

THE KINGDOM OF THAILAND
NATIONAL ECONOMIC AND SOCIAL DEVELOPMENT COUNCIL (NESDC)

PROJECT FOR PROMOTING SUSTAINABILITY IN FUTURE CITIES OF THAILAND (STAGE 4-5)

FINAL REPORT VOL. 1: SUSTAINABLE FUTURE CITY INITIATIVE

December 2021

JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)

ALMEC CORPORATION
INTERNATIONAL DEVELOPMENT CENTER OF JAPAN INC.

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ABBREVIATIONS

AQI	air quality index
BMA	Bangkok Metropolitan Administration
BOB	Bureau of Budget
CCIO	Chief City Innovative Officer
CGD	Provincial Office of the Controller General
DASTA	Designated Area for Sustainable Tourism Administration
DEDE	Department of Alternative Energy Development of Efficiency
DEPA	Digital Economy Promotion Agency
DEQP	Department of Environmental Quality Promotion
DIW	Department of Industrial Works
DLA	Department of Local Administration
DPT	Department of Public Works and Town and Country Planning
EEC	Eastern Economic Corridor
ESC	Environment Sustainable City
FY	fiscal year
GOJ	Government of Japan
GOT	Government of Thailand
JCC	Joint Coordinating Committee
JICA	Japan International Cooperation Agency
KKTT	Khon Kaen Think Tank
KPI	King Pradjadhipok Institute
LAO	Local Administrative Organization
LRT	light rail transit
LSDP	local strategic development plan
LSFC	Livable Sustainable Future Cities
M/M	minutes of the meeting
MOI	Ministry of Interior
MOTS	Ministry of Tourism and Sport
MOU	memorandum of understanding
NESDB	National Economic and Social Development Board
NESDC	National Economic and Social Development Council
NESDP	National Economic and Social Development Plan
NMT	National Municipal League of Thailand
O&M	Operation and management
ODLOC	Office of Decentralization to the Local Government Organization Committee
ONEP	Office of Natural Resources and Environmental Policy and Planning
OPM	Office of the Prime Minister
OTP	Office of Transport and Traffic Policy and Planning
PAO	Provincial Administrative Organizations
PCC	Project Coordinating Committee
PCD	Pollution Control Department

PDCA	Plan-Do-Check-Act
PKCD	Phuket City Development
PRD	Provincial Public Relations Office
PT	Planning Team
PWDs	persons with disabilities
R/D	Record of Discussion
RUFD	Regional Urban Development Fund
SEC	Southern Economic Corridor
SFC	Sustainable Future City
SFCI	Sustainable Future City Initiative
SPSO	Spatial Planning Strategy Office
TAO	Tambon Administrative Organization
TFCP	Project for Promoting Sustainability in Future Cities of Thailand
TICA	Thailand International Cooperation Agency
TMO	Town Management Organization
TOD	transit-oriented development
U3A	University of Third Ages
UDSD	Urban Development Strategic Division

Executive Summary

Volume 1 Sustainable Future City Initiative

1. Overall Framework of Thai Future City Project

The Project for Promoting Sustainability in Future Cities of Thailand (Thailand Future City Project, hereinafter called the TFCP or the Project) commenced in July 2015 as a technical assistance project between Japan International Cooperation Agency (JICA) and National Economic Social Development Board (NESDB). The overall objective of TFCP is to promote sustainable urban development in the local cities of Thailand. More specifically, TFCP aims to establish a development concept for the Sustainable Future City (SFC) in Thailand and develop a practical implementation mechanism to realize such a sustainable city concept in Thailand.

The Project's overall implementation is shown in Figure 1.1, which includes the following 5 stages.

Stage 1: Policy Study on Future City Development Concept in Thailand, which was incorporated into 12th National Economic Social Development Plan (NESDP). Sustainable Future City Initiative (SFCI) was proposed as a practical implementation mechanism to realize SFC in Thailand,

Stage 2: Preparation of Development Plans and Conduct of Pilot Projects in Model Cities. The proposed SFCI was used as an experiment for the six selected municipalities (tessabans). Through a participatory approach, SFC Plan and Projects were prepared for each city and pilot project implementation was provided as support for the proposed SFC Projects.

Stage 3: Finalization and Dissemination of Planning and Implementation Guideline. TFCP was originally scheduled to complete during Stage 3. During this stage the National Social Development Board (NESDB) was reorganized as National Economic Social Development Council (NESDC). At the same time, NESDC established the Urban Development Strategy Division (UDSD) in January 2019 to actively respond to urban issues. In this context, it was agreed to extend the Project and to implement the SFC in two more cities in order to establish Thai-SFCI.

Stage 4: 2nd Phase SFCI Model City Projects, including second phase of SFCI implementation in Ranong and Chumphon by JICA, Livable Sustainable Future City (LSFC) implementation in 2 more cities by NESDC, monitoring of the first phase 6 cities, the establishment of SFCI Platform and updating of the SFCI Guideline by both parties.

Stage 5: Establishment of Sustainable Urban Development Policy by Thai Government. Based on the result of all the works, JICA and NESDC discussed how to continue sustainable urban development in Thailand cities, which include continuous

policy formulation by NESDC, dissemination of lessons learned from SFCI model cities, and further dissemination of SFCI /LSFC to other department, including DLA in order to expand it to other cities.



Note: Blue box shows the scope of JICA's Thai Future City Project, while red boxes show output and activities related to NESDC.

Source: JICA Project Team

Figure 1.1 Stages of Thai Future City Project and its Input to Thai Government

2. Development of Sustainable Future City Initiative

2.1 Objectives and Overall Concept of SFCI

Sustainable Future City Initiative (SFCI) was proposed as an implementation mechanism to realize sustainable urban development. The overall concept and outstanding features of SFCI are summarized below.

- **National-government-guided and local government-driven development:** The key concept of SFCI is to link the local needs and visions with national or provincial government resources. The national government prepares the SFCI guideline along with the 20-year National Strategy and 12th National Economic Social Development Plan. While the local government (tessaban) takes the initiative to set its visions and propose the plan, national government will support tessaban to implement its visions and projects.
- **People-centered development:** SFCI applies a participatory approach in all of the planning processes to understand the actual needs of stakeholders and ensure collaboration of such stakeholders in the implementation and operation stage.
- **Comprehensive Planning Approach:** The **holistic approach** covers the economic, social, environmental aspects, and urban management comprehensively. The **regional approach** extends to municipal administrative boundaries for effective urban management. The **long-term approach** examines the future sustainability of the urban area, and the **collaborative approach** expands the scope and scale of planning and ensures its implementation.



Figure 2.1 Overall Concept of Sustainable Future City Initiatives

2.2 Common Visions of Sustainable Future City

While visions for SFC are not homogenous yet vary according to the city's locality, the five characteristics that cities should aspire for in preparing their visions include (i) self-sustaining and competitive city, (ii) attractive and distinctive identity, (iii) eco-friendly and resilient city, (iv) safe, secured, and inclusive city, and (v) civic pride for the future generations.

2.3 Target Cities

Target cities to participate in SFCI are regional growth cities and local urban centers. Since SFCI aims to serve as a policy tool to direct more equitable and sustainable development all over the county, those cities can be the centers of their respective regions. Specifically, it includes all of the tessaban Nakhon and tessaban Mueang. Surrounding tessabans and Tambon Administrative Organizations (TAOs) should be integrated to consider sustainable development of the integrated urban areas.

2.4 Organizational Structure

The organizational structure of SFCI comprises the following.

- . **Joint Coordinating Committee (JCC)** is the national level steering committee for SFCI. It includes relevant departments and organizations from the central government, such as NESDC as a secretariat of JCC, Bureau of Budget (BOB), Department of Public Works and Town and Country Planning (DPT), Department of Local Administration (DLA), Office of Transport and Traffic Policy and Planning (OTP), and Office of Natural Resources and Environmental Policy and Planning (ONEP). The role of JCC is to screen and advise for the SFC plan and project and provide its implementation support.
- . **Project Coordinating Committee (PCC)** is provincial(changwat)-level coordinating body chaired by Changwat Governor. It includes relevant departments and organizations at provincial levels, such as the DLA provincial office, DPT provincial office, and the provincial office of tourism and sport. The role of this committee is to consider and give opinions for the SFC plan and project in line with provincial direction.
- . At the local level, tessaban has the sole authority to carry out SFCI. Each tessaban creates a **Planning Team (PT)** as the platform of a participatory planning approach to discuss the SFC Plans and Projects. It includes the tessaban, private sector, community, the regional or local university, and other stakeholders.

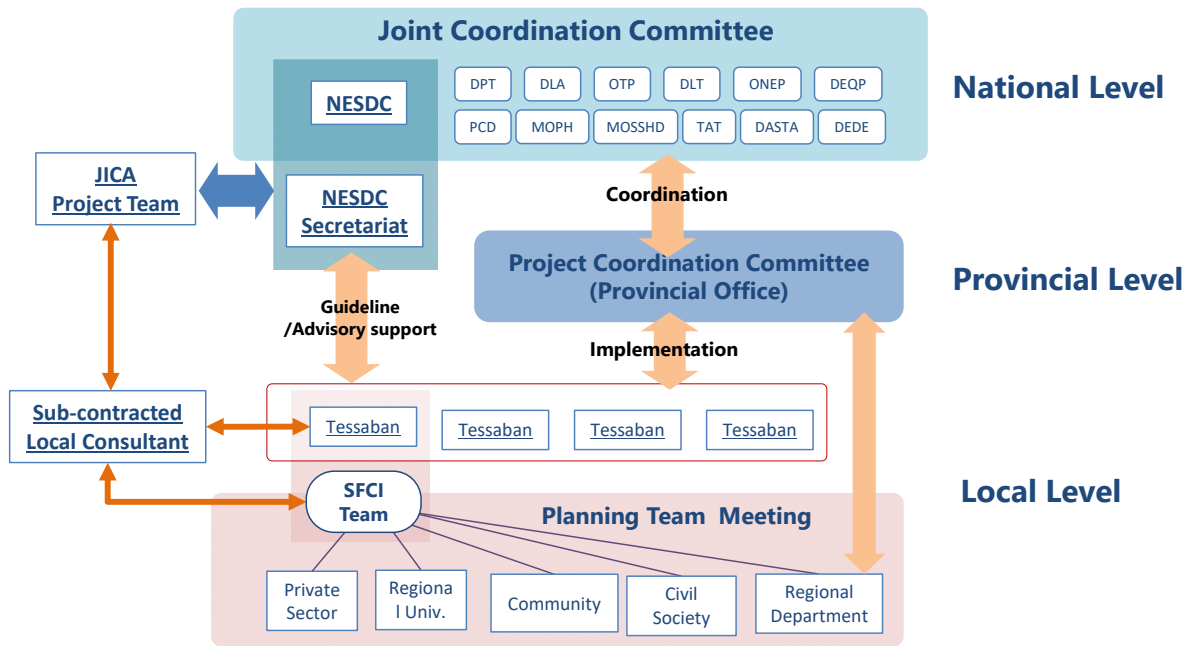


Figure 2.2 Organizational Structure of SFCI

2.5 Overall Framework of SFCI

Based on the SFCI Development Guideline, participating tessabans conduct SFCI projects, including research and planning, project formulation, and implementation. Project implementation support is provided by national and provincial organizations and the dispatched consultant accordingly. The overall framework of SFCI is illustrated in Figure 2.3.

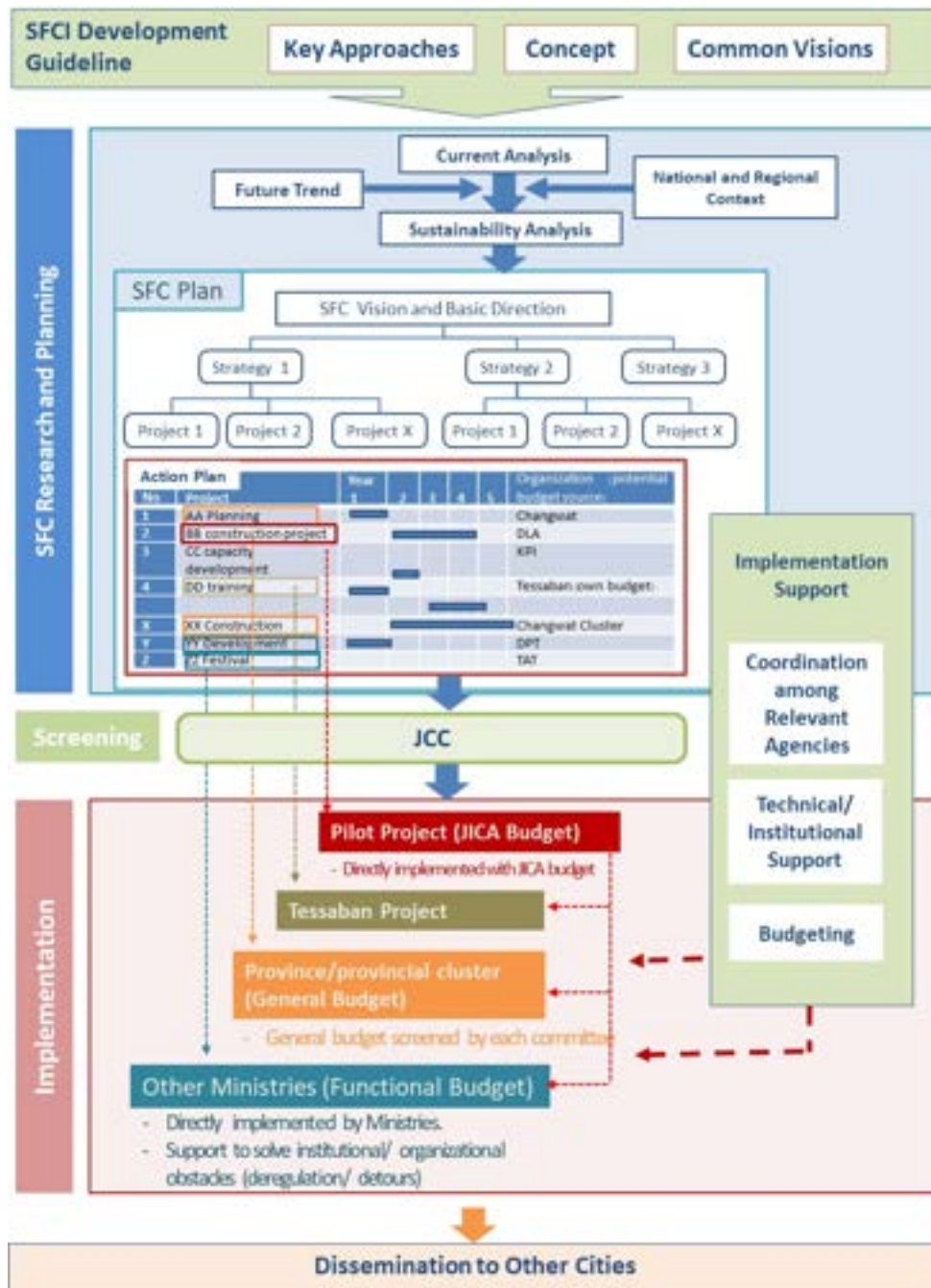


Figure 2.3 Overall Framework of SFCI

(1) **Planning Process of SFC Plan**

Planning Steps: SFC research and planning stage consists of three steps: (i) basic analysis to examine the current status of tessaban and identify critical issues and future potentials, including review of the existing plans, questionnaire survey, data collection, and analysis, (ii) future analysis, and (iii) sustainability analysis for visioning and setting strategic directions. Based on the result of the basic analysis, the SFC Plan will be formulated.

SFC Plan: SFC Plan is a core output of the SFCI. Based on the result of sustainability analysis, the SFC Plan is formulated to identify issues and projects to achieve the SFC vision, of which

the main concept is to keep the sustainability of the economy, society, and environment of tessaban.

The SFC Plan includes vision, strategies, and projects. It should be a holistic plan to keep sustainable urban growth in the long run and can cover any sector authorized by the central and provincial administration as well as those under tessaban or the Local Strategic Development Plan (LSDP). The SFC Plan can also cover the surrounding tessabans and TAOs depending on the issues identified in each city, while the comprehensive plan covers urban areas in the surrounding tessabans and TAOs. It can include projects to be implemented by central and provincial ministries, Changwat, PAOs, or surrounding tessabans/TAOs. The SFC Plan needs to harmonize with the relevant plans of these agencies and, simultaneously, for the relevant plans to include the SFC projects.

SFC Project Formulation: SFC projects are formulated as potential actions to be taken to materialize strategies. Each strategy has several programs and projects. In the SFCI, a list of projects is formulated as action plans for further elaboration, where detailed considerations, such as engineering design, procurement list, etc., have not been included. The action plan identifies, at least but not limited to, the initial implementation schedule and potential project financial sources of each project from the possible budgeting sources.

(2) Participatory Planning Process through PT Meetings

The participatory planning process, one of the most important features of SFCI, is composed of (i) issues identification answering the question “where we are?” at the first step, (ii) vision formulation answering the question “where we want to go?”, (iii) plan formulation answering the question “how can we achieve the vision?”, and then (iv) project identification. Tessaban and the local consultant closely work together to prepare each PT meeting and summarize the outputs of each meeting to proceed to the next step.

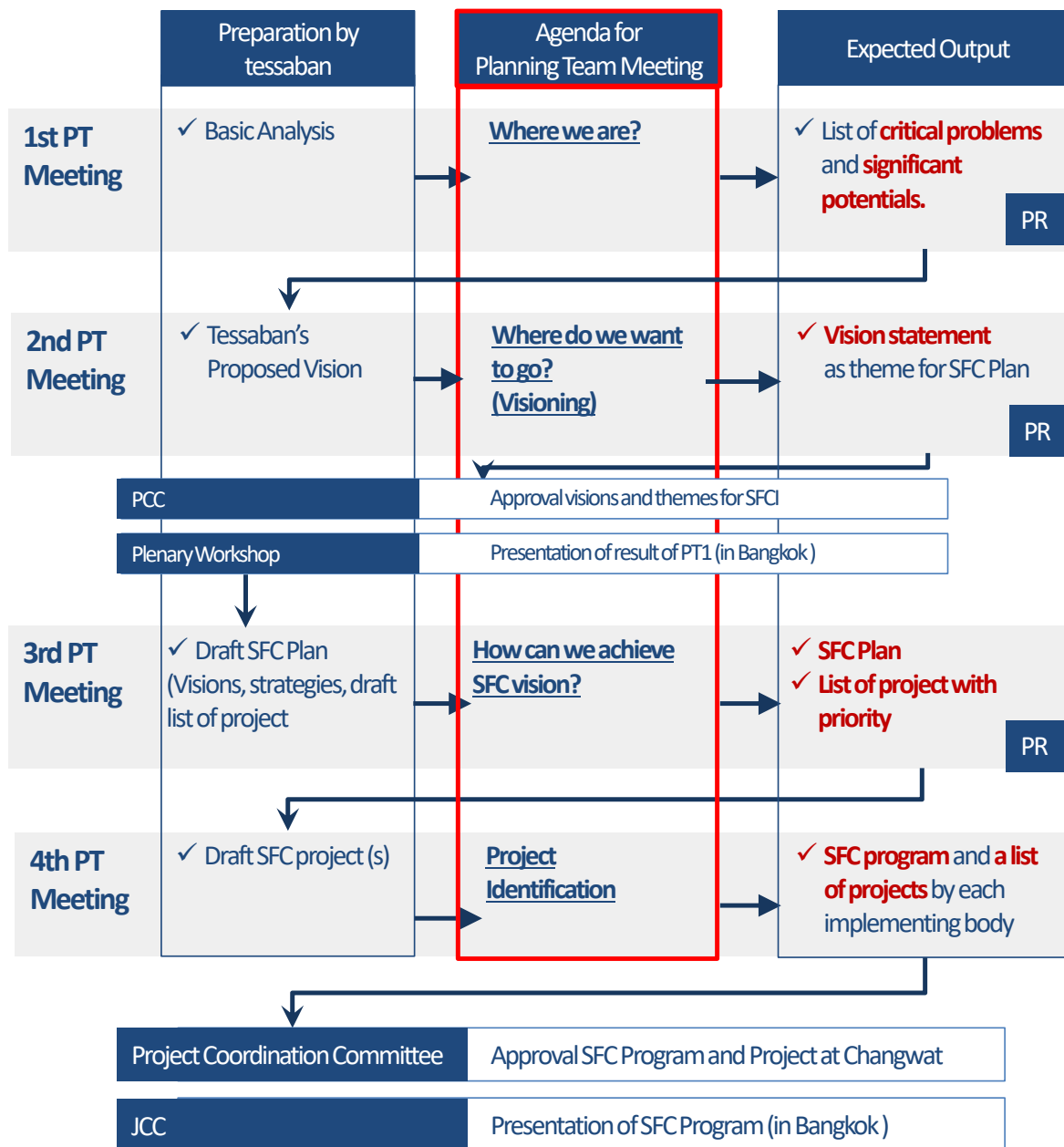


Figure 2.4 Participatory Planning Process

(3) SFCI Project Implementation Support

Based on the approved SFC Plan and projects, tessabans receive support to promote the implementation of those projects, including the following.

- **Policy-making Support:** In order to ensure continuous commitment by tessaban, tessaban needs to put a higher priority on the output of the SFCI. During the course of the SFCI, SFC Plan and Projects will be prepared through discussion with Mayor or high-rank officers as well as participatory PT meeting sin order to ensure commitment of Mayor.
- **Administrative Support: Collaboration with National and Provincial-level Authorities:** Tessaban or Changwat office are the main actors that are expected to

collaborate with relevant government agencies, such as provincial office of ministries, Provincial Administrative Organizations (PAOs), neighboring tessabans, and TAOs. The private sector, universities, and communities also actively coordinate. Tessaban makes MOU with organizations directly related to the formulated projects.

- **Approach to Potential Financial Sources:** Budgeting and financing are some of the biggest constraints for tessabans to facilitate project implementation. There are some potential budgets to implement SFC projects, such as municipal general budget, Changwat/ Changwat Cluster budget, function budget, and integrated budget from relevant departments. Tessaban needs to request the appropriate and applicable budget sources depending on the size and scope of each project.

3 Initiatives and Efforts on the Thai side during the Project

3.1 Restructure of NESDB to NESDC

In 2018, NESDB was restructured as NESDC to transform the state planning unit into a think tank that shapes the long-term vision and mission of the Country. With this restructure NESDC is expected to strengthen its planning capacity to respond strategically to international and domestic socio-economic changes and foresee the future appropriately.

With new Act of the NESDC will give more flexibility and give more resources to face new and complicated challenges. NESDC can now recruit new independent experts, collaborate with other institutions, and procure private experts to support its analytic and planning tasks. NESDC will continue its responsibility in formulating the 5-year NESDP

3.2 Establishment of Urban Development Strategy Division (UDSD)

UDSD was established in January 2019 under NESDC for the planning and creation of urban development policy according to the National Strategy, NESDP, and other relevant government policies.

After the After the establishment of UDSD, the TFCP counterpart was transferred from Spatial Planning Strategy Office (SPSO) to this division. While SFCI was not mentioned in the mission of SPSO, UDSD has a clear mission to be in charge of SFCI as the future secretariat. With the revision of the R/D of Stages 4-5, NESDC agreed to implement SFCI for four more cities under their budget in parallel with the implementation of SFCI in Tessaban Mueang Ranong and Tessaban Mueang Chumphon under the Project.

3.3 Discussion with Joint Coordinating Committee Members

Restructure of JCC: In the first phase of SFCI model city projects, it was found that the original JCC members did not cover some important development issues of local cities, such as tourism development, aging society, and smart city development. Therefore, it was suggested and agreed in the minutes of the meeting (M/M) in 2019 between JICA and NESDC to restructure JCC before starting Stage 4 and the second phase of SFCI.

Discussion with JCC members: In addition to the discussion at the official JCC meetings, JICA Project Team and NESDC visited JCC members individually in order to discuss specifically what was relevant to their respective institutions.

After Stage 4 of the TFCP started, the newly established UDSD and JICA Project Team visited most new JCC members, such as the Department of Older Persons, Office of Permanent Secretary of Ministry of Tourism and Sports (MOTS), DEPA, DASTA, and Thai Health Promotion Foundation, and explained the overall framework of the Project. In the meeting, UDSD presented the project and expressed their intentions to continue the SFCI as theirs.

3.4 Livable and Sustainable Future City Project by UDSD of NESDC

As agreed in the M/M signed in January 2019 (amended in August 2019 and presented by UDSD to the JCC in November 2019), NESDC-UDSD has conducted SFCI in two more cities

using their FY 2020 budget, but named it “Livable and Sustainable Future City Project.” Meanwhile, the JICA Project Team and its sub-contracted local consultant team supported the SFCI in Ranong and Chumphon. The scope of the LSFC covers three main objectives:

- (i) to establish a planning process for sustainable and livable future cities,
- (ii) to monitor the progress of model cities of SFCI Phase 1, and
- (iii) to develop the monitoring system for LSFC,

Through LSFC, it was expected to uprate the SFCI Guidelines as LSFC Guidelines. LSFC Guidelines can be disseminated as a tool for LAOs to prepare their LSDP in the future.

4. Model City Projects

TFCP conducted two phases of model city projects in a total of 8 tessabans.

First Phase Model City Projects

The first phase model city projects were conducted from 2016 to 2018, The key objectives are to examine the SFCI mechanism, “a national government-guided and local-government-driven mechanism”, on the practical ground as well as the relevance and appropriateness of the SFCI Guidelines, developed in Stage 1 of the TFCP. More specifically, the purposes of the model city projects are as follows;

- to examine the implementation of the SFCI;
- to check the relevance and appropriateness of the SFCI Guidelines;
- to strengthen capacities of model cities and make leading cities for sustainable urban development of local cities of Thailand; and
- to identify issues on the existing administrative system on urban development that needs improvement, such as institutional and budgeting mechanisms, if any.

It covered Tessaban Nakhon Chiang Rai, Tessaban Mueang Nan, Tessaban Nakhon Khon Kaen, Tessaban Mueang Krabi, and Tessaban Mueang Phanat Nikhom and Tessaban Nakhon Phitsanulok.

Output of the model city projects include (i) SFC Plan, including vision and strategies, (ii) action plan for the selected SFC Program, and (iii) implementation of pilot projects, which are summarized in the Final Report of the Project for Promoting Sustainability in Future Cities of Thailand (Stage 1-3) in 2019.

During the Stage 4, monitoring activities were conducted annually since the completion of the model city projects for three years, from 2019 to 2021. The purpose is to check the progress of SFC Plans and Projects as well as to get feedback for the SFCI from model cities. Result of the monitoring activities are summarized in Volume II.

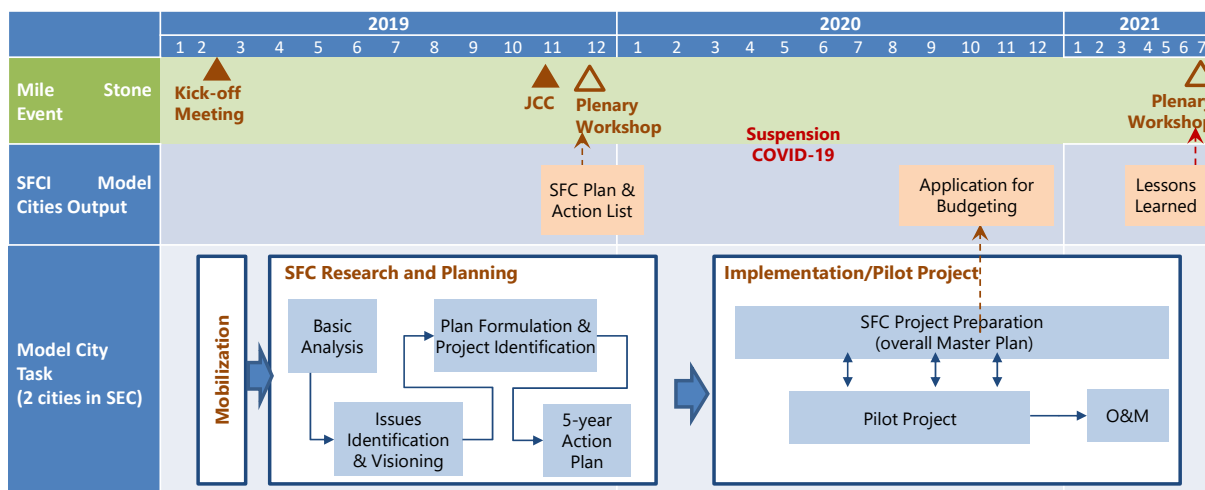
Second Phase Model City Projects

The Second Phase Model Cities projects were conducted in Tessaban Mueang Ranong and Tessaban Mueang Chumphon. Those two cities are important cores of Southern Economic Corridor (SEC), a key development scheme initiated by Thai Government to enhance regional development. Objectives of the second phase model city projects are as follows;

- (i) to strengthen the capacity of the newly-established division of NESDC;
- (ii) to enhance regional development of the Southern Economic Corridor, which is initiated by the Thai Government, through a people-centered approach; and

(iii) to further elaborate SFCI Guideline.

The second model city projects were implemented along with the SFCI Guideline developed in the Stage 3. Overall schedule of the second phase model city project is shown in Figure 4.1.



Note: Red-coloured square shows the period that activities of all or some model cities were suspended or canceled due to COVID-19 prevention measures.

Source: JICA Project Team

Figure 4.1 Overall Schedule of the Second Phase Model City Project

While all of the activities and outputs of the second phase model cities are summarized in Part II, those core output, SFC Plan and JICA Pilot Project, are summarize in the following Table 4.1 and Table 4.2.

Table 4.1 Summary of Output of Tessaban Mueang Chumphon

SFC Vision and Strategies	<p><u>Vision: Chumphon the Livable city, Happiness social and Good quality of life</u></p> <p>Strategic Direction 1: Create a happy city for people of all ages Strategic Direction 2: Smart mobility Strategic Direction 3: The Center of Agricultural Produces and food safety Strategic Direction 4: Gateway of the Southern Corridor and a must-visit destination Strategic Direction 5: Integrated Eco-system with Smart Data and Planning</p>
SFC Program	<p>Public Space design for better recreational experiences and healthy living (Strategic Direction 1: Create a happy city for people of all ages)</p> <ol style="list-style-type: none"> 1) Public Space: experiential design and development project <ul style="list-style-type: none"> - To enhance the quality of life by being a space for exchanging ideas and creating recreational activities for people in the area and visitors 2) Park and sports facilities improvement project <ul style="list-style-type: none"> - To promote good health and well-being for people of all ages - To add green areas to the city 3) Civilized architecture project (universal design for all ages) <ul style="list-style-type: none"> - To design and construct for various areas and buildings suitable for all ages and every physical condition
JICA Pilot Project	<p>Park and sports facilities improvement project</p> <ul style="list-style-type: none"> • Formulation of Draft Master Plan • Designing the selected areas • Implementation/construction of selected elements • Establishment of operation and management system • Designing activities/events and implementation of relevant elements

Expected output of SFC Program	<ul style="list-style-type: none"> • Better recreational experiences and healthy living are provided for all people. • Quality of life is improved and both physical and mental health are enhanced by good design of public space.
Long-term impact of SFC Plan	<ul style="list-style-type: none"> • Quality of life and healthy living for all ages will be enhanced while preparing well for an active aging society. • Sustainable potentials in agricultural-related business could be increased. • Being a hub of agricultural products could lead to further development of agro-tourism, gastronomy, and community-based tourism.

Table 4.2 Summary of Output of Tessaban Mueang Ranong

SFC Vision and Strategies	<p>Vision: Being the head of health tourism and livable city with well-being</p> <p>Strategic Direction 1: Inclusive and Multiculturalism City Strategic Direction 2: The World Class Holistic Health and Wellness Tourism Destination City Strategic Direction 3: Green City Strategic Direction 4: Healthy City Strategic Direction 5: Safe, Convenient, and Comfort City</p>
SFC Program	<p>Improvements of Park, Transport and Cityscape (Strategic Direction 5: Safe, Convenient and Comfort City, integrated key element of Strategic Direction 4: Healthy City)</p> <ol style="list-style-type: none"> 1) Local Economy Street: Rueang Rat Road Project <ul style="list-style-type: none"> - To promote community economy and community participation in creating a livable city 2) Park improvement and accessibility design and development project <ul style="list-style-type: none"> - To enhance the park and public space for better experiences and the well-being of all users 3) Pedestrian Trail Development Project: city walk through the building and shade throughout the city <ul style="list-style-type: none"> - To promote creative and environmentally friendly use of urban areas, as well as create tourism activity products in urban areas 4) Universal design project for people to travel in every area <ul style="list-style-type: none"> - To design and construct various areas and buildings suitable for people of all ages and every physical condition 5) Walkable city and streetscape design and improvement <ul style="list-style-type: none"> - To build a pleasant and environmentally friendly city - To create beautiful, memorable, and useful streetscapes and conditions for people of all ages - To strengthen economic distribution patterns and urban activities 6) Mineral water & hot spring accessibility and distribution management system <ul style="list-style-type: none"> - To create fair access and distribution of mineral water and the related value of hot spring
JICA Pilot Project	<p>Health park renovation with walkable city network</p> <ul style="list-style-type: none"> • Formulation of Draft Master Plan • Designing the selected areas • Implementation/construction of selected elements • Establishment of operation and management system • Designing activities/events and implementation of relevant elements
Expected output of SFC Program	<ul style="list-style-type: none"> • Not only the beautifulness of the city is promoted but also the urban safety and urban climate are improved by the urban design and urban physical improvement.
Long-term impact of SFC Plan	<ul style="list-style-type: none"> • Harmony of multi-cultural living environment will be enhanced by including diversities based on the city's rich cultural assets. • A platform for unique identity will be created by integrating all values of Ranong, such as biosphere reserve and natural hot springs.

5. Activities and Projects following SFCI

5.1 SFCI Platform Establishment

SFCI Platform aims to disseminate lessons from SFC model cities and promote mutual coordination among them. SFCI Platform will be composed of the national government, including NESDC, DLA, and other relevant departments, and SFCI/LSFC model cities. The expected outputs of the SFCI Platform includes:

- national government understands the actual situation and needs of local cities and stakeholders,
- local government can directly contact national departments to get technical or institutional support as well as to understand their policies for local development, and
- local governments can communicate directly and get lessons learned from each other.

In this context, several types of activities and mechanisms have been organized in the TFCP.

Periodical Plenary Workshop: Plenary workshops (WS) have been organized periodically under the TFCP. It provides opportunities for model cities to learn from other cities about experiences on specific urban issues, such as the aging society and tourism development, and key success and challenges toward sustainable future city development.

SFCI Portal Site: SFCI Portal Site has been developed to disseminate the SFCI concept and its outputs to those interested, including other tessabans. It also shares lessons learned from SFCI model cities and Japanese municipalities. The SFCI Portal Site is expected to open on the NESDC website.

5.2 Promotion of the Project and SFCI

In order to promote the SFCI, the JICA Project Team and NESDC conducted various PR activities, including the opening of a Facebook Page and participating in seminars and events conducted by other organizations, such as King Prajadhipok's Institute (KPI) Forum in 2016 and 2018.

6. Consideration and Recommendations for Future SFCI in Thailand

6.1 Lesson Learned from two SFCI Model Cities Projects

(1) Lessons for the Planning Approach

Participatory Planning Approach

Key Success: SFCI introduced a participatory planning approach through discussions in PT meetings with various key stakeholders at each planning step, including issues identification, visioning, and project identification. Such a participatory approach helps tessaban to identify actual local issues and find various solutions. It can also ensure the sustainability of the projects by making consensus among stakeholders and thus ensuring operation and management for the projects.

Challenges: Challenges to improve the participatory approach furthermore have been identified as follows.

- **To ensure commitment and active involvement of PT members:** Some PT members are listed as official representatives of the organization, yet someone else would attend each meeting, causing discontinuity of discussion and showing not enough commitment.
- **To involve a representative from the private sector:** While the SFCI Guideline advises involving the private sector in the PT and the SFC planning process, tessabans rather tend to select stakeholders they have a close relationship with, resulting in less private sector involvement in the planning process.

Recommendations: The following are recommendations to tackle the above challenges.

- **Stakeholder analysis for organization and personnel:** A stakeholder analysis is recommended to examine organization mandate and specific persons with strong commitment and insight for sustainable development.
- **Diversity and less hierarchy of PT:** PT members must not be limited to the formal sector but also from the outer network of tessaban, such as young entrepreneurs, artists, civil society networks, etc. More diverse PT members can provide a wider range of discussion and a higher level of creativity.
- **Involvement of the private sector:** A partnership between public and private institutions can be a key factor to SFCI. It is recommended to make the PT more open to a cooperative network with the private sector. Private sector involvement can be considered for (i) large companies with advanced technologies and large capital, which can invest in development projects or support local development through Company Social Responsibilities (CSR) activities, and (ii) small and local companies, which are expected to collaborate with tessaban and contribute to urban development over the long term.

Formulation of Comprehensive Plan

Key Success: SFCI applies a new planning approach, namely the regional approach to consider urban area/ urban cluster beyond tessaban's administrative boundary and holistic approach including economic, social, and environmental aspects. It is highly appreciated by all of the model cities to come up with their own comprehensive SFC Plan, which provided potential projects of relevant departments.

Challenges: There are critical issues on urban planning of local cities in Thailand as below,

- Lack of an integrated urban data set for basic analysis due to lack of reliable data.
- Lack of development plan, except for Local Strategic Development Plan.

Recommendations:

- **Integration into the Local Strategic Development Plan:** It is highly recommended to reflect the regional and comprehensive approach of SFCI into the Local Strategic Development Plan.
- **Establishment of Urban Data set:** It is recommended for tessaban to organize all of the available data in cooperation with relevant provincial departments, regardless of the data accuracy. It is also highly suggested to conduct an interview survey with people, which will show actual issues and needs of urban development quantitatively and can be a basis for comprehensive planning.
- **Conduct interview Survey:** Conducting an interview survey with citizens, which can identify actual urban problems and promptly show the needs of the people, is highly suggested. It can compensate for the lack of data and provide a qualitative and quantitative basis for planning.

(2) Lessons for Project Implementation

Networking and Coordination with Relevant Organizations

Key Success and Challenges: It is well-recognized by all model cities that networking and coordination with relevant organizations are essential for the implementation of the proposed SFC projects and sustainable O&M. On the other hand, it is a big challenge for small- to medium-sized tessabans, such as Ranong and Chumphon, to maintain this networking by themselves.

Recommendations: Central government must support tessabans so they can reach the relevant organizations when and where necessary, as they did in the SFCI. The Changwat-level coordinating committee is also important to link tessabans' needs with national and regional resources, which is one of the key concepts of SFCI.

Budgeting for Implementation of SFC Projects

Key Success and Challenges: Budgeting is the most critical issue. As for the short-term and small-size projects, some model cities integrated the proposed SFC Projects into their

own Local Strategic Development Plan and implemented them by themselves. Some SFC Projects have been proposed to the appropriate budgeting channel, such as PAO, functional budget, etc. It is difficult for tessaban to find a budget by themselves.

Recommendations

The right project in the right authority: Laws and regulations should be well considered to identify available budgeting sources for project implementation with the right authority. Tessaban needs to understand not only their own authorities but also those of relevant organizations.

Provincial-level budget packaging: Since functional budget is allocated by department, there is little system to integrate development projects in different sector at tessaban or even at changwat local level. There is a discussion in Thailand to set up provincial-level budget package under one plan concept to integrate spatial development at changwat cluster, changwat, and tessaban level, which can facilitate holistic and sustainable development of each local area.

Available budgeting information: It is important to provide tessaban with the updated information about the budget where they can propose the projects beyond their authorities. In order to provide financial support for the tessaban, SFCI Guidelines provide detailed information about approaches to such potential financial sources, including types of budget sources procedure of budget application. While it also provides a detailed list of funds under major national departments under JCC, regularly updating it is necessary to cover the policy-related special budget for a limited time and newly established development initiated by each department.

(3) Lessons for SFCI Platform

Sharing Experiences of Model Cities

Key Success and Challenges: All the model cities highly appreciated the opportunities to share their experiences on key urban development issues, such as aging society, local tourism development, public space improvement, etc. Disseminating the lessons learned to other cities in the future is a challenge.

Recommendations: Developing the SFCI Portal Site is a valuable platform to share lessons learned for the public to access. Tessabans facing similar issues can easily access the information on experiences of SFCI model cities.

City-to-city Collaboration

Key Success: SFCI Plenary WS can be the city-to-city collaboration platform, as well as for sharing experiences with other cities. They can directly communicate with each other and get lessons. The TFCP also provided opportunities for model cities to collaborate with Japanese cities. Now it needs to consider how to keep such a platform for city-to-city collaboration in Thailand in the future.

Recommendations: City-to-city collaboration can be established in two levels: (i) partnership of cities to support each other to deliver sustainable urban development and (ii) collaboration between two cities that have common specific issues. The former exists in Thailand, such as NMT and KPI. NESDC, as a policy agency, can coordinate with those organizations to arrange periodical workshops and provide their policy agenda for local development.

6.2 Future Dissemination of SFCI by Thai Agencies

(1) Utilization of SFCI Output by NESDC

The output of SFCI can be utilized by NESDC, a policy agency, as follows.

- **Deep understanding of local situations:** Through discussions with PT members, it is expected for NESDC to understand actual situations and issues of local cities and examine how its urban policies can be related to the local cities' urban development.
- **Strengthened connection with relevant departments:** With the proposed SFC projects, NESDC can actively coordinate with relevant departments to link their policies and plans with theirs, including the 5-year National Economic Social Development Plan.
- **Practical urban development policies:** NESDC can reflect the mentioned achievements to more practical and effective urban development policies.

(2) Toward Future SFCI

SFCI introduced the national government-guided and local government-driven mechanism composed of (i) urban development policy as "Sustainable Future City" to respond to the emerging socio-economic changes of regional cities in Thailand, (ii) new planning approach, i.e., participatory planning and comprehensive planning, and (iii) project implementation support. While JICA's Thai Future City Project accommodated all three aspects, each aspect should have a different counterpart agency, which expects to follow up the output of SFCI in the future, as shown in Figure 4.1.

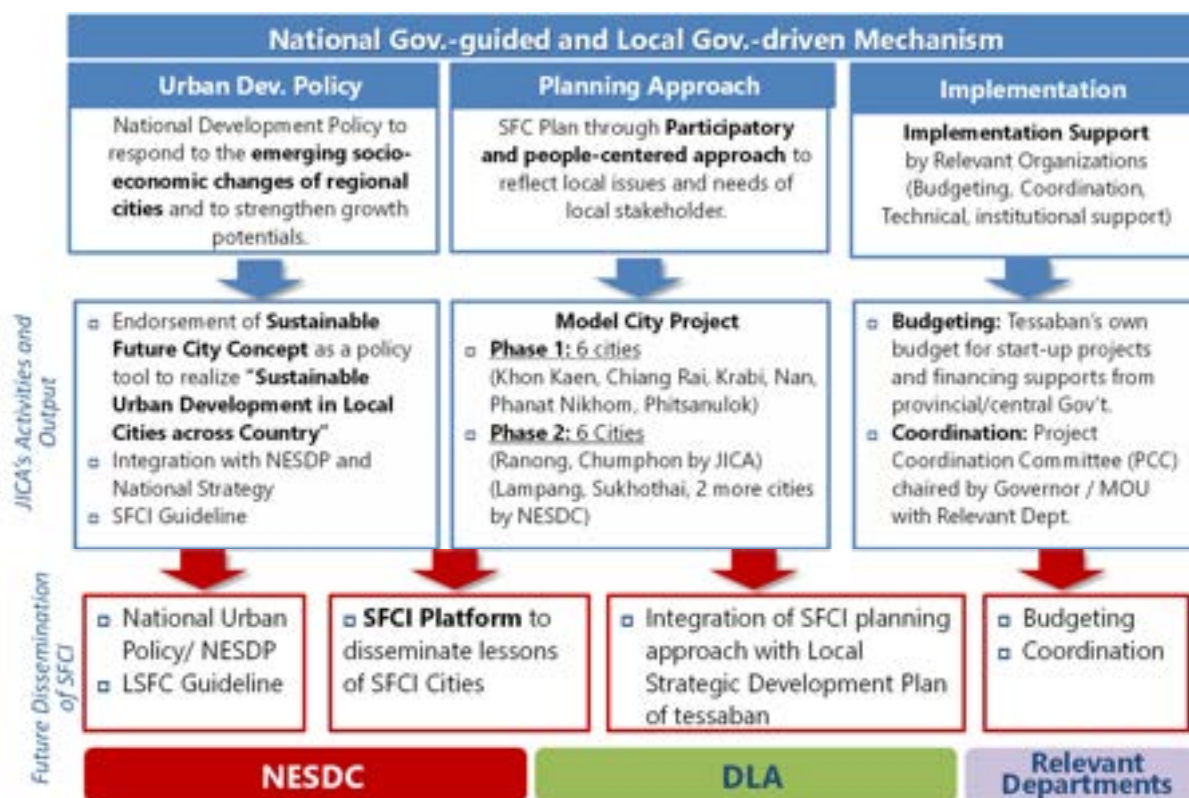


Figure 6.1 SFCI's Components and their Respective CP Agency

Expected roles of NESDC as a policy agency

- Policy endorsement to enhance regional cities' development as a core of sustainable development of each region, which can be observed in the draft 13th National Economic Sustainable Development Plan
- Transfer of planning approach of SFCI and LSFC to DLA, including lessons learned from model cities' project
- Dissemination of key success and challenges on specific urban issues as lessons learned from model cities and Japanese municipalities

Expected roles of DLA to follow up SFCI

- Integration of the planning concept of SFCI into the Local Strategic Development Plan, particularly for the participatory planning approach and regional/comprehensive approach
- Support tessaban to implement the proposed projects, including coordination with the relevant department for function budget as well as general budget under local administration
- Continue the city-to-city networking

1. Overall Framework of the Thai Future City Project

1.1 Project Background

Thailand has successfully achieved economic growth in the last several decades and has reached the status of an upper-middle-income country. However, its urban development trajectory has not always trodden an environment-friendly or sustainable path. While it is considered that climate change and greenhouse gas emission reduction shall be one of the most important policy issues from a global perspective and the standpoint of energy security, these must be considered in view of realizing a sustainable society.

The Government of Thailand (GOT) has identified “green growth” as one of the country’s major pillars in policy making which should be pursued, as indicated in the 11th National Economic and Social Development Plan (NESDP) and in Thailand’s Country Strategy. The government is also keen to promote “green growth” from the perspective of city/town development, although the detailed scope, methodologies, and institutional arrangement have not been developed yet.

Bangkok is the only metropolitan area in Thailand. With a population of 8.3 million, it accounts for about 35% of the country’s urban population. The municipality with the second-biggest population after Bangkok Metropolitan Administration (BMA) is Nonthaburi, with 256,000 residents, which is located next to BMA. Thailand has 2,440 municipalities (tessaban¹) and most have less than 100,000 population. These municipalities face serious issues in infrastructure, living environment, industries, and jobs, as well as the aging population, thereby necessitating a vision and a development plan.

Local cities in Thailand have two layers of administration, i.e., provincial administration and local administration. Provincial administration covers provinces headed by governors who are dispatched by the Ministry of Interior (MOI) and field offices controlled by each central ministry. Local administration is comprised of local councils and chief executives or mayors directly elected by residents. Prior to 1999, local development was carried out under provincial administration and by field offices of central ministries. In 1999, when the Decentralization Law was enacted, powers, funding, and human resources were transferred from provincial administration to local authorities. However, personnel and financial sources have not been devolved yet, while local administrative bodies find it difficult to develop their vision and formulate long-term projects for their local strategic development plans, which they prepared. The formulation of the Comprehensive Plan, a spatial development plan which serves as the basis for infrastructure development has also not been devolved to local administrative bodies yet. In most cities, except the really large ones, field offices of the Department of Public Works and Town and Country Planning (DPT) formulate comprehensive plans for the cities but with little coordination with local strategic development plans.

JICA Thailand and the National Economic and Social Development Board (NESDB)² shared

¹ Tessaban refers to municipalities in Thailand. There are three levels of municipalities, i.e., city, town and subdistrict municipality.

² NESDC was the reorganization of the NESDB based on the NESDC Act in 2018.

the above issues of urban development in local cities of Thailand and recognized the need for practical sustainable urban development policy and raise good model cities, which can be disseminated to other cities. It is in this context that the GOT requested the Government of Japan (GOJ) to conduct a project entitled “the Project for Promoting Sustainability in Future Cities of Thailand” (hereinafter called the TFCP or the Project) to learn from Japan’s experience and know-how in the field of sustainable city management. Japan International Cooperation Agency (JICA) thereafter sent a preliminary mission to Thailand to discuss the project’s scope of work including the area, scope, and requirements of the GOT. On 31 March 2015, both sides signed the Record of Discussion (hereinafter referred to as R/D) (refer to Appendix 1).

1.2 Project Objectives

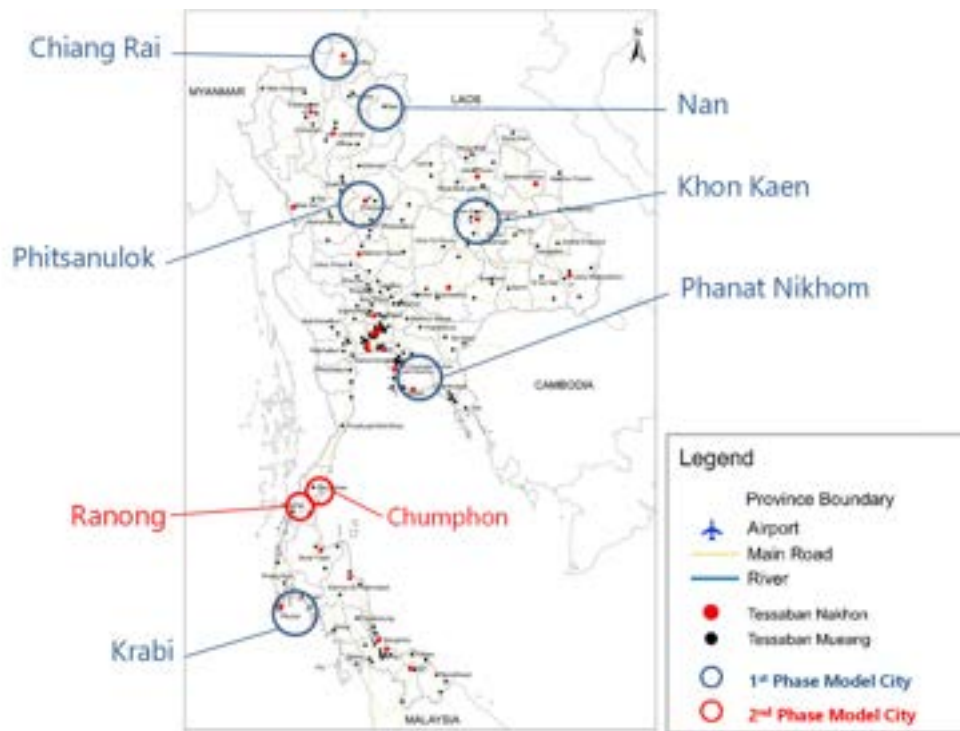
The overall goal of the TFCP is to realize sustainable urban development in the local cities of Thailand. For the TFCP to achieve its overall goal, it has set the following objectives.

- 1) to formulate a concept of future city development in Thailand to cover current issues in cities/towns, policy directions, and necessary measures, which is to be reflected in the next NESDP;
- 2) to propose and deepen an implementation mechanism and measures for future city development in Thailand, where the local government bodies (municipalities or tressaban) take the initiative in promoting the concept of future cities in collaboration with relevant authorities, citizens, and the private sector;
- 3) to build and upgrade planning and implementation guidelines to establish future cities in Thailand that will help the tressaban in analyzing current conditions, setting its vision, establishing development strategies, and implementing the development strategies by working with stakeholders;
- 4) to prepare development plans and action plans for developing future cities in model cities, where the above-mentioned concept, mechanism, and guidelines will be tested and refined; and
- 5) to establish and disseminate Thai-Sustainable Future City Initiative (SFCI).

1.3 Project Target Area

The Project will cover cities (municipalities or tressaban) of Thailand, excluding the special local administrative bodies, Bangkok Metropolitan Area, and Pattaya City. It will also consider urban areas beyond the administrative boundaries of tressabans, including several adjoining tressabans and Tambon Administrative Organizations (TAOs).

Model city projects were conducted in Tressaban Nakhorn Chiang Rai, Tressaban Nakhorn Khon Kaen, Tressaban Mueang Krabi, Tressaban Mueang Nan, Tressaban Mueang Phanat Nikhom, and Tressaban Nakhorn Phitsanulok in the first phase and Tressaban Mueang Ranong and Tressaban Mueang Chumphon of Southern Economic Corridor (SEC) in the second phase (Figure 1.3.1).



Source: JICA Project Team

Figure 1.3.1 Project Target Cities

1.4 Stages of Project Implementation

The Project commenced in July 2015. Its overall implementation, including initiatives and actions taken by NESDB, is shown in Figure 1.4.1. A summary of the outputs of Stages 1 to 3 is in the Final Report of the Project for Promoting Sustainability in Future Cities of Thailand in August 2019.

Stage 1: “Policy Study on Future City Development Concept in Thailand”

Considering the key urban development challenges of local cities in Thailand, the Sustainable Future City (SFC) Concept was established through discussions with national departments and a number of tessabans. The SFC Concept was integrated into the 12th National Economic and Social Development Plan by the NESDB, specifically in its Strategy 9 for Regional, Urban, and Economic Zone Development. The SFCI was proposed as a practical implementation mechanism to realize SFC. A draft SFCI Guideline was prepared for tessaban to prepare the SFC Plan and Projects.

Stage 2: Preparation of Development Plans and Conduct of Pilot Projects in Model Cities

The proposed SFCI was used as an experiment for the six selected model cities. Through a participatory planning approach, SFC Plan and Projects were prepared for each city, and pilot project implementation was provided as support for the proposed SFC Projects.

Stage 3: Finalization and Dissemination of Planning and Implementation Guidelines

TFCP was originally scheduled to complete during Stage 3. The National Economic and Social Development Council (NESDC) and JICA Project Team closely discussed how to

continue SFCI as an urban development policy tool of Thailand. During this stage, NESDB was reorganized as NESDC, transforming into a real think tank to shape the long-term vision and mission of the country. At the same time, NESDC established the Urban Development Strategy Division (UDSD) in January 2019 to actively respond to urban issues.

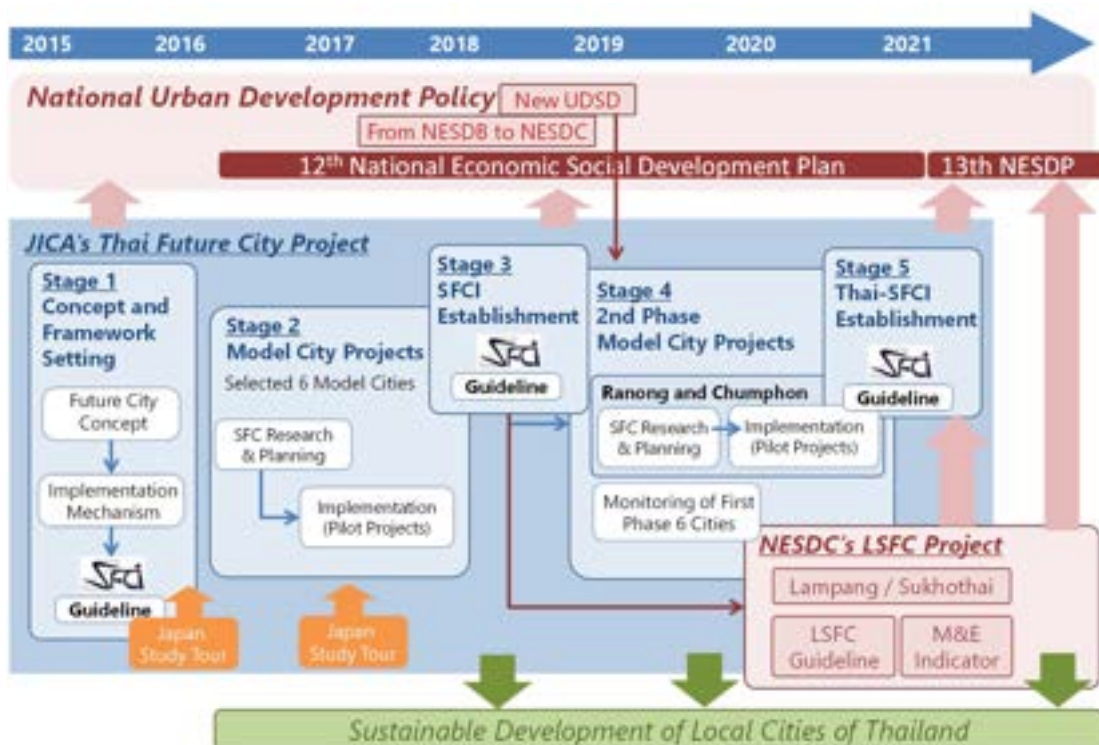
In this context, the GOT requested the GOJ to continue the Project to disseminate the SFCI, particularly in the cities of the SEC, and to establish Thai-SFCI. Both sides agreed to implement the SFCI in two more cities, namely Ranong and Chumphon in the SEC in January 2019. The NESDC also agreed to implement SFCI in parallel in two more cities using its budget, with the technical assistance of JICA. In August 2019, the R/D and work schedule were revised again, according to the delay of budget allocation in Thailand (refer to Appendix 1).

Stage 4: 2nd Phase SFCI Model Cities Projects

Based on the agreement of GOJ and GOT to further extend the Project for 2 years, the Project entered Stage 4 in February 2019. Stage 4 activities include the second phase of SFCI implementation in Ranong and Chumphon by JICA, Livable Sustainable Future City (LSFC) implementation in 2 more cities by NESDC, monitoring of the first phase 6 cities, the establishment of SFCI platform, and updating of the SFCI Guideline by both parties.

Stage 5: Establishment of Sustainable Urban Development Policy by Thai Government

Based on the result of all the works, JICA and NESDC discussed how to continue sustainable urban development in Thailand cities, which include continuous policy formulation by NESDC, dissemination of lessons learned from SFCI model cities, and further dissemination of SFCI /LSFC to other department, including DLA in order to expand it to other cities.



Note: Blue box shows the scope of JICA's Thai Future City Project, while red boxes show output and activities related to NESDC.

Source: JICA Project Team

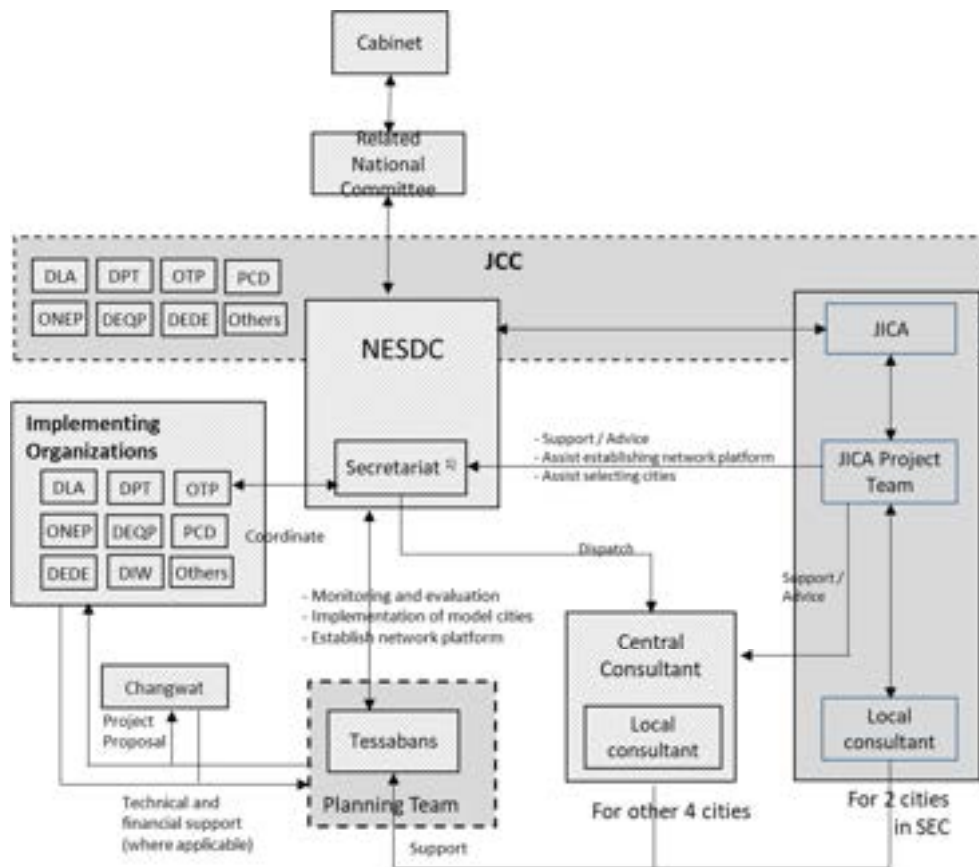
Figure 1.4.1 Stages of Thai Future City Project and its Input to Thai Government

1.5 Implementation Organization of the TFCP

The implementation organization of the TFCP is composed of the Joint Coordinating Committee (JCC) and Counterpart Team of NESDC at the national level, tressaban, Planning Team (PT) and Local Consultant Team at tressaban level on the Thai side, and JICA Project Team. The all over structure of the TFCP is shown in Figure 1.5.1.

NESDC-UDSD is the secretariat for SLFC. It will actively coordinate with relevant departments in JCC to ensure sustainable implementation of the SFC Projects. DLA, as an important organization in charge of local administration, will be closely discussed for future collaboration in SFCI.

Coordination with the Changwat and provincial offices of relevant departments will also be strengthened, and each model city will set up Project Coordinating Committee (PCC) to promote coordination at the provincial level.



1) Urban division will be in charge of Secretariat after officially established

Source: Minutes of Meeting signed in January 2019.

Figure 1.5.1 Organizational Structure of Stages 4 and 5

1.5.1 National Level

Joint Coordinating Committee (JCC)

JCC was established to facilitate inter-organizational coordination. It is chaired by the Secretary General of NESDC and comprises relevant national departments. JCC meetings have been held in time with the submission of reports and whenever necessary, in order to discuss the project framework, progress of activities, and any other pending issues.

After 1st Phase model city activities, more departments were proposed to be added to the JCC as a response to key development issues of local cities in Thailand, such as the department related to tourism development and aging society. The final list of JCC members is as follows.

- Director General of Office of Decentralization to the Local Government Organization Committee (ODLOC) or representative
- Director General of Budget Bureau or representative
- Director of Office of Transport and Traffic Policy and Planning (OTP) or representative
- Director of Thailand International Cooperation Agency (TICA) or representative
- Director General of Department of Alternative Energy Development of Efficiency (DEDE) or representative
- Director General of DPT or representative
- Director General of Department of Local Administration (DLA) or representative
- Director General of Department of Environmental Quality Promotion (DEQP) or representative
- Director General of Office of Natural Resources and Environmental Policy and Planning (ONEP) or representative
- Director General of Digital Economy Promotion Agency (DEPA), Ministry of Digital Economy and Society
- Director General of Designated Area for Sustainable Tourism Administration (DASTA)
- Secretary General, National Municipal League of Thailand (NMT) or representative

Each committee member is expected to provide necessary advice for planning and project formulation to the tessaban and provide necessary institutional arrangements, such as deregulation of proposed projects and coordination among relevant agencies.

SFCI/LSFC Secretariat: NESDC

The NESDC will be responsible for the overall management and supervision of the model city activities as the secretariat of the SFCI. It shall send invitations, select tessaban at the preparation stage, monitor and evaluate SFC plans and projects at the planning stage, and provide necessary coordination including giving instructions to relevant agencies to ensure the implementation of SFC projects.

As the overall project owner, the NESDC has the following specific responsibilities:

- Formulate the committee, JCC under TFCP and LSFC Committee for LSFC, of which chairman will be Secretary General or Deputy Secretary General of NESDC and

- organize those committee meetings;
- select and supervise the consultants;
- select SFCI/LSFC tessabans;
- supervise and advise SFCI/LSFC activities at local levels; and
- monitor and evaluate the outcomes of the previous six tessabans participating in the first Phase (Chiang Rai, Nan, Phitsanulok, Khon Kaen, Phanat Nikhom, and Krabi).

1.5.2 Local Level

Tessaban and SFCI Team

Tessaban has the sole authority to carry out the SFCI at the local level. Its role shall be to:

- organize the SFCI Team in the tessaban;
- organize the PT and hold PT meetings to make sustainability analysis and assessment;
- formulate the SFC Plan;
- formulate the SFC projects;
- integrate SFC Projects to be implemented by tessaban with its Local Strategic Development Plan (LSDP)
- coordinate with relevant agencies in promoting project implementation.
- cooperate evaluation and monitoring (E&M) activities during and after the SFCI project; and

The tessaban shall establish the SFCI Team in the tessaban as the SFCI project owner and the secretariat at the local level, which shall manage and operate SFCI activities at the local level as well as liaise with other organizations concerned.

The head of the SFCI Team shall be the mayor or high-ranking officer who can be responsible for the overall SFCI projects. The SFCI Team shall comprise representatives of key divisions closely related to the issues discussed in the SFCI.

The tessaban's SFCI team shall closely coordinate with the consultant to do research and planning, organize PT meetings, formulate SFC plans and projects, submit necessary documents to the NESDC, and so on. The consultant will assist tessaban in the overall management of the SFCI at the local level.

Planning Team (PT)

PT was established at the tessaban level right after commencement of the model city projects, to discuss the result of analysis and formulate the plan and projects in the SFCI. It comprises secretariat members of tessaban and key stakeholders, such as the community, provincial offices of government departments, academia, associations, private sector. Member composition of PT is different by tessaban depending on the themes of SFCI of each city.

1.5.3 JICA Project Team

The JICA Project Team is composed to cover various fields of expertise to examine sustainable urban development. An integrated project management group will closely coordinate to share issues and manage the Project efficiently and flexibly.

- Dr. Katsuhide NAGAYAMA, Team Leader /Urban Development Strategy/Urban Environmental Strategy
- Ms. Motoko KANEKO, Deputy Team Leader /Urban Development Strategy (2)/Urban Environmental Strategy (2)
- Mr. Atsushi SAITO, Urban Planning /Participatory Planning
- Mr. Haruhiko IMAI, Local Administration/Provincial Administration
- Ms. Mihoko OGASAWARA, Urban Planning Support (1)
- Ms. Ayako NAKAGAWA, Urban Planning Support (2)
- Ms. Natsumi SASAKI, Project Coordinator / Participatory Planning
- Ms. Veerada Sukcharoenmit, Senior Research Assistant
- Ms. Hatairat Chancherdphol, Senior Research Assistant
- Ms. Paweena Akrapranwat, Secretary

1.6 Records of the Project Activities

Discussion at National Level and Model City Activities

During the TFCP, various types of meetings and seminars have been conducted. JCC was organized and participated by national departments in time with the submission of the reports and at the periodical event of the TFCP for the discussion of the project framework, progress of activities, and pending issues.



JCC Meeting



Plenary Workshop



Source: JICA Project Team

Figure 1.6.1 Photos of the Meetings of TFCP

After the commencement of the model city projects, plenary workshops were organized to share the progress of model city activities, discuss key development issues, and share the lessons learned. After starting the second phase of model city projects, the first phase model cities were also invited to join the plenary workshops to share their experiences.

At the tessaban level, PT meetings and PCC were organized at each stage of model city activities in order to involve stakeholders' opinions and get their consensus.

Response during the first Lockdown due to COVID-19 in 2020

COVID-19 infection has spread worldwide since December 2019. In Thailand, it was seriously widespread sometime in February 2020. By March 2020, GOT imposed several measures to avoid the further spread of COVID-19, including refraining from going out, restricting movement between cities, and closing borders from foreign countries. Such "lockdown" measures have affected the TFCP and forced the Project Team to change project activities. During the curfew period from mid-March to mid-June, all project activities were stopped. The local consultant team instead developed the conceptual framework of the pilot project based on the desk review work and prepared for the site survey.

Pilot project activities resumed in mid-June, starting with a situation analysis, such as interview survey and site survey, in Ranong and Chumphon. However, the JICA Project Team still cannot visit Thailand. Therefore, all of the meetings were conducted online, including the monthly meetings between NESDC and JICA, pilot project meetings between local consultants and JICA Project Team, and internal meetings among the team.

Conduct of COVID-19 Survey

Since the spread of COVID-19, the Project activities had to be stopped and several activities were postponed. It affected the overall schedule of the Project, particularly the pilot project activities in Ranong and Chumphon.

The COVID-19 pandemic seriously affected cities, particularly the vulnerable people, such as the elderly and handicapped and poor households that lost jobs due to containment measures. In terms of the urban economy, the tourism industry, specifically, has been

seriously damaged due to the dramatic decrease in overseas and domestic tourists. In the future, even after the COVID-19 is converged, it is necessary to incorporate a new perspective or so-called “new normal” into urban development.

In this context, an additional survey on COVID-19 was conducted, which analyzed the status of and response to COVID-19, its impact on the socio-economy of the cities, and supporting measures. The targets of the survey are the first phase 6 model cities, the second phase 2 cities, and BMA. Results of the COVID-19 Survey are summarized in Volume III of the Final Report.

Adjustment of Project Activities

In the second half of 2020, COVID-19 infection in Thailand had somewhat settled, so project activities and on-site pilot project activities could resume, although JICA Project Team members still could not visit Thailand. However, since January 2021, COVID-19 infections have reappeared, affecting again all project activities. Since even the Bangkok-based local consultant team is not allowed to visit Ranong and Chumphon, all pilot project activities had to be adjusted. All meetings, including stakeholder workshops, were conducted online. Construction works, however, have been completed through close coordination with tessabans and local contractors in Ranong and Chumphon. The final inspection was conducted online by video streaming.

All of the meetings and activities of the Projects are summarized in Table 1.6.1 and Table 1.6.2.

model city projects and to formulate SFC Plans and Projects. It explains the goals and principles of SFCI, its key approaches, SFCI Methodology, SFC project implementation support, monitoring by tessaban, and the SFCI platform. The SFCI Guideline has been further elaborated into LSFC Guideline in Stage 4 by NESDC. It is attached in Appendix 4.

SFCI Portal Site. As a part of the SFCI Platform, the SFCI Portal Site was developed in order to disseminate the SFCI concept and framework and lessons learned of SFC model cities through the website, which is expected to open under the website of NESDC. The detailed structure and contents of the SFCI Portal Site are explained in Chapter 6.

SFCI Infographic. An easy-to-understand video was created as an infographic, explaining the concept and planning approach of SFCI and introducing the first phase model cities. It was shown in the meeting with tessabans and relevant departments and seminar. It is also uploaded to the SFCI Facebook and SFCI Portal Site.

Documentary of the First Phase Model Cities: A documentary video was prepared in the first phase model cities to introduce the output of each city. It also includes an interview with the mayor of each city, who talked about their experiences in SFCI, what they have learned, and their future visions toward sustainable development. It can be seen in the SFCI Facebook and SFCI Portal Site.

SFCI Facebook: SFCI Facebook page was created to post daily SFCI activities, such as a series of meetings and conduct of field surveys in the SFCI model cities projects and follow-up activities of the first phase model cities as well as internal project meetings.

Handbook of Japanese Experiences of Japanese Cities: This handbook introduced the challenges of Japanese local governments toward sustainable cities. It covers economic development, social development and environmental promotion, and urban management. It can be found in the SFCI Facebook and SFCI Portal site.

2. Development of Sustainable Future City Initiative

2.1 Rational of and Needs of Sustainable Development in Local Cities of Thailand

2.1.1 Policy Agenda for Urban Development of Local Cities

1) Changes in the Situations of Local Cities

As discussed in Stage 1 of TFCP, the key implications that should be taken into consideration as a set of prevailing phenomena, often common among the local cities of Thailand, have been identified when making development policy.

Detail analysis of socio-economic changes and urban development issues of local cities are described in the Final Report of TFCP (Stage 1-Stage 3) in August 2019

Prevailing Demographic Changes. It includes starting the depopulation phase and the aging of communities that causes diminishing economic dynamics in the existing urban centres. While the overall population of Thailand grows at 0.3 % annually, some provinces, particularly in the northern and north-eastern regions, have already entered the depopulation phase since the 2010s. Such a declining trend is caused by the declining birth rate and population outflow. As a result, local cities are now facing a trend of an aging society.

Salient Changes in Economic Structure. Thailand has experienced rapid economic growth due to the improvement of the manufacturing and service sectors in the last 30 years, enhancing the life of the people, especially in urban areas. Recently, along with globalization and regional economic integration, such as ASEAN Economic Community, more people and more goods are transported directly to and from local cities of Thailand. As a result, economies of local cities of Thailand are supported by labors from neighboring countries, such as Lao and Myanmar. Economic structure of local areas of Thailand needs to shift to more value-added industries rather than labour-intensive ones.

2) Urban Development Agenda in the 20-year National Strategy NESDP

It is important to note that local cities are developed to become local growth centres in the last 12th NESDP that constitutes the first 5 years of the 20-year National Strategy. Local cities are expected to be “Livable Cities” for all and to have more proactive roles and functions as development bass for a province or a cluster of provinces (12th NESDP). This calls for practical and strong actions based on “organized city planning” to change the trends of diminishing dynamics in the existing urban centers.

The draft 13th NESDP, which will begin drafting in October 2021, also defines urban areas as potential growth engines to create value-added to support economic growth and provide a wide range of development opportunities for all sectors. It set regional city with prosperity, modernity, and livability as one of the 13 milestones. On the other hand, it also mentions possible negative impact of urbanization on natural resources and global environment, such as increasing amount of GHGs and stresses necessity to adjust and manage urban activities by utilizing ICT and technologies.

13th NESDC Local Government also points out the constraints face by Local Administrative Organizations (LAOs) to promote sustainable development, such as lack of human resources and financial capacities. However, it also focuses on some of advanced LAOs taking progress and innovative steps and private sector being more involved in urban development.

3) Key Implications for Sustainable Urban Development

Considering the salient socio-economic changes and key urban development challenges faced by local cities in Thailand, the following six key implications can be set for sustainable urban development in local cities, which should be well considered both in national urban development initiatives and local government development policies.

- Self-sustaining economic competitiveness and promotion of centrality of city,
- Preparation for depopulation, aging, and low fertility society
- Attention on sustainable environmental strategy and global warming,
- Attractiveness of city and inheritance of locality
- Strengthening of regional connectivity, and
- Strengthened initiatives of tressabans and people's participation in development

2.1.2 Potentials and Constraints for Tressabans to Realize Sustainable Development

Local initiatives are essential because each tressaban is unique. Tressabans have different visions, strategies, and project priorities to tackle issues incurred with socio-economic changes, which largely depend on their size and financial and administrative capabilities, as well as the characteristics of the regions they are part. The tressabans know the local realities better than anyone else, even the national and regional government.

As stated above, the draft 13th NESDP expects LAOs (including tressabans) to make more local development initiatives. There are several notable and advanced tressabans with clear visions that conduct unique activities. Tressabans with strong mayoral leadership and insightful and committed staff have promoted creative development, which are honoured with national and international awards, such as Livable City Award, King Pradjadhipok Institute (KPI) Award, and ASEAN Environment Sustainable City (ESC) Award.

However, existing provincial and local administrative systems in Thailand have several constraints for tressabans to take initiatives promoting its development to meet local needs.

- Small size of tressaban, in terms of area and population.
- Limited financial capacities and a small percentage of its own resources and heavy reliance on grant, shared tax and subsidy.
- Lack of human resources, particularly technical staff
- Limited authorities, preventing conducting any projects outside of their administrative boundaries

2.1.3 Needs of Institutional and Administrative Mechanism to support Local Initiatives

Even though leaders of tssaban have a clear vision and awareness of their issues and needs, it is hard for them to manage their development. Therefore, the following government policy and administrative mechanisms are strongly needed to support local efforts and initiatives.

1) Linkage between the national government program and local reality

While Thailand has gradually proceeded decentralization in terms of fiscal and authority since the previous Constitution in 1997, financial resources allocated to the LAOs are still very limited. Most projects conducted in the area of local cities are implemented by each department. For example, flood protection projects are managed by DPT, tourism development by the Provincial Office of Tourism and Sports, the universal design project by the Department of Older Persons under the Ministry of Social Security and Human Development, etc. Even Comprehensive Plan or urban planning is prepared by Provincial DPT.

On the other hand, those central departments face difficulties understanding the actual local needs and formulating their development projects effectively, even though they have provincial or regional field offices.

There is a strong need for a tool or channel for the national government and each line department to effectively understand the local needs and implement projects along with their policies and programs.

2) Strengthened people's participation in development

Participation of the people is the key to enhancing local development capacity. Active participation of local communities has achieved good outcomes, particularly for projects related to urban development improvement, welfare promotion, and cultural preservation. It has also ensured the sustainability of those outputs through the active involvement of stakeholders in operation and management activities.

The 12th NESDP identified good public administration as one of the ten important strategies, stating "the decentralization of power, coupled with public participation and the fair distribution of responsibilities among national, regional, and local actors, should be also promoted." Self-support, mutual support, and public support through participation are important considerations in defining the role of tssabans in urban development and in designing certain actors for urban development. It can also facilitate private sector involvement to gain support towards the prosperity and wealth of the city.

3) Regional approach integrating the actual urbanized area, including several LAOs

The actual urban area exceeds far beyond the administrative boundaries of tssaban. Overall urban management to cover integrated urban areas is required for practical sustainable development in each region. Regional integration and development of the core city and regional center is identified in National Reform of Thai Government as well, which is essential to enhance regional development of Thailand as below

- Economic activities, whether domestic or overseas trading, the development of

targeted industries, and regional connectivity can generate income for the relevant sector. It can increase employment in areas of the target industry and surroundings. Therefore, the strategy of core urban development of clustered areas and transportation routes is highly necessary to serve the economic growth and urbanizations,

- The core urban development is to enhance income generation and to spread prosperity from major cities to secondary cities and surrounding areas.

Coordination among the core or central tressaban and surrounding tressabans as well as TAOs are required to identify priority issues, prepare the development plan, formulate the project, and implement them.

2.2 Objectives and Overall Concept of SFCI

Based on the above considerations, the SFCI was proposed as an implementation mechanism to undertake key urban development challenges of the local cities of Thailand. The overall concept and outstanding features of SFCI are summarized below.

2.2.1 National-government Guided and Local-Government Driven Development

With an overall goal to make cities sustainable under the emerging socio-economic changes, SFCI set an overall concept of “National-government-guided and Local-government Driven development,” which has the following three principles, (i) local-driven development, (ii) people-centered development, and (iii) national government guided and supported development.

- (i) **Local-driven development.** The local government should have the initiative to formulate its vision and strategies and propose projects to achieve its vision.
- (ii) **People-centered development.** All planning processes should be done in a participatory approach in order to understand the actual issues and needs of stakeholders and to ensure the collaboration of such stakeholders in the implementation and operation stage.
- (iii) **National government guided and supported development.** It is important to connect the proposed plans and projects of the local government with the financial and institutional support of the national government, which currently does not exist in Thailand.

SFCI supports local cities in identifying unique and practical solutions to key issues and achieving the visions of the local communities. That is to say, SFCI aims to link such local issues and visions with national financial and technical resources, missing in the existing administrative system.



Source: JICA Project Team

Figure 2.2.1 Overall Concept of Sustainable Future City Initiatives

2.2.2 New and Different Approaches of SFCI

SFCI focuses on four key planning approaches, namely (i) holistic approach, (ii) regional approach, (iii) long-term approach, and (iv) collaborative approach, which are new and different from existing urban development plans of local cities in Thailand, including Comprehensive Plan authorized by DPT and LSDP by DLA.

- (i) **Holistic approach.** Based on the common global concept of sustainable urban development, SFCI comprehensively covers the economic, social, and environmental aspects at the planning phase.
- (ii) **Regional approach.** Regional approach or inter-municipal coordination is the key of SFCI for effective urban management, considering the recent trend of urbanization beyond administrative boundaries of tessabans. It is also important for tessabans and adjoining TAOs to provide efficient urban services since most are too small in terms of area, population, and financial capacity.
- (iii) **Long-term approach.** Visioning and planning of SFCI have a long-term perspective, including the future framework of socio-economic conditions and long-term perspectives of national and regional development trends.
- (iv) **Collaborative approach:** Through collaboration with various stakeholders, including citizens, community-based organizations, and the private sector, the tessaban can expand its planning scope and scale, thus ensuring the sustainability of their development and reducing the financial burdens of the government sector both for development and operation phase.



Source: JICA Project Team

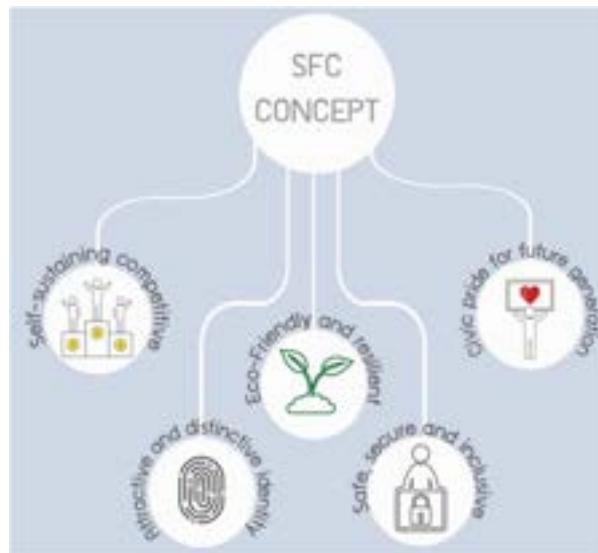
Figure 2.2.2 Image of Key Approaches of SFCI Planning Approach

2.3 Common Visions of Sustainable Future City

Sustainable urban development is a global common concept to balance economic, social, and environmental aspects. While the sustainable cities concept can be applied in any city, future visions of SFC vary, depending on the uniqueness of participating cities. There are five characteristics the participating cities should aspire for in preparing SFC visions to undertake key urban development challenges, called SFC Common Visions, as follows.

- (1) **Self-sustaining competitive city.** A city where self-sustaining industries are promoted by utilizing local resources.
- (2) **Attractive and distinctive identity.** A city where people and investment are attracted to a locally unique culture, lifestyle, and landscape.
- (3) **Eco-friendly and resilient city:** A city sufficiently liveable with basic infrastructures and public services as well as a well-managed green and natural environment, thereby resilient against disasters.
- (4) **Safe, secured, and inclusive city.** A city where people will grow safe and healthy will equally receive education, and mobility is ensured for the weak such as the elderly, handicapped, and pregnant.
- (5) **Civic pride for the future generation.** A city the citizens feel proud of and will confidently succeed for the next generations.

SFC Common Visions were reflected into one of the priority policies of the 12th NESDP.



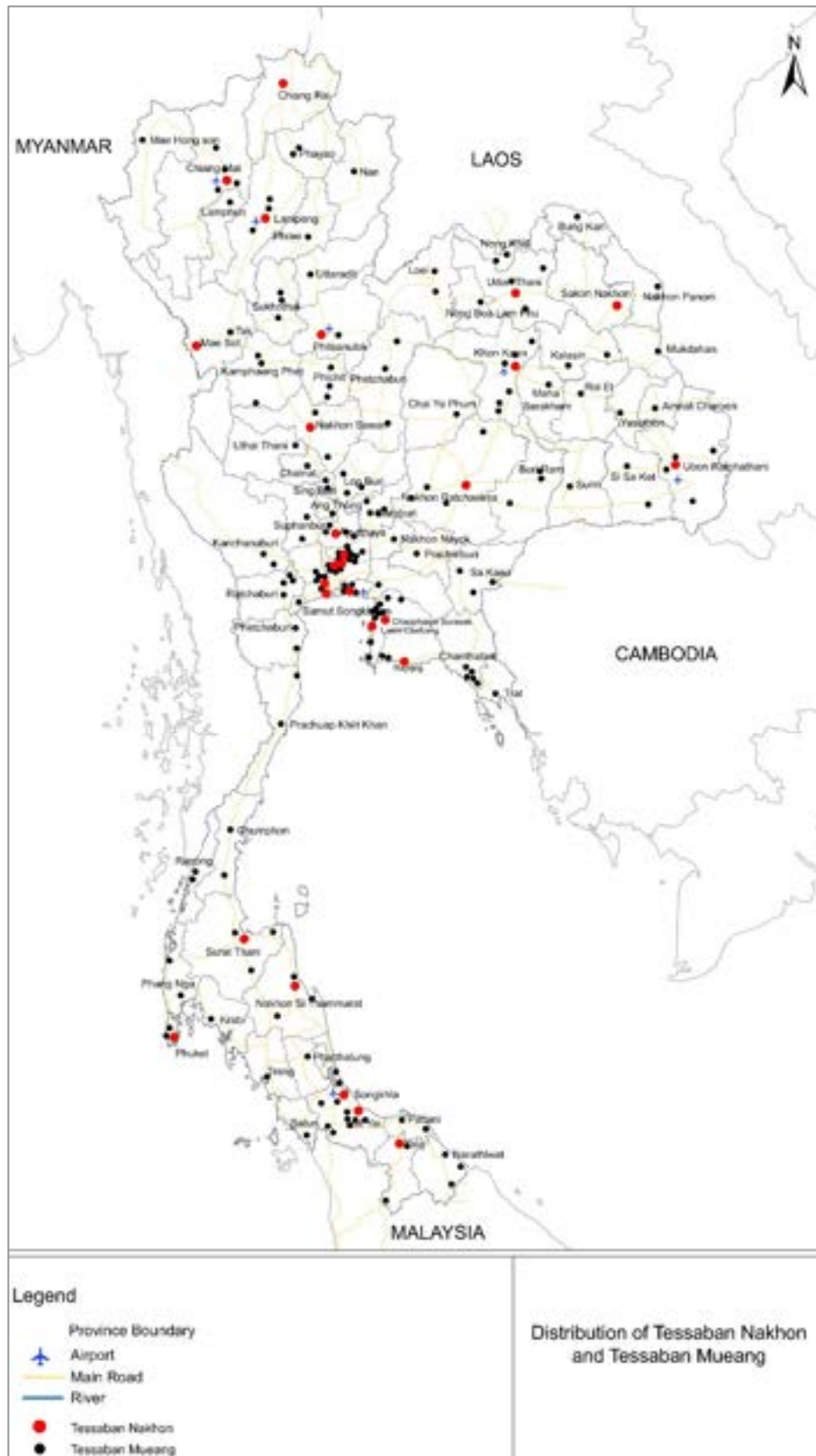
Source: JICA Project Team

Figure 2.3.1 Common Concept of Sustainable Future City

2.4 Target Cities of SFCI

Target cities to participate in SFCI are regional growth cities and local urban centers. Since SFCI aims to serve as a policy tool to direct more equitable and sustainable development all over the county, SFCI target cities should be centers for sustainable urban development of their respective urban areas. They should also have socio-economic potential sufficient enough to spill over to their surrounding areas. Specifically, SFCI target cities cover all of tessaban Nakhon and tessaban Mueang.

SFCI can be effective as an operational platform that facilitates organized planning and collaboration between different parties, which is an essential element of regional integration. While tessaban tambons, the smallest category of tessaban and TAOs, are not the target of the SFCI, they are still involved in its planning process to consider sustainable development of the integrated urban areas.

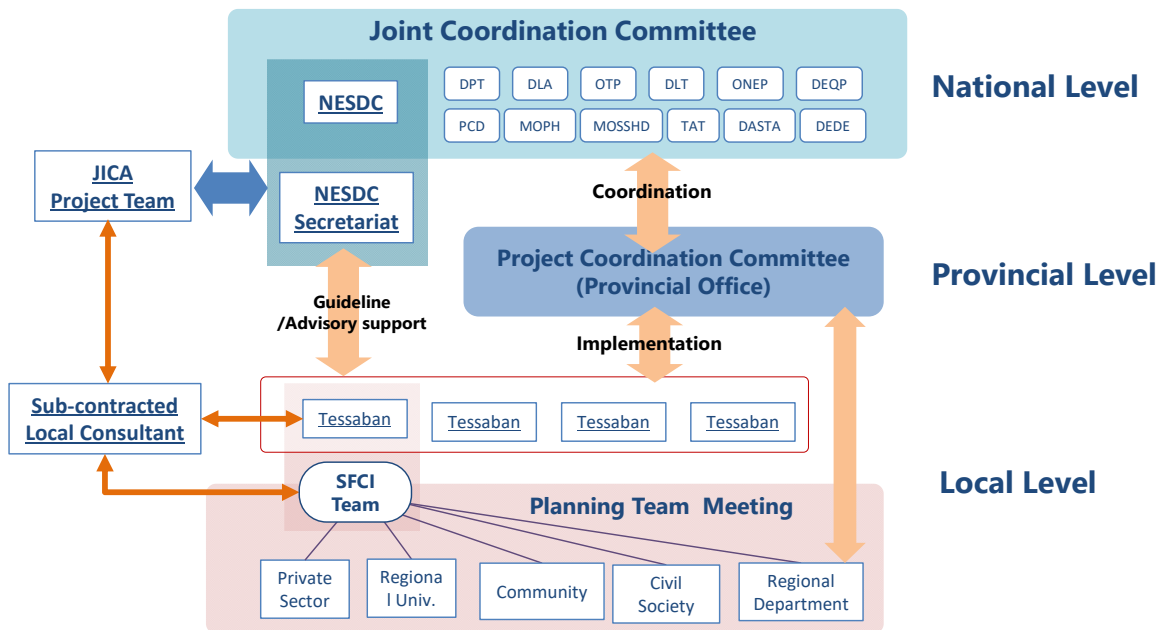


Source: JICA Project Team

Figure 2.4.1 Distribution of Tessaban Nakhon and Tessaban Mueang in Thailand

2.5 Organizational Structure

Figure 2.5.1 shows the organizational structure of SFCI. The expected roles of each organization are summarized thereafter.



Source: JICA Project Team

Figure 2.5.1 Organization Structure of SFCI

2.5.1 National Level

1) Joint Coordinating Committee (JCC)

JCC is the national-level steering committee for SFCI. It evaluates and approves the SFC Plan and Projects and facilitates inter-organizational coordination to ensure smooth implementation. A JCC meeting will be held for the approval of the SFC Plan and Projects and whenever necessary.

While JCC was set up under the implementation framework of the JICA Technical Assistance Project as specified in the R/D and described in Chapter 1, it can be renamed to SFCI Committee or any form of committee after completion of the TFCP. Committee members can be flexibly selected depending on the issues in the national urban development policies. Each member shall provide necessary advice for planning and project formulation to tessaban and provide necessary financial and institutional arrangements, such as deregulation for the proposed projects and coordination among relevant agencies.

2) SFCI Secretariat: UDSD, NESDC

NESDC is in charge of overall management and supervision of model city activities; with its UDSD as the secretariat of SFCI. NESDC shall send invitations and select tessaban at the preparation stage, monitor and evaluate SFC plan and projects at the planning stage, and provide necessary coordination among and give instructions to relevant agencies to ensure implementation of SFC projects.

As the overall project owner, the following are the specific responsibilities of NESDC:

- formulate the Committee for SFCI and chair the Committee meetings,
- select and supervise the Consultant to support model cities, if necessary,
- select SFCI model cities
- supervise and advise SFCI activities at local levels, and
- monitor the progress of the model cities participating in the previous stages.

2.5.2 Local (Tessaban) Level

1) Tessaban's SFCI Team: Project Owner and Secretariat

Tessaban has the sole authority to carry out the SFCI at the local level. Each tessaban has set up an SFCI Team as the SFCI project owner and the secretariat at the local level, managing SFCI as well as performing as a liaison to other organizations with the following tasks:

- organize the PT and hold PT meetings;
- formulate the SFC Plan and Projects, based on the result of basis analysis and discussion in the PT meetings;
- coordinate with Changwat Office and organize PCC meeting chaired by the Governor,
- submit the necessary documents to NESDC;
- integrate SFC Projects to be implemented by tessaban with its LSDP;
- coordinate with relevant agencies in promoting SFC projects;
- attend plenary WS organized in Bangkok; and
- cooperate monitoring and evaluation (M&E) activities during and after the SFCI Projects.

The head of the SFCI Team shall be the mayor, deputy mayor, or any officer responsible for the overall SFCI Projects to smoothly facilitate a series of SFCI activities and ensure the commitment of tessaban to the output of SFCI. The SFCI team shall comprise representatives from key divisions closely related to the issues discussed in the SFCI.

Box 2.5.1 SFCI Team in the First Phase Model Cities

In the first phase of SFCI, key divisions in charge of SFCI differ by tessaban, depending on the priority issues. Some tessabans assigned several divisions for collaboration to proceed with the SFCI.

- Tessaban Nakhorn Khon Kaen: Division of Civil Works is responsible for public transport development discussions. The director of the division is actively involved.
- Tessaban Nakhorn Chiang Rai: Division of Technical Services and Planning was assigned as the main secretariat for SFCI at the beginning. With strong commitment from the office of the mayor, the Medical Division and Municipal Clerk Division were also actively involved in SFCI activities.

- Tessaban Mueang Krabi: With strong commitment from the office of the mayor, the deputy mayor always leads the SFCI activities, and the Division of Technical Services and Planning is in charge of the Secretariat for SFCI.
- Tessaban Mueang Phanat Nikhom: The mayor participated in most SFCI activities, and the assigned main contact for SFCI was the Division of Public Works.
- Tessaban Nakhon Phitsanulok: The vice mayor actively joined SFCI activities, and the assigned main secretariat was the Bureau of Public Works. Many other relevant agencies participated in the capacity development programs of the SFCI.
- Tessaban Mueang Nan: The assigned main contact was the Division of Public Health and Environment since they intend to discuss environmental issues.

2) PT Meeting

The PT meeting is a platform of the participatory planning approach for discussing the existing situation, identifying key priority issues, and finding the priority projects for SFCI.

Tessaban will nominate PT members, including responsible persons and contact persons, to conduct a series of SFCI activities at the local level and organize PT meetings at each stage of activities. Stakeholders will be involved to get their opinions and consensus at each planning stage.

Through such a participatory approach, the tessaban can (i) identify actual issues and needs of the people, (ii) find key players of the city and various implementing bodies, including from the private sector, and (iii) ensure public support and increase opportunities of implementation and so on.

Representatives from the following organizations are expected to be invited:

- relevant departments of the provincial government;
- relevant departments/sections of tessaban;
- community people/ community-based-organizations;
- academics, particularly for regional universities if any;
- public organizations, such as hospitals, schools, police;
- the business sector, including provincial Chamber of Commerce, Federation of Thai Industries, and any other key business actors; and
- NGOs.

2.5.3 Provincial Level: Project Coordinating Committee (PCC)

It is important for tessabans to closely coordinate with the Changwat office and provincial departments since they formulate and implement development projects of national departments. Through such coordination, tessaban get access to the financial and technical support of the national department to facilitate the implementation of the proposed SFC Plan and Projects.

PCC will be established for inter-departmental coordination of cross-cut issues and

regional coordination chaired by Governor. The expected missions of PCC are

- to facilitate coordination with and among provincial offices of departments,
- to promote regional coordination with adjoining tressabans and TAOs,
- to ensure conformity with legal and institutional aspects of the plan and projects, and
- to identify appropriate agencies and budgeting sources to implement the SFCI Projects.

2.6 Implementation Framework of SFCI

The SFCI will commence with a clear commitment of the national government to achieve a national policy fully aligned with the 12th NESDP. As a policy document, the NESDC prepared the SFCI Development Guideline with technical assistance from JICA and approved by the JCC, of which the secretariat is NESDC and members are comprised of relevant national departments (see Section 1.5.1). The SFCI Development Guideline provides a strategic framework for the sustainable development of tressabans. It describes key urban development challenges, SFC common visions, SFCI methodology, SFC project implementation support, and monitoring.

Based on the SFC Development Guideline, participating tressabans will conduct SFCI projects. The SFCI has three components that are (i) Preparation, (ii) SFC Research and Planning, and (iii) SFC Project Implementation. National and provincial organizations and the dispatched Consultant accordingly will support the project implementation. The overall framework of SFCI is illustrated in Figure 2.6.1.

2.6.1 Preparation

In the Preparation component, participating tressabans need an understanding of the objectives and overall concept of SFCI. Tressaban will mobilize the SFCI implementation organization at the local level, as described in Figure 2.5.1. It includes the SFCI Team as SFCI project owner and secretariat at the local level, chaired by a mayor or a high-ranking officer, and the PT, composed of major stakeholders. Simultaneously, the tressaban also needs to coordinate with the Changwat office to set up PCC to coordinate with relevant provincial offices.

Stakeholder analysis can be conducted with the following steps;

Step1: List up organizations, groups, peoples in each tressaban from groups listed in Table 2.6.1. It is important to identify active organization/person with exact name.

Step2: Analyze in detail for each actor along with focusing issues, interest area, and expected contribution.

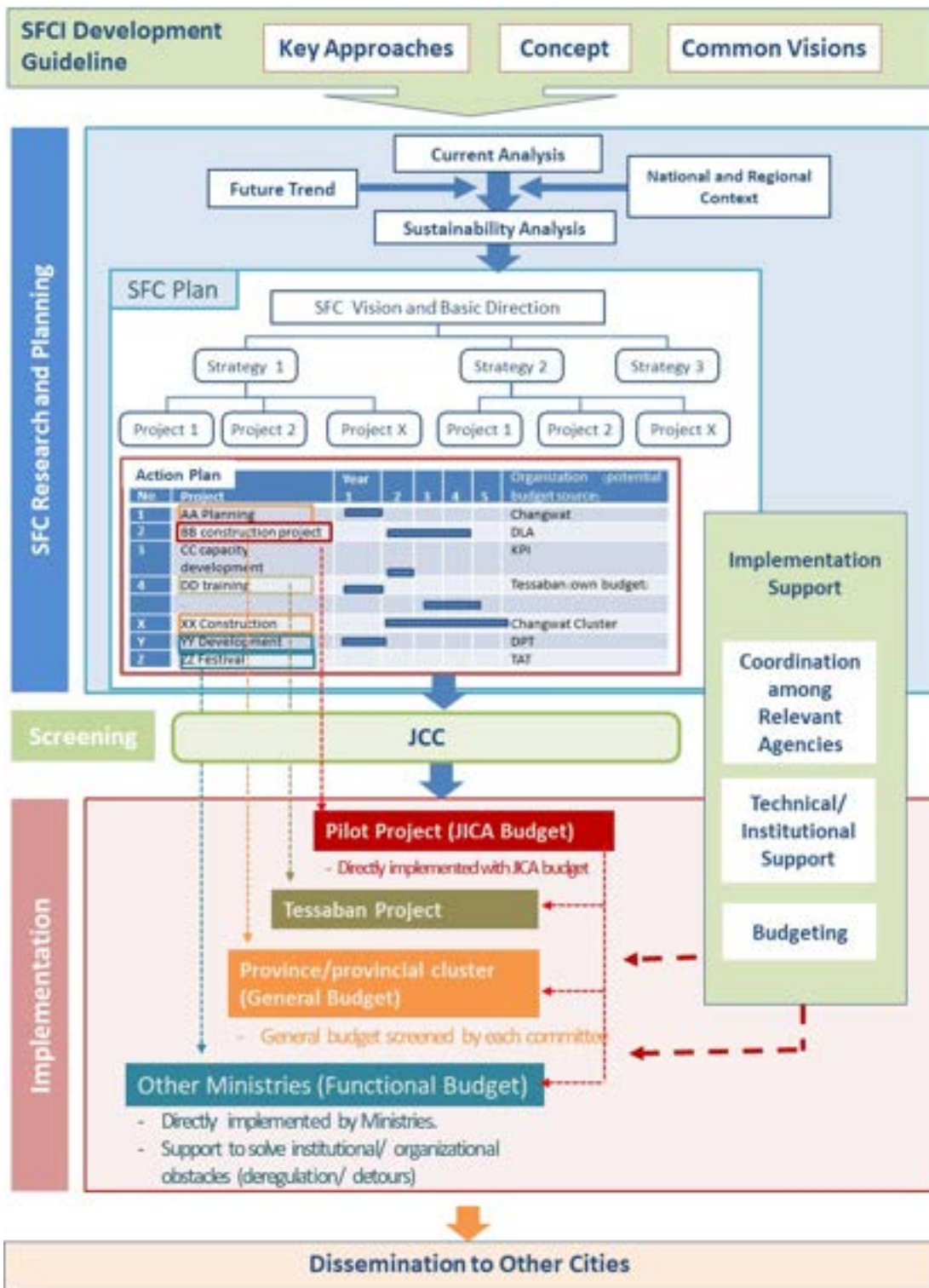
Step 3: Analyze each actor and identify cases (projects or programs) where they can be beneficiaries, negatively affected, implementation organizations, supporting organizations, or potential opponents.

Step4: Select Planning Team Members to include a variety of actors with different interest area.

Table 2.6.1 Expected Members of Planning Team Meeting

Governmental Organization	It is better to include surrounding Municipalities or TAOs to get ideas of inter-boundary issues
Community people/ organizations:	As representatives of community people, community committee members must be involved. Moreover, volunteer group, social club, youth group, etc., can also be involved.

Academics:	Local universities and colleges can be technical advisor and funding organization when their interests coincide with SFCI. They can also mobilize students, which make the city lively with participation of young generation.
Public organization	It includes police, hospital, school, etc.
Business Sector	Private sector should be involved to discuss economic competitiveness of the city. Provincial office of Chamber of Commerce and Federation of Thai Industry are good actors to work for provincial benefit, not only for their company profit. Owner of local market, OTOP, such as small scale business actors can share local economic ideas.
NGO	NGOs can be strong supporting groups as well as potential opponents. In order to make them strong supporters to SFCI, it is necessary to make good relationships through their involvement from the planning stage.
Opinion Leader	It is highly dependent on local situations. Expected actors are religious leader, local politician, school teachers/professor, doctor etc.



Source: JICA Project Team

Figure 2.6.1 Overall Framework of SFCI

2.6.2 SFC Research and Planning

1) Planning Steps

The SFC Research and Planning component consists of three steps.

1. Basic analysis: Basic analysis aims to examine the current status of tessaban and identify critical issues to solve and future potentials of tessaban. It shall cover the following components.

- **Review existing plans**, such as the National Economic Social Development Plan, Provincial Strategic Development Plan, DPT’s Comprehensive Plan, LSDP, and other important sector plans for tourism development, transport development, and environmental protection plan.
- **Data collection and analysis** to clarify the current status and problems of tessaban and its surrounding areas. It will cover demography as a basis of urban development, economic conditions, social aspect, environment, and urban management comprehensively. If any quantitative information is unavailable, qualitative information will be collected.

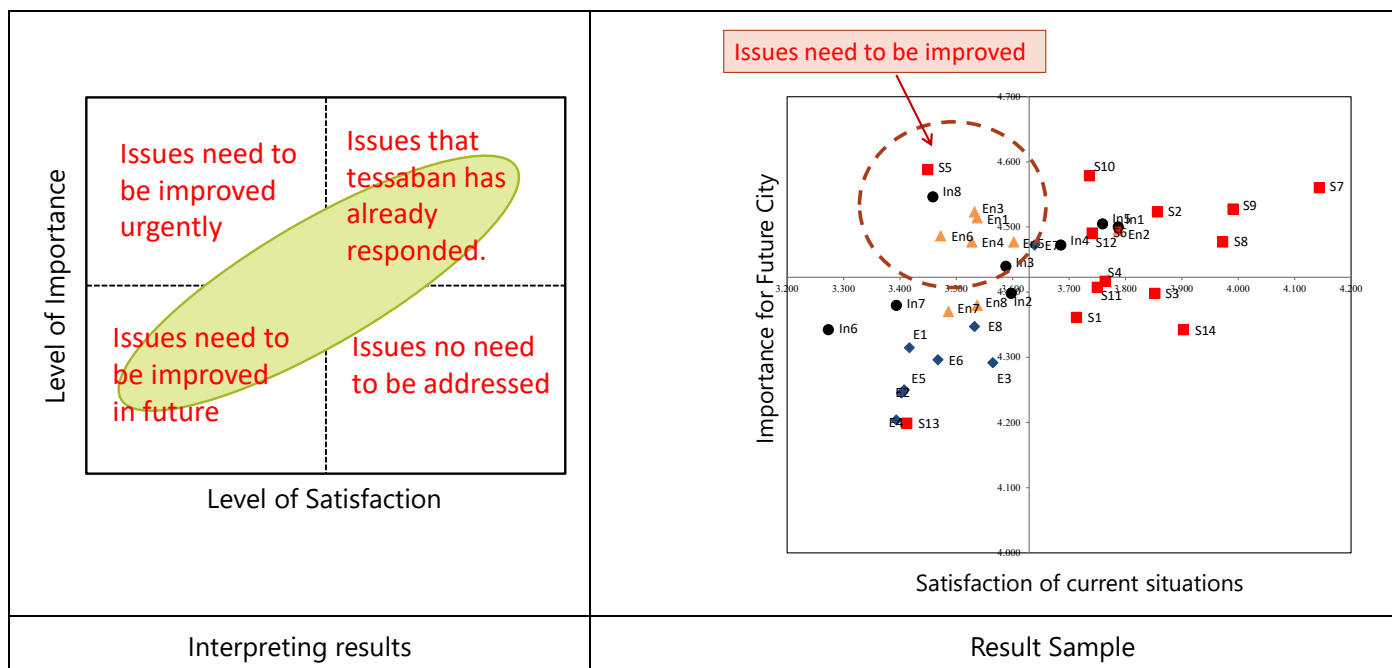
Table 2.6.2 List of Collected Data and Information

Sector		Type of data
Social aspect	Demographic data	<ul style="list-style-type: none"> - Population structure and its trend in the last 10 years (Thai, foreigners) - Aging rate and its trend in the last 10 years - Migration trend - Household income - Non-registered population
	Level of social services	<ul style="list-style-type: none"> - Number of higher educations - Number of medical services
	Issues	<ul style="list-style-type: none"> - Particular issues of social welfare, care support, or participation of vulnerable persons - Community participation - Education and medical services, - Security and crime - Historical cultural status
Environment	- Overview	- Climate, geography, natural resources
	- Disaster	<ul style="list-style-type: none"> - Types of disaster - Frequency and vulnerable areas
	- Natural resources	- Preservation area by type
	- Pollution	<ul style="list-style-type: none"> - Critical pollution (air, water quality, solid waste) - Any notable measures
	- Solid waste	<ul style="list-style-type: none"> - Volume of waste and landfill site - Issues of solid waste management (regional coordination, recycling, waste to energy, etc)
Economy	- Overall	- GRDP, GRDP per capita, and its composition
	- Employment	<ul style="list-style-type: none"> - Employment by sector and its trend in the last 10 years - Employment of young generation
	- Industries	<ul style="list-style-type: none"> - Leading industries - Traditional and emerging industries - Existing issues and future vision for local economic development

Urban Management	- Infrastructure	- Any existing issues, road, water supply, drainage, sewerage, etc.
	- Urbanization trend	- Change of land use - Urban expansion into the suburban area - Types of business and commercial status in CBD
	- Public transport	- Available public transport mode - Mobility issues

Source: JICA Project Team

- **Questionnaire survey** to understand opinions of the people on urban development. It can examine the level of people’s needs or priorities and satisfaction on various aspects (See Figure 3.2.1). The sample size will be more than 200. The result of questionnaire survey can be compared with other cities, which can show the position of that city within Thailand. It is also expected to conduct the similar survey periodically for tessaban to understand change of people’s perception on urban development



Source: JICA Project Team

Figure 2.6.2 Example of Result Analysis of Questionnaire Survey

2. Future Analysis: This analysis includes the socio-economic framework of tessaban and urban areas integrated with surrounding urban areas based on the past trend of population and age structure and future population forecast prepared by NESDB (Figure 2.6.3).



Source: JICA Project Team

Figure 2.6.3 Example of Population Analysis in Tessaban and Urban Area (Case of Phitsanulok)

Based on the results of the basic analysis and future socio-economic framework, the future perspectives of tessaban and surrounding areas will be examined as follows.

- Anticipated problems on economic aspect, such as outflow of industries, loss of competitiveness of major industries against surrounding regions lack of human resources,
- Anticipated problems on society, such as increasing aged population, lack of social security, outflow of young people due to lack of education,
- Anticipated problems on environment, such as increasing solid waste and lack of landfill site, water quality, air quality, serious frequent flooding.

3. Sustainability Analysis—Visioning and Strategic Directions: The future vision of existing plans will be reviewed, particularly those by the tessabans. The result of the above analysis will be compiled as SWOT analysis, and based on its result, strategic directions will be drafted as a basis of the SFC Plan. Once strategic directions are drafted, sustainability or future continuity of the city and its region will be assessed from various

aspects as follows:

- continuity of society in the future;
- economic continuity, especially potential future leading industrial sectors;
- future employment opportunities for the young generation in tessaban;
- the attractiveness of town for aged, middle-aged, and young generations, students, and kids;
- living environment for all people and social service available for vulnerable people; and
- environmental sustainability.

4. SFC Plan Formulation: Based on the above result, SFC Plan will be formulated.

2) Structure and Coverage of SFC Plan

The SFC Plan is a core output of the SFCl. Based on the sustainability analysis results, the SFC Plan is formulated to identify issues and projects to achieve the SFC vision, of which its main concept is to sustain the economy, society, and environment of tessaban. The SFC Plan includes vision, strategies, and projects. Its structure is shown in Figure 2.6.4.

SFC Plan is not designated by a specific law in Thailand such as Comprehensive Plan under DPT or LSDP under DLA. The Comprehensive Plan is a statutory urban plan and mainly focuses on land use and urban facilities in an urbanized area, of which planning coverage is usually beyond the administrative boundary of the central tessaban. On the other hand, the LSDP is a 5-year action plan of tessaban that focuses on projects for their implementation.

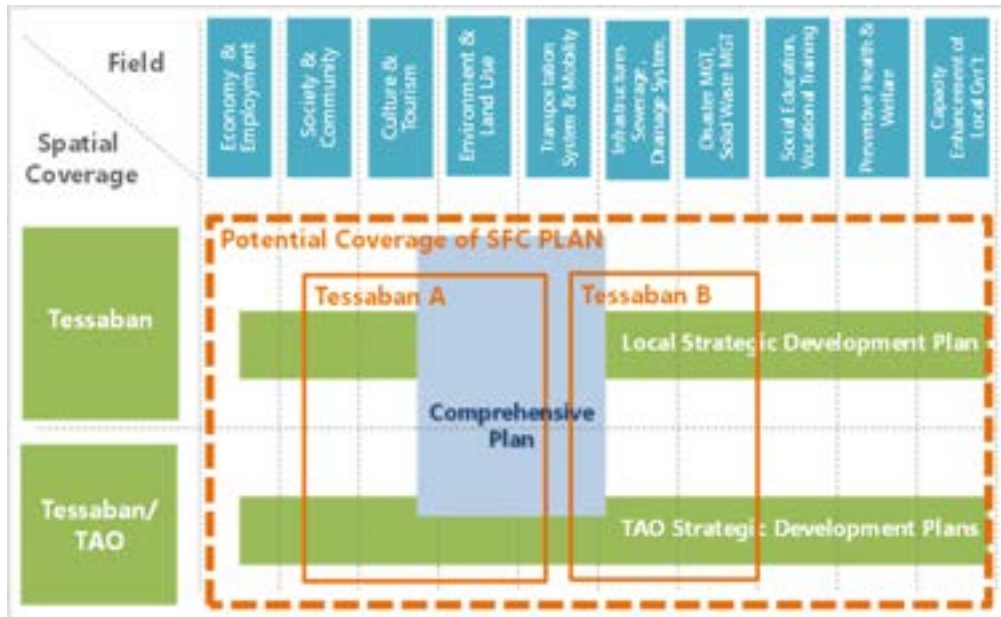


Source: JICA Project Team

Figure 2.6.4 Structure of SFC Research and Planning

The SFC Plan should be holistic to sustain urban growth for the long term. Accordingly, the SFC Plan and projects can cover any sector authorized by the central, provincial, or local administrations. The SFC Plan can also cover the surrounding tessabans and TAOs

depending on the issues identified in each city, while the comprehensive plan covers urban areas in the surrounding tessabans and TAOs (see Figure 2.6.5). In other words, the SFC Plan can include projects the central and provincial ministries, Changwat, Provincial Administrative Organizations (PAO)s, or surrounding tessabans and TAOs will implement. The SFC Plan needs to harmonize with relevant plans of these agencies and, at the same time, for those relevant plans to include SFC projects.



Source: JICA Project Team

Figure 2.6.5 Coverage of SFC Plan

Since SFCI is implemented with the SFCI Development Guideline, which is administratively authorized by NESDC, the core output of SFCI (SFC Plan and Projects) will eventually be owned by NESDC as its main secretariat. SFC Plans and Projects will be a part of the Regional Development Plan of NESDC.

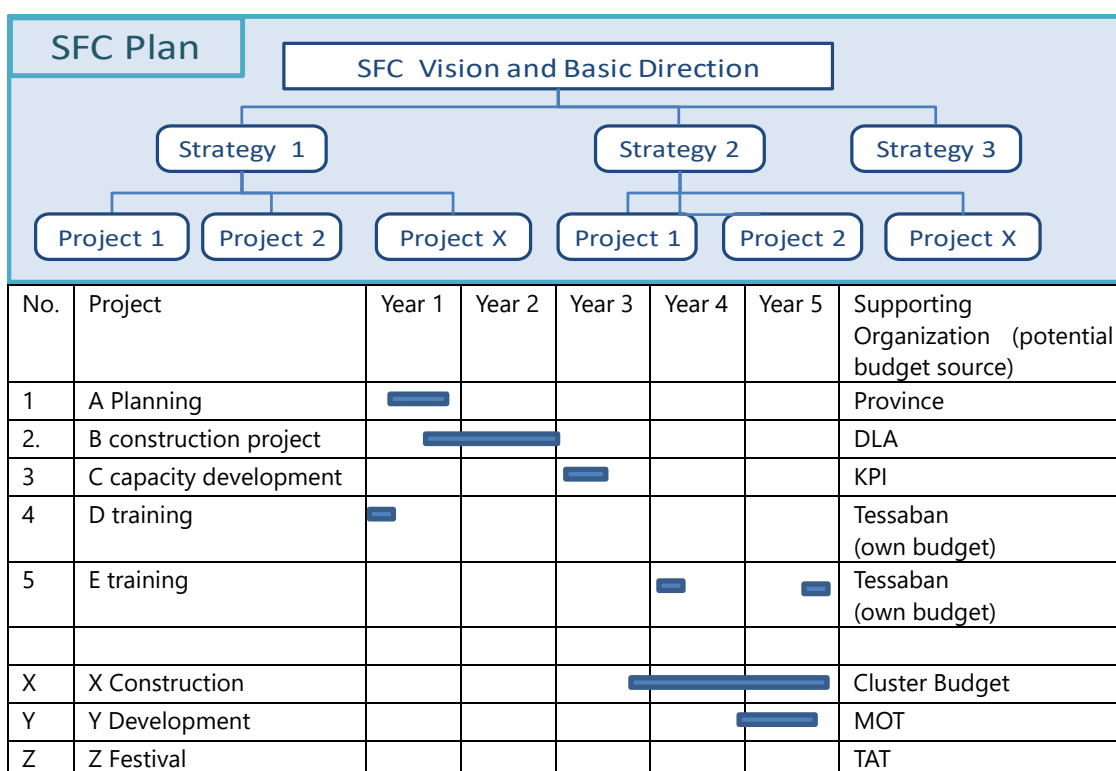
3) SFC Project Formulation

A list of SFC projects is formulated as a 5-year action plan or potential actions to materialize the strategies of the SFC Plan. Each strategy will have several programs and projects. In the SFCI, a list of projects will be formulated as preliminary action plans for further elaboration, where detailed consideration, such as engineering design, procurement list, etc., will not be included. The action plan will identify, including but not limited to, the initial implementation schedule and potential project financial sources of each project from the possible budgeting sources. The following points need to be carefully considered in the project formulation.

- **Existing projects:** It is important to review projects which are currently being implemented, committed or being planned by relevant organizations and to reflect into SFC Projects. Tessaban and the Consultant shall collect that information from relevant agencies, particularly from provincial departments under PCC.

- **Implementing organization:** It is important to review regulation and authorities of tessabans in terms of the scopes of SFC Projects. Those of other organizations should be also considered and reviewed in order to consider carefully implementing organizations and possible financial resources with necessary authorities to implement each project.
- **Implementation schedule:** At this stage, the implementation schedule can be set as long-term, medium-term, and short-term. The feasibility of the projects shall be considered, such as land availability, human capabilities, etc.

Tessaban will identify priority projects as early acquired actions to be taken through discussion with PT. The priority projects will be considered when there are more details to apply possible budgeting sources.



Source: JICA Project Team

Figure 2.6.6 Image of SFC Plan and 5-year Action Plan

4) Participatory Planning Process through PT Meeting

The participatory planning process, shown in Figure 2.6.7, will be introduced through PT meetings. This SFCI planning process is established based on the conventional participatory planning approach as follows.

- First PT meeting on issues identification by answering “**where we are?**” including urban development problems faced within tessaban and surrounding urban areas, critical issues, most important potentials, people’s opinions, and the satisfaction on urban development.
- Second PT meeting on vision formulation by answering “**where we want to go?**”

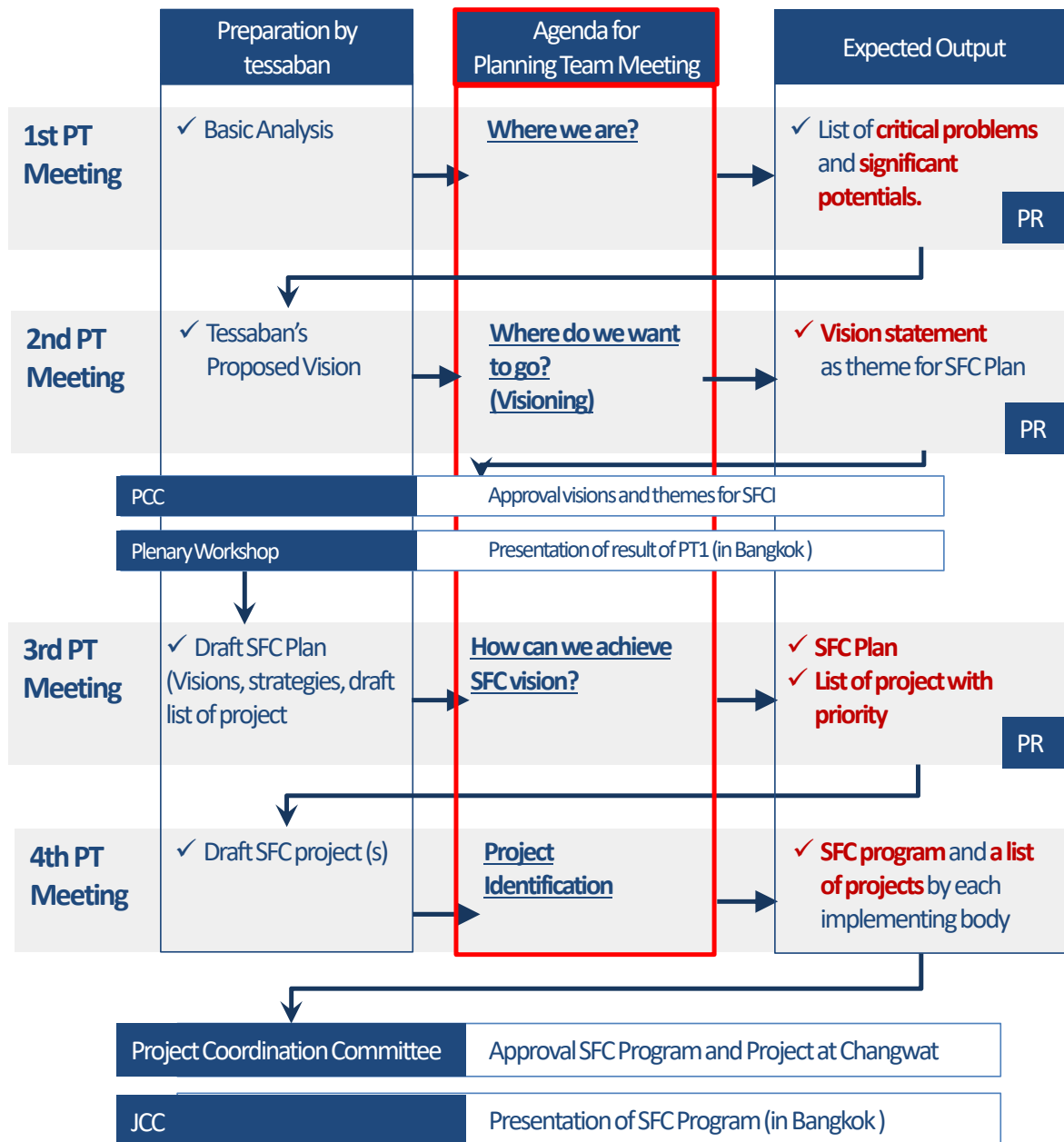
including sustainability assessment from various perspectives, the result of SWOT analysis, vision, and future development strategies.

(iii) Third PT meeting on plan formulation by answering **“how can we achieve the vision?”**

(iv) Project identification

Tessaban closely works together with the local consultant or any local academia to prepare each PT meeting. They summarize the output of the PT meeting in order to proceed to the next step.

Each tessaban may change the agenda of or organize in two sessions each PT meeting, if necessary, depending on the local conditions.



Note: PR: Promotion
 Source: JICA Project Team

Figure 2.6.7 Participatory Planning Process in the First Phase of SFCI

2.6.3 SFC Project Implementation Supports

Based on the approved SFC Plan and projects, tessaban will coordinate with national and provincial departments to receive implementation support, including the following.

1) Policy-making Support

In order to ensure continuous commitment by tessaban, tessaban needs to put a higher priority on the output of SFCI. During the course of SFCI, SFC Plan and Projects will be prepared through discussion with Mayor or higher-rank officers as well as participatory PT meetings in order to ensure commitment of Mayor. It is important to integrate SFC Plan and projects into its existing plans, such as the LSDP.

2) Administrative Support: Collaboration with National and Provincial-level Authorities

It is an effective way for tessaban to collaborate with relevant authorities for reinforcing technical, financial, and administrative capacity. The Consultant will coordinate with relevant agencies, such as provincial departments or public organizations, depending on the selected themes and sectors of the SFC Plan and projects. One of the typical outputs of coordination is the memorandum of understanding (MOU) with relevant stakeholders, including the provinces and surrounding tessabans, which aims to promote the implementation of the SFC Plan and projects.

In the first phase of SFCI, the following unique collaborations have been conducted.

- Tessaban-centered collaboration with relevant organizations with an MOU (as seen in Phitsanulok, Phanat Nikhom, and Krabi)
- Coordination between tessaban and regional offices of the national department (as seen in all tessaban)
- Coordination between tessaban and national departments through a committee to be set under SFCI
- Coordination with surrounding tessabans at a regional scale (as seen in Khon Kaen)

In addition to coordination with public organizations, various cooperation and collaboration are recognized. It can be a collaboration with private entities, civil society, and the academic sector based on win-win relations among stakeholders as well as with specific benefits and goals in a global society. It may be another potential source to obtain technical and financial supports to realize SFC Projects. The Consultant shall search and update potential partners, including:

- the private sector in each tessaban, such as Khon Kaen Think Tank (KKTT) in Khon Kaen;
- university; particularly for regional universities based on each tessaban;
- international donors that have undertaken urban development in each tessaban;
- cooperation with other municipalities, including outside Thailand, through sister city, friendship agreement, etc.

3) Approach to Potential Financial Sources

Budgeting and financing are some of the biggest constraints for tessabans to facilitate project implementation. The Consultant will support tessabans to apply potential budget schemes and find organizations to implement the SFC Projects.

Tessaban needs to request the appropriate and applicable budget sources depending on the size and scope of each project. The Consultant will provide information on the potential budget and find the most suitable budgeting sources. Since it takes time to approve the proposed budget, the Consultant will consider the timing of budgeting and provide alternative sources. It is also feasible for tessaban to secure its budget to implement the start-up projects until the budget for the full-scale project is approved by any national department.

Possible budgeting sources can be categorized into projects under tessaban’s authorities and those beyond them. The former includes the general financial line of tessabans and an additional financial line. The latter includes the budget under each ministry, PAO’s budget, and others, as shown in Figure 2.6.8. Details of each budget source are described in the following pages.³

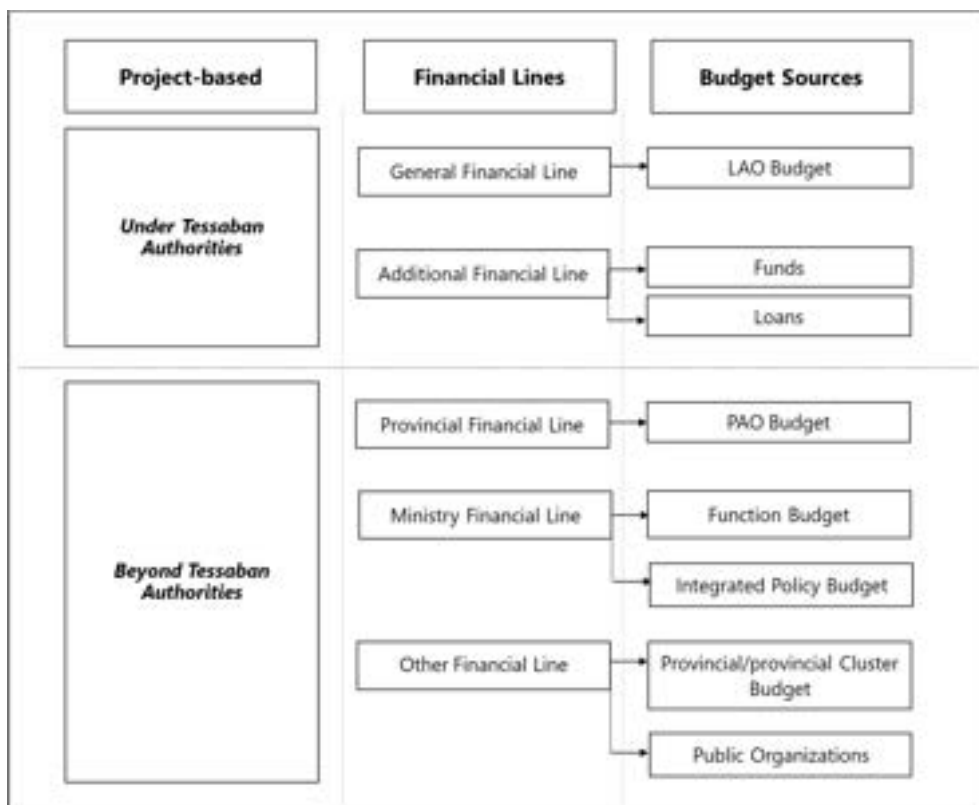


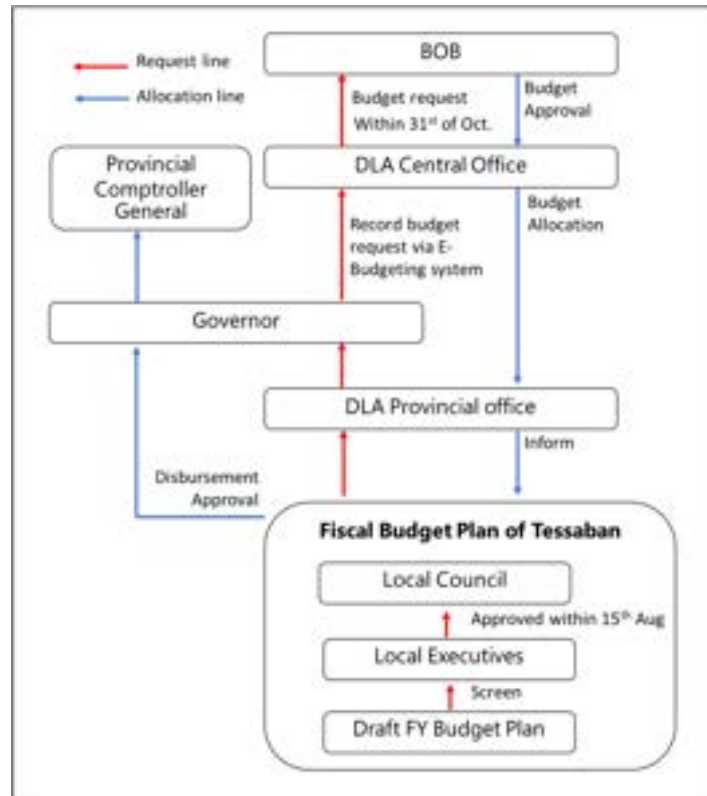
Figure 2.6.8 SFC Project Implementation Supports

(1) Financial Sources for Projects under Tessabans Authorities

LAO’s Budget

The most fundamental financial source for SFC Projects is LAO’s budget itself. Tessaban can include the SFC Projects, of which the scopes are under the authority of tessaban to include into the 5-year LSDP to be directly implemented under the municipal general budget.

³ Most of the information about potential financial sources is summarized as of 2019.



Source: JICA Project Team

Figure 2.6.9 Procedure of Fiscal Year (FY) Budget

In addition, a specific-purpose grant allocated by DLA is a potential financial source for new initiatives or SFC projects. Tessabans must annually update the focal issues of specific-purpose grants as they can change every year. They can propose directly to the Bureau of Budget (BOB) such projects into their fiscal year (FY) budget plan to use the specific grants. DLA sets up the committee to screen and approve those projects requested for specific grants.

Funds

There are several funds available for tessabans to request a budget for SFC Projects. Most of the funds are provided by central offices of relevant departments. Since those central departments cannot directly allocate the budget to tessabans, those funds can be one of the alternatives for them to support local activities. Since each fund has different procedures and focuses, tessaban needs to check yearly the availability, conditions, administrative process, and focal issues of each fund.

The administrative process of providing funds for departments under ministries and public organizations under the Office of the Prime Minister (OPM) is different. The fund provided by departments under the ministry prioritizes their development plans. In other words, the proposed SFC projects should be included in the department development plan, especially at its regional or provincial level, such as Environmental Fund under ONEP. In contrast, OPM without regional/provincial offices has provided more flexible funds, such as the Thai Health Promotion Foundation. It provides an open grant every year to the locality interested in public health promotion.

Loans / Borrowing

Loans or borrowing can be a potential financial source for tessaban to develop its initiatives/projects as its unconventional revenue source, which is also enforced by Determining Plans and Process of Decentralization to Local Government Organization Act B.E. 2542 (A.D. 1999).

Tessaban needs to understand the terms and conditions for repayment and interest rates in advance since the committee of loans will be appointed to evaluate the financial capability of repayments before approving the loan. Loans or borrowing are only available for development projects.

Regional Urban Development Fund (RUDF): The RUDF was established under the Social Investment Project (SIP) of World Bank by the Cabinet in 1998. It aims to provide a long-term fund for LAOs to borrow for local development promotion. The Ministry of Finance operates the funds through the Government Saving Bank. RUDF plays the main role in financial and technical support for all LAOs, and it is expected to be a financial instrument in supporting investment programs to stimulate local developments. Therefore, RUDF mainly focuses on investing in public infrastructure and services, which can sustainably generate income in localities. In addition, technical assistance is provided to strengthen local capability on financial and project management. LAOs are expected to enhance their accountability by establishing frameworks for financial management to reflect their future perspective on the local financial system. An example of the RUDF project is provided in Box 2.6.1.

Box 2.6.1 Example of RUDF Project in Phitsanulok	
Project Name	Investment on Extension of Public Water Supply Project of Tessaban Nakhon Phitsanulok
Background of Project	Water supply is one of the transferred missions from MOI. Tessaban Nakhon Phitsanulok owns two water purification plants, with a capacity of 1,570 m ³ per hour. However, efficient water production declined because of obsolete machines and equipment, lack of proper maintenance, and constrained budget allocation. Due to urbanization, the capacity of the existing water purification plant cannot catch up with the demands of the water supply, causing the water shortage.
Project Details	Expansion of existing water plants for serving present and future water consumption constructing new plant with capacity of 500 m ³ per hour.
Duration	12 months
Budget	Type: Matching budget Total: 33.17M RUDF loan: 60% of the total, 20M Tessaban Nakhon Phitsanulok: 40% of the total, 17M
Expected Outcome	Adequate water supply inside and surrounding Tessaban’s area. Providing clean water supply for all citizens. Distributing water supply for flame hazard protection.

Sources: Sakon Varanyuwatana, Local Government Finance, and Bond Market Financing in Thailand, edited by JICA Project Team

(2) Financial Sources for Projects beyond Tessaban's Authorities

Provincial Administrative Organization (PAO) Budget

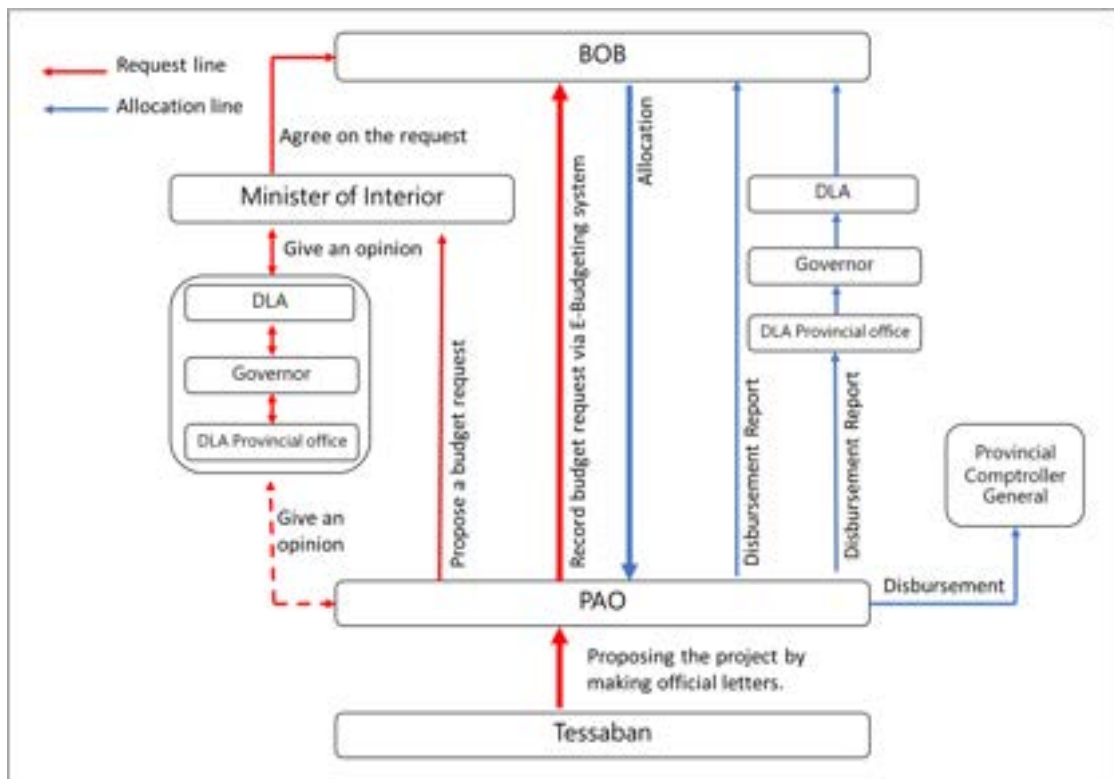
Tessabans and PAOs have similar local government structures, yet authorities of PAOs cover larger areas than tessabans, therefore responsible for providing public services and any development crossing several tessabans and TAOs within its province. Hence, SFC projects beyond the administrative boundary or authority of tessabans can be proposed under the budget of PAOs.

The proposed SFC projects should link with a PAO's Development Plan and respond to PAO's missions, integrating with their development plan. The tessaban needs to review the visions, goals, strategies, and developments of PAO before proposing the project to avoid duplicate implementation and harmonize the projects with the development direction of PAOs. While the project owner will be the PAO instead of tessaban, the latter needs to be responsible for maintenance and management.

In order to propose projects, the tessaban needs direct coordination with PAOs by proposing in a form of an official letter that includes rationales and full details of a project, especially how it can relate to the missions and plan of PAO. The letter will be approved by the PAOs committees, headed by the chief executive of PAOs. After approval, PAOs will notify the tessaban and add the projects into their plan to request their FY budget.

Budgeting Process: Tessaban should follow the procedure of PAO's FY budget to proceed with their proposal promptly. Even though the procedure of requesting PAO's budget is similar to that of tessaban, the new budgeting system has posed different steps. Even though PAOs now can directly request the FY budget to the BOB, PAOs still need to get approval from MOI before proceeding with the e-budgeting system. Detailed steps for requesting PAO budget are shown in Figure 2.6.10 and summarized as follows:

- PAO needs to submit the FY budget plan to MOI. DLA central office will gather opinions from the governor and DLA provincial office and submit them to MOI.
- After approval by MOI, PAO needs to record its FY budget plan into the e-budgeting system of BOB by the end of September according to the BOB budgeting schedule.
- The budget will be directly allocated to the PAO and disbursed from Provincial Comptroller General.
- PAO has to report the disbursement to BOB.



Source: JICA Project Team

Figure 2.6.10 Procedure for Requesting PAO Budget

PAO's Subsidy: In addition to PAO's original budget, its subsidy is also an alternative for tessaban to propose the SFC projects. PAO can subsidize the project of the tessaban up to 10 % of the net PAO revenues of the previous year. Since tessaban will be the project owner for the project implementation, the proposed projects need to be under tessaban authorities, but they would be over the financial capacity of tessaban. Tessabans also need to contribute financially to the subsidized projects depending on the financial capacity of each.

In order to prepare the project proposal, tessabans must present the expenditure breakdown and show how the project can benefit the citizens. An MOU will be made between tessaban and PAO after project approval. Once the project has been completed, PAO needs to appoint the committee for monitoring and evaluation. However, if the project has not finished as expected, tessaban must return the subsidy to PAO. If a tessaban did not use the entire subsidy, the remaining needs to be returned to PAO.

Function Budget

Functional budget is the budget of relevant departments of line ministries. The SFC Projects beyond capacities and authorities of tessaban and directly related to the scope of each department can be proposed to use the budget. The proposed project will belong to and be implemented by the department.

In order to propose the project, tessaban shall closely coordinate with relevant departments in its province or region. It has the authority to invite those provincial departments to inform them about their proposed projects. Tessaban needs to submit the

project proposal together with a letter requesting support from the departments.

As of 2019, there are 33 provincial offices under central ministries and central departments, as listed in Table 2.6.3. Besides this, there are 35 departments separately located in each region as regional offices as listed in Table 2.6.4. The provincial and regional offices have different missions and authorities; therefore, the tressabans must review their missions before submitting the project proposal. The main roles of those regional and provincial offices are to determine possible projects based on their agenda to include in the provincial development plan. The department plan of each province/region will be submitted to the central offices for consideration and will be consolidated into the FY budget plan of the ministry to request the budget. In other words, discussion and coordination for budget allocation across department at changwat level is very limited. The process for requesting a function budget is summarized in Figure 2.6.11.

Table 2.6.3 List of Provincial Offices of Central Ministries and Departments

Ministry	Provincial Offices of Departments
Office of the Prime Minister (OPM)	The Government Public Relations Department: Provincial Public Relations Office (PRD)
Ministry of Defense	Provincial Military Recruit Office
Ministry of Finance	Provincial Office of the Controller General (CGD)
Ministry of Tourism and Sports	Provincial Tourism and sport office
Ministry of Social Dev. and Human Security	Office of the Permanent Secretary of Ministry of Social Development and Human Security (Provincial Social Development and Human Security Office)
Ministry of Agriculture and Cooperatives	Office of the Permanent Secretary of Ministry of Agriculture and Cooperatives (Provincial Agriculture and Cooperatives office)
	Department of Fisheries (Provincial Fisheries Office)
	Department of Livestock (Provincial Livestock Office)
	Department of Agricultural Extension (Provincial Agricultural Extension Office)
	Department of Cooperative Promotion (Provincial Cooperative Office)
	Provincial Land Reform Office
Ministry of Transport	Department of Land Transport (Provincial Land Transport Office)
Ministry of Natural Resource and Environment	Office of the Permanent Secretary of Ministry of Natural Resource and Environment (Provincial Natural Resource and Environment Office)
Ministry of Digital Economy and Society	Provincial Statistical Office
	Meteorological Department
Ministry of Energy	Provincial Energy office
Ministry of commerce	Provincial commerce office
Ministry of Interior	Provincial office
	Department of Provincial Administration (Provincial Administration Office)
	Department of Community Development (Community Development Provincial Office)
	Department of Local Administration (Provincial Local Administration Office)
	Department of Public Works and Town and Country Planning (Provincial Office)
	Department of Land (Provincial Land Office)
Ministry of Justice	Department of Probation (Provincial Probation Office)
	Department of Corrections (Provincial Prison)
	Legal Execution Department (Provincial Legal Execution Office)
Ministry of Labor	Office of the Permanent Secretary of Ministry of Labor (Provincial Labor Office)
	Department of Employment (Provincial Employment Office)
	Department of Labor Protection and Welfare (Provincial Labor Protection and

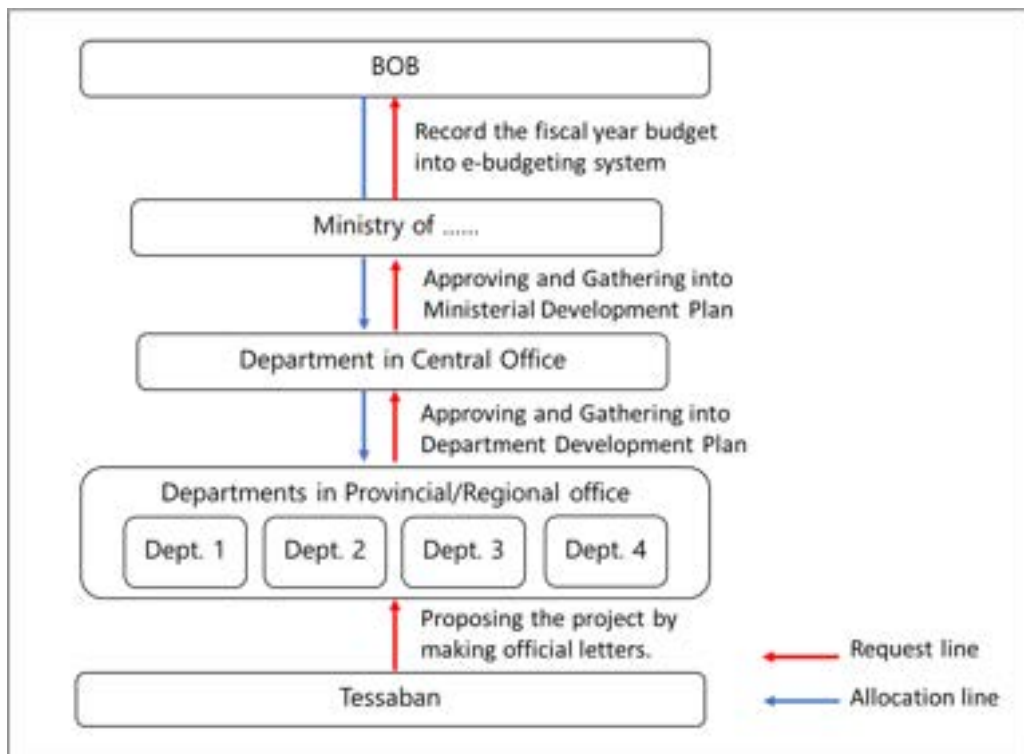
	Welfare Office)
	Provincial Social Security Office
Ministry of Culture	Office of the Permanent Secretary of Ministry of Culture (Provincial Cultural Office)
Ministry of Public Health	Office of the Permanent Secretary of Ministry of Public Health (Provincial Public Health Office)
Ministry of Industry	Office of the Permanent Secretary of Ministry of Industry (Provincial Industrial Office)
Independent Org.	National Office of Buddhism (Provincial Office of Buddhism)

Source: JICA Project Team

Table 2.6.4 List of Regional Offices of Central Ministries and Departments

Ministry Name	Regional Office
Ministry of Finance	1. Treasury Department (Provincial Treasury Office) 2. Custom Department (Regional Custom Bureau) 3. Excise Department (Regional Excise Office) 4. Revenue Department (Regional Revenue Office)
Ministry of Agriculture and Cooperatives	5. Irrigation Department (Irrigation Office) 6. Cooperative Auditing Department (Cooperative Auditing Office) 7. Department of Land Development (Land Development Office) 8. Department of Agriculture (Office of Agricultural Research and Development) 9. The Queen Sirikit Department of Sericulture (Sericulture Office) 10. Office of Agricultural Economics
Ministry of Transport	11. Marine Department (Regional Marine Office) 12. Department of Airports 13. Department of Highway (Highway Office) 14. Department of Rural Roads (Rural Road Office)
Ministry of Natural Resources and Environment	15. Department of Water Resource (Regional Water Resource Office) 16. Department of Groundwater Resources (Office of Ground Water Resources) 17. Department of Forest (Forest Resource Management Office) 18. Department of National Park (Office of Conservation Area Development)
Ministry of Justice	19. Department of Juvenile Observation and Protection (Juvenile Observation and Protection Provincial Office) 20. Office of the Narcotics Control Board (Regional Office of Narcotics Control Board)
Ministry of Labor	21. Department of Skill Development (Regional Skill Development Institute)
Ministry of Culture	22. Department of Fine Arts (Fine Arts Bureau)
Ministry of Public Health	23. Department of Medical Services (Princess Mother National Institute on Drug Abuse Treatment) 24. Department of Disease Control (Bureau of Disease Prevention and Control) 25. Department of Medical Sciences (Medical Science Center) 26. Department of Mental Health (Mental Health Center) 27. Department of Health (Health Center)
Ministry of Industry	28. Department of Industrial Promotion (Regional Industrial Promotion Center) 29. Department of Primary Industries and Mines (Office of Primary Industries and Mine) 30. Office of the Cane and Sugar Board (Regional Center for Sugar Cane and Sugar Industry)
Office of the Prime Minister	31. NESDC (NESDC Regional Office) 32. Bureau of the Budget (Budget Preparation Division) 33. The Board of Investment of Thailand (Regional Investment and Economic Center)
Ministry of Digital Economy and Society	34. Meteorological Department (Regional Meteorological Center)
Independent Agency	35. The Office of the National Counter Corruption Commission (Office of the Prevention and Suppression of Corruption in the Government)

Source: JICA Project Team



Source: JICA Project Team

Figure 2.6.11 Procedure for Requesting Function Budget of each Department

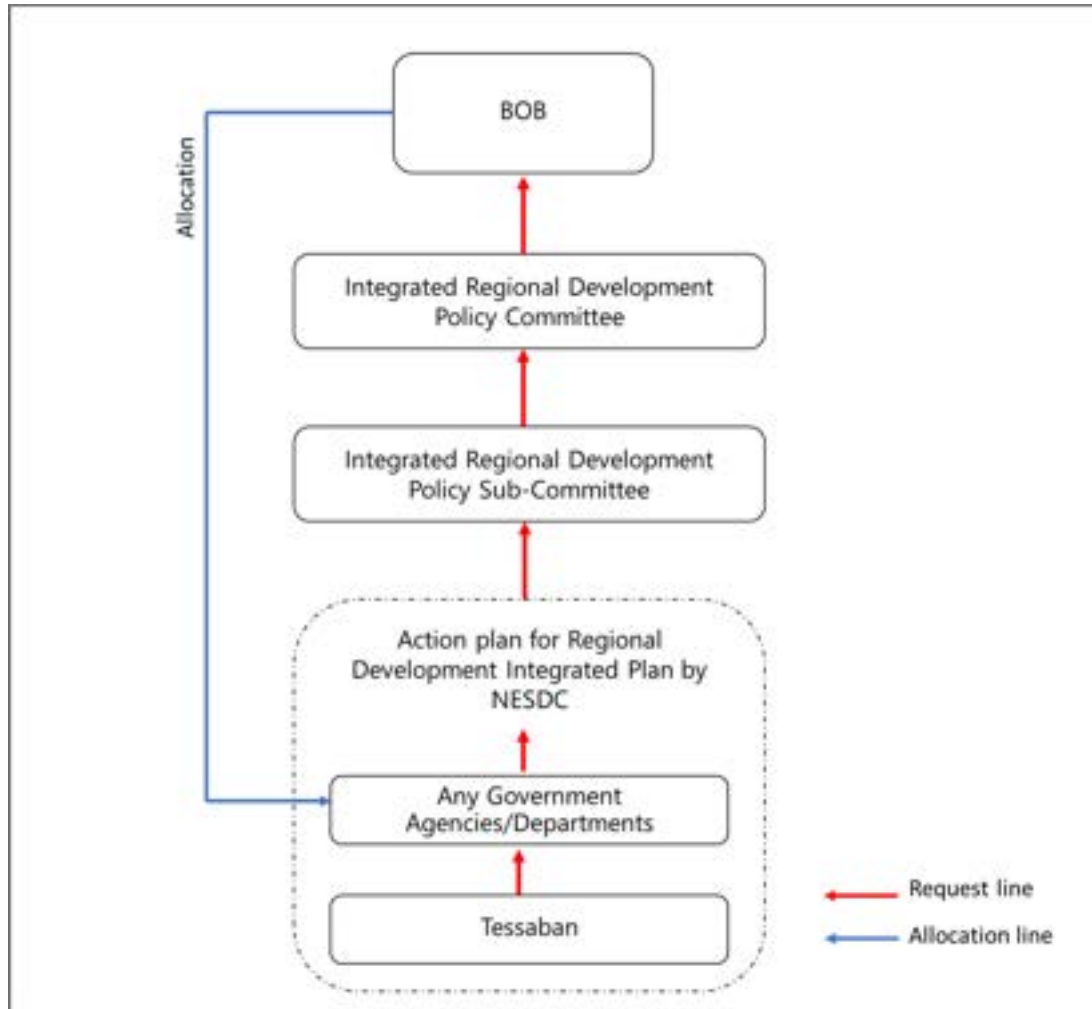
Integrated Policy Program under Integrated Budget

Integrated Policy Program is another alternative budget source for tessaban to propose the SFC project under the ministerial line, where the proposed SFC project should be related to the scope of each integrated policy program. The most possible and relevant integrated policy program for tessaban is the Regional Development Integrated Plan because it focuses on area-based development. The proposed SFC project should have positive impacts at regional and national levels, and thus, can highly respond to the national strategy and agenda. Tessaban needs to consider its potential position in the relevant plans and link those projects with the integrated issues.

The budgeting procedure to request an integrated budget is similar to that of a function budget. Yet, the projects in this integrated budget will be prioritized and approved by the Integrated Regional Development Policy Committee and Sub-Committee. To propose the project, tessaban needs to submit the project proposal to the department responsible for it. That department has a role in considering whether or not the proposed project is relevant to the regional development and submitting those projects to their ministries.

Since NESDC has a role in integrating regional development projects from those ministries to make an action plan for the Regional Development Integrated Plan, the ministries will submit the projects to NESDC. After completing the action plan for the Regional Development Integrated Plan, the NESDC will propose it to the Integrated Regional Development Policy Sub-Committee for initial consideration and approval and submit it to Integrated Regional Development Policy Committee for final approval. Once approved, the budget of the Regional Development Integrated Plan is classified by the ministry and

proposed to BOB. Then BOB will directly allocate the budget to the proponent ministries and departments. In this regard, the department will implement the project as the project owner, while the monitoring and evaluation will be done by the Integrated Regional Development Policy Sub-Committee. The overall of this process is summarized in Figure 2.6.12.



Source: JICA Project Team

Figure 2.6.12 Procedure for Requesting Integrated Budget

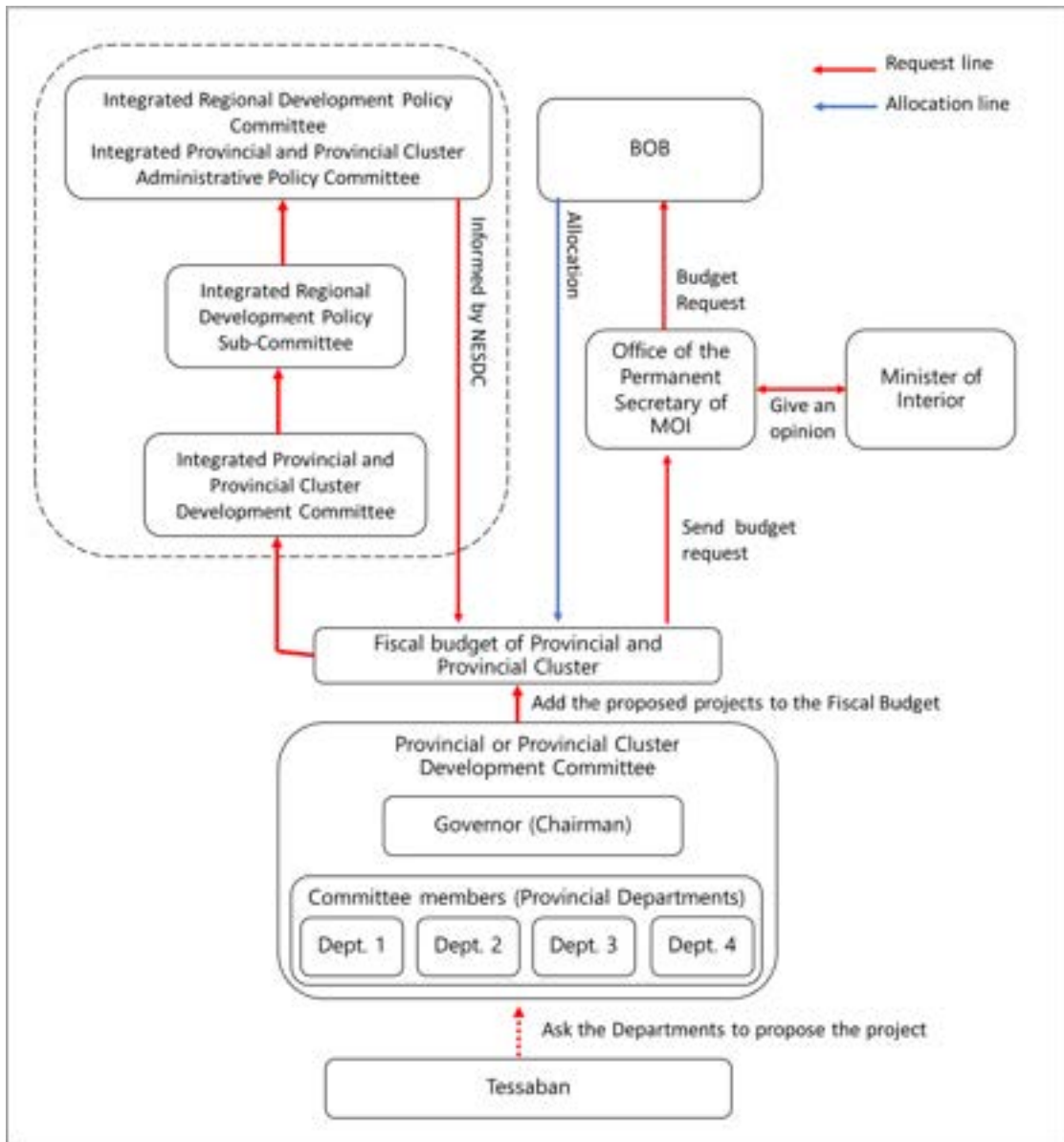
Provincial and Provincial Cluster Budget

The provincial and provincial cluster budget is another possible financial source for tressaban to propose the SFC Project, wherein the implementing body will be the responsibility of the province or provincial cluster. In general, tressaban cannot request the budget or propose the SFC project directly to its province and provincial cluster but can informally ask the provincial offices of relevant departments and ministries to include the project into the meeting agenda of the provincial committee headed by a governor. Thus, the governor is the main player to approve the project.

The proposed projects should be linked with the provincial development plan. As the governor is the main player in the approval, the provincial committee will consider whether the proposed projects are beyond provincial authority. Should they be beyond provincial authority, the governor needs to submit it to the provincial cluster committee for their approval, where linkage with the provincial cluster development plan is mainly considered.

The procedure of the FY budgeting for the province and provincial cluster is illustrated in Figure 2.6.13 and summarized as follows:

- The governor agrees to add the projects to its FY budget.
- The province and provincial cluster submit the FY budget plan to the Integrated Provincial and Provincial Cluster Development Committee for screening its linkage with the FY budget plans of other departments.
- Its linkage with the overall regional developments by the Integrated Regional Development Policy Sub-committee will also be reviewed.
- The Integrated Regional Development Policy Committee and Integrated Provincial and Provincial Cluster Administrative Policy Committee, in which NESDC is the secretariat, must approve the FY budget plan.
- NESDC will notify the province and provincial cluster and send the budget request to the Office of the Permanent Secretary of MOI.
- The Office of the Permanent Secretary of MOI will make the final decision before requesting the FY budget of the provincial and provincial cluster to the BOB.
- After BOB officially approves the national FY budget, the provincial and provincial cluster budget is directly allocated to each province and provincial cluster.



Source: JICA Project Team

Figure 2.6.13 Procedure for Requesting Provincial and Provincial Cluster Budget

Public Organizations' Budget

Tessaban can apply the SFC project to the public organizations, which set issues on city development. Since each organization selects the tessaban to develop its issues, tessaban should be ready to propose the project along with the agenda of public organization. Public organization projects differ from those by government agencies, as they facilitate tessaban to coordinate with relevant organizations and the private sector. One example is the Smart City Project of DEPA, to which DEPA promotes and invites tessabans to join by applying online. It evaluates applications and selects the pilot city for Smart City development.

Some public organizations specify target areas to promote their development agenda. In this case, the organization will coordinate with relevant organizations in that area to develop its comprehensive plan. For example, DASTA, which is under the Ministry of Tourism and Sport, specifies the city for promoting tourism. Currently, there are six designated areas, such as Nan, Koh Tao, and Sukho Thai.

(3) Proposed Budgeting System for SFCI Implementation

Setting up a budgeting system was also proposed, which is earmarked under SFCI for the future.

- **SFCI Matching Fund:** This is a proposed funding mechanism for SFCI to ensure stable budgeting for SFC projects. One of the options is that the national government provide a grant for 60–70% of the total cost and tessaban pay 30–40% by themselves, which needs further consideration.

2.6.4 Monitoring of SFCI

In order to ensure sustainable implementation of the SFC Plan and Projects and continuous improvement through the Plan-Do-Check-Act (PDCA) cycle, it is important for tessaban to monitor the progress of the SFC plan and projects together with relevant stakeholders. Monitoring activities can also cover key successes and challenges, which can be lessons learned for other cities and for NESDC to examine the SFCI framework and adjust it in the future.

1) Set-up Monitoring Framework

Tessaban will set up a monitoring framework to monitor and check the progress of the SFC Plan particularly for the 5-year action plan. It includes regularly following up the monitoring groups at the tessaban level as well as meeting with NESDC and national departments to check the progress of the SFC Plan implementation.

2) Monitor and Check the Progress of SFC Projects

Monitoring Check Sheet

Progress of the SFC Projects (5-year action plan) will be checked by comparing them with the original ones. Tessaban will make the monitoring sheet and check the following points in all projects

- Implementation and preparation of SFC Projects are as scheduled or not?

- How is the output of Project A?
- If Project A is delayed, what are the main causes of delay?
- Any constraints to implement Project A? (internal and external one)

Process of Monitoring by Tessaban

Tessaban will take the initiative to monitor and check the progress of the 5-year Action Plan and organize PT meetings to share it with relevant stakeholders to get their opinions. Tessaban will monitor continuously for 5 years.

- Tessaban will check the SFC Projects by using the check sheet.
- In the case of operational projects, the tessaban will coordinate with stakeholders in charge of the project operations to check the progress and identify causes of delay, if any.
- Tessaban will share the result of the progress check with members of the Planning Team Meeting.
- Tessaban will report the result of the progress check at the periodical meeting with NESDC and other national departments.

3) Update and Revise the SFC Plan and Projects

Problems and Issues need to be concerned

Based on the results of checking the progress of the projects, the tessaban should list and examine the problems and issues that would be of concern, such as;

- changes of socio-economic status of region/country,
- coordination with relevant authorities,
- coordination with communities,
- technical capabilities of implementing body,
- financial capabilities of implementing body, and
- institutional arrangement to proceed with implementation.

Revision of SFC Plan and 5-year Action Plan

Based on the identified problems and issues, the tessaban should identify necessary revisions on the SFC Plan and 5-year Action Plan and identify issues and necessary actions to be tackled. NESDC and relevant authorities will also provide advice to support them.

3. Initiatives and Efforts on the Thai side during the Project

3.1 Restructure of NESDB to NESDC

In 2018, NESDB was restructured as NESDC to transform the state planning unit into a think tank that shapes the long-term vision and mission of the country, according to the Cabinet Bill on the NESDC. With this restructure, NESDC is expected to strengthen its planning capacity to respond strategically to international and domestic socio-economic changes and foresee the future appropriately.

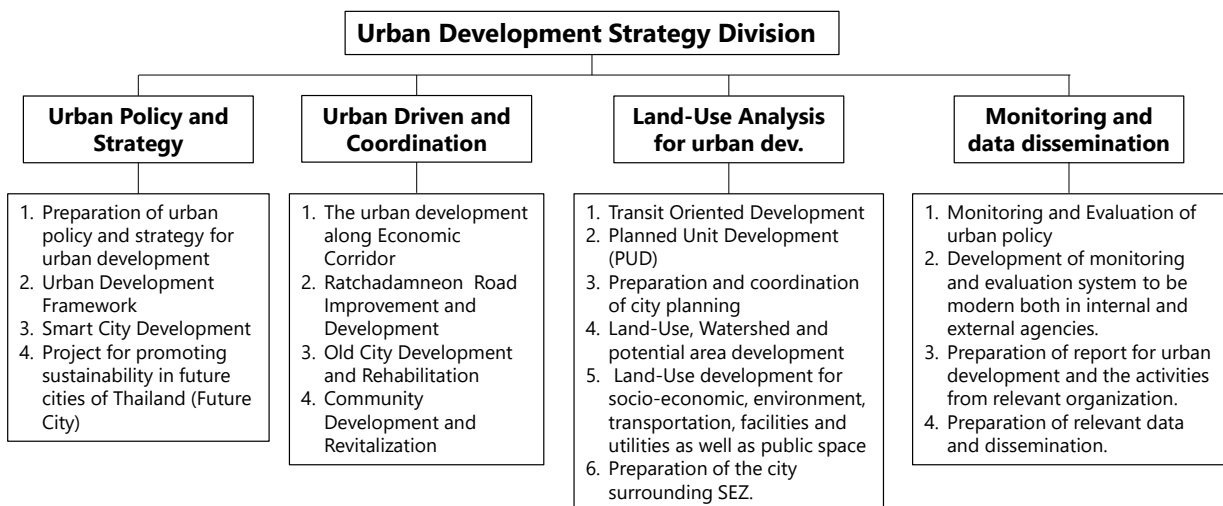
The new Act of the NESDC will give more flexibility and give more resources to face new and complicated challenges. The NESDC can now recruit about 100 new independent experts to work for its planning unit to cope with new challenges such as an aging society, rapid urbanization, and human resources development to realize the Thailand 4.0 economy. Rules and regulations will be more relaxed for the NESDC to collaborate with other institutions and procure private experts to conduct research to support its analytic and planning tasks. The committee members will be reorganized to have more than one board to serve various issues and specific areas.

The NESDC will continue its responsibility in formulating the 5-year NESDP and driving the 20-year National Strategy. Other duties include providing consultancy to the government, creating a database for development, monitoring, and evaluating important development projects, and so on.

3.2 Establishment of Urban Development Strategy Division (UDSD)

UDSD was established in January 2019 under NESDC for the planning and creation of urban development policy according to the National Strategy, National Economic and Social Development Plan, and other relevant government policies. Its general duties involve preparing an urban strategy by integrating all development aspects, including economic, social, environmental, and infrastructure; preparing policy recommendations, such as new city development, urban rehabilitation, revitalization and development, and regional/central city development; driving urban development along with the 20-year strategy and 12th NESDP; and monitoring the implementation of urban strategy and policy.

UDSD is comprised of four groups: (i) urban policy and strategy, (ii) urban driven and coordination, (iii) land use analysis for urban development, and (iv) monitoring and data dissemination.



Source: Prepared by JICA Project Team based on the Mandate of Office of the National Economic and Social Development Council

Figure 3.2.1 Structure of Urban Development Strategy Division

After the establishment of UDSD, the TFCP counterpart was transferred from Spatial Planning Strategy Office (SPSO) to this division. While SFCI was not mentioned in the mission of SPSO, UDSD has a clear mission to be in charge of SFCI as the future secretariat. With the revision of the R/D of Stages 4–5, NESDC agreed to implement SFCI for four more cities under their budget in parallel with the implementation of SFCI in Tessaban Mueang Ranong and Tessaban Mueang Chumphon under the Project.

3.3 Discussion with Joint Coordinating Committee members

3.3.1 Restructure of JCC

In the first phase of SFCl model city projects, it was found that the original JCC members did not cover some important development issues of local cities, such as tourism development, aging society, and smart city development. Therefore, it was suggested and agreed in the minutes of the meeting (M/M) in 2019 between JICA and NESDC to restructure JCC before starting Stage 4 and the second phase of SFCl.

Original list of JCC members

- Department of Public Works and Town and Country Planning (DPT)
- Department of Local Administration (DLA)
- Department of Industrial Works (DIW)
- Department of Land Transport (DLT)
- Pollution Control Department (PCD)
- Department of Environmental Quality Promotion (DEQP)
- Department of Alternative Energy Development of Efficiency (DEDE)
- Thailand International Cooperation Agency (TICA)
- Office of Transport and Traffic Policy and Planning (OTP)
- Office of Natural Resources and Environmental Policy and Planning (ONEP)
- National Municipal League of Thailand (NMT)

Departments added at the start of Phase 2

- Department of Fine Arts⁴
- Department of Older Person, Ministry of Social Development and Human Security
- Department of Health, Ministry of Public Health
- Department of Tourism⁵, Ministry of Tourism and Sports
- Tourism Authority of Thailand
- Digital Economy Promotion Agency (DEPA)
- Budget of Bureau⁴.

Departments added during Phase 2

- Office of the Decentralization to the Local Government Organization Committee (ODLOC)⁴
- Designated Area for Sustainable Tourism Administration (DASTA)

At the same time, some departments in the JCC have been excluded, considering the authority and responsibility of each department and their relevance to TFCl.

⁴ Unspecified in the M/M in January 2019.

⁵ It was agreed to add Office of Permanent Secretary, Ministry of Tourism and Sports in the January 2019 M/M.

Department excluded at the start of Phase 2

- Department of Industrial Works

Departments excluded during Phase 2

- Pollution Control Department
- Department of Land Transport
- Department of Fine Arts
- Department of Older Persons
- Department of Health
- Department of Tourism
- Tourism Authority of Thailand

The final list of JCC is in 1.5.1.

3.3.2 Discussion with JCC Members

In addition to the discussion at the official JCC meetings, JICA Project Team and NESDC visited JCC members individually in order to discuss specifically what was relevant to their respective institutions.

After Stage 4 of the TFPC started, the newly established UDSD and JICA Project Team visited most new JCC members, such as the Department of Older Persons, Office of Permanent Secretary of Ministry of Tourism and Sports (MOTS), DEPA, DASTA, and Thai Health Promotion Foundation, and explained the overall framework of the Project. In the meeting, UDSD presented the project and expressed their intentions to continue the SFCI as theirs.

Coordination with DLA for further dissemination of SFCI in the future: NESDC-UDSD members visited DLA with the JICA Project Team and discussed in December 2019 about collaboration possibilities on SFCI, attended by the Director General of DLA and Directors of relevant divisions of DLA. After the meeting, DLA continues to discuss with JICA Thailand how to integrate the SFCI approach into their planning process of LSDP. NESDC and DLA had a meeting with JICA Thailand to discuss role-sharing between NESDC and DLA. NESDC is in charge of policy and planning and DLA in the implementation of the Project. NESDC also agreed for DLA to follow up SFCI and merge SFC Plans into the LSDP. The expected role-sharing between the two organizations is described in Chapter 6.

3.4 Livable and Sustainable Future City Project by UDSD of NESDC

3.4.1 Introduction

As agreed in the M/M signed in January 2019 (amended in August 2019 and presented by UDSD to the JCC in November 2019), NESDC-UDSD has conducted SFCI in two more cities using their FY 2020 budget, but named it “Livable and Sustainable Future City Project (LSFC).”⁶ Meanwhile, the JICA Project Team and its sub-contracted local consultant team supported the SFCI in Ranong and Chumphon. The scope of the LSFC covers three main objectives:

- (i) to establish a planning process for sustainable and livable future cities,
- (ii) to monitor the progress of model cities of SFCI Phase 1, and
- (iii) to develop the monitoring system for LSFC,

Through LSFC, it was expected to uprate the SFCI Guidelines as LSFC Guidelines. LSFC Guidelines can be disseminated as a tool for LAOs to prepare their LSDP in the future.

3.4.2 LSFC Guidelines

1) Rationale

Urbanization has become a main challenge in the 21st century. United Nations (UN) has predicted that 66% of the world population is projected to live in urban areas by 2050 or around 2.4 billion. The growth of urbanization in Asia and Africa, in particular, will soar. In Thailand, urbanization has continued since 1957. About 55% of the current population in Thailand resides in urbanized areas, while 73% is projected to live in urbanized areas by 2050. This trend is crucial for the growth of small- and medium-sized cities, especially for the major and regional cities in Thailand, because economic growth will be highly concentrated.

Urbanization has posed both challenges and opportunities in the city. The urban area can contribute over 80% of GDP while emitting over 70% of carbon dioxide and energy consumption. Urbanization can support the growth of the economy by using efficient land use, facilitating economies of scale, and integrating technology and innovation. However, it has caused urban sprawl, damaging and deteriorating the environment and creating a social disparity in terms of incomes and access to affordable housing, public service, and public facility. These changes affect urban development both in the present and future. Climate change, natural disasters, middle-income trap, aging society, and the digital economy are challenges in the management and development of a city. Therefore, sustainable development has become the primary approach to cope with forthcoming changes and maximize the potential of the urban area.

The national strategy, the master plan under national strategy in terms of livable and smart city, and the strategy of the regional and urban development in the 12th NESDP have prioritized a livable and sustainable future city. This would provide social opportunities, a good environment, sustainable economic growth, and quality facilities and utilities. In

⁶ NESDC-UDSD needs to change the project name from the original SFCI to get their budget as a new project.

achieving this, the development should comply with the identity and uniqueness of the city through public participatory planning to distribute the prosperity in the nation. Since 2015, NESDC has collaborated with JICA to conduct Thailand Future City Project, aiming to provide guidelines for a Sustainable Future City Initiative that is government-guided and locally-driven as key mechanisms. In 2020, NESDC received a budget for LSFC to increase the capability of LAOs in the planning process and provide a planning guideline for LSFC Guideline to support the urban development planning process of the local government and other related partnerships in Thailand.

2) Objective

The LSFC guideline is provided for local government, urban development agencies, and other relevant partnerships for preparing, planning, and managing cities towards sustainable and livable urban development.

3) Target

The targets are LAOs, heads of communities, government agencies, academic institutions, the private sector, and other relevant partnerships in urban development.

4) Contents

The LSFC Guideline describes the LSFC framework, LSFC planning process, LSFC indicators, and mechanism for driving LSFC, which are all described in the following sections.

3.4.3 LSFC Framework

1) Concept

LSFC aims to enhance the quality of life of the people by leaving fewer impacts on the ecosystem. There will be a development plan suitable for the eco-landscape and competitiveness of the city based on eco-friendly growth, equality, and good governance. The public participation process shall be integrated into all development steps.

2) Focused Area

- City with sufficient infrastructure and basic services that can be equally accessible and suitable with the capacity of the city
- City that uses resources and energy efficiently
- City that reduces, controls, and manages waste and other pollution efficiently
- City that is capable to prevent disasters and other circumstances, including adapting to climate change
- City that is capable of competitiveness based on environmentally friendly growth and promoting the economy equally and fairly

3) Implementation Units

- LAOs considering the city's context and its ecosystem.
- Urban clusters and communities with ecosystem, economic, and societal connections with impacts and are necessary for collaboration to manage resources and drive the economy in an urban ecosystem.

4) Key Implementation approaches

- I. LSFC is a process-oriented development that has systematic indicators and targets for the city to analyze, evaluate the implementation level, and develop toward sustainability.
- II. The public participation of stakeholders is highly considered a particularly vulnerable group in the planning process and implementation.
- III. The urban, suburban, and rural connection is considered linked together in terms of the environmental, economic, and social ecosystem.
- IV. It is a development based on the area's potential and its ecosystem, both environmental and socio-economic.
- V. It includes implementation support for LAOs to develop the city, including technical support and financial source accessibility for LAOs to have enough budget for development.
- VI. Appropriate technology is considered, particularly for data management, energy, and resource management, as well as information technology for urban management.

5) Related Concept

Some of the related concepts are used to consider and develop LSFC. It includes ecosystem-based approaches in planning for a sustainable city, Sustainable Development Goals, Smart City, and Inclusive City.

3.4.4 LSFC Planning Process

There are seven steps in the planning process.

Step 1: Identify Ecosystem Boundary

The first step considers the boundary of the development based on the ecosystem and the urban contexts, which aim to identify the scope for urban and urban cluster planning. The scope is considered based on urban networks connected through economic and social ecosystems that have an impact on each other. It can be considered from two levels: (i) LAO's area and (ii) urban cluster and community having a connection in terms of the environmental, economic, and social ecosystem.

Step 2: Stakeholder Mobilization

The stakeholder mobilization step will create an understanding among relevant people in the city and community within its ecosystem, driving the urban development. The components of driving urban development consist of political support from the city's administration team, participation of the public, and support from the academic sector and local public organizations. The key person and targets will be identified for creating understanding among stakeholders through a communication method that suits each group of people. Two levels of working teams will be established during this step, and these are (i) PT at the urban or urban cluster level and (ii) Project Coordinating Committee at the provincial or inter-provincial level.

Step 3: Sustainability Assessment

This step will collect, analyze, and evaluate the existing conditions of the urban or urban cluster to support the decision-making in the next step. There are four main steps described as follows.

- I. **Physical and statistical data collection:** It can be divided into two types: (i) data used to support indicators for LSFC and (ii) data of policies related to urban development, which are national policy, provincial cluster policy, provincial policy, and private investment or development policy. Three methods will be used to analyze collected data: sustainability assignment by an indicator (traffic light), symbolization and mapping (green map), and SWOT analysis.
- II. **Sustainability assignment in accordance with an indicator (traffic light):** It is a method that uses statistical data for analysis and refers to standard values that were identified for each indicator. The results of the values can be divided into four standard levels that are good (green), intermediate (yellow), poor (red), and no data. Level categorizations can be created as a database for the city that can be analyzed for present and future trends. Not only will it help to prioritize the level of local problems, but it can be used as a base year for the analysis in the next year.
- III. **Symbolization and mapping (green map):** It is a map created by local people to reflect their city in many dimensions using icons or symbols to represent locations or physical contexts, such as natural resources (river, forest, wetland, biosphere, etc.) and social location (heritage site, religious places, learning center, etc.). The mapping process involves public participation from the step of surveying, designing, making the map, and translating information into symbols to reflect the city's contexts.
- IV. **SWOT analysis:** It is a method using analysis of the city's strengths, weaknesses, opportunities, and threats in four aspects of the environment, society, economy, and urban management. Analyzed data from the traffic light and green map will be considered together with relevant policies, stakeholders' opinions, and economic, social, and environmental forecasting trends.

Step 4: Vision formulation and prioritization

Results from the sustainability assessment will be collaboratively considered with representatives from many sectors to formulate a vision or goal, development directions, and strategies to achieve that vision or goal. A couple of tools can be used for this step.

- I. **Vision back-casting:** It is a method that allows people to formulate a vision based on data using several approaches, such as existing condition analysis, discussion, or focus groups. The vision will be placed together with goals in each period.
- II. **Strategic direction prioritization by Eisenhower method:** It is a method that will identify and prioritize city issues based on the importance and urgency by brainstorming opinions from the planning team. The issues, prioritized accordingly, will be added to the primary strategy.

Step 5: Strategic direction and action plan establishment

Vision and strategic directions will be developed as a plan for urban and urban cluster development that will act as a tool to set common measures and create collaboration among stakeholders and the urban development network. There are two ways to develop the strategic direction for a development plan, as described in the following.

- I. **Strategic direction development via mind map:** A mind map is one of the tools for creating participatory processes. Other than being a creative way to collect data and opinions from participants, but also an easy way to create a common understanding, leading to implementation.
- II. **Stakeholder Analysis:** Networks and stakeholders should cover the public sector, private sector, people, academic sector, and media sector. The analysis will be considered under the importance and influence that will drive the implementation to reach the vision. Stakeholders can be divided into three: strategic network group, support network group, and impact group.

After that, the data gathered from the mind map and stakeholder analysis will develop and define the “plan” that includes strategic direction, program projects, target area, timeframe, indicator, main responsible network groups (strategic network group and support network group).

Step 6: Integration and collaboration

The developed plan will be connected with relevant plans and mechanisms at each level as well as integrated with the implementation of the urban development network. The draft plan will be presented to the stakeholders and network groups before checking compatibility with other relevant plans or mechanisms at all levels and identifying those connections and tools that need to be developed for driving the plan. Furthermore, coordination and development in terms of technical support, financial support, and operation support will also be considered.

Step 7: Implementation and monitoring

An effective plan should be modern and compatible with urban development goals that can reflect and respond to urban changes and urban clusters’ needs. After implementation, monitoring and updating the qualitative and quantitative data periodically for revising the plan to fit with the current situation is important. Mostly, the action plan is recommended to be updated annually, whereas the main plan will be reviewed every 3 to 5 years.

3.4.5 LSFC Indicator

There are 24 indicators under 5 development dimensions helping to effectively and efficiently identify the issues of a city.

1. **Infrastructure for quality of life** includes water supply, housing, public transportation, safety, road accident, health, education, disaster/climate change preparation, local wisdom preservation, and internet accessibility.

2. **Environmental sustainability** includes surface water (quality), wastewater management, air pollution, solid waste management, public space, and electricity.
3. **Productivity and eco-efficiency** include entrepreneur growth/employment rate and local environmental-friendly implementation.
4. **Equity and social inclusion** include gender equality and income equality.
5. **Governance** includes transparency, the collaboration between public-private-people, public participation, and data sharing/management.

Table 3.4.1 LSFC Indicators

		Issues	Indicator
Infrastructure for quality of life	1	Water supply	Percentage of households having sufficient water supply for the whole year
	2	Housing	Number of slums or informal sectors in environments not good for living per total household
	3	Public transportation	Percentage of public transportation service distance compared to total public road distance
	4	Safety	Rate of population injured physically and mentally and by sexual harassment per 100,000 population or the number of victims of crimes causing injury, death, or properties in the last 1 year (categorized by gender and age, if applicable)
	5	Road accident	Ratio of the death from traffic accidents per 100,000 populations
	6	Health	Percentage of medical staff per total population (per 1,000 people)
	7	Education	Percentage of children living in the city educated in the formal education system
	8	Disaster/climate change preparation	Number of victims from natural disasters
	9	Local wisdom preservation	Number of cultural centers, learning centers, and local wisdom conservation center
	10	Internet accessibility	Percentage of local households that have internet connection per total households and/or percentage of an urban area with public Wi-Fi per total urban area.
Environmental sustainability	11	Surface water quality	Percentage of number of good quality surface water per total water source
	12	Wastewater management	Percentage of wastewater amount collected for standardized treatment per total wastewater amount
	13	Air pollution	Number of dates in 1 year (last year) that have an air quality index (AQI) affecting health
	14	Solid waste management	Average amount of solid waste per population
	15	Public space	Percentage of public space per total city areas

		Issues	Indicator
	16	Electricity	Number of electricity usage per total population
Productivity and eco-efficiency	17	Entrepreneur growth/employment rate	Growth rate of entrepreneurs and employees in the local non-agricultural sector (Including merchants, SMEs, and community enterprises)/ Growth rate on startup businesses
	18	Local environmental-friendly implementation	Number of agencies, organizations, and local entrepreneurs that have been certified as environmentally friendly agencies (e.g., certified green factories, green industry)
Equity and social inclusion	19	Gender equality	Percentage of the number of women in executive, council, and local community leader positions per total number of positions
	20	Income equality	Percentage of low-income households below the poverty line
Governance	21	Transparency	Number of complaints about corruption and misconduct
	22	Collaboration between public-private-people	Number and types of projects in cooperation with public-private and civil society sectors in local areas
	23	Public participation	Participation (for showing opinion-planning-implementation-monitoring) and variety of stakeholders that cover all groups of people
	24	Data sharing/management	The number of plans/projects having potential and reliable data collection system categorized by demographic data (e.g., income, gender, age, nation, etc.), geographic location, and other local necessary attributes related to urban management policy

3.4.6 Mechanism for Driving LSFC

1) Organization Mechanism

- I. **Mechanism in accordance with National Government Organization Act, BE 2534:** The administrations under the Act are divided into three main sectors: (i) central government, (ii) regional government, and (iii) local government. In order to implement LSFC, LAOs having sustainable urban development direction should establish a planning team at the tessaban level and/or in the provincial cluster level to create the LSFC plan and consider the regulations, collaborative support, coordination, and implementation. Provincial or Inter-provincial Coordinating Committee can also be established to support the development.
- II. **Private Collaboration Mechanism:** There are three types of collaboration for urban development operated by private sectors.
 - a. **City Development Company:** This is a group of private enterprises to drive urban development and infrastructure investment as a limited company, such as Khon Kaen Think Tank (KKTT) and Phuket City Development (PKCD).

- b. **City Council:** It is a combination of the people's sector for urban development by creating a platform for people who want to participate in local development, such as Khon Kaen City Council.
 - c. **National Charter:** It is a mechanism to build cooperation under the process of various sectors and people participation by creating charters. There are five specific charters, namely Food Safety Charter, Health Charter, Smart City Charter, Transport Charter, and Sustainable Tourism Charter. Currently, 13 tessabans are a network of the National Charter.
- III. **Community and People Collaboration Mechanism:** It consists of various types of resource persons supporting urban development. Implementing community and people collaboration approach can be divided into two types: (i) topic-based driving, focusing on the development to create a pilot area or a flagship project in many areas, and (ii) area-based driven, meaning working on one area with one or more topics, such as by association, clubs, university, etc. The community network normally includes the following.
- a. **Community enterprises/clubs/associations** can share their opinion on policy and collaboratively implement and monitor the local project.
 - b. **Local academic departments/research centers** such as universities, vocational schools, or community colleges can support the project implementation via academic knowledge.
 - c. **Local schools and religious centers,** as a center of the community, can support the local activities as a learning center and project magnification.
 - d. **Civil society organizations** like NGOs, public benefit organizations, and community welfare organizations, which are normally non-profit organizations, can protect people from unmanaged development. They can share experiences, coordinate with communities, and establish and monitor activities.

2) Financial Mechanism

- I. **Provincial and provincial cluster:** The budget aims to develop the economy and society of the target area under the national strategy and local needs. This is the financial source for implementing projects exceeding the local budget limit by connecting the projects with the provincial and provincial cluster development plan.
- II. **LAO budget:** LAO can integrate its plan into LSDP to request budget support.
- III. **Private budget:** Some financial mechanisms are implemented under the private sector, such as city development companies (KKTT or PKCD) and private companies in the local city.
- IV. **Other financial sources:** Examples of other financial sources are in the table below.

Table 3.4.2 Example of Other Financial Sources

Development dimensions	Financial sources	Detail	Additional information
Infrastructure for quality of life/ Environmental sustainability/ Productivity and eco-efficiency	RUDF Fund "Livable City Loan"	RUDF supports long-term loan and technical support for LAOs	http://www.rudf.or.th
	Funds for Tessaban promotion and funds PAOs promotion	Loans for LAOs that are members of the fund	http://www2.fpo.go.th/fpo
Infrastructure for quality of life	Land Readjustment Fund	Subsidies or loans for using in the land readjustment project or using in the construction or improvement of public utilities/public places that support land readjustment	http://office.dpt.go.th/lrfund
Housing	Low Income Housing Development Fund	Loans for low-income people for the program under the hire-purchase, rent-to-buy, and saving-to-buy	https://www.nha.co.th/services/
Public Health	Open Grant by Thai Health Promotion Foundation	Financial support for public health services, health promotion, disease prevention, and primary care treatment for people in the area	https://obt.nhs.go.th/obt/home
Security	Road Safety Fund	Funds to support and promote road safety as well as assist the victims caused by road accidents.	http://www.tabienrod.com/index.php
Disaster and climate change preparation	Green Climate Fund Thailand (GIZ)	Provide financial support to projects related to greenhouse gas reduction and climate change adaptation	http://gcf.onep.go.th/th/
Environmental sustainability (including culture)	Environmental fund	Subsidy for the promotion and conservation of the environment, including conservation and utilization of environment/fine arts Loans for the construction of air/water treatment systems and waste disposal.	http://envfund.onep.go.th/
Energy	Energy Conservation Promotion Fund	Subsidy and technical support for single or composite technologies with a form of co-payment (Co-Pay)	https://project.enconfund.go.th/feed
Gender equality	Women's Role Development Fund	Loans to provide opportunities for women to access funding for career development income generation or strengthen the economy for women and women's organizations.	http://www.womenfund.in.th/
Governance	Village and Urban Community Fund	1 million baht per fund along with strengthening villages and urban community development to have the capacity to manage the fund system in villages and urban communities by themselves.	http://www.villagefund.or.th/

3) Regulation Mechanism

Livable city development in the 12th NESDP has focused on the economy, social culture, and environment. In the context of local city development, the area-based development plan has been prioritized in the 12th NESDP under the consideration of demography, city, environment, and geography. Therefore, the planning process of urban development should focus on both function-based and area-based through a participatory process. The related regulations and orders to support the plan and urban development are summarized as follows.

- I. **Town Planning Act B.E. 2562** aims to promote urban planning through a comprehensive plan, focusing on transport, natural disaster prevention, and land-use management. There are three levels of comprehensive plans: national, regional, and provincial. Public hearing and participation have been the fundamental processes in preparing the comprehensive plan, which requires sharing and gaining opinions from people and disseminating the plan to the public. The comprehensive plan must be updated every 5 years to align with the national strategy, NESDP, and current situations. For the official announcement, the comprehensive plan is required to be authorized as a ministerial regulation or local ordinance according to Section 33 of the Town Planning Act. It is up to the DPT or LAO decision. In this new act, LAO will have more participation in the comprehensive plan preparation and update for the enforcement.
- II. **Land Readjustment Act BE 2547** aims to promote the private sector to cooperate with the public sector in land readjustment. It has housing, business, industry, and agriculture benefits, so the use of land will be efficient and the environment will improve. This is crucial for the economic and social aspects as well as for the orderly regulation of the city. The Land Readjustment Act also reduces the financial burden from the government and helps organize the city within the direction of other related plans. The new development area can be created through land readjustment together with infrastructure development as urban revitalization. This will cope with the issues of the blind and vacant areas in the city. The key advantage of land readjustment is to sustain personal property and land ownership. Therefore, this can be one mechanism for achieving a livable and sustainable future city.
- III. **Building Control Act, B.E. 2522 (1979)**. The National Energy Policy Committee has formulated that a large building with a total floor area of more than 2,000 m², or a building of at least 15 m height with a total floor area of more than 1,000 m², must be integrated with a saving energy design, such as department store and community mall. This can apply to LSFC in terms of saving energy consumption.
- IV. **Conservation and Development Krung Rattanakosin and Old City Act B.E. 2546** aims to formulate the policy, plan, measure, and guideline to conserve and develop Krung Rattanakosin and the old city systemically. This is to sustain the cultural heritage and history to the next generation. However, the comprehensive plan

cannot elaborate the regulation in detail, so the old city conservation needs to be taken into consideration and prepared along with this act.

- V. **Environmental Protection Area** is enforced under Environment Act B.E. 2535 (1992). It can be divided into two cases: (i) Section 43 Natural Conservation Area, such as upstream area or natural area where the ecosystem could be damaged or valuable to sustain, and (ii) Section 45 Conservation Area, specific comprehensive plan, building control area, industrial estate, and pollution control area. These areas have been considered to have environmental crisis issues and are required to prevent such issues immediately. These will be affected by urban development as the area could be under the control of the Environment Act.
- VI. **Local Ordinance** is a regulation issued by LAOs, which differs by the scale of the city, like BMA, tessaban Nakhon, tessaban Mueang, and tessaban tambon. When enforcing a local ordinance, the local government must collaborate with the Changwat governor or head of the district. LAOs can issue a local ordinance supporting the development, especially for an urban environment, to support the future urban development plan. For instance, the green space in a large building or commercial building. However, local ordinances should not be against the related act.

4. Second Phase SFCI Model City Projects

4.1 Purpose of the Second Phase SFCI Model City Projects

The objectives of the second phase of the SFCI Model City Project are:

- (i) to strengthen the capacity of the newly-established division of NESDC;
- (ii) to enhance regional development of the Southern Economic Corridor, which is initiated by the Thai Government, through a people-centered approach; and
- (iii) to further elaborate SFCI Guideline.

4.2 Selection of Target Model Cities

Selection Process of the First Phase Model Cities

As described in Chapter 2, the SFCI target cities are tessaban Nakhon and tessaban Mueang, which can be centres of sustainable development of its respective urban areas, including surrounding tessaban tambon and TAOs. In the first phase of SFCI, model cities were selected through applications from each city. The NESDC sent invitation letters to short-listed cities, tessabans submitted applications to NESDC, and NESDC and JICA Project Team evaluated the applications and selected six tessabans.⁷ Such a selection process can help choose tessabans with high capabilities, willingness to join, and strong commitment of Mayor. However, such an application process takes a long time to select model cities, and it is difficult to select tessabans without any outstanding activities.

Southern Economic Corridor (SEC) Development

The second model cities applied a different selection process, government strategy-oriented selection. NESDC decided to select tessabans from the Southern Economic Corridor (SEC), a key development scheme initiated by the Thai Government to enhance regional development and thus develop from the middle-income trap. It covers the upper side of the southern region, Ranong, Surat Thani, Nakhon Si Thammarat, and Chumphon, linking the Andaman Sea and the Gulf of Thailand, which easily connects with neighboring countries.

SEC development framework includes (i) western gateway development; (ii) Gulf of Thailand and Andaman Sea route development; (iii) bio-based and processed agricultural products development; and (iv) green, culture, smart, and livable cities development. Various regional transport infrastructure projects were identified under SEC, such as Ranong Port. There were only a few urban development projects. Chumphon and Ranong, being part of the SEC, expect to earmark their strategies to ensure its competitiveness is in line to capture fully the lucrative opportunities offered under SEC. In this context, NESDC and JICA agreed to select Ranong and Chumphon as the second phase model cities of SFCI.

⁷ Details of the selection process of the first phase model cities are in the Final Report of the Project for Promoting Sustainability in Future Cities of Thailand, August 2019.

4.3 Implementation of the Second Phase Model Cities Projects

4.3.1 Mobilization of Tessaban and Kick-off Meeting

After JICA and NESDC officially agreed to implement the Second Phase SFCI Model City Projects in tessaban Mueang Ranong and tessaban Mueang Chumphon in January 2019, JICA Project Team and NESDC-UDSD members visited in February and March of 2019, respectively, officially starting the SFCI to mobilize both tessabans to join the initiative.

After presenting the concept, objectives, implementation framework, and schedule of the SFCI model city project, the JICA Project Team and NESDC explained the roles of tessabans joining the SFCI.

- Taking an initiative in all activities under SFCI
- Establishing an SFCI Team in tessaban
- Inviting stakeholders to planning team meetings to formulate SFC Program and Projects
- Coordinating with Changwat-level organizations
- Meeting the PT
- Attending meetings regarding SFCI at Bangkok
- Reflecting the results of the SFC Initiative to the next LSDP
- Continuing the efforts to realize the projects proposed in SFC Initiative

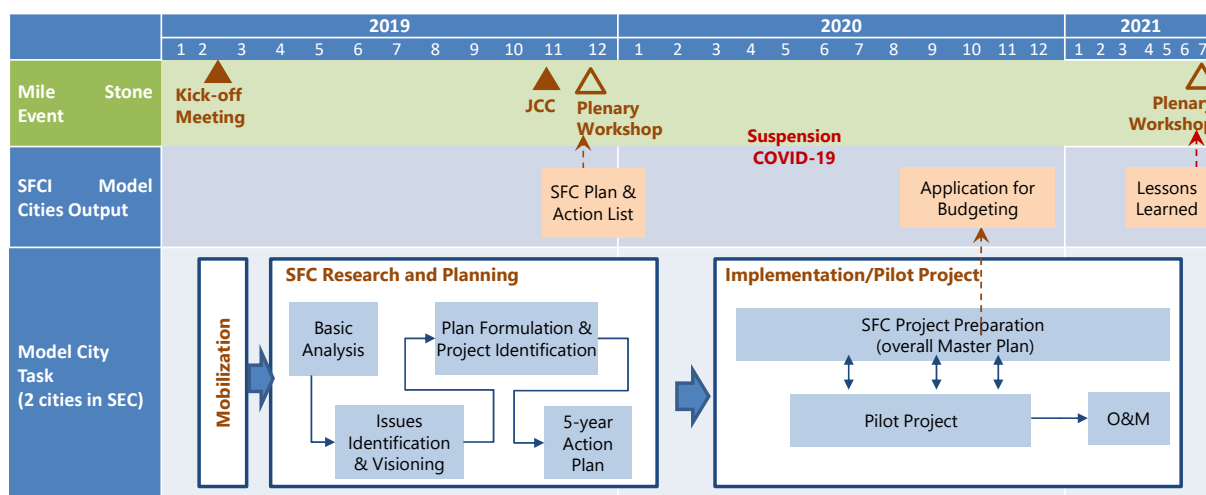
Since Tessaban Mueang Ranong and Tessaban Mueang Chumphon were nominated by NESDC, confirming their willingness to join SFCI and getting the commitment of the mayor or high-level officers was important.

Since the Mayor of Tessaban Mueang Chumphon has been in authority for a long time, he has a long-term vision for the city's development and has many project ideas. He also has a strong and positive relationship with city officials. Therefore, the SFCI Team was quickly set up within tessaban, and the model city project started right away.

On the other hand, the Mayor of Tessaban Mueang Ranong was newly elected, and some city government staff have been in the position since the previous mayor's administration. Getting the commitment from the mayor to set up the SFCI Team was difficult. The deputy mayor in charge of the SFCI has been replaced, making it difficult to unify the opinions of tessabans. Ultimately, the JICA Project Team and NESDC reconfirmed the system with the city government for the SFCI in the latter half of the model city projects.

4.3.2 Overall Implementation Schedule of Model City Projects

The Second Phase Model City Projects were implemented along with the SFCI Guideline described in Chapter 2. The SFCI comprises two steps, mainly SFC research and planning, and the other is implementation support. Under the TFCP of JICA, financial support for pilot project implementation was also provided. The overall schedule of the Second Phase Model City Project, together with milestone events, is shown in Figure 4.3.1.



Note: Red-coloured square shows the period that activities of all or some model cities were suspended or canceled due to COVID-19 prevention measures.

Source: JICA Project Team

Figure 4.3.1 Overall Schedule of the Second Phase Model City Project

1) SFC Research and Planning

Since one of the important SFCI concepts is the “local-driven approach,” model cities are required to have a strong initiative in leading their respective SFCI activities. At the same time, multi-sectoral local stakeholders’ involvement is essential under the SFCI concept of “collaborative approach.”

At the beginning of SFC Research and Planning, each tessaban established Planning Teams (PT) as a platform of the participatory planning process. It consists of key stakeholders, such as communities, the private sector, provincial departments, academic institutions, etc. A list of PT members of the two cities is shown in Table 4.3.1.

Table 4.3.1 List of Planning Team of Two Model Cities

	Chumphon	Ranong
Social sector	Chumphon Hospital Chumphon Vocational School Sriyapai School Saard Phaderm Wittaya School King Mongkut’s Institute of Technology Lad Krabang (Prince of Chumphon Campus) Provincial Cultural Office Community Development Provincial Office Provincial Social Development and Human Security Office Baan Nai Fhun community Baan Nai Sang community Poraminmanka 12 community	Wat-Uppanantaram Municipal School Baan Khao Niwet Municipal School Talad Mai-Sao Daeng community Rong Kluang community Old market community Ranong Land community Chalerm Pra Kiet community Talad Lang Pakdee community Ong Karn market community Provincial Cultural Office Provincial Public Health Doctor Ranong Community College Ranong Hospital
Environmental sector	Provincial Natural Resources and Environment Office Chumphon Provincial Waterworks Authority	Provincial Natural Resources and Environment Office Ranong Provincial Waterworks Authority
Industry & Employment	Chumphon provincial Chamber of Commerce Chumphon provincial industry council Provincial Tourism and Sport Office	Fisheries Provincial Office Regional Harbor Office, Ranong Branch Provincial Tourism and Sport Office

	Tourism Authority of Thailand (Provincial Office) Restaurant Club in Chumphon Province Department store (Ocean Super Mall)	Provincial Agriculture and Cooperatives Office Office of Commercial Affairs Tourism Industry Council of Ranong Ranong Tourism Association
Urban Management/ Infrastructure Development	Chumphon Police Station Provincial Office of Transport Provincial Local Administration Office (DLA) Chumphon Governor's Office Provincial Office of Department of Public Works and Town & Country Planning (DPT) Chumphon Highway District Provincial Office of Department of Rural Road (DRR) Chumphon Provincial Electricity Authority Chumphon Provincial Train Station Division of Planning and Budgeting (Chumphon PAO)	Ranong Police Station Provincial Land Officer Ranong Provincial Electricity Authority Ranong Highway District Ranong Immigration Provincial Local Administration Office (DLA) Ranong PAO Pak Nam Tha Rue TAO Bang Norn TAO Tha Rue TAO

Source: JICA Project Team

The Local Consultant Team supported the tessaban during the SFCI planning process, namely the basic analysis, issues identification, visioning and strategy setting, and project formulation. At each planning stage, each Tessaban organized PT meetings to present the progress of planning, get the opinions from stakeholders, and make consensus on the output. The detailed output is described in Volume 2 Chapters 1 and 2.

In addition to PT, the PCC was established to facilitate coordination with Changwat and provincial departments in promoting inter-departmental coordination to cross-cut issues and regional coordination on regional issues; thus, ensuring the implementation of the proposed SFC plan and projects. The governor is the chairperson of PCC. In the PCC meeting, both Tessaban Mueang Ranong and Tessaban Mueang Chumphon presented their draft SFC Plans and received opinions and advice from the governor and various provincial departments.

In November 2019, Tessaban Mueang Ranong and Tessaban Mueang Chumphon drafted SFC Plans (consisting of the vision, strategies, programs, and projects), prioritized the programs, and identified relevant implementing entities, which were presented in the JCC meeting in Bangkok. Both tessabans submitted their SFC Plans with action lists to JICA Project Team and NESDC in early 2020 as an output of the planning stage.

Table 4.3.2 lists the meetings in the two model cities. Meeting schedules varied by tessaban, depending on the progress of SFCI activities in each city.

Table 4.3.2 List of Meetings in Two Model Cities during Planning Stage

Meetings	Ranong	Chumphon
Kick-off	27 February 2019	19 March 2019
Follow-up	3 April 2019	
Pre-PT	-	21 May 2019
1 st PT	27 May 2019	29 May 2019
2 nd PT	24 June 2019	26 June 2019
3 rd PT	23 August 2019	21 August 2019
4 th PT	8 October 2019	9 October 2019
PCC	29 October 2019	31 October 2019

Alternative PCC	-	15 November 2019
5 th PT	22 January 2020	13 December 2019
6 th PT	19 February 2020	23 January 2020

Source: JICA Project Team

2) Pilot Project Implementation

Selection of SFC Program

With the prepared SFC Plan in the Research and Planning Stage, the SFC Program was selected as a priority project, of which the master plan will be further elaborated toward implementation under JICA pilot project activities. The criteria to select the JICA pilot project are as follows.

- (i) Integrated program to be developed as one program with several projects
- (ii) Feasibility that can be implemented within the expected budget and the schedule (1 year)
- (iii) Consensus building
- (iv) Collaboration with other organizations, etc.

Tessaban Mueang Ranong selected the SFC Program of "Health Park Development with Walkable City Network Project," composed of park improvement, accessibility design, and operation and management of the area. Tessaban Mueang Chumphon selected "public space design for better recreational experience and healthy living" as an SFC Program, which includes park and sports facilities improvement projects, as JICA Pilot Project. The local consultant team discussed with the tessabans to confirm the above SFC Programs and start the JICA Pilot Project in March 2020, where JICA Project Team could not participate due to the COVID-19 pandemic.

Draft Master Plan for the JICA Pilot Project

After resuming the project activities in June 2020, the local consultant team developed a draft master plan for pilot project implementation. Each consultant team conducted an existing situation analysis, including an interview survey, and organized a series of Pilot Project Team (PPT) meetings to identify the current situation and needs of improvement of each project site. Based on the result of the discussion of the PPT meeting, a draft master plan has been prepared to identify detailed action lists with the expected budget, implementing organizations, and schedule.

Construction Work under the JICA Pilot Project

Based on the master plan for the SFC program, each tessaban selected the project to be implemented under JICA Pilot Project.

- Tessaban Mueang Chumphon: Improvement of Banyan Tree Area of Arpakornkiattiwong Park.
- Tessaban Mueang Ranong: Pedestrian environmental improvement at Ranong Hospital Area and Pho Tha King Park improvement

The local consultant team prepared the detailed design with bill of quantities (BOQ) by the

end of 2020. While the Bangkok-based consultant team could not visit the site since March, actual construction work started in March 2021 through close collaboration with the local contractor team and Tessaban. All of the construction work has completed in July 2021.

4.4 Summary of Output of the Second Phase Model City Projects

As a result of the planning process of SFCI, the second phase model cities, Tessaban Mueang Chumphon and Tessaban Mueang Ranong formulated their respective SFC plans and identified specific SFC programs, including a list of SFC projects. JICA Pilot Project was also selected and implemented as a priority project to demonstrate coordination and partnership and to put the plan into effective practices. Operation and management (O&M) was prepared and embedded into the planning and implementation process. The outputs of the model city projects are summarized below. Their details are described in Volume II: Model City Projects.

4.4.1 Tessaban Mueang Chumphon

1) SFC Plan

The SFC Plan of Tessaban Mueang Chumphon is summarized in Table 4.4.1.

Table 4.4.1 Summary of SFC Plans of Tessaban Mueang Chumphon

SFC Vision and Strategies	<p>Vision: Chumphon the Livable city, Happiness social and Good quality of life</p> <p>Strategic Direction 1: Create a happy city for people of all ages</p> <p>Strategic Direction 2: Smart mobility</p> <p>Strategic Direction 3: The Center of Agricultural Produces and food safety</p> <p>Strategic Direction 4: Gateway of the Southern Corridor and a must-visit destination</p> <p>Strategic Direction 5: Integrated Eco-system with Smart Data and Planning</p>
SFC Program	<p>Public Space design for better recreational experiences and healthy living</p> <p>(Strategic Direction 1: Create a happy city for people of all ages)</p> <p>1) Public Space: experiential design and development project</p> <ul style="list-style-type: none"> - To enhance the quality of life by being a space for exchanging ideas and creating recreational activities for people in the area and visitors <p>2) Park and sports facilities improvement project</p> <ul style="list-style-type: none"> - To promote good health and well-being for people of all ages - To add green areas to the city <p>3) Civilized architecture project (universal design for all ages)</p> <ul style="list-style-type: none"> - To design and construct for various areas and buildings suitable for all ages and every physical condition
JICA Pilot Project	<p>Park and sports facilities improvement project</p> <ul style="list-style-type: none"> • Formulation of Draft Master Plan • Designing the selected areas • Implementation/construction of selected elements • Establishment of operation and management system • Designing activities/events and implementation of relevant elements
Expected output of SFC Program	<ul style="list-style-type: none"> • Better recreational experiences and healthy living are provided for all people. • Quality of life is improved and both physical and mental health are enhanced by good design of public space.

Long-term impact of SFC Plan	<ul style="list-style-type: none"> • Quality of life and healthy living for all ages will be enhanced while preparing well for an active aging society. • Sustainable potentials in agricultural-related business could be increased. • Being a hub of agricultural products could lead to further development of agro-tourism, gastronomy, and community-based tourism.
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Source: JICA Project Team

2) Pilot Project

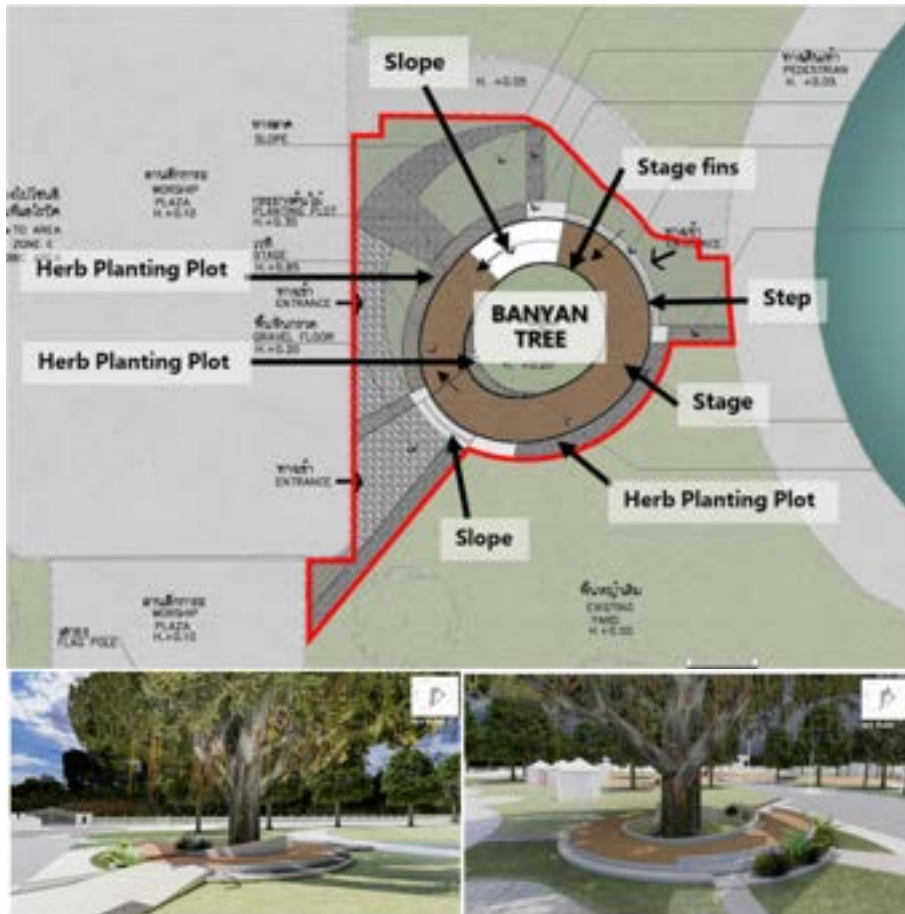
As mentioned in section 4.3.2, the master plan of the Parks and Sports Facilities Improvement Project was formulated (Figure 4.4.1).



Source: JICA Project Team

Figure 4.4.1 Master Plan of Parks and Sports Facilities Improvement Project (Zone A – Zone N)

Based on the master plan, the detailed design of Area D: Banyan tree and the detailed design for Zone H Playground were prepared (Figure 4.4.2 and Figure 4.4.3).



Source: JICA Project Team

Figure 4.4.2 Detailed design of Zone D (Banyan Tree Area)



Source: JICA Project Team

Figure 4.4.3 Detailed design of Zone H Preliminary design of play equipment

Based on the Detail Design of Zone D, the Zone D improvement project was implemented. It includes the construction of the stage, stage fin, and slope, installation of lighting, and softscape.



Source: JICA Project Team

Figure 4.4.4 Construction Work of Zone D

4.4.2 Tessaban Mueang Ranong

1) SFC Plan

The SFC Plan of Tessaban Mueang Chumphon is summarized in Table 4.4.2.

Table 4.4.2 Summary of SFC Plans of Tessaban Mueang Chumphon

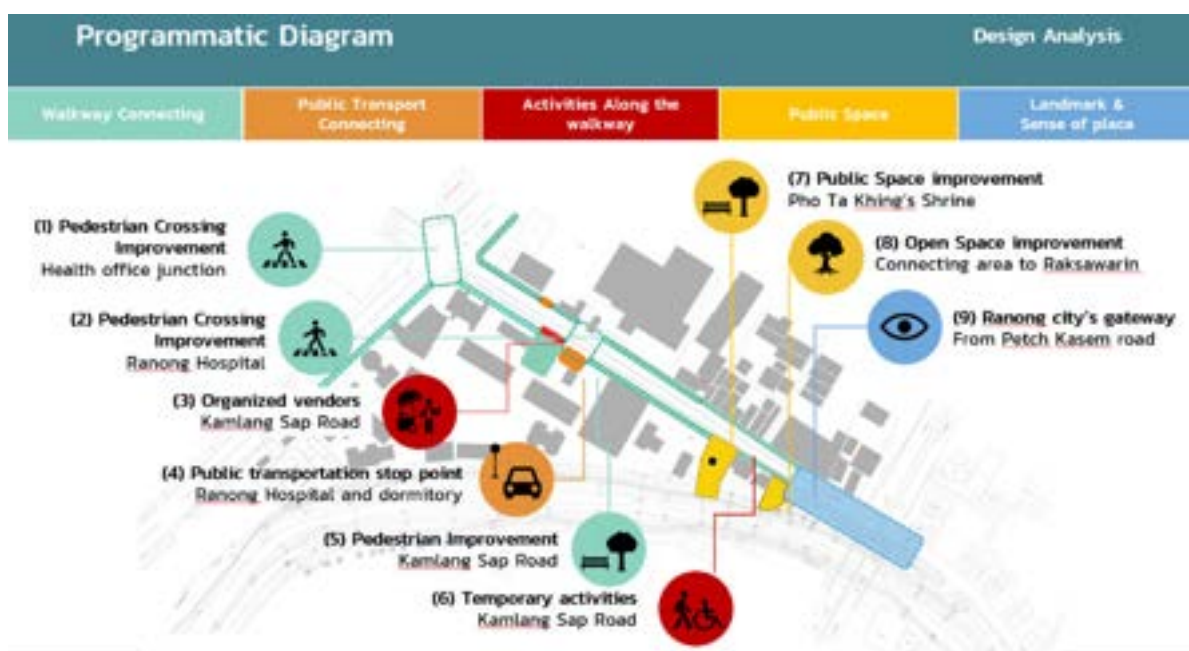
SFC Vision and Strategies	<p>Vision: Being the head of health tourism and livable city with well-being</p> <p>Strategic Direction 1: Inclusive and Multiculturalism City Strategic Direction 2: The World Class Holistic Health and Wellness Tourism Destination City Strategic Direction 3: Green City Strategic Direction 4: Healthy City Strategic Direction 5: Safe, Convenient, and Comfort City</p>
SFC Program	<p>Improvements of Park, Transport and Cityscape (Strategic Direction 5: Safe, Convenient and Comfort City, integrated key element of Strategic Direction 4: Healthy City)</p> <ol style="list-style-type: none"> 1) Local Economy Street: Rueang Rat Road Project <ul style="list-style-type: none"> - To promote community economy and community participation in creating a livable city 2) Park improvement and accessibility design and development project <ul style="list-style-type: none"> - To enhance the park and public space for better experiences and the well-being of all users 3) Pedestrian Trail Development Project: city walk through the building and shade throughout the city <ul style="list-style-type: none"> - To promote creative and environmentally friendly use of urban areas, as well as create tourism activity products in urban areas 4) Universal design project for people to travel in every area <ul style="list-style-type: none"> - To design and construct various areas and buildings suitable for people of

	<p>all ages and every physical condition</p> <p>5) Walkable city and streetscape design and improvement</p> <ul style="list-style-type: none"> - To build a pleasant and environmentally friendly city - To create beautiful, memorable, and useful streetscapes and conditions for people of all ages - To strengthen economic distribution patterns and urban activities <p>6) Mineral water & hot spring accessibility and distribution management system</p> <ul style="list-style-type: none"> - To create fair access and distribution of mineral water and the related value of hot spring
JICA Pilot Project	<p>Health park renovation with walkable city network</p> <ul style="list-style-type: none"> • Formulation of Draft Master Plan • Designing the selected areas • Implementation/construction of selected elements • Establishment of operation and management system • Designing activities/events and implementation of relevant elements
Expected output of SFC Program	<ul style="list-style-type: none"> • Not only the beautifulness of the city is promoted but also the urban safety and urban climate are improved by the urban design and urban physical improvement.
Long-term impact of SFC Plan	<ul style="list-style-type: none"> • Harmony of multi-cultural living environment will be enhanced by including diversities based on the city's rich cultural assets. • A platform for unique identity will be created by integrating all values of Ranong, such as biosphere reserve and natural hot springs.

Source: JICA Project Team

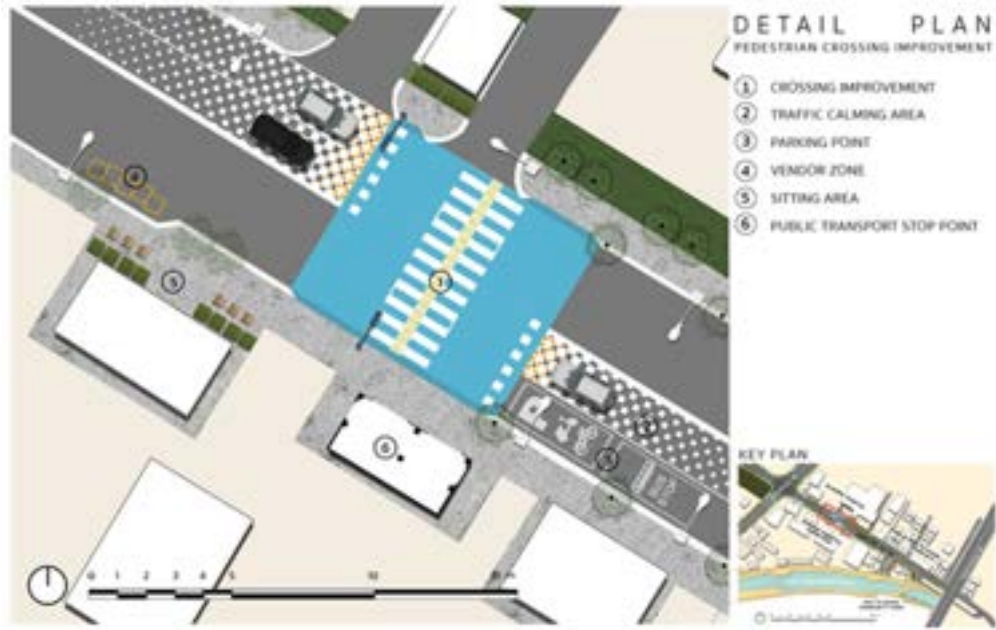
2) Pilot Project

Based on the master plan of the Health park renovation with a walkable city network, the Ranong Hospital area and Pho Ta Khing's Shrine area were designed and physically improved. Besides, detailed designs for Ranong City's Gateway and Pedestrian Improvement of Kamlang Sap Road were also prepared for the Tessaaban to implement in the future.



Source: JICA Project Team

Figure 4.4.5 Master Plan of Health park renovation with walkable city network including nine design areas on Kamlang sap road



Source: JICA Project Team

Figure 4.4.6 Detailed Plan for Ranong Hospital Area Improvement



Source: JICA Project Team

Figure 4.4.7 Improvement of Ranong Hospital Area



Source: JICA Project Team

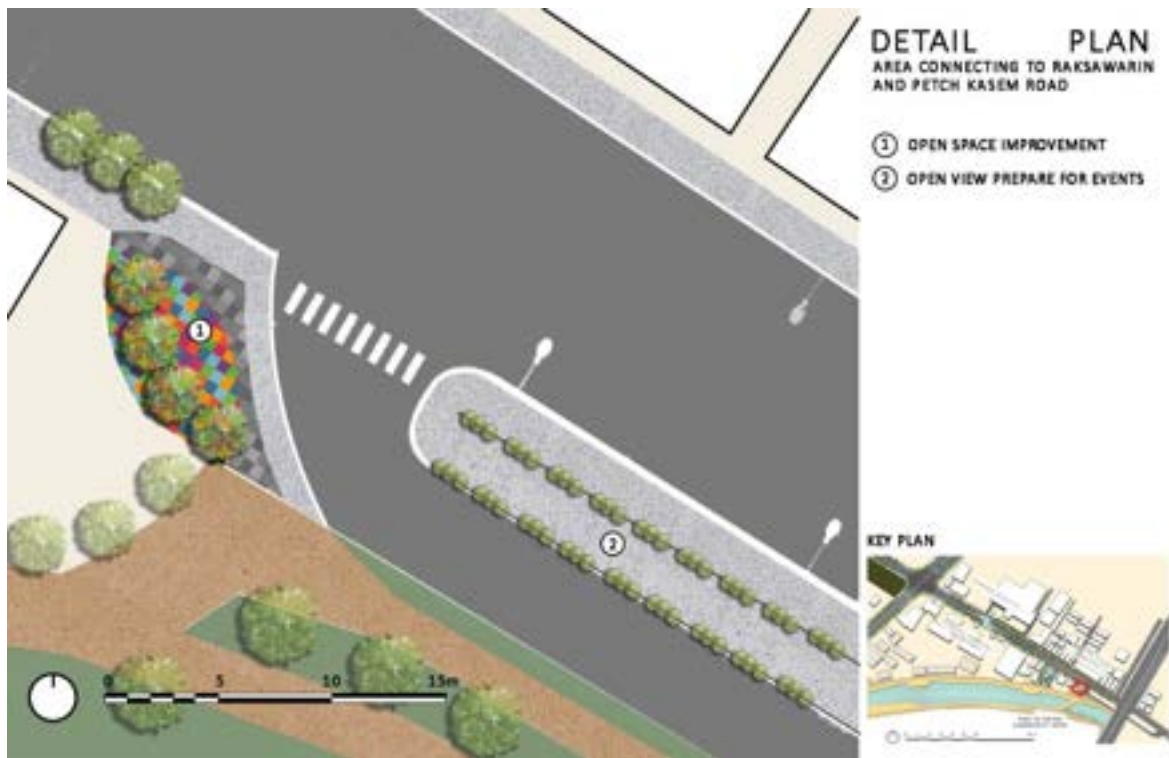
Figure 4.4.8 Detailed Plan for Pho Ta Khing Shrine

<p>Temporary activities</p>		<p>Improvement of the foundation</p>
<p>Repainting of the shrine and wall</p>		
<p>Installation of lighting (outdoor LED light pole and LED light for tree)</p>		<p>Landscape improvement (bamboo fence, shrub plant,</p>



Source: JICA Project Team

Figure 4.4.9 Improvement of Pho Ta Khing’s Shrine



Source: JICA Project Team

Figure 4.4.10 Detailed Plan for Ranong City’s Gateway



Source: JICA Project Team

Figure 4.4.11 Detailed Plan for Ranong City's Gateway

4.4.3 O&M Plan

O&M is defined as an administration of managerial practices aimed at ensuring efficiency within an organization, which will improve effectiveness, profitability, and sustainability. The O&M guideline was prepared to provide a systemized management framework that can be applied with more than only the completed pilot project components to manage other future projects. The proposed O&M Team Structure and roles of the O&M Team are shown in Figure 4.4.12 and Figure 4.4.13.



Source: JICA Project Team

Figure 4.4.12 Framework of O&M Team

Roles of OM Team		
<p>Regulation</p> <ul style="list-style-type: none"> Establish rules and manage conflicts between uses, safety issues and take preventive measures 	<p>Funding and Investment</p> <ul style="list-style-type: none"> Finance for redevelopment, Training of required skills, upskills and Expertise 	<p>Maintenance, Repair, Replace</p> <ul style="list-style-type: none"> Ensure routines and practices are performed properly
<p>Administrative Coordination and Promotion of Uses</p> <p>Interventions, actions, aspirations, Event organizers</p>		

Source: JICA Project Team

Figure 4.4.13 Roles of O&M Team

O&M Guideline for each city includes specific rules and regulations of each responsible organization, maintenance and usage guideline for pilot project components, potential funding and investment for future improvement, and event plan for promotion activities.

5. Summary of Monitoring of the First Phase Model City Projects

5.1 Overview of SFCI Activities in the First Phase Model Cities

5.1.1 Objectives

The first phase model city projects were conducted from 2016 to 2018. The key objectives are to examine the SFCI mechanism, “a national government-guided and local government-driven mechanism”, on the practical ground, as well as the relevance and appropriateness of the SFCI Guidelines, developed in Stage 1 of the TFCP. More specifically, the purposes of the model city projects are as follows:

- to examine the implementation of the SFCI;
- to check the relevance and appropriateness of the SFCI Guidelines;
- to strengthen capacities of model cities and make leading cities for sustainable urban development of local cities of Thailand; and
- to identify issues on the existing administrative system on urban development that needs improvement, such as institutional and budgeting mechanisms, if any.

5.1.2 Selection of Model Cities

The first phase model cities were selected through a proposal process. NESDC and JICA Project Team prepared a long list of candidate cities, including Tessaban Nakhon and Tessaban Mueang, with strong leadership and capabilities for city development and can be a model for other cities to replicate. The long list of tessabans was evaluated based on the following criteria.

- **Socio-economic Vitality:** The socio-economic conditions, including population growth rates and aging rates, were analyzed to identify which tessabans showed strong vitality or are facing depopulation and aging.
- **Financial Capacity:** Revenue per capita and share of own revenue were quantitatively analyzed to identify tessabans with a strong financial basis.
- **Tessabans’ Capacity:** To determine the capacity of the tessabans, the TFCP team members evaluated some of the awards the tessabans received, including the KPI Award, Livable City Award as well as some award-winning activities of tessabans. There were also direct discussions with tessabans or comments from relevant agencies as part of the evaluation.
- **Possibility to Discuss Key Issues of Local Cities:** Key issues of local cities were identified in the Concept Paper on Sustainable Future Cities, as listed below. The candidate model cities have worked to resolve such issues.
 - (i) Strengthening of self-sustaining economic competitiveness/promotion of centrality of the city
 - (ii) Preparation for depopulation, aging, and low fertility society

- (iii) Attention to or acknowledgment of sustainable environmental strategy and global warming
- (iv) Strengthened regional connectivity
- (v) Strengthened initiatives of tressabans and people's participation in development

JICA and NESDC discussed the above results with agencies related to urban development, such as DLA, DPT, DEQP, NMT, KPI, and so on, and prepared a list of 13 tressabans as candidate model cities, which was approved in the JCC meeting (see Table 5.1.1).

NESDC and JICA Project Team sent invitations to the short-listed 13 tressabans to participate in the SFCI on 8 April 2016, consisting of the following documents:

- invitation letter signed by Mr. Poramete Vimolsiri, Secretary General at that time,
- executive Summary on the Sustainable Future City Project,
- instructions for application to the Sustainable Future City Initiative Model City Projects,
- submission letter of application on SFC Initiative, and
- proposal form on SFCI Model City Project.

The invitations also included indispensable conditions, such as:

- responsibilities of the tressaban, including establishing the PT for SFCI within Tressaban and PCC, and involvement of stakeholders in the Planning Team Meeting;
- expenses to be borne by the tressaban to carry out the SFCI, including expenses to attend meetings regarding the project in Bangkok;
- reflection of results of SFCI to next Local Strategic Development Plan; and
- continuous efforts to realize the projects proposed in the SFCI.

Based on the evaluation of proposals, six tressabans were selected as model cities for the SFCI. They are Tressaban Nakhon Chaing Rai, Tressaban Nakhon Khon Kaen, Tressaban Mueang Krabi, Tressaban Mueang Nan, Tressaban Mueang Phanat Nikhom, and Tressaban Nakhon Phitsanulok. After approval in the JCC on 30 May, the notification letters for the selected SFCI model cities were signed by the Secretary General of the NESDC and sent to each tressaban and Changwat. It took about two months to select the model cities.

Table 5.1.1 Short-listed 13 Tessabans for the First Phase Model City Projects

Urban Hierarchy ¹⁾		Shortlisted Tessaban	Result of Evaluation	
Growth Centers	Regional Centers	1. Khon Kaen	O	
		2. Phuket	X	
	Strategic Cities	3. Nong Khai	X	
		4. Mae Sot	X	
		5. Phitsanulok	O	
		6. Lampang	X	
		7. Nakhon Sawan	X	
		8. Ayutthaya	X	
	Centers of Urban Clusters	9. Chiang Rai	O	
Provincial Centers	North	10. Nan	O	
	Northeast	11. Roi Et	X	
	South	12. Krabi	O	
Local Cities	East	13. Phanat Nikhom	O	

Note: ¹⁾Based on the urban hierarchy set in the FR of Phase 1 (Stage 1–3)

Source: JICA Project Team

5.1.3 Implementation Process of the Model City Projects

The overall schedule of the first phase model city projects is shown in Figure 5.1.1. After the kick-off seminar, model cities started the SFC research and planning process along with the draft SFCI Guideline. After preparing the SFC Plan and Projects, they identified the SFC project and implemented pilot projects with financial support from JICA. In the duration of the model city projects, model cities presented their progress, outputs, and lessons learned from SFCI at the periodical plenary workshop and JCC in Bangkok.



Source: JICA Project Team

Figure 5.1.1 Implementation Schedule of the First Phase SFCI Model City Project

5.2 Output of the First Phase Model Cities

The main outputs of the model city projects include (i) SFC Plan, including vision and strategies, (ii) action plan for the selected SFC Program, and (iii) implantation of pilot projects, which are summarized in Table 5.2.1.

Table 5.2.1 Pilot Project in the First Phase Model Cities

Tessaban	SFC Vision and Strategies	SFC Program	JICA Pilot Project
Chiang Rai	<p><u>Vision: Chiang Rai, the City of Happiness for All</u> Strategy 1: Infrastructure System Development for Safety in Life and Property Strategy 2: Generation of New Value by the Interaction of All Ages Strategy 3: Development of Health Service for All Ages</p>	Generation of New Value by the Interaction of All Ages	The Project for Promoting Interactions among the All Ages through Active Learning
Khon Kaen	<p><u>Vision: Make the City Global, Create a Happy Society” and “Smart City”</u> Strategy 1: Enhance “Centricity” in Isan Strategy 2: Smart and yet Traditional Urban Renewal Strategy 3: Green and Quality Amenity City Strategy 4: Beyond car-oriented development Strategy 5: Sustainable Urban Growth with Nature Strategy 6: Design for All Strategy 7: Safe, Secured, and Quality Living Environment</p>	Strategy 4: Beyond car-oriented development	Public Transport Promotion
Krabi	<p><u>Vision: To make Krabi City as Art and Culture City with Tourism</u> Strategy 1: Conservation & promotion of environmental and tourism resources program Strategy 2: Conservation & promotion of cultural and tourism resources Strategy 3: Promotion of Community-based Tourism (CBT)</p>	Enhancement on Dissemination of Andaman Culture	The project for improvement on Andaman Cultural Center
Nan	<p><u>Vision: Nan, The Happiness and Living Old Town</u> Strategy 1: Revitalization of Value of Nan’s Existing Cultures and Traditions Strategy 2: Improve the quality of life in Nan’s style Strategy 3: Improve & Conserve the Quality of Environment</p>	Cross-cutting project of All 3 Strategies	Experience Nan Live Museum along the Bicycle Route
Phanat Nikhom	<p><u>Vision: Livable City</u> Strategy 1: Strengthen Phanat Nikhom as the urban service center Strategy 2: Improve livability in multi-generation Strategy 3: Utilize local resources for uniqueness as Phanat Nikhom</p>	Provision of Urban Services for Various Generation and Their Lives in Comfort	Project for Introducing Universal Design in Phanat Nikhom
Phitsanulok	<p><u>Vision: Central City with a nice landscape,</u></p>	Preparation for	The Pilot Zone

	<p>Happy People Strategy 1: Encouragement of next leading business Strategy 2: Improvement of Naa Yuu (sustainability) and Local Pride for All generations Strategy 3: Provision of Infrastructure Utilities for Safety and Sufficient Living Environment</p>	Aged Society	for Creating Sustainable Ageing Society
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Source: JICA Project Team

5.3 Monitoring Activities

5.3.1 Objectives

Monitoring activities have been conducted annually since the completion of the model city projects for three years, from 2019 to 2021. The purpose is to check the progress of SFC Plans and Projects as well as get feedback for the SFCI from model cities. More specifically, the objectives of monitoring are:

- to evaluate the progress of the SFC Plan and Projects;
- to monitor the status of the output of the JICA Pilot Project;
- to gain lessons learned from each city, key success, and challenges; and
- to get a recommendation to continue SFCI.

The first monitoring activities were in 2019, aimed to screen, examine, and update the output of the model city project. It also aimed to examine possibilities of providing more support in implementing SFC Projects by the relevant departments.

The second monitoring activities were in mid-2020 after restriction measures under COVID-19 were lifted. It aimed to review the impacts of COVID-19, measures responding to COVID-19, emerging urban issues, and adaptation of outputs of SFCI under COVID-19, as well as checking the progress of the SFC Plan and Projects.

The final monitoring activities were conducted in the final stage of the TFCP in mid- 2021. Details of the monitoring activities in each city are in Volume 2, but a summary is included in the following section.

5.3.2 Progress of SFC Plan

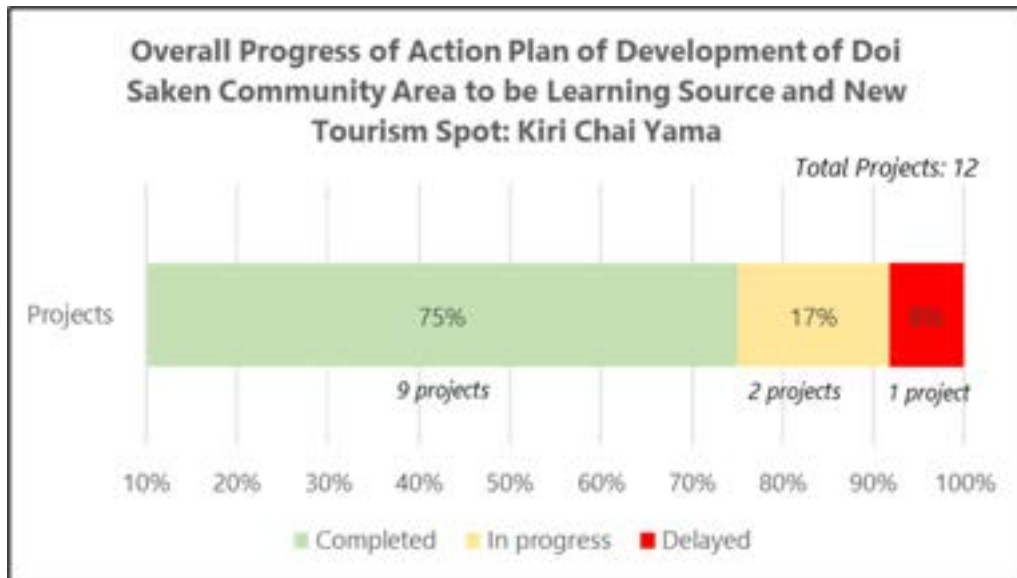
Progress of SFC Projects and the five-year action plan of 6 tessabans were assessed to categorize into projects that have been implemented, those that are in process, and those that have been delayed. Based on the result of assessment, necessary adjustment and actions have been identified, including revision of the plans, further coordination with relevant department, etc.

1) Tessaban Nakhon Chaing Rai

The five-year plan of the Project for Doi Saken Development as Learning Sources and Tourism Spot has been efficiently proceeded. Most of the projects have been proposed

under tessaban’s LSDP, showing high potential capacity of Tessaban Nakhon Chiang Rai to implement the projects.

The action plan consists of 12 projects. As shown in Figure 5.3.1, Tessaban has completed about 75% of the action plan, 17% of the projects are under construction, while the rest (8%) has been delayed.



Source: JICA Project Team

Figure 5.3.1 Overall Progress of the Chiang Rai’s SFC Plan

2) Tessaban Nakhon Khon Kaen

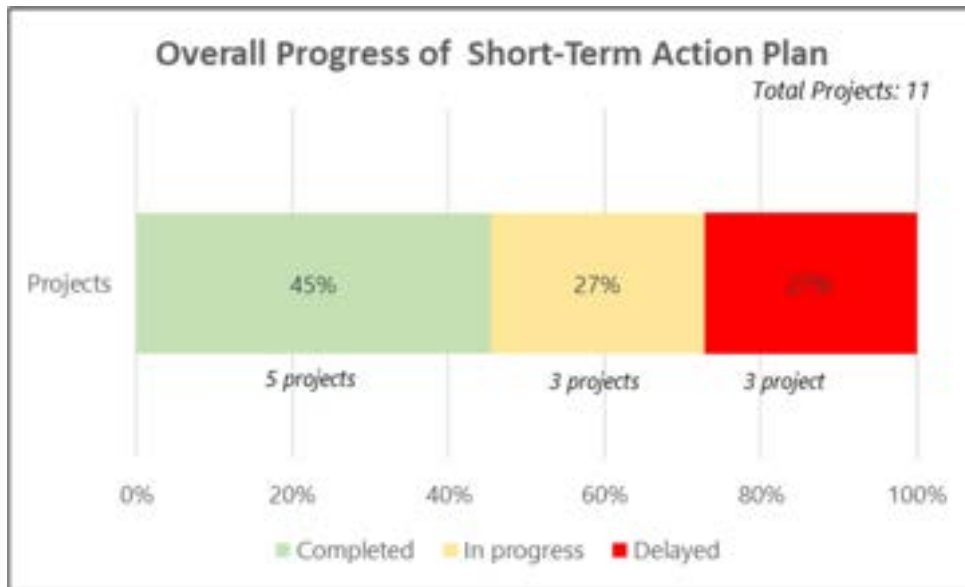
All projects proposed in the short-term and midterm action plan have been integrated in the LSDP of Tessaban Nakhon Khon Kaen (2018–2022) under Strategy 4: Development of Logistic and Public Transport System, and Infrastructure toward City of Investment and Living. The LSDP has become a key driver to propose the projects to other organizations. This is because the projects in the LSDP demonstrated the Tessaban’s development directions so that it is easier for the city to gain the necessary support. Meanwhile, the projects beyond the Tessaban’s capacity and responding to provincial needs were proposed in the Provincial Development Plan and Provincial Cluster Development Plan (Roi-Kaen-San-Sin Provincial Cluster).

It should be noted that the action plan of Khon Kaen is significantly related to the existing and future transportation system, including the Khon Kaen smart bus, songteaw, train station, and light rail transit (LRT) project. To promote the integrated system, transport data management was promoted while land use development and urban design were also considered as essential components, i.e., transit-oriented development (TOD) and urban design, to support the city development.

Tessaban Nakhon Khon Kaen has completed about 45% of the action plan, 27% is underway, and the rest of the projects are delayed as shown in Figure 5.3.2.

The short-term action plan consists of eleven (11) projects. The short-term action plan has a relation with the further developments. There are five (5) projects proceeding as planned.

Three (3) projects are being prepared for implementation, while another three (3) are suspended mainly because of delays of the LRT project.



Source: JICA Project Team

Figure 5.3.2 Overall Progress of the Khon Kaen’s SFC Plan

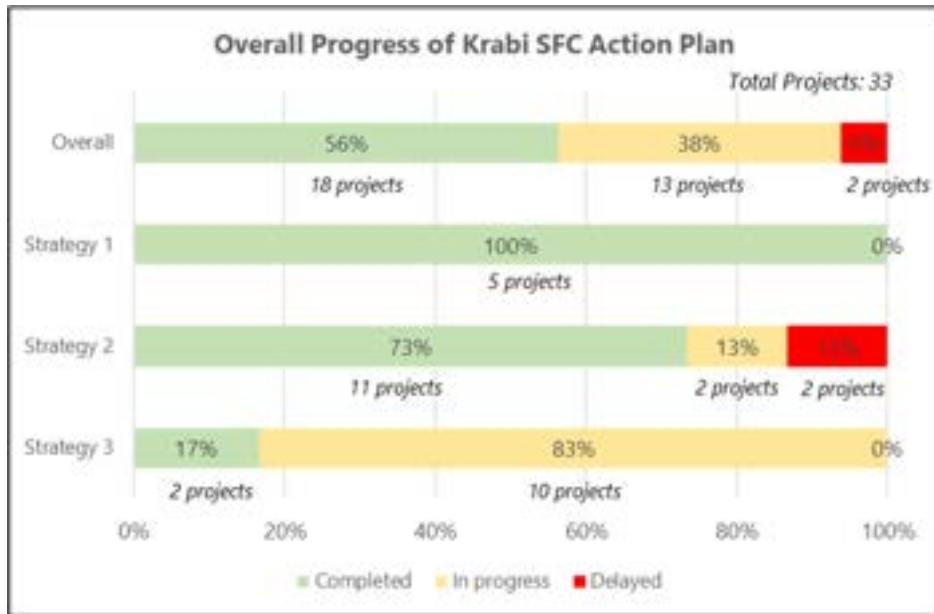
3) Tessaban Mueang Krabi

The progress of the five-year action plan for Sustainable Tourism Destination has been mainly implemented by Tessaban Mueang Krabi. To complete the action plan, the Tessaban has integrated most projects into the LSDP which allows the Tessaban to request for annual budget for its implementations. Under the LSDP, the proposed projects have not been only recognized by the national government, especially DLA, but have also complied with the vision of Art-Cultural City with Tourism. Accordingly, the outcomes of the project were beyond the tourism sector, but the quality of life was also reflected in the plan.

In addition to this, Tessaban Mueang Krabi has proposed some projects requiring a big budget to the Andaman Provincial Cluster. Mainly, the proposed projects must be related and beneficial to the region. However, it seemed like the process was more difficult than LSDP. This is because it required more approvals and project details.

Interestingly, some projects in the action plan have been implemented as activities with community. The good thing was that such activities did not require financial support, so the Tessaban implemented them by themselves. Accordingly, the Tessaban could get a common understanding with its citizens. This was very useful for other related projects too because the outcomes could be visually realized by relevant organizations. Therefore, it would be easier for the Tessaban to get further support either in the form of budget or advice.

The action plan consists of three (3) strategies with 33 projects in total. In the overall progress, 56% of the action plan have been completed, 38% of which are under the process of implementation and budget’s requests, while only 6% had been delayed mainly because of COVID-19 prevention measures and budget limitation.



Source: JICA Project Team

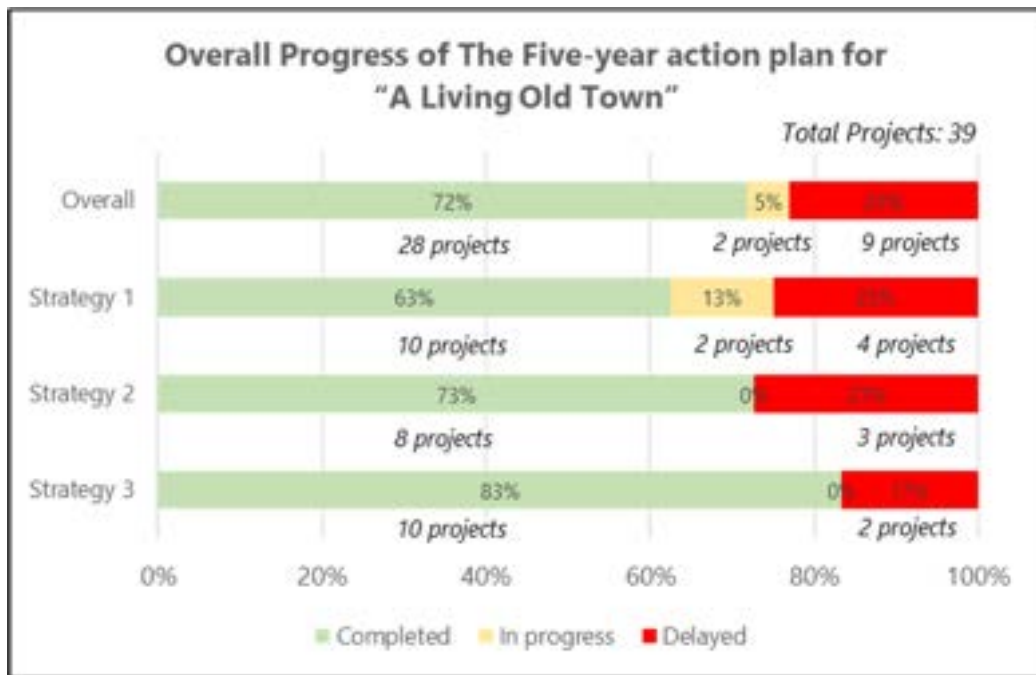
Figure 5.3.3 Overall Progress of the Krabi SFC Action Plan

4) Tessaban Mueang Nan

The five-year action plan for “A Living Old Town” has been implemented by Tessaban Mueang Nan. To complete the action plan, the Tessaban included most projects in the LSDP for FY2018–2022 which allows the Tessaban to request for annual budget for its implementation. Under the LSDP, the proposed projects have not only been recognized by the national government, especially the DLA, but have also conformed to the vision of “Nan – A Living Old Town Filled with Happiness”.

Tessaban Mueang Nan has proposed some projects requiring a big budget to other organizations, such as the Provincial Office, Department of Tourism and Sports, and the Provincial Electricity Authority. As the Tessaban is the core of Nan province, the project is expected to benefit more people. With its identity and uniqueness of the Tessaban, many organizations have become interested to develop the city. For instance, Nan was selected by the Designated Areas for Sustainable Tourism Administration or DASTA to develop its cultural tourism. Therefore, the projects in Nan have gained either financial or technical support to achieve its vision.

The action plan consists of three (3) strategies with 39 projects in total. As shown in Figure 5.3.4, Tessaban Mueang Nan completed over 70% (28 projects) of the total projects in the action plan. There are only two (2) projects that are in progress, approximately 5% of its total, while only nine (9) projects (23%) are delayed.



Source: JICA Project Team

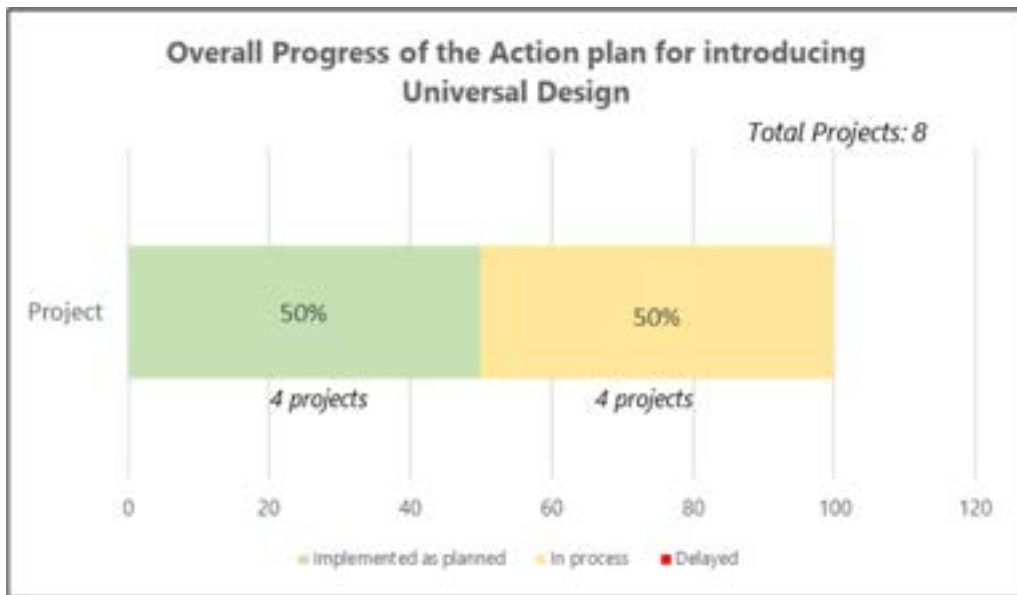
Figure 5.3.4 Progress of the Five-year Action Plan on “A Living Old Town

5) Tessaban Mueang Phanat Nikhom

Tessaban Mueang Phanat Nikhom has showed an outstanding performance in adopting universal designs to its public facilities. The LSDP is an efficient plan to drive the project in their action plan. The JICA pilot project has become a tangible output for Tessaban Mueang Phanat Nikhom. In addition, the Tessaban has increased their knowledge about universal design and the importance of an age-inclusive society.

To complete the action plan, the Tessaban has utilized the concept and study of universal design by proposing the project to other organizations. As the Tessaban is a small city, it is difficult to get a budget for mega projects. However, with the determination and clear vision of the Tessaban, the PAO has supported the mega project, which is the construction of an elderly daycare center. In addition, the Tessaban has seen the potential of its location and has requested a budget from the Eastern Economic Corridor (EEC) Development Plan to improve all its public parks.

Figure 5.3.5 shows the overall progress of action plan. The action plan includes eight (8) projects, half of which was completely done, while the other half are delayed mainly due to the process of budget allocation. This means that all projects have passed through official budget channels.



Source: JICA Pilot Project

Figure 5.3.5 Overall Progress of the Action Plan on Introducing Universal Design

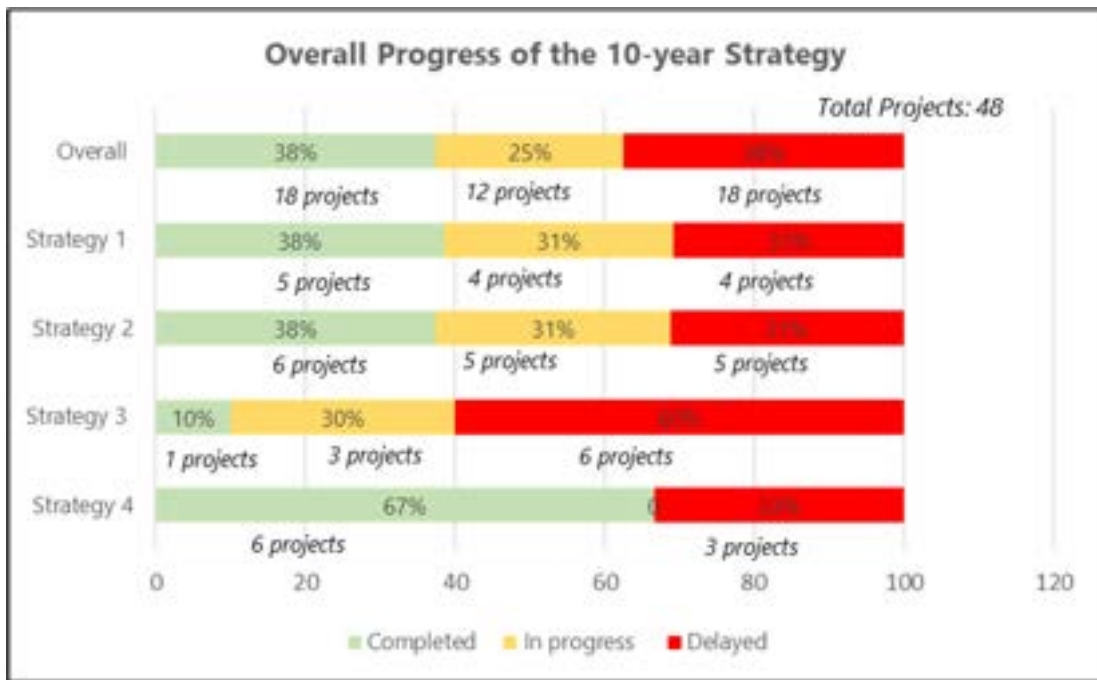
6) Tessaban Nakhon Phitsanulok

Tessaban Nakhon Phitsanulok has shown an outstanding performance to drive the 10-year strategy for sustainable ageing society under the Tessaban's capacity. All projects were proposed in the Tessaban's LSDP (2018–2022), especially Strategy 4; Promotion of quality of life and Strategy 5 Enhancement of Participation and Strengthening Community and Society. This is like an initial step for the Tessaban to gain further support based on the SFC Plan's initial outputs.

As the Tessaban is the key actor to implement the 10-year strategy, the LSDP only reflects their action step by step. As a first step, the projects were proposed in the LSDP, which is a five-year plan. Then, selected projects were included in the action plan for the LSDP, which is a three-year plan. To get the actual budget in each fiscal year, the selected projects in the action plan were included in the public expenditure plan, which indicates the budget spending for each year.

The process of the SFCI, especially the planning approach, has been utilized in Tessaban Nakhon Phitsanulok. PT remains as the key actor for driving and monitoring the 10-year strategy. Its main role is to review the plan and update it based on the current situation. In the recent PT meeting in Tessaban Nakhon Phitsanulok in 2021, the PT agreed to add a new strategy, which is "Strategy 5 Development of Technology system for Elderly Health".

Overall, the 10-year strategy consists of 48 projects in total, 18 of which are completed (38%), ongoing (12 or 25%), or delayed (18 or 38%). Of the strategies, Strategy 4 has the fastest progress with almost 70% of its projects under implementation, followed by Strategy 1 and Strategy 2 at 38% each. Strategy 3 shows the slowest progress with only 10% of its projects being implemented within the expected duration.



Source: JICA Project Team

Figure 5.3.6 Overall Progress of the 10-Year Strategy

5.3.3 Status and Future Direction of Pilot Project

This section focuses on the status of the pilot project supported by JICA. This also aims to evaluate how the Tessaban utilizes the output of the pilot project and how they operate and maintain the quality of project construction. Some challenges and plans are also identified.

1) Tessaban Nakhon Chaing Rai

The JICA pilot project in Tessaban Nakhon Chiang Rai was the Project for Promoting Interactions among the All Ages through Active Learning, including four (4) components (i) Active Learning Courses for Elderly People at the University of Third Ages (U3A), (ii) Camp Program for Students, (iii) Organic Vegetation Training for Community People, and (iv) Tourism Spot/ Program at Doi Saken.

After the JICA pilot project completed, the Tessaban proposed these outputs into the Tessaban’s annual expenditure to secure the budget for maintenance. In terms of role sharing, the Tessaban has remained a key actor to operate and implement the pilot project. The responsibility was shared with the different divisions of the Tessaban while closely collaborating with citizens and relevant organizations; for instance, the local university reviewed and updated the elderly learning courses in U3A, the Tessaban school promoted student camping, and local farmers sold their community products.

Under JICA’s pilot project, Tessaban Nakhon Chiang Rai did not implement any big construction. Instead, the Tessaban procured equipment to support their own activities. Such equipment has been maintained in good condition and its quality checked every quarter.

Noticeably, the outputs of the JICA pilot project have been disseminated to other areas

and other groups of citizens. The idea of U3A has been shared with other communities in Tessaban Nakhon Chiang Rai, while the Doi Saken area has been continually improved using the Tessaban's budget. As mentioned above, the Tessaban has systematically improved the Doi Saken area under a five-year action plan, while community products have been promoted at Doi Saken and organic food have been distributed and promoted to the Tessaban's schools and the entire Tessaban.

The key outcomes of pilot project are summarized as follows:

- The courses and curriculums of the U3A were developed to meet actual needs and their physical abilities. This attracted many elderly people in the city and contributed to the happiness and health of the elderly after retirement.
- Access to the school (e.g., school bus) and ease of using the facility (e.g., barrier-free toilets, large rooms) was key consideration to provide learning opportunities for the elderly.
- Through interactive activities between the elderly and the youth, local tradition and culture can be passed on to the next generations.
- Tessaban Nakhon Chiang Rai collaborated with the community to create a learning environment with local natural resources (Doi Saken and its biodiversity) and indigenous culture for municipal school students.
- Students discovered the strengths or attractiveness of their city by learning from/with the locals. This also fostered civic pride.
- Tessaban Nakhon Chiang Rai prepared their own tourism programs revolving around their key resource, the Doi Saken forest, by taking advantage of its rich biodiversity and the city's indigenous culture (Lanna culture).
- The tessaban collaborated with the community through a CBT Working Committee to manage tourism, where households learned about tourism management and gained more income and took pride in their city.

2) Tessaban Nakhon Khon Kaen

The JICA pilot project in Tessaban Nakhon Khon Kaen consisted of three (3) components. The main purpose of the pilot project was to promote the use of public transportation. With the existing systems and to support further implementation, Khon Kaen prioritized transit database building, placemaking (in transit system service), and songteaw promotion design.

With the results of the JICA pilot project, Tessaban Nakhon Khon Kaen has posed a latent operation and maintenance. The collaboration with other sectors, especially Khon Kaen University, has remained in each project. Also, the city has a plan to utilize and expand the outputs of the pilot project in the future. The quality of equipment installed in Khon Kaen ranged from moderate to good. The Tessaban has applied the technological system via LINE bot in which the locals and public transport users can report the issues and post feedback directly to the division of public works in Tessaban Nakhon Khon Kaen.

The key outcomes from pilot project are listed as below.

- Since songteaw is a main and familiar transport mode for the citizens, they could easily accept and cooperate to use public transport more frequently.
- JICA Pilot Project helped to develop comprehensive transport system by integrating demands and movements on several public transports mode, such as buses.
- Smart Mobility Committee, consisting of public, private, and academic sectors, can create partnership for further implementation of the projects effectively through collaboration among key stakeholders.
- Involvement of Songthaew owners to propose their own ideas for future development contributed to effective implementation of the project. Strong participation of the citizens in area design also makes a sense of belonging of the citizens.

3) Tessaban Mueang Krabi

The JICA pilot project in Tessaban Mueang Krabi is the project on improving the entrance area of the Andaman Cultural Center, design and construction of local beverage and sweets shop, and marketing and public relations promotion.

The overall condition of the pilot project is good. The Tessaban regularly checks for damages and errors in its function. The budget for the project's operation and maintenance is also considered to improve the service at the Andaman Cultural Center.

After the improvement of the Andaman Cultural Center, including the Beads Museum and construction of local beverage shop, the number of visitors significantly increased. Most of them visited the Center as a study tour to learn about the art and culture of Krabi. there were about 300 visitors per day.

However, COVID-19 has highly impacted the center. The prevention measure of COVID-19 caused the temporary closure of the center periodically as travelling had been restricted. Even though the museum, art exhibition, and the other activities in the center were reopened under the COVID-19 measures, the number of visitors had not reached the expected number.

The results of pilot project implementation including planning stage provided benefits in various aspects, particularly the participatory processes. Sustainable development must be created from a collaboration among potential stakeholders and active community. Tessaban Mueang Krabi has adopted the learning obtained during pilot project implementation for their other projects requiring collaboration with the local community. The long-term outcome will provide sustainable tourism through CBT that was formulated from public participation. The key outcomes can be summarized, as follows:

- Local beverage shop directly provides job opportunities to the local people.
- The Andaman Cultural Center attracts a greater number of visitors. The more visitors in Krabi city, the higher income the city can generate.
- Through co-creation workshops and participatory planning, the Tessaban developed a plan on improving the Andaman Cultural Center as a symbol of Krabi, and in doing so has fostered a sense of ownership among various stakeholders.

- To use the built/ renovated structures, especially the local beverage shop, in promoting CBT effectively and sustainably, an operations and management system (OMS) was established involving the communities, public and private tourism-related organizations, and academia. The OMS has led to the effective use of local resources and has contributed to sustainable and responsible tourism in Krabi.

4) Tessaban Mueang Nan

JICA's pilot project, "Experience Nan-the Living Old Town along the bicycle route," consists of three (3) cross-cutting components which are: (i) Long Nan Information Center, (ii) Lighting for Temples and Archeological Sites Projects, and (iii) Solid Waste Management.

The pilot projects provided positive outcome for Tessaban Mueang Nan, local people, and tourists in many aspects. The Long Nan Center and the lighting project supported the city in term of tourism and cultural promotion in Nan toward Nan's way, whereas the solid waste management project provided direct benefits to the local people and communities. It clearly shows the high level of public participation since the local people were the ones who drove the project together with Tessaban Mueang Nan. The key outcomes of the pilot project can be summarized as follows:

- By taking advantage of Nan's geographical characteristics (i.e., flat and small area) and its unique culture and history, Tessaban Mueang Nan has promoted bicycle tourism revolving around the Long Nan Center. This benefits not only the environment and public health, but also the local economy. It has also engendered a sense of ownership among the people and pride in their culture and heritage. Cycle tourism has also demonstrated the allure of an unhurried way of life in Nan.
- All preparatory activities from conceptual stage were jointly done by the Tessaban, communities, NGOs, academe, business communities, and provincial departments such as Fine Arts Department, Nan Provincial Cultural Office and Tourism Authority of Thailand. Thereby, it fostered a shared learning of the importance of local culture and heritage and nurtured a sense of ownership and collaboration among stakeholders.
- Night-time tourism is now being promoted as a new type of tourism product in Nan to highlight the town's unique architectural heritage. Improving streetlights, opening beverage and souvenir shops, providing transportation services (bicycle, tram, walking path, etc.), and training bilingual guides for night-time tours are being studied.
- Since Tessaban conducted awareness-raising activities in communities and markets regarding solid waste management from sources to disposal sites, pilot project activities such as selling recyclables, have been sustained, resulting in a cleaner environment.

5) Tessaban Mueang Phanat Nikhom

Due to the increasing number of the elderly in the city and the people's desire to have a public space for various activities, Tessaban Mueang Phanat Nikhom renovated the public park in Sub-community 9 with universal design concept. The renovation of the public park at Sub-Community 9 was financed by two sources, namely tessaban budget and JICA budget. The renovation of basic infrastructure was undertaken by the municipality, while

the design and introduction of universal design were done by JICA.

Workshops on universal design were organized to raise the awareness and promote the understanding of the concept and principles of universal design among the public and municipal staff and for them to apply this knowledge in developing their city.

The Tessaban and the surrounding communities, i.e., community 9, 4, and 5, are responsible for maintaining the renovated park in good condition. All installed equipment is also well-maintained. The Tessaban is in charge of the maintenance and repair of the construction, as well as replacement of equipment. Meanwhile, the communities take responsibility for the cleanliness of the park.

Besides the renovation, a universal design guideline was also prepared for Tessaban Mueang Phanat Nikhom. Standards of universal design, such as ramps for wheelchairs, handrails, and symbols, were compiled into a "Universal Design Guideline" document for application in other parks and public facilities in Phanat Nikhom.

The Tessaban has used this guideline to improve public facilities, construction, and other projects. The guideline is very useful for the Tessaban to enhance the capacity and understanding of the Tessaban and its citizens about the universal design concept. In the end, the Tessaban can improve the quality of all citizens' life and its environment efficiently.

- The concept of universal design is to provide access to all park users. For instance, handrails were installed in many areas in the park for the elderly and persons with disabilities (PWDs), while park benches are available for people to relax in or meet others.
- The park also has a sandbox for children and a multipurpose plaza to encourage intergenerational interaction.
- While it is important to apply universal design principles in designing park facilities and in choosing equipment, it is also vital to promote its understanding by the public and municipal staff through actual experience.

6) Tessaban Nakhon Phitsanulok

To materialize the 10-year Strategy for Sustainable Ageing Society, Phra-Ong-Khao Community was selected as the target area for the JICA pilot project. The JICA pilot project comprises three (3) components, i.e., peopleware, hardware, and software development. It introduced new systems and new development perspective to support the Tessaban in pursuing a sustainable ageing society.

Tessaban Nakhon Phitsanulok has disseminated the project outputs to other areas and has been updated or adapted them into the current context. The capacity of the Tessaban has been strengthened. In other words, the pilot project jump-started the elderly care project in Tessaban Nakhon Phitsanulok. In addition, the pilot project is continually monitored to respond to the needs of citizens and users in all aspects. The equipment from JICA were installed in the Phra Ong Khao Community Health Center and they have been maintained in good condition. The Tessaban has checked them quarterly.

The key outcomes of the pilot project are listed below.

- Based on the outcomes gained from the implementation of 10-year strategy, Tessaban Nakhon Phitsanulok sets long-term vision to address the progressive aging of the society which consists of three aspects, i.e., hardware development (age-friendly facilities), software development (accumulation of accurate data), and peopleware development (human resources for supporting a sustainable aging society). Such comprehensive measures are necessary to develop a sustainable aging society.
- To address the issue of an aging society sustainably, capacity development for people who support the elderly was placed at the core of the initial action to realize the 10-year strategy.

5.3.4 Lessons Learned from SFCI

Monitoring activities revealed that all of tessabans have learned a lot of lessons through SFCI activities and utilized them to implement SFC Projects continuously toward sustainable development of each city. Key lessons learned from SFCI can be summarized as below;

Sustainability through participatory approach: All of tessabans applied participatory approach in the SFCI process, which involve various stakeholders from the planning to the implementation of pilot project. Many tessabans realized that such participatory approach has gained trust and reliability among local stakeholders and thus contributed sustainable implementation of SFC Projects and effective O&M of the completed projects.

Tessaban's strong commitment on SFC Projects: Through monitoring activities, it was found that all tessabans have continued to implement the SFC Projects, with strong commitment of Mayor. At each stage of the SFCI planning process, the commitment of the Mayor was confirmed. This has contributed greatly to continuity of the SFC Projects.

Lessons from Japanese Cities: Many tessabans got inspired by experiences of Japanese Cities, through Study Tour in Japan or advice from JICA Project Team, particularly for newly emerging issues in Thailand, such as aged society, universal design, multi-generational interaction, etc. Such lessons have been integrated them into SFC Projects, particularly for pilot project activities.

Partnership among relevant organizations: All tessabans found partnership or networking with relevant organizations as key of success. Participatory process and collaborative approach under SFCI have greatly contributed to enhance tessaban's partnership with local stakeholders, including private sector, key provincial department, civil society, and surrounding tessabans.

Capacity development of tessaban: One of the most fundamental factors for sustainable development is capacity of tessaban's staff. The SFCI model city projects have emphasized that the tessaban's SFCI Team should take the lead to prepare SFC Plan and Project. Moreover, SFCI planning process, including PT meeting, community workshop and learning workshop for tessaban, have greatly contributed to enhance tessaban's capacity.

6. Activities and Projects following SFCI

6.1 SFCI Platform Establishment

SFCI Platform aims not only to disseminate lessons from SFC model cities but also promote coordination among them. The platform will be composed of national government agencies, including NESDC, DLA, and other relevant departments and SFCI/LSFC model cities. The expected outputs of the SFCI Platform are as follows:

- Understanding from the national government of the actual situation and needs of local cities and stakeholders
- Local government can directly contact national departments to get technical/institutional support as well as to understand their policies for local development
- Direct communication among local governments and learn lessons from each other.

In this context, several types of activities and mechanisms have been organized in the TFCP.

6.1.1 Periodical Plenary Workshop

The Plenary Workshop has been organized periodically under the TFCP, and participants include JCC departments and other relevant agencies, model cities, and the private sector. It provides opportunities for model cities to learn from other cities about their experience in certain issues and key success and challenges toward sustainable future city development.

During the TFCP, a total of five plenary workshops were organized, including those in the first phase. The first phase model cities also attended the plenary workshops of the second phase to present the progress of their SFC Plans and Projects and lessons learned. The last workshop was organized online in July 2021, where all model cities participated (six from the first phase, two from the second phase), as well as and Tessaban Mueang Sukhothaithani, one of the two LSFC model cities, and representatives of JCC departments. JICA recommended continuously organizing a plenary workshop to share experiences and maintain the networking among tessabans and between national departments and tessabans, which was agreed upon by most of the participants.

Below is a summary of some of the key agendas of the plenary workshop.

- Presentations from model cities on significant success and challenges during SFCI
- Group discussions on the key issues of local cities, such as preparation for an aging society, urban transportation, and tourism development
- Comments to/from cities that have similar developing agenda
- Introduction of development initiatives from the national department

6.1.2 SFCI Portal Site


The SFCI Portal Site has been developed to disseminate the SFCI concept and implementation framework and share lessons learned from the SFC model cities. JICA Project Team collaborated with IT-team of NESDC and UDSD members to develop the contents of the portal site and prepared necessary code of the website, which is available under NESDC's intranet. A manual to use the portal site was also prepared in order for NESDC UDSD members to further update the contents in future. It is expected to open under the website of NESDC, once the UDSD page is completed.

The overall structure of the SFCI Portal is as follows.

<p>NESDC top page</p> <p> -- Urban Development Strategy Division (UDSD)</p> <p> -- Sustainable Future City Initiative (SFCI) Portal</p> <p> -- page 1: Introduction of SFCI</p> <p> -- page 2: Output of the first 6 cities</p> <p> -- page 3: Key lessons of SFCI</p> <p> -- page 4: Lessons from Japanese Cities</p> <p> -- page 5: Guideline & Other Technical Tools</p>
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The contents of each page are summarized in Table 6.1.1.

Table 6.1.1 Contents of the SFCI Portal Site

Page	Contents	
Page 1: Home page: Introduction of SFCI	<ul style="list-style-type: none"> • Introduction of SFCI (Infographic & Brochure) • History of SFCI (background, implementation schedule) • Concept of SFCI • SFCI Activities under JICA Project 	
Page 2 Model Cities	<ul style="list-style-type: none"> • Outputs of Phase 1 model cities (SFC Plan and Projects, brochure) 	
Page 3 Key Lessons of SFCI	<ul style="list-style-type: none"> • Project sheets: Lessons learned from SFCI cities 	
Page 4 Lessons from Japan	<ul style="list-style-type: none"> • Project sheets: Lessons learned from Japanese Cities 	
Page 5 Planning tools	<ul style="list-style-type: none"> • SFCI Guideline • Other tools 	

Lessons learned from SFCI model cities cover key development issues of local cities of Thailand, which can be applied to other tressabans in future. It includes preparation for ageing society, community-based tourism promotion, public transport development, and public space improvement, as below.



- Lifelong Learning for the Elderly: U3A, in Tessaban Nakhon Chiang Rai
- Creation of Space for Students to Learn from/with the Local Community in Tessaban Nakhon Chiang Rai
- Eco-Tourism and Community-based Tourism in Doi Saken in Tessaban Nakhon Chiang Rai
- Public Transportation Promotion through Public-Private Partnership in Tessaban Nakhon Khon Kaen
- Public Space Improvement for Better Recreational Experiences and Healthy Living in Tessaban Mueang Chumphon
- Promotion of Cultural Tourism along Bicycle Routes in Tessaban Mueang Nan
- Detailed Design of a Lighting System to Promote Night-time Cultural Tourism in Nan Old Town in Tessaban Mueang Nan
- Comprehensive Solid Waste Management Program in Tessaban Mueang Nan
- Enhanced Promotion of the Andaman Culture in Tessaban Mueang Krabi
- Health Park Renovation with Walkable City Network in Tessaban Mueang Ranong
- Public Park Renovation Using Universal Design Principles in Tessaban Mueang Phanat Nikhom
- Preparation for a Sustainable Aging Society in Tessaban Nakhon Phitsanulok

Some of project sheets are shown from Figure 6.1.1 to Figure 6.1.8.

Project Title	Lifelong Learning for the Elderly: University of Third Age (U3A)		
Name of City	Tessaban Nakhon Chiang Rai (Chiang Rai City Municipality)		
Basic Information	Duration	2017-2018	Relevance to SFC Vision
	Budget	THB 1,091,000 (for 3 courses equipment and operation)	
	Implementation Body	<ul style="list-style-type: none"> Tessaban: Construction of U3A. Tessaban (with support from JICA): Development of 8 courses and curriculum U3A Committee (Tessaban staff and community): Operation of U3A 	
Project Outline	To provide lifelong learning for the elderly and opportunities for them to interact with young people, Tessaban Nakhon Chiang Rai established University of Third Age (U3A) and designed appropriate activities.		
Contents of Project	<ul style="list-style-type: none"> Active Learning Courses for the Elderly in U3A The following 8 courses and their curriculums were developed based on the elderly's needs. 1) Religion 2) Culture (Northern Music) 3) Environment 4) Tourism 5) Health 6) Economic 7) Technology and Communication 8) Social and Happiness (Social Behavior and Dance) Joint Activities among the Elderly and the Youth Activities that encourage the elderly to transfer their knowledge of local culture and tradition gained from active learning courses in U3A to the students of municipal schools were designed and are being conducted. e.g., Activities that allow the elderly to teach students how to create local products 		 Social & Happiness Course  Technology & Communication Course
	Useful Lessons	<ul style="list-style-type: none"> Based on local or the elderly's needs grasped through study and workshops, the courses and curriculums at U3A which meet actual needs and are appropriate for their age and physical abilities were developed. This has attracted many elderly people in the city and has contributed to the happiness and health of the elderly after retirement. Access to the school (e.g., school bus) and ease of using the facility (e.g., barrier-free toilets, large rooms) by the elderly should be of paramount consideration. Through activities where the elderly and the youth in the community learn from and interact with each other, local tradition and culture can be passed on to the next generations and social connection among generations is nurtured. 	

Source: JICA Project Team

Figure 6.1.1 Image of Project Sheets - Lessons from SFCI Model Cities (Chiang Rai)

Project Title	Public Transportation Promotion through Public-Private Partnership		
Name of City	Tessaban Nakhon Khon Kaen (Khon Kaen City Municipality)		
Basic Information	Duration	2017-2018	Relevance to SFC Vision
	Budget	THB 2,980,500	
	Implementation Body	<ul style="list-style-type: none"> Tessaban (with support from JICA) 	
Project Outline	To improve the local economy, quality of life, and the environment while enhancing the city's potential to serve as a regional transportation hub, Tessaban Nakhon Khon Kaen promoted public transportation use among its citizens mainly focusing on the songtaew through public-private partnership .		
Contents of Project	<ul style="list-style-type: none"> Development of a Transit Database in Khon Kaen City To understand the actual public transportation situation of the songtaew and to help improve public transportation services, data and information on the songtaew were collected and integrated into a GIS database. Place Making of Key Transit Points <ul style="list-style-type: none"> Ten (10) sites around the city were designated as important transit points for public transportation, for which designs were prepared based on the results of a workshop among various stakeholders such as provincial organizations, chambers of commerce, Khon Kaen Think Tank, and public transportation operators. The designs will be proposed for future implementation. In a series of workshops, 30 volunteer campaigners proposed solutions to promote public transportation and tested them in the field. Promotional Design for Public Transportation To create an identity for the songtaew and buses, the following promotional items were created: <ul style="list-style-type: none"> (i) Logo and key visual for a "smart songtaew" (ii) Transit map and online media (iii) Information designs: Transit map, signage for the songtaew, bus signage template, mock-up of a bus stop (iv) Interior and exterior designs of a songtaew 		 Design of Place Making  Smart Songtaew Logo
	Useful Lessons	<ul style="list-style-type: none"> Promoting public transportation use by starting with the songtaew, which is the main mode in the city and the one which the citizens are most familiar with, it was assumed that the people would readily cooperate in using public transportation more frequently. The 3 components mentioned above covered not only songtaew but other modes, such as buses, to develop a comprehensive transportation system by matching demand for and supply of various public transportation modes. In the initial stage of the project, the Smart Mobility Committee was established. Comprising representatives from the public and private sector, as well as the academe, the partnership helped in project implementation by fostering collaboration among key stakeholders. 	


Source: JICA Project Team

Figure 6.1.2 Image of Project Sheets - Lessons from SFCI Model Cities (Khon Kaen)

Project Title	Enhanced Promotion of the Andaman Culture		
Name of City	Tessaban Mueang Krabi (Krabi Town Municipality)		Relevance to SFC Vision <ul style="list-style-type: none"> ● Self-sustaining competitive city ● Attractive and distinctive identity ● Eco-friendly and resilient city ● Safe, secure, and inclusive city ● Civic pride for future generations
Basic Information	Duration	2017-2018	
	Budget	THB3,450,000	
Basic Information	Implementation Body	<ul style="list-style-type: none"> • Tessaban (with support from JICA) and 14 communities in Tessaban Mueang Krabi (as a proprietor of a local beverage shop which is expected to serve as hub for community-based tourism (CBT)) 	Collaboration with Other Organizations <ul style="list-style-type: none"> • Perfect Link Consulting Group: Overall coordination and consultation including marketing, PR, and operation & management system. • Tourism Authority of Thailand (TAT): Advisor on promoting demand-side of the tourism industry. • Krabi Chamber of Commerce, Krabi Hotel Association, Krabi Tourism Business Association: Advisors on enhancing supply-side of the tourism industry.
	Project Outline	Tessaban Mueang Krabi is strongly imbued with Andaman Culture, making the town unique in Thailand. To use this distinct identity in establishing sustainable tourism, Tessaban Mueang Krabi renovated the entrance areas of the Andaman Cultural Center, established a local beverage shop, and conducted participatory marketing and public relations (PR) activities through co-creation workshops.	
Contents of Project	<ul style="list-style-type: none"> ● Design & Build Project: Andaman Cultural Center and Local Beverage Shop <ul style="list-style-type: none"> • The entrance areas of the Andaman Cultural Center covering the entrance gate, parking areas, and pedestrian walkway, were renovated to enhance its physical appearance and showcase the town's cultural identity. A detailed design improvement plan was also prepared for other areas based on the Andaman Cultural Center Master Plan, which was formulated through participatory planning. • Local Beverage Shop, which was established to promote local products, is expected to become the hub for CBT and a PR platform for local communities. ● Marketing & PR Development of a Unique Selling Point (USP): <ul style="list-style-type: none"> • Items being sold at the local beverage shop, such as grilled sweet corn unique to Krabi, were designed by the local communities and integrated as the shop's brand and promotion of CBT. • A logo for "Krabi Link" was designed as the symbol or brand representing the uniqueness of Krabi. 		
	Hosting an Event at the Center to Introduce Andaman Culture, Arts, and CBT: <ul style="list-style-type: none"> • The ceremony to mark the reopening of the Center after its renovation revolved around the concept of "together is better" 		
Useful Lessons	<ul style="list-style-type: none"> ● Through co-creation workshops and participatory planning, the tessaban developed the plan on improving the Andaman Cultural Center as a symbol of Krabi, and in so doing has fostered a sense of ownership among various stakeholders. ● To use the built/ renovated structures, especially the local beverage shop, in promoting CBT effectively and sustainably, an operations management system (OMS) was established involving the communities, public and private tourism-related organizations, and academia. The OMS has led to the effective use of local resources and has contributed to sustainable and responsible tourism in Krabi. 		





Source: JICA Project Team

Figure 6.1.3 Image of Project Sheets - Lessons from SFCI Model Cities (Krabi)

Project Title	Promotion of Cultural Tourism along Bicycle Routes		
Name of City	Tessaban Mueang Nan (Nan Town Municipality)		Relevance to SFC Vision <ul style="list-style-type: none"> ● Self-sustaining competitive city ● Attractive and distinctive identity ● Eco-friendly and resilient city ● Safe, secure, and inclusive city ● Civic pride for future generations
Basic Information	Duration	2017-2018	
	Budget	Refurbishment (includes setting up the exhibition): THB 875,300; PR: THB 458,000	
Basic Information	Implementation Body	<ul style="list-style-type: none"> • Chiang Mai University: Design & Supervision of the Long Nan Center **Chiang Mai University was also the advisor for community-based cultural tourism • Tessaban (with support from JICA): Refurbishment, exhibition setup, management, and PR 	Collaboration with other organizations <ul style="list-style-type: none"> • Pre-research: TRF & Chiang Mai University • Exhibition in Long Nan Center: Chiang Mai University and Chulalongkorn University • Operation: DASTA, Nan Cultural Office, Nan Old Town Conservation Committee, Nan Tourism Business Association, Nan Scholars, Nan Bicycle Club • Bicycle service: Jampewinidaporn School, DASTA, and Nan Tourism Business Association
	Project Outline	To promote cultural tourism using bicycles, Tessaban Mueang Nan established a tourism information center called Long Nan Center and identified bicycle routes to reach cultural and historical sites.	
Contents of Project	<ul style="list-style-type: none"> ● Establishment of Long Nan Center <ul style="list-style-type: none"> • A building in the municipal school grounds was converted into a tourism information center called "Long Nan Center" to serve as the center for cycle tourism and for learning local culture and heritage. • Exhibitions showcasing the town's history, culture, and traditions are laid out in various forms, such as maps (ancient, aerial), models (traditional houses and wooden Buddha carvings), and video documentaries. Lighting displays of temples and historical sites are also exhibited to encourage night-time visitors. • The Long Nan Center provides bicycle route maps and rents out bicycles. ● Identification of Bicycle Routes to experience Nan, the Living Old Town <ul style="list-style-type: none"> • Four (4) cycling routes were identified by local scholars and a research team. • Cycling maps were prepared in Thai and English to introduce Nan's culture and heritage. • Ten (10) video documentaries on Nan's culture and tradition were produced with their own QR codes. The codes are engraved on plates installed in various locations around the town. 		
			
Useful Lessons	<ul style="list-style-type: none"> ● By taking advantage of Nan's geographical characteristics (i.e., flat and small area) and its unique culture and history, Tessaban Mueang Nan has promoted bicycle tourism revolving around the Long Nan Center. This benefits not only the environment and public health, but also the local economy. It has also engendered a sense of ownership among the people and pride in their culture and heritage. Cycle tourism has also demonstrated the allure of an unhurried way of life in Nan. ● All preparatory activities were jointly done by tessaban, communities, NGOs, academe, and business communities, thereby fostering a shared learning of the importance of local culture and heritage. 		



Source: JICA Project Team

Figure 6.1.4 Image of Project Sheets - Lessons from SFCI Model Cities (Nan)

Project Title	Public Park Renovation Using Universal Design Principles		
Name of City	Tessaban Mueang Phanat Nikhom (Phanat Nikhom Town Municipality)		<ul style="list-style-type: none"> ● Self-sustaining competitive city ● Attractive and distinctive identity ● Eco-friendly and resilient city ● Safe, secure, and inclusive city ● Civic pride for future generations
Basic Information	Duration	2017–2018 (Construction period: 3 months)	
	Budget	THB 4.56 million (THB 2.25 million from Tessaban)	
	Implementation Body	<ul style="list-style-type: none"> • Tessaban: Foundation construction • Tessaban (with support from JICA) : Design & Introduction of Universal Design 	
Project Outline	Due to the increasing number of the elderly in the city and the people's desire to have a public space for various activities, Tessaban Mueang Phanat Nikhom renovated the public park in Sub-community 9 by applying the principles of universal design to accommodate people regardless of age and ability.		
Contents of Project	<ul style="list-style-type: none"> ● Renovation of Public Park in Sub-community 9 <ul style="list-style-type: none"> - Renovation: After demolishing the existing structures in the park, the following were installed: pavement with braille blocks, slopes with handrails, benches, signage, and other universal design playground equipment. - Workshop on Universal Design: A series of workshops were organized to raise the awareness and promote the understanding of the concept and principles of universal design among the public and municipal staff and for them to apply this knowledge in developing their city. - Maintenance: Relevant sub-communities will be responsible for maintaining the renovated park in good condition. ● Universal Design Guideline <ul style="list-style-type: none"> Standards of universal design, such as ramps for wheelchairs, handrails, and symbols, were compiled in to a "Universal Design Guideline" document for application in other parks and public facilities in Phanat Nikhom. 		
	   		
Useful Lessons	<ul style="list-style-type: none"> ● The concept of universal design provides access to all park users. For instance, handrails are installed in many areas in the park for the elderly and the physically challenged, while park benches are available for people to relax in or meet others. ● The park also has a sandbox for children and a multipurpose plaza to encourage intergenerational interaction. ● While it is important to apply universal design principles in designing park facilities and in choosing equipment, it is also vital to promote its understanding by the public and municipal staff through actual experience. 		


Source: JICA Project Team

Figure 6.1.5 Image of Project Sheets - Lessons from SFCI Model Cities (Phanat Nikhom)

Project Title	Preparation for a Sustainable Aging Society		
Name of City	Tessaban Nakhon Phitsanulok (Phitsanulok City Municipality)		<ul style="list-style-type: none"> ● Self-sustaining competitive city ● Attractive and distinctive identity ● Eco-friendly and resilient city ● Safe, secure, and inclusive city ● Civic pride for future generations
Basic Information	Duration	2017–2018	
	Budget	THB 2,983,000	
	Implementation Body	<ul style="list-style-type: none"> • Tessaban (with support from JICA) 	
Project Outline	To address depopulation and an aging society, Tessaban Nakhon Phitsanulok developed the 10-year Strategy for Sustainable Aging Society to improve the quality of life of its elderly and which has three components, i.e., peopleware, hardware, and software development .		
Contents of Project	<ul style="list-style-type: none"> ● Peopleware Development: Capacity Development for Municipal Staff and the Community <ul style="list-style-type: none"> - Target 1 (Municipal Staff): Capacity building through the process of developing the 10-year strategy and includes team building workshops, design activities, and project assessment. - Target 2 (Community Leaders & Elderly Groups in the Pilot Community): (i) Training of leaders of elderly groups and volunteers for elderly care, (ii) workshops and other activities for elderly people in the community such as creating life plans, promoting health, transferring Thai traditions to young people, and learning computer skills. ● Hardware Development: Introduction of Universal Design to Facilities <ul style="list-style-type: none"> - Model for Elderly Housing: A model elderly house using universal design principles was developed as an example for the elderly who will renovate their houses. - Manual on Elderly Housing: This manual aims to deepen the understanding of developing and operating facilities for elderly people. ● Software Development: Integrated Health Care Database System <ul style="list-style-type: none"> - A database system on elderly health care was developed to help provide the elderly with a better quality of life. The database provides information on physical and mental health, social and intellectual ability of the elderly in the community, as well as their environmental and economic conditions. - A trial collection of data was done in the pilot community, and the collected data was stored in the database. - In this database, users can search for data and add/delete information by application. 		
	 		
Useful Lessons	<ul style="list-style-type: none"> ● Tessaban Nakhon Phitsanulok's long-term vision to address the progressive aging of the society has three aspects: i.e., hardware development (age-friendly facilities), software development (accumulation of accurate data), and peopleware development (human resources for supporting a sustainable aging society). Such comprehensive measures are necessary to develop a sustainable aging society. ● To address the issue of an aging society sustainably, capacity development for people who support the elderly was placed at the core of the 		



Source: JICA Project Team

Figure 6.1.6 Image of Project Sheets - Lessons from SFCI Model Cities (Phitsanulok)

Project Title	Public Space Improvement for Better Recreational Experiences and Healthy Living		
Name of City	Tessaban Mueang Chumphon (Chumphon town Municipality)		
Basic Information	Duration	2020-2021 (Construction period: 2 months)	Relevance to SFC Vision
	Budget	THB 1.04 million (construction)	
	Implementation Body	Tessaban (with support from JICA): Design & Construction	
Project Outline	Tessaban Mueang Chumphon has a goal to be a livable city, happy society, and good quality of life. To enhance the quality of people's life, the Tessaban prepared the master plan of Parks and Sport Facilities Improvement which are divided into 14 zones to be developed. Out of these 14 zones, the Tessaban improved Zone D: Banyan tree area aiming for developing as a recreation and event spot, and Zone H: Playground to serve for every age group of children.		
Contents of Project	Improvement of Zone D: Banyan tree area - Design & Construction <ul style="list-style-type: none"> The stage surrounding Banyan tree was constructed in consideration of universal design. It is expected to be a new landmark of the city and an event area of the province. The planting pots around the stage were prepared for Tessaban to plant the local herb. This area is also expected to be an herb learning center of the Tessaban. Lighting and swallow statues are suggested to be installed for the decoration during events. 		 
	Improvement of Zone H: Playground - Preparation of Detailed Design <ul style="list-style-type: none"> The playground was designed dividing into 3 main spaces based on the suitability of each age group of children. <ol style="list-style-type: none"> (1) Common space – a semi-public area which is appropriate for all ages. This space links activities of users between the park and provincial stadium. (2) Active space – a space supporting fast movement activities like running, jumping, and climbing which is good for children's physical and emotional development. (3) Passive space – a space for low movement activities that suits for young-age children to promote the social interaction, social gathering, and learning with environment. 		
Useful Lessons	<ul style="list-style-type: none"> The uniqueness of the city (Banyan tree) has been highlighted and presented to both citizens and outsiders. The local resources have also been promoted and supported by the collaboration with multisectoral agencies. In the course of preparing the master plan, demands of citizens were reflected into the public park improvement for better quality of life. In particular, the multifunctional space serves all demands of every age groups. By creating appropriate spaces for events and promoting it, the Tessaban gains more opportunities to collaborate with private sector. 		

Source: JICA Project Team

Figure 6.1.7 Image of Project Sheets - Lessons from SFCI Model Cities (Chumphon)

Project Title	Health Park Renovation with Walkable City Network		
Name of City	Tessaban Mueang Ranong (Ranong Town Municipality)		
Basic Information	Duration	2020-2021 (Construction period: 2 months)	Relevance to SFC Vision
	Budget	THB 1.4 million (construction)	
	Implementation Body	Tessaban (with support from JICA): Design & Construction	
Project Outline	Tessaban Mueang Ranong aims to develop the city toward health tourism along with city's well-being on a basis of richness of natural resources especially mangrove and hot spring. The concept of 'walkability' was applied in order to promote not only people's health through walking but also city's well-being via public space development. The master plan for Kamlang Sap Road area improvement was prepared targeting to connect walkway, enhance public transportation, create activities along the walkway, create public spaces and create landmark of the city.		
Contents of Project	Improvement of the Area in front of Ranong Hospital To increase walkability of the area in front of Ranong Hospital, one of the city centers, the following items were improved: <ul style="list-style-type: none"> Pedestrian crossing was improved by painting and installing braille blocks and reflective sticker for clearer visibility and safety Street vendors were organized while the wooden pallet seats and trash bins were also placed in the area Public transportation stop point were re-painted. The lighting system and solar panel were installed for providing safety at night. The stop sign with reflective sticker was installed.  <ul style="list-style-type: none"> Temporary parking zone was painted on the street for separating the parking 		Improvement of Pho Ta Khing's Shrine The space and walkability of Pho Ts Khing's Shrine, which is a gathering place for local people and connects with surrounding walkways was improved. <ul style="list-style-type: none"> Walkway was painted as a play spot to promote physical activities for pedestrians. In addition, the moveable giant chess was placed in the Shrine's area to create interaction between street furniture and people while walking. Public space, the shrine and the landscape were improved by repainting, repaving, and installing lighting and furniture such as benches and stair seating pads for recreation and relaxation. 
	Useful Lessons <ul style="list-style-type: none"> By creating walkable city, the city has gained not only social benefits such as improvement people's health and livability, but also economic and environmental benefits. Painting of streets not only makes the city more attractive but also creates the road safety and beautiful streetscape. Involvement of stakeholders into planning, designing and public space management facilitates harmonization of their interests to develop the city. Also, the sense of belonging was created from the community involvement. The communities offer to take care of the project site. 		

Source: JICA Project Team




Figure 6.1.8 Image of Project Sheets - Lessons from SFCI Model Cities (Ranong)

Good practice toward sustainable urban development in Japanese cities are also introduced in the SFCI Portal Site as lessons learned from Japanese Cities. It covers economic, social, environmental sector and infrastructure management as shown in Table 6.1.2, of which some examples are shown from Figure 6.1.9 to Figure 6.1.12.

Table 6.1.2 List of Good Practice of Japanese Cities

	City	Title
Self-sustaining competitive city		
1	Ozu city	Revitalization of the Downtown by Town Management Organization (TMO)
2	Kaneyama town	Traditional Housing and Industrial Development
3	Tokushima city	City Development utilizing the river - Shinmachi Boardwalk and Parasol Shops
4	Hikone city	Urban Tourism Boosted by the Dynamic Change of the Streetscape
5	Taketa city	Health Tourism with Hot Springs
Attractive and distinctive identity		
1	Kamiyama town	From "Artist in Residence" to "Work in Residence"
2	Tsuruoka city	UNESCO Creative City of Gastronomy
3	Kawagoe city	Historical City Development
Eco-friendly and resilient city		
1	Itabashi ward	Town Greening by Collaborating with Communities
2	Mishima city	Restoration of Natural Environment – The Mishima Ground Work
3	Toyooka city	Revitalize Natural Environment and Local Economy through Symbiosis with Oriental white Storks
4	Toyama city	Compact City Development centering on Public Transport
5	Osaki Town	Recycle of Waste Materials in Osaki Town
6	Miyama City	Local Energy Corporation – Miyama Smart Energy
7	Ichinoseki City	Disaster Mitigation by the Nakasato Council of Town Development
Safe, secure, and inclusive city		
1	Kanazawa city	"Share Kanazawa" – Community Town where People Live Actively throughout Their Lives
2	Silver Resource Center	Silver Resource Center/ Elderly Resource Center
3	Tokorozawa city	Barrier Free Project in Tokorozawa City
4	Sizu City	Project for Supporting Bus Operation by Citizens
Civic pride for future generations		
1	Mitsuke city	Smart Wellness City: City Development with the Theme of Healthy Long Life
2	Kusatsu city	Community Education in Kusatsu City
3	Kakegawa City	Land Use Control by Communities

Source: JICA Project Team

Project Title	Traditional Housing and Industrial Development	
Name of City	Kaneyama Town, Yamagata Prefecture (Population: 5,325 (2020), Area: 161.66 km²)	Relevance to SFC Vision <ul style="list-style-type: none"> ● Self-sustaining competitive city ● Attractive and distinctive identity ● Eco-friendly and resilient city ● Safe, secure, and inclusive city ● Civic pride for future generations
Outline/ Background	<p>Kaneyama Town is famous for cedar, frequently used for building houses in the area. However, with the increasing construction of modern prefabricated houses, traditional houses built with cedar have declined. Accordingly, the forestry industry and the local carpentry and lumber industry started to lessen. To address this situation, Kaneyama Town has promoted its forestry industry and secured job opportunities and income for carpenters through revitalizing traditional housing.</p>	
Contents	<ul style="list-style-type: none"> ● Subsidy for "Kaneyama Housing" Toward the preservation and inheritance of the distinctive local townscape, Kaneyama Town subsidizes up to 500,000 JPY for citizens to build or reform houses, conforming with the guidelines for the traditional houses, "Kaneyama Housing." Currently, 34% of the housing is in Kaneyama style. ● Use woods for Public Facilities Apart from housing, the town has utilized wood as much as possible, including but not limited to renewing bridges from steel to wood, paving pedestrian roads with wood tips, and introducing bio-energy. <p>→ Increasing traditional housing contributes to protecting and revitalizing local industry and preserving townscape.</p> <p>→ Beautiful townscape attracts many tourists. The increase of tourists developed a new tourism industry, which created job opportunities for the citizens.</p>	  
Useful Lessons	<ul style="list-style-type: none"> ● Through the "citywide beautification campaign," bringing awareness to citizens on the townscape and promoting the construction of Kaneyama housing by introducing subsidy, the Kaneyama Town have advocated town development that would benefit both citizens' lives and good townscape. By building houses and developing a townscape based on local standards, a beautiful townscape harmonized with a comfortable life for the citizens are achievable. ● Subsidy became an incentive to encourage private companies to invest in building houses. This kind of financial support can boost local economy. ● The Chamber of Commerce organizes a "Kaneyama Housing Contest" to propagate Kaneyama Housing and improve carpentry skills. The contest aims to establish a suitable housing style for the town and contribute to human resource development for town development. 	

Source: https://www.town.kaneyama.yamagata.jp/machinami_koryu/machinamizukuri100nenundo/1582.html, <https://www.reinet.or.jp/pdf/chihousesei/report/No04-2015Mar.pdf> edited by JICA Project Team

Figure 6.1.9 Image of Project Sheets - Lessons from Japan (Kaneyama Town)

Project Title	"Share Kanazawa" – Community Town where People Live Actively throughout Their Lives	
Name of City	Kanazawa City, Ishikawa Prefecture (Population: 451,475 (2020), Area: 469 km²)	Relevance to SFC Vision <ul style="list-style-type: none"> ● Self-sustaining competitive city ● Attractive and distinctive identity ● Eco-friendly and resilient city ● Safe, secure, and inclusive city ● Civic pride for future generations
Outline	<p>The social welfare cooperation "Bussai-En" developed and has operated "Share Kanazawa," where multi-generation and diverse people, including the elderly, people with disabilities, and the younger generation live together. Share Kanazawa is a multifunctional town with various facilities and services, such as a daycare center for the elderly, a residence for students, facilities for people with disabilities, and commercial facilities.</p>	
Characteristic Approach	<ul style="list-style-type: none"> ● For the Elderly: The elderly begins living in dedicated residences while they are still in good health. Besides receiving care and medical services they need, the elderly also have working opportunities, such as in farming, in a restaurant, or as a salesperson. ● For People with Disabilities: Job assistance and residences are provided in Share Kanazawa for people (including children) with disabilities, some of which operate their shop, such as laundry. ● For Students: Students can rent residences at a low price in exchange for volunteer work, such as childcare and designing shop flyers. There are also residences with an atelier for art students. ● For Children: Counseling center for childcare and a place for after-school childcare programs, with various exercise programs and cooking and music activities, are available. <p>→ <u>Diverse people operate the town together as well as interact with each other.</u></p>	
Useful Lessons	<ul style="list-style-type: none"> ● With the key concept of the "town developed by myself," the citizens themselves operate various businesses and the town itself. This "citizens-centered town operation" is a core belief of Share Kanazawa. ● The formulation of Share Kanazawa is by bringing together the factors that constitute a town, such as commercial facilities and residences. Commercial facilities in the town provide work and volunteer opportunities for people with disabilities and elderly people. These facilities are open to the public as well. As a result, it creates opportunities for various people to interact each other. ● A rent discount system is available for students. In exchange for the discount, students engage in volunteer work for 30 hours a month. This system also creates active interaction among citizens. 	

Source: <http://share-knazwa.com/index.html>, <http://www.nexttep-k.com/2017/05/05/4452> edited by JICA Project Team

Figure 6.1.10 Image of Project Sheets - Lessons from Japan (Share Kanazawa)

Project Title	Local Energy Corporation – Miyama Smart Energy																			
Name of City	Miyama City, Fukuoka Prefecture (Population: 37,148 (2020), Area: 105.21 km²)	Relevance to SFC Vision																		
Outline/ Background	To be a smart city, Miyama City aims to improve social infrastructure which drives a change in citizens' lifestyle. One of the cores is the "Miyama Smart Energy Co., Ltd." which was established by the city and a private sector jointly in 2015. Followed by Miyama City, other 26 municipalities have established an energy company until 2018.																			
Characteristic Approach	<ul style="list-style-type: none"> ● Basic Strategy toward Miyama Smart City <ul style="list-style-type: none"> - The city developed "Miyama Model" which combines local electricity business and livelihood support system. To aim not only energy circulation but also strengthening communication with the residents, revenue from electricity business is utilized to provide services for them. - As a part of energy circulation, the city also aims to utilize biomass for power generation by taking advantage of its rich agricultural and fishery industries. In 2016, the city developed a biomass center where collects waste materials used for power generation and fertilizer production. ● Miyama Smart Energy Co., Ltd. The Miyama Smart Energy Co., Ltd. is the first local company where a municipality started wholesaling electricity for households. As of 2017, 270 establishments and 36 public buildings purchased high-voltage power, and 2,700 customers and 1,800 households purchased low-voltage power. <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;"> </div> <div style="text-align: center;"> <table border="1"> <thead> <tr> <th colspan="2">Source of Energy</th> </tr> </thead> <tbody> <tr> <td>Hydropower</td> <td>2%</td> </tr> <tr> <td>Renewable energy</td> <td>2%</td> </tr> <tr> <td>FIT (Feed in Tariff)</td> <td>18%</td> </tr> <tr> <td>Atomic power</td> <td>15%</td> </tr> <tr> <td>Electricity from market</td> <td>30%</td> </tr> <tr> <td>Thermal power of coal</td> <td>13%</td> </tr> <tr> <td>Thermal power of LNG</td> <td>8%</td> </tr> <tr> <td>Others</td> <td>13%</td> </tr> </tbody> </table> </div> <div style="text-align: center;"> </div> </div>		Source of Energy		Hydropower	2%	Renewable energy	2%	FIT (Feed in Tariff)	18%	Atomic power	15%	Electricity from market	30%	Thermal power of coal	13%	Thermal power of LNG	8%	Others	13%
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Others	13%																			
Useful Lessons	<ul style="list-style-type: none"> ● An idle land was utilized to install the Mega Solar Panel. ● The city has addressed global warming in parallel with vitalizing a local economy. The city intended to stop paying for purchasing electricity produced outside the city, and instead, produce an electricity within the city. It will create new business opportunities for the city as well as job opportunities for residents, and the revenue can be used to raise the sustainability of the project and improve civic services. The city utilized a part of revenue to establish a place where residents interact each other, which enhances livability for them. 																			

Source: <http://miyama-se.com>, <http://www.env.go.jp/press/y020-dialogue04/mat03.pdf> edited by JICA Project Team

Figure 6.1.11 Image of Project Sheets - Lessons from Japan (Miyama City)

Project Title	Compact City Development centering on Public Transport	
Name of City	Toyama City, Toyama Prefecture (Population: 414,705 (2020), Area: 1,241.77 km²)	Relevance to SFC Vision
Outline/ Background	Toyama City has low population density and has faced an aging society with a low birth rate. Moreover, with the city's expanding urban areas, it dealt with overdependence on automobiles and a decline in the city center. The city has promoted compact city development to address the issues and enhance livability, focusing on public transportation by revitalizing public transportation and accumulating urban functions, such as residence, commerce, business, and social welfare, at the public transportation network.	
Characteristic Approach	<ul style="list-style-type: none"> ● Revitalization of Public Transport (1): Development of Light Rail Transit (LRT) network <ul style="list-style-type: none"> - The local railway, which had a declining number of passengers, was transformed into an LRT system. It is the first full-scale LRT system in Japan that was public construction and private operations. - Connecting LRT Toyama station and feeder buses improved the convenience of the service. - "Toyama Light Rail," a third sector company, was newly established with an active investment of Toyama City in order to provide stable public transport service. ● Revitalization of Public Transport (2): Circularization of Inner-City Railway "Centram" <ul style="list-style-type: none"> - A part of the inner-city tram network was extended to vitalize the city center and develop a migrational route there. - It also promoted road space development for an attractive cityscape. ● Promotion of living along public transportation network <ul style="list-style-type: none"> - The city has been encouraging people to live in the city center and area at the public transportation network by subsidizing the construction and buying of houses or relocation. <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;"> </div> <div style="text-align: center;"> </div> </div>	
Useful Lessons	<ul style="list-style-type: none"> ● The "dumplings on a stick" represents the concept of the urban structure of Toyama City, composed of a public transport system (stick) and walkable urban centers (dumplings). TOD strategies can achieve a compact city structure, not only by public transportation network development but also improvement of access to stations, vitalization of commercial streets, and promotion of developing the residential area around stations. The development of an attractive cityscape is also one of the key components. ● Together with infrastructure development, Toyama City promotes public transport use among the elderly by introducing a single-price pass usable in the city center. It has increased opportunities for the elderly to go out; thus, changing their lifestyle. 	

Source: <https://www.mlit.go.jp/common/001000821.pdf> edited by JICA Project Team

Figure 6.1.12 Image of Project Sheets - Lessons from Japan (Toyama City)

6.2 Promotion of the Project and the SFCI

6.2.1 SFCI Facebook page

The SFCI Facebook Page opened in 2019 where regular updates project activities were posted, such as the PT meetings and surveys in model cities, workshops, and regular monthly meetings between JICA Project Team and NESDC. It also promoted activities of the first phase model cities to elaborate SFC Plan and introduces good practices for sustainable development. JICA Project Team and UDSD agreed to keep the SFCI Facebook Page even after completion of the Project. While there will be no frequent update in the page, outputs and record of activities of the Project can be reviewed anytime.



Source: Project Facebook Page

Figure 6.2.1 Image of SFCI Facebook Page

6.2.2 Participation in the Event and Seminar

The JICA Project Team and NESDC have sought opportunities to promote SFCI more widely to various organization types, like the Chief City Innovative Officer (CCIO) Forum and C-ASEAN Thailand Sustainability Expo.

King Prajadhipok's Institute (KPI) Forum: The JICA Project Team participated in KPI Forum in 2016 and 2018⁸. Local administrative organizations, including tessaban, TAO, and organizations related to local administration, participate in the Local Forum of KPI, organized every two years. It aims to review the status of decentralization policy and to share experiences of local administrative organizations as a good model to inspire other cities to develop themselves. In the Thai Local Forum of 2018, "Thai Local Inspiration to the Future," JICA Project Team organized one session of "Future City: Model City of the Future." After the JICA Project Team presented an introduction of the TFCP, representatives of the model cities presented their experiences of SFCI and key issues in realizing a sustainable future city. It includes the policy commitment of the mayor on the SFC Plan, budgeting of

⁸ These KPI Forum were organized during the previous phase of the Project, "Project for Promoting Sustainability in Future Cities of Thailand (stage 1-3)".

the SFC Project, operation and management, and human resources development of tressabans.



Source: JICA Project Team

Figure 6.2.2 Photos of the Local Forum, KPI

Chief City Innovation Office (CCIO) Forum 2020: The CCIO project was initiated by the National Innovation Agency to develop the capacities of the chief for innovative city development. It is composed of a series of training courses related to urban development. At the end of the CCIO training, CCIO Forum 2020 was organized on 19 September 2020 to summarize and maximize the result of the training.

TFCP was invited to the CCIO Forum to introduce SFCI and its impacts. The Senior Representative of JICA Thailand presented the overall framework of the TFCP, Japanese experiences on sustainable urban development, and SFCI, including its concept and result of the first model city projects.



Source: JICA Project Team

Figure 6.2.3 Photos of the Events: CCIO Forum 2020

Thailand Sustainability Expo: The expo was organized by C-ASEAN from 1 to 4 October 2020 in SamYan Midtown. It intended to develop a platform towards a sustainable society with the following key elements: (i) lively marketplace; (ii) thought-provoking exhibitions; (iii) inspirational talks, panel discussions, or best practices sharing; (iv) showcase from partners; (v) stage of opportunities, business marching, social business pitching, and job fair; and (vi) contests and interactive workshop.

JICA Project Team set up a booth of TFCP jointly with the International Division of NESDC.



Source: JICA Project Team

Figure 6.2.4 Photos of the Events: C-ASEAN Thailand Sustainability Expo

Participation in DPT’s World Town Planning Day: DPT organized World Town Planning Day on 6 November 2020 with the topic of “Wellness City Transformation: New Paradigm of Thailand City Planning.” It aims to exchange knowledge and opinions from relevant stakeholders in charge of urban planning and urban development after the outbreak of COVID-19 under the concept of wellness city transformation. Various government agencies gave presentations, including the Secretary General of NESDC, Mr. Danucha Pichayanan, on the “Directions for development of special economic zones and integrated urban growth.” JICA Project Team participated in the exhibition and set up a booth for the Project in collaboration with the international department of NESDC. An interview was held at the booth that streamed live on Facebook Watch.



Source: JICA Project Team

Figure 6.2.5 Photos of the Events: DPT World Town Planning Day

7. Consideration and Recommendations for Future SFCI in Thailand

7.1 Lesson Learned from Two-Phase SFCI Model Cities Projects

7.1.1 Lessons for the Planning Approach

1) Participatory Planning Approach

Key Success: SFCI introduced a participatory planning approach through a PT meeting discussion with a variety of key stakeholders at each planning step, namely issues identification, visioning, and project identification. Such a participatory approach helps tessaban to identify actual local issues and find a variety of solutions. It can also enhance the sustainability of the project implementation by making consensus among stakeholders, thus ensuring operation and management for the projects.

Challenges: The identified challenges to improve the participatory approach furthermore are as follows.

- **To ensure commitment and active involvement of PT members:** Some PT members are listed as representatives of organizations; however, different persons attend each meeting, causing discontinuity of discussion and little commitment from each member.
- **To involve representatives of the private sector:** While the SFCI Guidelines advise involving the private sector as PT members and in the SFC planning process, the tessabans tend to rather select stakeholders they have close relations with, resulting in less private sector involvement.

Recommendations: Recommendations in tackling the challenges are as follows.

- **Stakeholder analysis for organization and personnel:** A stakeholder analysis is recommended to examine organization mandate and specific persons with strong commitment and insight for sustainable development.
- **Diversity and less hierarchy of PT:** PT members must not be limited to the formal sector but also from the outer network of tessaban, such as young entrepreneurs, artists, civil society networks, etc. More diverse PT members can provide a wider range of discussion and a higher level of creativity.
- **Involvement of the private sector:** A partnership between public and private institutions can be a key factor to SFCI. It is recommended to make the PT more open to a cooperative network with the private sector. Private sector involvement can be considered for (i) large companies with advanced technologies and large capital, which can invest in development projects or support local development through Company Social Responsibilities (CSR) activities, and (ii) small and local companies, which are expected to collaborate with tessaban and contribute to urban development over the long term.

2) Formulation of Comprehensive Plan

Key Success: SFCI applies some new planning approaches that consist of a regional approach to consider urban area/urban cluster beyond tressaban's administrative boundary, holistic approach, including economic, social, and environmental aspects, and collaborative approach involving a variety of stakeholders. Such planning approaches were welcomed by all model cities.

- Tessaban has produced their comprehensive SFC Plan and Projects with potential projects for them to develop in the future.
- SFCI planning process has contributed to the capacity building of tessaban's staff in terms of the participatory planning process with a wider perspective on multiple stakeholders and project formulation to be proposed for other relevant departments.

Challenges: The SFCI planning process has faced limitations on urban planning of local cities in Thailand as follows.

- **Lack of an integrated urban data set:** A comprehensive planning process requires integrated urban data to understand the existing urban problems and examine the critical issues and potentials, such as industrial development, education, medical sector, environment, and so on. However, there is no well-integrated and reliable urban dataset in Thailand. Data is scattered among the relevant organizations and not coordinated among them. Collecting, integrating, and analyzing data is time-consuming. Most of the data are not available at the tessaban level but only at the Changwat level since most sectoral developments are authorized under provincial administration, not under local administration. Moreover, many of the available data are even unreliable. For example, the data on the number of hotel rooms in each city is unreliable since there are so many unregistered hotels in the system in order to avoid taxation. However, the most critical issue is demographic data. The census-based and registered population has a big gap. Most tessabans do not have an accurate number of non-registered populations.
- **Lack of existing sectoral development plan at the local level:** Comprehensive planning requires listing potential projects for various sectors, which can be coordinated with and extracted from existing sectoral plans such as the tourism and urban transport development plans. However, there are few sectoral development plans at the tessaban level, most of which were prepared by the Changwat office of each department or even by national departments. For example, the Tourism Development Plan is prepared by the Office of Tourism and Sports of each Changwat and the comprehensive plan by the provincial office of DPT. It was difficult for tessaban to prepare a set of practical project lists under SFC vision and strategies.

Recommendations:

- **Integration into the LSDP:** Reflecting the comprehensive planning approach of SFCI into the LSDP, a statutory plan of tessaban authorized by DLA is highly recommended. It is necessary to integrate SFCI into the overall guideline for LSDP prepared by DLA.

- **Establishment of Urban Data set:** The data inventory system development goes beyond the scope of SFCI and is rather a national concern. However, it is recommended (i) to collect available data in cooperation with provincial departments, including Changwat-based data and district-based data, (ii) to organize an urban data set, and (iii) to update the data periodically. It shall cover demographic conditions, social, environmental, and economic aspects, as shown in the data set for basic analysis (Table 2.6.2). DLA, the authority in promoting and supporting the work of the LAOs, is recommended to understand this issue and support the tessaban to organize urban data set for comprehensive urban planning.
- **Conduct interview survey:** Conducting an interview survey with citizens, which can identify actual urban problems and promptly show the needs of the people, is highly suggested. It can compensate for the lack of data and provide a qualitative and quantitative basis for planning. The sample size can be about 200, covering various people. The result of the interview survey can be used to identify priority issues for tessaban's urban development, as shown in Figure 2.6.2.

7.1.2 Lessons for Project Implementation

1) Networking and Coordination with Relevant Organizations

Key Success and Challenges: All of model cities recognize that networking and coordinating with relevant organizations are essential for implementing the proposed SFC projects and sustainable O&M. Particularly large-scale projects or holistic program requires multi-layer coordination, due to limited authorities of tessabans. Some advanced tessabans with strong long-term leadership already have established associations with relevant departments to get financial sources for development. On the other hand, it is a big challenge for small- to medium-sized tessabans, such as Ranong and Chumphon (second phase SFCI model cities), to create such networking themselves. SFCI can provide opportunities for such tessabans to propose their projects to national and provincial departments and to gain useful recommendations.

Recommendations:

- **National level committee** is an important platform to support tessabans to reach the relevant organizations when and where necessary similar to the JCC under the TFCEP. National level departments directly related to regional development can understand local needs as well as provide information about their development initiatives.
- **Changwat-level coordinating committee** is also an important platform to link the vision and needs of tessabans with national and regional resources, which is one of the key concepts of SFCI. Since function budget in the ministry's line are allocated within each department and decided at central level, changwat-level coordination is essential to ensure the proposed budget will be allocated to each city.

2) Budgeting for Implementation of SFC Projects

Key Success and Challenges: Budgeting is the most important and critical issue for

tessaban to realize its vision. As for short-term and small-sized projects, some model cities integrated the proposed SFC Projects into their own Local Strategic Development Plan and implemented them under their budget. Some SFC Projects have been proposed to the appropriate budgeting channel, such as PAO, functional budget, etc.; however, it is difficult for small-to-medium tessaban to find such prospective financial sources by themselves.

Recommendations:

The right project in the right authority: Laws and regulations should be well considered to identify available budgeting sources for project implementation with the right authority. Tessaban needs to understand not only their own authorities but also those of relevant organizations.

Provincial-level budget packaging: Since functional budget is allocated by department, there is little system to integrate development projects in different sector at tessaban or even at changwat local level. There is a discussion in Thailand to set up provincial-level budget package under one plan concept to integrate spatial development at changwat cluster, changwat, and tessaban level, which can facilitate holistic and sustainable development of each local area.

Available budgeting information: It is important to provide tessaban with the updated information about the budget where they can propose the projects beyond their authorities. In order to provide financial support for the tessaban, SFCI Guidelines provide detailed information about approaches to such potential financial sources, including types of budget sources procedure of budget application. While it also provides a detailed list of funds under major national departments under JCC, regularly updating it is necessary to cover the policy-related special budget for a limited time and newly established development initiated by each department.

7.1.3 Lessons for SFCI Platform

1) Sharing Experiences of Model Cities

Key Success and Challenges: All model cities highly appreciated having the opportunity to share their experiences with other model cities at the plenary workshop. Lessons learned can be shared on major urban development issues, such as aging society, local tourism development, mobility with public transport, public space improvement, etc. Each model city selected a specific sector on the SFCI model city project, such as tourism development in Krabi and public transport promotion in Khon Kaen. However, each model city can still learn from other cities about urban issues not discussed in SFCI, either they have a strong interest in as they could happen in the future or could be present issues. It might challenges for NESDC and other departments to disseminate lessons learned to other cities in the future.

Recommendations:

- **Opening of SFCI Portal Site:** Lessons learned could be useful for others as long as shared through the website. Any tessabans facing similar issues can easily learn from the experiences of SFCI model cities. The SFCI Portal Site has been developed under the NESDC website, which can be further expanded by NESDC in the future by adding lessons from the next model cities.
- **Conduct of Regular Workshop:** Similar to the TFCP, it is recommended to continuously organize plenary workshops to provide opportunities for tessabans to present their activities and for other cities to share lessons learned about key success and challenges. Such workshop activities are also expected to increase competitiveness among the participants.

2) City-to-city Collaboration

Key Success and Challenges: SFCI Plenary Workshops can be a platform for city-to-city collaboration as well as sharing experiences among model cities. They can directly communicate and arrange study visits with each other. The TFCP also provided opportunities for collaboration with cities in Japan on some specific urban issues, as shown in the following images. The challenge is maintaining such a platform for city-to-city collaboration in Thailand.

- Tessaban Nakhon Chiang Rai and Makinohara City, Japan. After joining the first model city project, Tessaban Nakhon Chiang Rai and Makinohara City started to communicate and seek the possibility of a city-to-city collaboration. Both cities have international airports, looking for opportunities to connect with cities abroad. They are also the largest tea production area in their respective countries.



Source: JICA Project Team

Figure 7.1.1 Mission in Tessaban Nakhon Chiang Rai and Makinohara City

- Tessaban Mueang Krabi and Nago City, Japan. Tessaban Mueang Krabi and Nago City began coordinating for future city-to-city collaboration with support from TFCP. Both cities are located close to famous beaches, which are tourist attractions, and have similar issues attracting tourists within a city area. The cities applied for a grassroots program cooperation with JICA. It was approved, and it is expected to begin in 2022.



Source: JICA Project Team

Figure 7.1.2 Online meeting between Tessaban Mueang Krabi and Nago City

Recommendations: City-to-city collaboration can be established in two levels: (i) partnership of cities to support each other to deliver sustainable urban development and (ii) collaboration between two cities that have common specific issues. The former exists in Thailand, such as NMT and KPI. NESDC, as a policy agency, can coordinate with those organizations to arrange periodical workshops and provide their policy agenda for local development.

7.2 Future Dissemination of SFCI by Thai Agencies

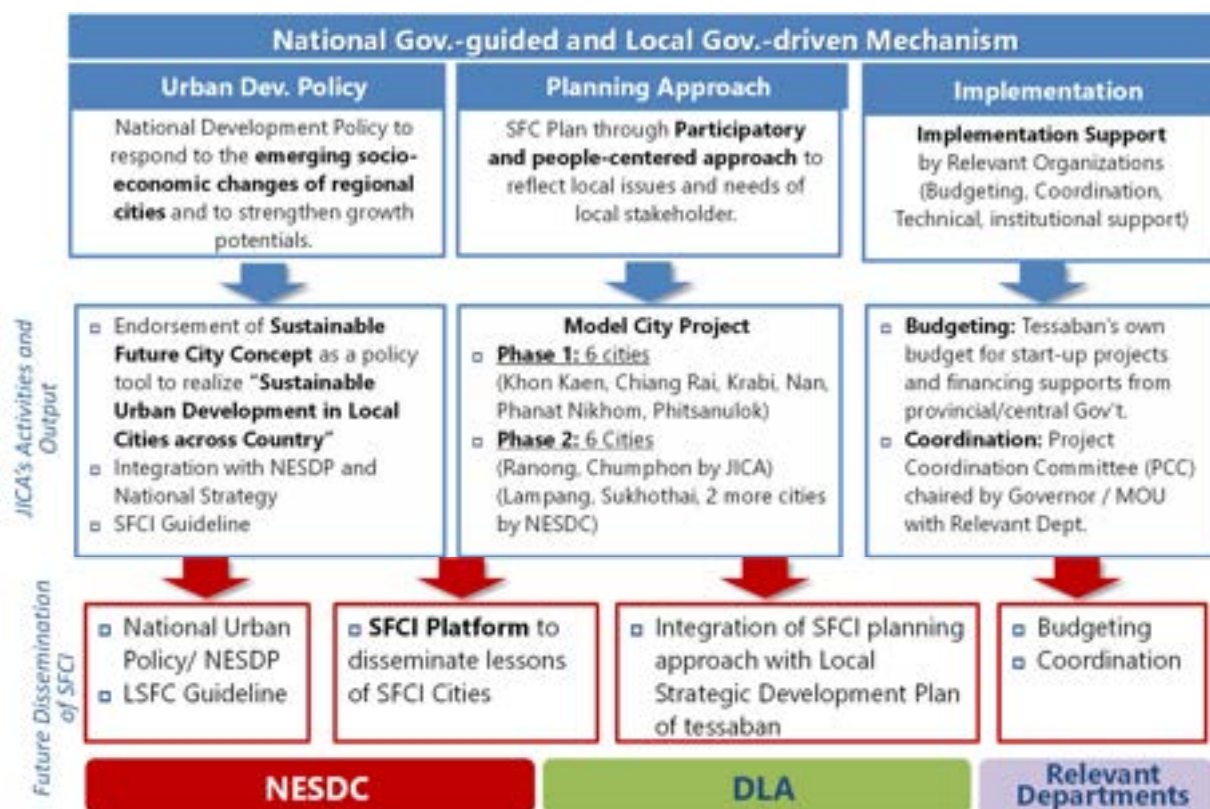
7.2.1 Utilization of SFCI Output by NESDC

The output of SFCI can be utilized by NESDC, a policy agency, as follows.

- **Deepening the understanding of local situations:** Through discussions with tessaban officers and PT members, NESDC is expected to understand the actual situation and issues of local cities, and thus, to deepen awareness of issues that need to be addressed by NESDC as a policy institution.
- **Strengthened connection with relevant departments:** With the proposed SFC projects, NESDC can actively coordinate with relevant departments to link with their policies and plans, including the 5-year NESDP.
- **Practical urban development policies:** NESDC can reflect the above-mentioned achievement to more practical and effective urban development policies.

7.2.2 Toward Future SFCI

SFCI introduced a national government-guided and local government-driven mechanism, composed of (i) urban development policy as “Sustainable Future City” to respond to the emerging socio-economic changes of regional cities in Thailand; (ii) new planning approach, i.e., participatory planning and comprehensive planning; and (iii) project implementation support. While JICA’s Thai Future City Project accommodated all three components, each should have different counterpart agencies, considering authorities of each department. Sustainable urban development of local cities need all of those three components work together. In order for Thailand to continue SFCI, it is necessary for all the related agencies to work together to continue the achievements of SFCI in the future, as shown in Figure 7.2.1.



Source: JICA Project Team

Figure 7.2.1 SFCI's Components and their Respective CP Agency

Expected role for NESDC as a policy agency

- **Policy endorsement** to enhance regional cities' development as a core of sustainable development of each region, which can be observed in the draft 13th National Economic Sustainable Development Plan
- **Transfer of SFCI/LSFC Guideline:** The planning approach of SFCI and LSFC to DLA is expected to be transferred in order to integrate into the LSDP.
- **Keep SFCI Platform:** Network with SFCI model cities and LSFC model cities will be NESDC-UDSD's valuable resources, including lessons learned from them. It is recommended to disseminate key successes and challenges on specific urban issues as lessons learned from model cities and keep communication channels with those tessabans to discuss emerging local issues.

Expected role for DLA to follow up SFCI

- **Integration with LSDP:** Integration of the planning concept of SFCI into the planning approach of LSDP includes a participatory planning approach to ensure coordination with a variety of local stakeholders. It can also promote private sector involvement in urban development. The regional or comprehensive approach should also be further elaborated into the LSDP, which can promote coordination with development plans of national (provincial) departments toward effective regional development.
- **Support Project Implementation:** DLA is expected to support tessaban to implement

the proposed projects through two channels, (i) general budget under local administration, including specific subsidy, and (ii) coordination with relevant department function budget through Provincial Office of Local Administration.

- **City-to-city network:** While SFCI targeted selected model cities, DLA needs to support all LAOs. It is expected to have a city-to-city network for LAOs to share their good practices with tessabans and lessons learned from SFCI model cities. DLA can also provide opportunities for tessabans to collaborate.

Appendix 1

Minutes of Meetings

**MINUTES OF MEETINGS
BETWEEN
JAPAN INTERNATIONAL COOPERATION AGENCY
AND
OFFICE OF THE NATIONAL ECONOMIC AND SOCIAL DEVELOPMENT COUNCIL
FOR AMENDMENT OF THE RECORD OF DISCUSSIONS
ON
PROJECT FOR PROMOTING SUSTAINABILITY IN FUTURE CITIES OF THAILAND**

The Japan International Cooperation Agency (hereinafter referred to as "JICA") and the Office of the National Economic and Social Development Council (hereinafter referred to as "NESDC") hereby agree that the Record of Discussions on the Project for Promoting Sustainability in Future Cities of Thailand signed on 31 March, 2015, Minutes of Meetings signed on 29 June, 2018, and Minutes of Meetings signed on 31 January, 2019 will be amended as follows;

1. The article 8.Duration

Before	Amended Version
The Duration of the Project will be <u>five (5) years by adding 2nd Phase for additional two years. The revised project schedule is shown in the Annex 3 of the revised R/D.</u>	The Duration of the Project will be <u>six (6) years. The revised project schedule is shown in the Annex 1 of the revised R/D.</u>
Reason: NESDC and JICA agreed to extend two (2) years: one (1) Fiscal Year with JICA assistance and one (1) Fiscal Year by themselves with JICA monitoring based on the experience of Phase 1 of the Project in the Minutes of Meetings signed on 31 January 2019. Both sides agreed to extend the project duration to secure enough time to finalize the SFCI Guideline and to prepare Draft Final Report after implementation of pilot projects in two cities, namely Chumphon and Ranong.	

This amendment will become effective as of 29 August, 2019.

Annex 1 : Revised PROJECT SCHEDULE (Ver5)

Annex 2 : Minutes of the Meetings (31 January, 2019)

Annex 3 : Minutes of the Meetings (28 June, 2018)

Annex 4 : Record of Discussions (31 March, 2015)

Bangkok, 29 August, 2019

宮崎 桂

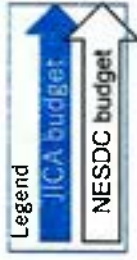
Ms. Katsura Miyazaki
Chief Representative
Thailand Office
Japan International Cooperation Agency

Thosaporn Sirisumphand

Dr. Thosaporn Sirisumphand,
Secretary General
Office of the National Economic and
Social Development Council

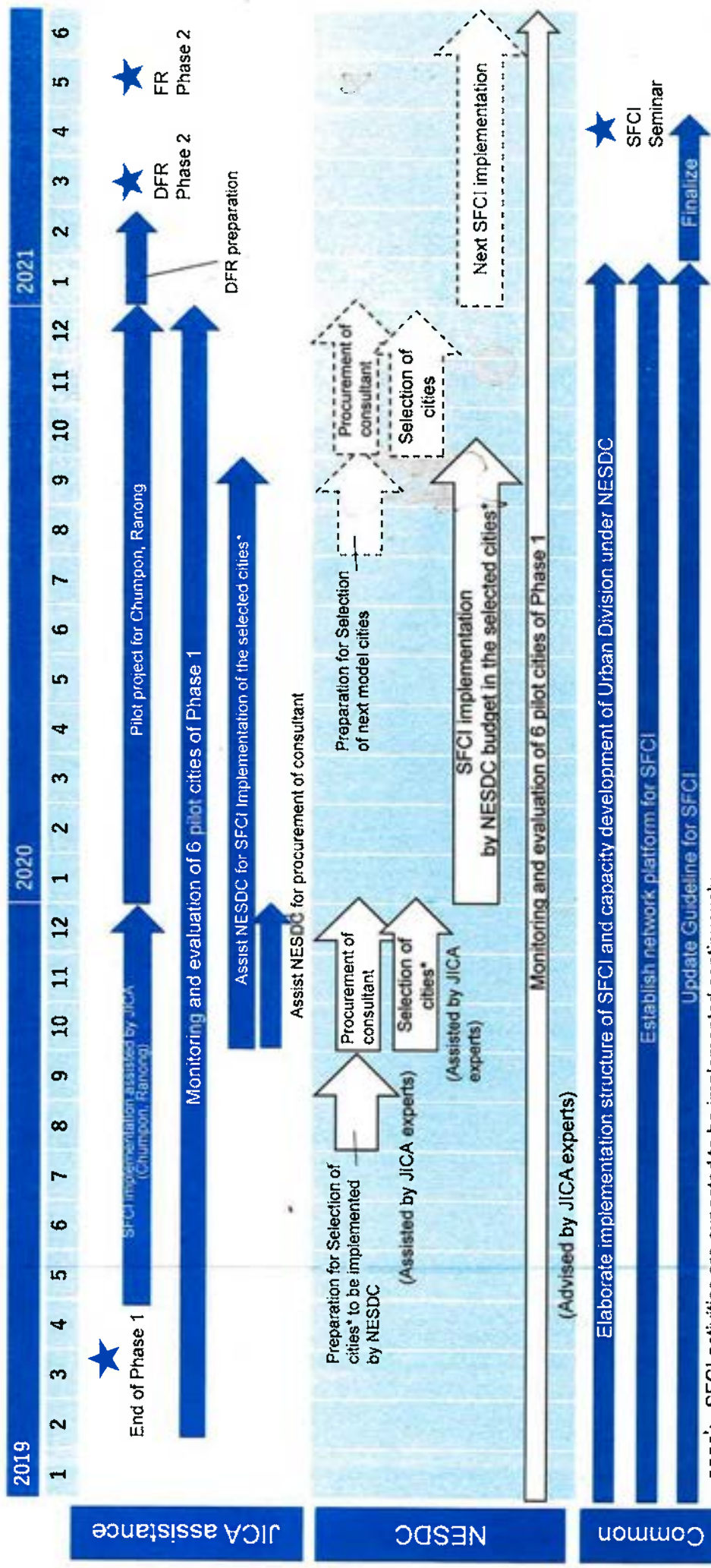
Revised Project Schedule for Project for Promoting Sustainability in Future Cities of Thailand Phase 2

Annex 1
As of August 2019



TFY 2021

TFY 2020



SFCI activities are expected to be implemented continuously.

*Number of cities to be determined for TFY2020 is based on the approved budget of NESDC.

**MINUTES OF MEETINGS
BETWEEN
JAPAN INTERNATIONAL COOPERATION AGENCY
AND
OFFICE OF THE NATIONAL ECONOMIC AND SOCIAL DEVELOPMENT COUNCIL
FOR AMENDMENT OF THE RECORD OF DISCUSSIONS
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1. The article 4. Activities

Before	Amended Version
<p><1st Stage></p> <p>(1) Basic study on present condition of regional cities</p> <p>(2) Development of discussion points</p> <p>(3) Discussion on the concept of future city development in Thailand</p> <p>(4) Development of vision and concept paper</p> <p>(5) Preparation of implementation mechanism and measures of future city development in Thailand</p> <p>(6) Development of the draft of planning and implementation guideline of the future city development in Thailand</p> <p><2nd Stage></p> <p>(1) Preparation of development plans and action plans in 2-4 model cities; vision, planning frame, land use, road and sector plans of other priority areas</p> <p>(2) Development of education/dissemination materials</p> <p>(3) Implementation of pilot projects</p> <p><3rd Stage></p> <p>(1) Finalization of planning and implementation guideline</p>	<p><u>1st Phase (2015-2018)</u></p> <p><1st Stage></p> <p>(1) Basic study on present condition of regional cities</p> <p>(2) Development of discussion points</p> <p>(3) Discussion on the concept of future city development in Thailand</p> <p>(4) Development of vision and concept paper</p> <p>(5) Preparation of implementation mechanism and measures of future city development in Thailand</p> <p>(6) Development of the draft of planning and implementation guideline of the future city development in Thailand</p> <p><2nd Stage></p> <p>(1) Preparation of development plans and action plans in 2-4 model cities; vision, planning frame, land use, road and sector plans of other priority areas</p> <p>(2) Development of education/dissemination materials</p> <p>(3) Implementation of pilot projects</p> <p><3rd Stage></p> <p>(1) Finalization of planning and implementation guideline</p>

(2) Dissemination seminar in Thailand

(2) Dissemination seminar in Thailand

2nd Phase (2019-2021)

- (1) Strengthening capacity of newly established division of NESDC to implement SFCI
- (2) Establishing networking platform for monitoring progress of activities and sharing lessons learned of 6 pilot cities in 1st Phase
- (3) Implementation of SFCI (planning, project formulation, implementation support and pilot projects) in 2 cities (Southern Economic Corridor)
- (4) Selecting 4 model cities to implement SFCI (by NESDC)
- (5) Implementation of SFCI (planning and project formulation and implementation support) in 4 model cities (by NESDC)
- (6) Update and finalization of SFCI guideline
- (7) Establish SFCI mechanism
- (8) Dissemination seminar in Thailand

Reason:

The Project was commenced in July 2015 and the activities were divided into three stages as follows,

- Stage 1: Policy Research on Future City Development Concept in Thailand
- Stage 2: Preparation of Development Plans and Conduct of Pilot Projects in Model Cities
- Stage 3: the Guideline for Sustainable Future City Development

The activities of the Stage 3 were completed based on the result of the model city activities of the Stage 2.

During the course of the Stage 2, NESDB has started to set up necessary administrative arrangement to implement the sustainable regional city development including the Sustainable Future City Initiative (SFCI). Since sustainable urban development of regional cities has been well recognized as an important policy issues, as described in the 12th National Economic and Social Development Plan and 20-year National Strategy. NESDB, as a whole, is preparing to establish the new division to handle urban issues more actively and will play a role as the secretariat of SFCI. To realize the SFCI in regional cities in Thailand more sustainable, NESDB requested JICA to continue the support to conduct the following activities as 2nd Phase. In addition, as Sustainable Southern Economic Corridor (SEC) development framework has been approved by the cabinet of Thailand in August 2018, NESDB would like to

promote SFCI model in SEC as well.

- (1) Strengthening capacity of newly established division of NESDB to implement SFCI
- (2) Establishing networking platform for monitoring progress of activities and sharing lessons learned of 6 pilot cities in 1st Phase
- (3) Implementation of SFCI (planning and project formulation, implementation support, and pilot project(s) in 2 cities (Southern Economic Corridor)
- (4) Selecting 4 model cities to implement SFCI (by NESDB)
- (5) Implementation of SFCI (planning and project formulation and implementation support) in 4 model cities (by NESDB)
- (6) Update and finalization of SFCI guideline
- (7) Establish SFCI mechanism

In order to disseminate lessons learned of 6 model cities to other cities in 1st Phase, it is necessary to follow-up and monitor the output and progress of their activities continuously. To connect those cities experienced SFCI implementation, network platform for SFCI needs to be established for its continuity. Moreover, SFCI implementation mechanism to realize priority projects identified by model cities also needs to be established including coordination and financing.

2. The article 5. Input

Before	Amended Version
	<p>Following inputs are to be added.</p> <p>(1) Input by JICA</p> <p><u>(c) JICA expert team will assist SFCI planning and implementation of pilot projects for 2 cities in SEC (Activities 3 of 2nd Phase)</u></p> <p><u>(d) JICA expert team will provide necessary assistance for NESDC to implement SFCI in other 4 cities (Activities 4 and 5 of 2nd Phase).</u></p> <p>(2) Input by NESDC</p> <p><u>(h) NESDC will lead Activities 4 and 5 of 2nd Phase of the article 4. NESDC will prepare necessary budget for Activities 4 and 5 of 2nd Phase, such as budget to employ consultant</u></p>
Reason:	
<p>For the 2nd phase of the project, 2 cities in SEC are to be assisted by JICA Project Team to confirm and update the guideline prepared during the 1st phase. Based on the experience and lessons learned from the 1st phase and 2 cities in the 2nd phase, NESDC shall lead SFCI implementation, including selection of 4 cities, SFC planning,</p>	

and project identification. If the above processes for 4 cities are not processed by NESDC within the project period, (1) (d) is not going to be provided.

3. The article 6. Implementation Structure

Before	Amended Version
<p>The Project organization chart is given in the Annex 1. The roles and assignments of relevant organizations are as follows:</p> <p>(1) NESDB</p> <p>(a) Project Director Secretary General of NESDB will be responsible for overall administration and implementation of the Project.</p> <p>(b) Project Manager Director of Spatial Development Planning and Strategy Office, NESDB will be responsible for managerial and technical matters of the Project.</p> <p>(c) Counterpart Personnel Counterpart Personnel of Spatial Development Planning and Strategy Office, NESDB will be assigned before the commencement of the Project.</p> <p>(2) Other organization Other organization will be added when necessary.</p>	<p>The Project organization chart is modified <u>as given in the Annex 1.</u>The roles and assignments of relevant organizations are as follows:</p> <p>(1) NESDC</p> <p>(a) Project Director Secretary General of NESDC will be responsible for overall administration and implementation of the Project.</p> <p>(b) Project Manager <u>Director of Urban Division, NESDC will be responsible for planning policy, promoting and implementing SFCI by coordinating with other relevant ministries and organizations and regional cities (tessabans).</u></p> <p>(c) Counterpart Personnel Counterpart Personnel from the new division will be assigned before the commencement of the 2nd Phase of the Project.</p> <p>(d) <u>Consultant for 4 cities</u> <u>NESDC will prepare its own consultant team to support four model cities (except for 2 cities in SEC)</u></p> <p>(2) <u>Implementing Organizations</u> <u>Relevant line ministries and agencies should be involved in SFCI mechanism to realize SFCI implementation by making effective use of relationships with Tessabans and supporting technical expertise and financial resources where it is deemed appropriate and applicable.</u></p> <p>(3) JICA Experts The JICA experts will give necessary</p>

<p>(3) JICA Experts The JICA experts will give necessary technical guidance, advice and recommendations to NESDB on any matters pertaining to the implementation of the Project.</p> <p>(4) Joint Coordinating Committee Joint Coordinating Committee (hereinafter referred to as "JCC") will be established in order to facilitate inter-organizational coordination. JCC will be held whenever deems it necessary. A list of proposed members of JCC is shown in the Annex 2.</p>	<p>technical guidance, advice and recommendations to NESDC on any matters pertaining to the implementation of the Project.</p> <p>(4) Joint Coordinating Committee <u>A list of JCC is updated as Annex 2.</u></p>
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Reason:
National Economic and Social Development Board (NESDB) was changed to National Economic and Social Development Council (NESDC) as of 29 December 2018 based on the National Economic and Social Development Council Act.
To implement 2nd Phase of the Project, NESDC should make policy, coordinate among related ministries, organizations and tessebans to promote and implement SFCI for sustainable implementation in the future including coordination among stakeholders, establishment of mechanism to arrange finance and resources for implementation, planning, implementation, and monitoring and evaluation.

4. The article 8.Duration

Before	Amended Version
<p>The Duration of the Project will be three (3) years and a half in three stages. The revised project schedule is shown in the Annex 2 of the revised R/D.</p>	<p>The Duration of the Project will be <u>five (5) years by adding 2nd Phase for additional two years.</u> The revised project schedule is shown in the Annex 3 of the revised R/D.</p>

Reason:
NESDB requested to extend two (2) years to implement SFCI model under new Urban Division to be established to explore sustainable implementation structure of SFCI for one (1) Fiscal Year with JICA assistance and one (1) Fiscal Year by themselves with JICA monitoring based on the experience of Phase 1 of the Project.

5. The article 9.Reports

Before	Amended Version
<p>JICA will prepare and submit the following reports to the NESDB. (1) 30 copies of Inception Report in</p>	<p>JICA will prepare and submit the following reports to the NESDC. (1) 30 copies of Inception Report in</p>

<p>English at the commencement of the first work period in Thailand</p> <p>(2) 30 copies of <u>Interim Report 1</u> in English at the time of <u>10 months</u> after the commencement of the first work period in Thailand</p> <p>(3) 30 copies of <u>Interim Report 2</u> in English at the time of <u>21 months</u> after the commencement of the first work period in Thailand</p> <p>(4) 30 copies of <u>Draft Final Report 1</u> in English at the time of <u>34 months</u> after the commencement of the first work period in Thailand</p> <p>(5) 30 copies of <u>Draft Final Report 2</u> in English at the end of the last work period in Thailand</p> <p>(6) 50 copies of Final Report in English within one (1) month after the receipt of the comments on <u>the Draft final Report 2</u> with CDR</p> <p>(7) 100 copies of Executive Summary of Final Report in Thai and English with CDR</p> <p>(8) Soft data of each report above Education/dissemination material (video and pamphlet)</p>	<p>English at the commencement of the first work period in Thailand</p> <p>(2) 30 copies of Interim Report <u>1</u> in English at the time of 10 months after the commencement of the first work period in Thailand</p> <p>(3) 30 copies of Interim Report 2 in English at the time of 21 months after the commencement of the first work period in Thailand</p> <p>(4) 30 copies of Draft Final Report 1 in English at the time of 34 months after the commencement of the first work period in Thailand</p> <p>(5) 30 copies of Draft Final Report 2 in English at the end of the last work period of <u>Phase 1</u> in Thailand</p> <p>(6) 50 copies of Final Report <u>Phase 1</u> in English within one (1) month after the receipt of the comments on the Draft final Report 2 with CDR</p> <p>(7) <u>30 copies of Progress Report of Phase 2</u> after SFCI planning for 2 cities in <u>SEC</u></p> <p>(8) <u>30 copies of Draft Final Report Phase 2</u> in English at the end of the last work period in Thailand</p> <p>(9) <u>50 copies of Final Report Phase 2</u> in English within one (1) month after the receipt of the comments on the Draft final Report 2 with CDR</p> <p>(10) 100 copies of Executive Summary of Final Report in Thai and English with CDR</p> <p>(11) Soft data of each report above Education/dissemination material (video and pamphlet)</p>
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Reason:

Due to the extension of the project, Final Report Phase 1 is to be submitted at the end of the the 1st phase. Progress Report of Phase 2, Draft Final Report Phase 2, and Final Report Phase 2 are added to the Reports to be submitted. Final Report and Executive Summary shall include the contents of both Phase 1 and Phase 2 as the output of whole project.

This amendment will become effective as of 31 January, 2019.

Annex 1 : Revised Project Organization Chart

Annex 2 : Revised List of Proposed Members of Joint Coordinating Committee / Steering Committee

Annex 3 : Revised PROJECT SCHEDULE (Ver4)

Annex 4 : Record of Discussions (31 March, 2015)

Annex 5 : Minutes of the Meeting (28 June, 2018)

Bangkok, 31 January, 2019

宮崎 桂

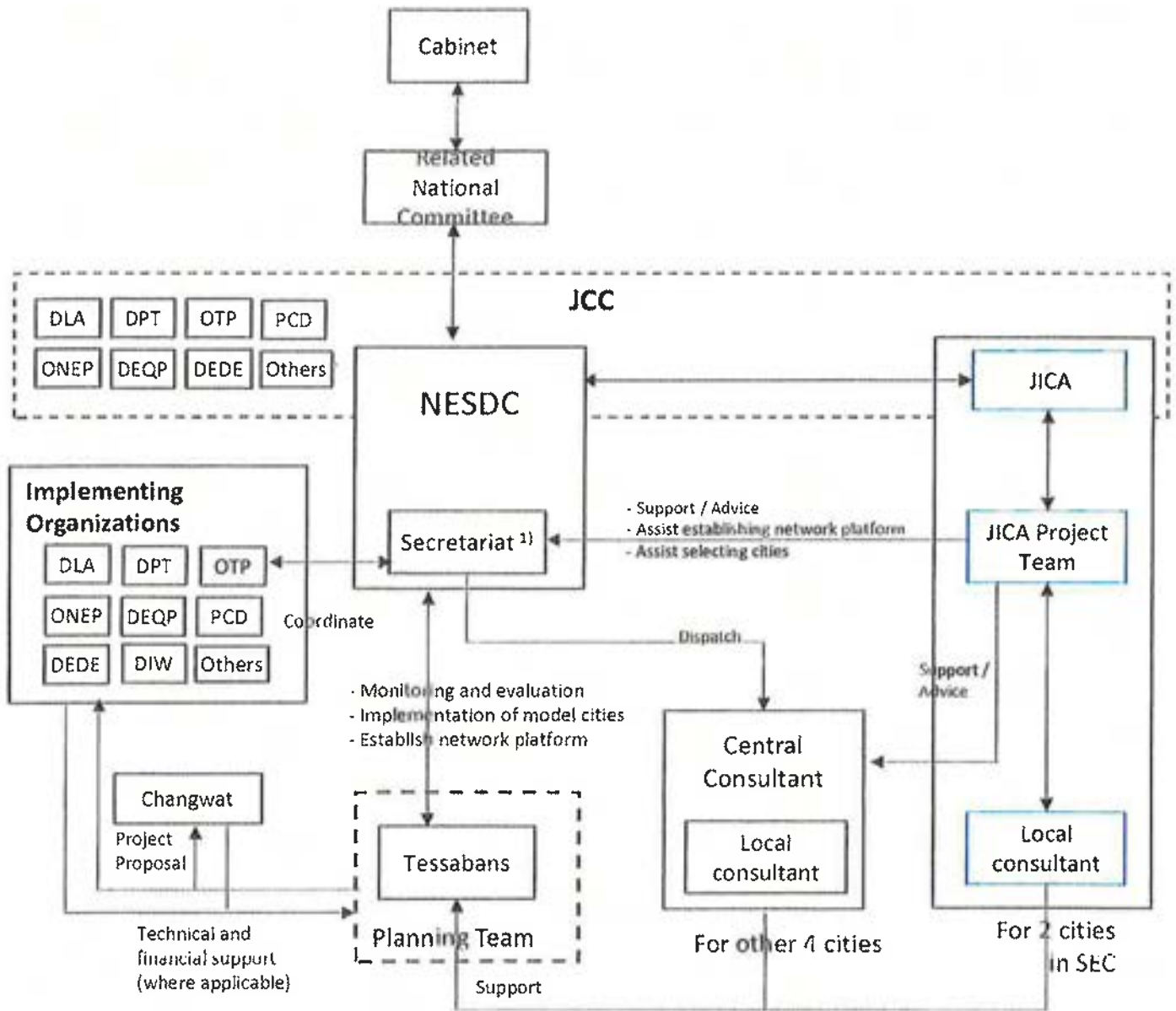
Ms. Katsura Miyazaki
Chief Representative
Thailand Office
Japan International Cooperation Agency

Thosaporn Sirisumphand

Dr. Thosaporn Sirisumphand,
Secretary General
Office of the National Economic and
Social Development Council

hr

Revised Organization Chart
Implementation structure of Phase 2



1) Urban division will be in charge of Secretariat after officially established

hr

Annex2: Revised List of Proposed Members of Joint Coordination Committee/ Steering Committee

Original Members

- Director General of Department of Public Works and Town and Country Planning (DPT) or representative
- Director General of Department of Local Administration (DLA) or representative
- Director General of Department of Industrial Works (DIW) or representative
- Director General of Department of Land Transport (DLT) or representative
- Director General of Pollution Control Department (PCD) or representative
- Director General of Department of Environmental Quality Promotion (DEQP) or representative
- Director General of Department of Alternative Energy Development of Efficiency (DEDE) or representative
- Director of Thailand International Cooperation Agency (TICA) or representative
- Director of Office of Transport and Traffic Policy and Planning (OTP) or representative
- Secretary General of Office of Natural Resources and Environmental Policy and Planning (ONEP) or representative
- Deputy Secretary General, National Municipal League of Thailand (NMT) or representative

Additional Members

- Office of the Permanent Secretary, Ministry of Tourism and Sports
- Tourism Promoting Division, Tourism Authority of Thailand (TAT)
- Designated Area for Sustainable Tourism Administration (DASTA)
- Department of Health, Ministry of Public Health
- Department of Social Development Welfare, Ministry of Social Development and Human Security
- Department of Older Persons, Ministry of Social Development and Human Security
- Digital Economy Promotion Agency (DEPA), Ministry of Digital Economy and Society
- Thai Health Promotion Foundation

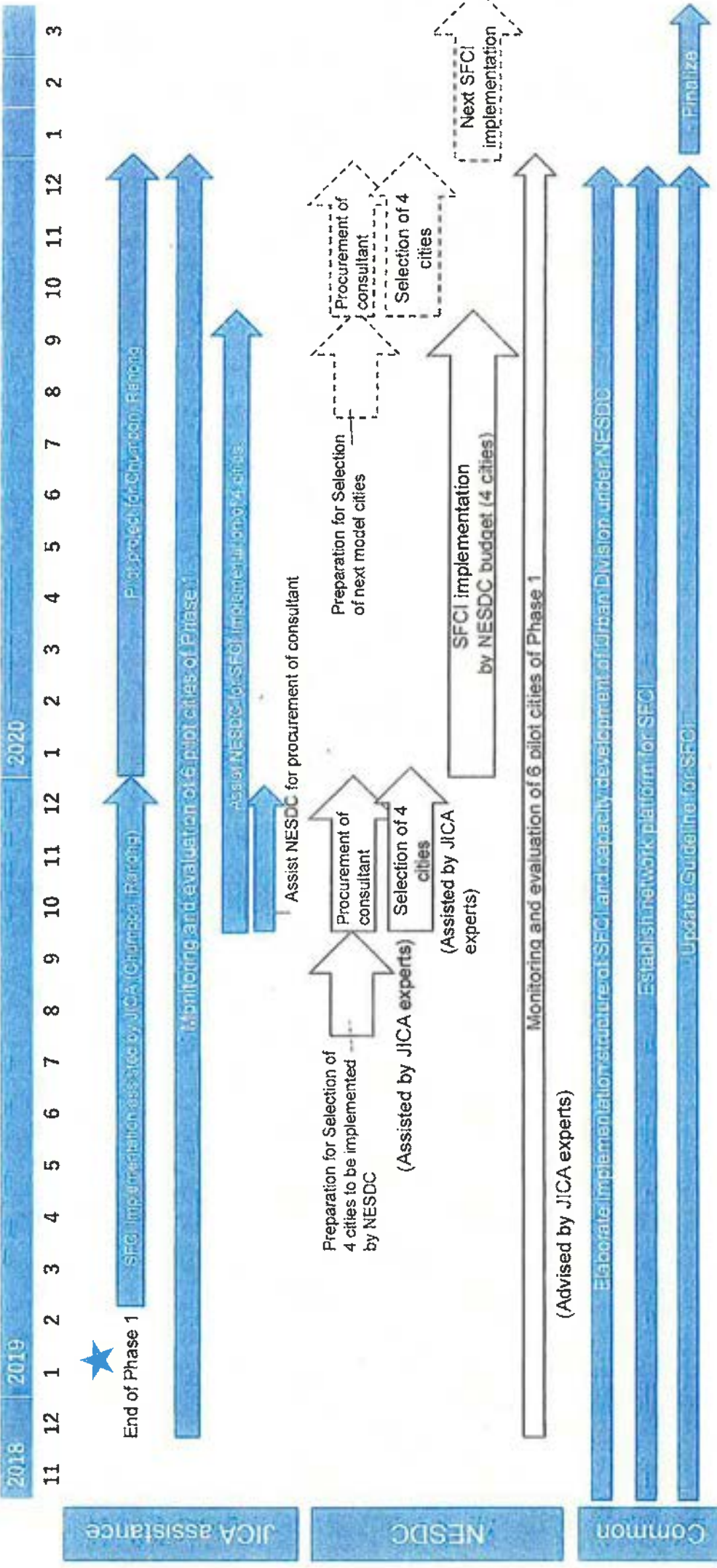
Revised Project Schedule for Project for Promoting Sustainability in Future Cities of Thailand Phase 2

Annex 3



FY 2021

FY 2020



SFCI activities are expected to be implemented continuously.

**MINUTES OF MEETINGS
BETWEEN
JAPAN INTERNATIONAL COOPERATION AGENCY
AND
OFFICE OF THE NATIONAL ECONOMIC AND SOCIAL DEVELOPMENT BOARD
FOR AMENDMENT OF THE RECORD OF DISCUSSIONS
ON
PROJECT FOR PROMOTING SUSTAINABILITY IN FUTURE CITIES OF THAILAND**

The Japan International Cooperation Agency (hereinafter referred to as "JICA") and the Office of the National Economic and Social Development Board hereby agree that the Record of Discussions on the Project for Promoting Sustainability in Future Cities of Thailand signed on 31 March, 2015 will be amended as follows;

1. The article 8. Duration

Before	Amended Version
The duration of the Project will be three (3) years in three stages. The tentative project schedule is shown in the Annex3.	The duration of the Project will be <u>three (3) yeas and a half</u> in three stages. The <u>revised</u> project schedule is shown in the Annex 2 of the revised R/D.
Reason: The Project was commended in July 2015 and the Stage 1 "Policy Research on Future City Development Concept in Thailand" was completed in March 2016. Since April 2016, the Stage 2 "Preparation of Development Plans and Conduct of Pilot Projects in Model Cities" has been implemented. The original completion date of the Stage 2 was scheduled to December 2017. However, during the course of the Stage 2, all of six selected model cities had carefully discussed with various stakeholders in order to set their visions and strategies, and accordingly identify a list of priority projects. This process has resulted in the longer activity period than originally expected, and therefore the both sides agreed to revise the Project duration.	

2. The article 9. Reports

Before	Amended Version
JICA will prepare and submit the following reports to the NESDB. (1) 30 copies of Inception Report in English at the commencement of the first work period in Thailand (2) 30 copies of Progress 1 Report in English at the time of 5 months after the commencement of the first work	JICA will prepare and submit the following reports to the NESDB. (1) 30 copies of Inception Report in English at the commencement of the first work period in Thailand (2) 30 copies of Interim Report <u>1</u> in English at the time of <u>10 months after</u> the commencement of the first work


<p>period in Thailand</p> <p>(3) 30 copies of Progress 2 Report in English at the time of 10 months after the commencement of the first work period in Thailand</p> <p>(4) 30 copies of Interim Report in English at the time of 24 months after the commencement of the first work period in Thailand</p> <p>(5) 30 copies of Draft Final Report in English at the end of the last work period in Thailand</p> <p>(6) 50 copies of Final Report in English within one (1) month after the receipt of the comments on the Draft final Report with CDR</p> <p>(7) 100 copies of Executive Summary of Final Report in Thai and English with CDR</p> <p>(8) Soft data of each report above</p> <p>(9) Education/dissemination material (video and pamphlet)</p>	<p>period in Thailand</p> <p>(3) 30 copies of Interim <u>Report 2</u> in English at the time of <u>21 months</u> after the commencement of the first work period in Thailand</p> <p>(4) 30 copies of <u>Draft Final Report 1</u> in English at the time of <u>34 months</u> after the commencement of the first work period in Thailand</p> <p>(5) 30 copies of <u>Draft Final Report 2</u> in English at the end of the last work period in Thailand</p> <p>(6) 50 copies of Final Report in English within one (1) month after the receipt of the comments on <u>the Draft final Report 2</u> with CDR</p> <p>(7) 100 copies of Executive Summary of Final Report in Thai and English with CDR</p> <p>(8) Soft data of each report above</p> <p>(9) Education/dissemination material (video and pamphlet)</p>
<p>Reason:</p> <p>Report submission schedule has been set to summarize output and interim result of each stage. Interim Report 1 summarizes the output of Stage 1 and Interim Report 2 summarizes the interim result of Stage 2. Draft Final Report 1 summarizes overall result of Stage 1 and Stage 2, which shall be further elaborated as Draft Final Report 2 in the end of the Project.</p>	

This amendment will become effective as of June, 2018.

Annex 1 : Record of Discussions (31 March 2015)

Annex 2 : Revised Annex3- Tentative Project Schedule

Bangkok, 29 June, 2018



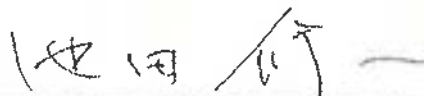
Mr. Hiroo Tanaka
Chief Representative
Thailand Office
Japan International Cooperation Agency



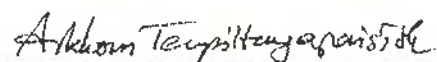
Mrs. Chutinart Wongsuban
Deputy Secretary-General
Acting Secretary-General
Office of the National Economic and
Social Development Board

RECORD OF DISCUSSIONS
ON
PROJECT FOR PROMOTING SUSTAINABILITY IN FUTURE CITIES OF
THAILAND
IN
THE KINGDOM OF THAILAND
AGREED UPON BETWEEN
OFFICE OF THE NATIONAL ECONOMIC AND SOCIAL DEVELOPMENT
BOARD
AND
JAPAN INTERNATIONAL COOPERATION AGENCY

BANGKOK, _____ 2015



Mr. Shuichi Ikeda
Chief Representative
Thailand Office
Japan International Cooperation
Agency



Mr. Arkhom Termpittayapaisith
Secretary General
Office of the National Economic and
Social Development Board

Based on the minutes of meetings on the Detailed Planning Survey on the Project for "Smart City Model" (hereinafter referred to as "the Project") signed on 20th February 2015 between Office of the National Economic and Social Development Board (hereinafter referred to as "NESDB") and the Japan International Cooperation Agency (hereinafter referred to as "JICA"), JICA held a series of discussions with NESDB and relevant organizations to develop a detailed plan of the Project.

Both parties agreed the details of the Project and the main points discussed as described in the Appendix 1 and the Appendix 2 respectively.

Both parties also agreed that NESDB, the counterpart to JICA, will be responsible for the implementation of the Project in cooperation with JICA, coordinate with other relevant organizations and ensure that the self-reliant operation of the Project is sustained during and after the implementation period in order to contribute toward social and economic development of Thailand.

The Project will be implemented within the framework of the Agreement on Technical Cooperation signed on 5th November 1981 (hereinafter referred to as "the Agreement") and the Note Verbales exchanged on 30th May and 20th June 2014 between the Government of Japan (hereinafter referred to as "GOJ") and the Government of Thailand.

Appendix 1: Project Description

Appendix 2: Minutes of Meetings on THE PROJECT FOR SMART CITY MODEL.

PROJECT DESCRIPTION

Both parties confirmed that there is no change in the Project Description agreed on in the minutes of meetings on the Detailed Study Team on the Project signed on 20th February 2015 (Appendix 2).

I. BACKGROUND

Thailand has successfully achieved the economic growth for the last several decades and reached the upper middle income country. However, the urban development with environmental friendly or sustainable way has not been implemented much. Whilst the climate change and the green-house gas emission reduction from a global perspective and energy security are all relevant policy issues in Thailand, these have to be considered in the view of realizing the sustainable society.

The Government of Thailand defines "Green Growth" as one of the main pillars of the policy to be pursued in the latest 11th National Economic and Social Development Plan, and in Thailand's Country Strategy. The government is also keen to promote "Green Growth" from the perspective of city/town development. In this area, the Government of Thailand would like to utilize the experience and know-how of Japan as many good examples for Thailand to promote sustainable city in Thailand.

II. OUTLINE OF THE PROJECT

1. Title of the Project

The Project for Promoting Sustainability in Future Cities of Thailand

2. Expected Goals which will be attained after the Project Completion

(1) Goal of the Proposed Plan

A concept of future city development and the implementation mechanism and measures are developed and approved.

(2) Goal which will be attained by utilizing the Proposed Plan

Urban development based on the concept of future city development is realized in regional cities/towns in Thailand.

3. Outputs

(1) Development of the concept of future city development in Thailand

(2) Proposal of implementation mechanism and measures of future city development in Thailand

(3) Development of planning and implementation guideline for future city development in Thailand

(4) Development plans and action plans for future city development in model cities

4. Activities

<1st Stage>

- (1) Basic study on present condition of regional cities
- (2) Development of discussion points
- (3) Discussion on the concept of future city development in Thailand
- (4) Development of vision and concept paper
- (5) Preparation of implementation mechanism and measures of future city development in Thailand
- (6) Development of the draft of planning and implementation guideline of the future city development in Thailand

<2nd Stage>

- (1) Preparation of development plans and action plans in 2-4 model cities; vision, planning frame, land use, road and sector plans of other priority areas
- (2) Development of education/dissemination materials
- (3) Implementation of pilot projects

<3rd Stage>

- (1) Finalization of planning and implementation guideline
- (2) Dissemination seminar in Thailand

5. Input

(1) Input by JICA

(a) Dispatch of Mission

- i. Urban Planning
- ii. Local Government
- iii. Land Use Plan
- iv. Urban Transport
- v. Water Supply and Sewerage
- vi. Solid Waste Management
- vii. Townscape and Urban Design
- viii. Urban Development Regulation
- ix. Community Development
- x. Industrial Promotion
- xi. Environmental Protection
- xii. Others, if necessary

(b) Counterpart Personnel Training(s) in Japan and the third country

Input other than indicated above will be determined through mutual consultations between JICA and NESDB during the implementation of the Project, as necessary.

(2) Input by NESDB

NESDB will take necessary measures to provide at its own expense:

- (a) Services and necessary expenses of NESDB's counterpart personnel and administrative personnel as referred to in II-6;
- (b) Suitable office space with necessary equipment and running cost of office space;
- (c) Supply or replacement of machinery, equipment, instruments, vehicles, tools, spare parts and any other materials necessary for the implementation

- of the Project other than the equipment provided by JICA;
- (d) Credentials or identification cards;
- (e) Available data (including maps and photographs) and information related to the Project;
- (f) Expenses necessary for transportation within Thailand of the equipment as well as for the installation, operation and maintenance thereof; and
- (g) Facilitation of the effective implementation of the pilot projects in the model cities.

6. Implementation Structure

The Project organization chart is given in the Annex 1. The roles and assignments of relevant organizations are as follows:

(1) NESDB

(a) Project Director

Secretary General of NESDB will be responsible for overall administration and implementation of the Project.

(b) Project Manager

Director of Spatial Development Planning and Strategy Office, NESDB will be responsible for managerial and technical matters of the Project.

(c) Counterpart Personnel

Counterpart Personnel of Spatial Development Planning and Strategy Office, NESDB will be assigned before the commencement of the Project.

(2) Other organization

Other organization will be added when necessary.

(3) JICA Experts

The JICA experts will give necessary technical guidance, advice and recommendations to NESDB on any matters pertaining to the implementation of the Project.

(4) Joint Coordinating Committee

Joint Coordinating Committee (hereinafter referred to as "JCC") will be established in order to facilitate inter-organizational coordination. JCC will be held whenever deems it necessary. A list of proposed members of JCC is shown in the Annex 2.

7. Project Site(s) and Beneficiaries

NESDB

Local cities/towns in Thailand

8. Duration

The duration of the Project will be three (3) years in three stages. The tentative project schedule is shown in the Annex 3.

9. Reports

JICA will prepare and submit the following reports to the NESDB.

- (1) 30 copies of Inception Report in English at the commencement of the first

- work period in Thailand
- (2) 30 copies of Progress 1 Report in English at the time of 5 months after the commencement of the first work period in Thailand
 - (3) 30 copies of Progress 2 Report in English at the time of 10 months after the commencement of the first work period in Thailand
 - (4) 30 copies of Interim Report in English at the time about 24 months after the commencement of the first work period in Thailand
 - (5) 30 copies of Draft Final Report in English at the end of the last work period in Thailand
 - (6) 50 copies of Final Report in English within one (1) month after the receipt of the comments on the Draft Final Report with CDR
 - (7) 100 copies of Executive Summary of Final Report in Thai and English with CDR
 - (8) Soft data of each report above
 - (9) Education/dissemination material (video and pamphlet)

10. Environmental and Social Considerations

NESDB agreed to abide by 'JICA Guidelines for Environmental and Social Considerations' in order to ensure that appropriate considerations will be made for the environmental and social impacts of the Project.

III. UNDERTAKINGS OF THAI SIDE

The Thai side will take necessary measures to:

1. ensure that the technologies and knowledge acquired by the Thailand nationals as a result of Japanese technical cooperation contributes to the economic and social development of Thailand, and that the knowledge and experience acquired by the personnel of Thailand from technical training as well as the equipment provided by JICA will be utilized effectively in the implementation of the Project; and
2. grant privileges, exemptions and benefits to members of the JICA missions referred to in II-5 (1) above and their families, which are no less favorable than those granted to experts and members of the missions and their families of third countries or international organizations performing similar missions in Thailand.

Other privileges, exemptions and benefits will be provided in accordance with the Agreement on Technical Cooperation signed on 5th November 1981 between the Government of Japan and the Government of Thailand.

IV. MONITORING AND EVALUATION

JICA will conduct the following evaluations and surveys to mainly verify sustainability and impact of the Project and draw lessons. The NESDB is required to provide necessary support for them.

1. Ex-post evaluation three (3) years after the project completion, in principle

2. Follow-up surveys on necessity basis

V. PROMOTION OF PUBLIC SUPPORT

For the purpose of promoting support for the Project, NESDB will take appropriate measures to make the Project widely known to the people of Thailand.

VI. MISCONDUCT

If JICA receives information related to suspected corrupt or fraudulent practices in the implementation of the Project, NESDB and relevant organizations shall provide JICA with such information as JICA may reasonably request, including information related to any concerned official of the government and/or public organizations of the Thailand.

NESDB and relevant organizations shall not, unfairly or unfavorably treat the person and/or company which provided the information related to suspected corrupt or fraudulent practices in the implementation of the Project.

VII. MUTUAL CONSULTATION

JICA and NESDB will consult each other whenever any major issues arise in the course of Project implementation.

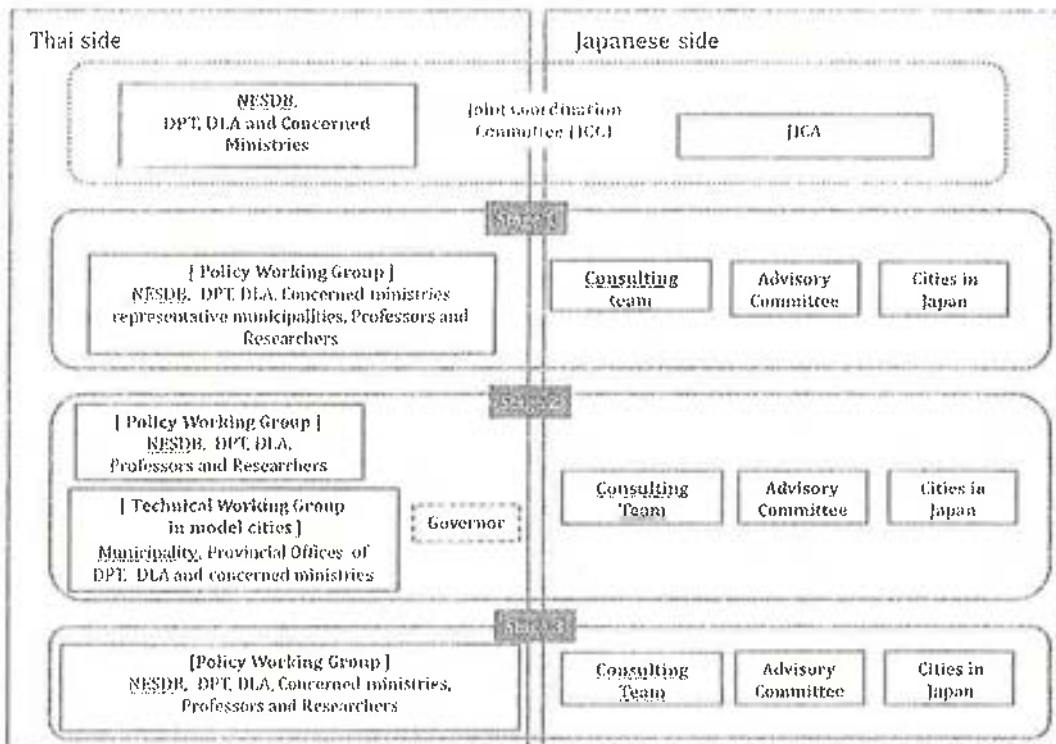
VIII. AMENDMENTS

The record of discussions may be amended by the minutes of meetings between JICA and NESDB.

The minutes of meetings will be signed by authorized persons of each side who may be different from the signers of the record of discussions.

- Annex 1 Project Organization Chart
- Annex 2 A List of Proposed Members of Joint Coordinating Committee/ Steering Committee
- Annex 3 Tentative Project Schedule

ANNEX 1 PROJECT ORGANIZATION CHART



* Underline: main actors in each stage

A: 1A

ANNEX 2

A LIST OF PROPOSED MEMBERS OF JOINT COORDINATING
COMMITTEE

Thai Side

- (1) Secretary-General, NESDB (Chair)
- (2) Director General, Department of Public Works and Town & Country Planning (DPT)
- (3) Director General, Department of Local Administration (DLA)
- (4) Representative, Thailand International Cooperation Agency (TICA)
- (5) Director General, Department of Industrial Works (DIW)
- (6) Director General, Department of Land Transport (DLT)
- (7) Director General, Department of Environmental Quality Promotion (DEQP)
- (8) Director General, Department of Alternative Energy Development of Efficiency (DEDE)
- (9) Director General, Office of Transport and Traffic Policy and Planning (OTP)
- (10) Secretary General Office of Natural Resources and Environmental Policy and Planning ONEP)
- (11) Representatives of Representing Municipalities

Japanese Side

- (1) JICA Missions
- (2) JICA Thailand Office
- (3) Embassy of Japan (Observer)

ANNEX 3 TENTATIVE PROJECT SCHEDULE

1st Stage: July 2015 to March 2016 (9 months)

2nd Stage: April 2016 to December 2017 (21 months)

3rd Stage: January 2018 to June 2018 (6 months)

Timeline	Calendar Year			
	2015	2016	2017	2018
1 st Stage	■			
2 nd Stage		■■■■■		
3 rd Stage				■■■■■
Report	▽	▽	▽	▽
	IC/R	PR1/R	PR2/R	ITR
				▽
Seminars			Dissemination Seminar	

Reports

- (1) Inception Report at the commencement of the first work period in Thailand
- (2) Progress 1 Report at the time about 5 months after the commencement of the first work period in Thailand - PR1 will include the concept of future city development in Thailand by December 2015.
- (3) Progress 2 Report at the time about 10 months after the commencement of the first work period in Thailand - PR2 will include the draft of planning guideline of future city development in Thailand and preparation of formulation of development plan in model cities.
- (4) Interim Report at the time about 24 months after the commencement of the first work period in Thailand
- (5) Draft Final Report at the end of the last work period in Thailand
- (6) Final Report within one (1) month after the receipt of the comments on the Draft Final Report

Appendix 2

Minutes of Meetings on THE PROJECT FOR SMART CITY MODEL

Annex2: Revised ANNEX 3 TENTATIVE PROJECT SCHEDULE (Ver2)

1st Stage: July 2015 to March 2016 (9 months)

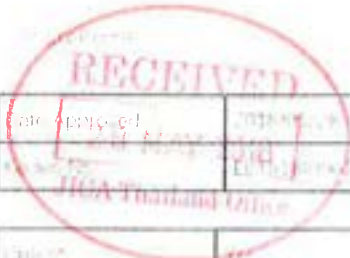
2nd Stage: April 2016 to May 2018 (25 months)

3rd Stage: June 2018 to November 2018 (6 months)

Timeline	Calendar Year			
	2015	2016	2017	2018
1 st Stage	▬			
2 nd Stage		▬	▬	▬
3 rd Stage				▬
Report	▽ IC/R	▽ ITR 1	▽ ITR 2	▽ ▽ ▽ DFR1 DFR2 FR
Seminars		▽ Model City Projects Kick-off Seminar		▽ Dissemination Seminar

Reports

- (1) Inception Report at the commencement of the first work period in Thailand
- (2) Interim Report 1 at the time about 10 months after the commencement of the first work period in Thailand - PR1 will include the concept of future city development in Thailand by December 2015.
- (3) Interim Report 2 at the time about 21 months after the commencement of the first work period in Thailand - PR2 will include the draft of planning guideline of future city development in Thailand and preparation of formulation of development plan in model cities.
- (4) Draft Final Report 1 at the time about 34 months after the commencement of the first work period in Thailand
- (5) Draft Final Report 2 at the end of the last work period in Thailand
- (6) Final Report within one (1) month after the receipt of the comments on the Draft Final Report

	
申請書 No. [REDACTED]	依頼書 No. [REDACTED]

K. S.
[Handwritten signature]

Project	Requesting	Ref
Requester	Requestor	

Subject Title	【Request】Signing of MM for R/D amendment on "Project for Promoting sustainability in Future Cities of Thailand"
Subject Name	【依頼】R/D変更ミニッツ署名 タイ国「未来型都市持続性推進プロジェクト」
Requester	Task
Detail	標記プロジェクトについて、添付のR/D変更ミニッツ(案)にて関係機関と協議を行い、R/D変更ミニッツに署名の上、結果を回電願います。 なお、最終的なミニッツの表現及び体裁については、合意内容を実質的に担保できる範囲内で、貴所の判断にて変更して差し支えありません。 以上

Attachments	添付: R/D変更ミニッツ(案) (1) (2) (3) (4) (5) (6) (7) (8) (9) (10) (11) (12) (13) (14) (15) (16) (17) (18) (19) (20) (21) (22) (23) (24) (25) (26) (27) (28) (29) (30) (31) (32) (33) (34) (35) (36) (37) (38) (39) (40) (41) (42) (43) (44) (45) (46) (47) (48) (49) (50) (51) (52) (53) (54) (55) (56) (57) (58) (59) (60) (61) (62) (63) (64) (65) (66) (67) (68) (69) (70) (71) (72) (73) (74) (75) (76) (77) (78) (79) (80) (81) (82) (83) (84) (85) (86) (87) (88) (89) (90) (91) (92) (93) (94) (95) (96) (97) (98) (99) (100)
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Separate Document	
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Approved by	D 課長、部内副課長 (本部、研究部)		
Date Declared	2018/05/28	Archival Date	Class (45 days)
Requested by	Yoshida, Akihiro (投資企画課)	Requested by	Yoshida, Akihiro (投資企画課)
Dept. Name	社会基盤・平川構想部 (1)		

From	社会基盤・平川構想部 (1)
To	東アジアタイムズ所 (1)
CC	

Appendix 2

List of Members and Summary of Meetings

Appendix 2: List of Members and Summary of Meetings

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1. Member List of TFCP

1.1 List of Joint Coordinating Committee (JCC)

	Position	Organization
1	Director General (or representative)	Office of Decentralization to the Local Government Organization Committee (ODLOC)
2	Director General (or representative)	Bureau of Budget
3	Director (or representative)	Office of Transport and Traffic Policy and Planning (OTP)
4	Director (or representative)	Thailand International Cooperation Agency (TICA)
5	Director General (or representative)	Department of Alternative Energy Development of Efficiency (DEDE)
6	Director General (or representative)	Department of Public Works and Town and Country Planning (DPT)
7	Director General (or representative)	Department of Local Administration (DLA)
8	Director General (or representative)	Department of Environmental Quality Promotion (DEQP)
9	Director General (or representative)	Office of Natural Resources and Environmental Policy and Planning (ONEP)
10	Director General	Digital Economy Promotion Agency (DEPA), Ministry of Digital Economy and Society
11	Director General	Designated Area for Sustainable Tourism Administration (DASTA)
12	Secretary General (or representative)	National Municipal League of Thailand (NMT)

1.2 List of Planning Team (PT)

1.2.1 Tessaban Mueang Chumphon

	Name / Position	Organization
1	Mayor	Tessaban Mueang Chumphon
2	Vice Mayor	Tessaban Mueang Chumphon
3	Chairman of Municipal council	Tessaban Mueang Chumphon
4	Clerk	Tessaban Mueang Chumphon
5	Vice clerk	Tessaban Mueang Chumphon
6	Chief of Office of Clerk	Tessaban Mueang Chumphon
7	Director, Division of Technical Services and Planning	Tessaban Mueang Chumphon
8	Subdivision Chief of Planning and Budgeting	Tessaban Mueang Chumphon
9	Plan and Policy Analysis Officer	Tessaban Mueang Chumphon
10	Directors of all divisions	Tessaban Mueang Chumphon
11	Chairman	Chumphon provincial Chamber of Commerce
12	Chairman	Chumphon provincial industry council

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13	Superintendent	Chumphon Police Station
14	Director	Chumphon Hospital
15	Director	Chumphon Vocational School
16	Director	Sriyapai School
17	Director	Saard Phadern Wittaya School
18	Deputy Director General	King Mongkut's Institute of Technology Lad Krabang (Prince of Chumphon Campus)
19	-	Provincial Office of Transport
20	-	Provincial Local Administration Office (DLA)
21	Chief	Chumphon Governor's Office
22	-	Provincial Tourism and Sport Office
23	-	Provincial Office of Department of Public Works and Town & Country Planning (DPT)
24	-	Provincial Cultural Office
25	Director	Tourism Authority of Thailand (Provincial Office)
26	Director	Chumphon Highway District
27	Director	Provincial Office of Department of Rural Road (DRR)
28	Director	Provincial Natural Resources and Environment Office
29	-	Community Development Provincial Office
30	Manager	Chumphon Provincial Electricity Authority
31	Manager	Chumphon Provincial Waterworks Authority
32	-	Provincial Social Development and Human Security Office
33	-	Chumphon Provincial Train Station
34	Chairman	Restaurant Club in Chumphon Province
35	Owner	Department store (Ocean Super Mall)
36	Chairman	Baan Nai Fhun community
37	Chairman	Baan Nai Sang community
38	Chairman	Poraminmanka 12 community
39	Director	Division of Planning and Budgeting (Chumphon PAO)

1.2.2 Tessaban Mueang Ranong

	Name / Position	Organization
1	Mayor	Tessaban Mueang Ranong
2	Vice Mayor	Tessaban Mueang Ranong
3	Clerk	Tessaban Mueang Ranong
4	Deputy clerk	Tessaban Mueang Ranong
5	Chief of Municipal Clerk Office	Tessaban Mueang Ranong
6	Director, Division of Technical Services and Planning	Tessaban Mueang Ranong

7	Director Division of Finance	Tessaban Mueang Ranong
8	Director, Division of Education	Tessaban Mueang Ranong
9	Director, Division of Public Health and Environment	Tessaban Mueang Ranong
10	Director, Division of Public Works	Tessaban Mueang Ranong
11	Director, Division of Social Welfare	Tessaban Mueang Ranong
12	Plan and Policy Analysis Officer	Tessaban Mueang Ranong
13	Director	Wat-Uppanantaram Municipal School
14	Director	Baan Khao Niwet Municipal School
15	Chairman	Talad Mai-Sao Daeng community
16	Chairman	Rong Kluang community
17	Chairman	Old market community
18	Chairman	Ranong Land community
19	Chairman	Chalerm Pra Kiet community
20	Chairman	Talad Lang Pakdee community
21	Chairman	Ong Karn market community
22	Superintendent	Ranong Police Station
23	Director	Provincial Natural Resources and Environment Office
24	-	Provincial Land Officer
25	-	Fisheries Provincial Office
26	Director	Regional Harbor Office, Ranong Branch
27	Manager	Ranong Provincial Electricity Authority
28	Manager	Ranong Provincial Waterworks Authority
29	-	Provincial Cultural Office
30	Director	Ranong Highway District
31	-	Provincial Public Health Doctor
32	Director	Ranong Community College
33	Superintendent	Ranong Immigration
34	Director	Ranong Hospital
35	-	Provincial Local Administration Office (DLA)
36	-	Provincial Tourism and Sport Office
37	-	Provincial Agriculture and Cooperatives Office
38	-	Office of Commercial Affairs
39	Chairman	Tourism Industry Council of Ranong
40	Mayor	Ranong Tourism Association
41	Mayor	Ranong Provincial Administrative Organization (PAO)
42	Chief Executive	Pak Nam Tha Rue Sub-district Administrative Organization
43	Chief Executive	Bang Norn Sub-district Administrative Organization
44	Chief Executive	Tha Rue Sub-district Administrative Organization

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45	Ms. Issariya Settayukanont	
46	Ms. Chanikarn Hongbunarak	
47	Mrs. Karnda Polsen	
48	Mrs. Kritsana Malasri	
49	Mr. Sucheep Patthong	

1.3 List of Pilot Project Team (PPT)**1.3.1 Tessaban Mueang Chumphon**

	Name/Position	Organizations
1	Mayor	Tessaban Mueang Chumphon
2	Vice Mayor	Tessaban Mueang Chumphon
3	Clerk	Tessaban Mueang Chumphon
4	Vice Clerk	Tessaban Mueang Chumphon
5	Chief of Municipal Clerk Office	Tessaban Mueang Chumphon
6	Director of All Division	Tessaban Mueang Chumphon
7	Director of Technical Services and Plan	Tessaban Mueang Chumphon
8	Ms. Samran Maneewong (Chief of Planning and Budget Subdivision)	Tessaban Mueang Chumphon
9	Ms. Pattiya Krainarumon (Plan and Policy Analyst, Professional Level)	Tessaban Mueang Chumphon
10	Mr. Songpob Panwichartkul (Professional Architect)	Tessaban Mueang Chumphon
11	Director	Provincial Local Administration Office (DLA)
12	-	Provincial Public Works and Town & Country Planning Office (DPT)
13	Officer	Chumphon Railway Station
14	Director	TAT Chumphon – Ranong
15	Community Leader	Baan Nai Fahn
16	Community Leader	Baan Nai Sang
17	Community Leader	Poramin Mankha 12

1.3.2 Tessaban Mueang Ranong

	Name / Position	Organization
1	Mayor	Tessaban Mueang Ranong
2	All Vice Mayor	Tessaban Mueang Ranong
3	Clerk	Tessaban Mueang Ranong
4	Municipality Council Chairman	Tessaban Mueang Ranong
5	Chief of Municipal Clerk Office	Tessaban Mueang Ranong
6	Director, Division of Technical Services and Planning	Tessaban Mueang Ranong
7	Director Division of Finance	Tessaban Mueang Ranong
8	Director, Division of Education	Tessaban Mueang Ranong
9	Director, Division of Public Health and	Tessaban Mueang Ranong

	Environment	
10	Director, Division of Public Works	Tessaban Mueang Ranong
11	Director, Division of Social Welfare	Tessaban Mueang Ranong
12	Plan and Policy Analysis Officer	Tessaban Mueang Ranong
13	Clerical Officer, Division of Public Works	Tessaban Mueang Ranong
14	President	Ranong Chamber of Commerce
15	-	Provincial Public Works and Town & Country Planning Office (DPT)
16	-	Provincial Tourism and Sports Office
17	Community Leader	Talad Kao Community
18	Community Leader	Bangsan Pattana Community
19	Community Leader	Talad Burma Community
20	Community Leader	Pho Ta Khing Community

1.4 List of JICA Project Team

Name	Position
Dr. Katsuhide NAGAYAMA	Team Leader /Urban Development Strategy/Urban Environmental Strategy
Ms. Motoko KANEKO	Deputy Team Leader /Urban Development Strategy (2)/Urban Environmental Strategy (2)
Mr. Atsushi SAITO	Urban Planning /Participatory Planning
Mr. Haruhiko IMAI	Local Administration/Provincial Administration
Ms. Mihoko OGASAWARA	Urban Planning Support (1)
Ms. Ayako NAKAGAWA	Urban Planning Support (2)
Ms. Natsumi SASAKI	Project Coordinator / Participatory Planning
Ms. Veerada Sukcharoenmit	Senior Research Assistant
Ms. Hatairat Chancherdphol	Research Assistant
Ms. Paweena Akrapranwat	Secretary

1.5 List of Model Cities

Phase 1

Name of Model City	Key person
Tessaban Nakhon Chiang Rai	<ul style="list-style-type: none"> • Mr. Wanchai Chongsuttanamanee (Mayor) • Mr. Narongsak Tueansakul (Deputy Mayor) • Ms. Warinin Inkham (Chief of Plan and Policy Analyst Unit) • Mrs. Pornthip Chantrakool (Acting Director of Medical Division)
Tessaban Nakhon Khon Kaen	<ul style="list-style-type: none"> • Mr. Tawatchai Wanapitakkul (Director of Civil Work division)

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Appendix 2: List of Members and Summary of Meetings

Tessaban Mueang Krabi	<ul style="list-style-type: none"> • Mr. Channarong Leelaburanapong (Deputy Mayor) • Ms. Jiratchaya Chaising (Plan and Policy Analyst, Professional Level)
Tessaban Mueang Nan	<ul style="list-style-type: none"> • Mr. Surapol Tiensoot (Mayor) • Mrs. Buapha Kaewmongkol (Director of the Division of Public Health and Environment) • Mr. Banhan Silapetch (Sanitation Technical Officer, Professional Level)
Tessaban Mueang Phanat Nikhom	<ul style="list-style-type: none"> • Mr. Vijai Amaralikit (Mayor) • Ms. Rueankaew Pakdeekham (Assistant Social Development Officer)
Tessaban Nakhon Phitsanulok	<ul style="list-style-type: none"> • Mr. Suthi Hantrakool (Deputy Mayor) • Mrs. Suthaluk Surawatmontri (Plan and policy Analyst Professional Level) • Ms. Napatsaporn Khunmaturospatum (Chief of Research and Evaluation Unit) • Mrs. Darunee Chauyboon (Chief of Phra-Ong Khao Community Health Center)

Phase 2

Name of Model City	Key person
Tessaban Mueang Chumphon	<ul style="list-style-type: none"> • Mrs. Siriporn Mueangprom (Municipal Clerk) • Mr. Charan Suchartpong (Director of Plan and Policy Division) • Ms. Pattiya Krainaruemol (Plan and Policy Analyst Professional Level)
Tessaban Mueang Ranong	<ul style="list-style-type: none"> • Mr. Wichan Tacho (Director of Public Works Division) • Ms. Kanlayapat Karndee (Plan and Policy Analyst Professional Level)

1.6 List of Local Consultant for Phase 2

Tessaban	Role	Organization	Representative / Team Leader
Chumphon	Overall management	Perfect Link Consulting Group	Dr. Jutamas Wisansing (Executive Director)
	Pilot Project Implementation	Faculty of Architecture, Rangsit University	Mr. Thanatwass Wongtimarat (Instructor)
Ranong	Overall management	Perfect Link Consulting Group	Dr. Jutamas Wisansing (Executive Director)
	Pilot Project Implementation	Forum Co., Ltd.	Dr. Panit Pujinda (Managing Director)

2. Summary of Meetings

2.1 Joint Coordinating Committee (JCC)

The Joint Coordinating Committee (JCC) was established in order to facilitate inter-organizational coordination. It is chaired by the Secretary General of NESDC and is comprised of relevant national departments, as listed below. JCC has been held in time with reports submission and whenever necessary, in order to discuss project framework, progress of activities, and any other pending issues.

After the First Phase model city activities, some of the departments were proposed to add in the JCC, in order to respond to the key development issues of local cities in Thailand, such as department related with tourism development and ageing society. Final list of JCC members is as below;

- Director General of Office of Decentralization to the Local Government Organization Committee (ODLOC) or representative
- Director General of Bureau of Budget or representative
- Director of Office of Transport and Traffic Policy and Planning (OTP) or representative
- Director of Thailand International Cooperation Agency (TICA) or representative
- Director General of Department of Alternative Energy Development of Efficiency (DEDE) or representative
- Director General of Department of Public Works and Town and Country Planning (DPT) or representative
- Director General of Department of Local Administration (DLA) or representative
- Director General of Department of Environmental Quality Promotion (DEQP) or representative
- Director General of Office of Natural Resources and Environmental Policy and Planning (ONEP) or representative
- Director General of Digital Economy Promotion Agency (DEPA), Ministry of Digital Economy and Society
- Director General of Designated Area for Sustainable Tourism Administration (DASTA)
- Secretary General, National Municipal League of Thailand (NMT) or representative

During the course of the Second Phase of the Project, the JCC has met two time. A list of JCC meetings and each agenda is shown in Table 2.1.1.

Table 2.1.1 List of JCC Meetings on the Project

Meeting	Date/ Venue	Agenda	Participants (number)
First JCC Meeting	26 November 2019 / Rachadamnoen Room, Royal Princess Lanluang Hotel, Bangkok	<ul style="list-style-type: none"> • Output of the Phase 1 and 2 of SFCI • Future implementation plan of SFCI by NESDC • Draft SFC Plan of Tassaban Mueang Ranong and Tassaban Mueang Chumphon 	<p>Chairperson: Mr. Anek Meemongkol, Deputy Secretary General, NESDC</p> <p>JCC Board Members: 16</p> <p>NESDC: 13</p> <p>Other Thai delegates: 7</p> <p>Model cities: 9</p> <p>JICA: 5</p> <p>JICA Project Team: 4</p> <p>Local Staff: 4</p>

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Appendix 2: List of Members and Summary of Meetings

Meeting	Date/ Venue	Agenda	Participants (number)
Second JCC Meeting	7 September 2021 / Online	<ul style="list-style-type: none"> Overall Progress of Thai Future City Project Progress of Livable Sustainable Future City (LSFC) Sustainable Future City Initiative (SFCl) in Chumphon and Ranong LSFC in Lampang and Sukhothauthani 	<p>Chairperson: Mr. Anek Meemongkol, Deputy Secretary General, NESDC</p> <p>JCC Board Members: 16</p> <p>Other Thai delegates: 24</p> <p>Model Cities: 21</p> <p>LSFC Consultant: 7</p> <p>JICA: 5</p> <p>JICA Project Team: 6</p> <p>Local Staff and Local Consultant for the Project: 3</p>

2.2 Plenary Workshop (WS)

During the course of model city projects, the Plenary Workshop (WS) was organized, where model cities and relevant national departments periodically get together in Bangkok. It aims not only to share the progress and the output of SFCl in each city, but also to discuss common issues on urban development and share lessons learned from each other.

Table 2.2.1 List of Workshops for the Project

Workshop	Date/ Venue	Agenda
First Plenary WS	21 July 2021 / Online	<ul style="list-style-type: none"> Overall Progress of Thai Future City Project and purpose of Plenary Workshop (by JICA Project Team) Session1: Sustainable Ageing Society and Public Transport Oriented Development (by Representative of 5 tessabans) Session 2: Tourism Development (by Representative of 4 tessabans)

2.3 Final Seminar

Final Seminar of the Project was organized online on 2 November 2021. Following the opening remarks by Mr. Sapon Tangpetch, Senior Advisor of NESDC and Mr. Takahiro MORITA, Chief Representative of JICA Thailand Office, Mr. Arkhom Termittayapaisith, Minister of Finance delivered the keynote speech to the Project. Since he was a Secretary General of NESDC who initiated the Project, he mentioned background of the Project as well as expected directions of sustainable urban development of Thailand. Mr. Atsutoshi HIRABAYASHI, a technical advisor of JICA, then presented lessons of local cities development in Japan. JICA Project Team presented overall output of the Project, including project activities, overall framework of SFCl, and lessons learned from SFCl model city projects. After that, out of 8 SFCl model cities, Tessaban Nakhon Phitsanulok, Tessaban Nakhon Chiang Rai, and Tessaban Mueang Krabi presented lessons from SFCl and their future visions. After the presentations by these three model cities, Participants shared their activities/projects associated with urban development and discuss how to disseminate the lessons and outcomes from the Project to other cities. The seminar was closed by Dr. NAGAYAMA, a team leader of JICA Project Team.

Many departments and organizations related to urban development in Thailand were invited to the seminar, as shown in Table 2.4.1.

Table 2.3.1 List of Participants in the Final Seminar

Sector	Organization participated
JCC	<ul style="list-style-type: none"> • NESDC • DLA • OTP • TICA • ONEP • ODLOC
Other Government Agency	<ul style="list-style-type: none"> • Department of Older Persons (DOP) • Ministry of Tourism and Sports • Tourism Authority of Thailand • Community Development Department (CDD) • ONEP • GISTA
Academia/ research Institute	<ul style="list-style-type: none"> • Chulalongkorn University
Model Cities	<p>First Phase</p> <ul style="list-style-type: none"> • Tessaban Nakhon Chiang Rai • Tessaban Nakhon Khon Kaen • Tessaban Mueang Krabi • Tessaban Mueang Nan • Tessaban Mueang Phanat Nikhom • Tessaban Nakhon Phitsanulok <p>Second Phase</p> <ul style="list-style-type: none"> • Tessaban Mueang Chumphon • Tessaban Mueang Ranon • Tessaban Nakhon Lampang • Tessaban Mueang Sukhothai Thani
JICA	<ul style="list-style-type: none"> • JICA Headquarter • JICA Thailand Office • JICA Project Team

2.4 Meetings in Model Cities

During the course of model cities project of SFCl, a series of meetings were organized by each tessaban, including the PT meeting, PCC meeting, PPT meeting, and so on. Timing and numbers of the meeting were varied by tessabans, depending on the progress of SFCl activities in each city. Overall activities are listed in Table 2.4.1, details of which are summarized in the following sections.

Table 2.4.1 List of Activities in Model Cities

Activity	Chumphon	Ranong
Kick-off meeting	19-21 Mar 2019	25 Feb – 1 Mar 2019
Follow-up meeting	10-11 May 2019	3-4 Apr 2019
Pre-PT 1	21 May 2019	-
PT 1	29 May 2019	27 May 2019
PT 2	26 Jun 2019	24 Jun 2019
PT 3	21 Aug 2019	23 Aug 2019
PT 4	9 Oct 2019	8 Oct 2019
Meeting with Mayor	-	12 Dec 2019
PT 5	13 Dec 2019	22 Jan 2020
PT 6	23 Jan 2020	19 Feb 2020
PCC 1	31 Oct 2019	29 Oct 2019
Post-PCC 1	15 Nov 2019	-
PCC 2 (Report submission)	9 Jun 2021	9 Jun 2021
Kick-off meeting for Pilot Project	20 Mar 2020	19 Mar 2020
PPT 1	14 Aug 2020	13 Aug 2020
PPT 2	30 Sep 2020	29 Sep 2020
Meeting with Tessaban 1	3 Dec 2020	2 Dec 2020
Meeting with Tessaban 2	21 Oct 2020	5 Feb 2021
PPT 3 (online)	24 Feb 2021	25 Feb 2021
PPT 4 (online)	22 Jun 2021	25 Jun 2021
Meeting with Tessaban	29 Oct 2021	28 Oct 2021

Source: JICA Project Team

2.4.1 Chumphon

Table 2.4.2 List of Activities in Chumphon

Activity	Date	Agenda
Kick-off meeting	19-21 Mar 2019	<ul style="list-style-type: none"> Announcement of selection of model city Introduction of SFCI and team General information and issues of Chumphon (Governor, Tourism and Sports Office, Young Entrepreneur Chamber of Commerce (YEC), DPT)
Follow-up meeting	10-11 May 2019	<ul style="list-style-type: none"> SFCI Team Mobilization Request to provide data & Information of Chumphon Issues of Chumphon (PAO, Tourism council)
Pre-PT 1	21 May 2019	<ul style="list-style-type: none"> Introduction of SFCI Brainstorming (4 groups): Discuss and share opinions about how to make Chumphon to be a sustainable future city
PT 1	29 May 2019	<ul style="list-style-type: none"> Presentation of the result of data analysis
PT 2	26 Jun 2019	<ul style="list-style-type: none"> Presentation on SWOT analysis Result of questionnaire survey (satisfaction on current situation and importance for future development) Identification of key issues for future cities
PT 3	21 Aug 2019	<ul style="list-style-type: none"> Discussion on the proposed strategic direction
PT 4	9 Oct 2019	<ul style="list-style-type: none"> Discussion on the proposed projects
PT 5	13 Dec 2019	<ul style="list-style-type: none"> Selection of priority program Introduction of the Pilot Project
PT 6	23 Jan 2020	<ul style="list-style-type: none"> Finalization of SFC Plan Selection of the Pilot Project
PCC 1	31 Oct 2019	<ul style="list-style-type: none"> Introduction of SFCI Establishment of PCC Presentation of the draft strategies and proposed projects
Post-PCC 1	15 Nov 2019	<ul style="list-style-type: none"> Discussion on the draft strategies and proposed projects
PCC 2 (Report submission)	9 Jun 2021	<ul style="list-style-type: none"> Report about SFCI model city project (SFC Plan and pilot project implementation)
Kick-off meeting for Pilot Project	20 Mar 2020	<ul style="list-style-type: none"> Introduction of the local consultant team and Pilot Project Team (PPT) Discussion on the scope and details of the Pilot Project
PPT 1	14 Aug 2020	<ul style="list-style-type: none"> Presentation on the results of users' needs analysis, site analysis and SWOT analysis Presentation and gaining opinions on the concept of Draft Master Plan
PPT 2	30 Sep 2020	<ul style="list-style-type: none"> Presentation and discussion on the Draft Master Plan to select pilot zone Presentation of the concept of OM plan
Meeting with Tessaban 1	3 Dec 2020	<ul style="list-style-type: none"> Selection of the implementation elements of the Pilot Project Discussion on OM plan
Meeting with Tessaban 2	21 Oct 2020	<ul style="list-style-type: none"> Presentation and gaining opinions on the basic designs of Zone D and Zone H
PPT 3 (online)	24 Feb 2021	<ul style="list-style-type: none"> Presentation and gaining opinions on the design and construction of Zone D
PPT 4 (online)	22 Jun 2021	<ul style="list-style-type: none"> Report of the pilot project implementation Presentation of the OM plan
Meeting with Governor	29 Oct 2021	<ul style="list-style-type: none"> Report of completion of model city project in Chumphon

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Appendix 2: List of Members and Summary of Meetings

Activity	Date	Agenda
Meeting with Tessaban	29 Oct 2021	<ul style="list-style-type: none"> • Discussion on model city project and future direction • Awarding for Completion of SFCI Model City Project

Source: JICA Project Team

2.4.2 Ranong**Table 2.4.3 List of Activities in Ranong**

Activity	Date	Agenda
Kick-off meeting	25 Feb – 1 Mar 2019	<ul style="list-style-type: none"> • Announcement of selection of model city • Introduction of SFCI and team • General information and issues of Chumphon (Governor, Tourism association, Young Entrepreneur Chamber of Commerce (YEC), DPT)
Follow-up meeting	3-4 Apr 2019	<ul style="list-style-type: none"> • SFCI Team Mobilization • Request to provide data & Information of Chumphon • Issues of Chumphon (PAO, Tourism council)
PT 1	27 May 2019	<ul style="list-style-type: none"> • Presentation of the result of data analysis
PT 2	24 Jun 2019	<ul style="list-style-type: none"> • Presentation on SWOT analysis • Result of questionnaire survey (satisfaction on current situation and importance for future development) • Identification of key issues for future cities
PT 3	23 Aug 2019	<ul style="list-style-type: none"> • Discussion on the proposed strategic direction
PT 4	8 Oct 2019	<ul style="list-style-type: none"> • Discussion on the proposed projects
Meeting with Mayor	12 Dec 2019	<ul style="list-style-type: none"> • Clarification on the assignment within Tessaban • Gaining opinions on proposed projects
PT 5	22 Jan 2020	<ul style="list-style-type: none"> • Selection of priority program • Introduction of the Pilot Project
PT 6	19 Feb 2020	<ul style="list-style-type: none"> • Finalization of SFC Plan • Selection of the Pilot Project
PCC 1	29 Oct 2019	<ul style="list-style-type: none"> • Introduction of SFCI • Establishment of PCC • Presentation of the draft strategies and proposed projects
PCC 2 (Report submission)	9 Jun 2021	<ul style="list-style-type: none"> • Report about SFCI model city project (SFC Plan and pilot project implementation)
Kick-off meeting for Pilot Project	19 Mar 2020	<ul style="list-style-type: none"> • Introduction of the local consultant team and Pilot Project Team (PPT) • Discussion on the scope and details of the Pilot Project
PPT 1	13 Aug 2020	<ul style="list-style-type: none"> • Presentation on the results of users' needs analysis, site analysis and SWOT analysis • Presentation and gaining opinions on the concept of Draft Master Plan
PPT 2	29 Sep 2020	<ul style="list-style-type: none"> • Presentation and discussion on the Draft Master Plan to select the implementation elements • Presentation of the concept of OM plan
Meeting with Tessaban 1	2 Dec 2020	<ul style="list-style-type: none"> • Confirmation of the components and schedule of implementation • Discussion on OM plan
Meeting with Tessaban 2	5 Feb 2021	<ul style="list-style-type: none"> • Presentation and gaining opinions on the basic design for the construction
PPT 3 (online)	25 Feb 2021	<ul style="list-style-type: none"> • Presentation and gaining opinions on the detailed design and construction of Zone D
PPT 4 (online)	25 Jun 2021	<ul style="list-style-type: none"> • Report of the pilot project implementation • Presentation of the OM plan

Activity	Date	Agenda
Meeting with Governor	28 Oct 2021	<ul style="list-style-type: none">• Report of completion of model city project in Ranong
Meeting with Tessaban	28 Oct 2021	<ul style="list-style-type: none">• Discussion on model city project and future direction• Awarding for Completion of SFCI Model City Project

Source: JICA Project Team

Appendix 3

Good Practices of Sustainable Urban Development
in Japan

Appendix 3: Good Practices of Sustainable Urban Development in Japan

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1. Introduction

This Appendix 2 introduces some of the good practices in sustainable urban development, particularly in the cities of Japan, covering the following sectors: (i) economic, (ii) social, and (iii) environmental. Those cases can be references for tassabans in Thailand for their own urban development programs under SFCL.

2. Economic Sector

2.1 Kanazawa Air (Wi-Fi Spot for Tourism Promotion)¹

Tourists need a map, information on transport, accommodations, location of tourism spots, restaurants etc., especially for foreign tourists in Japan facing difficulties in obtaining such information, which is provided mostly only in Japanese.

Due to the rapid increase of foreign tourists, advanced municipalities such as Kanazawa City have introduced free wi-fi services to provide tourism information in several languages. Free wi-fi network is also useful in cases of emergency such as during earthquakes, which is another reason for municipalities to promote free wi-fi network.

Kanazawa City is one of the first municipalities to launch Kanazawa AIR project which aimed to provide free wi-fi spots for tourism promotion in 2011. After a year, more than 1,000 wi-fi spots had been opened. In this project, Kanazawa City established only 10 free wi-fi spots while private companies opened the rest of the spots, which people can use with charge. On the other hand, Kyoto City (an old capital of Japan) serves all wi-fi spots to people without charge. The difference between these two cities comes from the difference in municipality expenditure. It means Kanazawa City spent meager funds.



Figure 2.1.1 Distribution of Wi-Fi spot in Kanazawa City

To provide more information to tourists, the city holds a contest of smart phone applications every year. This also aims to enhance the skill and know-how of participating

¹ Reference Material: http://www4.city.kanazawa.lg.jp/11010/wifi/index_2.html

companies. Kanazawa City's major roles in this contest are to coordinate the project, and to notify private companies of possible sites for wi-fi service.

Recently, some private companies analyze data about a tourist's sightseeing route gained from wi-fi usage. Based on these information, municipalities and tourism business associations improve on their services.

2.2 Town Management Organization (TMO) of Ozu City²

Town Management Organization (TMO) is an organization which engages in a comprehensive promotion of improving built-up areas and the vitalization of commercial activities in city centers. In Ozu City, which is located at the south-west part of Japan and has a population of 39,500, the TMO was established by a local private sector investor (50%) and the municipality (50%) to revitalize the downtown area of the city. In 2002, the TMO operated a roadside shop for tourists and sold local products.

When the TMO started, only a manager and three high school graduates operated the TMO. Nobody except the TMO profited in the first five years. To address this situation, the manager asked the young members to frequently send messages through their blogs, which were then accessed by many people. After that, the manager started to sell local food and sweets on the Internet. Sales rapidly boosted and the TMO profited in the first year.

The manager considered that it was most important to revitalize downtown to increase tourists. Previously, most of the tourists just dropped by the city, and stayed for a couple of hours only, following the program of travel agencies. The manager then decided to develop their own tour programs wherein tourists can enjoy the city. The program needed the cooperation of both merchant and community, some of whom already profited from Internet sales and were willing to cooperate. In parallel, the manager asked the young members to study tourism operation and the young men passed the national exam for tourist agent qualification. Then, the TMO became a tourist agent. The TMO sold their programs mostly to airline companies and railway companies. As tourist agents located in the metropolitan area, they accepted the TMO program, such as stay to experience charcoal making, holidays in canes, excursion of Hiji River and townscape watching in downtown, and Shigure (traditional sweet of the city) making afterwards. As a result of these efforts, the number of tourists increased almost three times, and employed personnel doubled.



Roadside Shop



Hiji River

² Reference Materials: <http://www.city.ozu.ehime.jp/soshiki/kankou/1210.html>

2.3 Traditional Housing and Industrial Development – Kaneyama Town³

Kaneyama Town is located at the northern region of Japan and is famous for cedar mostly used for building houses. Here, the height of cedar trees sometimes exceeds 60 m.

In general, local traditional houses were built by cedar and carpentering and lumbering were one of the most popular industries of the town. However, when modern pre-fabricated houses were constructed and their use gradually increased, the local carpentering and lumbering industry started to decline since the pre-fabricated houses were not produced in town.

In order to protect the local industry, the municipality decided to introduce a subsidy for citizens in case they build or reform houses in conformity with the guidelines for traditional houses. In parallel, the municipality utilized woods as much as possible when renewing bridges from steel to wood, paving pedestrian roads by wood tips and introducing bio-energy, and so on.

As a result of these efforts, the traditional type of houses gradually increased, and more tourists visited the town. With the increase of tourists, a new tourism industry was developed which created job opportunities for the citizens.



Figure 2.3.1 Image of Town scape



Figure 2.3.2 Kaneyama House

³ Reference Materials: www.reinet.or.jp/pdf/chihosousei/report/No04-2015Mar.pdf, <http://town.kaneyama.yamagata.jp/sanyo/keikan100/>



Figure 2.3.3 Wood Chip Pavement



Figure 2.3.4 Wood Bridge



Figure 2.3.5 Other examples of using wood

2.4 Shinmachi Boardwalk and Parasol Shops (Tokushima City)⁴

While Shinmachi area is located at the center of Tokushima City, it had faced serious decline of commercial activities and recently lost its vitality. The challenges to revitalize Shinmachi started with the “Beautification Project of the Shinmachi River” in the second half of 1980s. The riverside park opened in 1989, as a part of this project.

In 1996, the riverside walkway was developed as a wooden pedestrian path with 287 meters in length and six to seven meters in width. The walkway opened in collaboration with retail shops located along 10 commercial streets. The broad walkway was previously used as a car parking lot operated by the province.

In 1998, 50 parasols were installed along the boardwalk to invite the public to open shops. People rented the space under the parasols, then applicants opened their shops at JPY 3,000 per day. These parasol shops opened every Saturday, Sunday, and public holidays. Many people applied to rent the parasol shop spaces and sell various products such as fashionable goods, miscellaneous goods, foods and fortune-telling. This parasol shopping area attracted many customers and was utilized as part of a venture education program for high school students to open shops and to sell their products.

There are around 20 to 30 cases of people who opened parasol shops then started new permanent shops in commercial areas nearby. The parasol shops also work as an incubator of businesses in the city.

⁴ Reference material: <http://rurubu.jp/andmore/spot/80035488>



Figure 2.4.1 Shinmachi Boardwalk

2.5 Murakami Town Renovation by Citizens⁵

Murakami City has a population of about 28 thousand, and a history as a regional center. However, the economic activities as well as traditional townscapes of the downtown area has gradually declined.

To revitalize the area, one town merchant started the movement called, “Traditional Town-House Renovation Project” by renovating traditional houses in 2006. The citizens established the fund to proceed with this project aiming to collect 100 million yen in 10 years. They tried to collect 10 million yen per year through membership fees and contributions.

The fund subsidized 0.8 million yen (less than project cost) to those who would renovate the town-house in the traditional way. “Black Wall Project” was also launched to cover walls made of concrete and bricks with black-painted wood to recreate the traditional streetscape. Participants of the project paid 1,000 yen for a wood plate and constructed traditional walls by themselves.

So far, 30 traditional town-houses have been renovated and the length of renovated walls has reached 150 m. Members of the project have increased. Approximately 4,500 private companies and 60 enterprises have joined the movement.

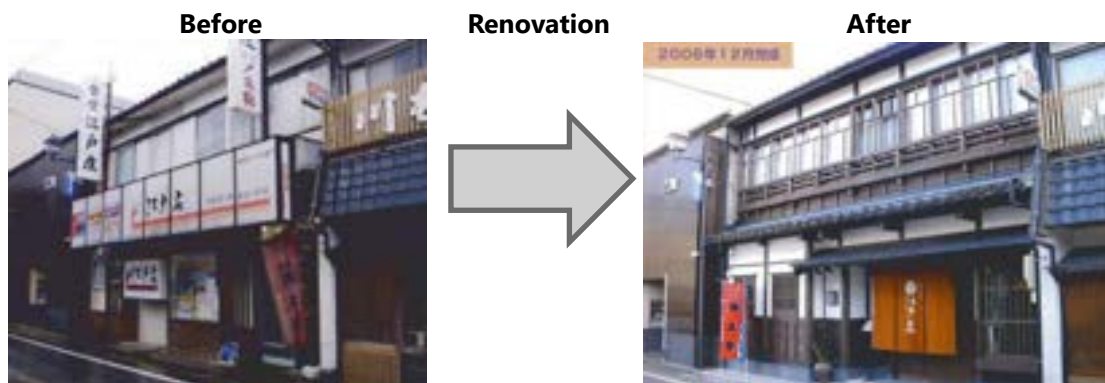


Figure 2.5.1 Murakami Town Renovation (before and after)

⁵ Reference materials: http://gurutabi.gnavi.co.jp/a/a_253/, <http://www.mmsp.info/jigyo-naiyou.htm>

2.6 A-Ranked Gourmet Town - Ohnan Town⁶

Ohnan Town has a population of about 11.5 thousand people. It is surrounded by mountains with agriculture as its major industry. To revitalize the town and cope with a declining population and aging, the municipality started a project of “aiming for an A-ranked gourmet town,” focusing on the food industry, since the town has an abundant variety of food and a rich food culture. The municipality also knew the fact that more Michelin-starred restaurants were located in remote villages than in urban areas. Therefore, the municipality established a new Italian restaurant, with 95 percent of the food ingredients used at this restaurant produced in the region. This restaurant is usually fully booked by people from various places in Japan because of its high-quality of foodstuff and cooking. The restaurant subsequently started a capacity development program of chefs named “cultivating chef”. In this program, people yearning to be a chef learned agriculture, as well as cooking,



Scenery in Ohnan Town

for three years. Five years after the program started, 43 people started their restaurant business and agriculture in the town. Some 240 people likewise migrated in town.

The school of food was also opened by the municipality with the aim of passing their traditional food culture of over 100 years, to their children. The school provides the following three types of programs:

- (1) Year-round Course
 - Professional Training Course;
 - Kids Kitchen Course;
 - Natural Food Course etc.
- (2) One-time Lecture
 - Traditional food of the region;
 - Lecture by special guest.
- (3) Order-made Course
 - Corresponding to the request.



⁶ Reference materials: <http://si-ajikura.com/>, <http://ohnan.com/>



Figure 2.6.1 School of Food (left) and Italian Restaurant (right)

2.7 From “Artist in Residence” to “Work in Residence”, Kamiyama Town⁷

Kamiyama Town is a mountainous village with an altitude of 300-500 m, and a population of about 5,300 in 2016. Since Kamiyama Town has been facing decline and aging of population (49.5% of its population is above 65 years old in 2016), the town has addressed mitigating such trend.

In 1999, the international art project, “The Kamiyama Artist in Residence (KAIR) Program” was started by volunteers. They invited both domestic and international artists by providing an opportunity to stay and produce art works in a supportive and communal environment in town. This project also focused on creating an interaction between the citizens and the artists during their work period. In 2004, the volunteers’ group became the NGO of “Green Valley” to enlarge their field of activities, not only to support artists, but also to transmit regional information, improve environment and living conditions, support migration, attract satellite offices and support businesses. This project succeeded in inviting artists as “artists in residence”, but was limited by the increase in the number of artists. In 2008, when they opened their website to transmit various information about the town, they found that people accessed the page, “Live in Kamiyama” the most, and then got an idea to change the concept of “artist in residence” to “work in residence” to develop the town.

The first office which moved into town was a crowd computing service company with 70 staff members. The reasons for deciding relocation in town were because an optical fiber network was already prepared, the cost of office space and living quarters were cheap, and the natural and social environment were impressive.

While ICT companies require a high-speed communication network, they can do their business in any place as long as the network condition satisfies their needs. By developing such network environment in town, satellite offices gradually started to relocate too. The town now doesn’t welcome all companies but chooses companies from candidates considering harmonious and sustainable to society.

⁷ Reference materials: <http://www.ashita-lab.jp/special/637/>, <http://motorashi.com/feature-tokushima-cominami/21150806>



Figure 2.7.1 Landscape of Kamiyama Town



Figure 2.7.2 Activities of Artist in Residence



Figure 2.7.3 Satellite Offices by renovating vacant houses



Figure 2.7.4 Satellite Office Complex

2.8 The Green Farm – Kagoshima City⁸

Kagoshima City is located in the southern island of Japan and has a population of about 600,000. While there is a rich rural area with abundant agricultural products in the city, the city has faced a declining population and an aging society. It also lacked farm workers.

In 2012, the municipality formulated, “Green Tourism Promotion Plan” to respond to the needs of citizens in urban area and tourists and to revitalize the rural area by green tourism.

⁸ Reference material: <http://kankonogyo-park.jp/>

“Green tourism” in the city is defined as enjoyable activities like interacting with nature, culture, and people in rural areas, and promoting an interaction between rural and urban areas by utilizing the agriculture, forestry and fishery industries.

The “Green Firm” opened in the same year as a symbol of the green tourism. It has various facilities such as a farm stand, farm restaurant, camp, play equipment, and allotment garden to enjoy an agricultural experience in its total area of 41.3 ha. In the Green Farm, local residents and visitors can deepen their interaction with each other by the agricultural experience programs, while private companies produce safe agricultural products.



Figure 2.8.1 Overview of Green Farm

Table 2.8.1 Number of Visitors

Year	2012	2013	2014	2015
No. of visitors	90,500 persons	209,100 persons	192,700 persons	193,000 persons

2.9 Environmental-Economic Strategy through Symbiosis with Oriental White Stork in Toyooka City

Toyooka City is a small city with a population of 85,000 that promotes a unique sustainable development policy to go with economic activity and environment preservation. A core policy of its environmental-economic strategy is to revitalize natural environments, including mountains, forests, paddy fields, clean water surfaces, and ecosystems within

them, where oriental white storks⁹ can survive with human beings. Toyooka’s strategy is also to promote environmental-friendly lifestyle and develop local industries which can preserve natural environment.

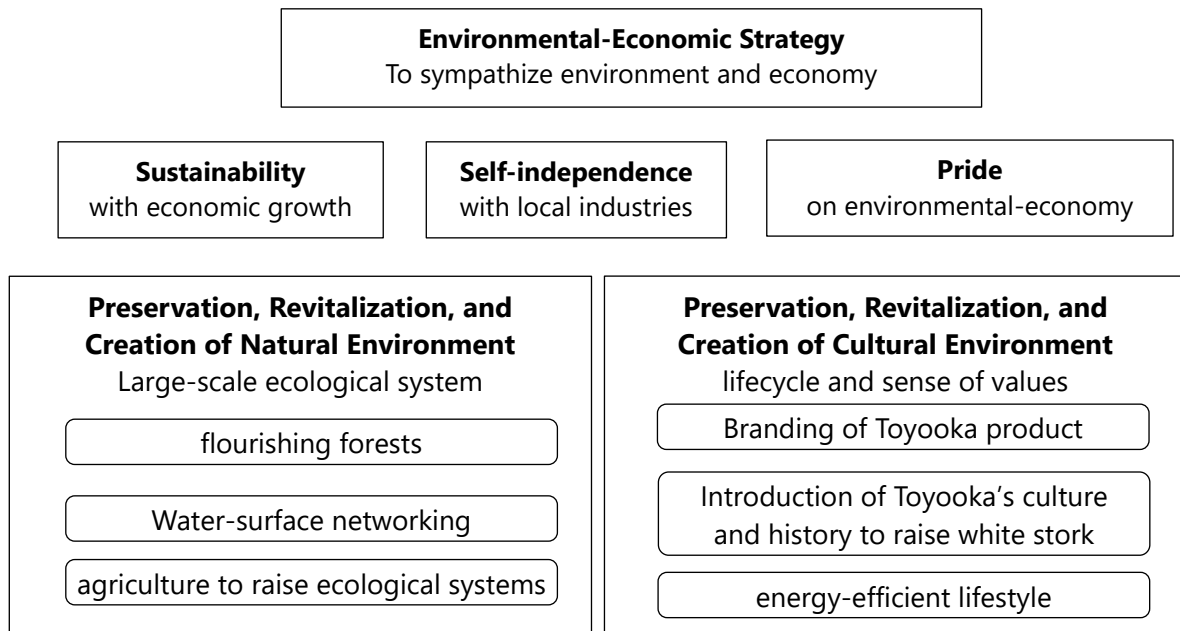


Figure 2.9.1 Development Framework of Toyooka City’s Development Strategy

Environmental-creative Agriculture

Creative farming methods to raise white storks have been developed including the following: (i) disuse or reduction of agricultural chemicals; (ii) disuse of chemical fertilizer; (iii) extension of periods to put water into the paddy fields, and so on. Product branding with a symbol of white storks has brought a high price.

Eco-tourism with oriental white stork

In addition to eco-tourism, preservation of oriental white storks, including artificial raising and release into the wild methods, are exhibited in the museum. Historical and cultural resources of Toyooka City are also introduced through Oriental White Stork Eco-tourism.

Various Environmental Industries

Toyooka’s environmental-economic strategies have promoted various eco-industries by private enterprises. These include production of solar battery, biodiesel fuel using waste edible oil, and production of charcoal using timber from forest thinning.

⁹ Oriental white storks are threatened with extinction. While it had been disappeared in Japan, artificially raised ones were release into the wild in Toyooka City in 2005.

3. Social Sector

3.1 “Share Kanazawa” - Continuing Care Retirement Community at Kanazawa City

The social welfare cooperation “Bussi-En” (Buda’s children society) developed and has operated a new type of Continuing Care Retirement Community (CCRC) called, Share Kanazawa. The key concept of this CCRC is to integrate multi-generation and diversified people, including elderly persons, handicapped, and younger generations such as students.

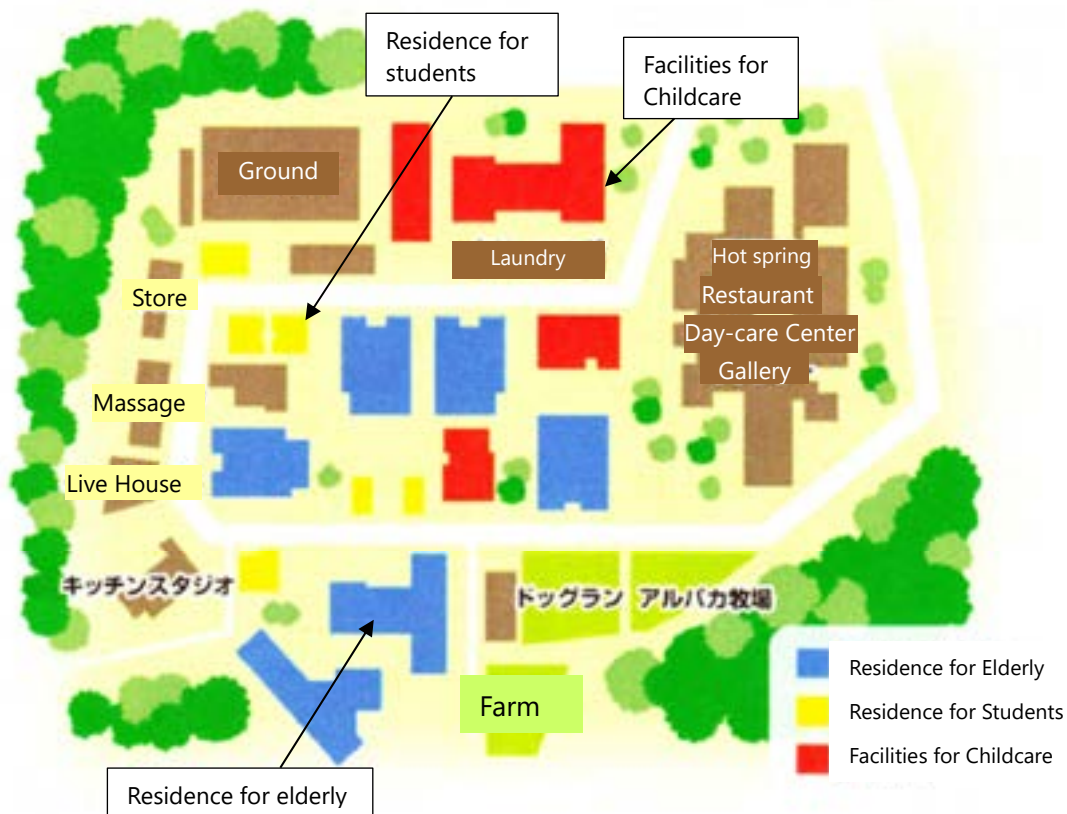
Share Kanazawa opened in March 2012. With a total area of 3.7 ha., it has a residence for elderly people, day care center for elderly people, residence for students, after-school spaces for school kids, and facilities for handicapped persons. Overall construction cost was about JPY 1.7 billion, of which JPY 450 million was subsidized by the Central Government. A variety of services are provided in Share Kanazawa. It includes elderly care residences, day care services for the elderly, after-school services, support for kids with developmentally disability, job assistance for disabled people, etc. Share Kanazawa also provides a platform to connect regional universities with local community people.

With a key concept of “Town developed by myself,” there are various businesses operated in Share Kanazawa, including cleaning services, restaurant, educational club for kids, body-care escapist, etc. Some of them are operated by elderly or handicapped people who live there.

Share Kanazawa provides not only care services for elderly persons but also working opportunities for the elders. In other words, Share Kanazawa is a new community developed by all stakeholders to make their lives more livable.



Figure 3.1.1 Overall View of Share Kanazawa



Source: Share Kanazawa (<http://share-kanazawa.com/index.html>, <http://www.nexttep-k.com/2017/05/05/4452>)

Figure 3.1.2 Overall Facility Map of Share Kanazawa



Source: Bussi En

Figure 3.1.3 Image of Multi-generation integration

3.2 Silver Resource Center/ Elderly Resource Center¹⁰

To provide opportunities to make elderly people feel their lives more worthy, a silver resource center was established in 1975, in Tokyo to provide job opportunities to the elderly in response to their various needs. This idea has spread to many provinces and cities in Japan, so the Central Government started to support with it laws and subsidies. The center is operated as a public corporation, and functions to coordinate between the elderly and households, companies or public institutions in the city which provide job opportunities. The center likewise functions as a communication support.

Table 3.2.1 Number of Participants of Japan (2015)

No. of Centers	Registered Members		
	male	female	Total
1,314	483,470	237,478	720,948

Elderly persons who still want to work with their skills and knowledge visit the center and register their desired type of job. Then, the center finds a job for the registered person based on the request.

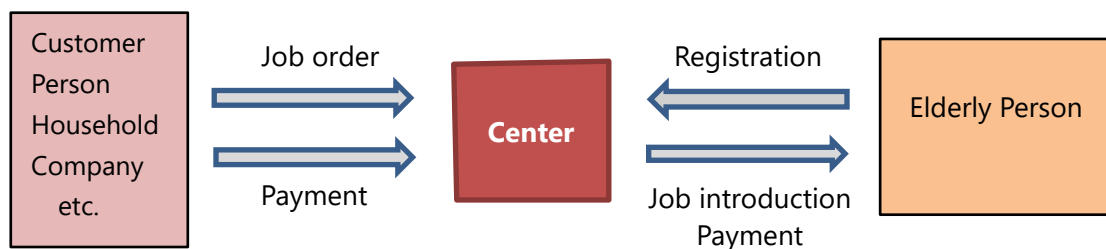


Figure 3.2.1 Mechanism of Silver Resource Center/ Elderly Resource Center

There are various types of jobs on the list, for instance, tutor, translator, personal computer support, carpenter, gardener, painter, reformer of clothes, office worker, accountant, surveyor, building maintenance, parking management, salesman, store tender, pickup and delivery personnel, house cleaner, agricultural assistant, houseworker, elderly care and childcare attendants. The amount of payment, however, is generally cheap when compared with the market price due to the value of work for elderly people as well as the minimized administrative cost.

3.3 Programs of Utilizing Home of Elderly Persons¹¹

Program-1: Reverse Mortgage

A reverse mortgage is one type of loan which people, mainly over 50 years old, can obtain in exchange for their property. To receive living expenses as a pension, house owners can

¹⁰ Reference Materials: <http://www.zcip.or.jp/>, <http://www.chofu-sc.or.jp/>

¹¹ Reference Materials: <https://p-kaigo.jp/guide/reversemortgage/>, <https://www.jt-i.jp/lease/>

put up their house as a mortgage. The balance can be paid by the property pledged as a mortgage even after the owner’s death.

This program was introduced by municipalities, and is the first case that Musashino City introduced in 1981. Since lenders have to take the risk when the house owner lives longer or the property value declines, this program has not been popular. Some commercial banks, however, provide this kind of services recently with a loan limit within 50-70 percent of the present property value.

Even if elderly person loses his or her property when the contract expires, he or she can keep living in the house while receiving living expenses until his or her death.

Program-2: House Leasing Program

This program coordinates between elderly house owners who want to lease their own house and people who want to rent houses through municipalities and specific public corporations. In this program, the corporation rents a house owned by an elderly person as long as the owner needs to lease, and guarantees a monthly payment to the owner during the contract period. If the owner wants to rent the house even after his or her death, the contract can be terminated and the house will be returned to the owner’s heir.

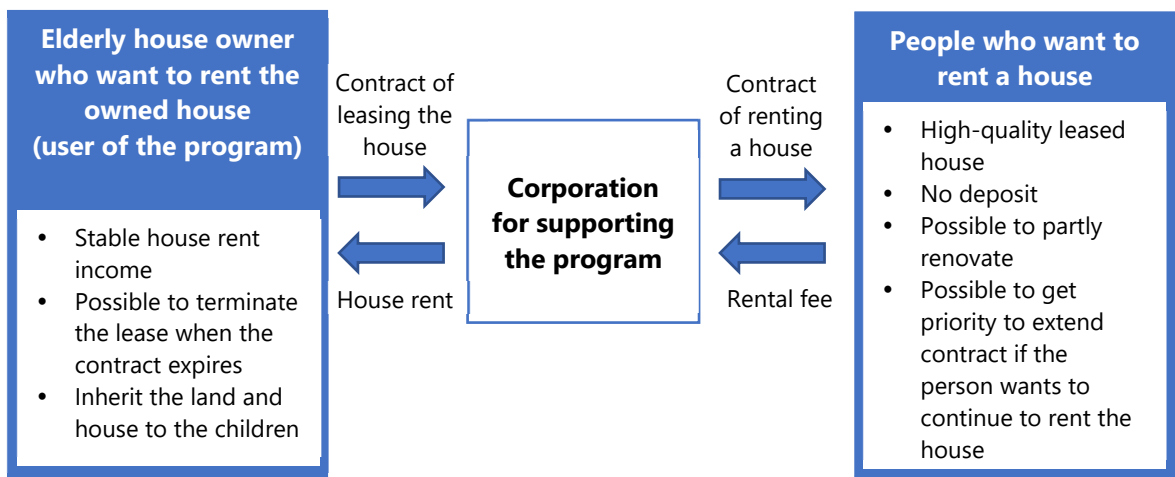


Figure 3.3.1 Mechanism of House Leasing Program

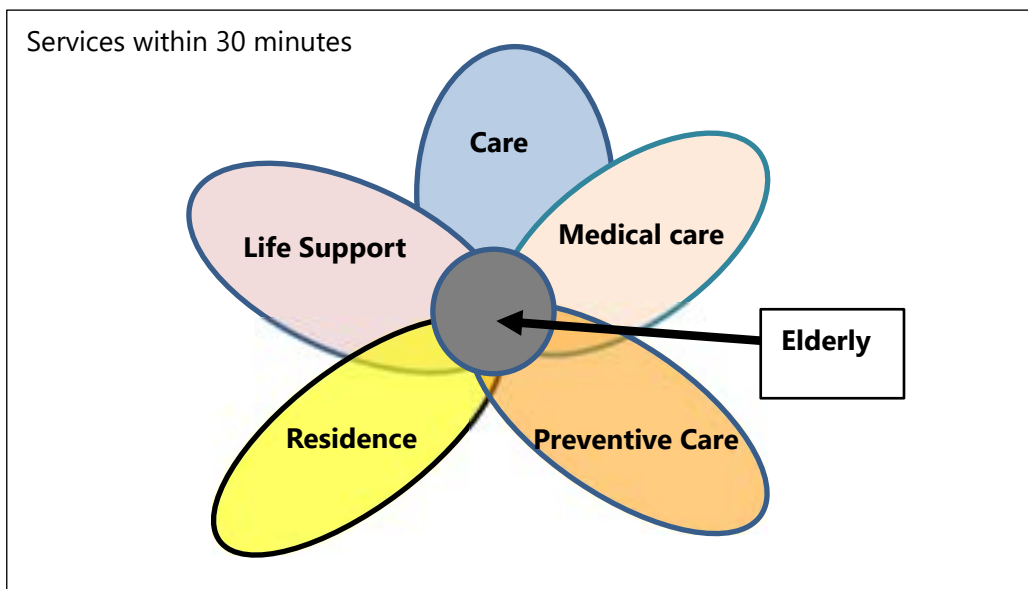
The most possible case is that an owner needs to move from his/her house to a care house to receive adequate care service. In this case, the cost for the care service can be covered by the income from leasing the house.

The leasing houses are sometimes renovated by the corporation to meet the demand of younger generation.

3.4 Regional Comprehensive Support Center

By the Long-Term Care Insurance Act, every municipality is required to establish at least one regional comprehensive support center to improve the level of health and medical services and to promote social welfare comprehensively. Total number of centers in Japan including this branch is 7,072 (in 2012), which means one center covers around 17,000 elderly persons on the average.

The center arranges suitable care services for the elderly, identified by the care necessity check as a person necessary to support. The basic concept of the regional comprehensive support is the integration of all aspects of an elderly person's life.



Each center has certified social worker, health nurse, and care manager, and they cooperate to support the citizens' life. The roles of these professionals are shown below:

Role	Contact	Support for Preventive Care	Comprehensive care by regional network	Right Protection Prevention of Ill-Treatment
Certified Social Worker	Care, Life Support Consumer Damage		Municipality Relevant Organization	Ill-Treatment Guardian
Public Health Nurse	Health Medical Service Care Prevention	Payment Community support Project Prevention care management	Public Health Center Hospital Pharmacy	Ill-Treatment

Care Manager	Care in general		Consultation of care Network of Private Sector Quality improvement of Private Sector	Ill-Treatment
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To receive necessary support, elderly persons ask a care manager to first give a consultation, then the necessary support is provided. The cost of services is partly paid by elderly person (10-20% of total cost).

3.5 Barrier Free Project in Tokorozawa City¹²

The introduction of barrier free to the new mobility facilities was made compulsory not only for public sectors, but also for private sectors, since Barrier Free ACT was effected in 2004. The following figure shows the physical requirements of barrier free.

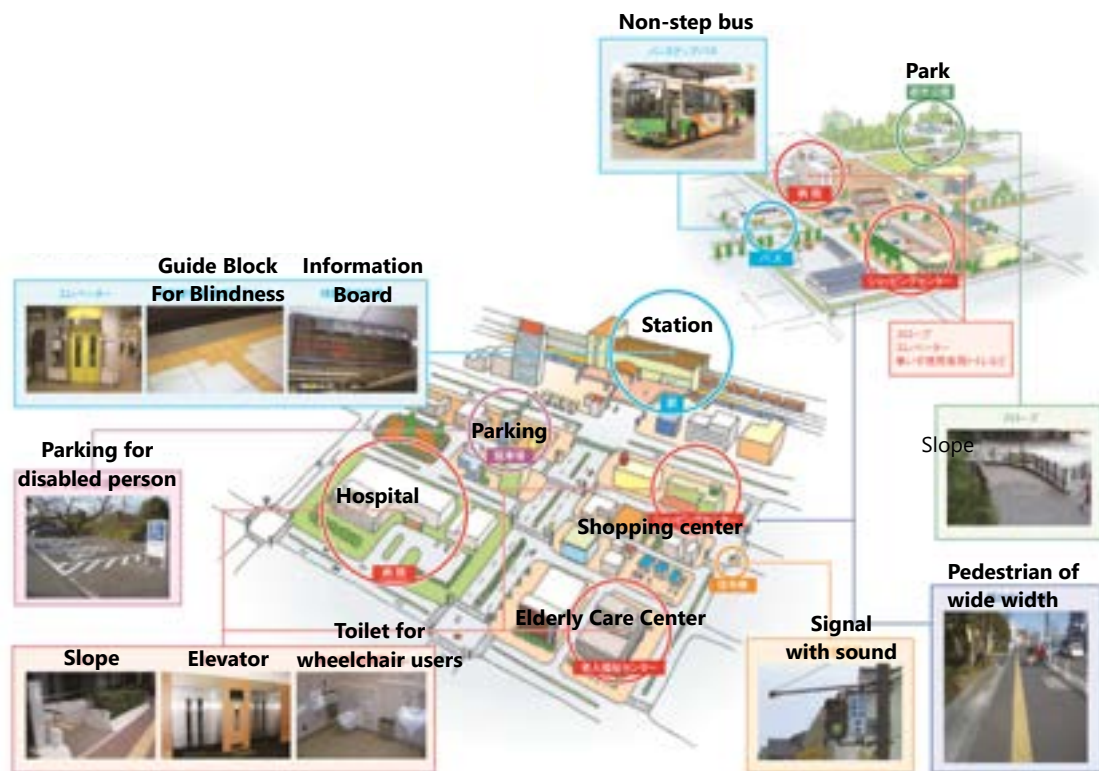


Figure 3.5.1 Overview of Barrier Free Project in Tokorozawa City

TOKOROZAWA city Tokorozawa City has also been implementing barrier-free projects based on a plan aimed at providing a society where people can live equally regardless of age and the presence or absence of disabilities.

¹² Reference materials:

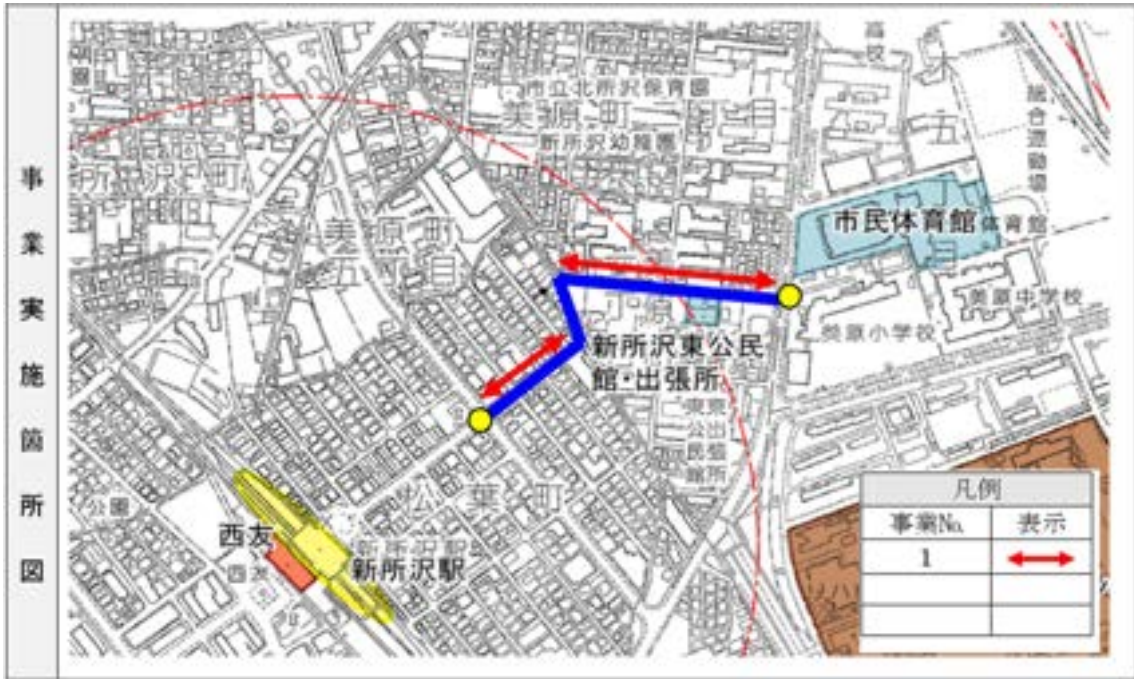
http://www.city.tokorozawa.saitama.jp/shiseijoho/keikaku/jissi/barrierfree/Koutu_201003241742101534.html

Vision
 Everybody feels safe Every place is safe
 TOKOROZAWA – Barrier-Free Town of Heart

- Basic Policy
1. **To develop spaces that are easily usable, safe to move in for everybody;**
 2. **To realize a safe and comfortable environment through mutual support of minds;**
 3. **To make a people-friendly city with participation from the municipality, citizens, groups and companies.**

Example of Improvement Plan at Strategic Area

Improvement of pedestrian	Road No. 3-737, 3-494	2016
Removal of obstacles from pedestrian lanes in the whole area		2017-2018



**Figure 3.5.2 Implementation Items for Barrier-free
 (Braille Blocks, Slope for Wheel Chair, Guide Map with Braille, Wheel Chair Space in the Train)**



Figure 3.5.3 Improvement toward Smooth and Flat Pedestrian



Figure 3.5.4 Introduction of Pedestrian lanes to the street

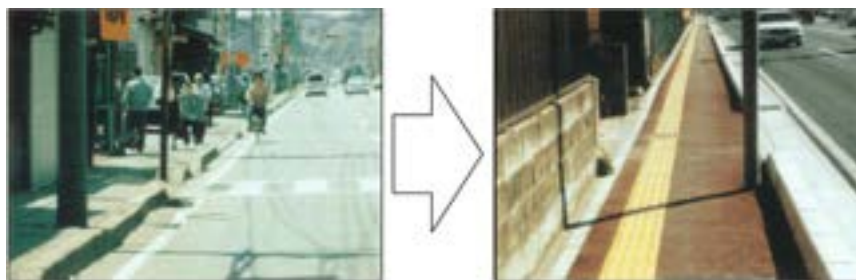


Figure 3.5.5 Improvement for continuity of flatness

In addition to the physical improvement above, software programs for promoting barrier free are also implemented. The examples of the program are shown below:

- Control of illegal car parking and removal of standing bicycles;
- Extension of lighting time of green light of traffic signals for pedestrians;
- Improvement of sound signals for visually challenged;
- Various efforts to promote public awareness for barrier free;
- Producing barrier free maps with citizens' participation.

3.6 Community Education in Kusatsu City

Kusatsu City focuses on the community education toward its urban development concept, "City development is human development." To improve education, Kusatsu city established, "Educational promotion master plan," which has three main pillars: i) to raise children healthily; ii) to develop educational environment; and iii) to create enriched learning opportunities and places in the community. Achievement of each program, such as the number of participants and the progress are checked every year to realize its basic concept of "Educational City where children live actively, City with various meetings and education, KUSATSU". Based on this Educational promotion master plan, Kusatsu City has promoted lifelong learning, in particular support for education at home and youth activities like Boy

Scout, fostering study volunteers who utilize their own knowledge or skill for social contribution, and organizing art festival to create society where people learn from each other.

Kusatsu City started the educational program, "Community collaboration school" in 1998. This program aims to create a community learning society where children and adults learn from each other in the close living area. This program can be a center of interaction between students and adults aside from teachers joining this program.

Every elementary and junior high school can conduct their own unique activities under this program, because the program allows schools to formulate activities by taking advantage of its feature. At the beginning of formulating activities, teacher(s) in charge of this program in each school plan state "what they would like children to learn and experience." Now, elementary schools have a coordinator for the program who supports the implementation of the activity by looking for people or private companies in the community that show interest in participating in the program and organizing activities. People or private companies basically participate in this program by supporting classes or club activities, developing school environment, and securing students' safety to and from school without any charge. Figure 3.6.1 and Figure 3.6.2 show the examples of the activities of community collaboration school. Skill and knowledge of local people and local culture are introduced to the classes.



Figure 3.6.1 Lesson of Koto



**Figure 3.6.2 Making traditional dish
"Masu Zushi"**

There is also an activity at the community center wherein students stay in the community center for several days during their summer vacation. This activity is supported by their parents and by many people in the community.

Kusatsu City has another lifelong learning program through Japanese language culture called "Haiku", which expresses in 17 words, the changing of seasons and natural beauty. This program came from Yamazaki Sokan, born in Sina-cho, Kusatsu city in 1465, and made the basis of Haiku for people to enjoy it.

A part of this program is Youth Haiku contest targeted at fifth and sixth graders. This contest provides the students a chance to look at the beautiful nature around the city and be interested in their hometown.

Kusatsu City also organizes hiking and walking activity under this program. Every people can join this activity regardless of age. Participants walk around the city watching the historical streetscape and nature, make Haiku, and select the best among the participants. This activity promotes the culture of Haiku and encourages people to support their city by reminding them of the great sites and local resources in the city.

Kusatsu City started interacting with Kannonji City in Kagawa Prefecture where Yamazaki Sokan died through the organizations of Haiku around 1980. In October 1981, the sister city affiliation was signed. After that, not only the organization of Haiku but also cultural organization, local government and exchange each other.

There are other educational programs for adults and children in Kusatsu City. Kusatsu City provides a special lecture at the university for adults on its history and culture, as well as that of Biwa lake. For children, Kusatsu City organizes "Kids cinema school" where children produce movies on the city's history and culture. In this program, children use real equipment to shoot movies and play roles. Children participating in this program can spread knowledge about Kusatsu City through movies. This program also provides career education to encourage children to plan their future through the experience-based activity.

3.7 Seaside Gallery in Kuroshio Town - Beach is Museum¹³

Kuroshio Town has a beautiful four-kilometer beach facing the Pacific Ocean. In 1989, a T-shirt art festival was held on the beach and photos of 1,000 t-shirts printed by participants were hanged on the beach. From this T-shirt art festival, the "Seaside Gallery" came about with a concept, "Beach is Museum" considering everything related to the beach as art works. For instance, rakkyo (scallion) grown on the beach, flotsams arriving on the beach and a whale appearing near the beach can be art works in town. The T-shirt art festival has been up to the present, and the municipality gives an award for excellent T-shirt art works.

The basic idea of the "Seaside Gallery" was brought to the municipality by one graphic artist and young city officials joined in and promoted the project. Therefore, this project was started with the municipality budget and a donation from private sector. In 2003, a non-profit organization was established to manage the gallery. It has expanded its activities to the education, tourism development, sales of local goods and provision of a sports field.

While the town didn't have any museum, the municipality chose the beach as an art museum instead of constructing a new museum. This made it possible to realize various unique activities with small money from the town.

¹³ Reference Materials: <http://sunabi.com>



T-Shirt Art Festival



Flotsam Exhibition (left) and Beach Training (right)

3.8 Tsuruoka – UNESCO Creative City of Gastronomy¹⁴

Tsuruoka City is located in the northern region and has a population of 130,000. Since the city has rich natural resources such as mountains, rivers and the sea, there are many seasonal foodstuffs and traditional recipes in the area.

Tsuruoka City is the first city in Japan designated as “Creative City of Gastronomy” by UNESCO. The “UNESCO Creative City Network” started in 2004 and aims to contribute to the promotion of creative local industries, the conservation of cultural diversity, and sustainable development in seven fields such as food culture, literature, movie, music, craftworks and folk arts, design, and media arts by supporting international cooperation and interaction among the cities for regional development. The designation of the Creative City encourages the city to revitalize its primary industry as well as service sector by developing local brands, exporting local products, and attracting tourists through gastronomical experiences.

The first five-year plan of the Tsuruoka Creative City of Gastronomy was formulated in 2014 with the target visions as shown below:

¹⁴ Reference Materials: <http://www.creative-tsuruoka.jp/>

Promoting Creative City of Gastronomy – Utopia of food-

- 1. City of creative food industries**
- 2. City of attractive food culture with tradition**
- 3. City of enjoyable community with rich food culture**
- 4. City of global exchange through food culture**

This plan aims to preserve and inherit the food culture, improve civil activities with interaction with international and domestic cities, and to develop the local food industry, by utilizing the rich food culture of TSURUOKA City.



According to the second plan, the municipality has implemented the following projects:

1. Tourism Promotion by Food Culture;
PR on the web site, Providing leisure activities, Establishment of promotion office
2. Improvement of the quality of local products;
Production of high-quality rice, Promotion of eco-friendly agriculture, Introduction of authentication system
3. Stable supply of local foodstuff to accommodations, restaurants and food processing industry;
4. Upgrading the value of local product and merchandizing;
Promotion of local brands, Development of new products, etc.
5. Efforts for realizing the plan of TSURUOKA gastronomy field and capacity-building;
6. Cooperation with organizations focusing on food;
Field study with the university of food in Italy, Organizing an international conference, etc.
7. Cooperation and exchange with the network of the Creative Cities of UNESCO;
8. Preservation of traditional food culture and dissemination of its information;
Organizing photo contests and opening a homepage to report activities;
9. Enhance public awareness of local food culture and introduction of the local food culture into families.

Training course of cooking traditional dishes, Use of local food for school lunch



3.9 Town Development by Cooperation among Various Stakeholders – Obuse Town

Obuse Town is the smallest town in Nagano Prefecture with approximately 11,500 population and an area of 19.12 km.

Obuse Town started its town development around 1970, focusing on agriculture especially fruit cultivation and cultural heritage. Katsushika Hokusai, a famous ukiyo-e master in the late Edo era, came to Obuse and painted several masterpieces in town. By gathering his original paintings left in Obuse Town, Hokusai Museum opened in 1976.

Obuse Town also implemented landscape improvement project. This was not based on the urban development plan, but Obuse Town spent plenty of time proceeding in a way all stakeholders can accept. This project was carried out without any subsidies through the use of existing buildings and functions, collaborating with public and private sectors, keeping its rusticity, and improving comfort of living environment. In this project, Obuse Town developed several regulations, manual and facility, particularly environmental design cooperation standard in 1986, consultation center for building houses in 1989, the regulation of pleasant and beautiful town development in 1990, manual of building houses and installing promotion materials in 1992, and the ward of landscape.

While participating in this project, residents have increased their awareness of the landscape and started using flowers for town development. "Floral garden" national gardening summit and open gardens represent this "Town development by flowers."



Figure 3.9.1 Open Garden



Figure 3.9.2 Flowers Line the Street

Good performance of the local industry is another aspect of Obuse Town development in this period. Sweets made of chestnuts are famous products of Obuse, and the traditional chestnut sweets shop started selling these products in retail. They also provided eating and drinking services.

Obuse Town has been developed by transmitting information on these key projects and is supported by residents' of Obuse Town. Collaboration between public sectors and private sectors in town development is now called "Obuse method".

In the 2000s, Obuse Town shifted its town development concepts to the following four aspects: 1) self-sustainability and autonomy; 2) cooperation with residents, local industry, out-of-town private companies, research institutions and university; 3) development of city center; and 4) vitalization of rural area for the next step of the town development.

Self-sustainability and autonomy

Obuse Town dealt with sound finance and administrative reform as urgent tasks alongside cooperation and interaction, especially among residents, local industry, out-of-town private companies, research institutions and the university. Town revitalization and industrial development needed cooperation among various stakeholders. An advantage Obuse Town has is its history and culture of 16 villages dating back to the Great Merger of the Meiji Era. Its rural landscape is conserved by city planning while its fruit industry, its small area, local industries and local production for local consumption preserve its rusticity.

Cooperation with residents, local industry, out-of-town private companies, research institutions and university

In cooperation with the residents, Obuse Town built facilities such as a public hall and library, and set up a town development committee in collaboration with residents.

To promote the local industry, Obuse Town partnered with a company to organize a local fruit fair featuring Bramley and Cherry kiss, a kind of apple cultivated in Obuse, as the brand of the town.

Obuse Town also collaborated with several out-of-town blue-chip companies. Bramley, a kind of green apple for cooking cultivated in Obuse, was branded in collaboration with Shinjuku Takano. Ina Food Company supported the second landscape improvement of Obuse Town and agricultural processing. Tsuruya supermarket provided a new business model of "Obuse Aguri Town" to market Obuse Town's agriculture. This model aims to do the following: i) improve the residents' lives; ii) develop a brand for agriculture of Obuse town; and iii) promote town development with environmental conservation by utilizing agricultural resources in Obuse town. JR Kyushu installed an antenna shop in Hakata terminal to sell agricultural products of Obuse around the Kyushu area.

Development of city center

National Road 403 was designed to develop a good landscape and improve convenience by sharing the image with stakeholders. As a sixth land readjustment project, parking space was developed like a small forest by Obuse Junior High School and Tokyo University of Science.



Figure 3.9.3 Design of National Road 403

Vitalization of Rural Area

To vitalize the rural area, Obuse Town organizes several events such as a walking event and an exchange program between urban and rural areas to promote interaction with each other. Core facilities in the rural areas were developed toward this aim. These include the farm guest house, clinic, and village restaurant such as “OBUSE HANAYA,” which serves dishes made of fresh vegetables from Obuse. Obuse town also established a new industry integrating several industries such as agriculture, hot springs, culture, sports, medical services and food.

For further town development, Obuse town has to deal with depopulation, low birth rate and aging population, and lack of successors of agriculture. To address these issues, Obuse town currently works on developing the basis for its further town development to pass on to the next generation. It especially reconsiders the way of town development and developing next generation. For this aim, Obuse town organizes a youth summit to discuss innovation, tourism and supports 104 youths. Citizens and local and out-of-town companies join this program.

3.10 Kanazawa Citizen’s Art Center

Kanazawa Citizen’s Art Center was established by renovating former Daiwa spinning factory cluster in 1996. The center aims to improve and enrich the local cultural infrastructure by promoting young people’s cultural activities and supporting citizens’ creative art activities. The center now attracts 200 thousand people per year and becomes the hub of local culture and a facility for interaction where citizens can freely enjoy practicing, creating, researching and sharing theater, music, dance and art.

The center is open 365 days/24 hours and is operated under the core principle of “citizens in control”. This principle gives users a responsibility to use the facility instead of making the center available all day with low cost, and allowing free art activities.

In the center, there are four different kinds of studio depending on the purpose of use: drama, music, art and multipurpose. The drama, music and art studio have two directors who are experts in their fields and who are entrusted with the studio's operation. The directors are selected from among the public. The center is the first public cultural facility and abides by the "citizen director system" for a smooth autonomous operation.

During the term, directors formulate their "action plan", hosted by the center to provide citizens the opportunity to readily enjoy art and culture in an experience-based workshop. This project creates a new art and culture for Kanazawa City through a support program for young people and program for the citizens' enlightenment.

4. Environmental Sector

4.1 NGO: The Mishima Ground Work – Restoration of the Natural Environment¹⁵

Mishima City is famous for its rich water resource, and Genbei River is one of the rivers flowing in the city. Subsoil flow of Mt. Fuji springs from the head of this river.

The rivers flowing in the city had very clean water and are naturally beautiful. However, the water quality of rivers deteriorated due to rapid urbanization and industrialization. To restore the water quality, the Mishima Ground Work was established in 1992, by local people. It consists of 20 groups of citizens with about 6,000 participants including more than 150 personal members and 200 companies supported by the municipality. Starting from the clean-up activity of Genbei River, the Mishima Ground Work has gradually expanded to development of a biotope park, enlightenment of eco-knowledge to students as well as citizens, recovering of forests, revitalization of local culture and incubation of community businesses.

With efforts of the Mishima Ground Park, Genbei River had recovered its cleanness and beauty. It was registered as a World Heritage Irrigation Structure in the International Commission on Irrigation and Drainage held in Chiang Mai, Thailand on 8th November 2016.

The efforts of the Mishima Ground Park not only improved the natural environment but also increased the number of tourists. The local people likewise became more interested in their environment and became proud of their city.



Genbei River in the 1970s (left) and at Present (right)



River Cleaning Activity



River Observation by Children

¹⁵ Reference Materials: <http://www.gwmishima>



Tree Planting



Soba Noodle Making



Downtown Store



Night Festival

4.2 **Production of Electricity by Raw Garbage and Pig Feces in Hita City¹⁶**

In Hita City, agriculture and livestock, forest, lumber and brewing are key industries. Rich biomass resource originated from these industries.

In 2006, Hita Municipality developed a power generation facility which produced electricity by burning raw garbage and pig feces. This method was the best solution to dispose those waste materials. While there are 11 pig farmers in the city, pig feces are more difficult to dispose of than other livestock's. Raw garbage is also difficult to burn properly due to its wateriness. Then, the idea to generate electricity by using both waste materials came up. Electricity was generated by methane fermentation of these biomass resources. The generated electricity is sold to the electricity company whenever it exceeds its own consumption. The peptic juice left by burning is delivered to farmers without any charge as a liquid fertilizer and the dregs are sold as a compost to citizens.

Generating Power: 340 KW Electric Energy :1.64 million KW/year

Fuel: 80 tone/day, a raw garbage 24t, excretions of pig 50t, sludge from village 6t

Total amount of Investment (land acquisition cost, construction cost): 950million Yen

¹⁶ Reference Materials: www.maff.go.jp/shokusan/biomass/b_jirei/pdf/hita.pdf (Food Industry Affairs, Ministry of Agriculture, Forestry and Fisheries), <http://www.green.support.com/news07081501.html>

without any charge, and kitchen garbage is collected at the collecting station for kitchen garbage.

In OOSAKI Town, when people take their trash out, they have a duty to follow the rules below:

1. People shall register as a member of Oosaki sanitary association;
2. The members will register the collecting station according to their address;
3. Each registered household will pay JPY 500 as a registration fee, which will be used for the management fee of the collecting center;
4. It is prohibited for non-registered people to drop off their waste at collecting stations;
5. At collecting station, it is necessary to classify waste materials in cooperation with other members according to the order designated by the station manager;
6. The members will drop off waste materials at a set time;
7. The members will write their name on a specified collecting bag for accountability;
8. It is prohibited to use a non-specified bag for recyclable waste and general waste.



Rape Blossoms Echo Project

Residential oil waste is one of the causes of water pollution in the rivers in town, because the town has a low-penetration rate of sewerage system. In order to protect the river environment from pollution by residential oil waste, the town started to collect oil waste by delivering a specified tank to households. The volume of collected oil, however, was not enough to use as bio-diesel-fuel for garbage collecting cars.

The use of rape blossoms, which are agricultural products in town, is an effective measure to increase the amount of collected oil waste. The town started "Rape Blossoms Eco-Project"

by utilizing rape blossoms, not only as alternative to light oil, but also for local product development and tourism resources.



In this project, organic rape seed oil was produced by utilizing compost made from raw garbage collected in town. The oil is sold as a local specialty product at a roadside station in town and is also used for school lunch.

4.4 3R Initiatives in Yokohama City

Start-up of G30 Program

In Yokohama City, the second largest city in Japan with a population of 3.7 million, the volume of waste has continuously increased from 1 million tons in 1980, to 1.6 million tons in 2001, at a pace that exceeds its population increase and economic growth. It has put serious pressure on the city's landfill site which has a limited capacity. Yokohama City changed its conventional waste management policy of disposing waste after incineration and introduced the G30 policy that promotes 3R (reduce, reuse and recycle of waste). It aims to reduce Gomi or waste by 30 percent in 2010, from the 2001 level.

Basic Concept of G30

Aiming to reduce the waste volume by 30 percent and thus achieve a recycling society with lower environmental load, G30 program promotes the 3R activities through collaboration of citizens, businesses, and government. It specifies the roles of each stakeholder as follows:

- **Citizens and community:** to make its lifestyle environmental-friendly and to ensure segregation of waste;
- **Business sector:** to design and produce products which reduce the emission of waste and to promote collection and recycling of used products;
- **Government:** to formulate 3R systems, to conduct campaigns, to provide and exchange information.

Community Participation

Since it is essential to encourage understanding and cooperation of citizens. Yokohama City conducted an extensive campaign to explain the new rules for segregation of waste, including 11,000 times of briefings, 600 times of on-street campaigns in front of the station, and 3,300 times of early-morning instructions. Eco-education lectures were conducted at elementary and junior schools to explain current conditions of waste management and

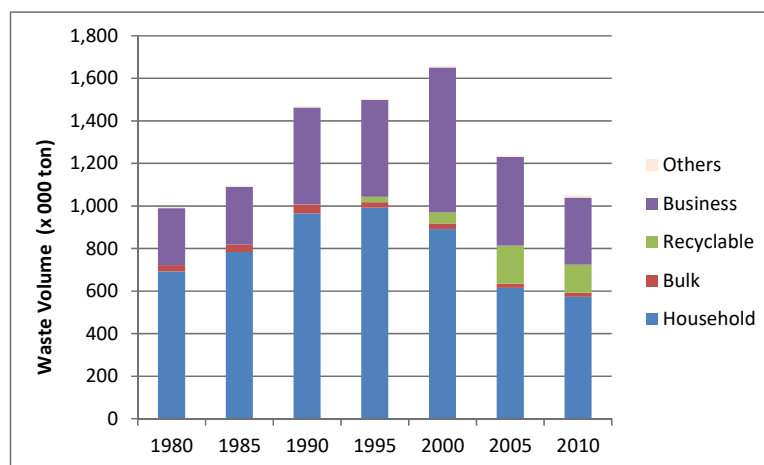
demonstrate the waste segregation process. Government established a variety of routes to collect recyclable waste, including installation of recycling boxes, subsidy for garbage disposal or compost at residences.

Business Sector Involvement

In order to reduce industrial waste, which was a major contributor in waste volume, Yokohama City recently restricted the business sector in bringing wooden waste and recyclable paper into incinerator plants and conducted inspections at incinerator plants and at company buildings. It also held a number of briefings to enhance understanding of the business plan and chose an excellent business plan.

Impact of G30 Program

G30 program has contributed to a significant reduction of the volume of waste in the city. Compared to the 2001 level, the total volume of collected waste and disposed waste decreased by 34 percent and 44 percent, respectively, in 2008. As a result, the city government decided to close two incinerator plants which reduced financial costs for future rehabilitation and annual operation costs of about JPY 3 billion. It also contributed to a reduction in CO₂ emission by 870,000 tons by 2008, from the 2001 level. Thus, G30 program has provided economic and environmental benefits. Yokohama City continues to promote G30 program, including conversion of citizens' lifestyle to promote 3R and pilot projects of composting and gasification of raw garbage.



Source: Yokohama City

Figure 4.4.1 Volume of Waste Collection in Yokohama City

5. Urban Management

5.1 Compact City Development in Toyama City

Overall Strategy:

Toyama City, one of the provincial cities in the central part of Japan with a population of 420,000, has faced depopulation with aging society and deterioration of urban center due to high dependence on passenger car and expansion of urban areas. With strong initiatives of the mayor and local government, Toyama City has promoted Compact City Development. Represented as, "Dumplings on a stick," its urban structure is composed of public transport system (stick) and walkable urban centers (dumplings). Such compact city structure can be achieved by TOD strategies, which include the following:

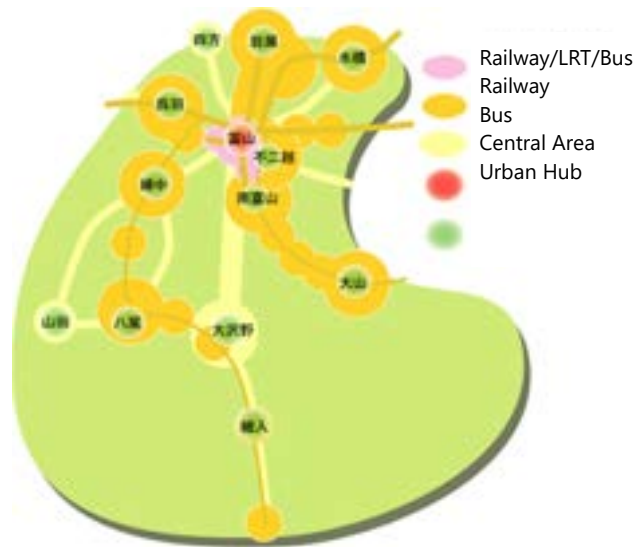


Figure 5.1.1 Concept of Compact City

- (i) development and reformation of public transportation network, including LRT and bus network;
- (ii) development of public facilities and vitalize city centers;
- (iii) encouragement of moving residences and commercial/business facilities to areas along public transport network by providing subsidy.

Impact of Toyama's Compact City Strategy:

Toyama's Compact City Development has made various impacts on society, environment, and economy in Toyama City.

- **Passengers of public transport:** The number of passengers of public transport has increased by 2.1 times on weekdays and 3.6 times on weekends, from the former inter-city to the newly replaced LRT, particularly during daytime for the aged population.
- **Residential development:** The average number of residences that are newly constructed along the LRT route has increased to 116 per year in 2005-2010, from 90 per year in 2004, while Toyama City as a whole, has decreased for the same period.
- **Dissemination of Lessons Learned:** As Eco-model City and Future City, lessons learned from Toyama's Compact City Strategy have been widely disseminated in Japan, and to the world through international seminars, publications and on government website.

Table 5.1.1 Impact of Compact City Development

Indicator	Before	After
Reduction of CO ₂ emission (for whole Toyama City)	-	(Total) ▲31,287 ton CO ₂
		(TOD) <ul style="list-style-type: none"> • Modal shift to LRT: 73.0 t-CO₂ • Collective house: 230 ton-CO₂
		(others) <ul style="list-style-type: none"> • Photovoltaic house: 763 • Low-carbon promotion: 23 ton CO₂ • RPF¹⁾: 12,962 ton-CO₂
Passengers of LRT	1.0 (2006)	2.1 times in weekday (2013) 3.5 times in weekend
No. of pedestrians	8,421 /day (2006)	13,155 /day (2011)
No. of vacant shops	20.9% (2009)	18.6 (2011)
No. of newly constructed houses		
Along LRT	90 in 2004	116 /year (2005-2010)
Toyama city as a whole	2,238 in 2004	1,798 / year (2005-2010)
Increase of population in urban center	▲41persons/year (2006-2007)	+ 87 persons/year (2008-2013)

1) Refuse Paper & Plastic Fuel.

5.2 Land Use Management by Community – Kakegawa City¹⁸

Kakegawa City is located in one of the major transport axes of Japan. Since Kakegawa Station of Tokaido Shinkansen opened in 1988, many investments for urban development or land speculation occurred sporadically around the suburban areas. While the city had a zoning plan, it covered only the central area. Therefore, the land use control of suburban area was rather weak against such an intensive development pressure. To prevent regional environment degradation, the city enforced a municipal ordinance for introducing new land use management system in 1991. A unique point of this ordinance is that the rule of land management was decided by stakeholders of the area. The rule of land use for a specific area was prepared by the residents and was authorized by 80 percent and over of landowner's or households' agreement.



Figure 5.2.1 Land Use Plan of Kakegawa City

¹⁸ Reference Materials: www.mlit.go.jp/pri/houkoku/gaiyou/pdf/kkk57.pdf

<http://www.city.kakegawa.shizuoka.ka.jp/business/toshi/sidouyoukou.html>

In this ordinance, all people who intend to develop or change the land condition should submit a plan to the city, to get permission, following the land management rule. If the development plan violates the rule, the mayor gives advices to follow the rule, and if the developer refuses, the mayor announces the name of the developer, without any other penalty. The legal power seems weak, but it is actually effective in controlling undesirable development since the developer will face a strong opposition from citizens if his plan doesn't follow the rule.

5.3 Niigata Wellness City¹⁹

Niigata City is a capital of Niigata prefecture with a population of 810 thousand. It recently joined the movement of creating a healthy and happy city called, "a Smart Wellness City". In 2011, 69.3 percent of citizens travelled by private cars, which resulted in smaller walk count than the national average. The city took an initiative to change such situation aiming to be a city of health and long-life.

¹⁹ Reference Materials: http://www.city.niigata.lg.jp/iryo/kenkou/hoken_torikumi/smartwell/index.html

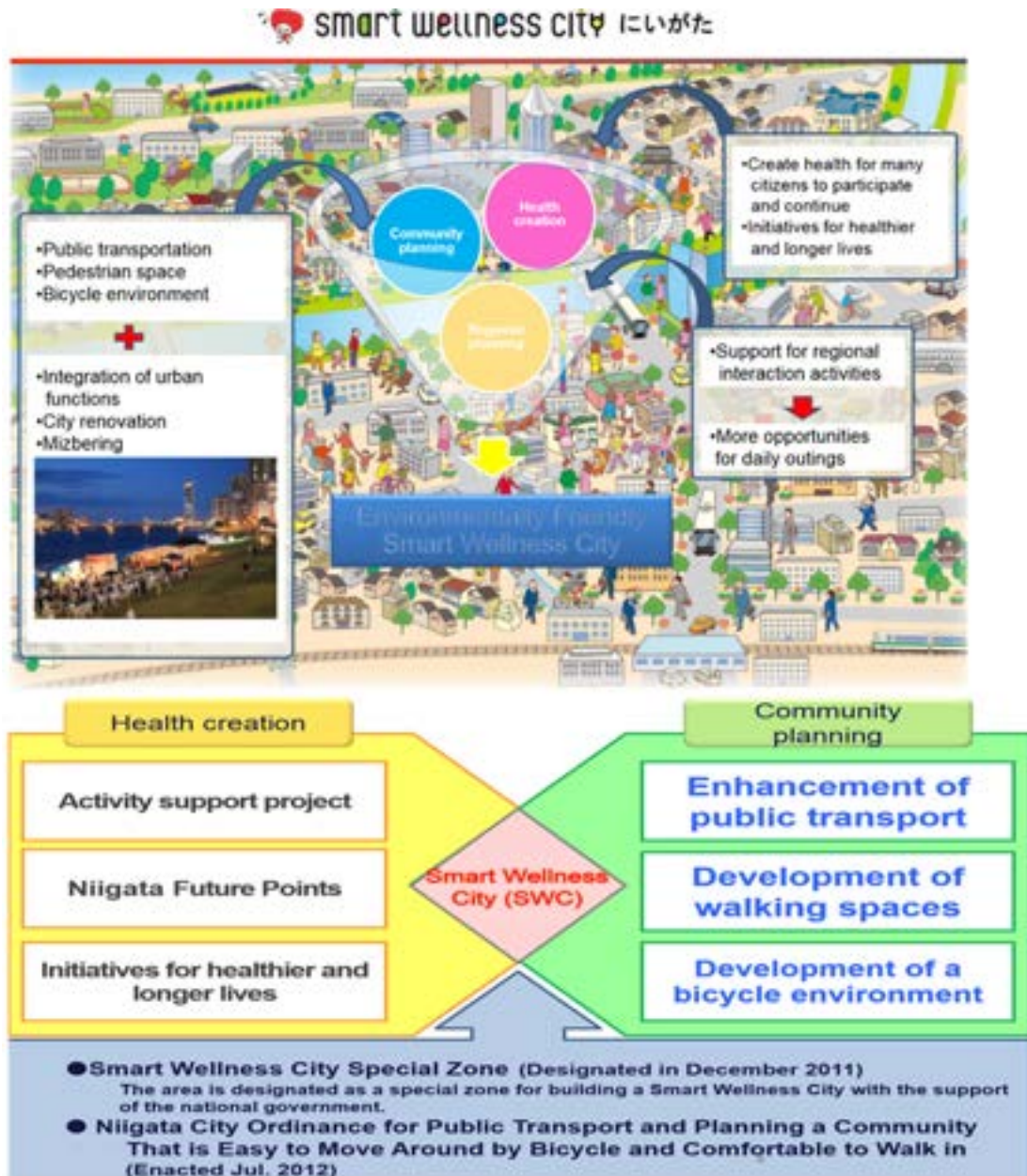


Figure 5.3.1 Overall Image of Smart Wellness City NIIGATA

There are several projects to support citizens joining activities good for their health, such as walking and sports. Visualizing the effects of these continuous exercises, providing opportunities for low-cost and giving Niigata future points which can be exchanged to Niigata City gifts or points for bus use. The results of this are participants with physical strength. The participants' physical age got younger by 5.2 years, the walk count increased by 2,300 steps and there was a significant cut in their medical cost.



As a part of the project of promoting smart wellness city, Niigata City also focuses on public transport development such as introducing BRT and park & ride.

The environment for pedestrians and bicycle users has also been improved by installing bollards, securing walking spaces, operating rental bicycle service, developing parking spaces for bicycle and so on.



5.4 Project for Supporting Bus Operation by Citizens – Suzu City²⁰

Suzu City had been facing an aged society and declining population, and those issues caused decreasing number of bus passengers as well as worsening financial balance.

To fix those situations, in 2006, the regional public transport promotion committee was established in Suzu City. The committee executed research and planning for the public transport development of the region. Based on this research and planning, the city started various activities on transport demand management. The committee is comprised of the municipality, provincial government, police, transport operators, experts, chamber of commerce, administrators of loads, community leaders, citizens, and local branch of national transport department.

One of activities was bus passenger promotion program to attract more bus passengers by citizens and local organizations. The committee sent support volunteers for the bus passenger promotion program. In 2008, the committee made MOU with five groups, namely three local communities, a high school and a rotary act club to implement the program. The program included a construction of a bus station, setting up benches at bus stations, cleaning and snow removal around bus stations. According to the survey questionnaire, 62.7 percent of citizens appreciated the program. It has continued every year since then.

²⁰ Reference Materials: www.tb.mlit.go.jp/hokushin/hry54/com_policy/hprenew/jinzai/su...



Production of Bench



Constructed Bus Station



Cleaning Bus Station

General Case of Supporting Activities for Public Transport by the private sectors

Supporter:

Community, Volunteer Group,
School, Hospital and Welfare Establishment
Office, Shopping Street, Emporium,
Tourism related Establishment
Customer attracting Establishment
Others

Major Program:

Cleaning and Maintenance, Provision of space
for bus stop and park & ride,
Provision and Delivery of map and guide
materials,
Participation for No Car Day, Delivery of
coupon ticket for customers
Purchase of ticket by group

Appendix 4

Sustainable Future City Initiative Guideline
for SFCI Model Cities

Appendix 4: Sustainable Future City Initiative Guideline for SFCI Model Cities

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Introduction

The Sustainable Future City Initiative (SFCI) is proposed along with the urban development policies addressed in the Twelfth National Economic Social Development Plan (2016-2021) as a policy tool to stimulate growth potentials and competitiveness of the regional/provincial cities and thus to facilitate more equitable and sustainable socio-economic development of urban areas over the country.

The SFCI is a new mechanism to realize this development process in municipality under the concept of "national government-guided and local government-driven development".

This guideline is prepared for Tessaban and Consultant team, and other agencies concerned such as Changwat and provincial offices of relevant departments to manage/ operate Sustainable Future City Initiative (SFCI). It consists of four sections, namely (1) Rationale on Sustainable Development of Local Cities, (2) SFCI, (3) SFCI Methodology, (4) SFC Project Implementation Support, (5) Monitoring and Evaluation, (5) References, list of formats.

Rationale on Sustainable Development of Local Cities

Socio-economic Changes of Thailand

Thailand has enjoyed rapid and continuous economic growth due to the successful growth of the manufacturing and service sectors in the last 30 years, which has in turn resulted in significant changes in people's lives especially in urban areas. Now, Thailand faces a turning point in its development in terms of society, economy and environment, envisaging the following challenges:

- (1) Thai economy is required to shift from the historically successful labor-intensive one to a higher value-added and technology-based one in order to maintain economic growth even under higher labor wages and labor shortage;
- (2) Regional economic disparities have been even enlarged. Thailand shall further promote FDIs and diversify domestic investments over the country for higher-valued local production, thereby mitigating regional disparities in economic status;
- (3) Thai society will be required to tackle the anticipated problems in near future, such as forthcoming core family (fewer peoples in family), aging society as well as depopulation in local areas;
- (4) Environmental issues have been shifted from deterioration of natural resources (such as deforestation, saltation) through pollution issues (such as water contamination, air population), and now to global environmental issues (such as global warming);
- (5) Thai citizens have more confidence and put higher priority on identification as Thai. In relation to this, local people pay more attention on own unique locality, and on enhancing local community as a basis of local activity.

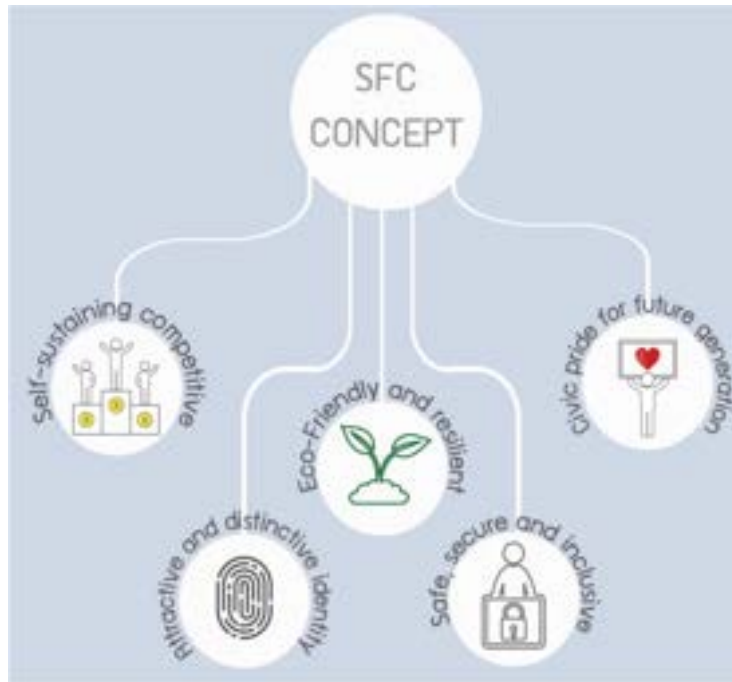
Recognizing the above challenges, the Twelfth National Economic and Social Development Plan (NESDP) addressed two priority policies to successfully enter such a new stage of development, that is, the first one is to pursue "more economic growth toward high-income country" and the second one is to facilitate "more equitable and sustainable social development over the country". The second one implies needs of sustainable urban development of local cities of Thailand.

Key Urban Development Challenges Faced by Local Cities

It is important to note that local cities are redefined to become local growth centers in the current Twelfth NESDP that constitutes the first 5 years of 20-year National Strategy. Local cities are expected to be “Livable Cities” for all and to take more proactive roles and functions as development bases for a province or a cluster of provinces.

Given those aspects, there are five key implications for sustainable urban development in local cities, which should be well considered in local government development policies. It is summarized as common visions of Sustainable Future City (SFC) as below. While visions of SFC will vary depending on uniqueness of participating cities, participating cities should aspire for those five characteristics in preparing own SFC visions to undertake key urban development challenges of local cities of Thailand.

- (1) the city where self-sustaining industries are promoted by utilizing local resources (**self-sustaining competitive city**)
- (2) the city where people and investment are attracted with locally unique culture, lifestyle and landscape (**attractive and distinctive identity**);
- (3) the city where is sufficiently livable with basic infrastructures and public services as well as well-managed green and natural environment, thereby being resilient against disasters (**eco-friendly and resilient city**);
- (4) the city where people will safely and healthily grow up and equally be educated, and mobility is ensured for the weak such as aged people, handicappers and pregnant women (**safe, secured, and inclusive city**);
- (5) the city which all citizens feel proud of and confidently succeed for next generations (**civic pride for future generations**).



Source: SFCI Project Team

Figure 1 Common Concept of Sustainable Future City

Toward these visions, the SFC is conducted as local city's movement to pursue the "Sufficiency Economy" at local level to realize such a national vision.

Sustainable Future City Initiative

Goals and Principles of Sustainable Future City Initiative

The Sustainable Future City Initiative (SFCI) is proposed along with the urban development policies addressed in the 12th National Economic and Social Development Plan to stimulate growth potentials and competitiveness of the regional/provincial cities and thus to facilitate more equitable and sustainable social development over the country.

It is inevitable for municipalities (tessaban) to take an initiative to promote its own development. However, most of municipalities in Thailand have constraints in terms of its limited authorities, lack of financial resources and limited human resources. Even though tessabans have visions for sustainable development, they have difficulties to manage it properly only with local initiatives. Therefore, it is of importance for national government to show overall directions of urban development along with the national and regional development plan and provide necessary supports for municipalities to promote their own sustainable urban development.

The SFCI is a mechanism to realize such development process in municipality. SFCI set an overall concept of "national-government-guided and local-government-driven mechanism". In other word, municipalities shall have strong initiatives to stimulate its potentials and to develop their own plans and projects to sustain future growth, while the central and provincial governments should provide institutional and financial support for municipalities appropriately. SFCI has the following three principles.

- **Linkage with National Urban Development Policies:** SFCI will facilitate sustainable urban development of regional and provincial centers and thus to facilitate regional economic development, which is one of the core strategies of 20-year National Strategy and 12th 5-year National Economic and Social Development Plan.
- **Local Initiative and People-centered Approach:** Local government shall mobilize local resources and enhance its capabilities to formulate plan and projects, through participatory planning approach;
- **Implementation Support of National/Provincial government:** national and provincial government shall provide implementation support such as development guidelines and financial/institutional support to ensure implementation of priority projects/programs. To this end, an institutional "platform", for all cities which are interested in participating in the SFCI, should be built at the national level.

Key Approaches of SFCI

With the above objectives, SFC Initiative will take the following four key planning approaches. They are keys to achieve sustainable urban development in each city, some of which may be new to the existing planning and institutional framework of urban development in Thailand.

Holistic Approach

Sustainable urban development is global common concept comprising of economic, social, and environmental dimensions in a balanced and integrated manner. SFCI also requires to consider those three dimensions comprehensively from the planning phase and examines infrastructure and urban management as a basis for sustainable development.

Regional Scale

Regional approach or inter-municipal coordination is key of SFC Initiative for effective urban management considering trend of urbanization beyond administrative boundaries of tressabans. It is also important for tressabans and adjoining TAOs to provide urban services efficiently, since most of tressabans and TAOs are too small in terms of area and population and financial capacity.

Long-term and Future Perspective

SFC Initiative will introduce long-term perspective in the existing short-term planning framework, 5-year Local Strategic Development Plan (LSDP). It includes future framework of socio-economic conditions as well as long-term perspectives of national and global economy, society, and environment.

People-centered and Collaborative Approach

People-centered approach can support tressaban to identify local uniqueness and practical solutions of key issues and visions that they share with local communities. Through collaboration with various stakeholders including citizens, community-based organizations, private sector, tressaban can increase scope, expand scale and ensure sustainability of their own development as well as reduce financial burdens of government sector.



Figure 2 Image of Key Approaches of SFC Initiative

SFCI Methodology

The tessaban shall carry out the SFCI together with the NESDC along with SFCI Guideline which was developed through JICA's Thai Future City Project. NESDC shall dispatch the Consultant to support tessabans to properly carry out the following Scope of Work along with this SFCI Guideline.

Overall framework of SFCI is shown in Figure 3. SFCI is a holistic process to formulate SFC Plan and SFC projects and promote its implementation with "National-government guided and Local-government driven" approach. The process of SFCI is mainly divided into three components such as:

Step1: Preparation

Step2: SFC Planning and Action Plan

Step 3: SFC Project Preparation

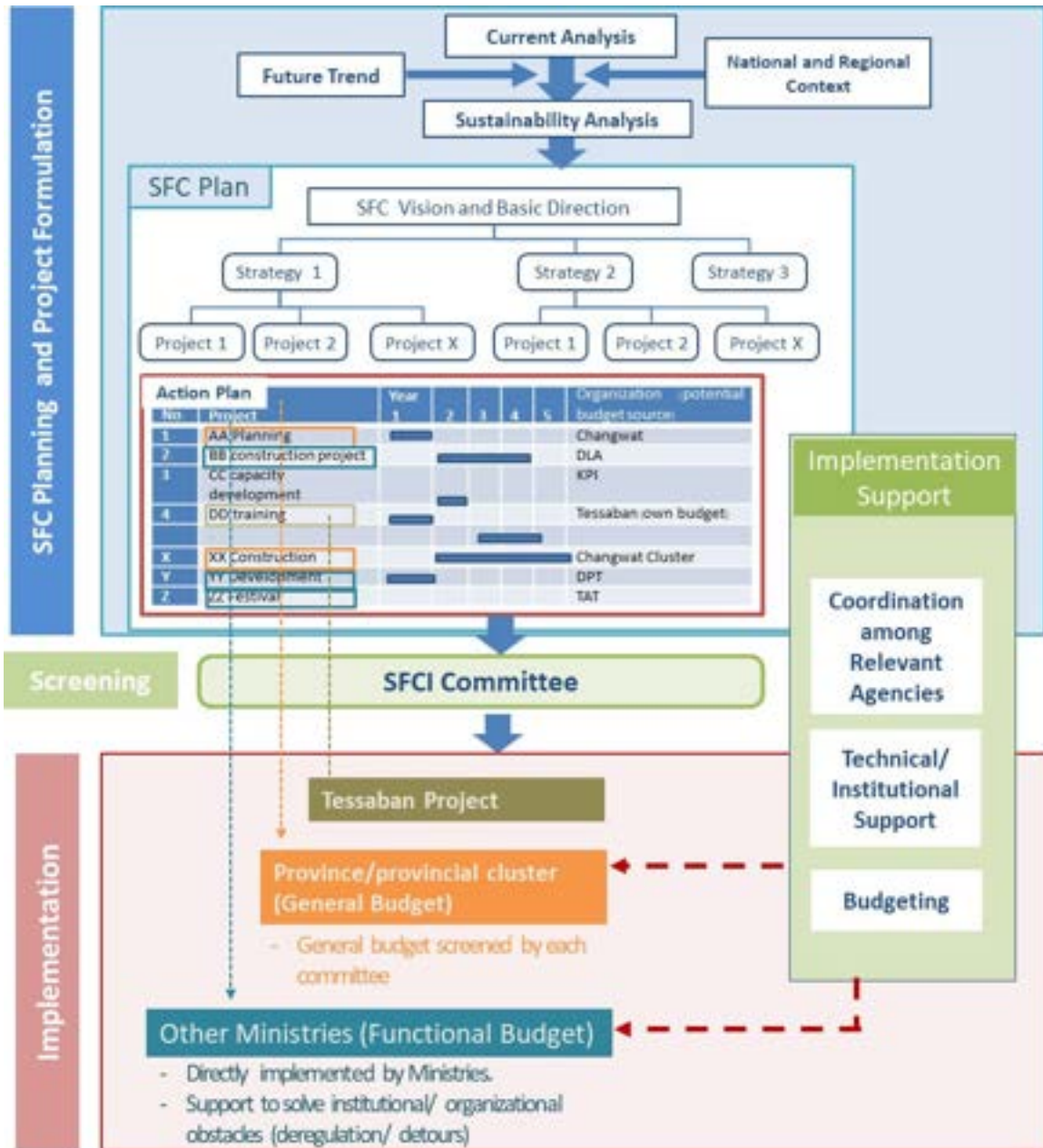


Figure 3 Overall Framework of SFCI

Step 1: Preparation: Formulation of SFC Implementation Team

[Step1-1] Establishment of SFCI Team in Tessaban

Tessaban will establish SFCI Team in tessaban as SFCI project owner and secretariat at local level. SFCI team will manage a series of SFCI activities at local level and closely coordinate other organizations concerned. More specifically, SFCI team will do research and planning, organize Planning Meeting, formulate SFC plan and projects, submit necessary documents to the NESDC, and so on.

Head of SFCI Team shall be Mayor or high-rank officer who can be responsible for the overall SFCI projects. SFCI Team will comprise representative of key divisions, which is closely related to the issues to be discussed in the SFCI.

Box 1 SFCI Team in Tessaban

In the first phase of SFCI, key divisions in charge of SFCI were different by tessaban, depending on the priority issues. Some tessabans assigned several divisions to collaborate to proceed SFCI.

- Tessaban Nakhorn Khon Kaen: Division of Civil Works is responsible for SFCI in order to discuss public transport development. Director of the division is actively involved.
- Tessaban Nakhorn Chiang Rai: Division of Technical Services and Planning was assigned as main secretariat for SFCI at beginning. With strong commitment of Mayor, Medical Division and Municipal Clerk Division were also actively involved in the SFCI activities.
- Tessaban Mueang Krabi: With strong commitment of Mayor, Deputy Mayor always led the SFCI activities and Division of Technical Services and Planning is in charge of Secretariat for SFCI.
- Tessaban Mueang Phanat Nikhom: Mayor participated in the most of activities of SFCI. Division of Public Works was assigned as a main contact for SFCI.
- Tessaban Nakhon Phitsanulok: Vice Mayor actively joined the SFCI activities. Bureau of Public Works was assigned as main secretariat and many other related participated capacity development program in the SFCI.
- Tessaban Nakhorn Nan: Division of Public Health and Environment was assigned as a main contact of SFCI, since they intend to discuss environmental issues.

Tessaban's SFCI Team will closely coordinate with the Consultant to do research and planning, to organize Planning Meetings, to formulate SFC Plans and projects, to submit necessary documents to the NESDC and relevant departments of committee to be set under SFCI. The Consultant will assist tessaban overall management of SFCI in local level.

[Step 1-2] Establishment of Planning Team

The Planning Team (PT) will function as a core platform of participatory planning approach to discuss the result of analysis, the proposed SFC Plan and projects during the course of the SFCI.

Tessaban will nominate key stakeholders who can join a series of SFCI activities at local level. Tessaban will organize the Planning Meeting at each stage of activities, in order to involve stakeholders' opinion and get their consensus at each stage.

It is expected to invite the representative from the following organizations:

- Relevant provincial departments,
- Relevant departments/sections of tessaban,
- Community people, community-based organizations,
- Civil society and public organizations, such as hospital, police etc.
- Academics, particularly for regional universities and college or, if not, academia team who has closely worked for tessaban,
- Business sector, including provincial Chamber of Commerce, Federation of Thai industry, and any other key business actor in each city,
- NGOs.

Through a participatory approach with those stakeholders, tessaban can (1) identify actual issues and needs of the people, (2) find key players of the city and find various implementing body including private sector, (3) ensure public support and increase implement ability, and so on.

The Consultant will assist the tessabans to analyze types of stakeholders and make a list of planning team members.

Box 2 Planning Team Members of Tessaban Nakhon Phitsanulok

1. Vice Mayor (Mr. Sutee Hantrakul)
2. Deputy Director of Tessaban Council
3. Clerk of Tessaban Nakhon Phitsanulok
4. Deputy Clerk
5. Director of Financial Division
6. Director of Educational Division
7. Director of Public Health and Environment Division
8. Director of Public Works Division
9. Director of Planning Division
10. Director of Social welfare Division
11. Director of Waterworks Authority
12. Chief of Clerk Office
13. Director of Building Controls and Urban Planning Division
14. Dr. Sunate Tongkampong, Former Director of Tessaban School
15. Dr. Boonsap Panishkarn, Logistics, Naresuan Univ.
16. Dr. San Chansomsak, Architecture, Naresuan Univ.
17. Dr. Radklao Prameprasit, Humanity, Naresuan Univ.
18. Dr. Piyarat Nimpitakpong, Sociology, Naresuan Univ.
19. Dr. Chanya Saengaroon, IGEZ Official
20. Wg. Cdr. Amnart Boonkhor, Community Leader
21. Mr. Pralorm Promchu, Community Leader
22. Mr. Prakorn Darnsrithong, Private Sector
23. Mr. Patchara Roonsriwatana, Private Sector
24. Mr. Klanarong Pakprapai, Private Sector
25. Mrs. Supawadee Piboonsombat, Chief of General Administration, Public Works Division
26. Mrs. Prapaporn Komklao, Chief of General Administration, Planning Division
27. Mrs. Darunee Chuayboon, Professional Nurse
28. Ms. Yaowaluck Anupongsanukul, Social Worker
29. Mrs. Noocharin Pinsupa, General Admin, Practitioner Level
30. Mrs. Kamolsikarn Akkarasupaset, Chief of Budget and Planning Division Secretary
31. Ms. Chompitcha Meksawang, Planning Analysis Officer Asst. Secretary
32. Ms. Sataluck Surawatmontree Planning Analysis Officer Asst. Secretary
33. Mrs. Napatsaporn Koonmaturotpratom, Planning Analysis Officer Asst. Secretary

Box 3 Planning Team Members of Tessaban Mueang Nan

- 1 Director of ONB, Provincial Office of National Buddhism
- 2 Director of Nan Hospital, Nan Hospital
- 3 Public Health Doctor Provincial Office of Public Health
- 4 Director of Sports and Tourism Provincial Office, Provincial Office of Sports and Tourism
- 5 Dean of Agricultural Resource Department, Mahachulalongkornrajavidyalaya University Nan
- 6 Vice President of Rajamangala University of Technology Lanna, Rajamangala University of Technology Lanna
- 7 Director of Nan Community College, Nan Community College
- 8 Vice-Rector, Ratchaphat Uttaradit University, Nan Campus
- 9 Director of Nan Office of Non-formal and Informal Education, Nan Office of Non-formal and Informal Education
- 10 Director of the 6th Designated Areas for Sustainable Tourism Administration (Public Organization) (DASTA)
- 11 Chief of Community Leaders Club, Tessaban Muang Nan, Community Leaders Club, Tessaban Muang Nan
- 12 Chief of "Hak Muang Nan (Love Nan City)" Foundation, Chief of "Hak Muang Nan (Love Nan City)" Foundation
- 13 Representative of Nan Communities, Office of Nan Community
- 14 Director of Chamber of Commerce of Nan Chamber of Commerce of Nan
- 15 President of The Federation of Thai Industries of Nan
- 16 Mayor of Nan, Tessaban Muang Nan
- 17 Vice Mayor of Nan, Tessaban Muang Nan
- 18 Clerk, Tessaban Muang Nan,
- 19 Deputy Clerk, Tessaban Mueang Nan
- 20 Director of Division of Finance Tessaban Mueang Nan
- 21 Director of Educational Division, Tessaban Mueang Nan
- 22 Director of Policy and Planning Division, Tessaban Mueang Nan
- 23 Director of Public Works Division ,Tessaban Mueang Nan
- 24 Director of Division of Sanitary Works, Tessaban Mueang Nan
- 25 Director of Division of Public Health and Environment, Tessaban Mueang Nan
- 26 Chief of Clerk Office, Tessaban Mueang Nan
- 27 President of Nan Municipality Council , Tessaban Mueang Nan
- 28 Member of Nan Municipality Council, Tessaban Mueang Nan

Kick-off Meeting for Planning Team

Tessaban can organize Kick-off Meeting for Planning Team at this stage. This kick-off meeting aims to introduce SFCI, including its objectives, overall framework, implementation schedule, and organization structure. It can also help PT members to know each other and to identify missing organizations, if any.

In the Kick-off meeting, tessaban can introduce the Consultant team to relevant agencies so that the Consultant can easily get support from them to collect data and information at the next step, basis analysis.

[Step 1-3] Establishment of Project Coordination Committee

The Project Coordination Committee (PCC) will function as an inter-departmental coordinator at changwat level and regional coordinator for cross-cutting or regional issues. Expected missions of PCC are as follows;

- To facilitate coordination with provincial offices of departments
- to promote regional coordination with adjoining tessabans and TAOs
- to ensure conformity with legal and institutional aspects of the plan and projects
- to identify appropriate agencies and budgeting sources to implement the SFCI Projects.

Chairman of the PCC will be Governor of Changwat and tessaban will be in charge of its Secretariat. Tessaban will coordinate with Changwat office to establish PCC. NESDC can also support to coordinate with Changwat office, if necessary.

The existing committee can be a basis for PCC, such as Provincial Development Committee, PAO Development Committee, and Tessaban Development Committee. Candidate members of the PCC will be the following;

- Office of the Changwat governor
- PAO,
- Regional office of NESDC
- Provincial offices of national departments, such as Department of Public Works and Town and Country Planning (DPT), DLA (Department of Local Administration), Provincial Office of Natural Resources and Environment (PONRE), Department of Land Transport (DLT), Department of Public Health (DOPH), Department of Tourism and Sports (DOST) etc.
- Adjoining tessabans and TAOs

Tessaban will coordinate with Changwat office to decide members of PCC by considering local situation and its priority issues.

Box 4 Member of Project Coordination Committee, Tessaban Nakhon Khon Kaen

1. Governor of Khon Kaen	Chairman
2. Vice Governor (In charge of strategic development)	Committee
3. Provincial Clerk	Committee
4. Representative from 23rd Military Circle Headquarters	Committee
5. Commander of provincial police	Committee
6. Provincial Treasury Office	Committee
7. Provincial Land Officer	Committee
8. Office Provincial Transports	Committee
9. Director of the 1st Department of Highways (KhonKaen)	Committee
10. Director of Department of Rural Road (KhonKaen)	Committee
11. Director of Rice Research Institution of Khon Kaen	Committee
12. The 10th Regional Environmental Office	Committee
13. Director of Provincial Department of Natural Resources and Environment	Committee
14. Provincial Energy	Committee
15. Provincial DLA	Committee
16. Representative from OTP Bangkok	Committee
17. Manager of Regional Office of Electricity	Committee
18. Regional Waterworks Authority	Committee
19. Commander of the 4th Highways Police	Committee
20. PAO mayor	Committee
21. Mayor of Tessaban Nakhon Khon Kaen	Committee
22. Mayor of Tessaban Muang Sila	Committee
23. Mayor of Tessaban Tambon Samran	Committee
24. Mayor of Tessaban Tambon Muang Kao	Committee
25. Mayor of Tessaban Tambon Ta Phra	Committee
26. Director of Sustainable Infrastructure Research and Development Center	Committee
27. President of KKTT	Committee
28. Secretary of "Khon Kaen next decade" Foundation	Committee
29. Chief of Provincial Office	Committee
30. Chief of Strategic Development, Provincial Office	Committee
31. Department of Law, DLA	Committee
32. Director of Public Works Division, Tessaban Nakhon KhonKaen	Committee
33. Mr. Suradech, Vice-Dean of Khon Kaen University	Committee
34. DPT Khon Kaen	Committee

Step 2 SFC Planning

What is SFC Plan?

SFC Plan is a core output of the SFCI. The SFC Plan includes vision and basic directions, strategies to achieve its vision, and projects to realize the strategies. The SFC Plan shall be formulated based on the result of current analysis and sustainability analysis to keep sustainability on economic, social, and environmental aspects of tessaban, of which detail process are described from the next chapters.

SFC Plan is not designated by specific law in Thailand such as Comprehensive Plan under Department of Public Works and Town and Country Planning (DPT) or Local Strategic Development Plan (LSDP) under Department of Local Administration (DLA). SFC Plan is an integrated plan to keep sustainable urban growth in the longer term. Accordingly, SFC Plan should look into social, economic and infrastructure (physical) and environmental aspects comprehensively and focus mostly on critical and priority issues for future sustainability of tessaban and its urban areas. Therefore, the SFC Plan may sometimes have certain duplications with the DPT Plan and the LSDP. However, the SFC Plan has unique approaches, which can be great advantage for tessaban. It includes (i) **Holistic Approach** to keep sustainable urban growth to balance economic, social and environmental aspects, (ii) **Regional Approach** to enhance collaborative actions for effective urban management considering trend of urbanization beyond administrative boundaries of tessaban or sharing responsibilities among the surrounding LAOs, (iii) **Long-term Perspective Approach** to consider sustainability and continuity in long-term, (iv) **People-centered and Collaborative Approach** to identify local uniqueness and practical solutions of key issues to enhance ownership on the plan including citizens, community-based organizations and private businesses, as described in the section of Key Approaches of SFCI.

Coverage of SFC Plan

SFC Plan should be a holistic plan to keep sustainable urban growth in the longer term. Accordingly, the SFC Plan and projects can cover any sectors which is authorized either by central, provincial administration, or local administration. The SFC Plan can also cover surrounding tessabans and TAOs depending on the issues identified in each city, while the Comprehensive Plan covers urban areas in surrounding tessabans and TAOs (see Figure 4). In other words, the SFC Plan can include projects which will be implemented by central and provincial ministries, changwat, PAOs, or surrounding tessabans/TAOs. It is important for the SFC Plan to harmonize with the relevant plans of these agencies and, at the same time, for SFC projects to be included in those relevant plans.

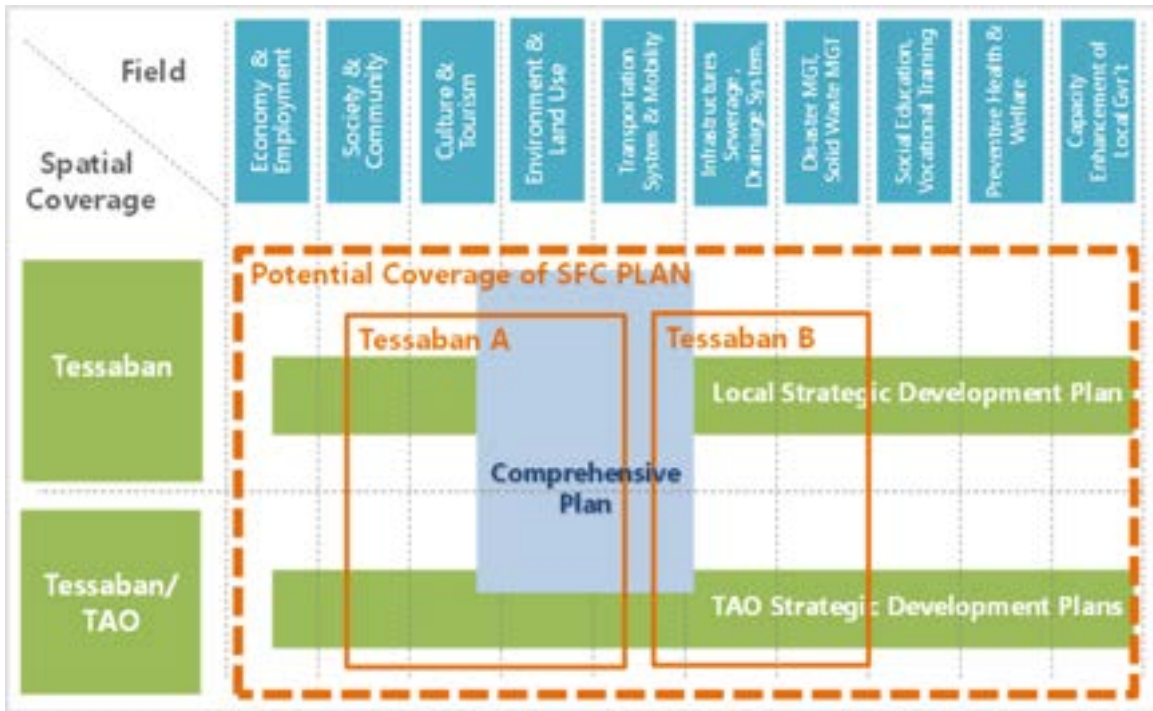
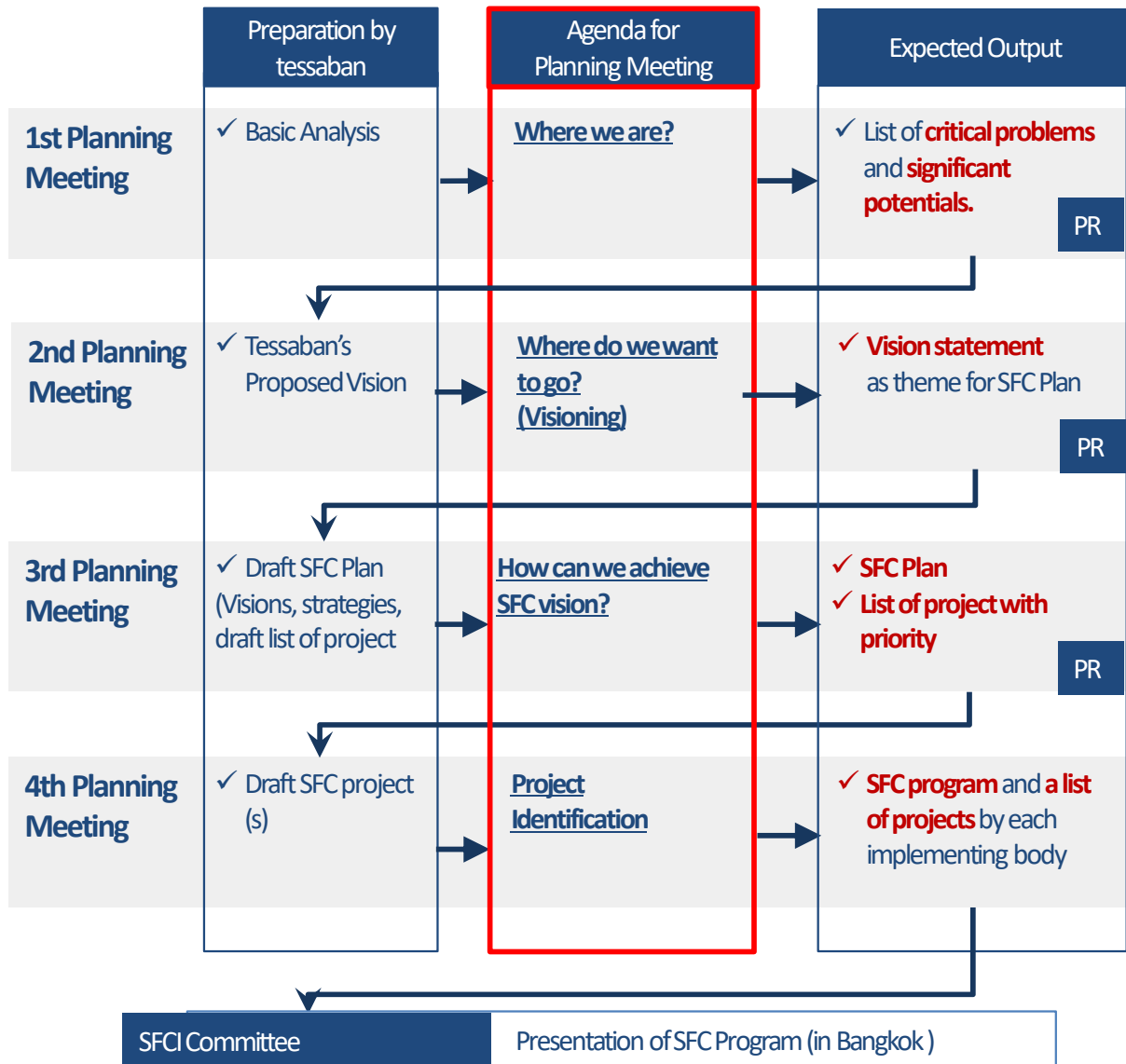


Figure 4 Coverage of SFC Plan

Participatory Process of SFC Planning

The tessaban and the Consultant shall be required to follow the following participatory approach in a whole planning process of SFCI. Tessabans shall organize several Planning Meetings to carry out SFCI. The SFCI Team and the Consultant shall formulate SFC Plan and Projects through the discussions in those Planning Meetings. The final output shall be also approved by the Planning Meetings.



Note: PR: public relation of the output of each meeting by tessaban

Figure 5 Participatory Process in SFCI

[Step 2-1] Basic Analysis

Basic analysis aims to examine current status of tessaban and identify critical issues to be solved and future potentials of tessaban. Basic analysis includes (i) review of the existing plans, (ii) questionnaire survey, and (iii) data collection in social, environment, and economic aspect and urban management comprehensively.

Consultant will support tessaban to do basic analysis, including to collect necessary data and information, to analyse them, and to identify key existing and future issues of tessaban.

Review of Existing Plans

The tessaban shall review the following existing plans to clarify current issues and development vision of tessaban and expected roles of tessaban to achieve the 12th NESDP and Provincial Development Plan;

- 12th National Economic Social Development Plan and 20-year National Strategy;
- Regional Development Plan
- Changwat Development Plan;
- PAO Strategic Development Plan
- DPT's Comprehensive Plan;
- Local Strategic Development Plan;

Other important plans, such as Provincial Environmental Quality Management Plan, Tourism Development Plan, feasibility studies of specific projects, etc. It is also important to examine the relationship between tessaban's visions and the above plans in order to clearly understand the rationale/ justification of the vision from the following points of view:

Questionnaire Survey

Tessaban shall conduct small-scale questionnaire survey to examine the level of people's needs or people's priority and that of people's satisfaction on various aspect, including quality of life, tessaban's services, infrastructure, etc. Sample size shall be more than 200 samples.

Example of questionnaire survey is shown in the attached Form 2. Tessaban can add some specific questions depending on the priority issues of each tessaban.

The Consultant will support to prepare the questionnaire sheet, conduct the survey, and analyze them. Questionnaire form and survey methodology shall be discussed in the Consultant, Planning Team and tesabban.

Box 5 Comparison of the Questionnaire Result of the First-phase 6 Model Cities

1. Importance for Future Tessaban

3 of highest score items of each model cities are as follows.

	1st	2nd	3rd
Chiang Rai	Vocational School for better job	Tourism development	School education system
Khon Kean	Disaster Management	Manufacturing development	Road network development
Krabi	Beautification of landscape	Tourism development	Air quality and noise
Nan	Local culture preservation	Public health services	City center development
Phanat Nikhom	City center development	Public announcement Transport administration	
Phitsanulok	Basic electricity installation	Drug control	Solid waste management
Total	Tourism development	Disaster management	Public health services

Tourism development, disaster management and public health services are the top three of the most important items for future in general, however, the important items differ by city. It should be noted that, in every model city, there are few differences among the score of items. In other words, orders among items may change easily depending on the situation. Therefore, tessaban should not neglect even the low-scored items.

2. Satisfaction for the present status

3 of lowest score items of each model cities are as follows.

	1st	2nd	3rd
Chiang Rai	Manufacturing development	Agricultural development	Transparent administration
Khon Kean	Climate change mitigation	Noise pollution control	Public health services Elderly care services

Krabi	Drug control	Public housing supply	Solid waste management
Nan	Manufacturing development	Agricultural development	ICT service promotion
Phanat Nikhom	Rainstorm management	Public housing supply	Noise pollution control
Phitsanulok	Manufacturing development	Agricultural development	International exchange
Total	Manufacturing development	Agricultural development	Rainstorm management

Development of manufacturing and agriculture were not satisfied in most of tessabans, but the score of importance for these two items are generally low. On the other hand, rainstorm management is classified into rather high score group of importance.

3. Gap between importance and satisfaction

If citizens are not satisfied with the present situation of some items but put high importance on them, there are large needs for local administration to improve them.

The following table shows the gap between the score of importance and that of satisfaction.

(importance score) – (satisfaction score)

	1st	2nd	3rd	Average Gap
Chiang Rai	Transparent administration	Wastewater management	Rainstorm management Solid waste management	0.720
Khon Kean	Disaster management	Public housing	Noise pollution control	0.798
Krabi	Drug control	Solid waste management	Public housing	0.661
Nan	Public participation	Vocational school for better job Noise pollution control		0.340
Phanat Nikhom	Rainstorm management	Private sector involvement	Public housing	0.667
Phitsanulok	Drug control	Solid waste management	Rainstorm management	0.873
Total	Rainstorm management	Noise pollution control	Solid waste management	0.637

It is found that the gap is large particularly in the environmental sector such as rainstorm management, noise pollution control and solid waste management. In other words, citizens are seriously concerned about those items at this moment.

The average gap is almost at the same level, except for Nan, where the gap is extremely low.

Data Analysis

The tessaban shall collect data and information to clarify current status and current problems of tessaban and its surrounding urban areas, as shown in the Table 1. Some data is available by tessaban, while the others are only by district or province. Qualitative information shall be also collected if there is no available data.

Consultant will support to collect necessary data and tessaban shall provide necessary arrangement and coordination with relevant agencies for the Consultant to access to the data appropriately.

Table 1 List of Collected Data and Information

Sector		Type of data
Social aspect	Demographic data	<ul style="list-style-type: none"> - Population structure and its trend in the last 10 years (Thai, foreigners) - Ageing rate and its trend in the last 10 years - Migration trend - Household income - Non-registered population
	Level of social services	<ul style="list-style-type: none"> - Number of higher educations - Number of medical services
	Issues	<ul style="list-style-type: none"> - Particular issues of social welfare, care support, or participation of vulnerable persons - Community participation - Education and medical services, - Security and crime - Historical cultural status
Environment	- Overview	- Climate, geography, natural resources
	- Disaster	<ul style="list-style-type: none"> - Types of disaster - Frequency and vulnerable areas
	- Natural resources	- Preservation area by type
	- Pollution	<ul style="list-style-type: none"> - Critical pollution (air, water quality, solid waste) - Any notable measures
	- Solid waste	<ul style="list-style-type: none"> - Volume of waste and landfill site - Issues of solid waste management (regional coordination, recycling, waste to energy, etc)
Economy	- Overall	- GRDP, GRDP per capita, and its composition
	- Employment	<ul style="list-style-type: none"> - Employment by sector and its trend in the last 10 years - Employment of young generation
	- Industries	<ul style="list-style-type: none"> - Leading industries - Traditional and emerging industries - Existing issues and future vision for local economic development
Urban Management	- Infrastructure	- Any existing issues, road, water supply, drainage, sewerage, etc.
	- Urbanization trend	<ul style="list-style-type: none"> - Change of land use - Urban expansion into sub-urban area - Types of business and commercial status in CBD
	- Public transport	<ul style="list-style-type: none"> - Available public transport mode - Mobility issues

Table 2 shows the example of data analysis using the above data. Tessaban may collect additional data or elaborate them in detail, depending on the local issues. For example, impact of regional connectivity will be carefully analyzed at the border city. It is necessary to be flexible to make analysis depending on available data and uniqueness of tessaban.

Table 2 Example of Data Analysis

Sector	Type of data	Analysis
Population	Trend	<ul style="list-style-type: none"> - population increase/decrease rate in the past 10 years - Comparison of population increase/decrease rate of Tessaban with that of Amphoe Mueang / Changwat/ whole Thailand - Historical trend of number of household and average household size
	Age structure	<ul style="list-style-type: none"> - Historical trend of aged population ratio (over 60 years old) - Historical change of younger generation (less than 15 years old)
Economy	Leading economic activity	<ul style="list-style-type: none"> - Major economic activities (past, current and future possibilities) in Changwat, Amphoe Muang and Tessaban
	Employment	<ul style="list-style-type: none"> - Characteristics of employment in Tessaban, Amphoe Muang and Changwat - Job opportunities for young generation and possibilities for young generation to stay in tessaban after graduation
Social	Education	<ul style="list-style-type: none"> - Number of higher education and possible migration of young generation
	Security	<ul style="list-style-type: none"> - Trend and types of crime
Environment	Waste	<ul style="list-style-type: none"> - Trend of waste generation - Any critical issues (collection transport, disposal) and measures to undertake those issues
	Sewerage	<ul style="list-style-type: none"> - Treatment and coverage and needs for expansion
	Pollution	<ul style="list-style-type: none"> - Any critical pollution
	Disaster	<ul style="list-style-type: none"> - Urgent needs to mitigate disaster damage (adaptation)
Natural and Cultural Resource		<ul style="list-style-type: none"> - Location of resources by type to be considered in the spatial development plan
Urban Development	Urbanization	<ul style="list-style-type: none"> - Comparison of urbanized area in the past and at present to check the direction of urban expansion - Urbanized area beyond tessaban boundary
	Central Business District	<ul style="list-style-type: none"> - Status of declining economy of CBD - Possibilities of redevelopment
	Transport	<ul style="list-style-type: none"> - Transport for vulnerable persons

Source: SFCI Project Team

Summarize Existing Issues

Based on the findings of the above analysis, Tessaban shall summarize existing issues, which can be categorized into environmental, social, and economic sector, and urban management. The Consultant will support to summarize them.

Table 3 Summary of All Key Issues

	Economic aspects	Social aspects	Environmental aspects	Urban Management
Data analysis				
Questionnaire survey				
Interview with relevant agencies and stakeholder				
Summary				

First Planning Team Meeting

Tessaban shall organize the First Planning Team Meeting. Agenda of the First Planning Team Meeting shall cover the following topics.

- What are urban development problems faced by tessabans and its urban areas?
- What are the critical issues of tessabans and its urban areas?
- What are the most important potentials of tessabans and its urban areas?
- What are people's opinions and satisfactions on urban development?

The Consultant Team will support tessaban SFCI Team to present the result of basic analysis. In order to facilitate active discussion among the Planning Team members, workshop-style group discussion shall be arranged rather than class-room style Q&A session. The Consultant Team shall facilitate discussion in each group as well as prepare necessary materials for group discussion, such as A0 white paper, post-it, pen, etc.

Box 6 Planning Team Meeting in the First Phase Model Cities



Tessaban Mueang Nan



Tessaban Mueang Krabi

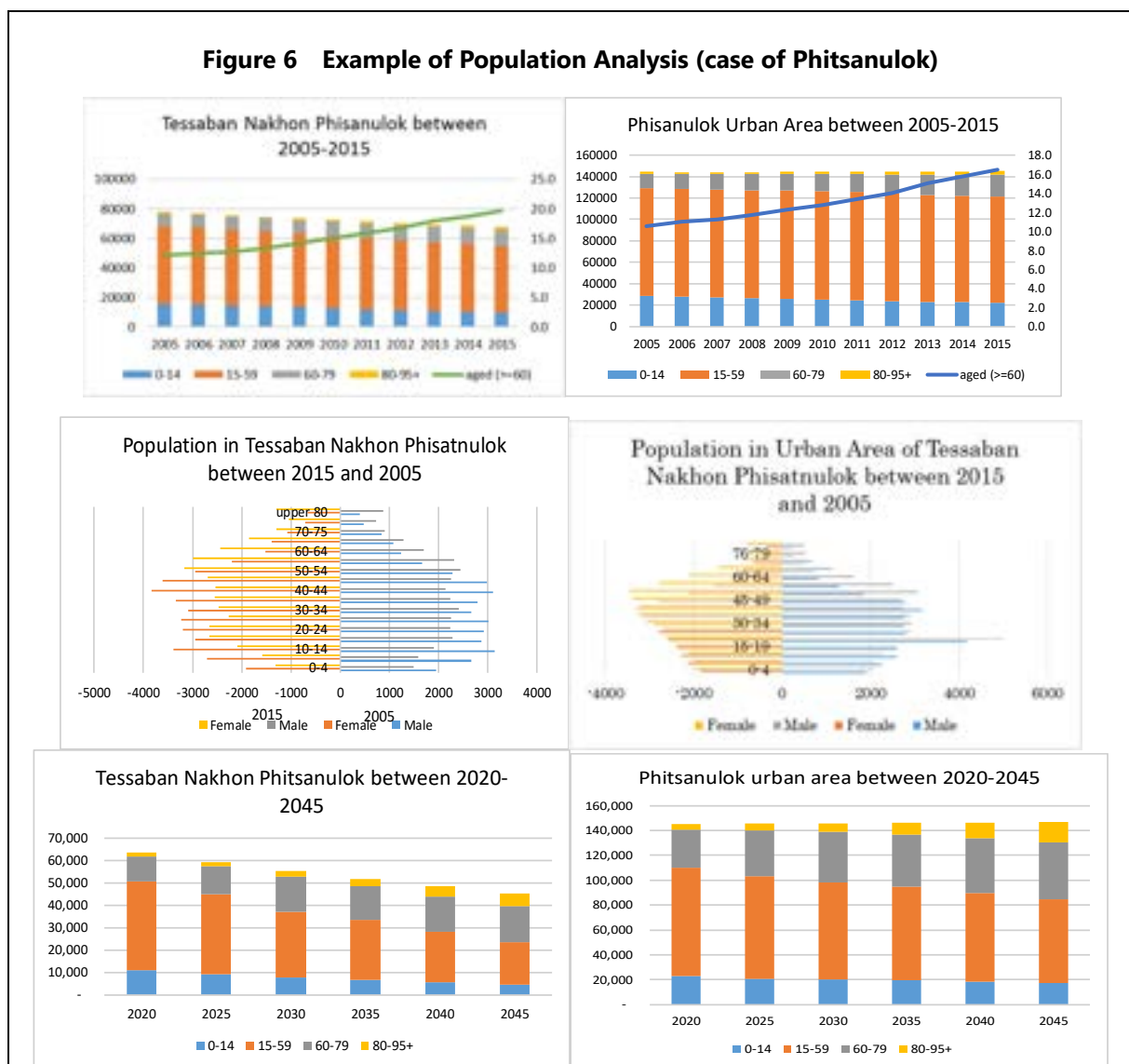
[Step 2-2] Analysis for Future

Analysis of Socio-economic Framework

Future socio-economic framework of tessaban and surrounding urban areas will be analysed, based on the past trend of population and aged structure and future population forecast prepared by NESDC. Urban areas can be defined as central tessaban plus adjoining tessaban or TAOs, depending on the local situations.

The Consultant will work on data analysis and tessaban will provide all the available data and information, such as registered population of tessaban and surrounding LAOs. It should be noted that non-registered population should be carefully discussed.

Figure 6 Example of Population Analysis (case of Phitsanulok)



Analysis on Future Perspective

Based on the result of current status analysis and future socio-economic framework including population change, population structure change, the tessaban will prepare future perspective of tessaban and its surrounding urban areas, in order to visualize “**What can be happened in future**”. The following aspects should be highlighted;

- **Anticipated problems on economic aspect of the inner tessaban and surrounding areas:** such as closure of shops in the city center, insufficient employment opportunities for young generation, decline of regional industries etc,
- **Anticipated problems on society of tessaban and surrounding areas:** such as insufficient care system and facilities (including universal design) for aged people/ disabled/ kids, less participation in the society /deterioration of security, etc.
- **Anticipated problem on environment of tessaban and surrounding areas:** such as traffic congestion and safety, waste management, pollution, flooding, climate change issues, sprawling, etc.

The Consultant provide technical support to do such analytical framework.

Sustainability Assessment

Based on the result of analysis of future perspective, tessaban will assess sustainability of tessaban and surrounding urban areas from economic, social and environmental points of view. Some of the discussion points, but not limited to, are listed below;

- **Continuity of society in future** from population change/ population structural change,
- **Economic continuity** especially potential future **leading** industrial sectors,
- **Continuity of economic activities of CBD area** or old town area as an economic center of urban area,
- **Future employment opportunities** for young generation in tessaban,
- **Attractiveness** and destructiveness of town for aged, middle aged and young generations, students and kids,
- **Living environment** (like universal design) **and social services** available for **vulnerable** people (aged, disabled, single mother, kids etc.),
- **Environmental sustainability**, such as waste, pollution, disaster, and climate **change** issues etc.

The Consultant should provide third party’s interpretation including comparison with other tessabans or cities of other countries.

[Step 2-3]: Visioning and Strategy Setting

Confirmation of existing Visions as a Goal for “Sustainability”

Development goal for “sustainability of town” or “continuity of town should be prepared for SWOT analysis”. Based on the existing visions of tessabans, changwat and other relevant development plans, visions for SFCI can be decided.

Visions of the six tessabans of the first phase of SFCI are as below;

Tessaban Nakhon Chiang Rai: “City of Happiness for All”,

Tessaban Nakhon Khon Kaen: “Make the City to be Global, Create the Society to be Happy and Smart city”,

Tessaban Mueang Krabi: “To make Krabi City as Art cultural City with Tourism”,

Tessabn Mueang Nan: “Nan-A Happy & Living old town”,

Tessaban Mueang Phanat Nikhom: “Livable City”, and

Tessaban Nakhon Phitsanulok: “Central City with Nice Landscape, Happy People”.

Compilation the Results of Assessment as SWOT Analysis

The results of basic analysis and future analysis shall be compiled as SWOT analysis with the above-set development goal. The Consultant shall support tressaban to compile the SWOT analysis along the clear goal.

Table 4 Format of SWOT Analysis

Future Vision (Development Goal): _____	
Strength	Opportunity
Social Aspect . . Economic Aspect . . Environmental Aspect . . Urban Management . .	Social Aspect . . Economic Aspect . . Environmental Aspect . . Urban Management . .
Weakness	Threat
Social Aspect . . Economic Aspect . . Environmental Aspect . . Urban Management . .	Social Aspect . . Economic Aspect . . Environmental Aspect . . Urban Management . .

Box 7 Example of SWOT Analysis (Tessaban Krabi)

Future Vision: “Art Cultural City with Tourism”

<p>Strength</p> <ul style="list-style-type: none"> • Well known beach resorts • Accumulation of tourism industry and tourism supporting industry • Livability of Tessaban Krabi • Andaman Culture (i.e. culture of diversity and coexistence) • A variety of natural resources, including beaches, waterfalls, hot springs and mountains. • Uniqueness of art (i.e. sculpture, museum and art festival) • Beautiful landscape 	<p>Opportunity</p> <ul style="list-style-type: none"> • Increase of tourists under AEC • Joint tourism project among “Andaman Cluster” • Art Olympic in tessaban every 4 years by Department of Culture • Collaboration in term of tourism in Andaman group. • Airport will be expanded within 2 years.
<p>Weakness</p> <ul style="list-style-type: none"> • Disparity of income assessment • limited job opportunities for white-color young people • limited tourism products • Language skills especially English and Chinese to communicate with tourists • Lack of specialists for art-building design to promote tourism in the city. • Relatively high price of products and services in the city. 	<p>Threat</p> <ul style="list-style-type: none"> • Deterioration of the beach environment • Competition among the beach resorts • Mass-media broadcasting incorrect information providing negative/inappropriate image of the city) • Lack of local product promotion, including traditional food, product and attraction. (i.e. packaging design) • Risk of flooding and traffic accident

Source: SFC Plan of Tessaban Mueang Krabi

Setting Future Strategies

Based on the result of SWOT analysis, future strategies to achieve the proposed vision will be established. Four to five strategies will be set to cover the issues identified in the above-SWOT analysis comprehensively. Each strategy shall describe its background issues, target and focuses.

Box 8 Example of SFC Vision and Strategies

(a case of Tessaban Nakhon Phitsanulok)

Vision: “Central City with Nice Landscape, Happy People”

(1) Strategy 1: Encouragement of Next Leading Businesses

Target: To promote logistics, transport, agro-processing industries to generate more job opportunities. Domestic tourism businesses are also important to provide with job opportunities for young generation.

Program:

- Business district, production center, and logistics and distribution center development in the urban area.
- To promote vocational training for local peoples
- More tie between local business/industry and universities for more local recruitments
- Business incubation and support entrepreneurs
- Tourism promotion especially city tour, MICE etc.

(2) Strategy 2: Improvement of “Naa Yuu” and Local Pride for All Generations

Target: Improvement of living environment including environmental aspects and universal design aspects. In the Tessaban area, more attention should be given to improve infrastructure and utilities for all generations. In the surrounding area, more attention should be given to improve environment through proper infrastructure and utilities development.

Program:

- Expansion of green areas and parks
- Promotion of community participation in environment preservation
- Encouragement of pollution control at surrounding Tambons
- Lifelong learning
- Education of local uniqueness like history, culture, geology and economy etc.
- Preparation of Aged Society
- Applying universal design concept to design infrastructure and public facilities
- Care system integration
- Capacity development
- Database and IT system to serve social welfare and medical service for elderly people
 - o Database
 - o Smart living and smart health care.
- Sustainable public health management under community collaboration.
- Strengthening of public health services.
- Promotion of sports.
- Right protection for socially disable groups.
- Anti-drug promotion.

(3) Strategy 3: Provision of Infrastructure and Utilities for Safety and Sufficient Living Environment

Target: Utilities and infrastructure should be properly expanded in accordance with urban expansion

in the urban area to improve living environment in the suburban area.

Program:

- Improve roads, walkways, drainage, and bridges
- Expansion of capacity and coverage of water supply
- Improvement of Solid Waste management like 3R
- Expansion of waste water treatment area
- Traffic safety
- Public transport improvement
- Improvement of landscape in Tessaban area
- Flood prevention

Second Planning Team Meeting

Tessaban shall organize Second Planning Team Meeting in order to discuss the result of Step 2-2 and Step 2-3. Agenda of the Second Planning Team Meeting shall cover the following topics.

- Future perspective: What will happen in future?
- Sustainability assessment from the various perspectives
- Result of SWOT analysis
- Vision and Future Development Strategies

The Consultant shall support tessaban to facilitate discussion among PT members.

[Step 2-4] Lessons Learned from Experiences of Japan

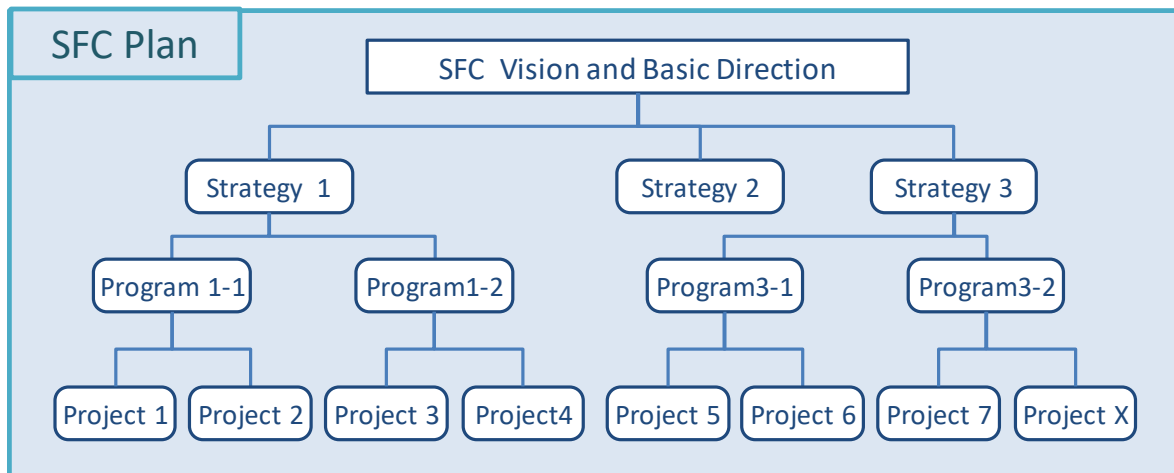
A booklet “Challenges toward Sustainable Cities by Japanese Local Cities”

A booklet titled “Challenges toward Sustainable Cities by Japanese Local Cities” will be provided to tessabans, which describes good practices of Japanese Cities and covers economic development, environmental management, social enhancement and urban management.

[Step 2-5] SFC Plan Formulation

SFC Vision and Strategies

Tessabans will formulate SFC Plan. The SFC Plan shall consist of vision, strategies and projects. The Consultant shall support tessaban to formulate SFC Plan, including strategy and projects.



Identification of SFC Projects along the SFC Strategies

SFC projects is formulated as potential actions to be taken to materialize strategies under SFC vision. Each strategy may have several projects, which can be categorized as short-term ones in the first 5-year and mid-to-long term ones.

In the SFC Plan, projects shall be initially or preliminarily formulated for further elaboration, so detailed considerations such as engineering design, procurement list, etc. may not be required. Each project can be formulated as a program which will be separated into several sub-components later on. However, it is required, at least but not limited, to identify initial implementation schedule and potential financial sources of each project, which is listed as below and shown in Table 5. Project name

- Location
- Objectives
- Project components
- Implementation organization
- Initial implementation schedule

The following points need to be carefully considered in the project formulation.

- **Existing Projects:** It is important to integrate projects which are being implemented, already committed, or under planning. Tessaban and the Consultant shall collect those information from the relevant agencies, particularly

from departments under PCC.

- **Implementing organization:** It is important to consider carefully about possible financial resources and necessary authorities to implement projects.
- **Implementation Schedule:** At this stage, implementing schedule can be set for long-term, mid-term and short-term. Feasibility of the projects shall be considered, such as land availability, human capabilities, etc.

It is also recommended to combine some of similar projects as one program.

The Consultant shall provide technical support to make a list of projects.

Table 5 Image of a List of SFC Projects

No.	Project Name	Objectives	Project Components (preliminary)	Implementation Organization	Implementing Schedule
Strategy 1 Health Care System Development					
Program 1-1 Health care network development					
1	Enhancement of Public participation and Development of Health Management Network	To strengthen capabilities of community in health care system	<ul style="list-style-type: none"> - Lively Elderly persons with health conscious - Promotion of health and sanitation for elderly and disabled persons - Health promotion and leaning system development 	<ul style="list-style-type: none"> - Tessaban - Community 	
2	Health care center development	To construct health care center	<ul style="list-style-type: none"> - Health care center - O&M development 	<ul style="list-style-type: none"> - Tessaban - Changwat 	
Strategy 2					
n	Silver Economy Enhancement	Job opportunity in silver business	<ul style="list-style-type: none"> - Core facility - Networking - Product development - Marketing and sales promotion by ICT - Training 	Department of Older Persons	

Note: The table above is just example of format and image. The organizations in the table are not committed any action.

Third Planning Team Meeting

Tessaban shall organize the Third Planning Team Meeting in order to present the result of Step 2-5 and to get opinions of relevant stakeholders, as below;

- Any missing projects which are related with SFC strategies
- Possible implementing agencies and potential financial sources to promote each SFC Project
- Priority projects that have urgent needs and can be implemented in a short-term.
- The Consultant shall support tessaban to facilitate discussion among PT members.

Step 3 Prioritization and Project Formulation

[Step 3-1] Prioritization

Tessaban and the Consultant and Planning Team shall identify priority SFC program or SFC projects from the SFC Plan as early harvested actions to be taken. The followings are the proposed criteria for prioritization, which can be finalized by each tessaban.









Prioritization Criteria (Draft)

- Progress of other preparatory actions like resettlement, approval from other authorities, if necessary
- Implementation capacity on human resources in Tessaban
- Own budgeting or possibility to get finance from other sources, if necessary
- Consensus of tessaban and other stakeholders
- Demonstration effects

[Step 3-2] 5-Year Action Plan of the Priority SFC Program/Project

The tessabans will formulate 5-Year Action Plan of the priority SFC Program/Projects, which are selected in [Step 3-1]. Some of projects in the SFC Plan can be divided into several project components. It aims to provide implementation schedule, implementation organization, and preliminary estimated cost. The Consultant will support to prepare the documents.

Table 6 Image of the 5 Years Action Plan

No.	Project	Year 1	Year 2	Year 3	Year 4	Year 5	Implementing Organization (potential budget source)	Estimated Budget
1	A Planning						Province	THB 10 mil
2.	B construction project						DLA	THB 100 mil
3	C capacity development						KPI	THB 2 mil
4	D training						Tessaban (own budget)	THB 1 mil
5	E training						Tessaban (own budget)	THB 2 mil
X	X Construction						Cluster Budget	THB 15 mil
Y	Y Development						MOT	THB 30 mil
Z	Z Festival						TAT	THB 5 mil

Note: The table above is just example of format and image. The organizations in the table are not committed any action.

[Step 3-3] Project Formulation

The priority projects need to be compiled in the project sheet as attached in the Form 5, which covers the following items;

- Project name
- Location
- Objectives
- Project components
- Implementation schedule
- Implementation organization
- Preliminary estimated Cost

Forth Planning Team Meeting

Tessaban shall organize the Forth Planning Team Meeting in order to present the result of Step 3, to select the priority program/projects and to get opinions of relevant stakeholders, as below;

- Any missing actions which should be included in the priority projects/program
- Possible implementing agencies and potential financial sources to facilitate priority projects/program

The Consultant shall support tessaban to facilitate discussion among PT members.

Compilation of SFC Plan Report

Tessaban will summarize the result of SFC Planning stage, including planning process, result of basic analysis, and SFC Plan , 5-year action lists (Form 4) and project sheet of priority projects (Form 5).

The tessaban shall submit them to the NESDC for their check and advise.

The Consultant will summarize all of the planning process and the SFCI output, including the SFC Plan and the selected SFC Program/projects. TOC of the Report will cover the following.

1. Introduction

2. SFCI Planning Process

Summarize a list of PT members and PCC and record of PT meeting.

3. Basic Analysis

(1) Outline of tessaban

Describe outline of tessaban and surrounding area, including historical background, uniqueness, roles of the cities from national and regional context.

(2) Review of the Existing Plan

Summarize review of the exiting plans

(3) Result of Data Analysis

Summarize the result of data analysis including following;

(a) Demography, population change of the last decades, population structure, ageing rate, and unregistered population

(b) Economic sector: GRDP structure, major industries and major employment

(c) Social sector: education and medical services, security issues, etc.

(d) Environmental sector: natural resources, environmental quality, solid waste management, waste water treatment, disaster

(e) Infrastructure and urban management: infrastructure bottleneck, urbanization trend, with spatial information

(4) Result of Citizen Questionnaire Survey

4. Analysis for the Future

(1) Analysis of population forecast

(2) Future perspective

5. SFC Plan

- (1) Visioning and Strategies
 - *Result of SWOT analysis*
 - *Describe background issues, target and focuses of each strategy*
 - (2) SFC Project
 - A list of SFC Project (Form 3)
6. Prioritization and Project Formulation
- (1) Prioritization of the SFC Program
 - (2) Prioritized SFC Program and Project Formulation
 - Describe action plan of the selected SFC Program (Form 4)
 - Formulation of SFC Project (Form 5)

SFC Project Implementation Supports

In order to ensure implementation of the proposed priority SFC projects or other SFC projects, Tessaban and the Consultant shall work together to seek the way for project implementation, as shown in Figure 7.



Figure 7 SFC Project Implementation Supports

Support 1 Policy-making supports

In order to ensure continuous commitment by tessaban, it is essential for tessaban to put higher priority on the output of SFCI. The Consultant will assist tessaban's decision-making and to integrate SFC plan and projects into its existing plans, such as Local Strategic Development Plan (LSDP).

Support 2 Administrative Supports: Collaboration with Relevant Stakeholder

It is an effective way for tessaban to make collaboration with relevant authority(ies) for reinforcing technical, financial and administrative capacity. The Consultant will coordinate with relevant agencies, such as provincial department or public organizations depending on the selected themes and sectors of SFC Plan and SFC projects. One of the typical outputs of coordination is MOU with relevant stakeholders including province, surrounding tessaban(s), which aims to promote implementation of SFC plan and projects.

In the first phase of SFCI, the following unique collaboration have been conducted;

- Tessaban-centered collaboration with relevant organizations: MOU (as seen in Phitsanulok, Phanat Nikhom and Krabi)
- Coordination between tessaban and regional offices of national department (as seen in all tessaban)
- Coordination between tessaban and national departments at committee to be set

under SFCI

- Coordination with surrounding tessabans at regional scale (as seen in Khon Kaen)

In addition to coordination with public organizations, more variety of cooperation and collaboration are currently observed. It can be collaboration with private entities, civil society, academic sector based on the win-win relations among stakeholders as well as with specific benefits and goals in global society. It may be another potential source to obtain technical and financial supports to realize SFC Projects. The Consultant shall search and update potential partners including:

- Private sector in each tessaban, such as KKTT in Khon Kaen.
- University; particularly for regional universities based on each tessaban,
- International Donors, which have undertaken urban development in each tessaban,
- Cooperation with other municipalities including those outside of Thailand, through sister city, friendship agreement etc.

Support 3 Approach to Potential Financial Sources

Budgeting and financing are one of the biggest constraints for tessabans to facilitate project implementation. The Consultant will support tessabans to apply potential budget scheme and find implementation organization to implement the SFC Projects.

It is essential for tessaban to request the appropriate budget sources depending on the size and scope of each project. The Consultant will provide information on the potential budget and find the most suitable budgeting sources. Since it takes time to approve the proposed budget, the Consultant will consider timing of budgeting and to provide alternative budgeting sources. It is also feasible for tessaban to secure its own budget to implement the start-up projects until the budget for full-scale project is approved by any national departments.

The possible budgeting sources can be categorized into projects under tessaban’s authorities and those beyond them. The former includes general financial line of tessabans and additional financial line. The latter includes budget under each ministry, PAO’s budget and others, as shown in Figure 8. Details of each budget source are described as below;

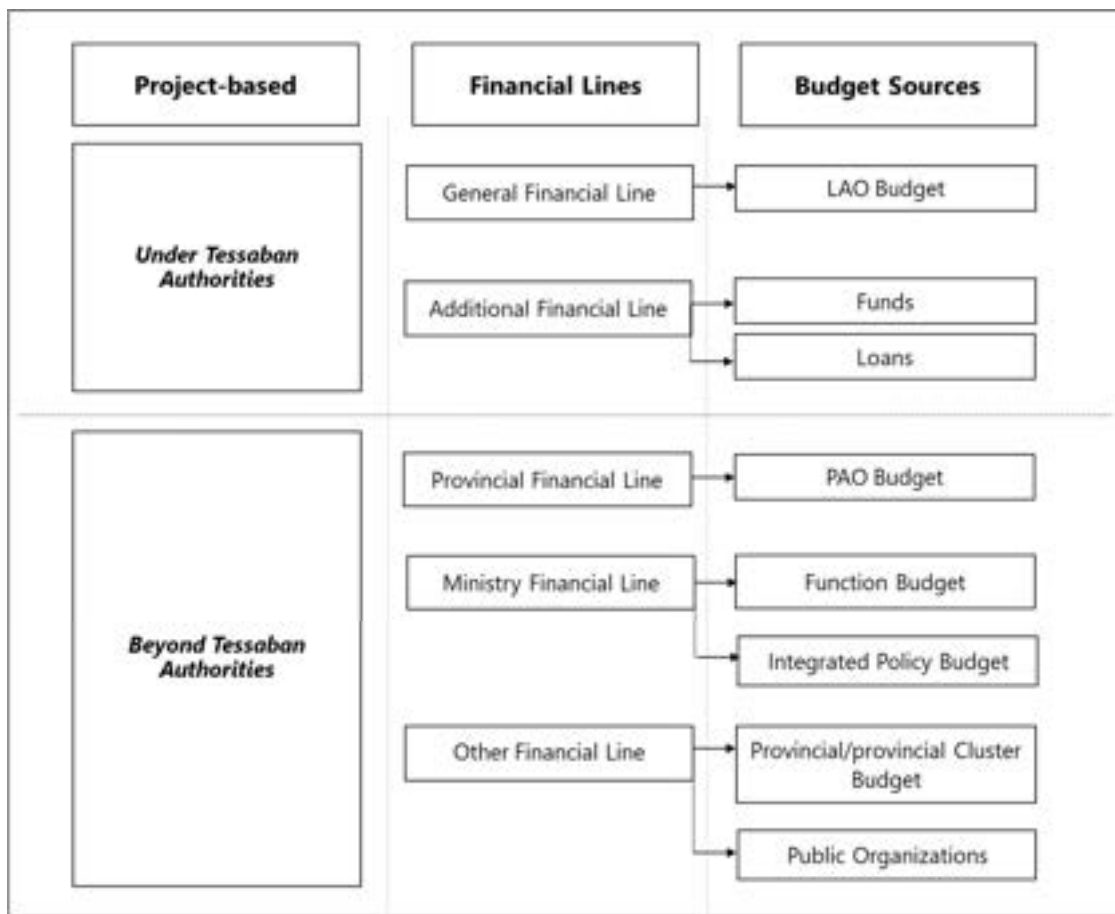


Figure 8 SFC Project Implementation Supports

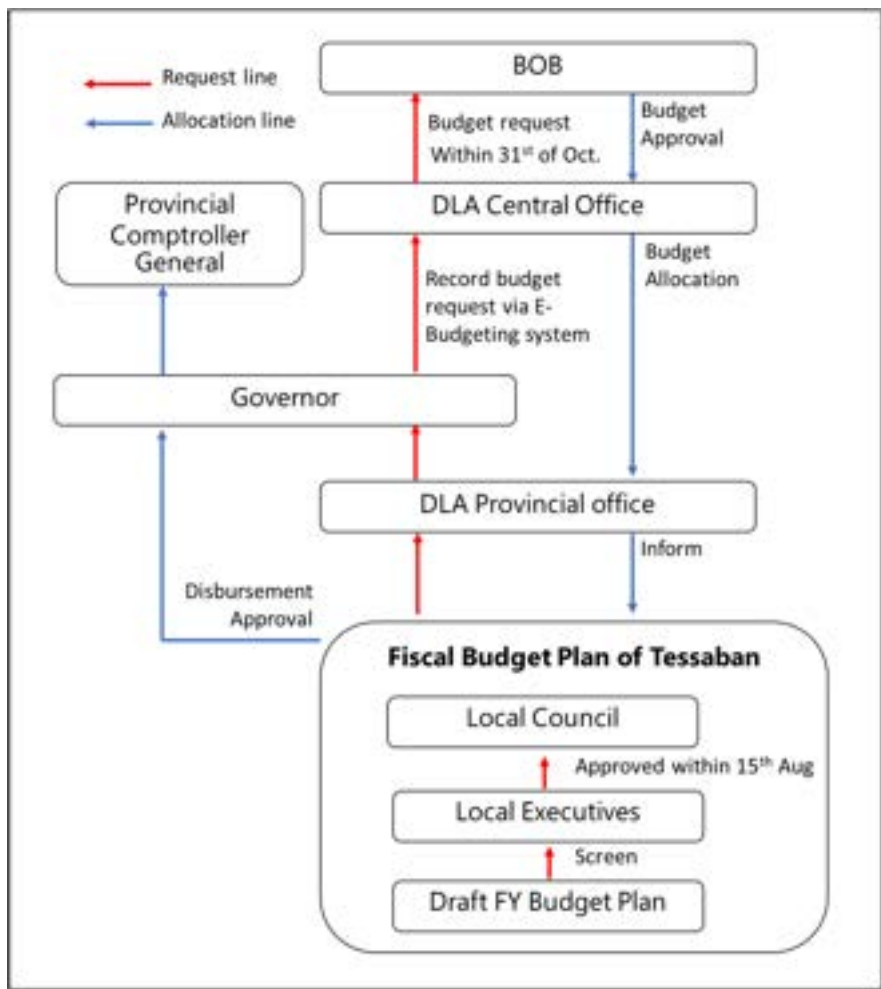
LAO’s Budget

The most fundamental financial source for SFC Projects is LAO’s budget itself. Tessaban can include the SFC Projects of which scopes are under its own authorities into its 4-year Local Strategic Development Plan (LSDP) to be directly implemented under municipal general budget.

SFC Projects listed in the LSDP shall be included in the tessaban’s Annual Action Plan, which will be checked by the Committee for Promoting and Integrating LAOs Development Plan, screened by the Committee for Local Development and approved by the Local Executives.

It is important to consider schedule to prepare the budget. Tessaban needs to submit FY budget to the Local Council by 15th August. The FY budget is submitted to the DLA Provincial Office and reviewed by Governor. It is further screened by DLA central office and approved by BOB by 31st October.

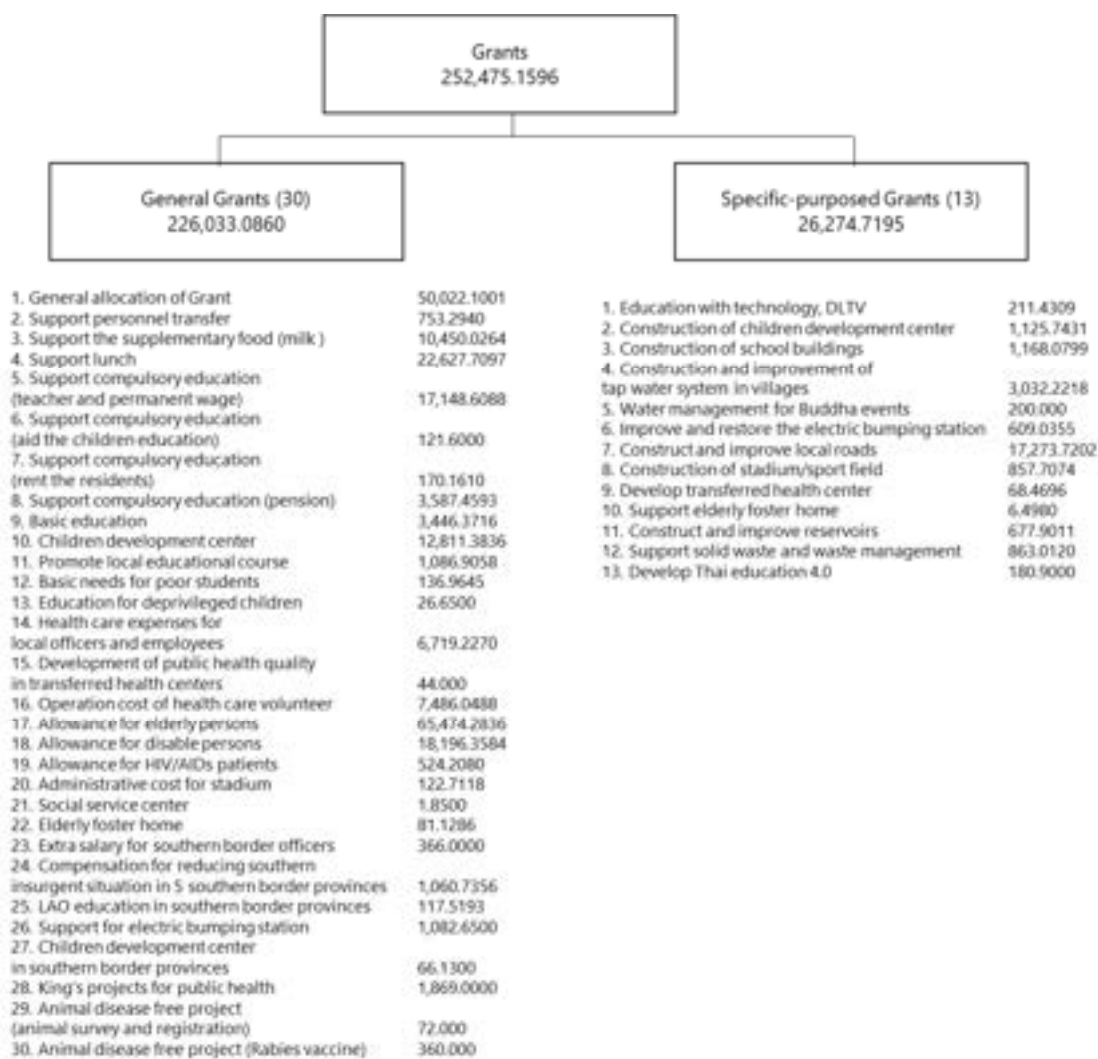
The Consultant will support tessaban to prepare necessary documents to be submitted within the above timeline.



Source: JICA Project Team

Figure 9 Procedure of Fiscal year budget

In addition, specific-purposed grant allocated by DLA is a potential financial source for new initiatives or SFC projects. It is important for tessabans to annually update the focal issues of specific-purposed grant as it can change every year. Tessaban can propose such projects into its fiscal year budget plan to use the specific grants. DLA sets up the committee to screen and approve those projects requested for specific grants.



Source: ODLOC edited by JICA Project Team

Figure 10 Criteria of Grant Allocation in 2019

Funds

There are several funds available for tressabans to request the budget for the SFC Projects. Most of funds are provided by central offices of relevant departments. Since those central departments cannot directly allocate the budget to tressabans, those funds can be one of the alternatives for them to support local activities. Since each fund has different procedures and focuses, it is important for tressaban to check the availability, conditions, administrative process and focal issues of each fund in each year. The overall funds provided by SFCI Committee Members are summarized in Table 7.

The administrative process of providing fund of departments under ministries and that of public organizations under OPM is different. The fund provided by departments under ministry gives priority on their own development plans. In other words, the proposed SFC projects should be included into the department development plan especially in its regional or provincial level, such as Environmental Fund under Office of Natural Resource and Environmental Promotion (ONEP). In contrast, OPM which has no regional/provincial offices has provided more flexible funds, such as Thai Health Promotion Foundation. It provides open grant every year to the locality who are interested in public health promotion.

Table 7 List of Funds from SFCI Committee members

	SFCI Committee Members	Fund	Focused issues	Proponents	Supported Amount (THB)	Timeline to request	Remarks	Source
1	Office of Natural Resources and Environmental Policy and Planning (ONEP)	Environment I fund	<ol style="list-style-type: none"> 1. Protection and restoration of conservation areas 2. Preserving and using natural resources, environment and biodiversity 3. Solid waste management 4. Climate change 5. Agricultural and environmental-friendly consumption 6. Environment and natural resource and renewable energy research 	<ol style="list-style-type: none"> 1. Government agencies 2. Local Administrative Organizations 3. Environmental private organizations 4. Public organization 5. Volunteer network/Association for natural source and environment preservation 6. Community council 7. Village committee 8. Educational institution 9. Environmental conservation and local artistry agency 	Up to 5 mil	All year rounds	- LAOs need to be submitted the project in accordance with Action Plan for Environmental Quality Management at the Provincial Level in each fiscal year.	http://envfu.nd.onep.go.th/
2	Department of Environmental Quality Promotion (DEQP)	N/A	N/A	N/A	N/A	N/A	N/A	N/A
3	Pollution Control Department (PCD)	N/A	N/A	N/A	N/A	N/A	N/A	N/A
4	Ministry of Energy (M-Energy) Department of Alternative Energy Development and Efficiency (DEDE)	Energy Conservation Promotion Fund Solar Fund	Energy saving Create renewable energy for community	<ol style="list-style-type: none"> 1. Government Agencies 2. State Enterprise 3. Educational Institution 4. Non-profit private organization <ol style="list-style-type: none"> 1. Hospital 2. School 3. Communities 4. Unreached electricity places 	Considered case-by-case by the energy conservation fund committee.			http://www.enconfund.go.th/pdf/manual.pdf https://thailand.solarfund.org/

Final Report

Appendix 4: Sustainable Future City Initiative Guideline for SFCI Model Cities

	SFCI Committee Members	Fund	Focused issues	Proponents	Supported Amount (THB)	Timeline to request	Remarks	Source
Ministry of Social Development and Human Security (M-Society)								
5	Department of Social Development and Social Welfare	Social Welfare Promotion Fund	Prevention, problem-solving, and enhancing social security 1. Education 2. Health and sanitation 3. Housing 4. work and income generation 5. Recreation 6. Justice process and 7. General social services	1. Public Benefit Organization (PBO) 2. Community welfare organization 3. Government Agencies being responsible for social welfare provision	Up to 100,000 per area and Must subsidize the project	All year rounds	The proposal should be identified into area-based and issue-based project.	http://www.sociafund.dsdw.go.th/
6	Department of Old Persons (DOP)	Older Fund	Protect, support and promote the elderly persons 1. Education 2. Public Surveillance 3. Culture conservation 4. Health and Sport 5. Multipurpose center 6. Local Wisdom 7. Careers Training 8. Network establishment and development 9. Research and Study 10. Facilities	1. Public Organization, Agency for elderly persons and Elderly club 2. Government Agencies (all)	Small project: up to 50,000 Medium project: 50,000-300,000 Large project: over 300,000.	All year rounds	Tessaban can request only for urgent issues or new activities	http://www.oldefund.dop.go.th/content/view/18/396
Ministry of Interior (MOI)								
7	Department of Public Works and Town & Country Planning (DPT)	Land Readjustment for Land Development Fund	The project should be related to Master Plan and being target group for land readjustment of province.	Government Agencies	Depends on fund allocation in each year	All year rounds	This fund can be provided in the form of subsidy and loan.	http://office.dpt.go.th/lrfund/index.php/2018-11-14-08-22-08
8	Department of Local Administration (DLA)	N/A	N/A	N/A	N/A	N/A	N/A	N/A

	SFCI Committee Members	Fund	Focused issues	Proponents	Supported Amount (THB)	Timeline to request	Remarks	Source
Ministry of Tourism and Sport								

	SFCI Committee Members	Fund	Focused issues	Proponents	Supported Amount (THB)	Timeline to request	Remarks	Source
9	Department of Tourism	Thailand's Tourism Promotion Fund	<ol style="list-style-type: none"> 1. Tourism promotion either research, training, meeting or public relation. 2. Tourism Development 3. Increase capacity of tourism competition 4. Administrative Development Skill 5. Marketing 6. Conservation of Community-Based Tourism (CBT) 7. Attraction quality preservation 8. Promotion of new local tourism products. 	<ol style="list-style-type: none"> 1. Government agencies 2. Educational Institution 3. Community 4. Any 	The Fund Management Committee will consider as necessary and appropriate the project or activity in the form of subsidies or loans in whole or in part or as part of the contribution.		The fund is provided in the form of 'working capital'	http://thailandtourismfund.go.th/
	Ministry of Industry (M-Industry)							
10	Department of Industrial Works (DIW)	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Ministry of Public Health (Department of Health (DOH))							
11	Department of Health (DOH)	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Ministry of Culture (M-Culture)							
12	Department of Fine Arts	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Ministry of Transport (MOT)							
13	Office of Transport and Traffic Policy and Planning (OTPP)	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Office of Prime Minister (OPM)							
14	Bureau of Budget (BOB)	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Public Organization							
15	Thai Health Promotion Foundation	Open Grant	Everyone <ol style="list-style-type: none"> 1. Group of individuals, 2. Government Agencies, 3. Any organizations 4. Communities, 	<ol style="list-style-type: none"> 1. Alcohol and substance abuse control 2. Tobacco control 3. Road safety and disaster management 4. Drug abuse protection and control 5. Prevention of pre-pregnancy in adolescents 6. Prevention of violence 	Up to 90,000 Plus 10,000 for additional supports on public relations and travel and accommodation expenditures	All year arounds	- New application form has been released on 30 of October. - The grant does not support for purchasing durable	https://www.thaihealth.or.th/

	SFCI Committee Members	Fund	Focused issues	Proponents	Supported Amount (THB)	Timeline to request	Remarks	Source
16	Digital Economy Promotion Agency (DEPA)	Digital Development Fund for Economy and Society	<ol style="list-style-type: none"> 1. Develop security in the digital site 2. Develop digital infrastructure 3. Develop digital government 4. Digital Personnel Development 5. Developing further technology that has potential 6. Developed according to the state's urgent policy 	<ol style="list-style-type: none"> 7. Healthy food promotion 8. Physical activity promotion 9. Healthy community strengthening 10. Mental health promotion/emotional and stress management 11. Spiritual health pathway promotion 	According to the Fund Management Committee deems appropriate.	N/A	goods, office costs and personal compensation excepting for speaker remuneration.	https://www.onde.go.th/ https://www3.rdi.ku.ac.th/?p=51118
17	Designated Areas for Sustainable Tourism Administration (DASTA)	N/A	N/A	N/A	N/A	N/A	N/A	N/A
State Enterprise								
18	Tourism Authority of Thailand (TAT)	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Association								
19	The National Municipal League of Thailand (NMT)	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Sources: JICA Project Team

Loans / Borrowing

Loans or borrowing can be a potential financial source for tressaban to develop their own initiatives/projects as its unconventional revenue source which is also enforced by Determining Plans and Process of Decentralization to Local Government Organization Act B.E. 2542 (A.D. 1999).

Tessaban needs to understand the terms and conditions for repayment and interest rate in advance, since the committee of loans will be appointed to evaluate the financial capability of repayments before approving the loan. Loans/borrowing is only available for development projects.

Regional Urban Development Fund (RUDF): It was established under Social Investment Project (SIP) by the Cabinet in 1998. This aims to provide long-term fund for LAOs to borrow for promoting local development. This fund is operated under Ministry of Finance through Government Saving Bank. RUDF plays a main role on both financial and technical supports for all LAOs. RUDF is expected to be a financial instrument to support investment programs as a pilot to simulate local developments. Therefore, RUDF mainly focuses on the investment on public infrastructure and services which can sustainably generate incomes in localities. In addition, technical assistance is provided to strengthen local capability on financial and project management. LAOs are expected to enhance their accountability by establishing frameworks for financial management to reflect their future perspective on local financial system. The example of RUDF project is provided in Box 9.

Box 9 Example of RUDF project in Phitsanulok

Project Name	Investment on Extension of Public Water Supply Project of Tessaban Nakhon Phitsanulok
Background of Project	Water supply is a one of transferred missions from MOI. Tessaban Nakhon Phitsanulok owns 2 water purification plants, with capacity of 1,570 cubic meter per hour. The efficiency of water production was declined because of obsolete machines and equipment, lack of proper maintenance, constrained in budget allocation. Due to urbanization, the capacity of existing water purification plant cannot catch up with the demands of water supply causing the water shortage.
Project Details	Expansion of existing water plants for serving present and future water consumption constructing new plant with capacity of 500 cubic meter per hour.
Duration	12 months
Budget	Type: Matching budget Total: 33.17 mil. RUDF loan: 60% of the total, 20 mil. Tessaban Nakhon Phitsanulok: 40% of the total, 17 mil.
Expected Outcome	Adequate water supply inside and surrounding Tessaban's area. Providing clean water supply for all citizens. Distributing water supply for flame hazard protection.

Sources: Sakon Varanyuwatana, Local Government Finance and Bond Market Financing in Thailand, edited by JICA Project Team

PAO's Budget

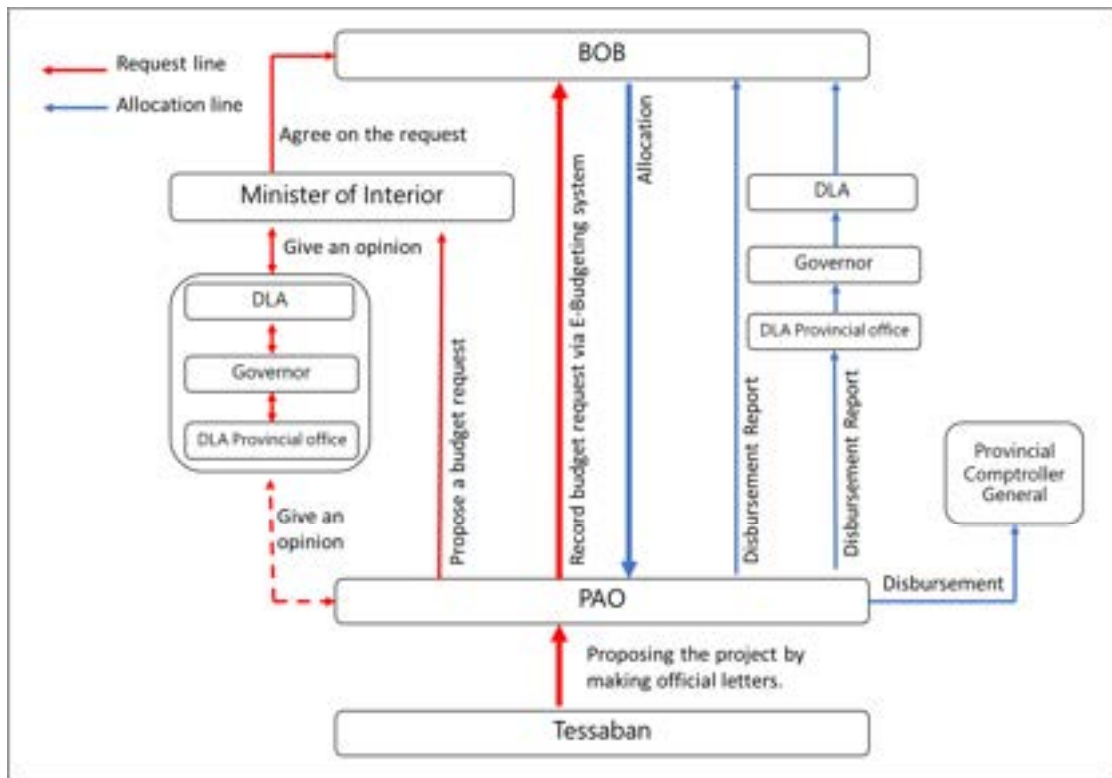
Since tessabans and PAOs have positioned at the same local government structure, the authorities of PAOs cover the larger areas than tessabans. In other words, PAOs are in charge of providing public services and any development crossing several tessabans and TAOs within its province. Therefore, the SFC Projects beyond tessaban's administrative boundary or authorities can be proposed to the PAOs budget.

The proposed SFC projects should be linked with PAO's Development Plan and responded to PAO's missions in order to integrate with PAO's development plan. Tessaban needs to review visions, goals, strategies and developments of PAO before proposing the project to avoid the duplicated implementations and to harmonize the projects with PAO's development direction. While the project owner will be the PAO instead of tessaban, tessaban need to be responsible for its maintenance and management.

In order to propose the projects, tessaban needs to directly coordinate with PAOs by making proposal in the form of official letter. The letters should include rationales and full details of the project especially how the project can be related to PAOs missions and plan. The letter will be considered by the PAOs committees which is headed by chief executive of PAOs. After the approval, PAOs will notify tessaban and add the projects into their plan for requesting their FY budget.

Budgeting Process: Tessaban should follow the procedure of PAO's FY budget in order to proceed their proposal in a timely manner. Even through the procedure of requesting PAO's budget is similar to that of tessaban, the new budgeting system has posed different steps. Even though PAOs now can directly request the FY budget to the BOB, PAOs still need to get the approval from MOI before proceeding the e-budgeting system. Detail steps are shown in Figure 11 and summarized as below;

- PAO needs to submit the FY budget plan to MOI. DLA central office will gather opinions from the governor and DLA provincial office and submit to MOI.
- After approved by MOI, PAO need to record its FY budget plan into the e-budgeting system of BOB by the end of September according to the BOB budgeting schedule.
- The budget will be directly allocated to the PAO and disbursed from Provincial Comptroller General.
- PAO has to report the disbursement to BOB.



Source: JICA Project Team

Figure 11 Procedure for Requesting PAO Budget

PAO's Subsidy: In addition to the PAO's original budget, PAO's subsidy is also an alternative of tessaban to propose the SFC projects. PAO can subsidize tessaban's project up to 10 % of the net PAO revenues of the previous year. Since tessaban will be a project owner for its implementation, the proposed projects need to be under tessaban authorities but over financial capacity of tessaban. Tessaban also needs to pay some contribution to the subsidized projects depending on the financial capacity of each tessaban.

In order to prepare the project proposal, tessaban needs to present the expenditure breakdown and show how the project can provide benefits for citizens. After the project approval, MOU will be made between tessaban and PAO. Once the project has completed, PAO needs to appoint the committee for monitoring and evaluation. If the project has not finished as expected, tessaban must return the subsidy to PAO. If tessaban does not use all of the subsidy, the remaining needs to be returned to PAO.

Function Budget

Functional budget is budget of relevant departments of line ministries. The SFC Projects proposed to this budget should be beyond capacities and authorities of tressaban and be directly related with the scope of each department. The proposed project will belong to and be implemented by the department.

In order to propose the project, tressaban shall closely coordinate with relevant departments in its province or region. Tressaban has authorities to invite those provincial departments to inform about their proposed projects. Tressaban needs to submit the project proposal together with a letter for requesting supports to those departments.

Recently, there are 33 provincial offices under central ministries and central departments as listed in Table 8. Beside this, there are 35 departments separately located in each region as regional office as listed in Table 9. The provincial and regional offices have different missions and authorities, therefore, it is necessary for tressaban to review their missions before submitting the project proposal. The main roles of those regional and provincial department are to gather possible projects based on their agenda into the provincial development plan. The department plan of each province/region will be submitted to the central offices for a consideration and consolidated into the fiscal year budget plan of ministry for requesting the budget. The procedure of function budget is summarized in Figure 12.

Table 8 List of Provincial Offices of Central Ministries and Departments

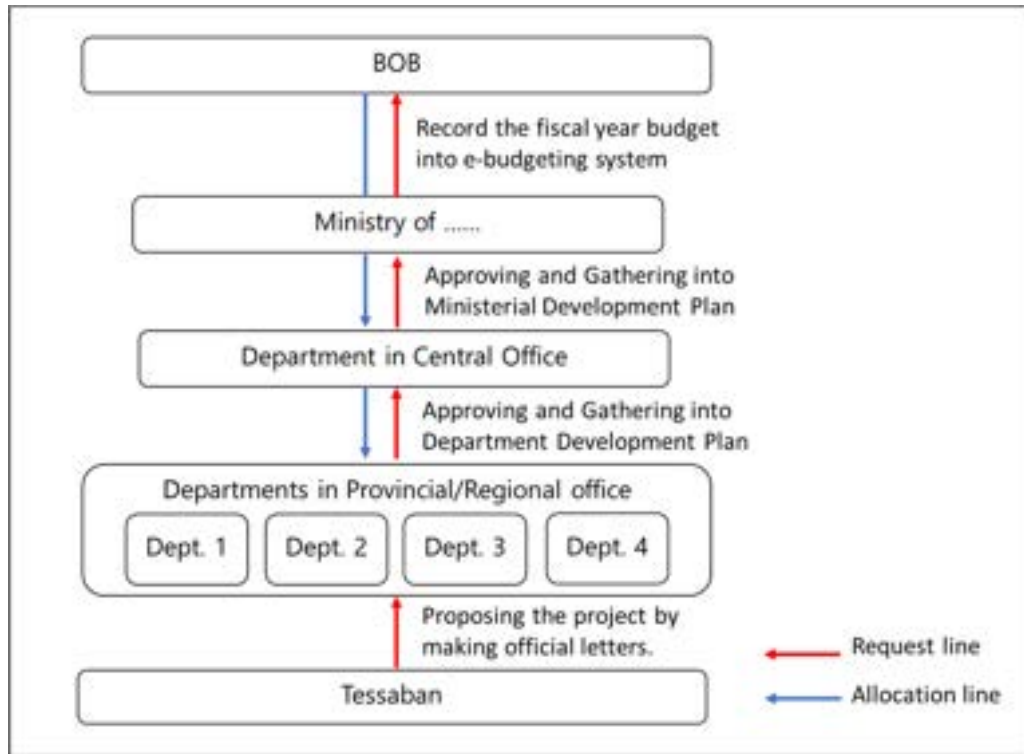
Ministry	Provincial offices of Departments
Office of the Prime Minister	The Government Public Relations Department: PRD (Provincial public relations office)
Ministry of Defence	Provincial Military Recruit Office##
Ministry of Finance	Provincial office of the Controller General: CGD
Ministry of Tourism and Sports	Provincial tourism and sport office
Ministry of Social Dev. and Human Security	Office of the Permanent Secretary of Ministry of Social Development and Human Security (Provincial Social Development and Human Security Office)
Ministry of Agriculture and Cooperatives	Office of the Permanent Secretary of Ministry of Agriculture and Cooperatives (Provincial Agriculture and Cooperatives office)
	Department of Fisheries (Provincial fisheries office)
	Department of Livestock (Provincial Livestock office)
	Department of Agricultural Extension (Provincial Agricultural Extension Office)
	Department of Cooperative Promotion (Provincial Cooperative Office)
	Provincial Land Reform Office
Ministry of Transport	Department of Land Transport (Provincial land transport office)
Ministry of Natural Resource and Environment	Office of the Permanent Secretary of Ministry of Natural Resource and Environment (Provincial Natural Resource and Environment Office)
Ministry of Digital Economy and Society	Provincial Statistical Office
	Meteorological Department
Ministry of Energy	Provincial Energy office
Ministry of commerce	Provincial commerce office
Ministry of Interior	Provincial office
	Department of Provincial Administration (Provincial Administration Office)
	Department of Community Development (Community Development Provincial Office)
	Department of Local Administration (Provincial Local Administration Office)
	Department of Public Works and Town and Country Planning (Provincial Office)
	Department of Land (Provincial Land Office)
	Department of Disaster Prevention and Mitigation- (Provincial Disaster Prevention and Mitigation Office)
Ministry of Justice	Department of Probation (Provincial probation office)
	Department of Corrections (Provincial prison)
	Legal Execution Department (Provincial legal execution office)
Ministry of Labor	Office of the Permanent Secretary of Ministry of Labor (Provincial labor office)
	Department of Employment (Provincial Employment Office)
	Department of Labor Protection and Welfare (Provincial Labor protection and welfare office)
	Provincial Social Security Office
Ministry of Culture	Office of the Permanent Secretary of Ministry of Culture (Provincial cultural office)
Ministry of Public Health	Office of the Permanent Secretary of Ministry of Public Health (Provincial Public Health Office)
Ministry of Industry	Office of the Permanent Secretary of Ministry of Industry (Provincial Industrial Office)
Independent Org.	National Office of Buddhism (Provincial office of Buddhism)

Source: JICA Project Team

Table 9 List of Regional Offices of Central Ministries and Departments

Ministry Name	Regional Office
Ministry of Finance	1. Treasury Department (Provincial Treasury Office) 2. Custom Department (Regional Custom Bureau) 3. Excise Department (Regional Excise Office) 4. Revenue Department (Regional Revenue Office)
Ministry of Agriculture and Cooperatives	5. Irrigation Department (Irrigation Office) 6. Cooperative Auditing Department (Cooperative Auditing Office) 7. Department of Land Development (Land Development Office) 8. Department of Agriculture (Office of Agricultural Research and Development) 9. The Queen Sirikit Department of Sericulture (Sericulture Office) 10. Office of Agricultural Economics
Ministry of Transport	11. Marine Department (Regional Marine Office) 12. Department of Airports 13. Department of Highway (Highway Office) 14. Department of Rural Roads (Rural Road Office)
Ministry of Natural Resources and Environment	15. Department of Water Resource (Regional Water Resource Office) 16. Department of Groundwater Resources (Office of Ground Water Resources) 17. Department of Forest (Forest Resource Management Office) 18. Department of National Park (Office of Conservation Area Development)
Ministry of Justice	19. Department of Juvenile Observation and Protection (Juvenile Observation and Protection Provincial Office) 20. Office of the Narcotics Control Board (Regional Office of Narcotics Control Board)
Ministry of Labour	21. Department of Skill Development (Regional Skill Development Institute)
Ministry of Culture	22. Department of Fine Arts (Fine Arts Bureau)
Ministry of Public Health	23. Department of Medical Services (Princess Mother National Institute on Drug Abuse Treatment) 24. Department of Disease Control (Bureau of Disease Prevention and Control) 25. Department of Medical Sciences (Medical Science Center) 26. Department of Mental Health (Mental Health Center) 27. Department of Health (Health Center)
Ministry of Industry	28. Department of Industrial Promotion (Regional Industrial Promotion Center) 29. Department of Primary Industries and Mines (Office of Primary Industries and Mine) 30. Office of the Cane and Sugar Board (Regional Center for Sugar Cane and Sugar Industry)
Office of the Prime Minister	31. NESDC (NESDC Regional Office) 32. Bureau of the Budget (Budget Preparation Division) 33. The Board of Investment of Thailand (Regional Investment and Economic Center)
Ministry of Digital Economy and Society	34. Meteorological Department (Regional Meteorological Center)
Independent Agency	35. The Office of the National Counter Corruption Commission (Office of the Prevention and Suppression of Corruption in the Government)

Source: JICA Project Team



Source: JICA Project Team

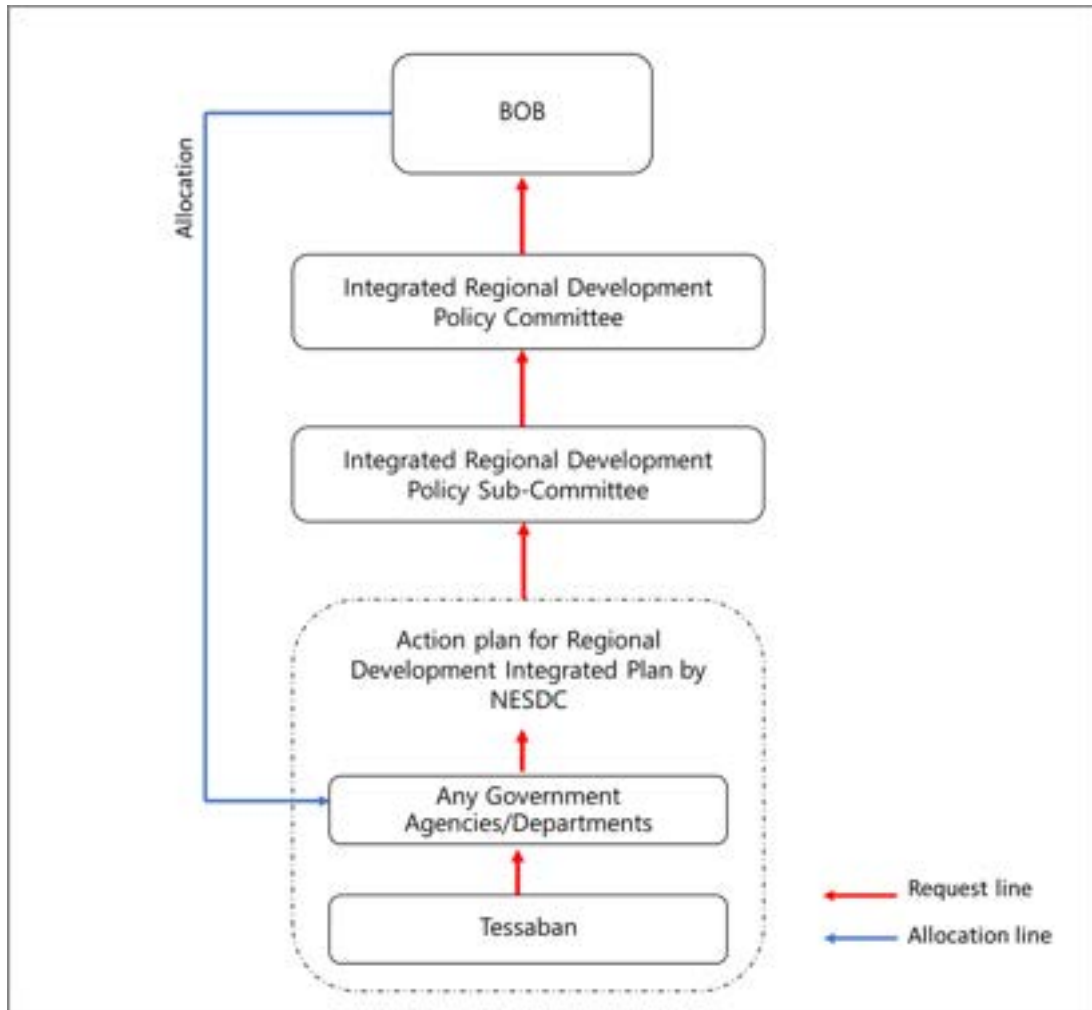
Figure 12 Procedure for Requesting Function Budget of each Department

Integrated Policy Program under Integrated Budget

Integrated Policy Program is another alternative budget source for tessaban to propose the SFC Project under the ministerial line, where the proposed SFC project should be related with the scope of each integrated policy programs. The most possible and relevant integrated policy program for tessaban is 'Regional Development Integrated Plan' because it focuses on area-based development. The proposed SFC project should have positive impacts in regional and national levels, and thus, it can highly respond to the national strategy and agenda. Tessaban needs to consider their own potential position in the relevant plans and to link those projects with the integrated issues.

The budgeting procedure to request integrated budget is similar to that of function budget. Yet, the projects in this integrated budget will be prioritized and approved by 'Integrated Regional Development Policy Committee and Sub-Committee'. To propose the project, tessaban needs to submit the project proposal to the department responsible for it. That department has a role to consider whether the proposed project is relevant to the regional development or not and thus to submit those projects to their ministries.

Since NESDC has a role to integrate regional development projects from those ministries to make an action plan for Regional Development Integrated Plan, the ministries will submit the projects to NESDC. After completing the action plan for Regional Development Integrated Plan, NESDC will propose it to 'Integrated Regional Development Policy Sub-Committee' for initial consideration and approval and submit to 'Integrated Regional Development Policy Committee' for final approval. Once approved, the budget of Regional Development Integrated Plan is classified by ministry and proposed it to the BOB. BOB will directly allocate the budget to the proponent ministries and departments. In this regard, the department will implement the project as a project owner, while the monitoring and evaluation of the project will be done by Integrated Regional Development Policy Sub-Committee. The overall of this process is summarized in Figure 13.



Source: JICA Project Team

Figure 13 Procedure for requesting Integrated Budget

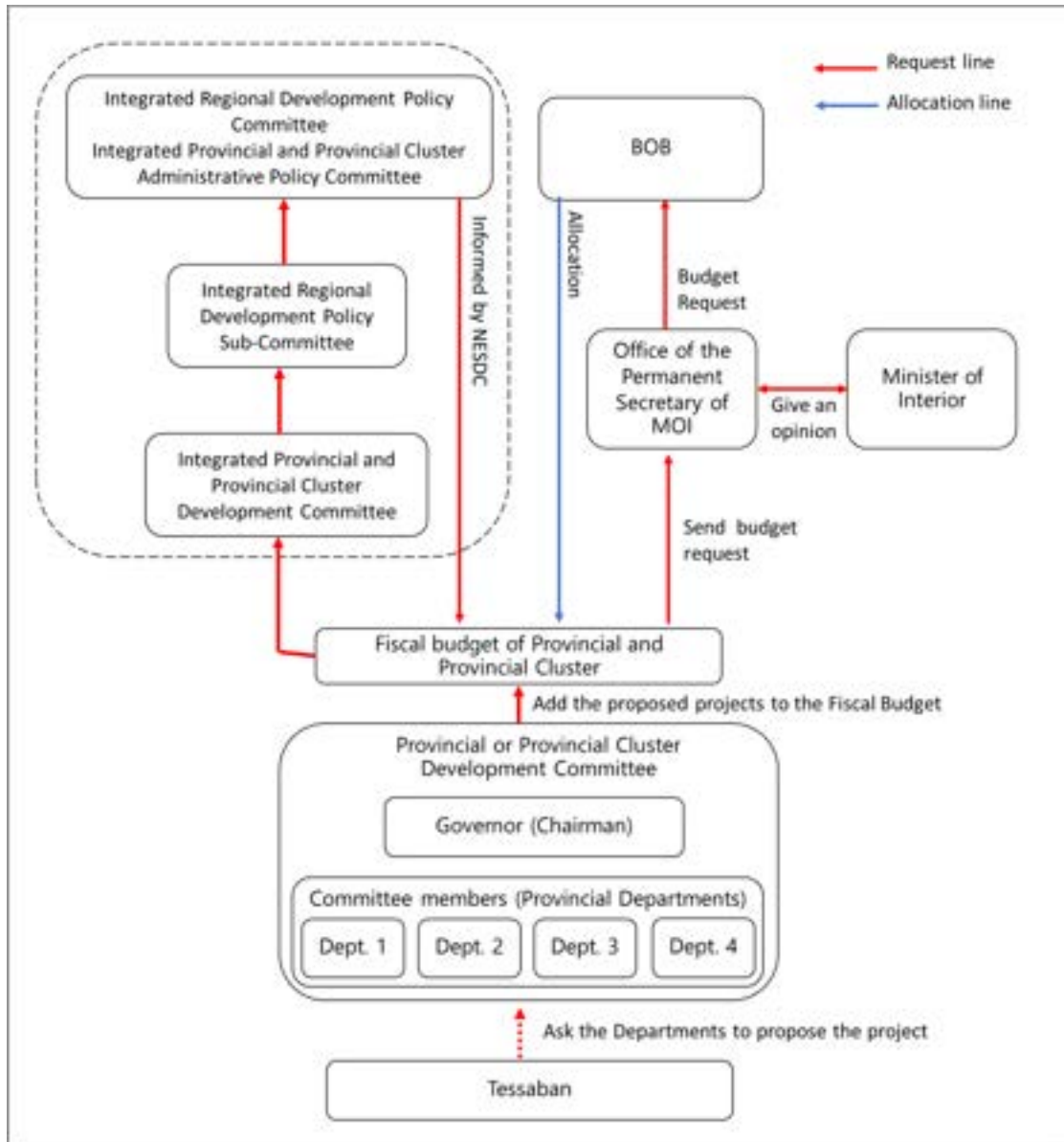
Provincial and Provincial Cluster Budget

Provincial and provincial cluster budget is possible financial lines for tressban to propose the SFC Project, of which implementing body will be owned by province or provincial cluster. In general, tressaban cannot request the budget or propose the SFC project directly to its province and provincial cluster. Instead, tressaban can informally ask the provincial offices of relevant departments and ministries to include the project into the meeting agenda of provincial committee headed by governor. Thus, governor is the main actor who has authorities to approve the project.

The proposed projects should be linked with the provincial development plan. As the governor is a main actor for the approval, the provincial committee will consider whether the proposed projects are beyond the provincial authorities. If the proposed project is over provincial authorities, the governor needs to propose the project to the provincial cluster committee for their approval, where the linkage with provincial cluster development plan is mainly considered.

The procedure of fiscal year budget for provincial and provincial cluster is illustrated in Figure 14 and are summarized as below;

- Governor agrees to add the projects in its FY budget.
- The province and provincial cluster submit the FY budget plan to 'Integrated Provincial and Provincial Cluster Development Committee' to preliminarily screen the linkage with the other department FY budget plans.
- The FY budget plan will be reviewed to consider the linkage of the FY budget plan with overall regional developments by "Integrated Regional Development Policy Sub-committee".
- 'Integrated Regional Development Policy Committee' and 'Integrated Provincial and Provincial Cluster Administrative Policy Committee', which NESDC is a secretariat, approved the FY budget plan.
- NESDC will notify the province and provincial cluster and send the budget request to Office of the Permanent Secretary of MOI.
- The Office of the Permanent Secretary of MOI will make the final decision before requesting the FY budget of provincial and provincial cluster to the BOB.
- After BOB officially approved the national FY budget, the budget of province and provincial cluster is directly allocated to each province and provincial cluster.



Source: JICA Project Team

Figure 14 Procedure for Requesting Provincial and Provincial Cluster Budget

Public Organizations' Budget

Tessaban can apply the SFC Project to the public organizations, which set issues on city development. Since each organization select the tessaban to develop its own issues, tessaban should be ready to propose the project along with agenda of public organization. Public organization projects differ from those done by the government agencies, as they facilitate tessaban to coordinate with relevant organizations and private sector. One example is Smart City Project of DEPA. DEPA promotes SMART City and invites tessabans by online application. DEPA evaluates the application and selects the pilot city for Smart City development.

Some public organizations specify targeted areas to promote their own development agenda. In this case, the organization will coordinate with relevant organizations in that area to develop its comprehensive plan. For example, DASTA, which is under Ministry of Tourism and Sport, specifies the city for promoting tourism. Currently, there are 6 designated areas, such as Nan, Koh Tao, and Sukho Thai.

Monitoring by Tessaban

In order to ensure sustainable implementation of the SFC Plan and Projects and continuous improvement through PDCA (Plan-Do-Check-Again) Cycle, it is important to monitor progress of SFC plan and projects together with relevant stakeholders.

M&E 1 Set-up Monitoring Framework

Tessaban will set up monitoring framework to monitor and check the progress of the 5-year Action Plan. It includes monitoring group at tessaban level to follow-up at a regular basis and meeting with NESDC and national departments to check progress of implementation of SFC Plan periodically.

- **Monitoring Team at Tessaban:** Tessaban will organize monitoring team by involving tessaban, stakeholders, and the Consultant will support it. If there are operational projects in the action plan, such as promotion of CBT tourism, this monitoring team needs to follow-up continuous operation more frequently.
- **Periodical Meeting with NESDC and Departments of committee to be set under SFCI:** Secretariat of NESDC and Tessaban will have a meeting for monitoring and evaluation, together with Plenary Workshop, if necessary. A member of Committee to be set under SFCI will also be involved in this regular meeting, depending on the themes of SFC Plans.

M&E 2 Monitor and Check the Progress of SFC Projects

Monitoring Check Sheet

Progress of the SFC Projects (5-year action plan) will be checked compared to the original ones. Tessaban will make the monitoring sheet as attached in Form 6 and check the following points for all projects

- Progress of Project A is being/ has been implemented / prepared as scheduled?
- How is output of Project A?
- If Project A is delayed, what are main causes of delay?
- Any constraints to implement Project A? (internal and external one)

Process of Monitoring by Tessaban

Tessaban will take initiative to monitor and check the progress of the 5-year Action Plan and organize Planning Team meeting to share it with relevant stakeholders to get their opinions. Tessaban will monitor continuously for 5 years.

- Tessaban will check the SFC Projects by using the check sheet (Form 6)
- In case of operational projects, tessaban will coordinate with stakeholders in charge of operation of the projects to check the progress and identify causes of delay, if any.
- Tessaban will share the result of progress check with members of the Planning Team Meeting.
- Tessaban will report the result of progress check at the periodical meeting with NESDC and other national departments.

M&E 3 Update and Revise the SFC Plan and Projects

Problems and Issues need to be concerned

Based on the result of checking of progress of the Projects, tessaban should list up and examine problems and issues to be concerned. It includes the following;

- Changes of socio-economic status of region/country
- Coordination with relevant authorities
- Coordination with communities
- Technical capabilities of implementing body
- Financial capabilities of implementing body
- Institutional arrangement to proceed implementation

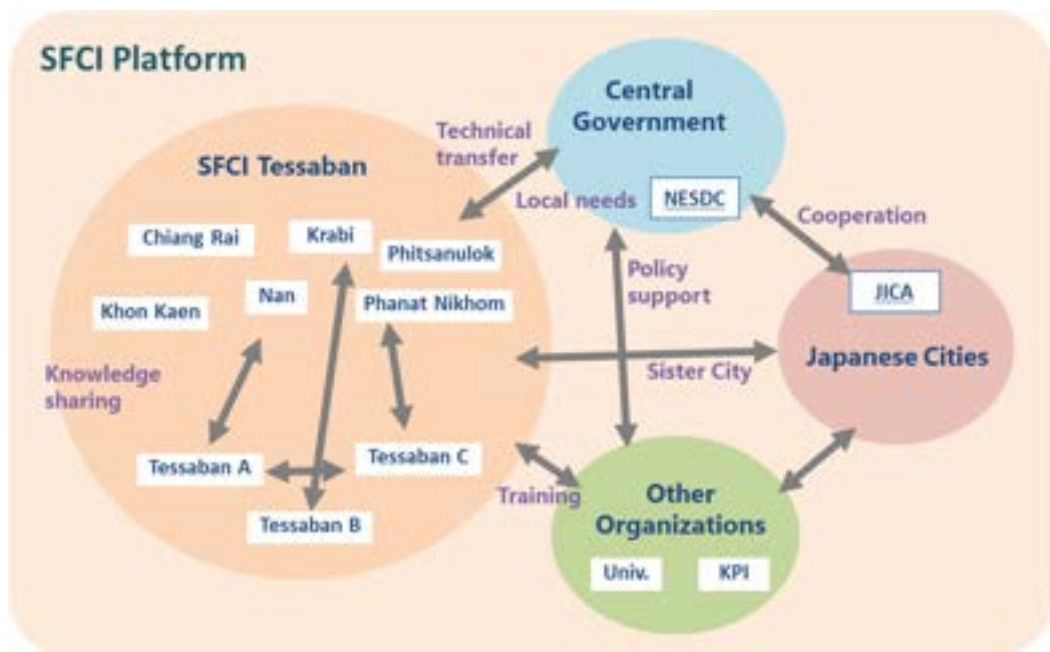
Revision of SFC Plan and 5-year Action Plan

Based on the identified problems and issues, tessaban should identify necessary revisions on the SFC Plan and 5-year Action Plan and identify issues and necessary actions to be tackled. NESDC and relevant authorities will also provide advice to support them.

SFCI Platform

Introduction

SFC Platform aims to establish city-to-city and national-to-local network to share experiences and knowledge of tessabans which participate in the SFCI in the past and the national-level urban issues. Tessaban shall utilize the SFCI Platform to get lessons from other SFC tessabans and provide its own experiences to other tessabans, including unique planning approaches, project ideas, active collaboration among stakeholders, etc.



Source: SFCI Project Team

Figure 15 Conceptual Image of SFCI Platform (repeated)

Participation to the SFCI Platform Meetings

During a course of SFCI activities, SFCI platform meeting will be organized in Bangkok or in any target tessaban to share experience of SFCI. Tessabans will participate and present the progress and result of the SFCI in the meeting. Tessaban will prepare presentation materials.

While detail timing and frequency of SFCI Platform Meeting will be decided later depending on the progress, tentative schedule is set as below;

Table 10 List of SFCI Platform Meeting

Platform	Schedule	Venue	Major topics
Kick-off for the Second Phase	To be decided	Bangkok	- The Secretariat of SFCI will explain concept and process of SFCI in details and tentative

Final Report

Appendix 4: Sustainable Future City Initiative Guideline for SFCI Model Cities

			<p>implementation schedule.</p> <ul style="list-style-type: none"> - First-phase six tessabans will share their experiences and lessons learned from SFCI - Next-phase tessabans will present their own vision/plans and expected output from SFCI.
Mid-term	To be decided	To be decided	<ul style="list-style-type: none"> - Tessaban will present SFC plan (draft), issues or constraints, necessary supports from national department
Summary of the Next Phase	To be decided	To be decided	<ul style="list-style-type: none"> - Tessaban will present SFC plan and projects - Lessons learned for the following phase of SFCI

References: List of Format

Form-1: Application Form

No.**Application to join SFCI**

Name of Municipality:	
District	Province :

1. Implementation Organization for SFCI

(1) Contact
Responsible Person: (please indicate the person responsible for overall SFCI)
Name
Position
Contact Person: (please indicate the contact person in the Municipality to implement SFCI)
Name
Position
Tel
Fax
EM address
Address
(2) SFCI Team in tessaban (please indicate structure and list of staff for SFCI Team to implement SFCI in your municipality)
(3) Preliminary list of relevant agencies at Changwat level (please preliminary identify organizations at Changwat level to be coordinated in the SFCI, such as Changwat office, provincial offices of departments, PAO, the existing committee, such as Smart City Committee)
(4) Preliminary Identified Major Stakeholders (please preliminary identify stakeholders which will be invited for Planning Meeting, such as private sectors, community leaders, and universities)

2. Expectation and Acceptance to participate in SFC Initiative

Final Report

(1) Expectation to SFC Initiative (please describe what you expect to participate in SFC Initiative)
(2) Tessaban in SFC Initiative Model City Project has to follow these conditions.
<ul style="list-style-type: none"> ● Establishment of SFCI Team in tessaban ● Invite stakeholder to Planning Meeting to formulate SFC Program and Projects ● Coordinate with Changwat-level organizations ● Expense of meeting of Planning Team ● Expense to attend meeting regarding SFCI at Bangkok ● Reflection of results of SFC Initiative to next Local Strategic Development Plan ● Continuous efforts to realize the projects proposed in SFC Initiative

3. City Vision and SFC Initiative

(1) City Vision (please describe city's vision, described in the local strategic development plan or other)												
(2) Major Issues to achieve the above Vision												
(3) Expected Sectors/fields to be taken in the SFC Initiative, in accordance with the City's Vision (please select (fill "P") expected sector/fields to be taken into account in the SFC Initiative and describe in detail below.												
<table border="1"> <tr> <td>1) Economy & Employment</td> <td>2) Society & Community</td> <td>3) Culture & Tourism</td> <td>4) Natural environment</td> <td>5) Land use</td> <td>6) Transportation & mobility</td> </tr> <tr> <td>7) Disaster mitigation</td> <td>8) Solid waste management</td> <td>9) Preventive health</td> <td>10) Social education</td> <td>11) Capacity enhancement of local government</td> <td>12) Others</td> </tr> </table>	1) Economy & Employment	2) Society & Community	3) Culture & Tourism	4) Natural environment	5) Land use	6) Transportation & mobility	7) Disaster mitigation	8) Solid waste management	9) Preventive health	10) Social education	11) Capacity enhancement of local government	12) Others
1) Economy & Employment	2) Society & Community	3) Culture & Tourism	4) Natural environment	5) Land use	6) Transportation & mobility							
7) Disaster mitigation	8) Solid waste management	9) Preventive health	10) Social education	11) Capacity enhancement of local government	12) Others							
Please describe in detail.												
(4) Reason to focus on the sectors/fields selected in (3) (please describe background and reason to select the sectors/fields among others)												

(5) Expected project (please indicate projects that your tessaban expect in the SFC Initiative, if there is)
(6) Current Obstacles to implement the projects mentioned in (5) (please indicate current difficulties/ obstacles/ shortage to realize the project above)
(7) Previous Studies on the project mentioned in (5) (if you have any previous studies related to the project mentioned in (5), please indicate its details below, including name of studies, year and client to conduct studies, etc.)

Form 2: Questionnaire Survey Sample

Q1. Address (Community)			
Q2. Age		Q3. Gender	1. male, 2. Female
Q5. How do you evaluate livability of your tessaban?			
1. Very livable, 2. Livable, 3. So-so, 4, Not livable, 5. Not livable at all.			
Q6. Do you want to keep living in your tessaban in future?			
1. Yes definitely, 2. Yes, rather than moving outside, 3. No, want to move outside, 4. No idea			
Q7. (if you choose 1 or 2 in Q6) please select reason to keep living in tessaban. (multiple 3 choices)			
1. ownership of land and house, 2. keep career 3. convenience for commuting, 4. future hope 5. good local culture 6. good human network, 7. convenient life 8. good local food] 9. emotional attachment 10. safe and secured life 11. good natural resources 12. good natural environment, 13. good public transportation services , 14. there is no other places to live in 15. others (_____)			
Q8. Please evaluate current situation on the following items			
Q9. Please evaluate importance for future tessaban			
	Q8 1. very satisfied, 2. satisfied, 3. so-so, 4. not satisfied, 5. not satisfied at all.		Q9 1. very important, 2. important, 3. so-so, 4. not important, 5 not important at all.
<i>(common to all tessabans)</i>			
Economy			
(1) agriculture, forestry, and fisheries development	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
(2) manufacturing development	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
(3) commercial and business development	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
(4) venture business development	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
(5) employment measures	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
(6) ICT services	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
(7) tourism development	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
(8) private sector involvement in public services	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
Society			
(9) local culture inheritance	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
(10) school education	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
(11) vocational school	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
(12) preservation of cultural heritage	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
(13) medical services	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
(14) childcare services	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
(15) elderly services	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
(16) mother and child health service	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
(17) social welfare for disabled	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
(18) urban security	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5

(19) community support	1	2	3	4	5	1	2	3	4	5
(20) public participation in urban development	1	2	3	4	5	1	2	3	4	5
(21) cross-border / international exchange	1	2	3	4	5	1	2	3	4	5
Environment										
(22) water management (drainage, river)	1	2	3	4	5	1	2	3	4	5
(23) disaster mitigation (fire-fighting)	1	2	3	4	5	1	2	3	4	5
(24) solid waste management	1	2	3	4	5	1	2	3	4	5
(25) park and greenery development	1	2	3	4	5	1	2	3	4	5
(26) natural resources preservation	1	2	3	4	5	1	2	3	4	5
Urban Management										
(27) road network development	1	2	3	4	5	1	2	3	4	5
(28) public transport services	1	2	3	4	5	1	2	3	4	5
(29) city center development (specify the name of area)	1	2	3	4	5	1	2	3	4	5
(30) urban utility development	1	2	3	4	5	1	2	3	4	5
(31) public housing	1	2	3	4	5	1	2	3	4	5
(32) (tessaban can add any items, if they want)	1	2	3	4	5	1	2	3	4	5
Q11. Please select tessabans' vision that you expect										
<i>(Detail choice will be identified from the city's vision of the existing plans)</i>										
1.										
2.										
3.										

Form-3: A list of SFC Projects

No.	Project Name	Objectives	Project Components (preliminary)	Implementation Organization	Implementing Schedule
Strategy 1					
Program 1-1					
1			-		
2					
Program 1-2					
1			-		
2					
Strategy 2					
n			-		
			-		
			-		

Note: The table above is just example of format and image. The organizations in the table are not committed any action.

Form 4: Five Year Action Plan for the Selected Priority Program

No.	Project	Project Implementation Schedule					Implementing/ Supporting organization (potential budget source)	Expected Budget
		Year1	2	3	4	5		
1-A-1	AAA (name of project)							
1-A-2	BBB							
	CCC							
	XXX							

Form 5: SFC Project Sheet

Tessaban :
 Name of Contact Person :
 Position :
 Contact :

Name of SFC Project	
Organization to be applied (Budget source)	1. Public Sector <input type="checkbox"/> Own, <input type="checkbox"/> Changwat , <input type="checkbox"/> Changwat cluster , <input type="checkbox"/> DLA Subsidy <input type="checkbox"/> Other ministries (_____), <input type="checkbox"/> tessaban 2. Private Sector <input type="checkbox"/> (_____) 3. Civil Sector <input type="checkbox"/> (_____)
Project Summary Background (Problems/Demands/ Level of Emergency)	<i>(Identify problems/issues to be addressed, demands for the projects, and its level of emergency)</i>
Description of Projects	
Rationales and reasons	<i>(Identify project rationale from 12th National Economic and Social Development Plan, Provincial Cluster Plan, Provincial Plan and local strategy development plan along with SFC Strategy)</i>
20-year National Strategy/ 12th NESDP Provincial Cluster Plan: Provincial Plan: Local Strategic Development Plan: SFC Strategy: Other relevant plan:	<i>(If there is plan/financial scheme in the ministry related for the project implementation, please describe consistency/relevance of the project along the plan/scheme of the ministry.)</i>
Objectives	<i>(describe objectives of SFC projects)</i>
Goal	<i>(describe goals)</i>
Output	<i>(describe expected output of the SFC projects)</i>
Expected Impact	<i>(describe expected outcome in future)</i>

Beneficiaries						
KPI for Monitoring and Evaluation (Qualitative Indicator)	Before (year)		Target (year)			
(Quantitative Indicator)						
Contents of Project						
Type	<input type="checkbox"/> Development <input type="checkbox"/> Operation <input type="checkbox"/> Planning <input type="checkbox"/> Training					
Duration	Start in Year _____			End in Year _____		
Budget	2019	2020	2021	2022	2023	Total
Readiness (1. Yes, 2. No, 3. Not applicable)	1. FS <input type="checkbox"/> 2. Design <input type="checkbox"/> 3. Tender Document <input type="checkbox"/> 4. Site preparation <input type="checkbox"/> 5. EIA <input type="checkbox"/>					
O&M	<input type="checkbox"/> O&M by itself <input type="checkbox"/> hire contractor <input type="checkbox"/> not applicable					
Issues and Constraints						

Final Report

Form 6: Check Sheet for Progress of the 5-Year Action Plan

Please make the monitoring sheet for the 5-Year Action Plan and describe the status for each project.

No.	Project	Has each project been Implemented or under preparation as scheduled?	Please describe output obtained in comparison with what originally expected?	If delayed, what are main factors of delay?	Please describe any constraints for implementation
1	A Planning				
2.	B construction project				
3	C capacity development				
4	D training				
5	E training				
	.				
	.				
	.				
X	X Construction				
Y	Y Development				
Z	Z Festival				