



Thailand Agricultural Policies and Development Strategies

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INTRODUCTION

In Thailand, the agricultural sector contributes only 8% to the national GDP. Despite this fact, agriculture still plays a vital role in Thailand. First, as a major source of food supply for the Thai people and for the world and second, as a major source of employment. In 2018, the value of agricultural products export was 1,388,541 million baht (about US\$ 44,792 million) which is about 17% of the total exports. About 30% of the population are classified as agricultural population. The land devoted to agricultural production is about 24 million hectares or 46 % of the total land area of the country and about half of the agricultural land are paddy fields. However, only about 25% of agricultural land are irrigated (Ministry of Agriculture and Cooperatives, 2017a). The major agricultural exports are natural rubber, rice, fruits, fishes, chicken meat, cassava, sugar, shrimps, vegetables and all their by-products. Many Thai agricultural products exported are ranked first or top ten and have a significant market share in the world market such as natural rubber, rice, cassava, sugar, and canned pineapple (Table 1). Nevertheless, the Thai agricultural sector still faces a number of problems such as fluctuated prices of agricultural products, inappropriate use of farm inputs, lack of water, depleted natural resources and aging farmers. Similar to other countries, Thailand is also facing the effect of climate change and natural disasters such as floods and droughts. Despite all the guidelines and measures taken to remedy the adverse effect by the governments, most of them were of short-term or *ad-hoc* basis, inconsistent and immediate in nature. Therefore, to make the development more sustainable in all sectors, including agriculture, the government of Thailand has launched the first 20-year national strategy as a pipeline pathway for long-term development together with the five-year plan under the umbrella of a 20-year plan. Moreover, some *ad-hoc* and issue-based policy remain necessary. Those hierarchies of plans can be concerted as a matrix to reach the long-term goals, from which the detail of each specific plan can be explored hereafter.

Table 1: Production share and ranking of, export quantity, market share and ranking of Thailand's major commodities in the world market, 2018

Commodity	Production		Export		
	Share (%)	Ranked	Quantity (Mil.Tons)	Share (%)	Ranked
Rice	4.4	6 th	11.088	21.3	2 nd
Rubber	32.7	1 st	5.042	35.8	1 st
Sugar	5.1	4 th	8.664	16.4	2 nd
Cassava	10.1	2 nd	6.965	78.7	1 st
Canned pineapple	8.3	4 th	0.309	44.1	1 st
Processed chicken	n.a	n.a	0.839	7.5	4 th
Shrimp	6.45	6 th	0.176	7.2	5 th

Source: Office of Agricultural Economics, 2018

THE 20- YEAR NATIONAL STRATEGY

The 20-year National Strategy is the first long-term (more than 5 years) development framework initiated in Thailand to lead the country toward its security, prosperity and sustainability (Royal Thai Government Gazette, 2018). The Principles of the Sufficiency Economy Philosophy have been followed to draw its developmental path toward the national interests of being a country of happy people, high income level, and developed economy with stability, equality, and fairness as well as economic competitiveness. The 20-Year National Strategy consists of six areas. These are: 1) national security; 2) competitiveness enhancement; 3) development and empowerment of human capital; 4) broadening opportunity and equality in social; 5) environmentally-friendly development and growth; and 6) reforming and improving government administration. The long-term 20-year National Strategy is used as a framework to develop several 5-year plans, starting with the 12th National Economic and Social Development Plan (2017 – 2021) covering 10 strategies. These 10 strategies are: 1) strengthening and developing the potential of human capital; 2) creating a just society and reducing inequality; 3) strengthening sustainable economic development and competitiveness; 4) green growth for sustainable development; 5) national security for the country's development towards prosperity and sustainability; 6) public administration, corruption prevention, and good governance in Thai society; 7) advancing infrastructure and logistics; 8) science, technology, research, and innovation development; 9) regional, urban, and economic zone development; and 10) international cooperation for development.

THE 20 – YEAR AGRICULTURAL DEVELOPMENT PLAN (2017-2036)

To lay a foundation for long-term development leading to systematic growth and solutions to the problems, the Ministry of Agriculture and Cooperatives (MOAC) has also prepared the 20-year Agriculture and Cooperatives Strategy (2017-2036) for use as an agenda for continuous and efficient operation of the development in the agricultural sector (Ministry of Agriculture and Cooperatives, 2017b). The Agriculture and Cooperatives Strategy is not only in consonance with the 20-year National Strategy and the 12th

Plan (2017-2021), but also with the Reform Plan of the National Reform Steering Assembly (NRSA) and the UN Sustainable Development Goals (SDGs). The development plan envisions to secure farmers livelihood, to prosper agricultural sector and to sustain agricultural resources, which aims to make Thai farmers escape from the middle-income trap by having the average national income per head of more than US\$13,000 (390,000 baht) in the year 2036. The specific goals are as follows: (1) Farmers specialize in their professions, so-called “Smart Farmer;” (2) Farmer institutions have an efficiency in management, so-called “Smart Agricultural Group;” (3) Quality of agricultural products meet the customers need, in other words, being “Smart Agricultural Products;” and (4) Agricultural area and sector have potential, known as “Smart Area / Agriculture.” This long-term plan flags out strategies in five aspects with number of guidelines which can be highlighted as follows:

(1) Strategy 1: Strengthening the Farmers and Farmer Institutions, having three development guidelines which are (1) Strengthening farmers and farmer institutions to become Smart Farmers, and Smart Groups with Smart Enterprises (2) Promoting pride and security in the agricultural profession, and (3) Applying innovations and technology in farm labor management.

(2) Strategy 2: Increasing the Productivity and Quality Standards of Agricultural Commodities, having 2 development guidelines which are (1) Improve product quality and production efficiency and (2) Promote agriculture throughout its supply chains in line with the requirements of the market.

(3) Strategy 3: Increasing Competitiveness in the Agricultural Sector through Technology and Innovations, having 3 development guidelines which are (1) Develop technology and innovations to drive “Agriculture 4.0” under the “Thailand 4.0” policy (2) Manage the agricultural information technology for ready access and utilization by farmers (3) Develop agricultural research works and information toward their commercialization.

(4) Strategy 4: Balanced and Sustainable Management of Agricultural Resources and the Environment, having two development guidelines which are (1) Sustainably manage agricultural resources and (2) Balanced and sustainably revive and conserve agricultural resources.

(5) Strategy 5: Development of Public Administration System, having three development guidelines which are (1) Develop all government personnel to become Smart Officers and Smart Researchers (2) Link and integrate the works of all agencies in all sectors using the civil state mechanism and modern administration system, and (3) Improve and develop agriculture legislations to cope with the contextual changes.

THE AGRICULTURAL DEVELOPMENT PLAN UNDER THE 12th NATIONAL ECONOMIC AND SOCIAL DEVELOPMENT PLAN (2017-2021)

The vision of this five-year development plan emphasizes that the agricultural sector moves forward through technology and innovations, market-led production, the quality of life of farmers, balanced and sustainable natural

resources (Office of the Agricultural Economics, 2014). Its objectives are nothing more than (1) to establish pride in the agriculture profession for being self-sustained, through continuous transfer of technology, farmers' groupings, strong linkages with external networks, and narrowing of income gap (2) to promote among the farmers and their institutions the upgrade of their productivity, efficiency, and standards, as well as value added agricultural products in response to market demands (3) to build up the competitiveness of agricultural products as well as develop applicable researches, technology and innovations, and lastly (4) to perform efficient management of agricultural resources toward their adjustability and immunity in dealing with climate change. This mid-term plan flags out five strategies with number of guidelines which can be highlighted as follows:

(1) Strategy 1: Strengthening the Farmers and Farmers Institutions, cascading into four guidelines which are (1) Intensifying the farming system in accordance with the Sufficiency Economy Philosophy (2) Building up pride and security in the agricultural profession (3) Promoting the effectiveness of sustainable agriculture (4) Developing farmers' knowledge toward being Smart Farmers;

(2) Strategy 2: Enhancing the Management Efficiency of Agricultural Commodities along their Supply Chains, guiding as (1) Promoting the production of agricultural products that meet the market standard (2) Improving the management of the supply chains of agricultural products (3) Adding more value to the agricultural products (4) Establishing an agricultural marketing center and expanding the agricultural marketing channels (5) Building up sustainable food security by managing food emergency caused (6) Promoting the public private partnership (7) Supporting the management of risks affecting agricultural produce, and finally (8) Promoting border trades, special economic zones and international cooperation.

(3) Strategy 3: Increasing the Competitiveness of the Agricultural Sector with Technology and Innovations, having two development guidelines which are (1) Promote and support agricultural research, technology and innovations (2) Systematically develop the agricultural information technology and its linkage (3) Promote the utilization of agricultural research, technology and innovations.

(4) Strategy 4: Balanced and Sustainable Management of Agricultural Resources and the Environment, cascading into four guidelines which are (1) Rehabilitate and conserve agricultural resources (2) Promote environmentally-friendly agriculture (3) Manage water resource (4) Manage agricultural land, as well as (5) Build immunity in agriculture against climate change.

(5) Strategy 5: Development of Public Sector Management System, having 2 development guidelines which are (1) Developing the public agricultural personnel, restructuring their organizations and working process and (2) Improving and revising agriculture related laws and regulations to become up-to-date, corrected and just in accordance with the changing economic and social conditions.

COMMODITY – BASED STRATEGY

Strategies have been developed as development guidelines for many important commodities of the country such as rice, natural rubber and oil palm. The strategies for each important commodity are as follows:

Rice strategy (2017 - 2021)

Rice has long been the most important staple and economic crop not just in Thailand but also in Southeast Asia, while its demand in the global market seems to be increasing, the farmer's livelihoods continuously fluctuate. Therefore, directed plan is formulated on the basis of a commodity strategy and is re-echo to help in the development of the well-being of farmers. This five-year strategy envisions Thailand to be the leader in developing the rice trade system of the country in response to Thailand 4.0 policy, by using marketing mechanism efficiently. Also, the country is the source of efficient rice production, having the best quality, reliable and can satisfy the market demand. The farmers live well and the farmers' organizations are strong. To ensure that the other aspects are well taken care of, eight strategic themes are adopted as follows: (1) Building the strength of farmers and farmers' organizations (2) Managing the rice planted area and production in line with the market demand (3) Increasing rice production efficiency (4) Improving rice quality and standard (5) Improving the efficiency of the logistic management (6) Developing the potential and the fairness in rice trade (7) Promoting rice consumption value and (8) Improving the Research and Development aspects of rice innovation.

The current rice policies of the Ministry of Agricultural and Cooperatives (MOAC) can be summarized into two viewpoints as follows:

(1) Production policy: relies on three strategies, which are (1.1) Establish the restructuring plan in order to reduce over production to match with the demand. In detail, the existing growing areas are classified into two major zones, suitable and unsuitable areas. For suitable areas, improvement of efficiency of production and quality of the products will be emphasized. The second rice will be to reduce and change to other cash crops, green manure crops, or leave them idle during the dry season. For unsuitable area, mixed farming or change to other activities will be promoted by providing the farmers some incentives. (1.2) Reduce cost of production and improve the quality of products; thus, the appropriate technologies will be transferred to rice farmers extensively. The good agricultural practice (GAP) for rice farming is encouraged and certified, and lastly, (1.3) Promote value-added products, whereas the training courses on rice processing, packaging and branding development will be provided.

(2) Marketing policy: relies on three strategies, which are (2.1) The market driven strategy will be emphasized, which production target will be set up to match with the demand before planting time (2.2) Promote business matching and e- market platforms establishment and (2.3) Promote niche market products, especially rice for niche markets including organic rice, geographical indication (GI) rice, nutritious rice, colored rice, native varieties rice and rice for food processing industry. The organic rice will be expanded to 1 million rais (equivalent to 160,000 hectares) in 2020.

In terms of implementation, the area-based extension approach will be adopted to implement the above policies.

Natural rubber strategy (2017 - 2036)

Para rubber has long been growing in Thailand, originally in Southern Thailand, and enlarged into the North and the Northeastern parts. While rubber plantation seems to keep increasing not only in the country but also its neighbors in LAO PDR, Myanmar, and Vietnam, the rubber price responses downward due to the shrinking supply of major importers and decreasing oil prices. To solve this contradiction, the Rubber Strategic Committee, under Rubber Authority of Thailand (RAOT), recently approved the 20-year Rubber Strategic Plan which aims to shape the supply and demand management and strengthen the foundation of rubber industry of Thailand. This strategic plan envisions a high-quality rubber production as well as securing farmers' income. The 20-year plan is composed of eight missions which are to strengthen farmers/farmer organizations and secure incomes; to lift up quality of rubber/rubber products to global standard; to add value to rubber products through R&D and innovation; to increase competitiveness of para-rubber logging industry; to develop marketing channels in both domestic and international levels; to stimulate local consumption; to formulate effective data and information along the supply chain; and to modernize relevant laws and regulations. The 20-year plan flags out into five strategies which are (1) Strengthening para-rubber farmers and farmer organizations (2) Expanding effectiveness and lifting up rubber standard and quality (3) Basing on R&D and innovation (4) Developing rubber markets and seeking outlet channels and (5) Improving supporting factors (Rubber Authority of Thailand, 2018). To cope with foreseeable circumstance, this plan sets up five targets within 2036 in terms of indicators as the followings: (1) Para rubber Planting area will subside to 18.4 million Rais from the based areas of 23.3 million Rais, approximately 21% diminishing (2) Para rubber yield will increase from only 224 Kg/Rai/Year to 360 Kg/Rai/Year (3) Domestic consumption ratio is expected to enlarge to 35% from the 13.6% as current ratio (4) Export Value of rubber/rubber product will raise up to 800,000 million baths (about US\$26,667 million) per year from currently around 250,000 million baths (about US\$ 8,333 million) per year, and (5) Farm incomes will elevate to 19,800 baths/Rai/Year from 11,984 baths/Rai/Year at this moment. Currently, this Rubber Strategic Plan (2017-2036) is in the process of cabinet approval officially and can be enforced and phasing cascade into 5-year operation plan afterward.

Oil palm strategy

Oil palm and/or palm oil in Thailand play the important role in terms of food and fuel security and involve with many stakeholders since the upstream farms to downstream industries, for example, there are more than 200,000 households planting oil palm, more than 1,800 collectors and distributors, and about 190 refined and bio-diesel plants throughout the country. Since Oil palm and Palm oil have a long supply chain, its problems and threats thus are quite complicated covering imbalance of supply and demand, standardization, low-quality palm oil, lack of information, and so on. Therefore, Oil Palm and Palm Oil Reform Subcommittee, under the National Oil Palm Committee, was assigned to formulate "Oil Palm and Palm Oil Reform Strategic Plan (2017-2036)" to tackle the problems systematically (National Committee on Palm Oil Policy, 2017). This 20-year plan, officially released since the early 2018, visions to advance Oil palm and Palm oil to be oleo chemical industry toward business competition in the ASEAN. The 20-year plan are phased out into five-year operation plan. This long-term plan flags out strategies in six aspects with number of sub-strategies and activities which can be highlighted as follows:

(1) Production aspect:

This aspect will focus on three strategies which are (1) Increase the percent of oil from 17% in 2016 to be 22% during 2017-2026 and 23% during 2027-2036 respectively, by building the network for knowledge development and extending oil palm cultivating in suitable area (2) Rise yield from 2.5 tons/Rai in 2016 to 3.5 tons/Rai in 2036 and increase production areas from 5.23 million Rais in 2016 to 7.23 million Rais in 2036, by using AGRI-Map for adaptive management, recommending to be precision farming, transferring technology and training farmers through Agricultural Learning Centers, proceeding research and development, including reducing post-harvest losses (Land Development Department, 2019) (3) Increase additional income for farmers by seeking proper crops to cultivate into palm field as the inter-crop and such crops will be introduced depending on conditions of each specific areas.

(2) Innovation aspect:

This aspect will focus on two strategies in order to reform industrial structure and build value-added from production which are (1) Develop primary oleo chemical industry by promoting investments and integrating knowhow, and (2) Develop primary oleo chemical industry by studying feasibility on production, marketing, and

technology of palm oil industry and relevant industries as well as reforming industrial structure and developing domestic oleo chemical equipment;

(3) Standard aspect

This aspect will focus on four strategies which are (1) Cultivation and harvest standard by reviewing the existing standard to be more practical and transpose to compulsory standard together with increasing the number of GAP farms (2) Trade standard by establishing provincial mechanism and developing distribution-Contribution standard as well as initiating oil measuring tool at the oil palm before cutting of the palm tree (3) Refine-plant standard by transforming to be effective, green and sustainable industry and (4) Supply chain standard by adopting global standard

(4) Energy aspect

This aspect will focus on two strategies which are (1) Study and adjust quality of biodiesel to be able to increase ratio of palm oil base to B10 within 2026 and B20 during 2027-2036 (2) Increase palm oil consumption by extending the use of biodiesel vehicles

(5) Marketing aspect:

This aspect will focus on three strategies which are (1) Manage demand, supply, and buffer stock and aim to reduce or eliminate market intervention as rely on fair trade basis (2) Connect SMEs to palm oil and oleo chemical industries as well as seeking emerging export markets for both ordinary and high-end products (3) Set up information center and disseminate analyzed information to stakeholders

(6) Administration aspect

This aspect will focus on two strategies which are (1) Release and enforce oil palm and palm oil Act and (2) Establish steering and monitoring mechanism

ISSUE-BASED POLICY AND STRATEGY

National Organics Agriculture Development Plan (2017-2021)

This development plan envisions Thailand to be the leader in the region in terms of production, consumption, trade and services in organic agriculture at the international level. There are four strategic themes as follows: (1) Promote a research, knowledge dissemination and innovation in organic agriculture (2) Develop organic agricultural production and services (3) Develop market and services as well as certification system for organic agricultural products, and (4) Drive organic agriculture extensively (National Committee on Organic Agriculture Development, 2017).

MOAC's Digital Agriculture Strategy (2017-2021)

There is no any argument that digital technology is one of the most important foundations to mobilize development plan in many aspects including economics, social, and environment; therefore, the Office of Permanent Secretary, under Ministry of Agriculture and Cooperatives abided by cabinet's direction, launched "MOAC's Digital Agriculture Strategic Plan (2017-2021)" (Ministry of Agriculture and Cooperatives' Committee on ICTs, 2017). As the conceptual framework states, the Ministry roadmaps the long-term steps to digitalize agriculture starting from preparing the ICT system for being digital agriculture. The second step is to extend smart agriculture technology to improve its level of effectiveness, followed by supporting of digital-service system to add up value to agricultural products. For the first five years, the MOAC stay on the Digital Agriculture Strategic Plan (2017-2021), which envisioned to be the working paradigm that is facilitated by digital agriculture. This strategic plan comprises of three missions, which are to develop agricultural information system for proactive management, to apply appropriate digital technology with context to agriculture sector, and to support sustainable agriculture.

This 5-year plan lays down into 5 strategies which are (1) To escalate digital literacy and bridge the network-learning society in order to simplify existing knowhow to fit for farmers' accessibility, for example, turning explicit and implicit knowledge into digital KM, bringing knowledge-on-demand and alert system into mobile phone and other internet platforms (2) To emphasize digital technology for supply-chain management, i.e., to increase efficiency and reduce risk, for instance, introducing precision farming, changing to automatic production system, and developing big data analytics (3) To integrate data and information for farmers' well-being and sustainable agriculture, for example, developing single window for agriculture database, and enhancing public services for farmers via digital/automated platforms (4) To add values into agriculture products for increasing accessibility to markets such as promoting online market to farmers, recommending RFID/Wireless Sensor/Embedded System where appropriated, applying software and application for agribusiness entrepreneurs and Smart Cooperatives, and lastly (5) To transform into digital organization by integrating technology information with organization's role and responsibility from business architecture level up to roadmap level, and developing human resources for digital literacy.

MOAC Food Security Strategy Framework (2017-2021)

Food security has been strongly concerned in 2008 due to the food soaring price becoming an issue in all level from global to country levels. ASEAN is one of regional cooperation that raised this concern up and ASEAN Ministers of Agriculture and Forestry launched ASEAN Integrated Food Security Framework and Strategic Plan of Action in Food Security (2013-2020) to have a set of policy components to combat this problem in the region (Ministry of Agriculture and Cooperatives' Sub-Committee on Strategic Framework of Food Security, 2017). Thailand, by the MOAC, adopted this integrates plan to be a backup conceptual framework to formulate its own food security strategic plan; therefore, the Ministry then approved MOAC's Food Security Strategic Plan (2017-2021) on May 3, 2017 as a fundamental of food security projects and activities during five years ahead. The 5-year plan envisions that population in Thailand have to have enough and sustainable quality food for nutritious consumption. The said plan targets to produce standard food, good-quality and safety agriculture products and in line with the nutrition requirement trend, to secure food for consumption throughout the year and during emergency situation, and to sustain natural resources for agriculture production as well as to have well-being farmers.

The plan determines into 4 strategies as follows: (1) Producing food to sustainable serve domestic consumption by increasing food production capability, investing in compulsory infrastructure, supporting private investment in agricultural sector, and so on (2) Supporting people, at all levels, access to food in any times by increasing food production in community level, enlarging services activities in agricultural sector, facilitating logistics management (3) Encouraging high-quality production, reduce losses, and suitable usage by enforcing food safety regulation along the supply chain, educating food literacy to people, reducing food losses and wastes (4) Maintaining food stability by maintaining agriculture area, balancing food crops and energy crops production and (5) Supporting food and nutrition security by basing on R&D to increase safety and nutritious agriculture products.

Climate Change in Agriculture Strategy (2017-2021)

GHG emission in Thailand has mostly been emitted from the transportation sector, while agriculture is one of the most-impacted sectors in terms of crop calendar, temperature fluctuation, extreme weather, floods and droughts, and so on. On the other hand, agriculture even mitigates GHG in some farming activities, but it plays an important role in the continuous sinking of CO₂ levels; therefore, the sector is facing the dilemma situation. The MONRE, as national focal point of climate change, has launched the National Plan of Action in this issue as the countrywide strategic plan, however, the sectoral plan is need for tangible activities. Thus, the MOAC by the sub-committee on mobilizing strategic plan of climate change on agricultural sector has released the "Climate Change on Agricultural Sector Strategic Plan (2017-2021)", which is the continuous phase of this sectoral (Sub-Committee on Mobilizing the Strategy of Climate Change in Agriculture Sector, 2017). This sectoral strategic plan envisions a self-resilient Thai agriculture that partly mitigate carbons to meet sustainable development.

This 5-year plan comprises of four missions which are to build awareness and disseminate data, information, and knowledge to stakeholders at all levels, to develop database, knowhow, and technology to support adaptation capacity to climate change, to participate into GHG mitigation regarding the conformity of agriculture sector, and to encourage integration of adaptation measures. The plan also pinpoints four strategies as follows: (1) Collecting and developing database on knowledge, technology, and innovation in order to increase relevant stakeholders' awareness by collecting and disseminating indigenous knowledge, generating early warning tools, studying trade-related measures regarding climate change, etc. (2) Increasing adaptive capacity on climate change for farmers/farmer organizations and related business by integrating local community into water management, increasing water usage effectiveness, adopting risk map for adaptation, applying precision farming where appropriate (3) Participating in GHG mitigation and preparing for environmental-friendly development, by promoting biogas production, setting low-carbon product standard, adjusting farming practices and (4) Building capacity on management to response with climate change in agriculture sector by transferring knowledge and technology to participants, setting plan for human resources development.

Mega farming policy

The fields of each small farmer in the neighborhood are consolidated to make a large farm (mega-farm) under the supervision of a (large) farm manager while the ownership of land remains unchanged. The objective of the area-based extension system is to make it achieve an economy of scale in order to increase the bargaining power of farmers. Thus, the cost of production for each small farmer in the area will be reduced while the price received by the farmers will be increased. In doing so, it is also very convenient for government officials to transfer site specific technology to the farmers in the areas and assist them in linking with the buyers. In addition, the area – based approach will facilitate the integration of works among different departments to further improve the efficiency and productivity of farming. The farmers' organization in the particular large farm will be set up, if not yet exist, and the farm manager will be appointed to operate each big farm.

Zoning by AGRI-pap policy

The agricultural land areas in the country are delineated on the map into four categories namely: highly suitable, moderately suitable, least suitable and unsuitable for each major crop and is called AGRI-Map. This map is used to develop the agro-economic zone for each commodity in such way that the planted area and production is matched with the expected demand.

Agriculture Learning Centers (ALCs) policy

For each commodity, the best practice farm in each district will be selected as a learning center for the farmers in the area. This policy breaks out into 882 centers in every single district throughout the country. The basis thinking is that since digital literacy is not equal among farmers; therefore, this conventional mechanism can play well with this circumstance and even more tangible, network building, and interaction of man-to-man than the visual searching plug-and-play via internet.

CONCLUSION

In conclusion, it seems that Thailand has launched the 20-year national development plan hoping that it will be utilized as the concreted pathway for development in all aspects including economic and social aspects. However, it may be improper in the political point of view since it cascades into too many development plans that need to be categorized into several hierarchies of plans. Furthermore, this concreted plan may make the country too rigid to change under the current VUCA world since it has long time frame. Therefore, in order to quickly respond to the dynamic changing world, the National Strategy Act of 2017, Section 11, has stipulated that the National Strategy Committee (NSC), which consists of many high-ranking officers and is chaired by the Prime Minister, can review the national strategy every five years or whenever it is necessary. However, the amendment version of the national strategy needs to get the approval from the parliament before its implementation.

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