

# International Journal of Sustainable Development and Planning

Vol. 17, No. 1, February, 2022, pp. 267-275

Journal homepage: http://iieta.org/journals/ijsdp

# The Capability of the Meranti Islands Regency Government in the Development of Sago Based on Local Wisdom



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## https://doi.org/10.18280/ijsdp.170127

# **Received:** 27 October 2021 **Accepted:** 7 January 2022

#### Keywords:

capability, local government, local wisdom, sago development

### **ABSTRACT**

Various government initiatives to support food security based on local wisdom, such as planting sago, must be implemented through multiple agricultural potentials. On the other hand, the facts show that sago is still not consumed as a staple food and requires extensive local government expertise. Therefore, this study aims to examine the ability of local governments to produce sago based on local wisdom in the Meranti Islands Regency, Riau Province. This study uses a qualitative approach with data analysis techniques on the Nvivo 12 Plus software concept map analysis. Based on the research results, the ability of the Meranti Islands Regency Government has four dimensions of capability, namely: First, in the knowledge and skills dimension, the government has carried out the task with regional agencies in socializing the "One Day with Sago" program. Second, on the technical system dimension, the government already has a technical design and specifications for sago processing, focusing on developing small and medium-sized industrial centers. Third, in the Managerial System Dimension, the government has encouraged community empowerment and designated Meranti as a sago cluster area. Fourth, in the Dimension of Values, the government has made efforts to empower the community sustainably and has produced various innovations in the content of sago production.

#### 1. INTRODUCTION

Currently, Indonesia has various food potentials, where one alternative to anticipate food scarcity is the implementation of sago development [1, 2]. Fundamentally, sago is tropical forest biodiversity that needs to be developed and preserved [3]. In addition, sago has a carbohydrate source that is suitable for consumption [4] and has multipurpose advantages that can encourage the local community's economy [5] and benefit the environment [4, 6, 7].

**Table 1.** Land area and sago production in meranti islands regency in 2020

Number	Sub-district	Land Area (Hectares)	Production (Ton)
1	Tebing Tinggi Barat	9.02	67.80
2	Tebing Tinggi	0.38	3.30
3	Tebing Tinggi Timur	16.68	84.24
4	Rangsang	0.52	3.48
5	Rangsang Pesisir	2.33	17.86
6	Rangsang Barat	0.26	1.98
7	Merbau	5.32	23.24
8	Pulau Merbau	1.94	11.53
9	Tasik Putri Puyu	3.50	30.27
	Amount	39.95	243.71

Source: merantikab.bps.go.id, 2021 [8].

One of the regencies included in one of the areas for developing national food security is the Meranti Islands Regency, the center of sago production in Indonesia [9]. Long before the Meranti Islands Regency had been established in Riau Province, the local populace cultivated sago since the Siak Indrapura Kingdom. Later, sago was also used as a staple food due to rice supply problems and food shortages during the colonial period in the Meranti Islands [10]. Another intriguing fact is that the Meranti Islands Regency has been designated as the national sago crop development center, with the Meranti Islands providing nearly half of Indonesia's sago needs [9, 10]. Then, the distribution of sago land also dominates in almost all areas [4]. The following is a table of sago commodity commodities in the Meranti Islands Regency.

Table 1 above shows that the sago commodity in the Meranti Islands Regency has promising prospects to support food security based on local wisdom. This is supported because 70.91 ha of available and uncultivated areas still exist in the Meranti Islands Regency [4]. Then various studies explain that sago commodities also have multifunctional benefits that can support food security [11], support the community's economy [10], absorb labor [12], maintain health [5,11], maintain environmental balance [1,2], alternative food to replace rice [9, 12, 13], and can be an alternative future export commodity for Indonesia [4]. However, even though it has promising potential and prospects, of course, the sustainable development of sago in the Meranti Islands

Regency requires the ability and assistance from the central and regional governments in the form of policies such as involving all relevant stakeholders, both from the government, academia, entrepreneurs, producers, institutions finance, as well as Non-Governmental Organizations [9]. The aim is to support farmers in growing more imaginative, inventive, and varied sago products [4, 9, 10]. Local government capabilities have an essential role in developing sago to support food security for the community. According to Leonard Barton [14], there are 4 (four) dimensions of local government capability, namely:

- 1. Knowledge and skills are vital for government organizations to carry out their duties, supported by human resources who have extensive experience and carry out their primary responsibilities and activities.
- A technical system is the attitude of actors and groups within an organization supported by information and development design.
- 3. The organizational system is an incentive structure in the public sector that encourages innovative activities and creates new knowledge.
- Values and Norms are characteristics of the government's ability to develop long-term public knowledge content through systematic management techniques.

Government capability is the skill of government organizations to adjust and establish the prerequisites necessary to maintain a competitive advantage rapidly [15]. Then, to encourage the growth of the industrial sector to be more focused, integrated, and prioritize optimal results, the government's ability to develop available industrial estates is needed. In addition, identifying opportunities to unlock growth sectors will be crucial in developing industrial strategies with actor agreements at the national and local levels to identify distinctive comparative advantages or 'leading sectors' to minimize the industrial skew [16]. Thus, government excellence and skills will represent the public's need to perform complex tasks internally [17]. Furthermore, government capability is needed to anticipate, shape, adapt, and develop existing competitive advantages [18]. In the context of this research, the capability of local governments in developing sago based on local wisdom is increasingly interesting to study because the Meranti Islands Regency is one of the most commercial sago production areas in Indonesia [18-20]. Therefore, this study aims to analyze the capability of local governments to develop sago based on local wisdom in the Meranti Islands Regency, Riau Province, Indonesia.

### 2. LITERATURE REVIEW

## 2.1 Local government capability

In managing food security at every level, the capability of local government is so essential and needed [21]. The synergic integration of the strengths of the elements of the organization can form a reliable government capability [22]. To create functional local government capabilities, required institutions with good networks between provincial and district governments [15, 23]. Then, a lack of human resources within the government environment can obstruct the optimal development of local government capabilities [17]. Besides, the inability to recognize obstacles, opportunities, and understand the existing circumstances, can influence and

hinder the ability of the government to develop existing [24].

For this reason, government capacity building must be adopted at the individual and communal levels. Although some government capabilities have not been well implemented, government capabilities have essential significance and significant influence in developing existing resources [17]. Then, Government capabilities can improve planning strategy by increasing employee competence, organizational climate, and organizational capacity [15]. In essence, the capability of local government as an organization will be conducted with four dimensions, namely the Knowledge and Skills Dimension, Technical System, Managerial System, and Values and Norms Dimension. The four (4) dimensions are a series of organizational learning to improve capacity and capabilities and have an essential role in realizing the achievement and success of a government [14].

### 2.2 Sago development

In developing sago production, cooperation between the government and farmer groups can provide added value to the development dimension by utilizing the area and suitability of land and the creativity that exists in the community [2]. Also, for sago management to run well and sustainably, support from all relevant stakeholders, from the government, academics, entrepreneurs, farmers, financial institutions, and non-governmental organizations [4, 10]. Currently, Indonesia can sago-producing areas to support community food security [5, 13]. Therefore, if this potential is managed optimally, it will impact the right image as a productive sago-producing country in the world [18, 19]. The development of sago in marketing and exports to other countries can also open up new jobs for the community to increase economic growth [6]. Then in its implementation, the development of sago has challenges that need to be responded to well by the government, which is related to the development of superior products in the sago processing industrial area [3, 12, 24] so that it has an impact on increasing the ability and independence of farmers in each region [7].

The sago management model that the government needs to develop must increase farmers' income through downstream, labor absorption, and land adjustment [4]. To achieve this process, the government can play a role in policy and pricing, industrial investment, land selection [5], and supervising sago management [11, 25]. Currently, various obstacles in adopting sago as a locally based food that supports food security are due to the lifestyle and habits of people accustomed to consuming rice as a staple food [9]. This is where the government plays a vital role in developing sago as an alternative to local food [26-28].

### 2.3 Local wisdom

Fundamentally, local wisdom can be interpreted as a community commitment to maintain the principles of goodness in the preservation and development of local potential [29]. The idea of involving all stakeholders, ethical values, and an assessment of the existing potential can be used to provide empowerment based on local wisdom [30]. In the process of achieving this goal, the current modern management system must be sensitive to the values of local wisdom [29, 30]. Local communities responsive to government development goals can help strengthen current local wisdom [31-33]. Today's community empowerment has

changed to knowledge, skills, attitudes, and capacities and the coordination of social capital to increase local potential. Although there are still obstacles, empowerment based on local wisdom is continuous [32, 33]. Various studies [8, 11, 20] have explained that utilizing the potential of land availability, expanding network and market absorption, forming capital cooperation, adopting technology, optimizing income and community awareness, and improving the quality of talented human resources in agriculture will be able to provide a contribution to the existence of local wisdom in the field of food development activities. Thus, the government's ability to identify the potential for sago development based on local wisdom is highly dependent on internal conditions in an area [1, 26].

Several previous studies have shown that the sago development strategy to support local food security has many challenges that the government must manage [34, 35]. In addition, there are many unanswered questions regarding how the development of sago based on local wisdom should be carried out optimally? For this reason, a comprehensive study of the various dimensions of the capability of the Meranti Islands Regency government is needed in the development of sago based on local wisdom.

#### 3. RESEARCH METHODS

This study uses a qualitative approach to collect data about a problem under investigation and analyze it systematically [36]. The data in this study came from secondary data obtained from various government websites, books, journals, proceedings, and several online news media. Then, the data collection technique in this study uses documentation techniques that focus on collecting data related to the capabilities of local governments in the development of sago based on local wisdom.

Furthermore, the data analysis technique in this study used Nvivo 12 Plus software with concept map analysis features [37, 38]. The analysis was carried out in two stages: First, analyzing the data through the concept map analysis feature to determine the dimensions of local government capabilities

used as concepts (nodes) used in the study. The second step is to conclude and interpret the data that has been analyzed systematically. Therefore, this study will examine the capabilities of the Meranti Islands local government in developing sago based on local wisdom.

#### 4. RESULTS AND DISCUSSIONS

Research [5] states that sago can be an alternative food source of food in local food diversification to support food security. Besides that, sago is also a good food source for maintaining health, such as blood sugar levels and keeping the body ideal [13]. Then, Research [19] states that the production of sago food in the Meranti Islands Regency is the best sago producer in Indonesia. Furthermore, based on the results of coding through the Nvivo 12 Plus software using the Concept Map feature, there are several dimensions of the capability of the Meranti Islands local government in developing sago based on local wisdom, namely:

Figure 1 below visualizes how the Meranti Islands local government's capability to develop sago based on local wisdom has four dimensions of ability, namely the dimensions of knowledge and skills, technical systems, organizational strategies, and measurements of technical systems values and norms. First, the local government has carried out the task and authority to the relevant local agencies in the knowledge and skills dimension and has socialized the "One day with Sago" program. Second, in the dimension of the technical system, The Local government has made efforts to continuously increase the productivity of sago commodities and develop a center for small and medium-sized industries for sago commodities. Third, in the Managerial System Dimension, the government has established Meranti as a sago cluster area, collaborated in the development of sago, and has made sago a symbol of the region and local cultural attractions for the community. Fourth, in the Dimension of Values and Norms, The Local government already has relevant knowledge related to the regional vision and mission and realizes its main tasks and functions to empower the community.

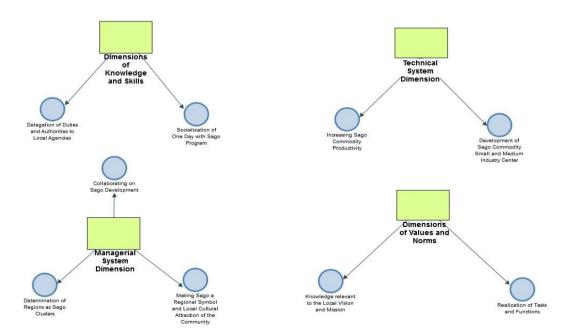


Figure 1. Concept map analysis on the dimensions of local government capability

# 4.1 Local government capability in the knowledge and skills dimension

**Table 2.** List of constraints and challenges to sago development in the meranti islands regency

	Elements of			
Number	Obstacles and	Description		
- 100	Challenges	F		
		Sago starch drying is still		
1	Sago Drying	done traditionally by the		
1	Techniques	community by drying the sago		
		starch in the sun.		
		The processing of derivative		
2	Derivative Product	products is still limited, and		
2	Processing and	the packaging design is still		
	Packaging Design	effortless, so it looks less		
		attractive Sago waste has not been		
		utilized and is still discharged		
3	Waste Utilization	into the sea so that it becomes		
3	and Treatment	a source of environmental		
		pollution.		
		The source of water for the		
		extraction of sago starch still		
4	Use of Water	comes from peat water, and		
4	Treatment	there is no technology for		
	Technology	processing raw water in sago		
		refineries.		
	Percentage of	The percentage of poverty in		
5	population below	the Meranti Islands district is		
	the poverty line	around 28.89%, the highest in		
	-	Riau Province.		
6	Sago Harvesting Culture	Sago harvesting system that is still conventional.		
	Farmer Group	The limited access to capital		
7	Access to financial	for sago farmers, especially to		
,	institutions	banks.		
0	Land Use	Zoning arrangements have not		
8	Regulation	yet been made.		
	Pattern of	The pattern of a partnership		
	Partnership and	between large companies and		
9	Institutional	sago farmers has not yet been		
	Strengthening of	formed so that the farmers'		
	Farmers	institutions are still very weak.		
10	The Ijon System	The Bonded system is still		
	3 3	ongoing.		
		Prices often fluctuate. In 2016 prices were at Rp. 50,000 One		
11	Price Stability	rod, while prices in 2018 Rp.		
		30,000 One rod.		
		Business capital is still very		
10	G	limited, and some are		
12	Capital Resources	dependent on the bonded		
		mechanism.		
	Market	Market segmentation is still		
13	Availability,	narrow because it is still		
13	Distribution and	limited to one product (sago		
	Segmentation	starch).		
14	Water Management	Some farmers have not carried		
		out water governance.		
15	Vegetation	Community sago crop cultivation is still a		
13	Association	monoculture.		
		Most land uses are not in		
16	Land suitability	accordance with the expected		
	Zana samonni	area.		
Source: Analysis Data Mamun Murad. 2010 [4]				

Source: Analysis Data Mamun Murod, 2019 [4].

In developing sago in the Meranti Islands Regency, the

Regional Government has delegated duties and authorities in the agricultural sector to the Forestry and Plantation Service and the Food and Animal Husbandry Service of the Meranti Islands Regency. However, in its implementation, regional apparatus organizations' capabilities have not been maximal in making breakthroughs to increase sago productivity. In the process, the "One Day With Sago" Program has been socialized by the Meranti Islands Regency Government to the surrounding community. However, the socialization process implemented has not been able to have a significant impact. It can be seen from the people who currently still consume rice as a staple food. Moreover, only make sago as the second staple food. The local government's failure of socialization is caused by a lack of skilled policy resources, both human resources and inadequate facilities and infrastructure. Nevertheless, the lack of technology in processing sago into rice is another factor causing various local governments' failure in developing sago in the Meranti Islands. The constraints indicated by local governments can be seen in Table 2.

Based on the above Table 2, it can be seen that some of the obstacles that the regional government is facing in the development of sago in the Meranti Islands are related to the lack of human resources and also the infrastructure that is hampering several programs that the local government has intensified. In addition, the high poverty rate due to the rampant bonded system in community sago gardens has caused the income of sago farmers from selling sago to be very minimal, the bonded system is a system where people plant sago trees, and then traders of Chinese descent buy their sago trees which are still young. As an illustration, when farmers sell one sago stick to the owner of the sago refinery, the farmer will get Rp. 500,000-Rp. 700,000, whereas if the farmers do the bonded labor system, they only get Rp. 100,000-Rp. 200,000 per stem, the minimum income of these farmers ultimately impacts the deep fulfillment of community needs that are only sufficient to meet daily needs. On that basis, local governments must evaluate their capabilities in developing better sago. Research [19, 20] confirms that the Meranti community still has great potential to return to consuming sago as local food. One of the local government's actions to restore people's habits in consuming songs is the "One Day with Sago" program [9]. However, in practice, this program has not been able to achieve the stated goals due to several factors, such as the community's response is still lacking in implementing sago consumption as local food, and there are still many people who do not know this program so that it cannot run optimally in the Meranti Islands.

Therefore, the relationship between government duties and local food production is related to the government's obligation to manage food availability and provide clear information about available food production, where rational government involvement can result in better nutrition for the local population while stimulating an efficient agricultural industry [39, 40]. However, if input support from the government is not provided, it will impact the tendency of smallholders to enter into contracts with private companies. This contractual relationship can increase production and centralize power with the private sector, which then determines the amount of product purchased and has the power to evaluate the commodity's quality. Ultimately, the price paid to farmers will not support the community's economy. For this reason, there are important priorities for the government to apply existing knowledge about effective interventions that can target food production and inform the public about dialogue between government actors and farmers regarding alternative sustainable food production policies [40].

# 4.2 Local government capabilities in the technical systems dimension

The Capability of the Meranti Islands Local Government in implementing the technical system dimensions looks stable when viewed from the total productivity of sago commodities in 2019-2020 in the following table:

**Table 3.** Sago production in meranti islands regency in 2019-2020

Number	Sub-district	Production (Ton)	
		2019	2020
1	Tebing Tinggi Barat	67.80	67.80
2	Tebing Tinggi	3.30	3.30
3	Tebing Tinggi Timur	84.24	84.24
4	Rangsang	3.48	3.48
5	Rangsang Pesisir	17.86	17.86
6	Rangsang Barat	1.98	1.98
7	Merbau	23.24	23.24
8	Pulau Merbau	11.53	11.53
9	Tasik Putri Puyu	30.27	30.27
	Amount	243.71	243.71

Source: merantikab.bps.go.id, 2021 [8].

Table 3 above shows that in 2019 and 2020, sago production in the Meranti Islands Regency tends to be stable with a total amount of 243.71 tons. Then, Sungai Tohor Village, located in East Tebing Tinggi District, is Indonesia's best sago-producing village area [19]. In general, the Meranti Islands Regency Government has supported developing sago as a promising agricultural potential. This was marked by the Sago Small and Medium Industry Center (SMI) in Sungai Tohor Village, Tebing Tinggi Timur District, which was carefully prepared with studies and explicit directions from the Ministry of Industry of the Republic of Indonesia. Then, several reasons were found, as shown in Table 4, regarding why the Meranti Islands should support and continue to develop sago as a local food ingredient for the local community.

Furthermore, three scenarios were carried out in the technical design and specifications for sago processing in the Meranti Islands Regency, namely Location Scenarios, Land Use Plans, and Mapping of Transportation Network System Plans [41]. First, the location plan for developing and constructing a Small and Medium Industry Center (SMI) made from sago is located in Sungai Tohor Village, East Tebing Tinggi District, Meranti Islands Regency. This location was chosen as a central location because this location is in the middle of the crossing of the Sungai Tohor Village to the sea and is inside a community sago plantation. At this location, along with the Sungai Tohor Village, several post-harvest processing sites extract pith from sago stalks taken from plantations in Sungai Tohor Village and its surroundings. Water is the main transportation for the SMI location and garden roads as agricultural roads. Currently, the development of the SMI center in Sungai Tohor Village can only be accessed by water or straits, so it is essential to provide water transportation with a canal road network system and design it properly as the primary transportation system.

Second, in the land use plan, the Meranti Islands Regency Government has prepared an area of  $\pm 29,915 \text{ m}^2$  or 2.99 ha,

located north of the Sungai Tohor Village. However, the land area prepared has not met the ideal land requirements for Small and Medium Industries (SMI) development. As an alternative, it is planned to add land in the southern part of the Sungai Tohor with an area of  $\pm$  23,598 m² (2.36 Ha) so that the total planned land area is 5.35 Ha and has met the minimum limit.

**Table 4.** The importance of sago development in the regency of meranti islands

Number	Supporting Elements	Explanation
1	Peat Region	Sago plants have high suitability
1	Meranti (60%)	for wetlands, swamps, and peat.
	Islands Region Meranti	Saltwater/salt water intrusion
2		makes Sago able to withstand
	Wichanti	certain salt levels.
		Sago has been the cultivation of
		meranti local communities since
	Local Community Cultivation	the days of the Sri Indrapura Siak
3		Kingdom in Riau Province, and it
J		is crucial to maintain and revive
		the agriculture, which has now
		become the 2nd staple food for the
		community.
	Potential Market	The demand for sago flour by
		agents/distributors annually
4		becomes a market opportunity for local governments and the
	Opportunities	community to improve the regional
		economy.
		Sago has been processed into 369
		types of products, such as Sago
	Business	Noodles, etc. In addition, the use of
5	Development	multi-function sago can create
	Potential	business development for farmers
		and can also break down people's
		income.
		With the continued increase in
		population, it will also have an
6	Local Food	impact on food needs, and Sago
U	Availability	can be used as an alternative to
		local food in supporting food
		security in the Meranti Islands.

Source: Analysis Results M. Rafi et al., 2021 [9].

Third, the transportation network system that supports the activities of industrial centers in the Meranti Islands Regency is divided into 2, namely the road network transportation system and the sea network. The road network system is a unified road network consisting of a primary road network system and a secondary road network system interwoven in a tiered relationship. The road network system is prepared concerning the regional spatial plan and considering the connectivity between regions and urban and rural areas. Then, water transportation infrastructure consisting of sea and river transportation infrastructure also plays a vital role in supporting Indonesian transportation. Sea and river transportation infrastructure in Meranti Islands Regency is supported by sub-district capital ports, coastal rural ports, and international ports. The development of the central port infrastructure in the Meranti Islands Regency has five ports which are the assets of the Meranti Islands Regency. In addition to the port, there is also a ferry dock that extends the road infrastructure network that is cut off by rivers or straits. In its development, the technical design for the development of sago in the Meranti Islands Regency was carried out to develop the potential of Meranti sago in order to support quality local food security.

# 4.3 Local government capabilities in the managerial systems dimension

The organizational capability of the Meranti Islands Regency local government in the managerial system dimensions, such as creating knowledge for local communities, can be optimal in the implementation process. This can be seen from the community empowerment process through the Bank Indonesia Social Program in Sungai Tohor Village, Tebing Tinggi Timur District:

- The local government has invited the community to participate in the development of sago and gave them an understanding that sago can be developed into a better economic resource by forming a group in which the group is planning to carry out sago utilization activities.
- 2. The government has facilitated various equipment in sago processing, such as processing freshly harvested sago stalks or what is known as a sago refinery, raw sago processing machines, building for processing sago derivative products, and other facilities. These facilities are used to provoke the community's desire to participate in the development of sago. The community has well-received this effort by participating directly in the development and utilization of superior resources in the form of sago in the early stages and making Bank Indonesia more confident that the people of Sungai Tohor village have started to practice it in the field.
- 3. The government has involved the community in participating in the learning process on new knowledge about a new derivative product from sago, namely sago sugar, and what needs to be done before utilizing the sago plant and how to preserve it. At this stage, the social program of Bank Indonesia's Riau Province branch was also welcomed by the local community.
- 4. The government has given confidence to farmer groups to manage the sago mill and all the facilities provided by continuing to carry out systematic supervision. In addition, the group of housewives also began to practice processing sago-derived products such as sago sugar and sago noodles as typical foods of the Meranti Islands.

Then, the Regional Government of the Meranti Islands Regency has collaborated with various parties to develop sago in the Meranti Islands. The cooperation in question is the collaboration between the Village Government and the Sungai Tohor Village Sago Development Team, Tebing Tinggi Timur District, the Research and Development Agency of the Ministry of Agriculture of the Republic of Indonesia, the Manado Palm Plant Research Agency, The Agency for the Assessment of Technology Application in Jakarta, and also Bank Indonesia Representatives in Riau Province in the Sago Cluster program. Besides, local community sago development support is also budgeted through the central, provincial, and district budgets. The following are details of programs and activities for sago development through the Meranti Islands Forestry and Plantation Service in 2018-2020 as shown in Table 5.

Then, Sago has been very synonymous with the local community. Besides being a symbol of the Meranti Islands Regency, Sago has also become a symbol of the Selatpanjang

City as the capital of the Meranti Islands Regency today. Several stages of harvesting sago have become a cultural attraction of the community, such as a running competition on sago tree as a show of skill in calculating sago tree that is assembled quickly in the river and bringing Sago to the sago refinery shown in Figure 2.

**Table 5.** Sago development program in the regency of meranti islands

Number	Programs	Source of funds	Year
1	Community Plantation Development (Sago)	Regency budget & Provincial Budget	2018- 2019
2	Development of Sago Main Plantation (SelatPanjang Meranti Variety)	Sharing & National Budget	2018- 2019
3	Identification and Inventory of Sago Main Trees in the Context of Release of Varieties	Regency budget	2018- 2019
4	Maintenance of People's Sago Plantation	Provincial Budget & Regency budget	2018- 2019
5	Processing Technology in the Regency of Meranti Islands	Regency budget	2018- 2019
6	Maintenance of Sago Mother Plantations	Regency budget	2018- 2019
7	Sago Seed Procurement	Regency budget	2018- 2019
8	Development of Sago Small and Medium Industry Centers in Sungai Tohor Village	Special Allocation Fund through the Ministry of Industry of the Republic of Indonesia	2018- 2020

Source: M. Rafi et al., 2021 [9].



**Figure 2.** Local symbols and community cultural activities in the meranti islands regency

The utilization of sago, which has long been cultivated in the life of the Meranti Islands community, has produced several local pearls of wisdom aimed at adapting and integrating internal and external environments. Besides, this step is a strategy and capability of the local government in carrying out its main tasks and functions and following the vision predetermined mission.

# 4.4 Local government capabilities in the dimensions of value and norms

Dimensions of values and norms are a standard set to create knowledge content continuously reinforced by organizational leaders and embedded in management practices and affects all development projects undertaken. There are two critical subdimensions of the value and norm dimension, namely the extent to which government organizations can provide optimal empowerment to the community and how the public labels the status on the capability of government organizations in the management that is being carried out [15].

First, in the community empowerment process carried out by the Meranti Islands Regency government organization to increase the ability and knowledge of the content of current food production, it still looks not fully optimal because the dominance of sago processing in Meranti Islands Regency is currently running conventionally and only produces semifinished materials in the form of sago flour, where the development of downstream products is still relatively limited in the form of noodles and crackers. The by-products in the form of waste sago dregs and sago husks have not been used optimally. Sago factory owners generally dispose of sago dregs into the sea. A small part of the sago husk is used for fuel, and some are used as engine foundation or load-bearing. Unfortunately, most of the sago husk is only burned to avoid accumulation. However, the government continues to carry out various ideas and innovations, where there are more than 300 types of processed foods made from sago in Meranti Islands Regency, such as sago noodles, sago rice, and seasoned rice, which are processed from sago flour and mixed with local ingredients such as cloves, cinnamon, ginger, and lemongrass. In terms of food production, sago flour is also very flexible to be reprocessed into various types of food such as sago noodles and sago rendang which are culinary characteristics of Riau Province. Thus, although there are still obstacles in the empowerment process for the community, the Regional Government, together with the Plantation and Horticulture Office of the Meranti Islands Regency, have developed a sago-based food industry that has the potential to absorb the labor of local communities.

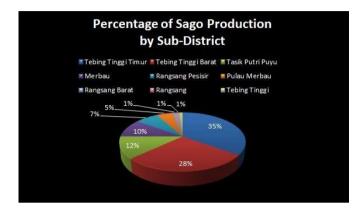
Second, the status branded by the community regarding the capability of local government organizations in managing sago development can be said to be very good when viewed from the change in the mindset of the community, sago farmers, and other stakeholders. At first, the sago commodity in the Meranti Islands was ignored by the public sector because it could not prove productive local food production. However, over time, the Meranti Regency Government continues to convince the public and the central government to consume sago as an alternative food source and strive to promote Meranti's sago commodity to become more global. Then, these efforts impact the success of making the Meranti Islands Regency the largest sago-producing area in Indonesia with excellent potential to be utilized during a food crisis. The following are the performance achievements of the Meranti Islands Regency Government in sago production in 2015-2020, which is shown in Table 6.

Then, the development of sago production is also carried out evenly in every sub-district in the Meranti Islands Regency, where the East Tebing Tinggi District was the most dominant area (35%) in the amount of sago production in the Meranti Islands Regency in 2020.

**Table 6.** Development of sago production in meranti islands regency 2015-2020

Production	Production Quantity	Year
	202.06	2015
	202.06	2016
Sago Commodity in Meranti Islands	205.05	2017
Regency, Riau Province	239.08	2018
	243.71	2019
	243.71	2020

Source: merantikab.bps.go.id, 2021 [8].



**Figure 3.** Percentage of sago production by district in meranti islands regency

In Figure 3 above, it can be seen that by sub-district in 2020 the amount of sago production is dominated by East Tebing Tinggi District (35%), West Tebing Tinggi (28%), Tasik Putri Puyu (12%), Merbau (10%), Coastal Rangsang (7%), Merbau Island (5%), Rangsang Barat (1%), Rangsang (1%), and Tebing Tinggi (1%). Not only that, in the context of developing sustainable sago in the Meranti Islands Regency, the Regional Government has implemented several development strategies, such as the collaboration between the local government and banks in facilitating lower-middle entrepreneurs in obtaining soft loans as capital to shift the traditional process towards a production process based on technological innovation. Then, the trading industry in the Meranti Islands Regency also routinely exports wet sago, which is processed into the food industry with more attractive packaging to foreign countries such as Malaysia, Japan, and Singapore.

### 5. CONCLUSIONS

Based on the explanation above, this study concludes that the various potentials for sago development in the Meranti Islands Regency will significantly impact local-based food security when the local government and other stakeholders have strong capabilities in developing food production. Then, although various characteristics of local government capability in sago development have not been executed effectively, the Meranti Islands Regency Government has demonstrated its commitment to achieving better capabilities in sustainable sago development. This statement is based on the central government's and the community's support for encouraging local governments to improve their performance to grow sago production in the Meranti Islands Regency. Thus, sago development in the Meranti Islands Regency endeavors

to improve regional food security based on indigenous wisdom, which solid local government capacities must accompany.

## **REFERENCES**

- [1] Trisia, M.A., Metaragakusuma, A.P., Osozawa, K., Bai, H. (2016). Promoting sago palm in the context of national level: Challenges and strategies to adapt to climate change in Indonesia. Int. J. Sustain. Futur. Hum. Secur., 4(2): 54-63. https://doi.org/10.24910/jsustain/4.2/5463
- [2] Boseren, M., Weterings, R. (2021). Sago palm: A sustainable solution for food security and peat conservation in Indonesia. https://forclime.org/documents/Briefing%20Note/Englis h/Policy%20Brief%20-%20Sago%20Palm.pdf.
- [3] Tjokrokusumo, D. (2018). Potency of sago (metroxylon spp) crops for food diversity. Biodivers. Int. J., 2(3): 239-240. https://doi.org/10.15406/bij.2018.02.00066
- [4] Murod, M., Kusmana, C., Bintoro, M.H., Widiatmaka (2019). Strategy of sago management sustainability to support food security in Regency of Meranti Islands, Riau Province, Indonesia. J. AAB Bioflux, 11(1): 1-20.
- [5] Arif, S., Isdijoso, W., Fatah, A.R., Tamyis, A.R. (2020). Strategic Review of Food Security and Nutrition in Indonesia (2019-2020 Update). Jakarta: Smeru Research Institute. https://reliefweb.int/sites/reliefweb.int/files/resources/W FP-0000119830.pdf.
- [6] Makkarennu, Katsuya, O., Kadir, A.R. (2018). Business development strategy of sago for food security. In IOP Conference Series: Earth and Environmental Science, 196: 1-7.
- [7] Sudarmadi, Rosnita, Khaswarina, S. (2017). Ability and independence of farmer groups on development of sago agribusiness as alternative foodstuff in Kepulauan Meranti Regency Riau Province. J. Sungkai, 5(1): 8-21.
- [8] Merantikab.bps.go.id. Meranti Islands Regency in Figures for 2021. Central Bureau of Statistics of the Meranti Islands Regency, 2021. https://merantikab.bps.go.id/publication/2021/02/26/53b dc11b3828e7e366e49b3f/kabupaten-kepulauanmeranti-dalam-angka-2021.html, accessed in Feb, 2021.
- [9] Rafi, M., Ardiansyah, Purnomo, E.P., Handoko, T., Rahmat, A.F. (2021). The capability of local government in sago development: Efforts to support food security in the regency of Meranti Islands. Cosmogov J. Ilmu Pemerintah., 7(1): 52-68. https://doi.org/10.24198/cosmogov.v7i1.27227
- [10] Elida, S., Amin, A.M., Sutrisno, J., Darsono. (2021). The current condition of agro-industrial supply chain management of public sago product: A case survey of Meranti Islands Regency, Indonesia. In IOP Conference Series: Earth and Environmental Science, 905(1): 1-8. https://doi.org/10.1088/1755-1315/905/1/012091
- [11] Syahza, A., Bakce, D., Irianti, M., Asmit, B., Nasrul, B. (2021). Development of superior plantation commodities based on sustainable development. International Journal of Sustainable Development and Planning, 16(4): 683-692. https://doi.org/10.18280/ijsdp.160408
- [12] Syahza, A., Suwondo, Bakce, D., Nasrul, B., Mustofa, R. (2020). Utilization of peatlands based on local wisdom and community welfare in Riau province, Indonesia.

- International Journal of Sustainable Development and Planning, 15(7): 1119-1126. https://doi.org/10.18280/ijsdp.150716
- [13] Kehati. (2021). Sago, The Source of Carbohydrates, The Solution of Food Sovereignty in Indonesia. Kehati.or.id. https://kehati.or.id/en/sago-the-source-of-carbohydrates-the-solution-of-food-sovereignty-in-indonesia/, accessed on Apr. 24, 2021.
- [14] Leonard-Barton, D. (1992). Core capabilities and core rigidities: A paradox in managing new product development. Strateg. Manag. J., 13(1): 111-125. http://www.jstor.org/stable/2486355
- [15] Fardell, B. (2020). Conceptualising capabilities and dimensions of advantage as needs. J. Hum. Dev. Capab., 21(3): 263-276. https://doi.org/10.1080/19452829.2020.1777952
- [16] Clayton, N. (2018). Six ideas for more effective Local Industrial Strategies. Centreforcities, 2018. https://www.centreforcities.org/reader/six-ideaseffective-local-industrial-strategies/, accessed on Apr. 12, 2018.
- [17] Liu, J. (2019). Reform of government institutions and improvement of governance capabilities. In Atlantis Press International Symposium on Education: Advance in Social Science, Education and Humanities Research, 2019, 311(1): 359-365. https://doi.org/10.2991/ecss-19.2019.72
- [18] Felin, T., Powell, T.C. (2016). Designing organizations for dynamic capabilities. J. Berkeley Univ. Calif., 58(4): 78-96. https://doi.org/10.1525/cmr.2016.58.4.78
- [19] Orentlicher, N. (2019). Carbon, palms and peat: Assessing the environmental and economic sustainability of sago for the carbon emissions reduction of Indonesian peatlands. Wageningen University.
- [20] Hasjim Bintoro, M., Pratama, A.J., Nurulhaq, M.I., Ahmad, F., Saputra, H.K.H., Bintoro, I.A., Ayulia, L. (2020). Mix farming based on sago palm in Meranti Island District, Riau Province, Indonesia. Alinteri J. Agric. Sci., 35(1): 106-112. https://doi.org/10.28955/alinterizbd.430769
- [21] Millimet, D.L., Mcdonough, I.K., Fomby, T.B. (2018). Financial capability and food security in extremely vulnerable households. Am. J. Agric. Econ., 100(4): 1-26. https://doi.org/10.1093/ajae/aay029
- [22] Lustiadi, Y. (2016). The capability of public organization after regional extention (a study on basic service organization in Way Kanan Regency Province of Lampung). J. Sosiohumaniora, 18(1): 76-82. https://doi.org/10.24198/sosiohumaniora.v18i1.9360
- [23] Syahza, A., Bakce, D., Irianti, M., Asmit, B. (2020). Potential development of leading commodities in efforts to accelerate rural economic development in coastal areas Riau, Indonesia. J. Appl. Sci., 20(5): 173-181. https://doi.org/10.3923/jas.2020.173.181
- [24] Purnomo, E.P., Anand, P.B., Choi, J.W. (2018). The complexity and consequences of the policy implementation dealing with sustainable ideas. J. Sustain. For., 37(3): 270-285. https://doi.org/10.1080/10549811.2017.1406373.
- [25] Tranggono, A., Wirman, C., Sulistiowati, A., Avianto, T. (2019). Strategy paper: Indonesia sustainable development. Jakarta: Ministry of National Development Planning. https://panganbijak.org/wp-content/uploads/2020/10/strategy-paper-isfs-eng-0510-

- min.pdf.
- [26] Rasyid, T.H., Kusumawaty, Y., Hadi, S. (2020). The utilization of sago waste: prospect and challenges. In IOP Conference Series: Earth and Environmental Science 415, pp. 1-8. https://doi.org/10.1088/1755-1315/415/1/012023
- [27] Sabri, R.M., Jahim, J., Yunus, N. (2018). Treatment of sago mill effluent for methane production using anaerobic sequencing batch reactor (ASBR). J. Eng. Sci. Res., 2(1): 18-22. https://doi.org/10.26666/rmp.jesr.2018.1.4
- [28] Trisia, M.A., Tachikawa, M., Ehara, H. (2021). The role of the sago supply chain for rural development in Indonesia: A review and perspective. Rev. Agric. Sci., 9(1): 143-156. https://doi.org/https://doi.org/10.7831/ras.9.0 143
- [29] Sulaiman, A.I., Chusmeru, C., Kuncoro, B. (2019). The educational tourism (edutourism) development through community empowerment based on local wisdom and food security. Int. Educ. Res., 2(3). https://doi.org/10.30560/ier.v2n3p1
- [30] Putera, A., Sukotjo, E., Dharmawati, T., Mokodompit, E.A. (2020). Model of community empowerment based on local wisdom through corporate social responsibility in North Konawe District. Asia Pacific J. Manag. Educ., 3(2): 1-10. https://doi.org/10.32535/apjme.v3i2.842
- [31] Munir, M., Sagena, B., Prajawati, M. (2021). Soyo practice: Revitalization of local wisdom values in the community empowerment of the modern management era. Eur. J. Bus. Manag. Res., 6(1): 206-211. https://doi.org/10.24018/ejbmr.2021.6.1.728
- [32] Rahmawati, D.E., Astuti, D.W. (2019). NGO and community empowerment based on local wisdom (a case study of Spedagi NGO in Temanggung, Central Java, 2018-2019. J. Gov. Public Policy, 6(3): 2018-2019. https://doi.org/10.18196/jgpp.63114
- [33] Sundari, S., NovskyAsmoro, H., Azhari, Y. (2021). Conflict management of halal tourism development based on local wisdom from regional economic

- empowerment. Turkish J. Comput., 12(14): 2463-2471. https://turcomat.org/index.php/turkbilmat/article/download/10675/8006.
- [34] Mandulangi, J. (2021). Maximizing of local community empowerment based on social capital coordination action in tourism development. Proc. Int. Conf. Appl. Sci. Technol. Soc. Sci. (ICAST-SS 2020), 544: 1-5. https://doi.org/10.2991/assehr.k.210424.001.
- [35] Meo, H.L.T., Panda, R.D. (2020). Community empowerment for environmentally sustainable tourism based on local perspectives (case study of Anakoli Village, Nagekeo). IOP Conf. Ser. Earth Environ. Sci., 448(1). https://doi.org/10.1088/1755-1315/448/1/012081
- [36] Aspers, P., Corte, U. (2019). What is qualitative in qualitative research. Qual. Sosiology, 42(2): 139-160. https://doi.org/10.1007/s11133-019-9413-7
- [37] Gibbs, G.R. (2014). Computer assisted qualitative data analysis: NVivo, MAXQDA, Atlasti, QDAMiner, HyperResearch. In: IfM's 21st Annual Research Methodology Workshop. http://eprints.hud.ac.uk/.
- [38] Sotiriadou, P., Brouwers, J., Le, T. (2014). Choosing a qualitative data analysis tool: A comparison of NVivo and Leximancer. Ann. Leis. Res., 17(2): 218-234. https://doi.org/10.1080/11745398.2014.902292
- [39] Lencucha, R., Pal, N.E., Appau, A., Thow, A.M., Drope, J. (2020). Government policy and agricultural production: A scoping review to inform research and policy on healthy agricultural commodities. Global. Health, 16(1): 1-15. https://doi.org/10.1186/s12992-020-0542-2
- [40] Knorr, D., Augustin, M.A., Tiwari, B. (2020). Advancing the role of food processing for improved integration in sustainable food chains. Front. Nutr., 7(1): 1-8. https://doi.org/10.3389/fnut.2020.00034
- [41] Syamsuadi, A., Hartati, S., Trisnawati, L., Arisandi, D. (2020). Policy strategy for development of sago based on small and medium industry centers (SMI). J. Inov. Ilmu Sos. dan Polit., 2(2): 114. https://doi.org/10.33474/jisop.v2i2.6666