



## Development Concept Plan of Minapolitan Regions in Gianyar Bali Indonesia



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### Article history:

Received: 9 July 2017

Accepted: 18 September 2017

Published: 30 November 2017

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### Keywords:

marketing;  
minapolitan;  
processing;  
production;  
regions;

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### Abstract

The present study aims to map out the central of production, processing, marketing, and service centers of Minapolitan regions in Gianyar regency. The Research sites were determined by purposive sampling in Tampaksiring and Blahbatuh sub-districts, with a basic consideration i.e. both sub-districts were planned as centers for the regional development of fisheries in Gianyar regency. To map the minapolitan regions, the data were analyzed by using GIS (Geographic Information System). The present study discovers some centers of production, processing, marketing, and service centers for Minapolitan regions namely Pering village and some coastal villages in Blahbatuh which were also supported by several coastal villages in Gianyar and Sukawati sub-district and Sanding village in Tampaksiring sub-district. The findings of this study suggest that the regional development may help to the following purposes: (1) improving the well-being, quality of life, ability, and capacity of the economic and social rural communities (2) increasing the bonding communities around the region who have the responsibility to preserve and secure the natural resources; (3) improving quality, productivity, and security of the region; (4) creating jobs, increasing the numbers of employment and income of the country as well as public revenue; (5) encouraging and accelerating the regional development in order to achieve progress and the region's autonomy.

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## 1. Introduction

Relationship and supports to each other functionally in accelerating the regional economic growth and enhancing societal welfare. Regional center for aquaculture (minapolitan) is a fishing town which grows and develops as a mini business system in which its efforts are running and able to provide, to support, to pull, and to heave fishery development in the surrounding of the regions.

The center of regional fisheries consists of cities for fisheries and nearby the central production villages with restrictions that are not defined by the administrative boundaries of government, rather are determined by taking existing economic scale of the region into account. Spatial management is defined as a regulation, a control, a supervision, an evaluation, an enforcement, and a review of the use of central of regional fisheries' space. Intensively high-quality management fisheries are important to administer to attain the quality production (Allahyari, 2010).

The developmental program of regional fisheries center constitutes an economic development which is based on the fisheries carried out by combining the whole and complete potencies that exist, competitive, populist, sustainable and decentralized, community-driven and facilitated by the government. Indeed, Regional fisheries which are located in the rural areas should be developed as an integral development of the region based on economic linkages between rural-urban (urban-rural linkages) and dynamic reciprocal relationship thoroughly. The development program is conducted as a continual effort to improve the quality of life of the community (Permatasari *et al.*, 2010; Adams, & Tiesdell, 2010).

Gianyar regency is one of the nine districts in Bali Province covering an area of 36.800 hectares or 6.53% of the overall areas in Bali (Bali Provincial Government, 2012). Until the end of 2010, it had 14.790 hectares of paddy fields which was sustained by its hydrological region with the diverse sources of irrigation. Considering the aspects of land resources availability, hydrology, and climatology, Gianyar had a great potency for the development of freshwater aquaculture. The potency of freshwater aquaculture has not been utilized optimally because there were still many obstacles and problems to impede it. At the end of 2010, fishponds reached 171 hectares (Department of Livestock, Fisheries, and Marine of Gianyar regency, 2012; Gianyar in Numbers, 2011).

National policy of development of marine and fisheries depends on four pillars, namely pro-poor through socio-economic empowerment of marine and fisheries businesses; pro-job through optimization of untapped potential of fisheries to reduce the national unemployment rate; pro-growth to actualize growth in marine and fisheries sector as pillars of the resilience of the subsistence economy into modern business operators through the support of infrastructure development, industrialization, and modernization; and pro-sustainability through the recovery and preservation of marine, coastal, and small islands environment, as well as mitigation and adaptation to the climate change. One strategy that was done to implement the four directions of the aforementioned policy is by developing minapolitan. Government support in this development is necessary needed (Fadillah *et al.*, 2012; Sukarmi, 2017).

Regional development planning for aquaculture (minapolitan) in Gianyar is an attempt to describe marine and fisheries development policy in order to use the land or aquaculture potentially. Two developing centers of a fishing town in Gianyar are Blahbatuh and Tampaksiring. An area can be regarded as minapolitan if the fishery sectors in the region sustain the economy of the region. Thus, the entire sub-sectors related to fisheries and marine should be optimized, starting from capture fisheries, aquaculture, tourism, to culinary. In addition to supporting infrastructure development, a change of local culture is also needed.

To date, the utilization of fishery resources in Blahbatuh and Tampak Siring has not been optimal yet. In addition, these resources involved a complicated system and easily damaged, as well as involved a variety of interests. Biophysical degradation of fishery resources phenomena, especially coastal and oceans, has been growing and expanding. This has been a challenge in actualizing sustainable development in minapolitan. Various fishery, coastal and marine-related resources were damaged irrationally. The destruction also occurred in natural resources whose benefits have not been assessed yet, thus their values to be future options would decrease in line with the rapid progress of science and technology.

In order to meet the new era of minapolitan regional development along with greater support for policy and fisheries infrastructure, precondition to make a various minapolitan is needed since it has the capacity to be a partner of the new economic growth. Even more, in the context of decentralization, local governments have the opportunity to make it as a driven-force on the development by encouraging the various sectors involved such as maritime industry and ecotourism. The development should be carefully planned to sustained all aspects of development (Zhang & Wang, 2010). Moreover, Aswanah *et al.*, (2013) suggest that It is needed more coordination among stakeholders and public to establish the participation of all sectors.

Optimal and sustainable utilization of fishery resources requires human resources which support a sustainable and good management. To reach such a support, training of cadres from local people about management of an integrated minapolitan is needed. Minapolitan region is managed in an integrated manner or, in other words, apply modern management based on science and technology. The technology can certainly be used to generate more sustainable management in order all the fishery resources can be developed continually (Jepson, 2004).

A study conducted by Aswanah *et al.*, (2013) suggest that the implementation of fishery minapolitan programs is caused by multiple factors. Therefore, in order to optimize the minapolitan region's contribution to the improvement of the regional economy, it is necessary to investigate the development of the region itself. This study is expected to: (a) improve the mechanism of fishery resources management, (b) protect, conserve, utilize, and rehabilitate the fishery resources and its ecological system in a sustainable manner, for the current generation without sacrificing the needs of future generations, and (c) improve socio-economic conditions and local culture.

The development of minapolitan regions is done by considering potential region and foundations of the society, so it would not result in a displacement of previous social institutions that have been harmonious and balanced with the carrying capacity of its natural resources. The development of minapolitan involved tactical and strategic steps that are expected to be an engine of economic development in Gianyar.

## 2. Materials and Methods

The regional development plan of aquaculture (minapolitan) in Gianyar applied a comprehensive and integrated approach and was based on potential and existing problems both within the planning area regional constellation. The essence of minapolitan development plan included utilization of space by integrating activities between central and regional governments, inter-governmental regional, inter-sector inter-business-community, as well as accommodate a variety of science and principles of management, and regional activities development and coordinative regional spatial arrangement. To map out the data of minapolitan regions, GIS (Geographic Information System) was employed.

## 3. Results and Discussions

### 3.1 Principles of Minapolitan Regional Development

The principle of minapolitan regional development in Gianyar adopts the concept of *Tri Hita Karana* on its spatial aspects, so-called *Tri Angga* or *Tri Mandala* concept. Three elements of space are blended into a single amicable, balanced, and harmonious space. The implementation of *Tri Angga* or *Tri Mandala* concept is highly visible through their zones namely main (*utama*) zone, i.e., production centers; middle (*madya*) zone i.e. supporting areas of production, and *nista* zone which refers to the center of processing and marketing of fisheries. Furthermore, principles of natural resource management, human and human-made resources, and development management are also the other bases to be taken into account.

Regional development of aquaculture (minapolitan) in Gianyar is developed which is based on the following principles: (1) **integration**: it is developed by integrating policy and planning of various sectors of government, horizontally and vertically, between the central government and local governments, as well as integrating regional development of aquaculture in the plan of arrangement of regional space, (2) **sustainability**: it is applied to make the use of resources in the developed area does not exceed the carrying capacity and environmental capacity; (3) **consistency**: the consistency and various agencies and levels of government, from the planning, execution, control, and supervision to implement regional development plans along with indication of the program that has been set up; (4) **legal certainty**; it is necessary to ensure legal certainty for implementing the regional development plan clearly and to be understood and implemented by all stakeholders; (5) **partnership**; a cooperation agreement between the interested parties related to the regional development; (6) **role of society**; it is aimed at ensuring (a) local communities have a role in all steps namely planning, implementation, supervision and controlling up; (b) local communities have disclosure of information regarding government's policy and have sufficient access to participate in the implementation of regional development; (c) local communities' voices are well represented in the decision-making process; (D) local communities utilize those resources equitably; (7) **openness**: the purpose of the disclosure for the public is to ensure whether they obtain information which is truthful, and not discriminatory the development

and management of the region starts from planning, utilization, control, until the stage of supervision regarding the protection of human rights of personal, group, and state secrets; and (8) **decentralization**: devolution of government power from central government to the autonomous regional government to regulate and administer governmental affairs in the field of natural resource management in the region.

### *3.2 Policies and Strategies of Minapolitan Regional Development*

To achieve the goal of developing mina-politan in Gianyar, policies and developmental strategies have been formulated which would be used as the bases of formulating the direction of agro-ecosystem development in minapolitan regions as follows: empowering the mina-business community so that they would be able to explore potential or opportunities of the economy in rural areas, those strategies include: developing the entrepreneurial spirit on the mina-business actors; improving access to the mina-business actors to capital, means of production, access to the markets, access to the information, and other supporting facilities; developing partnerships with private sectors and the government, the establishment of networks to foster good interaction, directly and indirectly, between various stakeholders and governmental agencies, so a greater and stronger unity to develop the potential and eliminate shortcomings and weaknesses would be established, these efforts supported the results from [Arnawa & Gede Mekse Korri Arisena, 2013](#), that the Gianyar regency had a great potential in the field of fisheries.

The increase of local leading commodities of mina-business mutually supports and reinforces small industries, product processes, marketing services, and mina-tourism services result in the increase of benefits of natural resources efficiently and economically for a welfare of the society. Those strategies are set up to establish and develop the local competitive commodities which are supported by the previous concepts ([Monke & Pearson 1989](#); [Djoko, 2012](#)). Through the support of assessment and application of appropriate technology, mina-politan develops linkages between activities or locations or access or strategic sectors inside and outside the region as well as develops an integrated and mutually beneficial agro-ecosystem for mina-politan regions.

The institutional development of minabusiness actors as a center of minabusiness learning and developing can be set up by strengthening groups of farmers, the ones who process, and marketers; establishing forums and networks inter-groups; providing facilities for field learning; fostering organizational, technical, and business management skills. The development of financial institutions includes microfinance institutions. The strategies are developed to make their partnership in the development of microfinance institutions and strengthening the existing microfinance institutions. Institutional development of fisheries extension. The strategies constitute revitalizing of fisheries extension institution, developing human resources structure and fisheries extension, and increasing the capacity of fisheries extension workers.

The development of minabusiness growth centers and fishing industry locally. The strategies are developing centers of production, processing, and marketing based on the suitability of potential, accessibility, and linkages among the developed regions; increasing trade or marketing including development of terminal or subterminal minabusiness and auction centers for fishery products; developing linkages among centers of minabusiness to tourism; and increasing support and regional services with minabusiness centers.

Increasing construction and maintenance of public facilities and infrastructures which were strategic, developing supporting facilities and infrastructure in synergy with the development of other sectors in an integrated manner, optimizing the utilization of facilities and supporting infrastructure there. Improving the quality of existing facilities and infrastructure included building supporting facilities and infrastructure as needed; developing education and training in the field of fisheries for the younger generation. The strategies are providing training infrastructures adequately, developing materials or modules in the field of fisheries, mobilizing collaboration and partnership with institutions of education and training that exist, developing incentives education and training for young people, building incubator businesses, carrying out training on a regular basis both locally and outside the region, and developing test or assessment of appropriate technologies which were suitable for the local conditions. The strategies are developing representative demonstration plots, conducting assessment and application of appropriate technologies which are suitable for local conditions, building cooperation and partnerships with universities and centers or research, assessment, and application of technical institutions.

### 3.3 Development Concept Plan of Minapolitan Regions

#### *Concept of System Plan for Service Centre in Minapolitan Regions*

The plan of minapolitan structure consists of some centers of activities which are based on the development of minabusiness activities, connected by service centers in Gianyar regency as well as network and infrastructure systems especially transportation, energy, water, and communication. The spatial structure plan of minapolitan regions is formed by the urban system which is congenial with the rural system which includes a system plan for activity centers and service centers, an infrastructure and network system plan which is used to provide services for the region and the external linkages plan of the region.

In accordance with Medium Term Development Plan (*RPJM/Rencana Pembangunan Jangka Menengah*) bylaw plan of Gianyar regency, hierarchically, the highest service center in Gianyar regency was located in Gianyar city and served as a National Activity Centers (*PKN* or *Pusat Kegiatan Nasional*). *PKN* is an urban area that functions to serve international, national or some provinces scale activities. In order to develop a minapolitan region, Gianyar city plays an important role to provide administrative services to the district administration, banking, health, education, security, services, and trade.

Minapolitan region services are supported by Regional Service Center (*PPK* or *Pusat Pelayanan Kawasan*) in Blahbatuh and Tampaksiring sub-district and some Local Service Centres (*PPL* or *Pusat Pelayanan Lokal*). The functions of Regional Service Center are providing administrative services in the level of sub-district government, banking, healthcare, education, security, service, and trade scale districts. Meanwhile, *PPL* provides village scale services such as administrative services of the village administration, education, health, services, and retail trade. Local Service Centre in Minapolitan includes *PPL* Pering which is designed for *Pering, Medahan, Bedulu, Blahbatuh, Saba, Keramas, Belege*, and Bona village. On the other hand, *PPL* is designed for *Sanding, Manukaya, Pejeng, Pejeng Kaja, Pejeng Kawan, Pejeng Kangin, and Tampaksiring* village.

#### *Concept Plan of Regional Service Center*

Regional service centers are supporting components of minapolitan development as one element in the chain of neighborhood businesses. Minapolitan service centers function to provide services or trading inputs such as food, pharmaceuticals, and production equipment; services or supporting facilities for processing trade, clinic service or fish health, and so forth. The plan of minapolitan service centers includes Gianyar city, the capital of Blahbatuh and Tampaksiring sub-district, as well as villages that serve as local service centers.

#### *Concept Plan of Minapolitan Development Center (Mina Center)*

The minapolitan regional development needs Minapolitan Development Center (*PPM* or *Pusat Pengembangan Minapolitan*) to carry out activities in the area of Mina Center concept. The Mina Center in Gianyar regency is planned in Pering village, Blahbatuh sub-district, and Sanding Village in Tampaksiring sub-district. The *PPM* or Minapolitan Development Center or Mina Center serves as a center of information area, a center of education, a training hall, a counseling and human resource development, a regional management center (an administrative office of an area management), a healthcare of fish (a laboratory or a fish clinic), a service center or a minabusiness consultation, an exhibition center or events and promotions center, and a fish market for consumption or non-consumption purposes.

#### *Concept Plan of Transportation System*

The infrastructure of the major transport systems in minapolitan regions is a road network. There are adequate numbers of road networks that have provided infrastructures to connect service centers in the area so that the regional development becomes a priority on the improvement of the existing roads. Network systems of the main road infrastructure in minapolitan regions are a minapolitan region in Pering village which consists of roads

connecting from Pering to Blahbatuh and Gianyar city and a minapolitan region in Sanding village which comprises roads connecting from Tampaksiring to Gianyar and Denpasar.

### *Concept of Economic Activities Linkage in Developing the Region*

The minapolitan regional development is carried out based on some principles in accordance with the direction of national economic policy, namely (1) developing a democratic economic system based on the fairly market mechanism, (2) developing a globally-oriented economy in accordance with the advancement of technology through building competitive advantage based on the competence of superior product in every region (3) empowering small and medium enterprises and cooperatives to be able to work together effectively, efficiently and competitively; (4) developing a food security system based on the diversity of aquaculture resources and local culture; (5) accelerating local economic development by empowering the participants in accordance with the spirit of regional autonomy; (6) accelerating rural development in order to empower local communities, especially fish farmers, with the certainty and clarity of rights and obligations of all parties; (7) maximizing the role of government as a facilitator and supervisor of all activities of regional development.

In the relation with the aforementioned policies, the development of minapolitan in Gianyar is designed in the form of a chain of businesses which has strong economic linkages, consisting of production centers, centers of fish processing, and marketing centers for fishery products. Centers of the chain are supported by service centers and regional service centers. Conceptually, the chain business plan of minapolitan regional development in Gianyar district is shown in Figure 2. Tabel 1 describes a production center and support for a minapolitan region in Blahbatuh sub-district, as well as production centers and supports for a minapolitan region in Tampaksiring sub-district. Furthermore, the centers of processing, marketing, and service area are presented as follows:

Table 1  
Centrals and supporters of production for minapolitan regions in Blahbatuh and Tampaksiring sub-district, Gianyar Regency

No.	Name of Sub-District/Village	Information
Blahbatuh Sub-District		
1	Pering Village	center
2	Medahan Village	Supporter
3	Keramas Village	Supporter
4	Bedulu Village	Supporter
5	Blahbatuh Village	Supporter
6	Belege Village	Supporter
7	Bona Village	Supporter
Tampaksiring Sub-District		
1	Sanding Village	center
2	Pejeng Village	Supporter
3	Pejeng Kaja Village	Supporter
4	Pejeng Kawan Village	Supporter
5	Pejeng Kangin Village	Supporter
6	Tampaksiring Village	Supporter
7	Manukaya Village	Supporter

Furthermore, the centers of processing, marketing, and service in the region are as follows: the centers of processing of fish were Pering village and coastal villages in Blahbatuh, supported by some coastal villages in Gianyar and Sukawati sub-district and Sanding village in Tampaksiring sub-district; marketing centers are Gianyar city, the city of Blahbatuh sub-district, and the city of Tampaksiring sub-district; service centers or regional services are Pering village, Blahbatuh sub-district, and Sanding village in Tampaksiring sub-district, as well as Gianyar city.

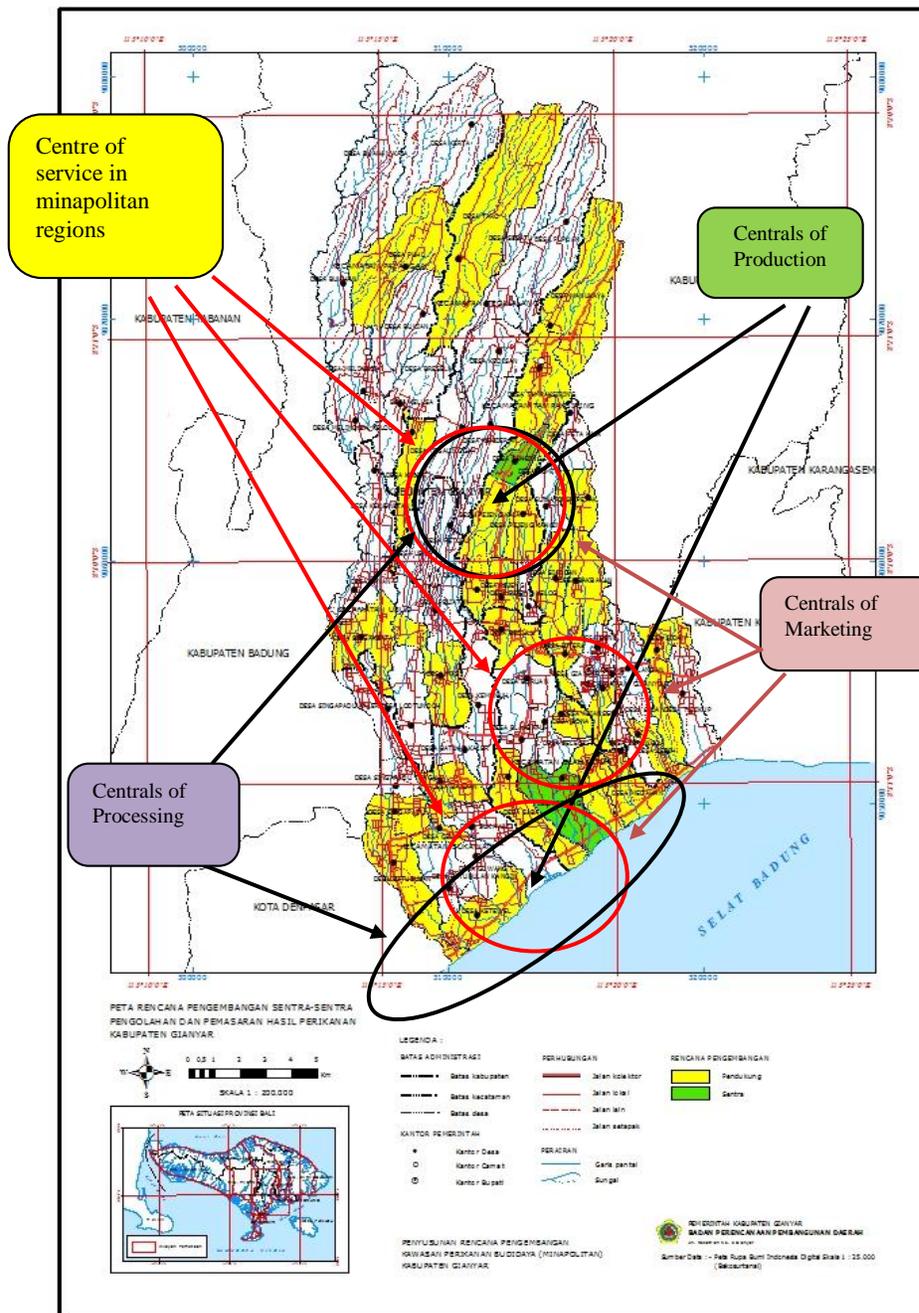


Figure 1. Concept of business chain plan in minapolitan regions in the regency

In addition to the aforementioned goals, in terms of regional interest, the regional development can be directed to achieve the following purposes: (1) improving the well-being, quality of life, ability, and capacity of the economic and social rural communities (2) increasing the bonding communities around the region who have the responsibility to preserve and secure the natural resources; (3) improving quality, productivity, and security of the region; (4) creating jobs, increasing numbers of employment and income of the country as well as public revenue; (5) encouraging and accelerating the regional development in order to achieve progress and the region's autonomy.

#### 4. Conclusion

Based on the research findings, some centers of production, processing, marketing, and service of minapolitan regions are explored, namely Pering village and several coastal villages in Blahbatuh sub-district, supported by some coastal villages in Gianyar and Sukawati sub-district and Sanding village in Tampaksiring sub-district. The regional development should be developed in order to improve the quality of community life and make the community more productive and increase the employment and income. The regional development is highly essential to be taken into account to face challenging for the community development.

##### *Conflict of interest statement and funding sources*

The author(s) declared that (s)he/they have no competing interest. The study was financed by DP2M Dikti.

##### *Statement of authorship*

The author(s) have a responsibility for the conception and design of the study. The author(s) have approved the final article.

##### *Acknowledgments*

The author would like to express gratitude to the following parties: honorable Director of DP2M Dikti, who has funded the MP3EI (Masterplan Percepatan dan Perluasan Pembangunan Ekonomi Indonesia) research grant, Rector and Head of LPPM Mahasaraswati University of Denpasar for the opportunities, trust, support, and cooperation, as well as government of Gianyar regency and society leaders for their cooperation and support for this MP3EI research program.

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