

Institutional development strategy through Interpretive Structural Modelling (ISM) for gillnet fisher group in Barsela Aceh, Indonesia

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Abstract. Concept of fisher community group (KUB) has been developed concerned with poverty alleviation through empowerment programs. Attempts to resolve KUB problems, particularly, in Barsela Aceh, Indonesia have been performed by numerous parties. However, up to this moment, the increased welfare and KUB empowerment in Barsela Aceh have not showed satisfactory outcomes. Hence, it requires a real concept that can be continuously implemented for KUB's institutional strengthening development and is locally based. The study aims to figure out institutional development strategies of gillnet fisher KUB in Barsela Aceh. The result of the study showed that there are four system elements to be noted in the implementation, namely: (1) development goals; (2) development challenges; (3) development activities; (4) all actors involved in the development. Key sub-elements as the factors that play critical roles for the successful implementation of development model in each element are increasing human resources quality, work ethic, a relatively high investment fund and operational cost, and the formation of cooperative unit and Ministry of Marine Affairs and Fisheries (MMAF).

Key Words: gillnet fisheries, poverty, key elements, ISM (Interpretive Structural Modeling).

Introduction. Fisher community or *kelompok usaha bersama* (KUB) as fishery cooperative unit, is a group of people living on the coast that is prioritized with a number of assistance from the government economically, socio-culturally, technologically, ecologically, and politically (MMAF 2014). The KUB community members are generally characterized by low economic and socio-culturally condition, and also lack of quality of human resources due to low education level or illiterate, therefore the existence of KUB has no significant influence in increasing fisher's welfare.

Numerous economic recovery concepts of these KUBs are concerned with poverty alleviation through empowerment program from government. The approaches used aim on institutional strengthening and human resource empowerment. These efforts, however, have not impact significantly in KUB welfare. Accordingly, it requires an enhanced empowerment concept that covers numerous concepts and multi approaches and is locally compatible.

In addition, KUB empowerment concept for institutional strengthening based on local policy is highly expected to be established on the principles of activity need and hope, so that various government programs can be implemented precisely, accommodated properly and performed well.

Efforts to overcome KUB problems, particularly, in Barsela (barat selatan/South West) Aceh have been performed by a number of parties, such as the government as policy maker or related institutions and professional groups through community empowerment. Nevertheless, up to now, these efforts have not come with satisfactory outcomes in improving community welfare and empowering KUB in Barsela Aceh. This issue calls for a real concept that can be continuously implemented in KUB institutional

strengthening development, is integrated, and is locally based. One of the techniques of institutional development strategy through approach modelling developed for strategic planning in enhancing KUB in Barsela Aceh is Interpretive Structural Modelling (ISM) technique with group learning process. According to Ma'sum et al (2015), ISM is one of modelling techniques for developing policy strategy that can be used with detail explanation of system. The purpose of the study is to figure out institutional development strategies of gillnet fisher group (KUB) in Barsela Aceh, Indonesia.

Material and Method

Location and time of study. The study was conducted in Barsela Aceh from April to December 2015 which included three districts; Aceh Barat, Aceh Jaya, and Nagan Raya (Figure 1). The data was collected using purposive sampling technique that limited only KUB gillnet as the survey respondents. Data collected during the study was primary data concerning institutional development strategies of gillnet fisherman KUB that was obtained through in-depth interview and focus group discussion with stakeholders comprising Extension Officers (PPTK), Fisheries Agency of Aceh (DKP), universities, and customary institutions in Barsela Aceh.

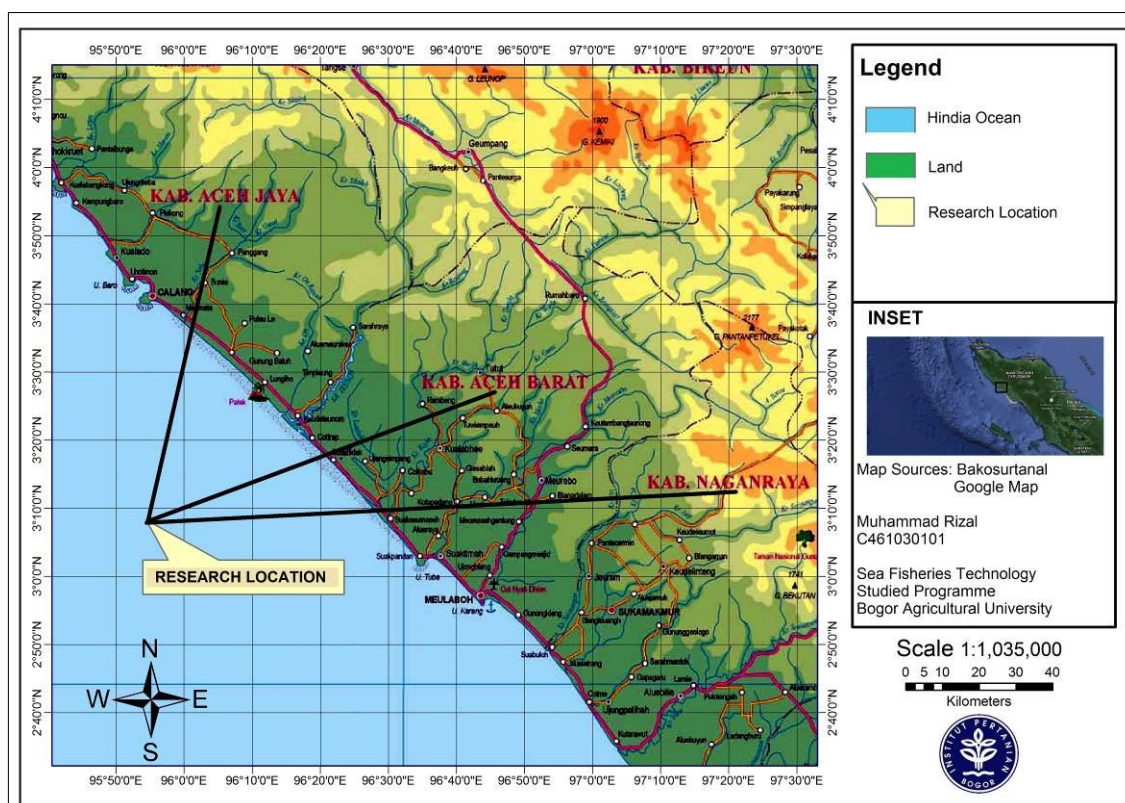


Figure 1. Research sites in the South West (Barsela) Aceh.

Data analysis. Data analysis was performed from the statistic obtained from three district involved in the study; Aceh Jaya, Aceh Barat and Nagan Raya. The analysis focused only on gillnet fishermen listed as KUB members in five subdistricts; Sampoinet, Lhok Kruet, Kuala Bubon, Johan Pahlawan, and Tadu Raya, who landed their catch in five Fish Landing Place (Pangkalan Pendaratan Ikan/PPI) in Barsela Aceh namely, PPI Sampoinet, PPI Lhok Kruet, PPI Lhok Bubon, PPI Meulaboh and PPI Kuala Tuha. The data collected from those landing places were analyzed using ISM to interpret contextual relation among elements and sub-elements in integration strategy based on geographical condition for KUB gillnet development. In determining the strategies of KUB development, the elements aligned with KUB institutional development included the goals

that comprise 12 sub-elements, the challenges with 15 sub-elements, the activities with 11 sub-elements, and the actors involved with 13 sub-elements. Kholil & Tagian (2012) indicated that ISM is a method that can be used to analyse the complex problem in a system. Furthermore, Jayant et al (2015) explained that ISM provides decent and clear basic principles to researchers or institutions, so that employing ISM can assist them in developing the model for each different element and to improve the working condition of each field. It is possible because all elements in ISM are integrated. According to Attri et al (2013) and Samantaray (2016), basic principle of the theory, the concept, and computation is used to reach efficiency through graphic or network representative among ISM elements.

Results and Discussion. According to Saxena et al (1992), ISM technique is related with the interpretation of a complete object or a system representative through the application of graphical theory systematically and iteratively. Shahabadkar et al (2012) defined that ISM is a process that transforms an unclear and weak explanation mental model which becomes a visible one, and can be defined clearly and usefully for various purposes. The model will help to find the key factors related to the problem or issue. After identifying key factors or elements, strategies can be developed to deal with an issue (Attri et al 2013). ISM analyze elements of the system and solve in form of graphs of direct relationships between elements and levels of hierarchy (Dachyar et al 2014).

Goal elements of KUB institutional development. Based on the result of focus group discussion (FGD) four times in Aceh Jaya, four times in West Aceh and three times in Nagan Raya with stakeholders in the field from April to December 2015 in Barsela Aceh, there were twelve sub-elements that need to be performed to meet the goal in institutional development of gillnet fisherman KUB in Barsela Aceh, as the following:

- T1: keeping the existence of KUB continuously;
- T2: utilizing the potentials optimally;
- T3: increasing caught fish production;
- T4: improving the income and welfare of the fishermen;
- T5: enhancing KUB standard of living;
- T6: increasing technology utilization;
- T7: increasing KUB investment;
- T8: increasing KUB revenue;
- T9: widening KUB work opportunity;
- T10: improving fishermen human resource quality;
- T11: work ethics;
- T12: growing KUB creative economic.

ISM output from the goal aspect of KUB institutional strengthening development has been arranged as a structural model diagram. This diagram was used to figure out which sub-element of the goal needs to be prioritized. The higher level showed the main sub-element that needs to be prioritized to achieve success in gillnet fisher KUB institutional development.

Structural model diagram from the goal element of institutional strengthening development of gillnet fishermen KUB in Barsela Aceh, improving fishermen human resource quality (T10) and KUB work ethic (T11) are the priority goals and the main force to achieve the successful development because these two sub-elements influence the the success of other sub-elements at the lower levels.

The increased human resource quality and fishermen high work ethics will likely result in the improved technology utilization automatically (T6 in level 6). These eventually also influence fishermen activity and technology utilization in caught fish production (T3 level 5). The raise in production will be followed by the increased income and eventually, fisherman welfare will become better (T4 level 4). KUB welfare is expected to transform KUB members become more concerned and wiser in developing and utilizing the resources optimally (T2 level 3). With the increased KUB welfare, KUB is hoped to be able to keep and maintain its existence (T1 level 2) and improve KUB

standard of living (T5 level 2). It automatically happens if KUB performs sustainable activities.

The next sub-element at the lowest level (level 1) are: increasing the investment in KUB area (T7); increasing locally generated revenue (T8); widening KUB work opportunity (T9); and the formation of KUB creative economy (T12). It will be pushed habitually if the sub-elements from the goal aspect at the upper level have been performed. Nevertheless, the sub-elements at level 3, level 2, and level 1 are highly dependent on the available human resources because they have high level of dependency. Diagram elements KUB development objectives gillnet fishermen in Figure 2.

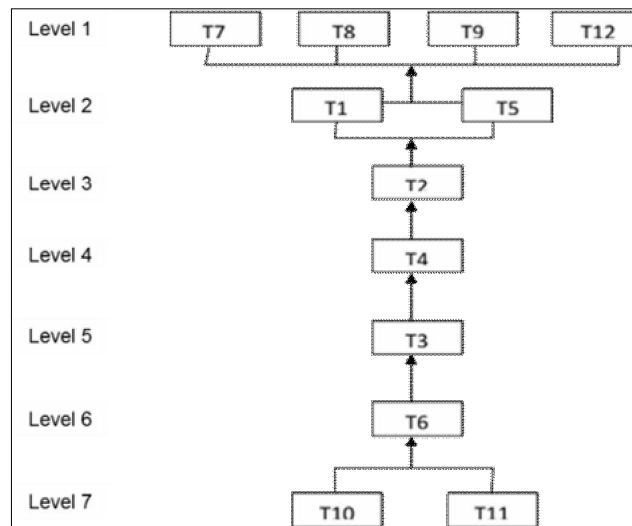


Figure 2. Structural model diagram element of goal.

The field research using ISM analysis concerning the goal of institutional strengthening development of gillnet fisherman KUB in Barsela Aceh produced Driver Power-Dependence (DP-D) matrix along with structural model diagram. DP-D matrix maps the goal of institutional development based on the dependency accompanied with driver power owned by each sub-element of the goal (Figure 3).

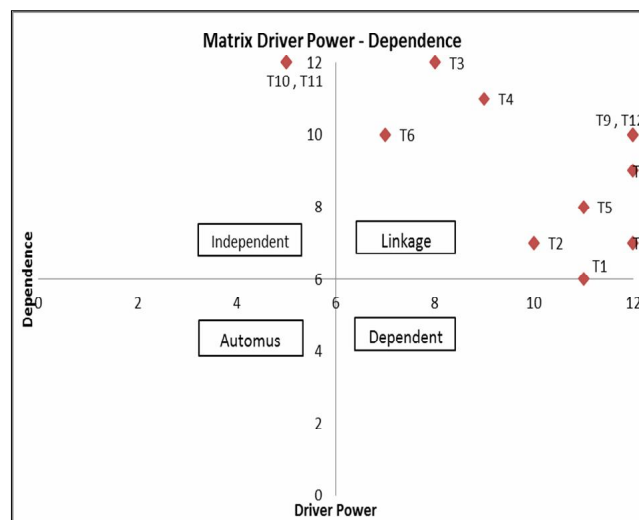


Figure 3. Matrix of DP-D element development goals.

Based on DP-D matrix, it can be seen that the majority of institutional development goal of KUB in Barsela Aceh is located in sector III (linkage), where each sub-element of goal has high driver power but at the same time also possesses high dependency. Sub-elements at sector III have unstable relation among sub-elements. Hence, they require

careful handling because every move will impact other sub-elements and the feedback influence can possibly enlarge the effect. The sub-elements at sector III are T1, T2, T3, T4, T5, T6, T7, T8, T9 and T12. In addition, there are two sub-elements of development goal at sector IV where the sub-elements have high driver power but possess low dependency. The sub-element at sector IV (T10 and T11) are not closely related to the system but they can influence other sub-elements and own a high driver power.

Challenge elements in KUB institutional development. Based on survey result (interview and FGD) from April to December 2015 in Barsela Aceh, there were 15 challenge sub-elements that need to be taken care of to establish institutional strengthening development of gillnet fishermen KUB in Barsela Aceh, as the following:

- K1: lack of HT diversification;
- K2: low human resources quality and professionals;
- K3: homogeneity;
- K4: empowerment program synchronization;
- K5: low technology mastery;
- K6: interaction and communication;
- K7: top down planning policy;
- K8: high investment and operational cost;
- K9: finance management transparency;
- K10: limited number of qualified Extension Officers (PPTK) on the field;
- K11: lack of group work and cooperation;
- K12: low quality competitiveness and price;
- K13: fishermen participation rate;
- K14: locally based policy and empowerment (geographical);
- K15: lack of properly qualified fishermen.

The sub-element of development challenges was arranged in a structure based on the level, where the higher the level are, the faster the solution for the challenge in institutional development of gillnet fisher KUB in Barsela Aceh need to be taken (Figure 4).

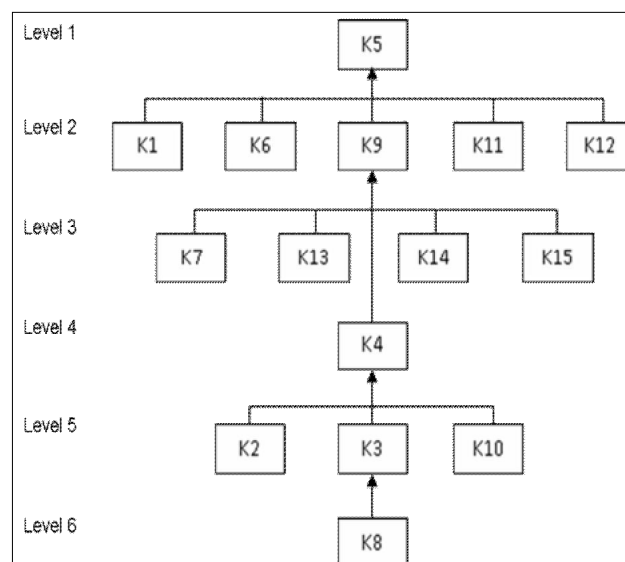


Figure 4. Diagram structural model element of challenge.

Based on Figure 4, it is clear that the main challenge that needs to be immediately solved that hampers institutional strengthening development of gillnet fisher is the high investment and operational cost (K8 level 6). The next challenge is at level 5, the quality of human resources and professionals are relatively low (K2); homogeneity rate (K3), and limited number of qualified PPTK on the field (K10). K3 and K10 cause the main challenge to emerge which is the low performance and KUB activeness in Barsela Aceh.

The next challenge to be solved is empowerment program synchronization (K4 level 4). This is caused by the lack of good management from Local Fisheries Agency (DKP) programs and the limited number of qualified Extension Officers (PPTK) on the field (K10). At the lower level, level 3, there are 4 sub-elements that need to be handled, comprising the top down planning (K7); fishermen participation rate (K13), lack of empowerment policy that is locally based (geographical) (K14), as well as lack of properly qualified fishermen (K15). All of these emerged due to human resources quality and professionals which are relatively low (K2)

At level 2 there are 5 sub-elements that have to be resolved, 4 of them are the dependent sub-elements. The dependent sub-elements are: low catch diversification (K1); interaction and communication (K6); finance management transparency (K9); lack of group work and cooperation (K11). These four sub-elements depend on government intervention through policy making that will be able to solve problems in KUB institutional development in Barsela Aceh. In addition, low catch competitive rate, quality, and price are also challenges that cannot be ignored and have to be handled thoughtfully (K12).

At the lowest level or level 1, the challenge that needs to be deal with is low technology mastery by fishermen (K5) in the field so that it becomes one of the constraints in having such big catch. In resolving the problem, it is critical that the problems are solved in an orderly manner from level 6 to level 1 because the challenge of institutional development of gillnet fishermen KUB at level 6 and the following levels are significant problems that need to be resolved as immediately as possible as part of the institutional development strategies of gillnet fishermen KUB in Barsela Aceh.

Based on the result of ISM model questionnaire, ISM analysis on challenge elements of institutional strengthening development of gillnet fisherman KUB in Barsela Aceh produced DP-D matrix that maps the development challenges based on dependency along with driver power of each challenge sub element (Figure 5).

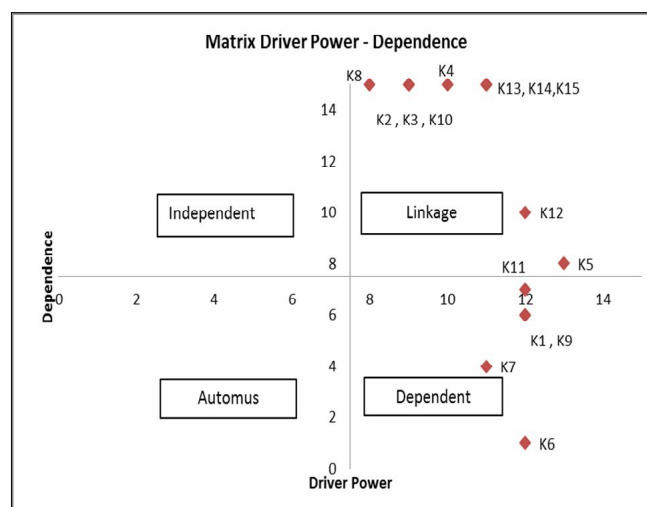


Figure 5. Matrix of DP-D element development challenge.

There are fifteen sub-element of KUB development challenge on DP-D matrix that is divided into two sectors, sector III (linkage) and sector II (dependency). Those classified as sector III challenge sub-elements are K2, K3, K4, K5, K8, K10, K12, K13, K14 and K15. Sector III consists of sub-elements that have strong driver power and high level of dependency. It is very critical to be handled carefully because sector III sub-elements are related with unstable sub-elements, so that every move taken can influence other sub-elements and feedback influence can make it even bigger. Meanwhile the sub-elements classified as sector II are K1, K6, K7, K9 and K11. These sub-elements have a weak driver power but high level of dependency toward other sub-elements, hence, they are the dependent sub-elements.

Activities elements of KUB institutional development. Based on the result of focus group discussion (FGD) with stakeholders in the field from April to December 2015 in Barsela Aceh, there are 11 (elemens) sub-elements in the development activities of KUB which are prioritized to achieve institutional strengthening development activities of gillnet fishermen's KUB in Barsela Aceh as follows:

- A1: enhancing KUB's institutional capacity which is appropriate to its environment;
- A2: enhancing of competitive innovation and appropriate technologies;
- A3: enhancing the efforts to empower KUB through counselling and mentoring effectively;
- A4: fostering the establishment of catches central diversification region;
- A5: policy toward the ownership of KUB's assets;
- A6: synchronization the programs in an integrated manner;
- A7: detail policy toward public criteria, program's objectives and the type of business;
- A8: program policies according to the needs of local fishermen;
- A9: formed joint institutional;
- A10: developing a chain value system of agribusiness downstream and upstream;
- A11: changing the mindset of fishermen consumptive behavior.

DP-D matrix also formed a structural model diagram in element of development activities. This diagram is necessary to see which structure of the activity that should be prioritized for ensuring the successful development of institutional strengthening in gillnet fishermen's KUB in Barsela Aceh. The diagram is presented in Figure 6.

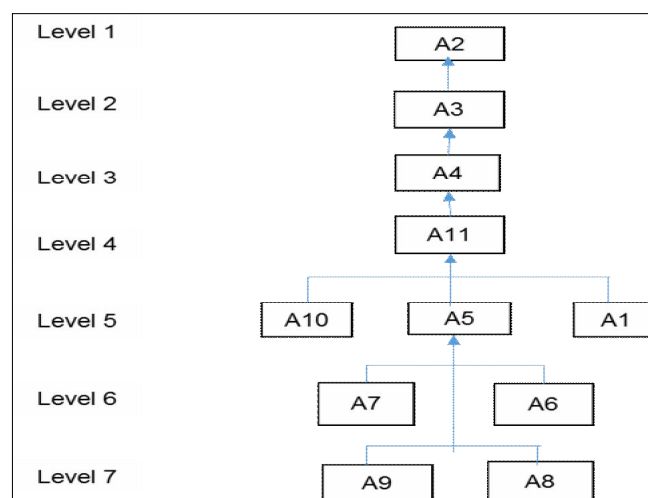


Figure 6. Diagram structural model element of activities.

Diagram of structural model development activities consists of 7 levels. The most important activities, at the highest level (level 7), to do in the development of institutional strengthening of gillnet fishermen's KUB in Barsela Aceh are cheap and good quality of feed supply (A9) and policy program which is suitable to the needs of local fishermen (A8). Then, policy criteria of fishermen and their business type (A7 at level 6) is the next activity to be done. Next program to perform is synchronization the program in an integrated manner (A6 at level 6), if this program is executed properly then program A3 can easily be done well.

Management of fish caught activity up to the market by developing a value chain agribusiness system downstream and upstream (A10 at level 5) has a clearly visible structure and value added sales that will benefit the KUB sustainably in Barsela Aceh. Then, next programs which need to be considered in the strengthening development of gillnet fishermen's KUB institutional in Barsela Aceh are policy towards asset ownership of KUB (A5 on level 4) and enhancing the KUB institutional capacity according to its

environment (A1). This activity is dependent to the government in the making policies on assets used by KUB in Barsela Aceh.

Furthermore, on level 4, there is one sub-element of institutional development activity with the purpose to change the mindset of fishermen's consumptive behavior (A11). In Level 3 there is one sub-element which aims to foster the establishment of catches central diversification region (A4). In level 2, there is one sub-element in sector II which has high dependence and low driver power that aims to improve KUB empowerment through counselling, training and mentoring effectively (A3). As in level 1, the development activities are to increase innovation and effective technologies competitively (A2). These activities, basically, will be taken care by itself if the development activities at higher levels has been done beforehand.

Based on interviews with stakeholders using ISM questionnaires, each sub-element was compared to other sub-elements to obtain efficient result in every element of gillnet fishermen's KUB institutional development activities in Barsela Aceh through matrix of driver power-dependent (DP-D). DP-D matrix resulted from ISM analysis described the position of each sub-element based on its dependency and driver power (Figure 7).

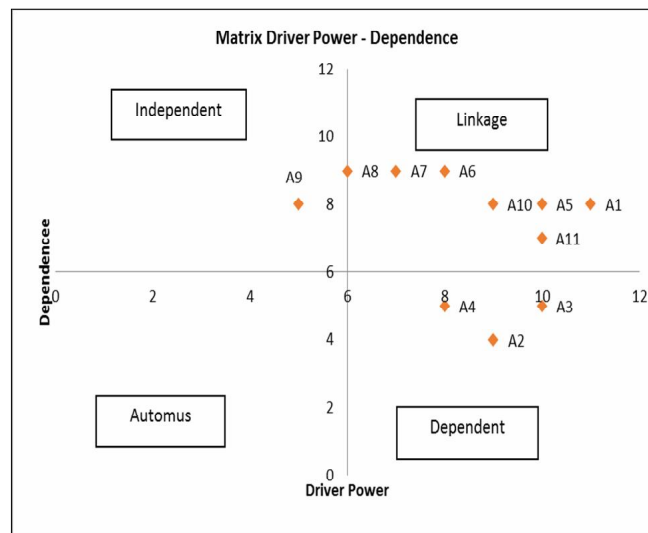


Figure 7. Matrix of DP-D element development activities.

The matrix above shows that the sub-elements of KUB institutional development element activities are divided into three (3) sectors, namely sector II, III and sector sectors IV. Sub-elements which are grouped in sector IV (independent) have low dependence and high driver power indicating that the sub-elements in this sector do not have linkage in the system but can affect sub-elements because of their high driver power. Sub-elements which are grouped in sector IV are A9 and A8.

Sub-elements which included in the third sector (linkage) are A1, A5, A6, A7, A8, A10 and A11. These sub-elements are related to unstable elements and thus require careful handling because every action will influence other sub-elements and the feedback can magnify the impact.

Sub-elements A2, A3 and A4 are included in sector II (dependent). This sector is a place for the sub-elements which have a dependency on other sub-elements. Sub-elements in this sector have low driver power, so that, in general, they can be overcome if other sectors are already handled first.

Actors elements of KUB institutional development. In the element of institutional developer of gillnet fishermen's KUB in Barsela, Aceh, there are 13 (thirteen) sub-element of actors that must be considered to achieve institutional development as follows:

- P1: Ministry of Marine Affairs and Fisheries/MMAF (KKP);
- P2: Fisheries and Marine Agency of Provincial level (DKP Prov.);

- P3: Traditional Sea Commander (Panglima Laot);
- P4: Fisheries and Marine Agency of District level (DKP Kab.);
- P5: PPTK (Extension Officers for fishermen Group);
- P6: merchant collector/agents/wholesalers;
- P7: Fisheries Counsellor;
- P8: banking and financial institutions;
- P9: educational institutions and training for fishermen's KUB;
- P10: agribusiness institutions (downstream and upstream);
- P11: research institutions/universities;
- P12: industry of fishery products diversification;
- P13: HNSI (Fishermen Association of Indonesia).

Existing sub-elements classification on institutional development of gillnet fishermen's KUB in Barsela Aceh has been organized into a structural model diagram. Higher levels indicate that sub-elements should be prioritized to achieve the success on institutional development. Institutional development actors can be seen in Figure 8.

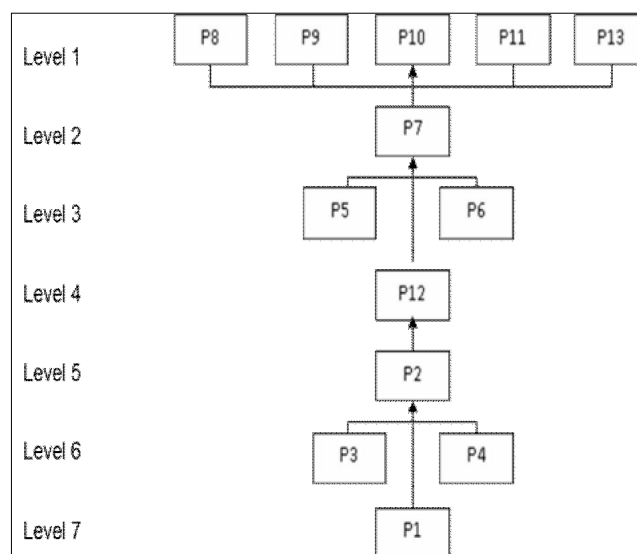


Figure 8. Diagram structural model element of actors.

Structural model of gillnet fishermen's KUB institutional development actor is Ministry of Marine Affairs and Fisheries/MMAF (P1 on level 7) which is a main development actor that needs optimal attention to successfully develop the KUB institutional of gillnet fishermen in Barsela Aceh. Furthermore, in level 6, KUB institutional development actors that should be effectively involved are Sea Commander (P3) and Fisheries and Marine Agency of District level (P4). Both of them are expected to work effectively and efficiently to control every activity and fostering the KUB to actualize the development of gillnet fishermen's KUB institution independently. In level 5, it is stated that Provincial DKP (P2) is a subsequent actor that needs to be involved thoroughly in every decision or policy. The involvement of the Provincial DKP will make KUB easier to control in any communication of problems and solutions on the field consistent to local environment.

In level 4, industry of fishery products diversification (P12) acts as an actor who strengthens the development of KUB institutional Barsela Aceh. Progress in fish diversification industry will expand the market network, increase the resale value as well as provide new innovations of processed foods or processed products in the community so that they will be interested to consume it.

Sub-element PPTK (P5) and merchant collectors/agents/wholesalers (P6) are occupied on level 3 where they both have high dependency. Currently, PPTK is still unable to stand independently and still relies on the government's role. While collectors/agents/wholesalers are very dependent on the amount of catches obtained. Therefore, the role of fisheries counsellor (P7 on level 2), who provides guidance, sample and control in the field, is needed. Level 1 consists of several sub-elements actors that

are considered to have less role in the institutional development of gillnet fishermen's KUB in Barsela Aceh. Sub-elements which are occupied in this level are banking and financial institutions (P8), educational institutions and training for fishermen's KUB (P9), agribusiness institutions (downstream and upstream) (P10), research institutions or universities (P11), and HNSI (Fishermen Association of Indonesia) (P13). Sub-elements in this level are highly dependent on other sub-elements. Even sub-element P13 also has low driver power that its existence almost has no impact toward others.

Based on the DP-D matrix and structural model diagrams, it is explained that the actors of institutional strengthening development for gillnet fishermen's KUB in Barsela Aceh are grouped by their dependence and driver power. DP-D matrix can explain the relationship between sub-elements of the gillnet fishermen's KUB developer in Barsela Aceh (Figure 9).

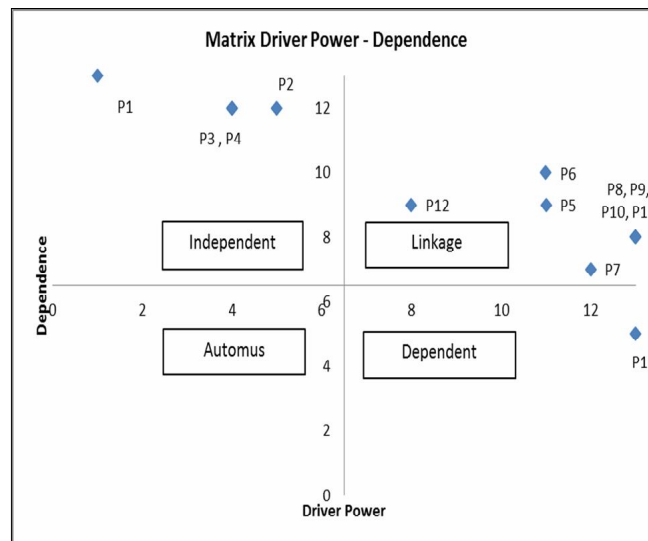


Figure 9. Matrix of DP-D element development actors.

The results showed that DP-D matrix of majority developer for institutional strengthening development are in sector III (linkage), where each sub-element of the developer has a high driver power but also has a high dependence. Sub-elements in this sector have the relationship between unstable sub-elements, so that they require careful handling because every action will have an impact on other sub-elements and effects from feedback can magnify the impact. Sub-elements which are classified in this sector are P5, P6, P7, P8, P9, P10, P11 and P12.

Four sub-elements of other actors are grouped on sector IV (independent) where the sub-element has high driver power and low dependence. Sub-elements in this sector (P1, P2, P3 and P4) are not closely linked in the system but can affect other sub-elements and have high driver power. In addition, there is a sub-element (P13) of actor in sector II (dependent). Sub-elements in this sector are dependent to other elements and have low driver power. In general, sub-elements in this sector can be overcome if other sectors are already handled first.

Development of institutional strengthening to fight against poverty, which is used in accordance with the concept of empowerment through the implementation of the model, was done by using interpretative structural modeling (ISM). Irnawati et al (2013) explain that the ISM technique is very suitable for fisheries because of its high complexity and involves many stakeholders. In theory, poverty is a complex problem (Stanford et al 2016; Barbier 2010). In practice, this complexity limits the relevant agencies. Various government agencies have a variety of expertise whom not individually have the ability to solve the whole problem, but if they cannot address the underlying cause then it would not work effectively.

According to Rahim et al (2014), poverty problem solving requires effort to eliminate traditionalism, fatalism, easily satisfied character and lack of courage to take risks so that upgrading, training, counselling, and special programs are required. To

tackle poverty, broadly, there are two approaches, namely, direct and indirect approaches. The first approach is the development of national economy which is market-hygienic oriented for fishermen or KUB. The latter approach can be or related to government programs by sector, such as education, health, infrastructure, and direct aid to the poor. Position between different sub-elements in the quadrant makes the relationship between sub-elements to be highly dynamic and interrelated, so it needs to be examined closely in the field implementation where the development strategies of KUB institutional can be done well. As for the institutional development strategy KUB gillnet fishermen in Aceh following Barsela is shown in Table 1.

Table 1

Elements and key elements of strategy implementation designs for institutional development of gillnet fisher's KUB in Barsela Aceh

| <i>No</i> | <i>Elements</i> | <i>Key elements</i> | <i>Sector III</i> | <i>Sector IV</i> |
|-----------|-----------------|---|--|---|
| 1 | Objectives | Improving the quality of human resources, work ethic | Maintaining the existence of KUB continuously, exploiting the potential optimally, increasing caught fish production, increasing incomes and welfare of fishermen, improving living standards, improving the level of technology utilization, increasing the investment, increasing the revenue, expanding the opportunity of employment, creating creative economic of KUB | Improving the quality of human resources, work ethic |
| 2 | Obstacles | Investment control and operational costs are relatively high | Low quality of human resources and professionals, low degree of similarity/homogeneity, synchronization of empowerment programs, low mastery of technology, relatively high in cost control of investment and operations, limited number of appropriate expertise in Extension Officers (PPATK), low competitiveness of quality and price, low level of fishermen participation, low on policy and empowerment (geographically), the lack of qualified fishermen on target | - |
| 3 | Activities | Formed joint institutional, policy programs according to the needs of local fishermen | Enhancing KUB's institutional capacity appropriate to its environment, enhancing the policy on the ownership of KUB's assets, synchronizing programs integratedly, detailed policy of communities criteria, targeted programs and the type of business, Enhancing appropriate policy programs to the needs of local fishermen, developing value chain systems of agribusiness (downstream and upstream), changing mindset behavior of consumptive fishermen | Formed joint institutional, policy programs according to the needs of local fishermen |
| 4 | Actors | Ministry of Marine Affairs and Fisheries | PPATK, merchant collector/agents/wholesalers, fisheries counsellor, banking and financial institutions, educational institutions and training for fishermen's KUB, agribusiness institutions (downstream and upstream), research institutions/universities, industry of fishery products diversification | Ministry of Marine and Fisheries, Marine and Fisheries Agency of Province level, Sea Commander, Marine and Fisheries Agency of District level |

Conclusions. There are four elements of the system to be considered in the implementation of gillnet fishermen's KUB development strategies in Barsela, Aceh, namely (1) the objectives of the development; (2) obstacles in the development; (3) development activity; (4) involved developer. Sub-key elements are critical factors for successful implementation of development model for each element, namely improving

the quality of human resources, improving work ethic, relatively high control of investment costs and operational, forming the institutional joint, forming the appropriate policy programs to the needs and hope of local fishermen be done by Ministry of Marine Affairs and Fisheries (MMAF).

The abovementioned elements are very important elements to be considered, if the government, both for local (DKP, HNSI, Panglima Laot and KUB) and national institution (MMAF), would like to focus on appropriate effort in implementation of fishers empowerment program, which are alleviation their prosperity. Integrated double track approach, which is from local to national approach, based on locality need to be considered. Element of success for fisheries program development, such as: mechanism of aids, comprehensive handling of empowerment, availability of appropriate human resources, appropriate innovation of technology, control mechanism from MMAF and DKP and accessibility of financial modality, are needed to be implemented using synchronization of programs amongst institutions. The success of program can be seen monitored on the community income, fisher group independency and resiliency and also their activity as micro economic organization.

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