

THE ROLE OF EXTENSION AND LOCAL CHAMPIONS IN EMPOWERING COASTAL COMMUNITIES FOR ACHIEVING SDGS

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Abstract

This study aims to analyse the role of local champions and extension in empowering coastal communities for achieving SDGs. This research method uses the Participatory Rural Communication Appraisal (PRCA) technique by placing researchers living with the community during the follow-up study period to empower coastal communities. The research location is in Tambakasari and Sedari Village, Karawang Regency, West Java. The results show that local figures who act as local champions contribute significantly to extension coastal community for empowering the development of coastal community resources, especially in building internal and external community capital in the seaweed business. The sustainability of the seaweed business is conducive, apart from strengthening social capital, as well as strengthening human capital, technological capital, financial capital, and physical capital. Participatory extension for the empowerment of coastal communities requires strengthening community leaders to become local champions in the management of local community capital to SDGs achievement. The participatory extension paradigm is effective in empowering the community if it is successful in developing local champions who are able to manage business networks and community capital in empowering coastal communities.

Keywords: community empowerment, extension role, local champion, SDGs

Contribution/Originality: This study contributes to the important role of local champions in empowering coastal communities through participatory extension.

1. INTRODUCTION

Coastal communities are often identified with problems of poverty and low labor income. This is related to management problems and weak human resources in the ability to utilize marine resources, which are the backbone of their lives (Sriyono & Dewi, 2021). In Indonesia, the number of fishermen in 2008 amounted to 16.2 million, around 14.6 million of whom are below the poverty line. In addition to weak human capital, another thing that causes this condition is the weakness of social capital related to the relationship between skipper fishermen and working fishermen. Weak competition between traditional communities and strong investors in the utilization of coastal natural resources, especially seaweed, affects the low productivity of traditional communities.

Indonesia has at least 550 varieties of seaweed with high economic value, with a tropical climate and 110,000 km long coastline (Minapoli, 2022). Indonesia is the world's largest producer of red seaweeds, used to produce carrageenan and agar. It is also a major producer of

Gracilaria, used to produce agar (Rimmer et al., 2021). However, the potential of resources at the coastal community level has not been appropriately managed.

Biological resources in Indonesian waters are very abundant, one of which is seaweed, which accounts for 8.6% of the total marine biota or 1.2 million hectares. This is the largest area of seaweed in the world (Lestari et al., 2020). In 2027, the largest market projection for seaweed demand from Asia Pacific countries will reach USD23.04 billion (KKP, 2021).

So far, various parties' strengthening of social capital tends to be carried out with a community development approach that relies on the community level. Although the approach is participatory, it is not effective in increasing human capital and social capital, which relies on the strength of a particular commodity agribusiness network. This problem is related to the weakness of the facilitator in mastering the subject matter related to the development of commodities and their business networks. In addition, farmers are less able to develop their individuality because they do not get the strengthening of human capital in the seaweed commodity business. Based on these weaknesses, coastal community empowerment activities related to seaweed development in the last three years have shown prospective developments after the implementation of participatory extension (Sumardjo et al., 2021).

The problem raised in this research is how to make effective efforts to empower coastal communities, especially those related to seaweed commodities, to realize the SDGs. Based on the facts of community empowerment for seaweed farmers that occurred during the last three years, there has been a change, namely the function of extension in strengthening the role of community leaders as local champions in achieving the SDGs.

2. THEORETICAL FRAMEWORK

There are many community development approaches in Indonesia, for example, the National Community Empowerment Program (PNPM) (Utomo & Prihatin, 2019), the District Development Program (PPK), and village development activities (Mandak, 2017), Inpres for Disadvantaged Villages (Warella et al., 2006), and other programs. The program based on community development conceptually uses a participatory approach through the placement of assistants in the community. In practice, mostly external parties dominate so that they are more responsive to the village's interests and less responsive to problems related to improving the quality of life and community welfare (Hentihu et al., 2020; Sumardjo et al., 2019; Sumardjo, Firmansyah, & Manikharda, 2020; Sumardjo, Firmansyah, & Dharmawan, 2020). Tjondronegoro, in 1982, revealed the concept of sodality as an alternative to answering the problem of dominance in community development, but it has not been widely practiced in development programs (Sumardjo et al., 2021).

This study reveals the application of community development through a community empowerment approach consistently. Its mean the community role as the main actors. The actors who implement this are community empowerment field CDOs who act as extension workers and consistently apply the principles and philosophies of development extension. Various formulations of the philosophy of agricultural extension, in this study, community

empowerment applies the philosophy of "to help people to help themselves to improve their level of living through educational minds". This is in line with what (Kelsey & Hearne, 1949) which state that Individuals play an important role in increasing progress, both for society and for the wider life. Referring to (Boone, 1989) in implementing the philosophy of extension, three essential aspects of community empowerment are applied in this research location, namely: values, values, and principles, as their working philosophy. This means that the CDO who acts as an extension agent understands the main values in the local social system. CDOs in implementing extension understand well what is considered right or wrong for people's lives. In extension-based community empowerment, CDO prioritizes the conditions and needs of the community as a starting point in implementing the program according to the extension principle. The principle in question is learning by doing, applying innovations to empower farmers, and seaweed management in the community empowerment process. Another extension principle is "seeing is believing through pilot demonstration plots and field trips (benchmarking) and integrated information network management in seaweed agribusiness". These principles are the implementation of the extension philosophy.

In empowering coastal communities, it is necessary to strengthen the role of local champions in building internal and external social capital in the form of bonding, bridging, and linking. In this case, local champions play a role in dynamizing community groups in the community so that these groups act as forum media in community empowerment communication networks. The role of local champions in empowering rural communities is an important issue to study, considering the lack of public education and limited social facilities in rural areas (Xu et al., 2017). The role of local champions is crucial because they must be able to set common goals and mobilize the community to be able to take collective action to achieve this goal (Haven-Tang & Jones, 2012). Local champions must maintain the relationship between leaders and followers, and at least local champions must act as mediators, facilitators, and mobilizers (Haven-Tang & Jones, 2012; Xu et al., 2017). In the four roles of community involvement as described by (Okazaki, 2008), local leaders have an essential position; in almost all community participation roles, local leaders always have the role in it. The function of a local champion is "Local leader, who synergizes with the farming community, bridges relationships, especially with external business partners, strengthens the motivation of the community to seize business opportunities, strengthens the bargaining position of the farming community" (Sumardjo, Firmansyah, & Dharmawan, 2022a).

3. METHODS

This research method uses the Participatory Rural Communication Appraisal (PRCA) technique by placing researchers living with the community during the follow-up study period to empower coastal communities. Data collection uses cybernetic techniques and principles. During the study, the researcher stayed at the research location to conduct observations and in-depth interviews with 15 informant figures and conduct focus group discussions (FGD) involving key persons who understand the ongoing community empowerment process. Empowerment applies a participatory extension approach. The informants of this research came from the internal community and related external parties. FGDs were conducted by

involving figures who were considered to understand a lot of information related to community empowerment. In this way, extensive and in-depth information is revealed, including decision making/planning, implementation, monitoring and evaluation. The empowerment program is sponsored by the Corporate Social Responsibility Division of PT Pertamina EP, which operates around the research site and in the implementation of empowerment in collaboration with CARE IPB University.

PRCA has proven to be effective in strengthening communication between the community and its various stakeholders. With PRCA, it is possible to identify potential resources, ideal conditions that the community wants to realize, and real needs and felt needs to realize these conditions. PRCA can also reveal the ideas needed to realize the ideal of community empowerment. In addition, with PRCA, coastal communities can also decide to choose the right party to be a partner in realizing ideals. This kind of approach refers to the experience of (Sumardjo, Firmansyah, Dharmawan, et al., 2022; Sumardjo, Firmansyah, & Dharmawan, 2020, 2022b), known as the application of PRCA in the strengthening of creative social energy (CSE).

The PRCA approach in CSE shows the advantages of obtaining comprehension, actual, and objektif related to community empowerment. This PRCA integrated all stages of process, planning in ideals condition as goal-oriented community empowerment and the logical framework approach (Anyaeibunam et al., 2004; Sumardjo, Firmansyah, Dharmawan, et al., 2022). In detail, the implementation of the empowerment method is presented in Figure 1.

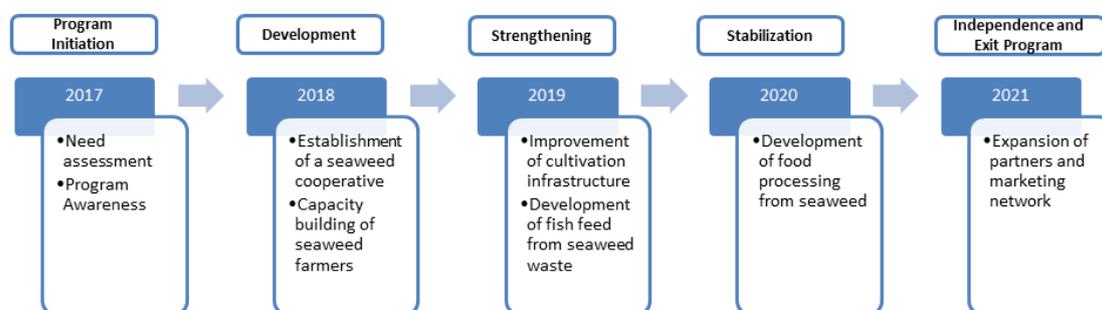


Figure 1: Logical framework approach of Community Empowerment Program base on Seaweed

The villages of Tambakasari and Sedari Village, Karawang Regency, West Java, were chosen to consider that the community is the primary producer of seaweed products. This location is a ring 1 area that has the potential to be directly affected by the operations of PT Pertamina EP. Community Development Officer Field (CDO) plays a role in community empowerment from the Company's CSR. CDO This field acts as a private extension agent operating at the company's expense, applying a combination of PRCA and CSE methods.

4. RESULT AND DISCUSSION

The results show that local figures who act as local champions contribute significantly to extension coastal community for empowering the development of coastal community resources, especially in building internal and external community capital in the seaweed business. The sustainability of the seaweed business is conducive, apart from strengthening social capital, as well as strengthening human capital, technological capital, financial capital, and physical capital.

1. Role of Local Champion

Local champions play a real and effective role in empowering seaweed farmers by synergizing the roles of local leaders and communities. This synergy occurs by strengthening farmer groups' role as a communication media forum in community empowerment. Local champions bridge the local community, especially with external parties, namely business partners of farmer's business product commodities, by strengthening the motivation of farmers to seize business opportunities and bargaining positions in the marketing network of farm products. This is revealed from the opinion of the following community empowerment facilitators:

"The local champion in the seaweed-based empowerment program is Mr. US (55th). This figure has succeeded in implementing appropriate technological innovations in a political system, which also acts as a local champion. Mr. US, as a local champion, plays a role as a local facilitator, educator/mediator, as well as a mobilizer, among others: (1) Inviting the community to apply seaweed farming innovations with polyculture; (2) Initiating and motivating groups of seaweed farmers to cooperate with external parties/stakeholders, in this case, seaweed processing companies and local governments and other stakeholders; (3) Initiating the formation of seaweed cooperatives; (4) Educate the public about good seaweed cultivation by implementing polyculture innovations. (5) Facilitating training activities for cooperative members in collaboration with companies and local governments; (6) Conduct marketing promotions for seaweed processing products online and offline. (7) Motivating the community to be involved in polyculture seaweed cultivation that is environmentally friendly and does not damage the ecosystem". (DY, 29 years old, private empowerment facilitator/extension).

Community empowerment facilitators have played a real role as private extension workers. In the constellation of extension concepts in Indonesia, the term private extension is an extension worker who operates at non-government costs but by private companies.

2. Building social capital in the seaweed business

Empowerment of coastal communities has been carried out conventionally since 2006 through a program called the National Community Empowerment Program (PNPM). However, this economic empowerment program tends to use a top-down approach, although conceptually, it uses a participatory approach in community development by placing trained facilitators to assist the community. In practice, it turns out that the facilitators are trapped in a target

orientation so that they do not place coastal communities as subjects of empowerment. As a result, the strengthening of human capital is less effective in developing the individuality of farmers. In the community development process, which prioritizes target orientation, the facilitator unwittingly overrides participatory principles.

In 2015, after PNPM, the economic empowerment of coastal communities was carried out by consistently applying the philosophy and principles of extension. Empowering facilitators are equipped with competencies as professional extension workers who apply community empowerment with the philosophy and principles of extension. This is as stated by UP (55 years old, community leader):

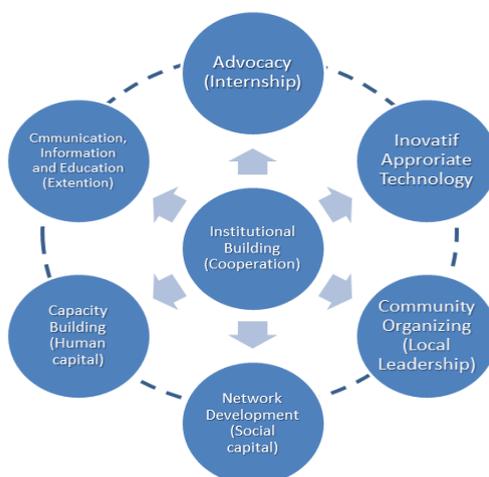
"Initially, the adoption of innovation was slow, but after almost 10 years, it only quickly expanded. Through seaweed polyculture cultivation, capacity building is carried out in the community empowerment program through training. Another support provided by PEP Asset 3 Tambun Field is by providing extension and group assistance in terms of business development and market development."

"In addition to the cultivation aspect, assistance is directed at processing seaweed into ready-to-eat products and managing seaweed waste into fish feed. In addition, network development is also facilitated by field assistants, among others, through the development of farmer networks to local offices, companies (Pertamina EP), and universities as a source of innovation to improve the quality of seaweed". (DY, 29 years old, a facilitator who acts as an extension worker).

The role of extension by empowering facilitators is to develop communication, information, and education networks developed in a participatory manner to existing farmer groups through weekly, monthly, and quarterly monitoring. In addition, the facilitator applies an advocacy function to these groups. The result strengthened the group's position until a seaweed farmer cooperative was formed based on mutual agreement and collective action. The ideal condition that the community wants to realize to strengthen the bargaining position of seaweed products from farming is the functioning of cooperatives engaged in seaweed agribusiness networks.

The formed cooperative has functioned and is a legal entity under number 55/BH/XIII.10/XII/2015. The success of the community development program is due to the effective interrelation of five main components: capacity building, communication, information and education (IEC), advocacy, community organizing, and network development. More details at Figure 2.

Figure 2: Component of Community Empowerment



"Mina Agar Makmur Cooperative is a cooperative that is engaged in the seaweed sector. The cooperative, which was officially formed in 2015, has now transformed into an institution that oversees the seaweed business of pond farmers in Tambaksari Village and has become a learning platform for pond farmers. The membership of the cooperative assisted by PT Pertamina EP is 72 people, and cooperates with 400 seaweed farmers spread over three surrounding districts." (Mr. US, 55 years old, local champion/cooperation leader)

The formation and functioning of cooperatives is an ideal condition to be realized together as the ideal concept in Creative Social Energy (Sumardjo, Firmansyah, & Dharmawan, 2020). The development of cooperative business units is a way to realize the ideal conditions that are the community's dreams, as illustrated in the following statements by community leaders. The establishment of partners between villages in one cooperative into two villages in one cooperative illustrates the development of internal solidity, which is a manifestation of the strengthening of internal social capital, namely bonding. Meanwhile, the growing number of members, from 72 members to 400 members spread across three districts, is an illustration of the strengthening of external social capital, which is a form of bridging and linking (Putnam, 1994).

Sumardjo et al., (2021) referred to (Coleman, 1988; Fukuyama, 2000; Sumardjo, Firmansyah, & Dharmawan, 2020) that social capital is the value of mutual trust among members of the community itself, with other communities, as well as with their leaders. One form of social capital is social institutions that include networks, norms, and social beliefs that are conducive to social collaboration that meets the needs or interests of related parties. The occurrence of potential strengthening of human capital encourages the strengthening of social capital in an effort to empower communities based on extension. The participatory approach to empowering coastal communities is a strategic way to achieve goals and meet community needs, especially for seaweed farmers on the North Coast of West Java.

"In 2018, the Mina Agar Makmur Cooperative is expanding its wings by opening a new business unit in Sedari Village, namely Bumi Kreatif Mina Agar Makmur. This business unit has focused on managing the business of making fish feed on leftover seaweed. This unit has the opportunity to positively impact the community in terms of economy, social and environment". (Mr. BM, 58 years old, local leader)

Mr. US, as a local figure, has a real role as a local champion. Mr. US has carried out community empowerment effectively, resulting in the strengthening of social capital in a participatory, dialogical manner, and succeeded in building a collective agreement and collective action as the functioning of cooperatives in managing the agribusiness system, which is a collective goal. Collective action carried out through the development of social capital is in line with the findings of (Hwang & Stewart, 2017) and (Sumardjo et al., 2021).

3. Impact of Innovation in Community Empowerment through Extension

The role of extension impacts innovation in the management of the seaweed agribusiness system in a polyculture manner. The impact of the role of extension in empowerment through effective and prospective polyculture pond cultivation supports efforts to improve the living standards of coastal communities through increasing benefit of economic (profit), social (people), and environmental (planet), in line with (Elkington, 1998) opinion. This was revealed from the results of the FGD involving the following key persons:

"Polycultural system pond cultivation developed in prospective research locations to be developed and effectively supports efforts to improve the living standards of people in coastal areas through (1) increasing business efficiency by adding commodities and shortening the harvest period and increasing harvest frequency, (2) increasing added value through product processing, and (3) the use of waste for fish feed, and (4) the accumulation of an increase in the income of farmers from three commodities (shrimp, milkfish, and seaweed)." (FGD results, June 2022).

The results of the FGD are supported by the results of field data analysis, which are presented in Table 1, which describes the efficiency and value-added and the impact of implementing appropriate technological innovations for polyculture pond systems at the research site.

Table 1: Description of conditions before and after applying polyculture at the research site, 2021

Indicators	Before applied polyculture system	After applied polyculture system
Comodity	Milkfish/shrimp/seaweed	Milkfish, shrimp and seaweed
Income (per year)	36.000.000	62.600.000
Feed cost (per kg)	9.250	7.500

Source: CSR Report of PT Pertamina EP Tambun Field, 2021

The application of the polyculture system innovation by seaweed farmers in the research location resulted in an increase in income of 73.9 percent and an increase in feed efficiency of 18.9 percent. In addition, there is also the use of seaweed waste. The accumulated increase in seaweed productivity in cooperatives in the last five years from 432 tons in 2016 to 726 tons in 2022, or an average increase of 22.7 percent per year. In addition, the FGD revealed that the social impacts of the community empowerment program through the extension approach were as follows:

"Social cohesion of group members and beneficiaries is getting stronger. Group members increased from 65 to 72. A new group was formed in Sedari Village, Cibuaya District, named Bumi Kreatif Agar Makmur, which focuses on the business unit of the Mina Agar Makmur Cooperative feed management. There are 15 active administrators. The network of group cooperation is getting wider. The group has a network with the community and government of Tambaksari Village and Sedari Village, the local Marine and Fisheries Service, feed marketing, and others. Another social impact is that the cultivation of polyculture ponds has helped create wide employment opportunities for the surrounding community so as to reduce unemployment. The workforce absorbed as many as 465 seaweed farmers who became members of Mina Agar Makmur from a total of 4,923 the total population who work as farmers in Tambaksari Village or 9.4% of farmers are members of Mina Agar Makmur." (FGD results, June 2022)

Other social impacts include: (1) developing partnership synergies with the market that can ensure consistency in the orientation of quality or market need (market need), quantity, continuity, and contractual commitment among partners; and (2) changes in people's attitudes and behavior in the use of yards are the orientation of cultural values which are local wisdom that has become a tradition of rural communities in the region. This is similar with the findings of Sumardjo et al., (2019) regarding coastal communities empowerment in North West Java.

The implementation of the partnership involves the role of universities with large companies through their CSR, local government, and community participation. A large company that plays a role in the ABG-C partnership model is PT Pertamina EP Asset 3 Tambun Field. The company acts as a supporter and driver of the fishpond business. The company also carries out mentoring and consulting activities in order to increase the seaweed business and answer the problems that the Mina Agar Makmur group has faced.

4. The Importance of Extension Role in Coastal Communities Empowerment

Community empowerment activities for seaweed farmers in the research location apply the philosophy and principles of extension. This concept is in line with the concept of (Christenson & Robinson, 1989; Sumardjo et al., 2019) that empowerment is a development process that places community initiatives to improve their situation and condition. Communities are placed as development subjects or as agents of development and not just beneficiaries. Extension in empowerment is applied with trust and three working principles: value system, belief in reality, and belief in knowledge and learning to better future.

The application of the value system includes placing: (1) the community as the subject of empowerment, (2) the importance of rural life, and (3) belief in better future choices. Extension workers believe that improving human capital actually results in collective good for the community. Extension leads to an increase in the capacity of individuals as adults and has an impact on increasing their ability to control their world in an effort to improve their livelihoods and levels of well-being. Extension applies the principle of farmers as subjects who try to fulfill their wishes, hopes, and commitments regarding the realization of benefits for them. Here the extensionist bases the principle of (Boone, 1989), which basically doesn't give fish to eat today, but increases the ability to think and to act about how to fish properly to get more fish in a sustainable manner.

Extension applies the importance of rural life by respecting the intrinsic beliefs of community life. Extension workers act professionally and respect the beliefs, lifestyle, and behavior of the community as the subject of development. The extension agent in dialogue facilitates what farmers aspire to (ideals) and how to realize the best in accordance with the potential and community conditions and determine appropriate technology that is compatible with local conditions (ideas). Furthermore, developing the ability of the community to think about finding and choosing a partner (friendship) in the management of their seaweed agribusiness business. Such is the concept of creative social energy, according to (Sumardjo et al., 2019), is applied in extension.

Extension workers raise the belief that the future of farmers can be much better. Extension workers try to build awareness in a participatory manner about facts and data, the potential of local resources, and appropriate technological innovations to improve farmers' livelihoods and coastal communities and their environment. The fact is that with extension in community empowerment, there is an increase in livelihoods in line with the achievement of the SDGs.

5. Impact of the Empowerment Program with the Extension Approach on the Achievement of the SDGs

Community empowerment with an extension approach has proven to be effective in realizing the achievement of several aspects of the SDGs. Similar to the findings of (Sumardjo, Firmansyah, & Manikharda, 2020) which revealed that extension has an impact on economic, social and environmental sustainability, which is in accordance with the objectives of the empowerment program. Community empowerment base on effective to improve effort of SDGs achievement. In more detail the achievement of six aspects of SDGs can be seen in Table 2.

Table 2: Sixth Aspect Achievement of SDGs as impact of empowerment base on agricultural extension

SDGs Number	SDGs Indicator	Empowerment Impact Indicator	Description
1	No poverty:	Efforts to eradicate poverty	Income improvement 14,8% per year.
2	Zero hunger	Efforts to achieve food security and nutrition improvement, and promote sustainable agriculture	Improvement of production for food: 22,7 % per year
3	Good health and wellbeing	Promote healthy lifestyle and support welfare for all ages	The availability of organic farming for healthy food material
8	Decent work and economic growth	Produce products needed by the market	The availability local job opportunities and improve farmers' income
12	Responsible consumption and production	The product is safe because it is applied organic farming	Free from harmful chemical input and healthy food product
15	Life on Land	Zero waste by inovation polyculture pond system	Waste reduction 4,5 ton per year, and water efficiency 6000 liter per year

5. CONCLUSION

1. The results show that local figures who act as local champions contribute significantly to extension coastal community for empowering the development of coastal community resources, especially in building internal and external community capital in the seaweed business.
2. For the extension to impact the sustainability of the seaweed business, it is better to strengthen human capital that can manage the strengthening of the community capital strengthening that, including the capital of social, technology, financial, and physical.
3. The sustainability of the seaweed business as a result of the extension is determined by the realization of strengthening human capital, which is able to manage the community capital strengthening that, including the capital of social, technology, financial, and physical.
4. Practical implication: Participatory extension for the empowerment of coastal communities requires strengthening community leaders to become local champions in the management of local community capital to SDGs achievement.
5. Theoretical implication: The participatory extension paradigm is effective in empowering the community if it is successful in developing local champions who are able to manage business networks and community capital in empowering coastal communities.

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