSOs have also produced their own VNR reports to supplement the Government's VNR report. Their inputs as well as contributions and those from other stakeholders will further synergize Thailand's efforts to achieve the SDGs.

Thailand views the VNR as a process to engage and create ownership, rather than a report-making exercise. The content of the report is derived from assessing progress as well as learning from communities. It provides a snapshot of significant progress in 2016, together with approaches and good practices applied in 17 SDGs and challenges faced in achieving some of the goals. The SEP for SDGs model projects have been studied and selected from diverse areas and sectors. Background on data collection and indicators as well as a statistical annex are also presented.

In addition, the Ministry of Foreign Affairs, as chair of the Taskforce on VNR, in collaboration with local universities, organized regional forums to engage and update stakeholders on national SDGs implementation and gather views on how the country should proceed to achieve the SDGs. This process has generated greater awareness and ownership while the Taskforce appreciated learning more from local wisdom and community strength.

2. Introduction

In the past few decades, the world's development has put an emphasis on economic development based on the modernization theory, which craved for economic growth, industrialization and urbanization, but neglected the environment and quality of human development.

Even though many countries have achieved halving the number of those living in poverty according to the MDGs, the income gap between the rich and the poor has widened. Inequality still persists, the environment has deteriorated, and climate change and disaster phenomena have become more severe. People are fighting over resources and do not respect opinions of others. This leads to conflicts and violence such as terrorism and wars, as well as induced migration. Therefore, every country needs to take these challenges into consideration while formulating an appropriate development approach in achieving the SDGs.

Since the economic crisis in 1997, Thailand has adapted to the world's changing context by incorporating SEP in the national development plans starting from the 9th National Economic and Social Development Plan (2002 – 2006) until the current 12th Plan (2017 – 2021). Over the past few years, Thailand has undertaken serious reforms in every aspect and put in place the 20-Year National Strategy Framework. The Royal Thai Government is well aware that to move Thailand toward a sustainable and prosperous future, the Government needs to carefully adopt policies, in a time-efficient manner, and to strengthen national resilience, as well as empower and create opportunities for every Thai citizen.

The Royal Thai Government has an ambition to empower the country and its citizens in order for them to become “Stable, Prosperous, and Sustainable”. Therefore, the Royal Thai Government has moved forward the country’s reforms to fine-tune the system structures to benefit everyone in the society, including the underprivileged and the vulnerables, so that they are able to mold their own future and live in harmony with nature.

To this ends, the Government has put in place an area-based development policy, under which the implementation of development programs is decentralized in terms of increasing administrative and decision-making power of local authorities and communities. The Government also expands the infrastructure and logistics systems, with a view to promoting effectiveness and inclusiveness and boosting the economic potential of cities. It utilizes science and technology to move the country forward and focuses on building up a digital economy and society towards “Thailand 4.0”. It has undertaken reforms in public administration to make it more effective and responsive and ensure good governance and a corruption-free society.

Participating in 2017 VNR is a significant opportunity for Thailand to take stock of the current situation at an initial stage of the 20-Year National Strategy Framework and the implementation of the SDGs. This stocktaking includes the review of structures, policies, mechanisms for implementation and all stakeholder participation.

Thailand strongly believes that taking part in VNR will encourage all sectors of the Thai society to join hands in moving the country’s sustainable development forward. It will also help identify implementation gaps and necessary solutions in a timely manner.

3. Methodology and Process for Preparation of the Review

The decision of Thailand to participate in the 2017 VNR was approved by the CSD. Accordingly the Sub-committee on Implementing Sustainable Development Goals set up the Taskforce on Reporting on the Implementation of the 2030 Agenda. The members of the Taskforce are representatives from lead ministries responsible for each SDG, namely, Ministry of Interior, Ministry of Agriculture and Cooperatives, Ministry of Public Health, Ministry of Education, Ministry of Social Development and Human Security, Ministry of Natural Resources and Environment, Ministry of Energy, Ministry of Finance, Ministry of Transport, Ministry of Industry, Ministry of Justice, Office of the National Economic and Social Development Board, National Statistical Office (NSO), as well as experts, with Department of International Organizations, Ministry of Foreign Affairs, as chairperson of this Taskforce. A truly whole of Government efforts.

The Taskforce has drafted this VNR report following the UN Secretary-General’s proposed voluntary common reporting guidelines. The main structure includes policies and mechanisms to implement SDGs and the progress made in all 17 goals in the year 2016. The report will also emphasize SEP as Thailand’s fundamental path towards sustainable development.

There are two parallel processes in preparing Thailand's VNR, namely:

(1) Self-assessment

In drafting the VNR, the lead ministries have consulted their respective supporting agencies for each goal and requested that they conduct a self-assessment in terms of policies, institutional arrangements, mechanisms, processes and the progress made under each goal including Thailand's best practices and challenges. The lead ministries then reported to the Taskforce to compile their findings.

(2) Stakeholders' assessment

While the lead ministries formed a self-assessment report, the Taskforce organized public consultation platforms for stakeholders be they local authorities, the private sector, academia, civil society and general public, including the youth to voice their opinions. They focused on the directions for sustainable development and the roles of stakeholders in partnership with the Government to realize the SDGs. In this way, the public can contribute to shaping and specifying the course for achieving SDGs.

The public consultation platforms took place in three regions of Thailand, i.e., Bangkok (central region), Chiang Mai (Northern region) and Songkla (Southern region), and so did additional open platforms for public consultation, especially with civil society organizations and the youth.

4. Policy and enabling environment

(a) Creating ownership for the SDGs

The implementation of SDGs requires cooperation from all sectors and every single persons in the society. They need to feel the sense of ownership. Therefore, the Royal Thai Government has invited all sectors at all levels to engage in the VNR process and join hands in designing the path to achieve SDGs. The significant steps to create ownership for SDGs are as follows:

- Members of CSD and its sub-committees. 37-member CSD comprises of 26 members from public sectors, 3 academics, 2 from the private sector, 2 from civil society and 4 independent experts on sustainable development. Additional sectors are invited to participate in the sub-committees in order to be part of the mechanism that drives forward sustainable development and raises the awareness of Thailand's task to achieve SDGs.

- Setting up priority goals and targets. The academia was instrumental in designing the methodology and processes for prioritizing SDGs targets in accordance with the Thai context and statistical method, ensuring the objectivity of the process. The private sector, academia, civil society and general public were invited to take part in five brainstorming sessions to prioritize targets for Thailand.

- Working with the private sector to implement the SDGs. The secretariat of the CSD has conducted discussion with the private sector as a stakeholder in the implementation of SDGs. The private sector, especially many large enterprises, appreciates the benefits of SDGs and are enthusiastic to participate in the process of

implementing the SDGs. Many of them have indeed initiated their own projects to implement the SDGs.

- Networking with the civil society. Acknowledging that the civil society works closely with local communities, and has been working on many issues of sustainable development, especially environmental and rights issues, the secretariat of the CSD has set up a platform to consult with the civil society in order to receive their inputs, reflecting interests of diverse groups, which would benefit policy planning and implementation.

- Raising SDGs awareness among the youth. The Ministry of Foreign Affairs, on behalf of the VNR Taskforce, has organized activities to raise SDGs awareness among the youth, such as the ‘SEP for SDGs’ speech and essay writing contests. The Thai youth became well-informed and gained better understanding on how SEP can support the achievement of SDGs. In addition, the Ministry of Foreign Affairs has also supported the youth to organize Youth Forum on Sustainable Development to voice their opinions on the implementation of the SDGs.

- Platform for the civil society. The VNR Taskforce in collaboration with local universities has organized 3 regional platforms to engage and update stakeholders on the national SDGs implementation and gather their views on how the country should proceed to achieve the SDGs. The platform for the Central region took place in Bangkok in collaboration with Chulalongkorn University. The platform for the Northern region was organized in Chiang Mai in collaboration with Chiang Mai University, and so was the platform for the Southern region in Songkla in collaboration with Prince of Songkla University. The civil society and local communities have highlighted on the importance of inclusiveness, local identities, traditional knowledge and wisdom in the achievement of sustainable development.

Additionally, the **National Legislative Assembly of Thailand (NLA)** is also very active in supporting the SDGs. NLA has established a sub-committee on monitoring the implementation of Sustainable Development Goals with a mandate to follow-up and promote the role of the NLA in supporting the SDGs implementation.

Public communication platform

The engagement of every sector to participate in the implementation of SDGs has raised awareness of SDGs in the society. Many agencies have found the use of SDGs as a tool of communication and formulated their vision to move forward the SDGs, as follows :

Thailand Sustainable Development Foundation and Thai Publica online media have regularly organized events to promote sustainable development and create platforms among businesses, civil society, academia and media. During such events, participants exchanged views and shared knowledge on sustainable development approaches.

Global Compact Network Thailand has applied the principles of the UN Global Compact in their business management to integrate SDGs in the production process and value chain. It also emphasizes the need to conduct businesses in line with the UN Guiding Principles on Business and Human Rights.

Thailand Management Association (TMA) has disseminated information and organized seminars for executives in the private sector to join hands in moving forward SDGs.

Community Organizations Development Institute (CODI) and NGO Coordinating Committee on Development (NGO-COD) have organized SDGs forums in 5 regions to raise awareness and produced a set of recommendations for Thailand's sustainable development. In addition, the CSOs have also produced their own VNR reports to supplement the Government's. Their inputs as well as those from other stakeholders will further synergize Thailand's efforts to achieve SDGs.

Thai Health Promotion Foundation in collaboration with over 3,000 people in the network of local communities has announced a declaration to ensure the participation of communities in achieving SDGs as guided by SEP.

In the academic sector, **Thailand Research Fund**, among others, has launched "Research Coordination for SDGs" project or "SDG Move" to coordinate and support researchers, organize workshops, and grant research funds for producing strategic analysis and policy recommendations to support the implementation of all 17 SDGs. SDG Move also promotes networking among academia, public and private sector through organizing and participating in public forums in order to build awareness of SDGs in various sectors.

(b) Incorporation of the SDGs in national frameworks

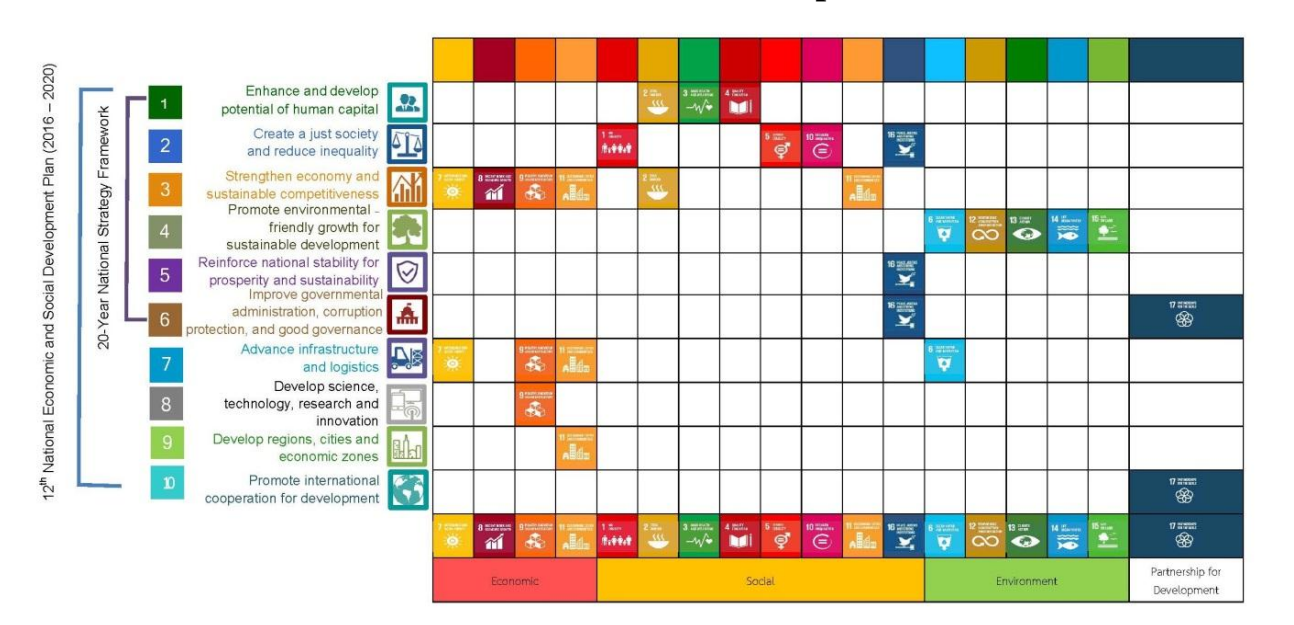
The Royal Thai Government has systematically incorporated SDGs in the national frameworks. The Government is aware of the importance in driving the nation toward sustainable development since the MDGs. Therefore, the 2030 Agenda was declared a national agenda after the Prime Minister attended the UN Summit for its adoption. Every government agency has integrated SDGs into their strategies and action plans including the country's reform processes. An emphasis is placed on restructuring the nation in a more stable, sustainable and resilient manner and moving towards a high-income country, as clearly reflected in the 2017 Constitution. The Government has formulated the 20-Year National Strategy (2017 – 2036) to set the national goals of sustainable development and apply SEP as the guiding principle. In addition, the Government has set an inclusive reform agenda. The year 2017 is the beginning of the 12th National Economic and Social Development Plan and the 20-Year National Strategy Framework. Both serve as the medium- and long-term master plans to move forward the nation towards sustainable development. Hence, these national frameworks, namely, the Constitution, the 20-Year National Strategy Framework, the 12th National Economic and Social Development Plan and the country's reform agendas have been formulated in the same direction for the nation to become "Stable, Prosperous, and Sustainable". All sectors in the country will be able to move in the same direction and have the ownership to achieve sustainable development and leaving no one behind.

In practice, the National Economic and Social Development Board, which is the lead agency in formulating development plans and policies, has examined the linkages between the 5-year National Economic and Social Development Plan and all 17 SDGs. At this initial stage, Thailand has set 30 priority targets for the

country's sustainable development, which are in line with all 6 dimensions of the 20-Year National Strategy Framework. The CSD and related agencies in formulating a 1- and 5-year roadmaps have invited all sectors in the society to participate in this process to promote maximum inclusiveness.

In addition, the Government stresses on establishing an enabling environment for the implementation of SDGs. It has also mandated relevant working groups to provide recommendations on necessary amendments of economic, social and legal spheres to promote sustainable development and to accommodate the implementation of SDGs.

Mapping the 20-Year National Strategy Framework and the 12th National Economic and Social Development Plan with the SDGs.



(c) Integration of the 3 dimensions

Thailand has applied SEP to national development and public administration since the 9th National Economic and Social Development Plan (2002 – 2006). SEP is also a core principle in the current Constitution and the 20-Year National Strategy Framework.

SEP is an approach towards balanced and sustainable development. It espouses moderation, reasonableness and self-immunity as a development framework based on knowledge and virtue. It has been incorporated in all national frameworks and master plans at all levels. On 25 October 2016, the Cabinet has mandated every government agency to apply SEP as an approach to achieve SDGs in accordance with agencies' 20-year strategic plans and 1- and 5-year action plans. SEP, therefore, is a tool to integrate all three dimensions of sustainable development. The philosophy attaches great importance to human development. It emphasizes the need to strengthen community capacity and ensure a balanced way of life and resilience, with full respect for the environment. It creates a mindset to balance the three dimensions of sustainable development.

The CSD is a national institutional mechanism that strives to achieve the right balance among the three dimensions of sustainable development. The CSD is mandated to inclusively integrate the economic, social and environmental dimensions into national sustainable development policies and strategies in a balanced manner. The CSD is also to oversee operational processes of government agencies, so that they are aligned with these national sustainable development policies and strategies. In addition, the Prime Minister Delivery Unit is another mechanism to assist all agencies in driving SDGs in the same direction.

(d) Goals and targets

Goal 1 End poverty in all its forms everywhere

Thailand successfully achieved the MDG in halving the number of people living in poverty. **The percentage of people living in poverty** was reduced from 42.3 per cent (25.3 million persons) in 2000 to 7.2 per cent (4.8 million persons) in 2015. Among the 4.8 million persons living in poverty in 2015, up to 38 per cent are female adults, 38 per cent male adults and 24 per cent children.

Poverty encompasses multiple and diverse dimensions of deprivation, not just the economic dimension focusing on material needs. Poverty can be defined not just as lack of income, but also as lack of educational opportunities, access to healthcare, public services and infrastructure. The lack of means to cope with damaging loss such as insurance and social protection often renders impoverished people vulnerable to disasters and other external shocks, which descend them further in poverty.

The Government has therefore put forward the policies under the 20–Year National Strategy Framework and the 12th National Economic and Social Development Plan (2016 – 2020) to end poverty in all its dimensions by using a development approach based on SEP, which has been the guiding principle of the National Economic and Social Development Plans since 2002 (the 9th Plan).

In line with SEP’s people-centered development approach, the Government encourages and supports poor families in using SEP as a guide to make a living, manage households and increase self-reliance. There are 878 **SEP model villages** which seek to increase income, reduce expenditure and promote community welfare for those in the rural areas. Furthermore, the Government has implemented the project “Pracharath Rak Samakee” under the Public-Private-People Partnership (PPPP) called Pracharath Policy, to promote social enterprises and enable the private sector to work with the Government to help communities and societies. The Pracharath social enterprises have been set up in 76 provinces nationwide to increase income in rural communities via three strategic pillars: agriculture, product processing by small and medium-sized enterprises, and community tourism.

Social security measures have also contributed to poverty reduction. In 2016 fiscal year, the Government provided up to 3,000 Baht (approximately 85.71 USD) financial subsidy to 325,609 low income families, amounting to 593,101,978 Baht (approximately 16.95 million USD) in total. The Government has also implemented various projects, such as Pracharath Housing Project and Improvement

of the Homeless' Quality of Life Project, under the 10-Year Housing Development Plan (2016-2025) to provide housing for the poor. Furthermore, Social Assistance Center 1300 has been established to allow people facing social problems to access immediate support through call center and online channels.

Reducing expenditures is as important as increasing income in fighting poverty. The Universal Health Coverage scheme has significantly reduced healthcare expenditures for the households. Other social welfare measures include providing free bus and train services and 15 years free basic education from kindergarten to high school levels.

The Government has also introduced various measures to help **the poor and the vulnerable**. The provision of 6,000 Baht (approximately 171.43 USD) per month childcare subsidy for poor families with child aged 0-3, free 15-year basic education, as well as monthly allowances for senior citizens and persons with disabilities (800 Baht or approximately 22.86 USD) / person / month for person with disabilities and progressive rate for senior citizen) are some of the examples. In 2016 fiscal year, up to 73 billion Baht (approximately 2.09 billion USD) of allowances was provided to 7.34 million senior citizens and 1.67 million persons with disabilities. Also, the Government promotes employment and provides funding sources for occupations for persons with disabilities. Community-based centers for promoting quality of life and occupations and schools for the elderly, as well as house refurbishment project for the elderly have been established. The elderly are also given access to loans through Older Fund.

Furthermore, the Government has started **the Registration for State Social Welfare Scheme to provide support to the poor**, where the eligibility criterion is person with an annual income lower than 100,000 Baht (approximately 2,857 USD). In 2016, 17,469 million Baht (approximately 499 million USD) was provided to 7.5 million qualified registered low income-earners through our national e-payment system to further support their livelihood.

The Government encourages decent employment for all Thai persons. It has set up job centers nationwide to provide career consulting and training services for all. Measures to protect and manage labors' rights according to the international human rights standards have been implemented. The Government also promotes decent employment in the informal sector which include the disabled, the elderly and the vulnerable.

Thailand attaches great importance to **ensuring vulnerable groups' access to basic public services and infrastructure and economic resources**. In 2013, up to 99.87 per cent of Thais had access to healthcare services through the National Health Act. In 2016, all persons in the urban areas had access to electricity and 99.3 per cent had access to clean water. In the rural areas, 99.7 per cent of people had access to electricity and 81.5 per cent had access to clean water. The Government aims to expand accessibility to clean water and electricity to all areas in Thailand. Furthermore, the Government's policy to promote 'Digital Economy' and 'Smart City' led to the establishment of Community Digital Centers in 2015 which increase people's access to telecommunication and on-line services. In 2015, up to 79.3 per

cent of Thais aged over 6 years old are users of mobile phone, and in 2016, 59.8 per cent of households have internet connection.

Land use and management is important for Thailand where the majority of the population is in the agricultural sector. The Committee on National Land Policy has introduced land management policy that aims to address the issue of land encroachment and to reallocate land for the poor in a fair manner in order to enhance their livelihoods and, in turn, stimulate the economy.

The Government is aware of the profound impact of disasters on the poor. The 2nd National Disaster Prevention and Mitigation Plan, which aims to promote resilience and mitigate disaster impacts especially on the poor and the vulnerable, is currently being drafted. At present, up to 25,915 persons in disaster-prone villages nationwide have been trained in early warning and disaster management. They are called ‘Miss/Mister Early Warning’. Local volunteers have also been trained on crisis and disaster management in the efforts to build community resilience to disasters.

Despite Thailand’s notable achievements in meeting the MDG targets to halve the number of people in extreme poverty, eradicating poverty remains one of the most important priorities for Thailand. Up to 15.5 per cent of the Thai citizens are near poor or live in poverty; most of them live in the rural areas and are in the agricultural sector. The Government thus remains fully committed to reducing poverty and uplifting the standards of living of its people by improving access to public services and spreading SEP-based development in all areas.

**Case Study: Community Welfare Fund of the Umong Municipality,
Lamphun Province**

Target 1.3: Implement nationally appropriate social protection systems and measures for all, including floors, and by 2030 achieve substantial coverage of the poor and the vulnerable.

Many communities in Thailand have taken the lead to initiate community-based social protection mechanisms, which complement state-sponsored ones (such as the Universal Health Coverage and monthly allowances for senior citizen). **The Umong Municipality in Lamphun province** is known nationwide for its successful use of SEP approach to make local residents more financially secured through the establishment of a **Community Welfare Fund**. The Fund not only encourages savings for people in the community, but also provides a modest amount of financial assistance for community members who have a savings account for the following purposes: childbirth, education, ordination, marriage, healthcare and pension for the elderly. Community members, especially those who are vulnerable to poverty or work in the informal sector, are incentivized to save money and have an access to social welfare, which in turn help reduce poverty as well as promote dignity, resilience to external shocks and a sense of belonging in their community.

Goal 2 End hunger, achieve food security and improved nutrition, and promote sustainable agriculture

All Thais are familiar with the traditional saying “there is fish in the water, there is rice in the fields”. This short and simple phrase reflects the Thai way of life and abundance in nature. Thailand has long been home to agricultural production, capable of producing enough for both domestic consumption and international export. This very fact reflects Thailand’s strong potential in this area that has led to the achievement of the MDG 1 in reducing the number of undernourished people. According to the Food and Agricultural Organization (FAO), **the number of undernourished persons in Thailand had declined** from 19.8 million (34.60 per cent of the population) in 1990 – 1992 to 5 million (7.4 per cent of the population) in 2014 – 2016.

With particular focus on the poor and the vulnerable, Thailand continues to ensure access to food that is safe, nutritious, and sufficient. **The 20-Year National Strategy on Healthcare** also aims to promote public health with measures to accelerate the reduction of undernourished women and young children including through conducting activities at the local and community levels. Furthermore, the Royal Thai Government has been supporting the enactment of **the Milk Code** to encourage breastfeeding rather than other substitutes. During 2004 - 2005 to 2015 – 2016, the prevalence of stunting declined from 11.9 per cent to 10.5 per cent but the prevalence of wasting and overweight increased from 4.1 per cent to 5.4 per cent and from 6.9 per cent to 8.2 per cent, respectively. In 2016, the 9th National Health Assembly put forward a policy to promote young children’s health by putting an emphasis on the right nutrition during the first 2,500 days after birth as well as age-specific development and enhanced reading skills.

To ensure a sustainable food production chain, the Royal Thai Government applies SEP in the agricultural sector aiming to enhance “immunity”, increase productive capacity, promote environmentally-friendly production, build adaptive capacity to climate change, drought, floods, and other types of hazards, and improve land and soil quality. In this regard, the Ministry of Agriculture and Cooperatives has formulated the **Framework on the Promotion of Sustainable Agriculture 2017 – 2021**. The Framework aims to increase the area for sustainable agriculture by 500,000 Rai (approximately 80,000 hectare). per year under five principles: (1) promote and improve production for sustainable agriculture, (2) improve the standardization and accreditation of produce from sustainable agriculture, (3) improve and promote the marketing of produce from sustainable agriculture, (4) promote Green Loans, and (5) support research and innovation on sustainable agriculture in an inclusive manner.

During the past years, the Royal Thai Government has implemented several projects relevant to sustainable agriculture as follows:

(1) Organic Farming Improvement Project

The Organic Farming Improvement Project aims to increase the area for organic farming, increase the value of produce, boost the domestic sales and consumption of organic produce, and promote the accreditation of organic farming

that meets international standards. To achieve these objectives, the Royal Thai Government recognizes the importance of capacity building and has initiated training programs on the whole process of organic farming from farm to market through networks of organic farmers, marketing, and organic fertilizer banks based on the best practice in Yasothorn Province.

(2) New Theory Agriculture Project

The New Theory Agriculture Project invites 70,000 farmers from 882 districts to join on a voluntary basis in applying His Majesty the Late King Bhumibol Adulyadej's New Theory to their own agricultural areas consistent with their local and social contexts. This project aims to support the improvement of livelihoods of farmers to become self-reliant by building the capacity of individual farmers, their families as well as their communities that would enable them to reduce expenditures and increase incomes. Also, the project seeks to promote jobs that can make use of limited resources efficiently. The New Theory Agriculture Project is a result of a joint effort between the Ministry of Agriculture and Cooperatives and five key groups consisting of farmers, model farmers, smart farmers, the Agricultural Learning Center, and the Learning Center for Sufficiency Economy Philosophy as well as cooperation from government agencies, the private sector and academic institutions. The Royal Thai Government plans to accelerate the implementation of the project to yield more visible results by 2017.

Furthermore, the Royal Thai Government attaches importance to possessing the **biodiversity of seeds** used in agriculture, domesticated animals, and relevant species of plants and animals. This has led to the formulation of the **Master Plan on Integration of the Management of Biodiversity 2015 – 2021** consisting of four strategies: (1) inclusive biodiversity management, (2) conservation and restoration of biodiversity, (3) protect national interests on biodiversity, increase and share benefits from biodiversity in accordance with Green Economy concept and (4) develop knowledge and database on biodiversity of international standards.

There are many challenges such as economic crises, climate change, and environmental degradation that are threatening agriculture and food production. We can no longer achieve prosperity like the saying “there is fish in the water, there is rice in the fields” without adapting to the changing world. The Royal Thai Government recognizes this as the mission to adapt and plan for new methods of agriculture that would respond to the world in its current and future states. Thailand seeks to utilize relevant technology and innovations while also conserving the environment and biodiversity. Only through this effort that Thailand would sustainably continue to be the food hub for the Thai people and also for the world.

Case Study: Food Bank Royal Project, Mae Hong Son Province

Target 2.1: By 2030, end hunger and ensure access by all people, in particular the poor and people in vulnerable situations, including infants, to safe, nutritious and sufficient food all year round.

The Food Bank Royal Project was initiated by Her Majesty Queen Sirikit who was concerned over inadequate food supplies due to the increasing population in Thailand. In selecting the project area, Mae Hong Son Province was deemed to have the required natural resources and upstream rivers to host different types of agriculture. Utilizing such resources, the Food Bank Project serves as the food production hub for both people and animals and for both consumption and income generation. The implementation is based on SEP where consideration is given to the area's potential and geo-social characteristics in order to foster harmonious living with nature.

The Project includes the restoration of nature through planting and breeding edible indigenous flora and fauna back to the forest, as well as cultivating animals that can thrive in highlands such as carp and poultry to become food source for the local people. In addition the people are encouraged to grow vegetable for their own consumption, produce organic substance for their farms' use, grow cash crop such as tea, coffee, pear, plum, persimmon, green bean and red bean in an environmentally friendly manner (agroforestry) in order to achieve food security, reduce expenditure, increase income, and preserve and fertilize soil on the hillside in the process.

As a result, the forest area has increased from 21,217 Rai (approximately 3,394 hectare) to 42,487 Rai (approximately 6,798 hectare), and the income of the people in the Project area has increased from 4,000 Baht (approximately 114.28 USD) per month per household to 120,000 Baht (approximately 3,428.57 USD) per month per household.

Goal 3 Ensure healthy lives and promote well-being for all at all ages

Thailand has progressed considerably in its implementation in achieving SDG 3. According to the World Bank, the percentage of babies delivered with assistance of qualified professionals is as high as 99.6 per cent. According to the Ministry of Public Health, in 2015, **the maternal mortality ratio (MMR) is 24.6 maternal deaths per 100,000 live births, and the Infant Mortality Rate (IMR) and the under-five mortality rate are at 3.5 and 8.6 per 1000 live births, respectively.** In addition, UNAIDS estimated in the year 2014 that the population rates, per 100,000 people, of new HIV infections ranged from just 0.06 – 0.16 people. In 2016, the World Health Organization (WHO) recognized Thailand as the first country in Asia and the second country in the world to eliminate the mother-to-child transmission of HIV and syphilis. WHO also has reported a ratio of 171 tuberculosis cases per 100,000 people and a ratio of 37.9 malaria cases per 1,000 people, which were considered decreasing continuously. Nevertheless, it is estimated that there are many patients with chronic hepatitis B and C. The exact number of the

patients is still being processed but it is estimated to be more than two million people.

As for **non-communicable diseases and mental health and well-being supports**, WHO has estimated that the death rate from cardiovascular disease, cancer, diabetes and chronic respiratory diseases in Thai people aged between 30 and 70 is 16.16 per 100,000 people. The suicide rate is 13.08 per 100,000 population. Access to mental health support services for Thais aged 15 years or over who suffered depression tends to be higher; persons at risk who should be screened for depression are, for instance, patients with chronic diseases, elderly patients, women during pregnancy or after delivery, alcoholics and drug addicts. Apart from this, **alcoholics and drug addicts can access comprehensive treatments, both voluntarily and mandatory**: medication, mental health treatments and rehabilitation and follow-up cares. The statistic of drug addicted patients who stop using drug for 3 months continuously after the treatment is currently at 88.90 per cent and tends to increase.

The Ministry of Public Health has implemented action plans to develop the quality of health services to be provided to citizens, such as **the maternal health care policy which provides quality pregnancy** starting with a 5-time antenatal care to ensure pregnancy quality, setting up plans for quality delivery room and offering 3 times follow-up care after delivery. The infant care policy and the maternal health care policy provides knowledge to the mother on how to take care of herself during pregnancy, and how to properly take care of her child after delivery. Apart from that, health care services have continuously been improved, so that Thailand's overall public health care services are globally recognized. SEP has been used as an implementation approach, for instance, by **focusing on preventing and controlling the spread of diseases** and providing health care services to people, all of which helps lower the nation's treatment cost in the long run. The health care services, focusing on taking care of one's health, eating properly, exercising, sharing health care knowledge to people so that they know how to properly take care of themselves, will also enhance people's physical well-being. Also, the universal health coverage policy with a focus on prevention will help reduce the nation's budget in terms of health services and treatments.

Since 2002, all citizens have their rights to health insurance which is a part of the Universal Health Coverage Service. According to the National Statistical Office's survey on the economic and social conditions in households in 2013, **the occurrence of the households indicated as low-income households after paying for their health treatment was just 0.47 per cent** of all households. Moreover, Thailand also provides **health insurance for both documented and undocumented migrant workers** including their dependents, along with a migrant health volunteer program. The migrant health volunteers are not only interpreters in health facilities but also provide health knowledge and help inform migrant communities on their rights and on hygiene and sanitation.

Thai people are capable of accessing necessary and safe medicine and vaccines. For example, 90.3-100 per cent have received doses of EPI program vaccine, 78.47 per cent of all targets have received influenza vaccines, 79.89 per

cent of registered HIV-infected and AIDs patients have access to antiviral drugs, 72.33 per cent of acute myocardial infarction patients, STEMI type, have access to anticoagulants and/or Primary PCI, and 4.19 per cent of stroke patients have access to anticoagulants. Thailand considers vaccines as one of the most effective means to prevent people from diseases, however, the process of developing and producing vaccines requires high-technology tools and an adequately large amount of budget. As a consequence, **a developing country like Thailand still has few domestically produced vaccines**, moreover, limited budget and other obstacles to buy vaccines make Thailand face the problems of vaccines in delay and vaccine shortages, both in normal circumstances and in emergencies, causing low vaccine security. Thailand is not yet ready to develop and research new medicines. Most domestic pharmaceutical industries produce generic drugs and are facing difficulties from international agreements which affects the replacement of generic drugs with original drugs through monopolizing of the market, and the need to rely on overseas ingredients. Original drugs that are developed from overseas tend to be more expensive while implementing a price control mechanism in accordance with the country's rights as provided for in the Doha Declaration are still limited.

Apart from diseases, **air, water and soil pollution also affect human health**. WHO reported that Thai people died from air pollution in the ratio of 6.48 per 100,000 people in 2013, from chemical hazards, water pollution, and soil pollution in the ratio of 1.87 per 100,000 people in 2012 and from receiving toxics in the surroundings at the rate of 0.15 per 100,000 people in 2012. However, tobacco smoke pollution is more harmful to people's health than air pollution. Therefore, in order to support the WHO Framework Convention on Tobacco Control (WHO FCTC), the Royal Thai Government has enacted **Tobacco Control Act**, combining the Tobacco Control Act and the Health Care Act for non-smokers and set up systematic rules in order to appropriately and effectively control tobacco products. The Act indicates that the lowest age of the tobacco consumer should be 20 instead of 18 and prohibits tobacco advertising which persuades tobacco consumption. According to a survey in 2011, the percentage of smokers who are 15-year-old and over was still around 20.7 per cent.

Despite Thailand's considerable progress in launching the Universal Health Coverage, there are still some challenges, including family planning. According to a survey in 2014, **birth control in women of reproductive age, 15-49 years old was 89.2 per cent but the rate of teenage pregnancy at 15-19 years old was as high as 47.9 per 1,000 teenage women**. The ratio tends to decrease merely slightly. Teenage pregnancy affects the well-being of individuals, families, communities and society as well as the overall economy. Therefore, Thailand has enacted the **Act for Prevention and Solution of the Adolescent Pregnancy Problem 2016** as a mechanism to shape policies and strategies and promote collaboration among all concerned authorities, including public and private sectors and civil society, in order to integrate effective methods of prevention and solutions in tackling teenage pregnancy problems in a more united, concrete, and efficient way.

Another significant challenge falls upon **traffic road accidents**. **The rate of deaths due to traffic road accidents was 22.3 per 100,000 people** in 2015, which

ranked second highest in the world. This has led the Royal Thai Government to revise and enforce road safety laws to help drivers to use the road more properly and to reduce accidents, injuries and deaths, as well as launched a series of campaign to create awareness and promote proper behaviors by focusing on eliminating risks such as speed, drunk driving, wearing safety helmets and safety belts.

Case study: Nong Muang Khai Hospital, Phrae Province

Target 3.4: By 2030, reduce by one third premature mortality from non-communicable diseases through prevention and treatment and promote mental health and well-being

Dr. Somsak Soloslikit, Director of Nong Muang Khai Hospital, has adopted SEP and Buddhist principles in hospital management to create a self-sufficiency hospital. These principles led to reducing chemicals used, improving wastewater treatment system and soil quality and using a large vacant area of the hospital to grow trees and organic vegetables. The hospital has formulated its vision as a “self-sufficient hospital with quality and friendly services for a healthy community”. It provides holistic and integrated health services which cover quality, prevention, treatment and rehabilitation. The hospital adheres to good governance and educates its staff in terms of knowledge, skills and an organizational culture, which will help improve health services, as well as enhance community and health network contribution to a sustainable healthy society. In addition, the hospital also educates communities on organic agriculture, safe and clean food consumption, exercise for good health and health promotion. As such, it focuses on prevention rather than treatment to reduce the number of patients who would come to the hospital for health services, allowing people to have good physical and mental health, happiness and live longer. Activities undertaken by the hospital use knowledge and virtues based on a middle path and mindfulness, the principles of moderation, reasonableness and prudence. Therefore, the hospital has been approved as a “health service learning center based on a Sufficiency Economy Philosophy approach.”

Goal 4 Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all

The Royal Thai Government has placed education and lifelong learning at the top of its priorities. This is aimed at providing all children in Thailand with free, equitable and quality primary and secondary education, leading to effective learning outcomes. Since 2005, the Royal Thai Government has provided all children with **subsidies for basic education including pre-primary education**. Through sustained efforts to expand school coverage and compulsory education to all children in Thailand regardless of their nationality or legal status such as children of documented and undocumented migrant workers, all children are entitled to enroll in any educational institution, levels, types or areas of education. The Government has also allocated budget (per head) for all children, both Thai and non-Thai, equitably to all educational institutions. Currently, the Government is in the process of

revising the education budget so that it is suitable to the current economic situation and covers increasing educational expenses in the future. In addition, the Government has established educational trust funds and scholarships such as the Education Loan Fund, Student Loan Fund, the Princess Sirindhorn scholarship and the 1 District 1 Scholarship. These funds and scholarships covers undergraduate level degree both in Thailand and overseas and so far over 4,000 individuals have received such assistance, **resulting in the reduction of the gap in term of access to quality education** between socio-economic groups, especially for poor and underprivileged children. It should be highlighted that there is an upward trend of school age children enrolling in 12 year basic education, with 90 per cent in 2015 and 80.3 per cent of that number enrolled in secondary education.

Thailand recognizes that sustainable human development must begin at an early age with family taking the lead. Therefore, Thailand has been providing quality education and development from pre-school through basic education. Early childhood education and development is another key priority for Thailand. To ensure that children have access to early childhood education and development, the Government established an inter-agency cooperation approach. As a result, Thailand has been recognized as having good access to quality early childhood education. **In 2015, 76.2 per cent of children between the age of 3 – 5 in Thailand had access to quality early childhood education**, including public and private education institutions, as well as child development centers. In the next phase, the Government will focus on the development of better educational management and a better child development curriculum. In addition, the Government will put emphasis on pre-primary education and increase the budget for early childhood development as appropriate.

Vulnerable population, including underprivileged children, children with disabilities, children of ethnic groups and children in marginalized groups, have equal access to education. The Government provides support, such as tuition fees, to better the livelihood of children. However, this has yet to be expanded to cover all students living in poverty. Nonetheless, the Government has established schools for the underprivileged, where teachers would be informed of the real problems and needs of the students and thus could help them to better respond, prevent, and lessen their problems. Thailand has improved its educational management and expanded learning opportunities for the poor, the underprivileged and the vulnerable, be they children living in poverty, left-behind children, homeless children, children living in far remote areas in Thailand, out-of-school children, children who have to follow their parents around such as construction workers and children who have no permanent residence. The establishment of non-formal education system has enabled these groups of people to better equip themselves with adequate skills and knowledge to improve their livelihood.

In terms of educational development, the Ministry of Education has developed the **12th Education Development Plan (2017 - 2021)** which focuses on 5 main goals. The 5 main goals aim to: (1) Improve the quality of education in Thailand, enhance ethics and morals of the people and help them to be immune to changes and contribute to country's development; (2) Strengthen Thai workforce to

enhance competitiveness; (3) Enhance knowledge, technology and innovation to support sustainable development; (4) Provide access to life-long learning; and (5) Create an effective education management system in accordance with the principles of good governance and inclusive stakeholders' engagement.

To ensure that Thailand's development leads to "Stability, Prosperity and Sustainability," greater emphasis must be given to creating a sufficient, strong and vibrant national capital to drive Thailand's mid-term and long-term goals. A crucial element is "human capital." The country has to be ready for challenges that come with the tides of globalization. On this issue, the Government has applied His Majesty the Late King Bhumibol Adulyadej's SEP to its work in the field of education. This includes, for example, creating **SEP-guided schools and learning centers**. The 21,185 SEP-guided schools are characterized by, among others: (1) Atmosphere and environment conducive to creating a society of learning; (2) Sufficiently-managed work plans and projects; (3) Lesson plans and / or knowledge acquisition plans, including teaching methods, which enable learners to understand, recognize and put key elements of SEP into practice; (4) Dedicated, virtuous and self-sacrificing management team that can serve as a true role model for everyone in the institution; (5) Teaching staff who can guide and stimulate students to think critically, synthesize ideas, make decisions based on reason and knowledge of changes that take place in the world, and avoid threats and risks; (6) Knowledge development system for faculty and staff; (7) Activities, learning and training sites and laboratories in real-world settings as well as community-based theoretical underpinning to respond to the needs of learners in order for them to become self-dependent and secure employment and livelihood; (8) Students who understand and recognize value of moderation, mindfulness, independence, reasonableness and virtue; (9) Constant contact with the local community in support of a learning process that fosters "sufficiency-livelihood" for students; (10) Preparedness against risk through a result-based assessment. Resources have been used in a careful, transparent and reasonable manner, while unnecessary expenditures reduced. Additionally, research, work and human resources are continuously developed to keep up with technological and knowledge innovation challenges. In 2015, agencies under the Ministry of Education have developed the capacities of these SEP-guided learning schools to become "SEP Learning Centers for Education", which are monitored and evaluated following the progress report requirements of the Ministry of Education. They will be a key mechanism to expand SEP to other educational institutions in the country.

On 16 May 2017, the Cabinet has approved in principle the establishment of the Southeast Asian Ministers of Education Organization's Regional Center for Sufficiency Economy Philosophy for Sustainability in Thailand in order to serve as a regional center for excellence in SEP. It will be a data and knowledge center, as well as a research center in order to promote integration and application of SEP in the regional context. The center will also encourage regional and international cooperation on SEP.

The Royal Thai Government also places great importance on **promoting vocational education** to accelerate creation of a pool of human resources for the

country's development. Concurrently, the Government supports the "Dual Vocational Education Initiative," where the curriculums of normal education and vocational education are merged, and the "Co-operative Education Initiative," which stresses work experiences at the vocational and tertiary education level. Additionally, to create sufficient manpower to meet the demand of the industrial, agricultural and services sectors, the Government also supports the establishment of vocational education schemes on a bilateral basis between Chambers of Commerce in 18 groups of Provinces and relevant public institutions. This also includes formulating a new curriculum to respond to the needs of ASEAN Community, Special Economic Zones, especially those along the border provinces of Thailand, and creating a University Business Incubator in universities in Thailand.

While the opportunity for education in Thailand is open for all, **Thailand still has challenges in terms of quality of the education system.** An example is the level of academic achievement of ordinary students, which in 2015 was less than 50 per cent, and the result of the Program for International Student Assessment (PISA) testing system which is lower than many countries at a similar level of development. These results suggest that there is still inequality in access to quality education among schools of different size and location, due to the fact that resources and personnel have not been equitably spread nationally, especially in remote locations. Furthermore, Thai students are more interested in pursuing higher education rather than vocational education. According to IMD assessment, Thai universities' quality is ranked 47th out of 61. These underline the need to address quality in the Thai education system.

The main challenge for the Thai education system is how to **raise education standards and create a culture that is conducive to learning.** The Royal Thai Government has translated its educational policy into concrete actions. These include measures to attract capable personnel to follow a teaching career, create a network for an exchange of teaching experiences, develop quality training courses for teachers and develop capable, dedicated and able teachers to inspire students. The Royal Thai Government will also broaden cooperation between vocational institutions, tertiary education institutions, the private sector and experts from Thailand and abroad. This cooperation is expected to create specialized qualification courses to meet specific needs, research innovation projects and transformed local community learning centers. The community level learning centers will support orderly and systemic management of local knowledge complimented by technological application and serve as a living and creative hub of learning. Thailand has successfully promoted education programs and opportunities through tele-broadcasting. Likewise, Thailand will create on-demand, easy and time- and place-independent access to digital educational content. This will facilitate Thailand in achieving the goal of quality education development for all groups of people.

Case Study: Khaendong Pitthayakhom School, Buriram Province

Target 4.7: by 2030 ensure all learners acquire knowledge and skills needed to promote sustainable development, including among others through education for sustainable development and sustainable lifestyles, human rights, gender equality, promotion of a culture of peace and non-violence, global citizenship, and appreciation of cultural diversity and of culture's contribution to sustainable development.

The integration of SEP into education has significantly raised the quality of education as well as increased ethical awareness. This has promoted well-rounded education and stimulated life-long learning. The Khaendong Pitthayanikhom School in Buriram Province, which provides education from Grade 7 to Grade 12, is a good case study of SEP integration in school teaching and activities to empower students to be independent. These activities include introducing a school bank, a waste bank and a cooperative community, applying the New Agricultural Theory under the SEP and promoting vocational skills development. As such, students learn how to save. They also learn to give and work as a team. Students become more aware of value and importance of natural resources conservation in their community and are instilled with knowledge and skills for life and in turn able to stand on their own feet.

Goal 5 Achieve gender equality and empower all women and girls

During the last 5 decades, Thailand has been committed to promoting gender equality and continuously integrating gender equality in all areas of national development. Policies, measures and mechanisms have been put in place to enhance women's development and equality as well as to protect women's rights. Thailand has also become a party to international agreements on women's empowerment and gender equality.

The Royal Thai Government has integrated the **Beijing Declaration and Platform for Action into the Women's Development Plan** under the National Economic and Social Development Plan since 1997. At present, the Women's Development Plan is currently under review and will be converted into the "**Strategy for Women's Development 2017 – 2021**". The SDG 5 has been utilized in the revision process as a framework for gender equality and women's empowerment strategies.

Status of women in Thailand has drastically improved. **Girls and boys have equal access to basic education**, and the enrollment rates of women in tertiary education is higher than men. In terms of labor market, more women are in labor force than men (60 per cent). **Percentage of women living in poverty has been decreasing and the current percentage (6.8 per cent) is lower than that of men.** Women have great opportunity and role in the private sector with **38 percent in management positions in 2014**. On the occasion of the establishment of an ASEAN Community in 2015, the Government supported the establishment of the ASEAN Women Entrepreneurs' Network to foster women entrepreneurs and entrepreneurship development at international level. Thailand was ranked 2nd

among Asia-Pacific countries with the most favorable conditions for female entrepreneurship according to the Women's Entrepreneurial Index 2016. Nonetheless, the **number of women in national politics and the number of women holding executive positions in government agencies are still relatively low**. In local administration, the number of women elected remains low but has increased from 11.25 per cent in 2014 to 16.6 per cent in 2016.

In order to **promote women's status and development** at national level, the Government has established the National Commission on Policy and Strategy for the Improvement of the Status of Women and the Gender Equality Promotion Committee. Furthermore, the **Gender Equality Act 2015**, which took effect on 9 September 2015, is Thailand's first national legislation that aims to provide protection for everyone from gender-based discrimination. At agency-level, in 2001, the Government instructed all ministries to appoint a Chief Gender Equality Officer (CGEO). Each CGEO acts as a gender focal point (GFP) and helps promote gender equality in his/her respective office. Since March 2015, the Cabinet has made all permanent secretaries to serve as their ministries' CGEO. Moreover, the current Constitution, which was enacted on 6 April 2017, stipulates that, in allocating the budget, the government should take into account the different necessities and needs with respect to gender (**Gender Responsive Budgeting : GRB**), age, conditions of persons to ensure fairness. The GRB concept has triggered down to all local administrations and a pilot project has been implemented in Surat Thani Province.

The Government has undertaken measures to improve its data collection capacity to **enhance protection and elimination of violence against all women and children**. Thailand, in cooperation with UN Women, has launched a national survey on violence. In this regard, in 2016, the One Stop Crisis Center (OSCC), under the Ministry of Social Development and Human Security reported, that there were 603 incidences of domestic violence in which 87.4 per cent of victims were women.

A recent survey by the National Statistics Office in 2015 reported that **unequal gender roles in family still remain**. Even in households where women work outside the home, women still shoulder the overwhelming burden of household tasks and caregiving responsibilities. As for health, adolescent pregnancy remains a challenge in Thailand. From 2000 to 2012, pregnancies among girls aged 15-19 years continued to rise; such trend improved slightly in 2013 and 2014. In July 2016, the **Act for Prevention and Solution of the Adolescent Pregnancy Problem 2016** was passed. The Act aims to ensure that teenage mothers are allowed to continue their studies at school following pregnancy.

Thailand considers the **development of a gender-disaggregated database** a next step of our effort to achieve gender equality. The establishment of integrated database will allow for easy access and use of data disaggregated by gender; for use in the planning and implementation of policy that promotes the equality and advancement of women. The Government reaffirms its commitment to work with all stakeholders at both national and international levels; for the successful promotion of gender equality and sustainable development.

**Case Study: Mae Fah Luang Foundation under Royal Patronage
and Women and Family Development Learning Centers**

Target 5.2: Eliminate all forms of violence against all women and girls in the public and private spheres, including trafficking and sexual and other types of exploitation.

Mae Fah Luang Foundation is an example of Thailand's effort to promote employment and income among local ethnic minority women in Chiang Rai Province. The Foundation established the Cottage Industries Center, which employs local ethnic minority women and villagers, has contributed to the reduction of prostitution among younger generation. The Center also explores traditional knowledge of each tribe and adapts it to various products. The Foundation **espouses the management principles of the late Her Royal Highness Princess Mother (Princess Srinagarindra) and the Sufficiency Economy Philosophy** as its guidelines. It provides employment for local ethnic minority women and villagers, with the aim of preventing unnecessary relocation to cities for work. The Foundation also supports local knowledge and craftsmanship to create income and sustainable and balanced lifestyle. The Foundation has successfully improved quality of life of the local women by providing them with employment and adequate income, enhancing their status and preventing them from engaging in illegal activities.

Women and Family Development Learning Centers were established to provide vocational training for local women, as well as to protect, assist and rehabilitate victims of human trafficking and prostitution, thus enabling them to reintegrate into society. The Centers also provide assistance in finding employment and funding. The Centers aim to train the victims according to their capability and need, and stress on the importance of creating economic and social security to enable them to be truly independent. Currently, there are 8 Women and Family Development Learning Centers across the country.

Goal 6 Ensure availability and sustainable management of water and sanitation for all

The Royal Thai Government has always emphasized that "*Water is life*". His Majesty the Late King Bhumibol Adulyadej also recognized the importance of the element, as His Majesty once said: "*Most importantly, the people must have water for consumption and agriculture. This is because people can't live without water. People can't live without electricity, either, but if there is electricity but no water, then the people would not be able to live.*" Therefore, Thailand has continuously enhanced Thailand's water resources management strategy. **The National Water Vision**, which was adopted by the Cabinet in July 2000, stated that "*By the year 2025, Thailand will have sufficient water of good quality for all, with institutional management system and legal system to ensure equitable and sustainable use of water resources while taking into account quality of life and community participation at all levels.*" Such vision was

in line with the MDGs which aimed to halve the proportion of people without sustainable access to safe drinking water and basic sanitation by 2015.

In 2014, Thailand achieved the MDG on access to safe drinking water and basic sanitation: 99.8 per cent of households had access to sanitary toilet facilities and 99.6 per cent of households had access to safe drinking water. Nevertheless, **unequal access to safe drinking water existed** in some parts of the country, and the problem was more prominent in rural areas. Water quality in some rural areas was also found to be below. Only 20 – 40 per cent of water supply in municipalities and sub-district administrative organizations met the water standard, due to incomplete water supply systems and poor maintenance. Furthermore, Thailand could not achieve MDG Plus¹ on increasing the share of municipal waste recycle. Solid waste increased continuously, and a large portion of waste was not disposed properly.

SDG6 reflects a joint vision of the global community that holistic management of the water cycle is required in order to ensure access to safe drinking water and sustainable management of water and sanitation. Aside from the need for safe drinking water and sanitation, improving water quality and waste water management, water use efficiency, integrated water resources management and protection and restoring water-related ecosystems are also important.

Realizing the importance of water resources management, the Government has launched **the Water Resources Management Strategy 2015 – 2026** which covers holistic and integrated water resources at 3 levels, namely, water sources management, water usage and waste water management. Additionally, there are also Strategy for Green Growth under the 20-Year National Strategy Framework (2017-2036) and Strategy for Green Growth toward Sustainable Development Under the 12th National Economic and Social Development Plan (2017 – 2021). Under these strategies, Thailand has engaged in numerous activities, for example:

(1) Water usage : The Government has set a goal to provide over 7,000 villages throughout the country with **access to clean water for domestic use** in order to reduce inequality in access to basic minimum needs. In 2016, more than 6,600 villages have gained access to clean water while the rest are expected to have the same access by the end of 2017. On sanitation, currently **71.04 per cent of Thailand's public toilets have passed the Healthy Accessibility Safety (HAS) standard** and 50 per cent of households are equipped with flush toilet. The Government has recognized the importance of integrating water resources management in a holistic manner and, therefore, the Water Resources Management Strategy has established implementation mechanisms at all levels (national level, regional level, provincial level and local level). The undertaken actions cover universal and equitable access to safe and affordable drinking water for all; access to adequate and equitable sanitation and hygiene for all and end open defecation;

¹ Already achieved many of the MDGs, in 2004 Thailand initiated MDGs – Plus, a more challenging set of goals to further push development in the country.

increase water use efficiency across all sectors and ensure sustainable withdrawals and supply of freshwater and reduce the number of people suffering from water scarcity, implement integrated water resources management; and support and strengthen the participation of local communities in improving water and sanitation management.

(2) Water resources management : The Royal Thai Government attaches importance to **conserving and restoring deteriorated upstream forests** and preventing soil erosion to maintain a healthy ecosystems and the balance of nature. We have set a goal to restore 40 per cent of overall forest areas in Thailand. In 2014, the total forest area of Thailand was 163,648 square kilometers (31.62 per cent of total land areas).

(3) Waste water management : **Thailand aims to reduce waste water from its original sources and increase the efficiency of waste water treatment systems** as well as improve community's wastewater treatment. In 2015, 74 per cent of sampling surface waters and 88 per cent of sampling marine water were found to be satisfactory. Moreover, in 2016, community's wastewater treatment capacity was improved by 30 per cent.

The Government realizes the significance of enhancing international cooperation and capacity building for developing countries on water-related and sanitation activities. In this regard, in 2016, Thailand engaged in a number of cooperation projects with neighboring countries and international organizations such as groundwater recharge project, underground water storage project, Global Analysis and Assessment of Sanitation and Drinking-Water (GLAAS) with the World Health Organization and the Mekong River Commission (MRC).

Thailand's current water demand volume is close to water volume of the country's reservoirs, thus Thailand still has enough water for basic human needs. Nonetheless, when comparing the future water demand volume with current water storage capacity, Thailand's water shortage problem will intensify since a dam construction process generally takes 20 years to complete.

Thailand's main challenges under Goal 6 are access to safe drinking water in accordance with WHO's Guidelines for drinking-water quality (GDWQ) in rural areas and access to proper toilet facilities in remote and rural areas. Additional challenges include **methodology for collecting agricultural, industrial and household water usage data**; development of a roadmap and target setting for enhancing water use efficiency; and ensuring sustainable use of freshwater and freshwater biomes.

**Case Study: Mosawan Village, Mae Le Sub-district, Mae Wong District,
Nakhon Sawan Province**

**Target 6.1: By 2030, achieve universal and equitable access to safe
and affordable drinking water for all**

Mosawan Village has successfully addressed water scarcity, and now every household has enough water for domestic use throughout the year. Such success can

be attributed to local management, community participation, knowledge exchange, good governance, critical thinking, monitoring mechanism, knowledge development and teamwork. The work started with the establishment of the “Mae Wong Care for Forest Network” with the objective of restoring upstream forests; learning how to develop mountain water supply system from successful example at Baan Pu-to, Uthai Thani Province; drafting and refining a project proposal for support from the Social Investment Fund (SIF) by the Ministry of Finance; working together to install 14-kilometer long water supply pipe from water source in Mae Wong National Park; setting up water management committee with emphasis on transparency and verifiability; setting up community water usage regulation; and building a new generation of leaders to ensure the project’s sustainability. Income from water supply charge has been used for community development activities such as education grants for children. The village has been able to experience all the benefits from the water source in Mae Wong National Park and has recognized the importance of forest; its members thus have taken part in protecting and restoring the forest so it can continue to provide safe and affordable water supply for the village throughout the year.

Goal 7 Ensure access to affordable, reliable, sustainable and modern energy for all

Energy is a valuable resource for a country’s security and economic growth. Thailand strengthens the country’s energy security through seeking and developing sources of energy and electricity, diversifying sources and types of energy with emphasis on regulating energy pricing to ensure accessibility to energy that is both affordable and fair, and efficient use of energy that benefits economic development.

Thailand continues to drive the energy security strategy forward by introducing the country’s **Thai Integrated Energy Blueprint (TIEB)** with a 20-year long-term energy plan aimed at achieving energy security, economic prosperity, and social sustainability. The Blueprint comprises of the Power Development Plan (PDP), Energy Efficiency Plan (EEP), Alternative Energy Development Plan (AEDP), Gas Plan, and Oil Plan covering all aspects of the energy efficiency chain.

In order to **ensure access to affordable, reliable, sustainable and modern energy for all**, the Government has implemented measures according to PDP which places importance to the electrical system security, reasonable electricity costs with limited effect on the environment. There is also follow-up on planned construction of power plants that includes small power plants, renewable energy power plants and private power plants for distributing electricity in remote areas. The Government has also studied and developed transmission systems to accommodate increasing demands for power supply in populated areas and to distribute electricity to remote areas via underwater electrical cable systems.

Regarding the **sustainable and environment-friendly energy development**, the Government acknowledges that renewable energy and energy savings are key to reduce greenhouse gas emissions. In this regard, Thailand has adopted the Paris Agreement during the 21st session of the Conference of the Parties (COP 21) on 12

December 2015 in Paris, France. Consequently, the Government has been implementing the Alternative Energy Development Plan (AEDP2015), **aiming to boost the ratio of renewable energy use, including electricity, heat and biomass, from 13.83 per cent to 30 per cent by 2036**. Currently Thailand has the installed capacity to generate electricity from solar power at 2,582.04 megawatts, which is highest among Southeast Asian countries.

To encourage greater use of renewable energy, Thailand supports investments in renewable energy by approving the purchase of renewable energy both from new projects and from projects pending approval, and through new financing method, such as Feed in Tariff, to strengthen competitiveness of the private sector. This will help boost investments and stimulate renewable energy development. With longer periods of financing, the public sector is able to thoroughly plan ahead for the procurement of electricity from renewable energy consistent with the cost that is fair to both the electricity suppliers and consumers.

Thailand is a state party to the International Renewable Energy Agency (IRENA). It provides Thailand with opportunities to participate in international activities, such as study and research projects on renewable energy, invite international experts to train Thai personnel responsible for energy issues, exchange academic and new technical knowledge as well as building network and stimulate private sector investments in renewable energy.

Regarding energy conservation, Thailand has been strictly implementing the **EEP2015, which aims at decreasing energy intensity at least 30 per cent by 2036** compared to 2010 by promoting energy saving products, campaigning on energy saving, and regulating service providers to use energy efficiently covering all four economic sectors namely transportation, the industry, large commercial buildings, small commercial buildings, and residences. Outstanding results include regulating energy conservation and increasing efficiency of energy use in factories and buildings, developing specifications of high-performance energy-saving equipment and machinery, and providing financial support for energy conservation. Incentives and financial benefits are provided for suppliers to increase investments in high-performance energy-saving machinery, such as low interest loans, investments support, and saving subsidies.

Most recently, the Government has initiated its **Energy 4.0 policy** in support of Thailand 4.0 national strategy, an innovation-driven policy aimed at increasing per capita income, pulling Thailand out of the middle-income trap and transforming Thailand into a value-based economy. Thailand 4.0 Policy focuses on improving efficiency of the current energy system, applying innovation in developing and improving the energy management system to ensure efficient production and procurement of energy and enhancing energy security. This will result in competitive energy costs, lay good foundation for the economy and attract domestic and foreign investments and help advance Thailand's economic growth.

In order to realize SDG7, Thailand also applied SEP to help support **energy management in communities** for more than a decade. The Philosophy emphasizes the value of and the need for energy conservation, the importance of using local source of energy sustainably, and the application of energy technology to empower

communities to become self-reliant in the future. The three main components of SEP are (1) Moderation, meaning moderate, balance, and efficient use of energy (2) Reasonableness, meaning appropriate use of energy and prioritizing domestic sources over importing energy, and (3) Self-immunity, meaning using renewable energy available in the community and building energy security from diversifying sources of energy. SEP is to be applied by **two accompanying conditions**: appropriate knowledge and ethics and virtues of the leaders. Five working plans are (1) to create community researchers (2) to encourage local economy through energy consumption reduction in community enterprises (3) to encourage public awareness in efficient use of energy through “Power Conservation Community” Project (4) to provide nationwide training for provincial-level energy planners with emphasis on successful model projects, such as local enterprise energy conservation project, solar cell in remote areas project, solar water pump system for irrigation operation and designing and development technique for renewable energy (5) to multiply results of community-based energy projects with large scale impact, such as solar water pump users for irrigation project, farm-to-household biogas system, industrial-sized solar dryer for processed products manufacturing network.

Today, Thailand has raised the capacity of 1,629 Local Administrative Organizations to become completely self-reliant in managing energy in communities, with over 6,000 community energy volunteers delivering news and information from the Ministry of Energy with approximately at least 300 participants per community. As a result, communities are able to save up to 2,000 Baht (approximately 57.14 USD) /year/household on energy expense, equal to 7 per cent of money spent on energy. In Thailand, there are 72 communities with the potential to become small energy-producing communities through integrated budgeting and access to funding, which will strengthen and empower communities.

Thailand is facing various **challenges of energy security**. In the domestic context, Thailand has to meet rising energy demand. In the global context, the volatile political situation in the energy supplying countries, changing geopolitics of major energy and economic powers, and climate change are affecting Thailand’s energy policy. The Government has to carefully manage its energy policy as the country **imports over 70 per cent of oil and gas**. The diversification of energy sources is important for Thailand's energy security. Applying SEP as a guiding principle in managing the country's energy will help strengthen Thailand’s energy security and ensuring access to modern energy for all. There is the need to decrease reliance on imported energy and increase reliance on the production and use of domestic natural resources. Thailand must also use energy sources that are suitable for specific situations and the local environment and diversifying energy sources to become less reliant upon a single energy source like fossil fuel. Raising awareness of the value of energy and promoting more public participation in energy management in community, which will eventually lead to sustainable energy consumption, is another important task.

Case Study: Number 5 energy labels
By the Electricity Generating Authority of Thailand (EGAT)
and the Ministry of Energy

Target 7.3: By 2030, double the global rate of improvement in energy efficiency.

Initiated in 1993, “Together Conservation” Project aims at encouraging more energy conservation, raising awareness of options of energy-saving appliances with Number 5 energy labels. The Project aligns with His Majesty the Late King Bhumibol Adulyadej’s SEP by applying the notions of moderation, reasonableness, self-immunity and knowledge in purchasing products, reducing expenses, increasing income, applying appropriate technology which will help strengthen Thailand’s energy security. The Number 5 energy labels, introduced by the Electricity Generating Authority of Thailand (EGAT) and the Ministry of Energy, have now become the symbol of efficiency and the widely respected standard of energy conservation. At the same time, it also motivates constant production of high-quality energy-saving appliances. Thus far, there are 29 types of products tested and certified with Number 5 energy labels, reducing electricity demand in the country by approximately 4,250 megawatts and widely mobilized public perception of the benefits of effective energy consumption.

Goal 8 Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all

In accordance with Thailand’s 20-Year National Strategy Framework, the Government aims to **upgrade Thailand from a middle-income country to a high-income country by 2036** (with a GDP per capita of approximately 13,000 USD). Thus, the 12th National Economic and Social Development Plan was drafted with the view of creating a resilient, competitive, service-based, digitized economic system. It also envisions an entrepreneurial society with competitive Micro, Small and Medium Enterprises that are supported by innovation and technology to create value-added goods and services from an increasingly advanced, environmentally-friendly means of production. Benefits are expected to geographically disperse across the country in order to reduce economic disparities between regions.

Thailand has set out to stabilize the economy and achieving an average growth rate of 5 per cent per year, with supporting factors such as logistics, energy and R&D that will enable the expansion of the means of production of goods and services. An increase in GDP per capita to 8,200 USD and an increase in total factor productivity of approximately 2.5 per cent per year is envisioned, along with growth targets in main sectors of the Thai economy, such as (1) agricultural sector, industrial sector and service sector, with an average growth rate of 3.0 per cent, 4.5 per cent and 6.0 per cent, respectively, and (2) tourism sector, with the goal of increasing revenue from both Thai and non-Thai tourists, no less than 3.0 trillion Baht (approximately 85.7 billion USD) small and medium enterprises, with a share of total GDP of no less than 45 per cent, once the 12th Plan has concluded.

As a result of 6 decades of the economic and social development, the Thai economy has grown at an average rate of 6 per cent per year, evolving from an agriculture-based economy to industry-based economy since 1987, with services becoming an increasingly larger share of the economy in the past decade. Given an expanding economic base and rising incomes, Thailand has been classified as a middle-income country since 1988, with an average income of 29,307 Baht (approximately 837 USD) per year. In 2010, Thailand moved up the rank to be among higher middle-income countries. In the aftermath of the Asian Financial Crisis of 1997, **the Royal Thai Government instituted SEP as the guiding principle to meet the challenges in the implementation of the 9th National Economic and Social Development Plan.** The philosophy helped all sectors to adapt and build immunities to economic risks as well as improving management, transparency and accountability. Disciplined financial management with sustainability at its heart became the norm, which helped improve credit worthiness and increased the country's foreign currency reserves. Laws, rules and regulations were updated to evolving economic and social structures along with improvement in consumer protection. Exports of goods and services have widened in terms of variety and sector, gaining a larger share of the world market and increasing Thailand's foreign currency reserves. This liberal economic policy has upgraded the Thai economy and lifted the quality of Thai goods and services through increased competition. **In 2016, the average GDP per capita was 212,862.3 Baht (approximately 6,082 USD) per year an increase from 203,356.1 Baht (approximately 5,810 USD) per year in 2015** (Source: State of the Thai Economy in the Fourth Trimester of 2016 and Forecasts for 2017, Office of the National Economic and Social Development Board). In terms of the average income by region, the Eastern region has the highest average GDP per capita compared with other regions, with an average GDP per capita of 432,712 Baht (approximately 12,363 USD) per year. Bangkok Metropolitan Region came second, with an average GDP per capita of 410,617 Baht (approximately 11,732 USD) per year, followed by the Central region at 251,392 Baht (approximately 7,183 USD) per year, the Western region at 135,262 Baht (approximately 3,865 USD) per year, the Southern region at 130,978 Baht (approximately 3,742 USD) per year, the Northern region at 93,058 Baht (approximately 2,659 USD) per year, and the Northeast region at 70,906 Baht (approximately 2,026 USD) per year. (Source: Gross Regional and Provincial Product Chain Volume Measures, 2015 Edition)

The Government places importance on stimulating sustainable economic growth with projects such as Strengthening Grassroots Economies under Pracharath Approach, Emergency Credit for Farmers Affected by Drought, Credit for One Tambol One SME in Agriculture, 2nd Phase of Credit Guarantee for Micro Entrepreneurs, and Adapting Supply Chains for Drought Resilience.

Regarding employment, in 2016, the Ministry of Labor has established the **Smart Training Center** to enhance labors' skill in order to raise productivity. The Ministry has also upgraded the capacity of 3,857,538 laborers, provided training to support the development of Special Economic Zones with emphasis on 13 industries promoted by the Board of Investment of Thailand (BOI). Furthermore, the Ministry of Labor supports a more robust relationship between business owners and state-

owned enterprises and their employees in order to improve fairness and solidarity in workplace, benefiting 668,060 workers from 11,391 workplaces.

Skill development programs also provide **vocational training for groups with special needs**. Training programs for specific groups such as pre-discharged army personnel, drug rehabilitated persons, pre-released prisoners, the elderly, persons with disabilities, victims of natural disasters, youth in juvenile centers, and ethnic minorities, aim to build up skills and knowledge for better livelihoods and reintegration into the society. “Smart Job Centers” were established in 44 provinces (11 centers in Bangkok) to make sure that skill development programs are compatible with market demand. Bank of Thailand, in 2016, estimated that the number of legal Thai laborers working in 136 countries was 224,150 with total remittances valued at 114.581 billion Baht (approximately 3.27 billion USD).

The Government gives importance to improving the quality of life and employment opportunities for all, including disadvantaged groups and those in the informal sector. The Government has registered 2.22 million persons in accordance with Article 40 of the Social Security Act of 1990 in order for independent business owners and workers in informal sector to enjoy social security benefits. Capacity building and skills development had been provided to 14,639 workers (from the target of 12,000 persons) in the informal sector. In addition, a total of 4,918 persons received support to set up businesses, from a target of 3,620 (135.86 per cent).

The Persons with Disabilities' Quality of Life Promotion Act 2007 stipulates that employers or business owners or government agencies must support the employment of disabled persons at the ratio of 1 person with disability for every 100 workers, or to give concessions or other benefits or donate to the Fund for Empowerment of Persons with Disabilities. Today, there are 58,518 persons with disabilities in workplaces, with 4,802 working in government agencies and 3,040 working as independent business owners in their communities. Furthermore, there are special loans available for persons with disabilities and their caretakers.

On the elderly employment, the Government has enhanced income and employment of the elderly through Pracharath scheme. As a result, 523 elders were hired by government agencies, 10,412 by private entities, and 6,657 receiving self-preneurship promotion benefits through Older Fund.

Thailand continues to attach importance to protect labors and prevent child labor and forced labor. There have been thorough investigations of employers and employees to ensure protection for workers against wrongful practices. Surveillance of labor in fishing vessels has been coordinated in 22 coastal provinces with relevant agencies such as the Marine Department, Department of Special Investigations, and the Royal Thai Police.

The policy to raise the minimum wage has already come into effect since 10 August 2016. The 5th announcement of the minimum wage for laborers adjusted the minimum wage in 20 career groups. On 1 January 2017, 12 career groups were added in the 6th announcement to mainstream the minimum wage policy across all sectors. Furthermore, the Royal Thai Government is in the process of improving

migrant labor management as well as creating inclusive and sufficient income security and promoting labor market flexibility as Thailand enters the 4.0 digital era.

The Government has pushed the business community to support the **Sufficiency Economy Business Standard (SEBS)** as guiding principle involving 7 core values: immunity, diligence, sufficiency, generosity, morality, social development and respect for stakeholders. SEBS has also been used to assess an organization's progress in sustainability in the long run.

Challenges still remain in developing Thailand's economy due to the impact of internal and external factors. These include the unpredictable trends stemming from the financial reforms of the world's major economies which may negatively impact Thailand's financial sector, export and business opportunities. The borderless nature of global financial markets has accelerated due to advances in technology, financial innovation and the emergence of new financial instruments. In addition, the **liberalization of ASEAN's economy** in terms of both goods and services has led to more competition. In order for Thailand to overcome a middle income trap, there has to be **necessary and sufficient investment in both capital and human resources**, with emphasis on upgrading skills in the technological field.

Case Study : Bangchak Corporation Company (Limited)

Target 8.1: Sustain per capita economic growth in accordance with national circumstances and, in particular, at least 7 per cent gross domestic product growth per annum in the least developed countries

Target 8.4: Improve progressively, through 2030, global resource efficiency in consumption and production and endeavor to decouple economic growth from environmental degradation in accordance with the 10-year framework of programs on sustainable consumption and production, with developed countries taking the lead

The Bangchak Corporation is determined to implement a culture of "developing sustainable business, friendly to the environment and society through SEP". It also supports innovation in tandem with environmental and social sustainability and formulates its vision and commitment to encourage advanced green innovation that is accessible to everyone, ensure customer satisfaction and business partnership, and promote sustainable social development", and develop sustainable business innovation. The end goal is to create not just monetary value but improve the quality of the environment and society. Thus, social and environmental indicators have been chosen as key performance indicators of the Corporation. A 'balanced scorecard' has been used to improve energy mix including various types of renewable energy such as gasohol, biodiesel fuels - in a bid to reduce the reliance on petroleum, improve the quality of environmentally-friendly fuels and reduce harmful substances released into the environment. Furthermore, petrol stations have been opened in collaboration with communities where locals produce such as lemons and eggs are used as marketing promotion in order to secure more income for farmers and promote a sustainable community economy.

Goal 9 Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation

The development of infrastructure and logistics, the development of inclusive industry and the development of science, technology, research, and innovation are all key components of Thailand's Development Strategy under the 12th National Economic and Social Development Plan. These goals correspond with SDG 9, for which Thailand has implemented as follows:

Developing transport infrastructure that is resistant and resilient to change

Transport is key for driving economic and social development and an important mechanism for raising a country's competitiveness. It enhances people's quality of life and is the backbone for moving towards achieving the sustainable development goals. Thailand's sustainable transport development follows **Thailand's 20-Year Draft Strategy for Transport Systems Development (2017-2036)** which corresponds with the 12th National Economic and Social Development Plan and the 20-Year National Strategy Framework. The plans emphasize the **sustainable development of all modes of transport, namely road, rail, sea, and air** to support the country's economic structure to shift towards quality and sustainable growth. This will also increase Thailand's competitiveness and support the ASEAN Community and the connectivity of the 5 Special Economic Zones along the border.

The Government has set out the **20-Year Draft Strategy for Transport Systems Development** with 3 concepts in mind:

1) Effective Transport – The Government is committed to establishing effective transport connectivity at the intra-city, inter-city and international levels. The aim is to **shift modes of transport from road to using more the rail systems**, which will reduce transport costs, lower traffic in major cities, and increase competitiveness for the private sector. The Government has 3 rail system development plans. First, for the intra-city rail system, the Government plans to invest in the public rail transport infrastructure, building 10 rail lines – about 550 kilometers in distance – in Bangkok and the surrounding provinces by 2030. Second, for inter-city rail, the Government has established a project to construct double-track railway lines across the country to increase transport effectiveness. As for international rail connectivity, the Government has planned the development of mid-speed and high-speed trains to connect to big tourist cities and important manufacturing cities in neighboring countries.

2) Green and Safe Transport – The Government has placed importance on environmental issues, having pledged to the United Nations Framework Convention on Climate Change's (UNFCCC) 21st Conference of the Parties (COP-21) to reduce greenhouse gas emissions by 20-25 per cent from the projected business-as-usual (BAU) level by 2030, 5.58 per cent of which is to be cut from the transport sector. As such, the Ministry of Transport has established plans to curb environmental pollution, like the project to procure NGV-fueled public buses, as well as electric public buses, the project to replace diesel-powered locomotive

engines with electric ones, as well as the project to develop public rail transport which will tangibly reduce power consumption and greenhouse gas emissions. As for improving road safety, the Government has set the **goal to reduce the number of road-related fatalities and injuries by no less than 50 per cent by 2020**. The Ministry of Transport has launched many related programs, such as road safety in school zones through the use of road signs, warning lights and road surface markings as well as rolling out road safety outreach campaigns to at least 717 schools, or the program to develop numerous bicycle paths in the country. It has also formulated measures to enforce traffic law in a stricter manner.

3) Inclusive Transport – The Government gives importance to equal access to public transport for the disabled, senior citizens, children and women. As such, the Government has established the policy to apply Universal Design in developing the public transport system's infrastructure and public transport vehicles themselves.

The 3 development plans mentioned above also aim to support the development of human resources, technology, and research and development in utilizing innovation and effective management as tools in the transport systems development process.

The Ministry of Transport's Strategic Plan 2017-2021 is in line with SDGs, setting out clear objectives like reducing shipping and transport costs on the Gross Domestic Product (GDP) from 7.4 to 6.9 per cent, increasing the ratio of rail shipping volume to overall shipping volume from 1.4 to 4.0 per cent, reducing the rate of fatal accidents from 6.34 to 4.07 per cent and cutting greenhouse gas emissions in the shipping sector by no less than 7 per cent. Moreover, the Government has emphasized connectivity in the ASEAN region through mutually beneficial plans based on trust, respect of rights and shared interests.

Thailand places importance on **regional connectivity** and views it as a vital factor in facilitating trade and achieving the SDGs. Connecting different transport networks, including sea transport, would connect the Pacific Islands to mainland countries. Furthermore, Thailand, as a transit developing country, affirms her intentions to support the Vienna Programme of Action to help the Landlocked Developing Countries (LLDCs) achieve the said program goals, as well as SDGs. The Government has endeavored to play an active role to develop international road networks, such as the ASEAN Highway Network, the Asian Highway Network, the international routes under the Greater Mekong Subregion (GMS) framework, the Ayeyawady-ChaoPraya-Mekong Economic Cooperation Strategy (ACMECS) and the Indonesia-Malaysia-Thailand Growth Triangle (IMT-GT) road networks.

Developing Inclusive and Sustainable Industry and Promoting Innovation

The Government, specifically the Ministry of Industry, established the **20-Year Thailand 4.0 Industrial Development Strategy**, which corresponds to SDGs, the 20-Year National Strategy Framework and the 12th National Economic and Social Development Plan. Current industrial development focuses on industrial reform that fosters value-added manufacturing, as well as changing traditional and

basic industry to one that is more modern, creative, technological and innovative. The emphasis is on S Curve and New S Curve industries, as well as Eco-Industry reform where infrastructure is developed to accommodate different types of industry, such as high-technology industry and digital industry, with quality management of natural resources and the environment (Green Growth). The Government has set a strategic framework to drive these concepts forward, namely (1) Industrial reform, (2) Eco-Industry reform, and (3) Connecting Thai industry to the Global Economy.

1) Industrial Reform - To increase digital applications and innovation in industrial management and manufacturing, taking into account **how to minimize effects on the environment and create sustainability in industrial enterprises**, including SMEs and community enterprises. In the past year, the Government has implemented many initiatives, as follows:

(1) Providing entrepreneurs with education and consultation on how to improve their production systems by using technology and innovation to increase productivity and manufacturing efficiency, as well as reducing energy and natural resources consumption to curb impacts on the environment;

(2) Conducting workshops to disseminate information on how to increase competitiveness, using new technology and innovation in their production, and raising (industrial) product standards; and

(3) Encouraging cooperation of the local entrepreneurs and community in safeguarding the environmental and sustainable development of industry.

Furthermore, the Government recognizes the need for **industrial enterprises' access to financial services**, especially for small and medium-sized enterprises in the 10 target industrial sectors (S Curve and New S Curve). The Government has provided financial support through the “Pracharath” or Public-Private-People Partnership mechanism through the **20 billion Baht** (approximately 571.42 million USD) **Pracharath SME Development Fund**, under the Ministry of Finance’s Working Capital Fund Act of 2015.

2) Eco-Industry Reform – The aim is to reform government agencies to be more adaptable to change, develop infrastructure to support industry growth and develop personnel’s skills and know-how to be able to handle change. The Government’s plans for infrastructure development include the Eastern Economic Corridor (EEC) project and the establishment of an eco-system for innovation or Innovation Cities. Additionally, the Government has plans to develop infrastructure in other areas, as well as build product testing facilities to improve product standards and manufacturing process.

The Government has already advanced the reform of some government agencies to increase flexibility by delegating permit and licensing duties to third party organizations and transferring certain tasks and missions from the central agencies to regional bodies. Moreover, the Government has revised laws and regulations to facilitate industry entrepreneurs and investors, like the revision of the Sugar Cane and Brown Sugar Act to cover the process of developing sugar cane into a high-value bio-industry.

3) Connecting Thai Industry to the Global Economy – The aim is to develop industry production methods to satisfy global market demands and move up in the value chains by connecting digital platform, production and marketing systems together. The Government also provides support for Thai enterprises investing overseas and encourages foreign investment in targeted industries through investment promotion measures, National Competitiveness Enhancement for Targeted Industries Act of 2017 aims to encourage investment in targeted industries or in industries that use new or advanced manufacturing technologies.

Another key factor that can help Thailand achieve SDG 9 is the expansion of investment on infrastructure and science, technology, and innovation-based research and development. This can promote growth and development of industries that will drive the future economy. The recent downturn in private investment and the global economy, as well as low growth in public investment, however, proves to be a challenge in the achievement of SDG 9. **It is essential to have conditions that facilitate investment expansion of the relevant sectors** while also supplementing mechanisms that promote the inclusion of the public, private, and academic sectors in **developing transport infrastructure and industry on the basis of technology and innovation development.**

**Case Study: The 9999 Industrial Standard (IS)
by the Thai Industrial Standards Institute (TISI), Ministry of Industry**

Target 9.2: Promote inclusive and sustainable industrialization and, by 2030, significantly raise industry's share of employment and gross domestic product, in line with national circumstances, and double its share in least developed countries.

The Thai Industrial Standards Institute (TISI) of the Ministry of Industry established the 9999 IS, Volume 1-2556 Standard as the industrial sector's standard for applying SEP as a guiding principle for industrial operations that are **balanced with economic, social and environmental considerations**. Industries may then grow in a sustainable manner. The 9999 IS Standard can be applied to the integrated management of an organization, emphasizing the inclusion of all levels of personnel, paying respect to all stakeholders in a fair and appropriate manner and keeping in mind the short and long term goals for the organization and the overall community. Businesses that have utilized the 9999 IS Standard in their operations have seen their companies grow steadily. Their employees, at all professional levels, feel happy and bonded with the company. The companies produce quality goods that satisfy market demands and are friendly to the environment. They have good relationships with their trading partners as well as their clientele. Examples of successful large, medium, and small businesses that have applied the 9999 IS Standard to their operations are the Mitr Phol Group, Bathroom Design Company Limited and the Pornthip (Phuket) Company. These success stories have contributed to significant economic growth at various societal levels, from the community level to the national level. Thailand, in turn, has benefited from increased economic expansion.

Goal 10 Reduce inequality within and among countries

Thailand is determined to address the problem of income inequalities and increase social protection for different groups according to their needs including age, genders and persons with disabilities groups. Furthermore, Thailand also seeks to resolve other types of inequalities, especially discrimination. There have been a variety of policies and plans to raise income for all groups as well as to expand protection equitably throughout. The 20-Year National Strategy Framework lays out a comprehensive structure that fosters opportunities for equality. The 12th National Economic and Social Development Plan envisages a social system and a structure that is just and capable of reducing social disparity with emphasis on helping people with lowest income.

As a result, **the 40 per cent of the population with lowest income saw an increase in their income to 3,353 Baht (approximately 95.8 USD) /person/month which reflect a growth rate of 6.04 per cent** and higher than that of national rate of 1.66 per cent. The Government is also vigilant on labor groups that are prone to being abused and taken advantage of including women, children, migrant workers and unskilled labors. However, income disparity remains prevalent particularly due to gender and age. Women still earn less than men, and the elderly and younger groups earn less than other laborers. There is still **8.55 per cent of labor force living below 50 per cent of median income** (men 4.05 per cent, women 4.50 per cent). Additionally 4.48 per cent of children and 3.25 per cent of senior citizens were found to live below 50 per cent of median income. Labor share of GDP was found to increase slightly from 30.34 per cent and 32.4 per cent in 2011 and 2014, respectively to 33.0 per cent in 2015.

The Government has constantly exerted effort in helping low-income populations by supporting vocational training and building financial management skills. Support is catered to different groups to meet their needs with the main policies as follows:

(1) **Building capacity of communities by Public-Private-People Policy (PPPP)** in accordance with the Pracharath Policy which includes providing business loan, debt reduction programs through partnership with the Government Savings Bank which allows those in debt to extend time for repayment and providing workshops to help improve vocational skills and financial literacy for small community business owners;

(2) **The Registration for State Social Welfare Scheme** opened for registration for the first time during 15 July to 15 August 2016 with 8.32 million registrants, and again during 3 April to 15 May 2017;

(3) **Solving informal debt problems** in an integrated and sustainable manner through regulating informal lenders by allowing them to register their lending business as Nano finance and Pico finance services; expediting the enactment of law that prohibits lenders from charging excessive interest rates and increases the penalty for offenses; creating new methods and channels that enhance access to credit, facilitate debt negotiation, revive jobs of people in debt, promote local community's financial mechanisms.

In addition, the Government has increased the standard minimum wage from 300 Baht/day (approximately 8.57 USD) to 305 – 310 Baht (approximately 8.85 USD) /day in 69 provinces, which has come into effect on 1 January 2017. Furthermore, the Government has setup dedicated employment centers for the elderly. This is to ensure that everyone has an equal opportunity to employment and to decent income. The Ministry of Labor also regularly dispatches onsite visit and inspection to **ensure compliance with labor protection laws** and to safeguard labor rights.

The Government applies SEP as the guiding principle of the country's development. Under **the Strategic Plan for the Integration of Sufficiency Economy Philosophy in Development 2014 – 2017**, Thailand places emphasis on **people-centered development**, area-specific development, step-by-step development, involvement of all sectors and building the necessary knowledge base to create opportunities for people in poverty or those who have low income to be able to live in a self-reliant manner.

In 2016, the Government has established **a social enterprise “Pracharath Rak Samakee”** in each province nationwide. Each social enterprise is made up of various shareholders- public, private, academia, civil society and the local people. All stakeholders hold an equal share in the company and work together towards the goal of sufficiency living. The company takes into account unique local environmental, economic, and social contexts and spreads knowledge in product development, marketing and branding services in a holistic way. The enterprise helps the people in the local areas develop their own livelihood and marketing their products to customers nationwide. This will increase the value of the product and the income of the local communities.

The work ahead will be a challenging one. Strategy Two of the 12th National Economic and Social Development Plan aims to create a just society with less social disparity. The Strategy outlines the goal of **uplifting the income of the bottom 40 per cent of the population by 15 per cent each year**, which is ambitious for a middle-income developing country like Thailand and thus needs timely implementation of strategies and plans. In pursuit of such goal, the Government emphasizes particularly the improvement of access to quality education for children and youth, the provision of health services for people in remote areas through community-based mechanisms, the creation of earning opportunities for people in poverty by fostering land management and increasing welfare for the target bottom 40 per cent through monthly allowances and housing. To allow for the above mentioned activities, Thailand recognizes that synergy among different government agencies and sufficient funding are crucial factors for its success.

Case study: “Thanyaburi Model” and “Tor-Fan” (Dream Weaving) Project by the Ministry of Social Development and Human Security

Target 10.1: By 2030, progressively achieve and sustain income growth of the bottom 40 per cent of the population at a rate higher than the national average.

“Thanyaburi Model”

The Thanyaburi Model was inspired by His Majesty the Late King Bhumibol Adulyadej’s SEP to concretely help revive and develop capacity of the mind, society, health and livelihoods for beggars and homeless people. This is done through disseminating basic knowledge and training of skill sets that would help in building self-reliance. The teaching of good morals, being strong willed, and having self-immunity will help these groups not return to begging. Understanding money management, to reduce spending and increase earnings also is key, for instance, using recycled materials to make products, and growing vegetables as food. These various activities will help people have a sense of direction and purpose in life.

Moreover, to assist these groups in reintegration into the society, a simulated community is set up with the help of various agencies to prepare and train people to live independently before they reenter back into the real world and become positive contributors to society. Products and produce made from the program are sold and the earnings are shared back to the group.

“Tor-Fan (Dream Weaving) Project”

The Tor-Fan Project is where products from the different vocational programs for the elderly, persons with disabilities, women, homeless, and victims of human trafficking, under the Ministry of Social Development and Human Security are sold to the general public. The Project applies SEP as the guiding principle in creating sufficient and sustainable income for the different groups. At present, there are 280 people involved in the Project which is conducted jointly with the private sector pursuant to the Public-Private-People Policy (PPPP) in accordance with the “Pracharath” Policy. The profit from the sales of products will be returned to the workers in the Project, providing them with sufficient funds to build their own livelihoods and thus supporting them to live in the society with dignity.

Goal 11 Make cities and human settlements inclusive, safe, resilient and sustainable

The 12th National Economic and Social Development Plan is the first plan that has specific strategy for urban development. It set priority on integrated urban policy and planning, efficient land management, and decentralization. The strategy also includes the shift towards low-carbon, smart, and inclusive city, local culture and identity preservation, environmentally friendly infrastructure and technology,

and disaster risk management. The core approach is area-based development with particular focus on major cities and special economic zones, while simultaneously promoting other cities. The Ministry of Interior and the Ministry of Social Development and Human Security are the main authorities responsible for driving forwards the SDG11, with supports from relevant agencies, in all aspects for sustainable urban development in line with the New Urban Agenda.

Progress has been made in accordance with SDG11 in many areas as follows:

Integrated and Resilient Urban Planning: The Department of Public Works and Town & Country Planning has reformed spatial planning system with broad participation of all stakeholders. At present, spatial plans have been done at all stages which are: National Plan, Regional Plan (6 regions), Sub-regional Plan (18 sub-regions), Comprehensive Provincial Plan (73 provinces), and City/Community Plan (435 plans). These plans are to be used by all relevant sectors not only for making integrated policy planning and development at the provincial, district and sub-district levels, but also for land use management, economics activities, agricultural area, industrial zoning, tourism, infrastructure, water management, natural resources and environment conservation in accordance with opportunities, roles and capabilities of each zone.

These urban plans carefully take into account prevention and mitigation measures to cope with flood. They utilize measures such as land use planning in disaster-prone, flood-prone, open, or wetland areas; conservation of forest areas for their water resource and aquatic ecology; physical measures (basin, dredging, flood wall for city and important economic areas); non-physical measures (land-use enforcement under Ministerial Regulations on urban spatial planning); and measure to integrate land-use with spatial planning such as designated green/open space to be used as floodway or “monkey cheek”² areas for flood management and water storage as well setback distance from waterways or reservoirs.

Land Tenure and Management: The major problems in land tenure and management are the concentration of land ownerships and land speculation. More than 60 per cent of land is owned by 10 per cent of population. As such, Thailand is speeding up the process of enacting law to tackle the problem of land tenure. At present, the draft Progressive Land Tax Act, Land Bank Act, and Community Rights in Land and Resource Management Act are being considered and pushed forward.

Adequate Housing: In 2015, there were approximately 21.3 million households in Thailand, among them around 5.87 million households did not have home ownership. As a result, the Ministry of Social Development and Human Security has developed the **10-Year Strategic Plan for Housing Development (2016-2026)** focusing on two groups of low income population. The plan is implemented nationwide by tasking the National Housing Authority to develop

² Monkey cheek is a flood management approach, developed by His Majesty the Late King Bhumibol Adulyadej, by diverting excess water to reservoirs or designated areas for later use or drain out when flood recedes.

housing for the low income (1,707,437 Households) and the Community Organizations Development Institute (Public Organization) to develop housing for homeless and the low income particularly in slums, informal settlement, trespassed land and rural areas (1,044,510 households) respectively. Additionally, the Government Housing Bank is providing concessional housing loan for low and medium income population. As of September 2016, 22,434 million Baht (approximately 650 million USD) has been approved.

Additionally, The Government is now considering the **draft 20-Year Strategic Plan for Housing Development (2017-2037)** containing the vision “Housing for all Thai People by 2037” with 5 key strategies: 1) promoting strong and sustainable community, 2) strengthening housing finance 3) promoting integrated housing management 4) developing and promoting good quality housing and 5) managing environment for good quality of life.

Public Private Partnership: City development companies have been established in many provinces with the aims to raise capital for infrastructure development and to promote the transition towards smart city. Such approach is structured through the collaboration between private sector, people, and the Government forming the “Pracharath” for City Development where everyone has ownership and takes part in the development. At present, there are three city development companies in Khon Kaen, Phuket and Chiang Mai.

Disaster Risk Management: Thailand has integrated National Disaster Prevention and Mitigation Plan 2015 and Climate Change Management Master Plan 2015-2050 to develop prevention and preparation system and enhance resilience through enriching knowledge, strengthening resilience and monitoring capacity at community level, and promoting co-existence with nature under the resilience concept of being “mindful, adaptive, inclusive recoverable, and sustainable.” The plans, grounded on preventive approach, aim to prepare people and youth to be able to response to different kinds of situations. One of the initiatives is **the Community Disaster Risk Management (CBDRM)** designed to create warning and evacuation system for community to be self-reliant. In 2016 fiscal year, CBDRM was implemented in 972 communities/villages. Other programs under the National Disaster Prevention and Mitigation Plan 2015 include capacity building for the prevention and mitigation of large-scale disaster, the use of disaster prevention and mitigation plan at provincial and district levels, compiling a list of risk area, disaster prevention and mitigation training in according to the context of area risk profile. The objectives of these programs and plans are to equip people and community with effective prevention and warning system; to enable people to cope with disaster in order to maintain living in their habitats; to maintain and acquire adequate machines, tools, and equipment for timely rescuing purposes; to further develop infrastructure such as transportation, energy, telecommunication, healthcare to be more resilient in line with the principle of “Build Back Better” and “Build Better from the Start”; to develop database on disaster and integrate information and communication among agencies in order to accurately predict the chance of disaster in each area for timely warning; and to further enhance the Incident Command System .

Empowering Local Governments: The Government is currently restructuring land tax by replacing the Building and Land Tax Act 1932 and Local Maintenance Tax Act 1965 with the draft Land and Building Tax Act in order to empower local governments to efficiently and adequately collect taxes in consistent with the present situations as well as to have sufficient resource to run their local projects. The draft Acts will provide just and reasonable tax schemes, stimulate efficient land use, encourage land tenure distribution, and reduce disparity in land ownership.

Urban Development Project in Thailand: Urban development in Thailand has advanced significantly focusing on creating livable cities and ensuring equal opportunities and equal access to government services for all. Currently, the Ministry of Transport has developed the **Universal Design concept**, enacted laws and regulations aiming to provide basic facilities for elder and persons with disabilities, and developed transportation service buildings that incorporate concepts of Universal Design and Service Design in order to eliminate barriers to access to public transports.

Urban development in Thailand is carried out by various government agencies through **different selected issue-based entry points, depending on their area of priorities**. For example, the Smart City Project of Phuket is pushed forward by Ministry of Digital Economy and Society, while Smart Cities-Clean Energy Project is under the lead of Ministry of Energy, and Livable City and Green City Projects are taken care by the Ministry of Natural Resources and Environment. Moreover, to celebrate its 250 year anniversary in 2032, Bangkok Metropolitan Administration has come up with the project on Urban Regeneration and Conservation or Bangkok 250 aiming to turn around 17 old districts to become livable and efficient and consequently making Bangkok a world class metropolitan.

There are still some issues on which Thailand needs to make more progress such as the formulation of National Urban Policy and the establishment of National Urban Committee in order to achieve an integrated urban spatial development, and decentralization of urban management. It is also needed to enforce the law on urban planning at all levels to prevent urban sprawl, to solve the problem on land distribution, use, and tenure, to develop urban financing, and to improve waste management.

Case Study: Khon Kaen Municipality

Target 11.6: By 2030, reduce the adverse per capita environmental impact of cities, including by paying special attention to air quality, municipal and other waste management

The vision of Khon Kaen municipality is to create society of happiness and livable city of international standard, with particular attention on environmental management and local awareness on climate change. The city also encourages the sense of ownership among its population in climate mitigation and adaptation. The

implementation consist of 1) waste management system from the source to transit waste station and to the terminal, with measures such as encouraging garbage sorting at the households and community levels, cultivating responsible mindset among children and youths, and promoting waste-to-energy plant 2) increasing green spaces/ clean land in the community for air purifying and CO2 absorption 3) promoting clean and environmentally friendly energy, reducing pollution, and supporting light rail usage as main transportation 4) reducing pesticides and other chemicals usage by promoting green market as the source of safe food 5) establishment of air quality control station to closely monitor the city's air quality. In addition, the city also cooperates with private sectors to reduce the use of plastic bags. At present, the works of Khon Kaen Municipality has helped their population to appreciate the importance of living in harmony with nature that is based on research, technology, and new ideas in preservation and restoration of national resources and environment, in order to achieve sustainable development goals.

Goal 12 Ensure sustainable consumption and production patterns

Thailand attaches great importance to environmentally-friendly development. The 20-Year National Strategy Framework advocates for growth that is based on an environmentally-friendly lifestyle. The 12th National Economic and Social Development Plan 2017 – 2021 and the Environment Quality Management Plan 2017 – 2021, as keys national plans on sustainable development, both highlight the significance of sustainable consumption and production (SCP). Additionally, Thailand has also been implementing a range of industry-specific strategies and plans which foster SCP in manufacturing, agriculture, tourism, education and transportation.

SCP in Thailand's context is based on the concepts of sustainable development and the SEP. Thailand believes that the integration of the two concepts will help create a balance between the conservation and the utilization of natural resources and the environment. To implement, Thailand has formulated policies, measures and mechanisms to advance SCP in all sectors including the government, manufacturing and services and civil society, and promoted the mindsets of responsible consumption and production.

Led by the Ministry of Natural Resources and Environment, twenty seven agencies under the Royal Thai Government have jointly formed the Taskforce for SDG12 under the Steering Committee on Natural Resources and Environment for the Implementation of Sustainable Development Goals. The Task Force has put forward the **“Sustainable Consumption and Production Roadmap 2017 – 2036”** which was built on the pre-existing Thailand SCP Roadmap developed under the SWTICH-Asia Program of the Thailand-EU Policy Dialogues Support Facility. For the next 20 years, this new Roadmap will become the basis for harmonizing SCP strategies, plans and projects of various government agencies as well as their implementation.

Thailand believes that strong cooperation from all sectors and all persons is crucial to create a social shift towards SCP and, as a result, achieve SDG12.

Thailand has been continuously **promoting the shift of consumption patterns** in many ways including through educational means and by drawing lessons from experience as well as through adaptation and mindset change in order to reduce unnecessary consumption demands. Some examples include the creation of school curricula on the environment and resource conservation and the promotion of eco-schools. Furthermore, Thailand has put effort in enhancing manufacturing efficiency and efficient resource utilization to encourage sufficiency and foster sustainable lifestyles. In the transport sector, the Government has been planning for **a modal shift in the public transportation systems**, moving towards low-energy and energy-efficient systems such as rail, water and multimodal transport. Thailand supports the usage of intra-city train systems, inter-city high-speed rails and efficient goods distribution systems. At a smaller scale, the Government has been promoting daily usage of bicycles and is currently accelerating the construction of safe bicycle routes in all regions which will become connected as bicycle route networks for both transportation and tourism. This will reduce energy consumption and pollution, saving Thailand's environment.

Among the various measures that Thailand has employed to enhance the involvement of the civil society and the private sector for SCP, one of the key strategies is using **product labels to promote environmentally-friendly products**. The fixation of labels on different types of products, such as green labels and carbon labeling, is a method that relies on the power of consumers to incentivize the private sector to lift up the standards of their goods and services to gain public acceptance as well as boost their own environmental awareness. Also, the Royal Thai Government promotes evaluation and accreditation for environmentally-friendly goods and services such as green offices, green hotels and green standard.

In the industrial sector, Thailand has been promoting its policy on Green Industry. The main objectives of the **Green Industry Policy** include the reduction of impacts on the environment and local communities, the reduction of exploitation of resources and energy and the creation of market opportunities for green products. This includes a range of different activities such as energy saving and reducing industrial wastes, as well as incentivizing measures like accreditation of the Green Industrial Mark (GIM) which would create a positive image of manufacturers in fostering economic growth, happiness and prosperity not only for themselves but also their communities, the environment and the society as a whole.

Furthermore, Thailand has implemented a range of projects on **environmentally sustainable cities and green cities** such as the Smart Cities – Clean Energy Project, promoting energy efficiency, renewable energy, and reducing carbon emission, and the **Green Procurement Project**, promoting green procurement among government agencies, local governments, state enterprises, and other public entities, which would induce the private sector to shift to an environmental-friendly practice and mindsets.

Thailand is currently implementing the **National Master Plan on Waste Management 2016 – 2021** which includes an objective to create an integrated waste management plan. Some of the key concepts under the Master Plan are the reduction of wastes at the source, the centralization of the waste disposal system and

engagement and shared responsibilities of all sectors. As an example, the Government and the private sector are cooperating on the promotion of replacing plastic bags with recycled cloth shopping bags to reduce the amount of wastes. In this connection, Thailand has displayed our commitments internationally by **having ratified all three international conventions on chemicals and wastes**, namely the Basel Convention, the Rotterdam Convention and the Stockholm Convention. The Government has put serious effort in implementing obligations under the conventions. Thailand is currently in the preparation stage to accede to the Minamata Convention on Mercury.

The Stock Exchange of Thailand (SET) has formulated **the Corporate Governance Code** as a guideline to integrate the concept of sustainability into the business sector. Under the Environment, Social and Governance Disclosure (ESG) guidelines, listed companies are encouraged to disclose information on their contribution to the environment and the society under their governance structure. In 2015, 98.13 per cent of listed companies in Thailand disclosed relevant information under the ESG and in 2016, 14 listed companies in the Thai stock exchange have been selected to be included in the Dow Jones Sustainability Indices.

The Government also strongly **promotes capacity-building and building knowledge base in science and technology** which is crucial to the implementation of SDG12. In this aspect, Thailand has cooperated with many agencies such as joining with the United Nations Environment Program and the Commonwealth Scientific and Industrial Research Organization (CSIRO) in organizing workshops on “The Measurement and Monitoring of Material Flows and Resource Productivity Data of Thailand for SDGs Indicators” and “The Evaluation and Monitoring of Material Footprint for SDGs Indicators”. Increasing capacity of Thai agencies in monitoring material footprints and domestic material consumption will help address Thailand’s challenge in implementing SDG12. The Government strongly wishes to further our cooperation with other international organizations and institutions that would support and provide recommendations on implementing measures, good practices, creating statistical data and monitoring and evaluation on material footprints and domestic material consumptions in the future.

**Case Study: Wongpanit Garbage Recycle Separation Plant,
Phitsanulok Province**

Target 12.4: By 2020, achieve the environmentally sound management of chemicals and all wastes throughout their life cycle, in accordance with agreed international frameworks and significantly reduce their release to air, water and soil in order to minimize their adverse impacts on human health and the environment

Established in 1974, the Wongpanit Garbage Recycle Separation Plant in Phitsanulok Province buys recyclable wastes from various sources such as households, communities, shops, factories and hospitals to sort, recycle or bury them in landfills. The company’s good practice as a one-stop full-cycle waste

management facility has led to different groups being interested in learning from them, resulting in the company holding educational and vocational training sessions for the disadvantaged in order for them to become self-reliant and self-sufficient. Some important policies of the company include controlling its operation according to the ISO 14001 standard on environmental impact, building awareness to all employees, strictly abide by Thai regulations and laws as well as international standards under, inter alia, the Basel Convention and the EU's Waste Electrical and Electronic Equipment Directive. Such business operation has significantly helped mitigate the problem of excess wastes in an environmentally-friendly way and at the same time reduced greenhouse gas emissions.

Goal 13 Take urgent action to combat climate change and its impacts

Thailand is a country highly vulnerable to adverse impacts of climate change. It is ranked as the 12th country in the "extreme risk" category in the Maplecroft's Climate Change Vulnerability Index (CCVI) and, according to the Climate Risk Index (CRI) by Germanwatch, Thailand has also been identified as one of the top ten most affected countries from long-term impacts of extreme weather events.

Thailand has long realized the importance of addressing climate change. In the speech on 4th December 1989, His Majesty the Late King Bhumibol Adulyadej stressed that **climate change is a global issue which Thailand as a responsible member of global community has the duty to address at both national and international levels.** The statement demonstrated His Majesty's great vision even before the issue of climate change was widely discussed in global forums. As a basis for Thailand's climate actions, His Majesty had also incorporated means and methods in tackling climate change in many of his Royal Projects such as the Chang Hua Man Royal Project, the "Monkey Cheek" Project and the Rain Making Project

Since Thailand became a party to the United Nations Framework Convention on Climate Change (UNFCCC) in 1992 and to the Kyoto Protocol in 2002, Thailand has continuously worked with the global community to stabilize greenhouse gas concentrations in the atmosphere and to adapt to adverse impacts of climate change while enabling sustainable economic and social development. The Government has submitted our **National Communications and Biennial Update Report** as required by the UNFCCC in order to regularly exchange information on Thailand's national policies and corresponding climate measures.

On 21 September 2016, the Prime Minister of Thailand deposited the instrument of ratification of the Paris Agreement to the United Nations Secretary-General during the High-level Event on the Entry into Force of the Agreement at the United Nations Headquarters in New York. To express our commitment, Thailand has submitted Intended Nationally Contribution (INDC) on 1 October 2015 with **an aim to reduce greenhouse gas emissions by 20 to 25 per cent from the projected business-as-usual (BAU) level by 2030.**

On 1 October 2015, the **Cabinet has specified climate change as one of Thailand's policy priorities** and, starting from fiscal year 2016, the Bureau of Budget has allocated budget to concerned agencies for climate actions and to achieve greenhouse gas emission reduction targets. The Government attaches great importance to concrete and practical climate actions and, on 23 May 2017, the Cabinet approved **Thailand's Nationally Determined Contribution Roadmap on Mitigation 2021 – 2030** which contains concrete guidelines and measures in order to achieve our INDC target.

In order to enhance policy integration, climate change issue has been included in the 11th and 12th National Economic and Social Development Plan as well as the 20-Year National Strategy Framework. **Thailand's Climate Change Management Master Plan 2015-2050**, which was approved by the Cabinet on 14 July 2015, has served as a long-term comprehensive framework for all concerned agencies to address climate change in all aspects. The Master Plan classifies climate-related work into 3 areas, namely: (1) climate change adaptation, (2) mitigation and low-carbon growth and (3) capacity building in climate change management. The Master Plan has been implemented at the local level through various projects such as the “Support to the Development and Implementation of the Thai Climate Change Policy” Project which **provides knowledge and capacity training to local actors in pilot areas (16 provinces and 32 municipalities)** on how to integrate the climate change aspect and related measures into their provincial and municipal development strategies. Currently, all provinces and municipalities in the pilot areas have successfully created climate change adaptation action plans.

On strengthening resilience and adaptive capacity to climate-related hazards and natural disasters, the Government has launched the **National Disaster Prevention and Mitigation Plan 2015 – 2019** and mandated each province to formulate their own provincial disaster risk reduction plan. Additionally, Thailand is in the process of preparing the **National Adaptation Plan (NAP)**.

Thailand strives to improve **education, awareness-raising and capacity on climate change mitigation and adaptation**. On 24 January 2017, the Cabinet instructed the Ministry of National Resources and Environment and the Ministry of Education to draft a program of action to promote and raise awareness on climate change and its effects as well as plans and policies on technology transfer and development. At present, the Thailand Greenhouse Gas Management Organization (Public Organization), together with Japan International Cooperation Agency (JICA), has established the **Climate Change International Training Center (CITC)** to be a technical and training center as well as a networking platform for Thailand and other countries in the Asia-Pacific Region to address climate change. The Center has provided training to government agencies, the academia, the private sector and the general public, all of whom are crucial to Thailand's effort to tackle climate change.

As a middle-income country with experience in a variety of areas, Thailand stands ready to assist or to coordinate assistance and knowledge exchange to other developing countries, Small Island Developing States and Least Developed

Countries. In the past, Thailand has had a range of climate-related cooperation with many countries such as Lao PDR, China, Jordan and Germany.

Thailand has attached great importance in addressing climate change. Relevant agencies have integrated the climate change aspect into their policies and plans such as the Alternative Energy Development Plan 2015-2036, the Energy Efficiency Plan 2015-2036, the Power Development Plan 2015-2036, the Thailand Smart Grid Development Master Plan 2015-2036 and Environmentally Sustainable Transport System Master Plan. Nevertheless, the Royal Thai Government has encountered limitations and thus would **need to strengthen our policy implementation mechanisms**. Measurable and verifiable data collection system is also required for an effective implementation. Moreover, enhancing public understanding and awareness, especially among children and youth, is our upcoming priority tasks.

From now until 2030, Thailand will have to face challenges in improving preparedness and capacity of all relevant stakeholders in order to ensure full participation of all sectors to support Thailand's climate actions and efforts in achieving sustainable development.

**Case Study: Natural Museum of Community Water Management
under the Royal Initiative, Buriram Province**

Target 13.1: Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries.

Baan Limthong Community in Buriram Province is in a zone of recurrent water shortages. Water supply in the province has not been sufficient for consumption and agriculture for more than forty years. As a result, the community encountered a high rate of poverty and debt and some of its members were forced to relocate. To solve this problem, the community has laid out a plan with SEP as a guiding principle with key concepts as follows:

(1) Develop community learning centers and facilitate youth activities concerning information technology, including the usage of computers, the global positioning system (GPS) reception and use of satellite imaging (remote sensing) for maps;

(2) Learn about "The King's Philosophy" on water management by visiting Royal Development Study Centers and Royal Projects. The community also established a community water committee to develop a plan which is geo-social appropriate;

(3) Learning by doing. The community built an environment in which its members can learn how to manage water and adapt to water-related disaster through local activities

and projects such as floodway digging, building Kaem Ling (Monkey Cheek) reservoirs and creating retention ponds in the rice fields. Some members have donated their own lands for the good of the community;

(4) Expanding water management network to 3 nearby sub-districts to cover upstream, midstream and downstream waterways which has led to more efficient water management; and

(5) Creating efficient water-usage pattern such as switching to integrated farming, limiting rice cultivation only once a year, and promoting water saving in dry season.

Baan Limthong now serves as a successful example of a community that has transformed itself into a disaster-resilient community by adopting improved management plans which is suitable to the particular circumstances of the area. The average household income has increased 20 times from 2004 to present. The community members no longer need to consider relocating. The water resources management network of Ban Limthong Community has now been expanded to cover 2,221 households and nearby areas of roughly 278.245 square kilometers.

Goal 14 Conserve and sustainably use the oceans, seas and marine resources for sustainable development

With the coast stretching 3,148 kilometers running across 23 provinces, Thailand has been utilizing our coastal areas for economic, social, environmental and security purposes. Hence, Thailand attaches great importance to the conservation and sustainable use of the oceans, seas and marine resources for sustainable development.

Thailand had successfully increased its mangrove forest area from 2,333.08 square kilometers in 2004 to 2,455.34 square kilometers in 2014 (by 5.24 per cent), as a result of mangrove reforestation through reclaiming shrimp farms that had encroached mangrove forest areas and turning them back into mangrove forests. The endeavor was complimented by continued efforts from the government and private sector to preserve and restore mangrove forest. The 2006-2011 mangrove forest resource survey has shown that the overall richness of mangrove forests had improved, and could satisfactorily supply food and nutrients for marine wildlife.

Despite the small increase in area protected to maintain biodiversity, Thailand was not able to achieve MDG 7B on the reduction of biodiversity loss. **In 2015, Thailand's marine and coastal resources were still in deteriorating condition.** Coastal areas had eroded by 830 kilometers. Up to 80 per cent of coral reefs were in severely damaged condition. Up to 40 per cent of sea grass was in severe condition. Near extinct animals such as dolphins, whales, sea turtles and dugongs were found in smaller numbers and the abundance of marine animal resources had declined as a result of population increase, infrastructure development in coastal areas, and economic expansion especially illegal fishing using unsuitable fishing methods. Climate change and other natural causes such as the change in tidal wave patterns due to higher seawater temperatures also impacted the marine ecosystem, resulting in the depletion of marine and coastal resources.

Thailand still needs to address many human activities that affect the marine environment and resources including coastal development, such as industries, aquaculture, tourism, human settlements and fisheries, as well as the increased

amount of marine debris and worsened pollution. Furthermore, the integration of development policies and natural resource management remains a major challenge, which could lead to further environmental and resources degradation and conflicts.

Recognizing the urgency, Thailand has put forward strategy to promote environmental quality and quality of life under the 20–Year National Strategy Framework and the 12th National Economic and Social Development Plan. Our progress on the implementation of SDG 14 is as follows:

Thailand has enacted the **2015 Marine and Coastal Resources Management Act**, the first law that specifically aims to protect important coastal and marine resources. The law establishes the **National Committee on Marine and Coastal Resources Management** which is responsible for:

(1) providing plan and policy recommendations in the management of marine and coastal resources and monitor the implementation of relevant agencies;

(2) considering and approving on the areas where the prevention measures for coastal erosion should be implemented and;

(3) reporting on the situation of marine resources and coastal erosion on an annual basis.

The law also encourages the participation of communities and local governments in conservation through **Provincial Committees on Marine and Coastal Resources Management**, a multi-stakeholder platform that can propose management plans for local marine and coastal resources.

Thailand attaches great importance to addressing the issue of **marine pollution and marine debris**. Various researches has been conducted to improve the situation such as studies on the types and volume of marine litters, the movement and pathway of marine litters and the problem of microplastics in beach ecosystems. In addition, clean-up activities have also been operated in 24 coastal provinces. Waste reduction measures are also implemented in 7 selected pilot areas.

As a measure to address indicators for marine pollution and eutrophication, a monitoring program for water quality and eutrophication (Red Tide Program) has been implemented in Thailand's marine and coastal areas. During 2007 – 2016, red tides have occurred in the upper area of the Gulf of Thailand from 7 to 21 times each year (13 times annually on average). On water quality, the Government has been conducting a study to determine the baseline data on the concentration of nitrate, nitrite, phosphate as well as the amount of **Chlorophyll a** in coastal seawater. Relevant agencies will continue to closely monitor water quality and eutrophication.

Thailand has implemented a number of measures and programs to **preserve the marine ecosystems and enhance biodiversity**. This includes the restoration of degraded marine and coastal ecosystems, the establishment and improvement of fishing measures to be in line with responsible fishery, declaration of marine and coastal conserved and reserved areas, and adoption of marine spatial planning as an integral part of marine and coastal zone management.

At present, Thai waters under ecosystem management measures (such as coastal non-hunting areas, marine fishery sanctuaries and environmental protection areas) sums up to approximately 50,743 square kilometers, accounting for 15.68 per

cent of the total marine area. This includes the **marine protected area (MPA)** of 18,136 square kilometers (accounting for 5.6 per cent of Thai waters), which encompasses 22 national marine parks, 6 coastal non-hunting areas, 160 sites of reserved mangrove forests, 56 marine fishery sanctuaries and 6 environmental protection areas. Furthermore, up to 9 additional areas will be proclaimed as MPAs from 2016 – 2023.

In order to minimize and address the impacts of **ocean acidification** on marine ecosystems, Thailand has worked closely with the UNESCO-IOC Sub-Commission for the Western Pacific (IOC-WESTPAC) since 2014 to learn and provide technical assistance to others countries in the region, as well as to develop the ocean acidification observing network in the region in close cooperation with the Global Ocean Acidification-Observation Network (GOA-ON). Under the IOC-WESTPAC and GOA-ON, Thailand has set up 2 permanent monitoring sites for carbonate chemistry of seawater and biodiversity in the coral reef ecosystem. The average pH of seawater in the eastern part of the Gulf of Thailand is in the range of 7.94-8.05; 7.93-8.06 for the lower western part; and 8.04-8.06 for the Andaman Sea. (The average ocean pH is 8.069.)

The Government attaches high priority to **eliminating illegal, unreported and unregulated (IUU) fishing** and spares no effort to address the concerns by reforming and modernizing its fisheries sector in compliance with international rules. **The Command Center for Combating Illegal Fishing (CCCIF)** was set up in May 2015 to coordinate the efforts of all state agencies to carry out the reform with a clear objective to achieve sustainability in the Thai fisheries sector.

In 2015, Thailand adopted the **National Plan of Action to Prevent, Deter and Eliminate IUU Fishing 2015 – 2019** (Thailand NPOA-IUU) and **the Fisheries Management Plan 2009-2018 (FMP)**. The FMP aims to tackle overcapacity and overfishing of the Thai fishing fleet and prevent the degradation of marine resources. Studies were conducted to determine the country's Maximum Sustainable Yield (MSY) on benthic fisheries, anchovy fishing and other surface fisheries. Other measures that have been introduced include:

(1) conducting surveys of all existing Thai-flagged fishing vessels to confirm the actual number, vessel-type and fishing gears as well as the validity of their vessel registration and fishing license, which has led to the establishment of an up-to-date vessel database "Fishing Info";

(2) fleet-reduction measures to gradually reduce the number of the Thai fishing fleet;

(3) E-license scheme and fishing day scheme based on MSY, which marks a transition from open-access to limited access fisheries in Thailand, and;

(4) Entry / Exit Scheme which controls and manages commercial fishing vessels entering and exiting Thai waters.

To ensure long-term solution to the IUU fishing problem, a number of on-going programs or activities have been put in place, i.e., Port in/Port out (PIPO) Scheme, Vessel Monitoring System (VMS), Fishery Monitoring Center (FMC), National Plan of Fishery Control and Inspection (NPFICI) and Database for Fishing Vessels and Labors. In compliance with international legal frameworks, Thailand

acceded to the Port State Measure Agreement in May 2016, resulting in enhancing regional and international cooperation in blocking the flow of IUU-caught fish into national and international markets. Other agreements to be acceded include the UN Fish Stock Agreement (UNFSA) and the 1993 FAO Compliance Agreement.

Furthermore, **the Fisheries Act 2015** has introduced measures to **facilitate access to marine resources and markets for small-scale local fishermen**, for example, zoning distinguishing commercial and artisanal fishing vessels, and promotion of development of tools for local coastal fisheries. This will assist small-scale local fishermen to stay in the business and in harmony with the sea.

Thailand has ratified the **United Nations Convention on the Law of the Sea (UNCLOS)** 1982 on 15 May 2011. The Royal Thai Government intends to undertake a comprehensive review of existing domestic laws and regulations with a view to progressively harmonizing them with the provisions of the Convention. Moreover, the amendment of the Navigation in Thai Waters Act would allow Thailand to consider harmonizing domestic laws with a view to acceding to various conventions and agreements under the International Maritime Organization, which include MARPOL Annex V, CLC Protocol 1992, FUND Protocol 1992 and London Protocol 1996.

Thailand will continue to exert its utmost efforts to address the challenges in coastal and marine resources management by fostering the integrated coastal management approach, i.e., enhancing coordinated application of the policies affecting the coastal zone and related to activities such as nature protection, aquaculture, fisheries, agriculture, industry, tourism, development of infrastructure, and mitigation and adaptation to climate change. Thailand will continue to engage all stakeholders in the resources management process, raise awareness on conservation and sustainable use of the oceans, seas and marine resources among the public. Further measures will be put in place to address the coastal erosion, conserve and rehabilitate marine wildlife, as well as develop necessary effective measures on waste management before being released in oceans and waterways.

**Case Study: Kung Krabaen Bay Royal Development Study Center,
Chanthaburi Province**

Target 14.1: By 2025, prevent and significantly reduce marine pollution of all kinds, in particular from land-based activities, including marine debris and nutrient pollution.

Target 14.2: By 2020, sustainably manage and protect marine and coastal ecosystems to avoid significant adverse impacts, including by strengthening their resilience and take action for their restoration in order to achieve healthy and productive oceans.

The Kung Krabaen Bay Royal Development Study Center was founded in 1981 to address the degradation of coastal resources due to land and mangrove forest encroachment and over fishing in the eastern coast of Thailand. The Study Center has undertaken studies on sustainable coastal resource restoration based on the

approach "sustainable coastal resource restoration and management from the mountain top ... to the sea" to create balance in the ecosystem where people live in harmony with nature. The center has also raised awareness and instilled the sense of ownership of natural resources in the local communities.

Communities in the area are increasingly taking responsibility for stewardship of the ecosystems they depend through a variety of activities such as conservation of coral reefs and seagrass, constructing artificial reefs, releasing bred aquatic animals, crab bank establishment, and establishing cooperation among local fishermen in managing aquatic resources. At the same time, they aim to make a living in a more sustainable manner such as coastal aquaculture, caged aquaculture in sea water, oyster cultivation, abolishing fishing gears that affect juvenile fish, and reviving the shrimp farms applying an environmentally friendly salt water irrigation system.

These transformations were in line with the concept of "Exploded from within" of the SEP where a single villager realized the need to change and took the first step then the whole community realized they too can make the difference. Community-run crab banks have been lauded for their efforts to conserve the declining crab population, often rallying behind the SEP-based maxim of moderation: "Stop catching a hundred – wait for a million."

Goal 15 Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss

Forests are inextricably linked to social, economic and environmental benefits. Unfortunately, statistic shows that Thailand's forest cover has declined due to people and economic growth factors. Government estimates indicate that Thailand's forest cover declined from 273,600 square kilometers (53.3 per cent of the total land area) in 1961 to 163,680 square kilometers (31.6 per cent of the total land area) in 2014.

The **20-Year National Strategy Framework** contains a **green growth strategy** which aims to protect and restore all types of forests, prevent deforestation, promote sustainable management of forests and enhance cooperation on natural resources and environment in Southeast Asia.

The 12th National Economic and Social Development Plan sets out a goal to **increase forest cover area to 40 per cent of total land area** through various measures including "**One Map**" initiative which aims to accelerate the revision of all maps by having agencies use the same scale of 1:4,000. The revised map can be used to address the issue of overlapping concession areas and as a basis for policy planning to ensure sustainable use of natural resources and reduce inequality. Additionally, the **National Reserved Forest Act** was revised in 2016 to reflect the current situation and **the Government has accelerated the implementation of laws and regulations to tackle forest encroachment** covering 191 square kilometers in 2015.

In order to increase Thailand's forest cover area, Thailand has encouraged reforestation in conservation forest and national reserved forest to replace degraded forest land and accelerate recovery of forest structure. **Community forests**, which are managed in a participatory manner by local citizens and communities, are established. The local communities in these forest areas have espoused the SEP as their guidance to improve the quality of life. Other measures include promoting **long-term economic plantations** such as teak, Ormosia, and Siamese rosewood, **production of economic plantation in private areas** and **financial mechanism for reforestation** such as forest bonds, tree banks and reforestation fund. In addition, research and development of growing crops in the forest areas in a sustainable manner, such as agroforestry, have been promoted.

With respect to biodiversity, **Thailand is one of the biodiversity-rich countries**. At present, **the total conserved area for biodiversity protection is approximately 116,800 square kilometers (22.76 per cent of total land area)**. From 2005 to 2015, Thailand's biodiversity was constantly under threat from overutilization, introduction of invasive alien species, urbanization, poaching, wetlands clearance and pollution, which resulted in increasing rate of biodiversity loss.

Thailand has formulated national plan for the conservation and sustainable use of biological diversity in accordance with the **Strategic Plan for Biodiversity 2011-2020 and the Aichi Biodiversity Targets** covering 31 targets on conserving, restoring and protecting biodiversity and ecosystem, raising public awareness and understanding the roles and importance of biodiversity to human well-being and collaborating with all relevant sectors in integrated management. Currently, the **Master Plan for Integrated Biodiversity Management 2015 – 2021** has served as a framework for all concerned agencies to coherently manage biodiversity. The Master Plan includes the following measures:

(1) Setting more comprehensive targets under the **Convention of Biological Diversity (CBD)** or the Aichi Biodiversity Targets to include promoting eco-friendly business practice, promoting access to genetic resources in accordance with the Nagoya Protocol and raising public understanding on the **Cartagena Protocol on Biosafety**;

(2) The **Conserving Habitats for Globally Important Flora and Fauna in Product Landscape Project**, which is supported by the Global Environment Facility (GEF), aims to conserve endangered species through improved management of critical habitats of three species, namely, Sarus Crane, Spoon-billed Sandpiper and Water Lily (*Crinum thaianum*). The Government has also **bred and returned endangered species to nature**. In 2016, 36 species of wild animal (a total of 3,807 animals) were returned to nature.

Thailand has been a party to the **United Nations Convention to Combat Desertification (UNCCD)** since 2001. Since 2016, Thailand has been working to develop a **Land Degradation Neutrality (LDN) Strategy** which aims to identify affected areas in order to formulate appropriate measures to prevent, reduce and restore degraded land. To systematically evaluate affected area, by 2017, Thailand will establish national baseline derived from the National Land Use Database of the

Land Development Department and global database from UNCCD secretariat. Moreover, Thailand will continue to build our network to prevent, reduce and restore degraded land and soil in an inclusive manner.

In order to protect endangered species of wild fauna and flora, Thailand has been a party to the **Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES)** since 1983. In 1992, Thailand enacted the Wild Animal Reservation and Protection Act to provide for the establishment of lists of reserved and protected wild animals limit hunting, control trade in wild animal products, allow for the preservation of wildlife habitat. There are also other laws that support the prevention and suppression of illegal wildlife trade under CITES, such as civil and criminal law, customs law, laws on export and import, laws on anti-money laundering and transnational organized crime.

Thailand has always attached great importance to **combatting and eradicating illegal ivory trade** through both the **National Action Plan and related legislations**. On 16 September 2014, the Cabinet approved **the revised National Ivory Action Plan (NIAP)**. Accordingly, as part of NIAP, Thailand revised many related laws, such as the Wild Animals Reservation and Protection Act 2014, and **the Ivory Trade Act 2015** and enacted more than 30 subordinate laws concerning reservation and protection of wild animals and ivory. Thailand has also added **African elephants as protected species under Thai law**.

Improvement has been made to **three ivory-related registration systems** which are: (1) registration system of ivory traders and ivory products list, (2) registration system for legal ivory possession from domesticated and African elephants and (3) registration system for confiscated ivory. These registration systems have been the central database for information on ivory and contributed to success in controlling and combatting illegal ivory trade. 17 cases on illegal ivory were successfully prosecuted and international smuggling rings have been arrested. These successes have led to the decision of the 17th Conference of Parties of CITES, which was held during 27 September – 5 October 2016, to move Thailand from Parties of ‘Primary concern’ to Parties of ‘secondary concern’.

To achieve SDG 15, Thailand needs to accelerate awareness-raising on environmental issues, develop map and designate land use in accordance with the potential of the areas, as well as develop and revise natural resources and environment-related laws to be in line with current economic and social situation. In the long run, financial mechanisms for environment management must be developed, incentives should be offered for efficient use of resources and innovations to enhance effective management of natural resources and environment must be encouraged. Most importantly, degraded natural resources and environment must be restored.

Case Study: Six Royal Development Study Centers

Target 15.2: By 2020, promote the implementation of sustainable management of all types of forests, halt deforestation, restore degraded forests and substantially increase afforestation and reforestation globally

Currently, there are 6 Royal Development Study Centers located in different parts of Thailand. All of them have studied and done research on ways to improve degraded forest in different geographical features of the country to restore balance to ecosystems and biodiversity. The Centers have espoused the SEP as their guidance. Knowledge is systematically acquired with the resolve to bring about strategies and work plans which are suitable for the local areas, and problems are solved in an inclusive manner with all stakeholders and public participation. Initiatives of these Centers include: (1) planting vetiver grass to rehabilitate hard soil; (2) conserving and developing water sources, including check dam, terracing, water diversion, reservoir network, to restore moisture to eroded soils, (3) conserving and restoring forest through different methods, such as the “Three Forests for Four Benefits” which is the principle of preserving and restoring forest that works harmoniously in supporting the economic need, “Wet Forest” which is a method of increasing water body in the forest to improve the moisture level and reduce chance of wildfire, “Reforestation without Planting a Tree” which is a way of let nature take its course in rehabilitating the forest back through its life cycle without any kind of human intervention; and (4) increasing quality of life of the people by serving as “one-stop service” multidisciplinary knowledge centers which promote agricultural and farming practice that is suitable to the geo-social situation so that people can be self-sufficient and do not engage in forest encroachment.

Goal 16 Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels

The Royal Thai Government recognizes that SDG 16 functions as the golden thread that weaves through all SDGs, as it combines the principles of the rule of law, human rights and democracy, which are fundamental in achieving sustainable development. SDG 16 also leads to a society where people can live in peace, dignity and respects for human rights. Therefore, Thailand recognizes the need to build strong legal foundations and a society that promotes human security and domestic stability at the same time.

In the course of previous years, the Government has developed effective crime prevention measures and attached importance on resolving challenges which hinder law enforcement, promoting in good governance in public sector and the country's development in general, particularly anti-corruption and anti-human trafficking.

Regarding national stability and justice, on 24 January 2017, the Cabinet approved **the Framework for Effective Crime Prevention** that connects all relevant government agencies in order to ensuring people's sense of safety in lives

and properties. This framework sets forth 6 aspects of crime prevention, namely (1) creating safe environment, (2) promoting people's participation, (3) reducing recidivism, (4) monitoring the high risk groups that may commit crimes, (5) reducing the probability to fall victims of crimes; and (6) developing and enhancing capacity of justice personnel for crime prevention.

Thailand has also been promoting **legal aids and access to justice** through the establishment of the justice fund and the reform of pro bono legal service, public defenders and legal counselors. This includes Thailand's cooperation with the United Nations Children's Fund (UNICEF) to enhance knowledge and expertise in child protection in the judicial process. These measures are to ensure that people, including children and youth, enjoy equal and inclusive access to justice and are able to receive legal protection, as well as live sustainably under good governance and rule of law.

Human trafficking is one of the urgent national agendas. The Government is committed to systematically solve the problem, with positive and visible results. In 2016, the Government continued to take a holistic policy to combat human trafficking and committed to a **“zero tolerance” policy against all forms of human trafficking**, while providing assistance and protection measures for the victims. This policy has been carried out in collaboration between the public and private sectors, civil society, domestic and international media and related foreign agencies, in order to protect and combat human trafficking in a holistic, inclusive and more effective manner, with special emphasis on the need of vulnerable groups that are prone to human trafficking network including children and women. All these efforts have actually improved the overall situation in Thailand.

To combat corruption is another national priority agenda which the Royal Thai Government has multiplied efforts through structural reforms of all relevant agencies. The National Anti-Corruption Committee and the Thailand Anti-Corruption Coordination Center (TACC) have been set up as national administrative bodies to tackle the problem more effectively. The Organic Act on Counter Corruption 2015 (3rd version) is being revised to **broaden the level of punishment for government officers who accept bribes and to extend its application to cover the business sectors involved.** In October 2016, a legislation which creates the **new specialized Criminal Court for Corruption and Misconduct Offences** has been enacted with the aim to expanding the prosecution of corruption offenses to cover the private sector and lower level of government officials and to resolve corruption cases more expeditiously.

Measures related to dissemination of information and new procurement system have also been introduced to enhance the transparency of the public sector's projects. This innovative effort supplements the implementation of globally-recognized initiatives such as the Integrity Pact, the Construction Sector Transparency Initiative (CoST) and the Extractive Industries Transparency Initiative (EITI). Furthermore, a strict anti-corruption measure is clearly mentioned in the Constitution of the Kingdom of Thailand of 2017, and the National Reform Steering Assembly has also exerted its effort on tackling the patronage system, from which most of the corruption cases begin, in cooperation with the private sector and civil

society. All these efforts are to enhance the country's potential via anti-corruption campaigns and to provide a clean platform for trade and investment, which are important drivers for sustainable development of the country.

There are projects initiated by Thailand to promote the rule of law and criminal justice, which lead to sustainable development and in consistent with the context of the SDGs, and could be shared with other countries as follows:

(1) **Alternative Development** applied as a balanced solution to reduce opium cultivation, and also reduces the demand and output of the narcotic drugs in parallel with law enforcement. This approach was carried out under the initiative of His Majesty the Late King Bhumibol Adulyadej as a Royal Project in 1969 that successfully substituted opium cultivation with cash crops in the northern part of Thailand. The Project was expanded to cover development in other related areas including agriculture, health and education, towards integrated rural development. This development approach is closely related to SEP aiming at local community and people empowerment which builds immunity and resilience to better cope with unexpected situations;

(2) **Kamlangjai (Inspire) Project** initiated by Her Royal Highness Princess Bajarakitiyabha in 2006, aims to help people who has committed crimes to reintegrate back into the society by taking an advocacy role. Groups involved include female inmates and their children, young offenders as well as other groups of people who lacked opportunities in the judicial process. The Project contributes significantly in promoting 'the United Nations Rules for the Treatment of Women Prisoners and Non-custodial Measures for Women Offenders', or "**the Bangkok Rules**", serving as an example for other countries to improve domestic law and correctional regulations related to the treatment of women prisoners.

Last but not least, as the **legal identity** serves as basic assurance of rights and access to public services as stipulated in the law and minimizes risk of being violated or not sufficiently protected by law, Thailand places high importance on birth registration for all children born in Thailand. The country has been successful in carrying out this measure. The UNICEF reported that **birth registration rate in Thailand in 2016 is recorded as high as 99 per cent**, which is outstandingly high by any standard of measurement. This success partly stems from the Registration of Residential Inhabitant Act 1991 and its Amendment of 2008, which provides that all children born in Thailand are entitled to birth registration and birth certificates. Another significant project that has also contributed to the success is the Royal Project on DNA Testing which was initiated in 2013 in order to solve registration problems for people living in highlands or migrant workers regardless of their status, including the children of refugees that are born in temporary shelters. Through this project, Thailand has issued legal identity to 460,000 people from vulnerable groups, which includes no less than 49,000 people living in highlands.

Another important issue is public access to information. Thai constitutions have **provisions to ensure citizens' rights in access to information as part of the civil rights** since 1997. Although the performance to implement this provision is at satisfactory level, there is still a need to continuously maintain the efforts towards the year 2030.

Thailand highly values the protection and promotion of all human rights and fundamental freedom. The Government will continue to undertake legal reforms and other related measures to address all concerns and to promote continuing engagement with the public and civil society and enhancement of the rule of law.

**Case Study: Development Model “Happy Village based on 9 Virtues”,
Buriram Province**

**Target 16.2: End abuse, exploitations, trafficking and all forms of violence
against and torture of children.**

Target 16.5: Substantially reduce corruption and bribery in all their forms.

The “Happy Village based on 9 Virtues” in Buriram has been initiated using the Buriram Case Management Model in propelling provincial strategy to generate sustainable peace. 9 keys for success (the 9 virtues) are kind-hearted people, wisdom, balanced income, good health, good environment, friendly society, free from crimes, self-reliance fund and empowerment of village/community committees. As the village is perceived as a game changer that leads to true peace, the provincial development process is based on the SEP with emphasis on detailed analysis and planning. Participation and integration of work among the public sector, local administrative organizations and the community have been promoted through “Charter of the Happy Village based on 9 Virtues”, which are ethics and Code of Conduct in effectively promoting existing laws enforcement while taking into account the geo-social and cultural aspects and local wisdom. The concept of immunity” under the SEP has also been built by nurturing sense of morality and value on anti-corruption and by making use of local culture and norms as tool to prevent people from wrong-doings. Participation of children and youth is encouraged in sustaining the project in the long run. As a result, people feels more empowered with a stronger sense of belonging in their communities and are more willing to take an active role in problem-solving as important development partners of their village. Villages that declare themselves as Happy Village based on 9 Virtues have found lower crime rate and decreased involvement with narcotic drugs. People share and manage resources fairly, which contributes to peace in the village. Since people accept and respect rules and agreements they conclude together, Buriram Province therefore achieves the goal of “Province with Virtue” that enjoys sustainable happiness.

**Goal 17 Strengthen the means of implementation and revitalize the global
partnership for sustainable development**

The implementation of SDGs so far has shown that Thailand, as a middle-income country, is considerably equipped with Means of Implementation necessary for advancing sustainable development. Thailand’s home-grown approach, the “Sufficiency Economy Philosophy” has been applied to the short, middle and long-term development plans in a manner consistent with the 2030 Agenda for Sustainable Development. Even though some challenges remain, Thailand is ready

to address them and extend our experiences on sustainable development to other developing countries.

In 2016, **75.6 per cent of the government's revenue came from taxation.** The numbers show that Thailand is self-dependent and is able to use the tax revenue as a source to finance the country's development. However, in order to achieve SDGs along with the target of becoming a high-income country as envisaged by the 20-Year National Strategy Framework, the Government needs more resources. At present, the Government's revenue amounts to 21.84 per cent of the country's total GDP. Therefore, **in the middle and long terms, Thailand aims to enhance the effectiveness of tax collection** through applying the National E-Payment system, with the aim of supporting entrepreneurs' capacity, increase the Government's revenue, improve taxation measures and capacity, strengthen local fiscal capacity, create justice and also reduce inequality as a whole.

Thailand attaches great importance to **mobilizing partnership from different sectors** to support the country's development scheme. At present, the Government has a mechanism in place which promotes the involvement and strengthens the work of social enterprises, civil society organizations and volunteers. In fiscal year 2017, the Government allocated budget to 9 projects on development of 91.78 million Baht (approximately 2.62 million USD). In December 2015, the Government together with the private sector and the civil society established **the Public Private Steering Committee or the "Pracharath Mechanism"** with the purpose of reducing inequalities, alleviating human capacity and strengthening the country's ability to compete. A working group has also been established to push forth and support the 13 issues regarding development in the agricultural, trade, industry, service, human development, economics and social sectors. An example can be seen from the establishment of the Pracharath Rak Samakee Social Enterprise in every province, where the private, public and academic sector together with the people in the community, work together to build the community's economy and sustainable happiness and prosperity through the implementation of the SEP. One of the projects is the establishment of a community enterprise in order to enhance the community's capacity to do business directly with modern trade chain in the country. Without a middleman, the farmers can sell their produces at much a higher price. This type of Pracharath Mechanism can lead to achieving sustainable development at the local level.

Internet access can serve as a catalyst for the country's development and reduces inequality between people living in urban and rural areas. In 2015, the number of internet users in Thailand is approximately 43.87 million. However, the number of people registered for high speed internet service (broadband subscriber) only amounts to 7.22 million people or 10.7 per cent of the population (or 33.85 of the household). In this regard, Thailand plans to expand its high-speed broadband system to cover the whole country at an affordable price in order to respond to the needs of people living in all areas. In return, this will provide all people with the opportunity to equally benefit from all digital technologies. In 2017, the telecommunication infrastructure in Thailand covers only 30,613 villages out of 74,965 villages. The Government is implementing the "Net Pracharath" program by

extending the access of broadband internet to 55,313 villages by the end of 2017 and to reach all 74,965 villages in by the end of 2018.

Thailand believes that a country can sustainably develop only when every country is developing together given that all countries are interlinked and interconnected, through people, economy, society, culture and environment, both through negative and positive aspects. The strengthening of partnership among countries to achieve all SDGs by 2030 is therefore crucial.

Thailand attaches great importance to **strengthening partnership for development** with various countries for the past 60 years. These partnerships are mainly done through the Thailand International Cooperation Agency (TICA). Thailand has moved away from being a receiving country to a country which assists others in their development endeavor since 2003.

Thailand's Official Development Assistance (ODA) includes concessional loan for infrastructures projects in developing countries and technical assistance, focusing on capacity building, knowledge and experience sharing in fields which Thailand has the expertise- such as public health, food security, environmental conservation and sustainable development based on the SEP. The amount of Thailand's ODA has increased from 2,665 million Baht (approximately 76.14 million USD) in 2015 to 7,454 million Baht (approximately 212.97 USD) in 2016. Thailand's ODA can be categorized as follows: development cooperation and partnership of 1,610 million Baht (approximately 46 million USD), financial contribution to international organization of 5,016 million Baht (approximately 143.31 million USD) and concessional loan of 827 million Baht (approximately 23.63 million USD). This includes over 200 **scholarships for higher education and short-term trainings in the field of science, technology, innovations and environmentally friendly technology for developing countries**. Moreover, in 2015, the Ministry of Natural Resources and Environment and the Thailand Greenhouse Gas Management Organization have cooperated with neighboring countries in knowledge and technology sharing with regards to air quality measurement, pollution management, and the reduction of greenhouse gas.

In 2016, Thailand chaired the Group of 77 (G-77) which coincided with the first year of the implementation of the SDGs. During the chairmanship, Thailand launched the "SEP for SDGs Partnership" initiative which supports the implementation of SDGs in various countries. In 2016, Thailand hosted a range of activities on SEP including the G-77 Bangkok Roundtable on Sufficiency Economy: and Approach to Implementing the Sustainable Development Goals between 28 – 29 February 2016 and the Sufficiency Economy Philosophy in Business: A G-77 forum on the Implementation of the SDGs held on 1 – 2 June 2016. Moreover, the 2016 G-77 Ministerial Declaration recognized the SEP as a practical approach that can support the implementation and achievement of the SDGs and its universal applicability.

Thailand has cooperated with 10 countries under the SEP for SDGs Partnership. 15 developing countries from Asia and the Pacific, Africa and South America have expressed their intentions to implement the Sustainable Community Development Model based on the Application of the SEP. In this regard, Thailand

has dispatched teams to survey and consult with local partners in Sri Lanka and Mozambique, in order to arrange appropriate preparation before implementing the projects.

Thailand is pushing forward global partnership for sustainable development both at the trilateral and multilateral levels. At the trilateral level, Thailand has also cooperated with groups of developed countries including Japan, France and Germany in the SEP for SDGs Partnership. At the multilateral level, Thailand supports the UN Office for South-South Cooperation (UNOSSC) in reestablishing its regional office in Thailand in order to promote South-South Cooperation in the region. Moreover, Thailand is determined to advocate sub-regional cooperation on sustainable development. Thailand serves as the Coordinator of the Association of Southeast Asian Nations (ASEAN) and promotes complementarities between the ASEAN Community Vision 2025 and the 2030 Agenda. Thailand also is Prime Mover of “Promoting Approaches to Inclusive and Sustainable Development” pillar in the Asia Cooperation Dialogue (ACD), and the Coordinator for Confidence Building Measures in the area of Sustainable Development in the Conference on Interaction and Confidence-Building Measures in Asia (CICA). Additionally, Thailand cooperated with UN Volunteers in holding a Conference on South-South Exchange on Youth Volunteering for SDGs: Sharing Sufficiency Economy Philosophy and other ASEAN approaches.

The private sector also plays an important role in supporting the achievement of SDGs in each country. Thailand holds a policy of **promoting investment in foreign countries especially in ASEAN and emerging markets**. Thailand also attaches great importance in concluding investment agreements with other countries in order to create confidence for private sectors to invest in those countries which in turn will enhance shared prosperity. Currently, Thailand has entered into investment agreements with 44 countries, out of which 25 are developing countries, including 4 LDCs. In 2016, the value of investment by Thai entities in developing countries and LDCs has increased by approximately 10,842 million USD and 1,835 million USD respectively. As of the 4th quarter of 2016, the total value of Thailand accumulative investment to developing countries and Least Developed Countries was at approximately 54,014 million USD and 8,558 million USD respectively.

Thailand has exempted its customs duty on 6,998 items of imported goods originating from LDCs since 2015. This is in accordance with the **WTO Duty-Free Quota-Free treatment for LDCs**. This measure helps improve and support LDCs’ trade capability. In the long run, Thailand wishes to expand more trade cooperation with LDCs. Thailand wishes to see that Thai investment in developing countries and the increased trade opportunity of LDCs will lead to more jobs, more income, and development in these countries.

Looking back on Thailand’s readiness in achieving SDGs, especially on enabling mechanism for the implementation, it is apparent that some challenges still remain such as **enhancing policy coherence for sustainable development**. At present, Thailand acquires various mechanisms to ensure policy coherence such as the CSD which is the main mechanism that oversees policy setting and

implementation on sustainable development. Moreover, Thailand also has other national committees which supervise cross-cutting issues such as the National Climate Change Committee and the Prime Minister's Delivery Unit which coordinates, monitors and provides recommendation on policy implementation of various government agencies. In addition, the 20-Year National Strategy Framework has set out an integrated policy for national development which helps maintain consistency among the work of different agencies. Nonetheless, Thailand stands ready to learn best practices and mechanisms in policy coherence from other countries.

Means of Implementation are crucial for achieving the 2030 Agenda, so is the will and commitment, which can bring about necessary changes. Thailand reaffirms its commitment in strengthening cooperation with the international community and relevant stakeholders to mobilize Means of Implementation, share our knowledge and exchange good practices, in particular in applying SEP for SDGs, so that all countries can achieve the Sustainable Development Goals by 2030.

**Case Study: Policy on Sufficiency Economy Philosophy
for Sustainable Development Goals Partnership**

Targets: 17.3, 17.6, 17.7, 17.9, 17.15, 17.16

International cooperation is an important element which drives Thailand and other countries towards achieving SDGs. This is particularly true for developing countries which value South-South and trilateral cooperation from developing and developed countries, from international developmental organizations and international organizations.

Thailand has been sharing knowledge, experiences and good practices on sustainable development in various fields. This includes the strengthening of partnership on the implementation of SEPs for SDGs. Some of the initiatives in which Thailand have been involved includes TICA's development programs in neighboring and partnering countries in various regions, including LDCs and SIDS. The program helps to sustainably improve the lives of the people in various ways such as health of mother and child, food security, livelihood and so forth. The program encourages other countries to incorporate the knowledge gained from Thailand and adapt it to fit their geo- social contexts, especially in implementing SEP for SDGs.

An example of our partnership with the civil society is the expansion of Doi Tung Model by the Mae Fah Luang Foundation Under Royal Patronage to other developing countries. This is an example of a civil society organization model, which use SEP to support other developing countries in the form of alternative development. The project has helped improve health, income, education along with the involvement of the community. This type of cooperation under the SEP approach that seeks to address the needs and respect local context, will help Thailand and our partners to sustainably develop and achieved SDGs.

(e) Institutional mechanisms

The United Nations Conference on Sustainable Development (Rio+20) in 2012 adopted “The Future We Want” which envisaged the Sustainable Development Goals, based on the achievements and challenges of the MDGs, to be the common future of the global community. To fulfill its commitment, the Royal Thai Government established the **National Committee for Sustainable Development** to drive economic, social and environmental development in a coherent and integrated manner in accordance with the concept of sustainable development. In June 2015, the structure of the CSD was adjusted to coincide with the Open Working Group proposal for Sustainable Development Goals. After the adoption of the 2030 Agenda for Sustainable Development, on 7 October 2015 the Prime Minister (General Prayut Chan-o-cha) chaired the first session of the CSD.

The National Committee for Sustainable Development (CSD) is a national mechanism to formulate policies and strategies on national sustainable development across economic, social and environment dimensions in a balanced and integrated manner, provide recommendations to improve economic, social and legal measures, as well as promote and support public and private agencies’ activities related to sustainable development, and oversee the implementation of government agencies in line with the country’s sustainable development policies, strategies and international agreements related to sustainable development. The CSD is chaired by the Prime Minister, with the Secretary-General of the National Economic and Social Development Board (NESDB) as the secretariat with 37 members from public, private, academia and civil society altogether.

The CSD has established 3 sub-committees to drive implementation of issues that are key to the country’s sustainable development, as follows:

1. Sub-committee on Implementing Sustainable Development Goals consists of representatives from Ministries, CSOs and experts on development issues. Main responsibility of the sub-committee includes planning the implementation, coordination, monitoring and integrating that implementation in order to achieve each SDG. It is also tasked with defining the goals and indicators of the SDGs and in consistent with the Thai context and SEP, developing Roadmaps for achieving the SDGs, providing policy recommendation for enhancing sustainable development, establishing follow up and review mechanisms on SDGs, reporting on the progress of SDGs implementation, and recommending the CSD on the ways forward. In this regard, the sub-committee has established 3 taskforces, comprising representatives of government agencies, private sector, academia and civil societies, to support the advancement of SDGs, as follows:

(1) Taskforce on Integrating the Implementation of SDGs has the main responsibility in coordinating and sharing the information on the implementation of concerned agencies in achieving goals, targets and indicators of sustainable development. The taskforce had taken significant steps in ensuring the mainstreaming of SDGs into the 20-Year National Strategy Framework (2017-2036) and the 12th National Economic and Social Development Plan (2017-2021). Moreover, it has developed a roadmap for each of the SDGs covering the current status, challenges and recommendations, and plans of actions for short, medium and

long terms, and prioritized the SDGs resulting in a list of 30 SDGs' targets with the potential of quick-win and big impact.

(2) Taskforce on Preparing Reports on the Progress of the Implementation of the SDGs has the main responsibility in conducting and preparing the report of the Voluntary National Review.

(3) Taskforce on Reviewing and Recommending Economic, Social and Legal Measures for the Promotion of Sustainable Development has the main responsibility in providing recommendations on measures and mechanisms to create environment conducive to achieving sustainable development in Thailand through especially economic, legal and social measures which could make far-reaching impacts and those which could serve as foundation for SDGs implementation in the long run. As a pilot project, the taskforce is developing measures to support the implementation of SDG 12 which also could contribute to achieving other targets such as waste management, chemical residues in food and food safety, at the same time addresses food waste and food loss issues, and promotes food security through sustainable agriculture. The taskforce plans to support relevant researches and workshops on the issues in order to formulate policy recommendations for the Sub-committee on Implementing Sustainable Development Goals at CSD.

2. Sub-committee on Promoting Understanding and Evaluating Sustainable Development in Accordance with Sufficiency Economy Philosophy is mainly responsible for promoting understanding about sustainable development and SEP, disseminating knowledge among the public and target groups at all levels including the international community and supporting knowledge management and dissemination of examples of successful models leading to learning and building on these successful models.

3. Sub-committee on Developing Information System to Support Sustainable Development has the main responsibility in providing guidelines to establish a national central database for supporting the formulation of sustainable development targets and indicators at the national and local levels, and to enhance statistical capability and integrate data and information among related agencies in order to develop required disaggregated data for the progress evaluation.

The CSD has tasked key agencies in charge of each target to draft report on the progress of the implementation of each target every six months. The report should include progress of implementation, data in line with each target, problems, obstacles and suggestions, to be presented to the secretariat of the CSD.

5. Means of Implementation

Financing

Driving SDGs in the public sector mainly uses annual budget that the Government has allocated to agencies. This is given the fact that SDGs have been integrated in the 20-Year National Strategy Framework and the 12th National Economic and Social Development Plan, therefore, SDGs already serve as foundations for their action plans. For the goals, targets and indicators that need to

be implemented in an integrated manner among at least two agencies and considered as important issues in accordance with key development policies, national security policies, other key government policies and SEP, and cover all 3 dimensions of sustainable development, agencies can request for strategically integrated budget from the central budget, instead of submitting for budget of each line agency. This way, the implementation will be connected, harmonized and mutually supportive in an efficient, cost-effective and non-duplicative manner.

Statistical capacity

The CSD recognizes the importance and necessity of statistical data collection and formulation of indicators in designing evidence-based policies. Therefore, the Sub-committee on Developing Information System to Support Sustainable Development has been established to support decision-making and policy design of CSD and relevant agencies. While formulating indicators that respond to the needs of SDGs is an important challenge, it is an opportunity to improve the national statistical capacity. The National Statistical Office and relevant agencies will expedite the implementation by using the country's official statistics as the main database, collecting, compiling and developing additional statistical data and indicators and enhancing statistical capacity of relevant agencies and personnel to make the database and indicators for SDGs as comprehensive as possible.

Partnership for development

Thailand is moving forward in raising awareness and seeking cooperation from all sectors to drive SDGs. This includes promoting the roles of community, civil society, and the private sector in contributing to stability, prosperity and sustainability of the country through processes and mechanisms such as the Pracharath Policy. The policy is about mobilizing collaborative efforts between public and private sectors, communities, civil society and academia in order to enhance the country's development in various aspects including the development at community level.

Thailand will continue its efforts to strengthen international partnership, so that all countries will achieve SDGs together. This is undertaken through North-South, South-South and triangular cooperation, particularly in exchanging good practices and providing technical assistance for countries. This includes the "SEP for SDGs Partnership" Program.

Science, technology and innovation

Science, technology and innovation is an important means of implementation of SDGs in Thailand. It enhances the well-being of people and national economic, social and environment capacities. Some examples include increasing productivity, promoting green growth and renewable energy, improving the quality of education and public health and reducing disaster risks.

The 12th National Economic and Social Development Plan (2017-2021) places an emphasis on knowledge-based development derived from the use of knowledge and skills and the application of science, technology, research and development, innovation in all aspects of development. It also stresses environment-friendliness. Creativity and innovation is to be applied to create value added at the local and higher levels, in which the private sector plays a role. Thailand has set

targets in expanding the country's R&D expenditures from 0.62% in 2015 to 1.5% by 2021 and increasing the number of R&D personnel from 13.6 researchers per 10,000 people in 2015 to 25 researchers per 10,000 populations by 2021.

6. Next steps

The CSD will place an emphasis on disseminating knowledge, promoting engagement, establishing directions and targets, creating an enabling environment for sustainable development and building statistical capacities. Important steps include:

1. Studying, compiling and disseminating knowledge and examples of SEP application in support of achieving SDGs and targets at the levels of individuals, communities, the private sector, civil society and across sectors domestically and internationally in order for Thailand and other countries to achieve SDGs altogether;

2. Arranging consultations with various sectors such as civil society, academia, international organizations, and youth, to drive sustainable development in an inclusive manner.

3. Setting target values at the national level for targets and indicators in line with the 20-Year National Strategy Framework, the 12th National Economic and Social Development Plan and other master plans in consultation with key line agencies and related public, private and CSO agencies;

4. Expediting data collection and SDG indicators formulation to cover all targets relevant to Thailand's context as well as establishing a central database to monitor progress of the implementation of SDGs;

5. Expediting the formulation of recommendations to enhance economic, social and legal mechanisms and other supporting measures to drive the country towards sustainable development according to the 20-Year National Strategy Framework, the 12th National Economic and Social Development Plan and SDGs;

6. Monitoring and reporting results of the implementation of SDGs every 6 months.

7. Conclusion

For Thailand, the review of the implementation of the 2030 Agenda for Sustainable Development is not simply a reporting process or an opportunity to exchange good practices and challenges among countries, but also an opportunity for relevant agencies to take stock of the current situation and plans as well as raising awareness and promoting understanding regarding SDGs among public and private agencies, civil society, academia and communities. It serves also as a channel of communication for stakeholders to voice their views and contribute to this process.

At this initial stage of the implementation of the 2030 Agenda for Sustainable Development, the VNR is an important step for Thailand to take stock of our progress and to engage in stakeholder consultations toward the achievement of SDGs.

Thailand encourages all member States to take part in this process for the benefits of their implementation of the 2030 Agenda.

8. Background on SDGs indicators formulation and Statistical Annex

How Thailand has formulated SDGs indicators

In order to achieve SDGs, Thailand needs quality and up-to-date statistical information to support policy planning and decision making processes and monitor outcomes of these processes. Major issues in the context of sustainable development include poverty, social inequality, aging society, social protection including the implementation of Universal Health Coverage, and climate change. Data and indicators have to be developed and monitored. This certainly is an important task for a national statistic system.

As Thailand's national statistical system is not centralized, the process to develop SDGs indicators has to be built upon accumulation and integration of data from different sources such as civil registration databases, reports, surveys and censuses, in order to make sure that no one is left behind. However, a number of challenges remains, such as availability of data, particularly data on the ground and disaggregated data such as by age, sex, and disability, complexity of an indicator assessment process at the global level, coherence in scope and definition of domestic indicators and those produced by Inter-agency Expert Group on SDG Indicators' (IAEG-SDGs), and duplication in some indicators. It is not a simple task to develop comprehensive, accurate, timely and consistent indicators.

Methods of Thailand's SDGs indicators formulation

The National Statistical Office (NSO), as secretariat of the Sub-committee on Developing Information System for Supporting Sustainable Development under CSD, has established 8 working groups to support the work of the Sub-committee. Some significant steps taken by the Sub-committee include:

1) Study of SDGs indicators in detail and provide translation of SDGs, targets and indicators in Thai language to create common understanding and reference. This also includes developing data sources and knowledge related to SDGs and disseminating these on NSO's website for the general public;

2) Establishment of data sets on indicators to support the implementation, monitoring and evaluation of each SDG under the road maps developed by key line agencies as well as assessment of the availability of data to review the country's data readiness;

3) Analysis and review of national SDGs indicators and assessment of the coherence between the national indicators and 241 global SDGs indicators;

4) Development of a data assessment mechanism for each SDG's indicators in detail to ensure that the data produced satisfy technical requirements. This process focused on the participation of relevant agencies, both implementing and supporting agencies, in the review of data accuracy and comprehensiveness, definition, scope, sources and custodian agencies as well as guidelines for the development of data

disaggregated at the local level based on the SEP as appropriate with the national context.

As of 30 March 2017, 12 SDGs (Goals 1, 2, 3, 4, 7, 8, 10, 11, 12, 13, 16 and 17) and 180 indicators have been assessed, as follows:

4.1) 113 indicators at the national level comply with details set by IAEG-SDGs. Of the 113 indicators, 84 are in full compliance: 60 with complete data and indicators and 24 with complete data but no indicator, which will have to be further developed. The other 29 indicators are in partial compliance: 24 with partial data and no indicator, which will have to be further developed, and 5 with no clear information.

4.2) 8 indicators are irrelevant to national context, thus, require no further action.

4.3) 17 indicators could be replaced by proxy indicators.

4.4) 42 indicators with no metadata provided from IAEG-SDGs and relevant agencies have not proposed proxy indicators.

Overview of SDGs indicators, by data availability

Goals	Total number of indicators	Tier 1	Tier 2	Tier 3	Irrelevant to the national context
1	12	5	1	6	
2	14	4	6	4	
3	26	12	3	10	1
4	11	6	3	2	
7	6	2	4		
8	17	9	5	3	
10	11	2	3	5	1
11	15	6	6	3	
12	13	4	5	3	1
13	7	2	2	2	1
16	23	7	9	6	1
17	25	8	13	2	2
Total	180	67	60	46	7

Tier 1: Indicator conceptually clear, established methodology and standards available and data regularly produced.

Tier 2: Indicator conceptually clear, established methodology and standards available but data are not regularly produced.

Tier 3: Indicator for which there are no established methodology and standards or methodology/standards are being developed/tested.

Indicators with complete data which can be used as baselines are made available at the SDGs monitoring system appears on NSO's website (<http://164.115.22.198/sdgs/>).

5) Formulation of a work plan and securing the budget to develop a national central statistical database system for collecting the country's official

statistics and enabling an exchange of data including SDGs indicators among agencies.

Challenges in formulating SDGs indicators

1) Lack of statistical expertise. Most indicators have never been formulated. Available data are spread among agencies, but these agencies' personnel still have to learn and develop their capacity in collecting data on SDGs indicators in line with the global indicators and improving the quality of data to support the monitoring and evaluation of the implementation of SDGs, including formulating proxy indicators in line with internationally recognized standards, recommendations and best practices.

2) Ambiguity in the definition of SDGs indicators. There are several indicators that have yet to be agreed upon in terms of the definition and scope at national level. A clearly defined framework for national indicators - for example, the scope of 'social protection floors' or definitions of 'access to public services' and "city" - will help assign responsible agencies and identify data sources.

3) Data comprehensiveness. For some indicators, data have been collected irregularly or only partially to serve agencies' specific objectives as well legal requirements. Such data have to be further developed in order to represent the overall picture of the country. For example, data on violence against children and women have been collected only in the case of domestic violence.

4) Data disaggregation. Several indicators in Thailand have been produced on a regular basis, however, they lack the disaggregation required by the 2030 Agenda, particularly at the local level and by age, gender, disability, etc.

5) Sustainability of indicators. Certain indicators require data and resources from various sources. Some require expertise in collecting and analyzing as well as extensive funding for example, in 'material foot print' or 'food loss' indicators. To make this type of indicators available in the long run, continued support is required.

6) Duplication in data collection. Several agencies collect overlapping data on the same indicators. Data integration is thus needed to address such difference in definition and scope. This will help meet, if not all, requirements of the global indicators.

7) Coordination. For many SDGs, the key coordinating agencies as well as those in charge of planning and policy-making have to use data and indicators produced by other ministries. This has led to a complicated and time-consuming process of data coordination.

Measures to address the challenges in formulating indicators

Developing a comprehensive set of indicators is necessary for analyzing, evaluating and monitoring the progress of achieving Sustainable Development Goals. In this regard, NSO has proposed the following measures:

1) Enhancing inter-agency cooperation. This is to narrow SDGs data gaps in the case that no data is available at all, data is not available at the local level or not disaggregated. If key agencies have no technical capability or resources, there is a need to provide them with necessary technical assistance and ensure their

engagement and shared ownership. NSO is currently developing official statistics for each sector and a central database for national statistics in accordance with Thailand's Master Plan on Statistics, which will enable an exchange of information between agencies.

2) Developing the quality of data from civil registration and vital statistics, censuses and surveys. The data collection capacity of statistical agencies has to be further developed to address the definition and disaggregation requirements of such data following international standards. This is to avoid omitting or duplicating data and ensure credibility. Such data includes the data on population, persons with disabilities, gender, age, birth, mortality, illnesses, mobility as well as cross-cutting issues. Today, several agencies are developing a common platform for utilizing registration databases from different sources. For example, a database on human trafficking is being developed from databases of the Ministry of Social Development and Human Security, the Royal Thai Police, the Ministry of Labor and judicial institutions. This model can be an approach for developing indicators for other SDGs. It is equally important to maintain the quality of data in this process.

3) Applying modern science, technology and innovation. This will facilitate an integrated exchange of data, an 'open data' system or a system for accessible to all national and international agencies. Several agencies have begun developing a registration data system and integrate it with relevant administrative statistics such as national IDs. In addition the application of remote sensing and Big Data is also being considered.

4) Capacity-building. There is a need to continuously promote the understanding of SDGs and indicators among the public, private and civil society sectors and to develop their statistical capacity in data collection and analysis. This will support decision-making, planning and monitoring of the implementation of SDGs. Nevertheless, international cooperation in terms of technical assistance is needed in some areas such as the calculation of 'food insecurity' for the undernourishment indicator of SDG 2 or the development of data collection and analysis tools for sensitive issues in SDG 5 and SDG 16 with regard to violence.

5) Mobilizing additional funding. This may take the form of pooling budget on statistics among agencies using the data from censuses and surveys or requesting additional budget to conduct a survey in case there is no data in the registration system or reports in order to have complete and comprehensive SDGs indicators.

Statistical Annex

NO.	SDG	Indicator	Description	Disaggregation	Source	Unit	Year		
							2013	2014	2015
1	1	1.2.1	Proportion of population living below the national poverty line		Office of the National Economic and Social Development Board	Percent	10.34	10.53	7.21
			Municipal Area	Administrative Area			7.70	7.12	5.49
			Non Municipal Area				13.99	13.76	8.91
			Female	Sex			10.35	10.12	6.87
			Male				11.6	10.99	7.59
			0-14 years	Age Group			14.73	14.43	10.15
			15-59 years				9.17	8.53	6.03
			60 years and over				13.65	13.94	8.48
NO.	SDG	Indicator	Description	Disaggregation	Source	Unit	Year		
							2006-2008	2007-2009	2008-2010
2	2	2.1.1	Prevalence of undernourishment		National Statistical Office	Percent	7.70	7.40	5.50
NO.	SDG	Indicator	Description	Disaggregation	Source	Unit	Year		
							2004-2005	2012	2015-2016
3		2.2.1	Prevalence of stunting		National Statistical Office	Percent	11.90	16.30	10.50
			Municipal Area	Administrative Area			8.70	13.30	9.80
			Non Municipal Area				13.20	18.10	11.00

NO.	SDG	Indicator	Description	Disaggregation	Source	Unit	Year		
							2004-2005	2012	2015-2016
			Male	Sex			11.80	16.40	11.50
			Female				12.00	16.30	9.40
4		2.2.2	1) Prevalence of Wasting		National Statistical Office	Percent	4.10	6.70	5.40
			Municipal Area	Administrative Area			3.90	6.40	4.40
			Non Municipal Area				4.20	6.90	6.00
			Male	Sex			3.90	7.40	5.50
			Female				4.30	6.10	5.20
			2) Prevalence of of Overweight		National Statistical Office	Percent	6.90	10.90	8.20
			Municipal Area	Administrative Area			10.40	11.30	8.50
			Non Municipal Area				5.50	10.60	8.00
			Male	Sex			7.00	10.10	7.50
			Female				6.70	11.60	8.80
NO.	SDG	Indicator	Description	Disaggregation	Source	Unit	Year		
							2013	2014	2015
5	3	3.1.1	Maternal mortality ratio classified by region and age		Ministry of Public Health	per 100,000 live births	22.20	23.30	24.60
			Bangkok	Region			16.00	17.00	18.90
			Central (Not included Bangkok)				21.10	23.40	21.20
			North				21.30	27.20	25.20
			Northeast				20.20	14.20	24.90
			South				31.80	40.20	32.30

NO.	SDG	Indicator	Description	Disaggregation	Source	Unit	Year		
							2013	2014	2015
			Under 15 years	Age Group			na.	na.	0.60
			15-19 years				9.60	9.60	6.60
			20-24 years				16.30	17.50	16.80
			25-29 years				22.90	17.50	16.20
			30-34 years				21.10	21.10	25.10
			35-39 years				21.10	22.90	25.10
			40-44 years				8.40	10.20	9.60
			45-49 years				0.60	1.20	na.
6		3.2.1	Under-five mortality rate		Office of Permanent Secretary, Ministry of Public Health	per 1,000 live births	8.70	8.80	8.60
			Male	Sex			9.50	9.60	9.60
			Female				7.80	7.90	7.60
7		3.2.2	Neonatal mortality rate		Ministry of Public Health	per 1,000 live births	3.70	3.70	3.50
			Bangkok	Region			3.70	4.60	4.20
			Central (Not included Bangkok)				3.80	4.00	3.70
			North				3.00	2.80	2.70
			Northeast				3.60	3.20	3.20
			South				4.20	4.40	3.70
			Male	Sex			4.00	4.10	3.90
			Female				3.30	3.40	3.00

NO.	SDG	Indicator	Description	Disaggregation	Source	Unit	Year		
							2013	2014	2015
8		3.3.3	Malaria incidence		Department of Disease Control	per 1,000 population	0.82	0.58	0.37
9		3.4.2	Suicide mortality rate		Department of Mental Health	per 100,000 live births	6.08	6.07	6.47
			Male	Sex			9.70	9.60	10.28
			Female				2.58	2.65	2.48
10		3.6.1	Death rate due to road traffic injuries		Department of Disease Control	per 100,000 live births	22.89	23.16	22.30
11		3.a.1	Age-standardized prevalence of current tobacco use among persons aged 15 years and older		National Statistical Office	Percent	na.	20.70	na.
			Male	Sex			na.	40.50	na.
			Female				na.	2.20	na.
			Municipal Area	Administrative Area			na.	18.00	na.
			Non Municipal Area				na.	23.00	na.
			15 - 24 years	Age Group			na.	14.70	na.
			25 - 59 years				na.	23.50	na.
			60 years and over				na.	16.60	na.
12	4	4.2.2	Participation rate in organized learning (one year before the official primary entry age)		Office of the Education Council	Percent	76.70	73.80	76.20

NO.	SDG	Indicator	Description	Disaggregation	Source	Unit	Year		
							2013	2014	2015
13	5	5.1.1	Whether or not legal frameworks are in place to promote, enforce and monitor equality and non-discrimination on the basis of sex		Department of Women's Affairs and Family Development		Yes: Gender Equality Act 2015		
NO.	SDG	Indicator	Description	Disaggregation	Source	Unit	Year		
							2004-2005	2012	2015-2016
14	5	5.3.1	Proportion of women aged 20-24 years who were married or in a union before age 15 and before age 18		National Statistical Office	Percent			
			Before age of 15				na.	3.80	4.40
			Before age of 18				na.	22.10	22.50
NO.	SDG	Indicator	Description	Disaggregation	Source	Unit	Year		
							2008	2011	2014
15	5	5.5.1	1) Proportion of seats held by women in national parliaments and local governments		Office of the Election Commission of Thailand and Department of Provincial Administration	Percent			
			Senator	National level			16.00	17.87	15.58
			Member of the House of Representative				10.60	11.67	15.80
			Provincial Administrative Organization	Local level					

NO.	SDG	Indicator	Description	Disaggregation	Source	Unit	Year		
							2009	2014	
			Chief Executive of the Provincial Administrative Organization				9.33	15.60	
			Members of Provincial Administrative Organization				11.48	13.71	
			Subdistrict Administrative Organization						
			Chief Executive of the Subdistrict Administrative Organization				4.80	7.10	
			Members of Subdistrict Administrative Organization				13.19	20.53	
NO.	SDG	Indicator	Description	Disaggregation	Source	Unit	Year		
							2004-2005	2012	2015-2016
16	6	6.1.1	Percentage of households using improved drinking water sources, by area		National Statistical Office	Percent	na.	na.	98.00
			Municipal Area	Administrative Area			na.	na.	99.00
			Non Municipal Area				na.	na.	97.00
17	6	6.2.1	Proportion of population using safely managed sanitation services, including a hand-washing facility with soap and water		National Statistical Office	Percent			
			1. Percentage of household members using improved sanitation facilities which are not shared				na.	97.20	97.2

NO.	SDG	Indicator	Description	Disaggregation	Source	Unit	Year		
							2004-2005	2012	2015-2016
			2. Percentage of children aged 0-2 years whose last stools were disposed of safely				64.60	56.90	42.0
			3. Percentage of households with a specific place for hand washing where water and soap or other cleansing agent are present				na.	na.	81.2
			4. Percentage of households with soap or other cleansing agent				na.	na.	85.5
NO.	SDG	Indicator	Description	Disaggregation	Source	Unit	Year		
							2014	2015	2016
18	7	7.1.1	Proportion of population with access to electricity		Ministry of Energy	Percent	na.	99.63	na.
19	7	7.2.1	Renewable energy share in the total final energy consumption		Department of Alternative Energy Development and Efficiency	Percent	11.91	12.94	na.
20	7	7.3.1	Energy intensity		Department of Alternative Energy Development and Efficiency	kilotonne of oil euiivalent / billion bath	8.23	8.22	na.

NO.	SDG	Indicator	Description	Disaggregation	Source	Unit	Year		
							2013	2014	2015
21	8	8.3.1	Proportion of informal employment in non-agriculture employment, by sex		National Statistical Office	Percent	38.60	43.10	44.00
			Male	Sex			36.10	40.70	41.90
			Female				41.60	46.10	46.40
22	8	8.5.1	Average hourly earnings of female and male employees, by occupation and age		National Statistical Office	USD (approximate)	2.12	2.17	2.21
			Male	Sex			2.17	2.20	2.23
			Female				2.05	2.14	2.18
			Professionals and managers.	Occupation			4.86	4.98	4.85
			Technicians and related occupations				3.99	4.22	4.26
			Clerk				2.91	3.13	3.27
			Service workers and shop and market attendants				2.23	2.27	2.31
			Skilled workers in agriculture and fishery				1.66	1.82	1.79
			Skilled craftsmen and related trades				0.96	0.95	0.93
			Factory and machine operators and assembly workers				1.50	1.62	1.65
			Elementary occupation in sales and services				1.56	1.64	1.69
			Others				1.09	1.16	1.18
			15-19 years	Age Group			1.10	1.14	1.15
			20-24 years				1.49	1.50	1.52
			25-29 years				1.89	1.90	1.97

NO.	SDG	Indicator	Description	Disaggregation	Source	Unit	Year		
							2013	2014	2015
			30-34 years				2.00	2.15	2.13
			35-39 years				2.13	2.18	2.27
			40-49 years				2.34	2.35	2.43
			50-59 years				2.97	3.03	2.97
			60 years and over				1.75	1.83	1.75
23	8	8.5.2	Unemployment rate, by sex and age		National Statistical Office	Percent	0.70	0.80	0.90
			Male	Sex			0.80	0.90	0.90
			Female				0.70	0.80	0.90
			15 - 24 years	Age Group			3.30	4.30	4.20
			25 - 59 years				0.40	0.40	0.50
			60 years and over				< 0.1	0.10	0.10
24	8	8.6.1	Proportion of youth (aged 15-24 years) not in education, employment or training		National Statistical Office	Percent	na.	12.70	13.31
25	8	8.7.1	Proportion and number of children aged 5-17 years engaged in child labour, by sex and age		National Statistical Office	Percent	na.	na.	2.90
			Male	Sex			na.	na.	3.40
			Female				na.	na.	2.30
			5-12 years	Age Group			na.	na.	1.80
			13-14 years				na.	na.	5.40
			15-17 years				na.	na.	3.60

NO.	SDG	Indicator	Description	Disaggregation	Source	Unit	Year		
							2013	2014	2015
26	9	9.5.1	Research and development expenditure as a proportion of GDP		National Science Technology and Innovation Policy Office	Percent	0.47	0.48	0.62
27	9	9.5.2	Researchers (in full-time equivalent)		National Science Technology and Innovation Policy Office	per 10,000 population	8.00	10.17	na.
NO.	SDG	Indicator	Description	Disaggregation	Source	Unit	Year		
							2011	2013	2015
28	10	10.1.1	Growth rates of household expenditure or income per capita among the bottom 40 Percent of the population and the total population		Office of the National Economic and Social Development Board	Percent			
			bottom 40 percent of the population				9.81	6.03	6.04
			total population				7.43	6.38	1.66
NO.	SDG	Indicator	Description	Disaggregation	Source	Unit	Year		
							2014	2015	2016
29	11	11.5.1	Number of deaths, missing persons and persons affected by disaster		Department of Disaster Prevention and Mitigation				
			Flood						
			Number of deaths			people	31	11	17
			Number of missing persons			people	-	-	2

NO.	SDG	Indicator	Description	Disaggregation	Source	Unit	Year		
							2014	2015	2016
			Number of affected people			million people	1.81	0.88	1.12
			Fire						
			Number of deaths			people	26	44	68
			Number of missing persons			people	0	0	0
			Number of affected people			people	5,206	4,732	22,166
			Storm						
			Number of deaths			people	7	67	0
			Number of missing persons			people	-	-	-
			Number of affected people			people (100 thousand)	107	354	na.
			Drought						
			Number of deaths			people	0	0	0
			Number of missing persons			people	0	0	0
			Number of affected people			million people	5.77	3.98	3.01
			Number of population (as of 31 December)		Department of Provincial Administration	people	65,124,716	65,729,098	65,931,550
30	12	12.1.1	Number of countries with sustainable consumption and production (SCP) national action plans or SCP mainstreamed as a priority or a target into national policies		Ministry of Natural Resources and Environment		Yes: 1) 12th National Economic and Social Development Plan (2017-2021) 2) Climate Change Management Master Plan 2015-2050		

NO.	SDG	Indicator	Description	Disaggregation	Source	Unit	Year		
							2014	2015	2016
31	13	13.1.1	Number of countries with national and local disaster risk reduction strategies		Office of Natural Resources and Environmental Policy and Planning		Yes: 1) National Disaster Preparedness and Mitigation Plan 2015 2) National Adaptation Plan: NAP		
NO.	SDG	Indicator	Description	Disaggregation	Source	Unit	Year		
							2013	2014	2015
32	14	14.1.1	Marine pollution						
			1) Quality of coastal seawater (according to Department of Marine and Coastal Resources's marine water quality index)		Department of Marine and Coastal Resources	Percent			
			Very good				-	11.00	-
			Good				16.00	52.00	16.00
			Fair				72.00	23.00	35.00
			Deteriorated				9.00	13.00	36.00
			Highly deteriorated				3.00	1.00	13.00
NO.	SDG	Indicator	Description	Disaggregation	Source	Unit	Year		
							2009-2012	2014	2015
			2)Proportion of plastic in marine debris		Department of Marine and Coastal Resources	Percent	13.84	na.	na.

NO.	SDG	Indicator	Description	Disaggregation	Source	Unit	Year		
							2013	2014	2015
33	14	14.3.1	Average marine acidity (pH) measured at sampling stations		Department of Marine and Coastal Resources	pH	na.	na.	8.04 - 8.06
34	14	14.b.1	Progress by countries in the degree of application of a legal/regulatory/policy/institutional framework which recognizes and protects access rights for small-scale fisheries		Department of Fisheries	Issue	Yes: 1) Fisheries Act 2015 2) Provincial Committees on Marine and Coastal Resources Management		
35	14	14.c.1	Number of countries making progress in ratifying, accepting and implementing through legal, policy and institutional frameworks, ocean-related instruments that implement international law, as reflected in the United Nation Convention on the Law of the Sea, for the conservation and sustainable use of the oceans and their resources		Department of Marine and Coastal Resources and Department of Fisheries	Issue	Yes : 1) National Marine Security Strategy 2015-2019 2) Port-state Measure Agreement (PSM) 3) Fisheries Act, 2015 4) Marine and Coastal Resources Management Act 2015		
36	15	15.1.1	Forest area as a proportion of total land area		Royal Forest Department	Percent	31.57	31.62	31.60
37	16	16.3.2	Unsentenced detainees as a proportion of overall prison population		Department of Corrections	Percent	26.22	23.64	21.06

NO.	SDG	Indicator	Description	Disaggregation	Source	Unit	Year		
							2004-2005	2012	2015-2016
38	16	16.9.1	Proportion of children under 5 years of age whose births have been registered with a civil authority		National Statistical Office	Percent	na.	99.40	99.50
39	16	16.10.2	Number of countries that adopt and implement constitutional, statutory and/or policy guarantees for public access to information		Prime Minister's Office	Issue	Yes: Information Act 1997		
NO.	SDG	Indicator	Description	Disaggregation	Source	Unit	Year		
							2013	2014	2015
40	17	17.1.1	Total government revenue as a proportion of GDP		Fiscal Policy Office	Percent	na.	na.	19.60
41	17	17.8.1	Proportion of individuals using the Internet		National Statistical Office	Percent	28.9	34.9	39.3
42	17	17.18.2	Number of countries that have national statistical legislation that complies with the Fundamental Principles of Official Statistics		National Statistical Office	Issue	Yes: 1) Statistical Act 2007 2) Thailand's first and second Statistical System Master Plan		