



STRATEGIC PLAN
PERIOD OF 2018-2023



DEPARTEMEN MANAJEMEN SUMBERDAYA PERAIRAN
FAKULTAS PERIKANAN DAN ILMU KELAUTAN
INSTITUT PERTANIAN BOGOR

Department of Aquatic Resources Management, Faculty of Fisheries and Marine Sciences, Bogor Agricultural University is an institution providing higher education in the field of aquatic resource management, has a mandate "Development science and technology of water resource management (fresh, brackish and marine) for the purpose of sustainability, conservation, health of aquatic habitats and sustainable fisheries with an ecosystem approach". The mandate is an articulation of the sub-mandates in the 3 Divisions in the MSP Department, namely:

- 1. Productivity and aquatic environment:** Development of science and technology used to estimate, study, evaluate, and predict the physical, chemical, and biological processes of waters and their interactions that support the processes of formation and the growth and development of biomass in aquatic ecosystems as well as the determination of status and efforts to maintain, utilize, and/or increase the use value of aquatic resources.
- 2. Ecobiology and Conservation of Aquatic Resources:** Development of science and technology related to the interaction of biological resources with the aquatic environment, conservation of aquatic biota and aquatic areas and aquatic ecotourism; aimed at the sustainable management of aquatic resources.
- 3. Fisheries Resource Management:** Development of population biology science and technology (fisheries) used to examine the dynamics patterns of fish, fish stocks, and strategies for the utilization and preservation of fish resources adjacent to the ecosystem for sustainability fisheries resources.

To achieve the objectives as mandated by the mandate of the MSP Department, a five-year Strategic Plan (Renstra) and Operational Plan (Renop) are prepared which are the elaboration of the policies set by the MSP Department. We hope that with this Strategic Plan and Renop, the MSP Department will become one of the leading units in IPB which becomes a *trend setter* in the implementation of education in the field of aquatic resource management at the national level and is recognized at the regional level. Hopefully, the Strategic Plan and Operation Plan the MSP Department 2013-2018 can make a real contribution to the development of fisheries and marine in Indonesia.

Bogor, December 2018
Head of MSP Department

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1.1 Background

The Department of Aquatic Resources Management (MSP) was originally one of the 6 majors within the Faculty of Fisheries IPB which was formed in 1981 and was determined *de jure* through the Decree of the Minister of Education and Culture No. 0546/O/1983 (MINISTRY OF EDUCATION AND CULTURE 1983). Long before in 1963, along with the establishment of IPB, this department already existed as the Hydrobiology Section of the Department of Inland Fisheries. Department of MSP, Faculty of Fisheries and Marine Sciences, Bogor Agricultural University (FPIK-IPB) as an institution that organizes high fish education, must be able to keep up with the dynamics of change while providing answers to various demands and problems related to the management of aquatic resources. The changes in question include paradigm, management, and competition.

The paradigm shift was mainly triggered by the development of information technology. The change in management is related to policy changes in the management system of higher education organizing bodies, both organized by the government and the private sector. The changing competition that must be faced by Indonesian higher education is currently getting tougher. The increasingly aggressive entry of foreign universities looking for Indonesian students, adds to the competition that already exists in the country. Not to mention the various new universities that have emerged in the country and are established by various business groups or industries that naturally have great financial support. This makes the college not only seen as a science center, research center, and community service center, but also a science-producing corporate entity that must compete to ensure the sustainability of its organization.

It must be admitted, with all its advantages and disadvantages, the Msp Department as an academic implementing unit and part of the Faculty of Fisheries and Marine Sciences – IPB has made significant progress both in terms of the number and quality of its human resources (educators and education personnel), the number of students who continue to

increasing from year to year, facilities and infrastructure for education providers, as well as the availability of increasing funds to support the activities of the tridharma of higher education. This progress is expected not to be stagnant, and should be in line with the developments and steps carried out by FPIK and IPB as a whole as a university that is heading towards a *Research Based University, World Class University (WCU) and Entrepreneurial University*.

The MSP Department as the organizer of IPB programs/sub-programs must play a role in supporting the achievement of IPB's vision. One of them is by conducting a series of stages of further quality improvement to lead to a better future of the MSP Department and the achievement of the IPB vision. This is in accordance with IPB's development strategy which consists of 6 pillars, namely:

1. Expanding access and improving the quality of student education and coaching
2. Improving the quality of research and innovation in science and technology
3. Fostering the quality of community service
4. Capacity building and cooperation network
5. Improving the welfare of educators, education staff, and students
6. Strengthening and dynamization of the management system to IPB

Therefore, as part of the education provider within IPB, all planning and development carried out by the MSP Department must be aligned and synchronized with the development program FPIK and IPB. Thus the MSP Department will be able to face very high competition and increasingly large challenges and will dare to enter the competition arena by making changes and improvements with using the most reliable competitive strategies.

Based on this background, the MSP Department must make strategic steps to make the MSP Department

as the development of science and technology in the Management of Aquatic Resources (freshwater, brackish water, and marine) for the purpose of sustainability, conservation, health of aquatic habitats and sustainable fisheries with an ecosystem approach. The Strategic Plan of the MSP Department is prepared by referring to the development of FPIK and IPB. By paying attention to this and the achievements of the 2013-2018 MSP Department Strategic Plan, the 2018-2023 MSP Department Strategic Plan will be focused on: (1) improving the quality of education, (2) improving the quality of governance, and (3) improving the quality of research and community service

1.2 Legal Basis and Strategic Plan Position

The Strategic Plan of the MSP Department 2018-2023 is prepared referring to the following laws and regulations:

1. Law of the Republic of Indonesia Number 20 of 2003 concerning the National Education System.
2. Law of the Republic of Indonesia Number 12 of 2012 concerning Higher Education .
3. Government Regulation of the Republic of Indonesia Number 66 of 2013 concerning the Statute of the Bogor Agricultural University
4. Presidential Regulation of the Republic of Indonesia Number 8 of 2012 concerning the Indonesian National Qualifications Framework
5. Decree of the Minister of Education and Culture of the Republic of Indonesia Number 0174/0/1983 concerning Departmental Arrangement at Faculties in state universities/institutes.
6. Decree of the Rector of the Bogor Agricultural University Number 001 / K13 / PP / 2005, which is about the mandate of the MSP Department, FPIK-IPB.

Meanwhile, the position of the strategic plan of the MSP Department, FPIK-IPB can be seen in Figure 1 below.

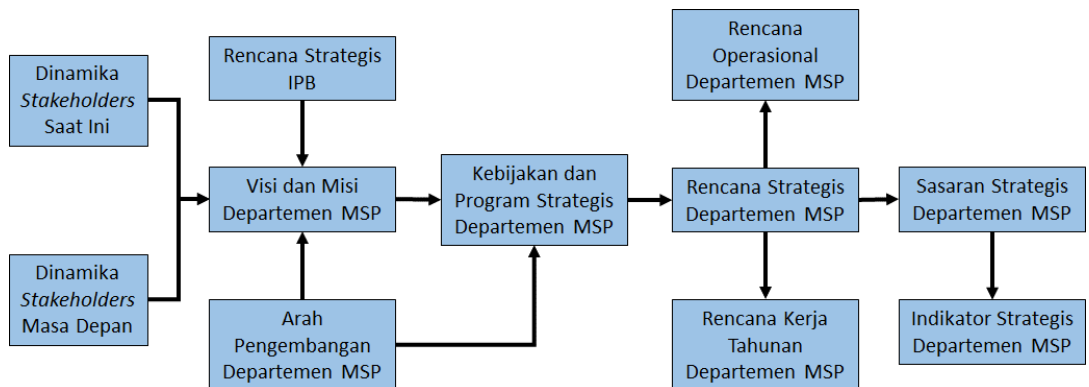


Figure 1 Strategic Planning Position of the Department of Aquatic Resources Management, FPIK-IPB

1.3 Drafting Method

This Strategic Plan was prepared using a participatory approach combining the thoughts of all leaders of the MSP Department with current and future challenges related to the main tasks and functions of the MSP Department as the best institution in the field of HR preparation in the field of aquatic resource management.

1.4 Organization of the Department of Aquatic Resources Management, FPIK-IPB

The MSP Department organization consists of departmental leadership elements consisting of the Head and Secretary of the Department, then assisted by the Head of Administration who coordinates the performance of the Academic Section, Human Resources Section and Finance Department, then two Coordinators, namely the Coordinator for Student Affairs, and the Coordinator for Cooperation and Research. The Head of Department also coordinates with the Head of Division, each of whom coordinates the teaching staff in accordance with the competence of the Division. The MSP Department has three Divisions, namely (1) the Productivity and Aquatic Environment Division; (2) Division of Ecobiology and Conservation of Aquatic Resources; and (3) Fisheries Resources Management Division. Diagrammatically, the organizational structure of the MSP Department can be seen in Figure 2 below.

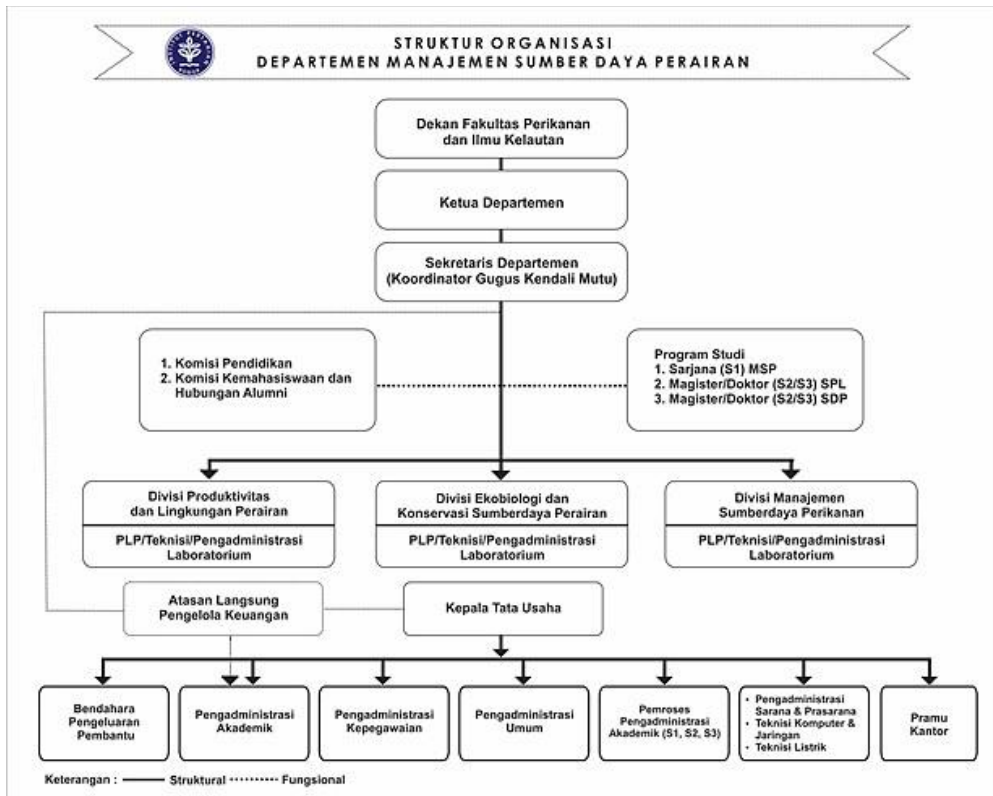


Figure 2. Organizational Structure of the Department of Aquatic Resources Management, FPIK-IPB

2.1 Strategic Issues

The strategic issues considered in the preparation of the Strategic Plan of the MSP Department, FPIK-IPB are as follows:

1. The aquatic system is the main *earth support system* globally with a contribution of 70% of the total area of the earth. In the Indonesian context, the water system dominates the area of Indonesia, namely 2/3 of the total 5.2 million km² is water consisting of coastal water systems

(including estuaries and wetlands), marine water systems, as well as inland waters;

2. The importance of the aquatic system is not only as a buffer for the sustainability of natural systems (*biosphere*), but also for human systems (*human sphere*), especially those related to the use of goods and services ecosystems waters to meet the needs of manusia;
3. The dynamics of the aquatic system with all components in it requires an integrated management approach to ensure the sustainability of the aquatic system in providing goods and services for the benefit of humans. Integrated and sustainable management requires continuous efforts to improve the quality and capacity of human resources;
4. Regulations for the implementation of higher education, especially in the scope of marine and fisheries science, which requires the department to be able to postsikan as an institution that encourages the progress of the nation which is oriented far to front, and not caught up in partial and short-term aspects of the solution; and
5. Optimizing the role of the MSP Department in the implementation of research-based higher education based on the Indonesian National Curriculum Framework (KKNI) system which is oriented towards the best quality of graduates while still paying attention to improving the quality of competencies according to the mandate of the department.

2.2 SWOT Analysis Matrix

Based on existing strategic issues, a SWOT matrix can be compiled that describes the *Strengths, Weaknesses, Opportunities* and *Threats* of the MSP Department as presented in Table 1 below.

Table 1 SWOT Matrix of MSP Department, FPIK-IPB

Code	Strength	Code	Weaknesses
S1	The vision, mission, goals, and objectives of the MSP PS are in line and synergistic with the vision, mission, goals, and objectives of IPB	W1	Programs as an implementation of the vision, mission, objectives, and targets are not yet optimal
S2	The statement of vision, mission, goals and objectives of the MSP Ps has colored the curriculum and is in line with the demands of sustainable development		
S3	The PS MSP civil service system guarantees the implementation of quality education	W2	Communication between SF-level civil service systems and institutional levels not yet effective
S4	Leadership in ps MSP is effective and efficient		
S5	The leadership element of the PS MSP is in an organized civil service system supported by an effective and empathetic communication system		
S6	The ps MSP quality assurance system and mechanism are adequate, both structure, role, and personnel		
S7	The recruitment and selection system for prospective students is structured, effective, and efficient	W3	Student participation in non-academic activities is quite high, but achievements are still lacking
S8	Service to students is good and excellent, both academic and non-academic	W4	The ability of English-speaking students and graduates is still less

S9	High academic performance of PS MSP	W5	Percentage of graduates working in the field which corresponds to his competence is still low (49%)
S10	The waiting period for the first work of PS MSP graduates is short (less than 3 months)		
S11	Ps MSP permanent lecturer with S3 qualification of 90%	W6	Regeneration of permanent lecturers and staff weak education
S12	Ps MSP permanent lecturers who have had lecturer certification as much as 97%	W7	Efforts of PS MSP permanent lecturers in improving positions academics are still lacking
S13	Permanent Professor ps MSP is higher than the IPB benchmark (23%)	W8	Not all education personnel have a degree Bachelor
S14	Lector and Associate Professor at PS MSP by 71%	W9	Number of technicians less laboratories
S15	The ability of PS MSP lecturers in implementing the Tri Dharma College is already good		
S16	The education staff at PS MSP are competent and synergize well with lecturers in the implementation of the Tri Dharma Colleges		
S17	The curriculum is in accordance with the needs and competencies and has considered the relevance and needs of stakeholders	W10	The task load of each course is uneven
S18	The curriculum provides opportunities for students to develop themselves with an		

	orientation towards career and job acquisition		
S19	Structured learning system well		
S20	Conducive academic atmosphere		
S21	The final project of PS MSP students is integrated with research lecturer		
S22	The quality assurance system of the learning process has been recognized, both nationally (ISO 90012008) and international (AUN-QA)		
S23	Organized financing system and structured	W11	Laboratory equipment still lacking
S24	Accountable and transparent financial management	W12	There is no information system for laboratory facilities yet
S24	Adequate lecture facilities		
S26	Reference library materials available		
S27	Laboratory management is good		
S28	Lecturer rooms, lecture rooms, laboratories, libraries, and computer/internet rooms are available according to needs		
S29	Information systems support smooth administration, activities academic and non-academic		

S30	Information systems for education, scientific work, quality assurance, staffing, and finance goes well		
S31	The MSP PS research roadmap is in accordance with its competence	W13	The amount of research in the scheme of international cooperation, still lacking
S32	Lecturer research involves students in completing the final project	W14	The application of research results of PS MSP lecturers in the community is still lacking
S33	Scientific publications of lecturers through accredited scientific journals and international journals continue to increase	W15	Scientific publications of PS MSP lecturers indexed by SCOPUS are still low
S34	The level of service and devotion of PS MSP in answering the needs of the community are quite high	W16	The number of textbooks written by PS lecturers MSP is still lacking
S35	Ability to collaborate on research and community service ps MSP with high domestic institutions		
O1	Many universities have made PS MSP IPB as a <i>benchmark</i> (reference)	T1	The same study program or cognate with PS MSP in Indonesia is increasing and growing
O2	Availability of input from alumni and stakeholders (community, institutions, and the private sector) related to the development policy of the	T2	There is an offer of activities from outside IPB to elements of the PS MSP leadership that

	water resources management study program		require a certain allocation of time, so that it can interfere with the performance of civil servants
O3	There are a number of universities abroad that can be used as a <i>benchmark</i>		
O4	The existence of external audit institutions from the international government / private sector that can help evaluate guarantees quality		
O5	The demand for prospective PS MSP students tends to increase	T3	Prospective regional students prefer to study study program similar in the area
O6	Scholarships for students are available quite a lot, both from the government and the private sector, both for <i>living costs</i> and for educational activities, self-development, and <i>soft skills</i>	T4	The increasing competition between PS MSP IPB graduates and similar PS graduates from other universities and foreign graduates
O7	Availability of a program of student scientific activities, either national as well as international		
O8	Lecturer capacity building and competency development programs are increasing	T5	The existence of a "zero growth" policy by the Government in the recruitment process of lecturers and CPNS education personnel will interfere with the continuity of recruitment of lecturers and staff Educational

O9	The program for developing the qualifications and competencies of education personnel is wide open	T6	The requirements for achieving the academic post of professor (professor) are increasing heavy and tight
O10	Increasing the opportunity to get offers of research funds and writing scientific papers , both from kemeristekdikti and various sources / sponsors, both from within and outside the country	T7	Limited opportunities for publication in internationally reputed journals
O11	Increased offer of participation in seminars/symposia/conferences/ international forums for development of lecturer competencies	T8	Offer of activities from outside IPB to PS MSP lecturers who need allocation specific time
O12	Increased offer of participation in seminars and training for the development of personnel competencies Educational	T9	Competing universities that have highly qualified human resources
O13	Additional lecture materials from various sources can be obtained easily	T10	Enactment of a policy regarding certificates of competence in the world of work
O14	The abundance of learning methods workable		
O15	Grants from the government are available, especially for research and community service	T11	Facilities and infrastructure of the same study program or cognate with ps MSP more good
O16	Availability of funding for the publication of textbooks and scientific articles	T12	The increasing price of materials and tools and maintenance costs

			laboratory equipment
O17	Information technology that is increasing forward and continue to develop		
O18	The number of research and community service grants at the national level	T13	National policies in research budgeting change frequently
O19	Many opportunities for research cooperation with universities abroad		
O20	The number of offers to publish books of scientific works of PS MSP lecturers		

Observing the identification of *strengths*, weaknesses owned by the MSP Department as well as *opportunities* and threats faced in the development of IPB, it is necessary to strive for the formulation of departmental development strategies, through: (1) develop strengths and optimize opportunities, (2) develop strengths to overcome threats, (3) minimize weaknesses to take advantage of opportunities, and (4) minimize weaknesses to avoid threats. The matrix of the msp department's development strategy is presented in Table 2.

Table 2. MSP Department Development Strategy Matrix Based on SWOT Analysis

	Strength (Code: S1, S2, S3, S4, S5, S6, S7, S8, S9, S10)	Weaknesses (Codes: W1, W2, W3, W4, W5, W6, W7, W8, W9, W10, W11, W12)
Opportunity (Codes: O1, O2, O3, O4, O5, O6)	Strategists S-O	W-O Strategy
	Strengthening the KKNi curriculum in all study programs through sharpening learning outcomes that are updated and in sync with course ingredients with <i>problem-based learning</i> methods, and continuing to increase the number of students in lecturer umbrella research accompanied by intense mentoring	Integrating the <i>Problem-Based Learning</i> method into the KKNi curriculum to improve the quality, competitiveness, <i>branding image</i> of graduates and departments, which is accompanied by planned and directed final project activities which are part of the dosen MSP research umbrella
	Improving learning facilities and infrastructure that encourage the relevance of learning outcomes, improving scientific communication (national and international), and mobility of students and lecturers	Increasing the promotional activities of the MSP Department both at the national and international levels by utilizing existing information technology and networks and increasing the number of lecturers and students who carry out mobility abroad
	Improving <i>the branding image</i> of the MSP Department through the promotion and publication of the achievements of the MSP Department, and pushing towards the internationalization of the MSP Department	Improvement of educational, research, and community service facilities and infrastructure
	Increasing cooperation in education, research, and service both nationally and internationally	

Threats	S-T Strategy	W-T Strategy
(Codes: T1, T2, T3, T4, T5, T6, T7, T8)	Strengthening the KKNi curriculum in all study programs through sharpening learning outcomes that are updated and in sync with course ingredients with <i>problem-based learning</i> methods, and continuing to increase the number of students in lecturer umbrella research accompanied by intense mentoring	Strengthening the KKNi curriculum in all study programs through the ui sharpening learning outcomes that are updated and synchronized with the course ingredients with the method <i>problem-based learning</i> , and continue to increase the number of students in the umbrella research of lecturers accompanied by intense mentoring
	Improving <i>the branding image</i> of the MSP Department through improving student <i>soft skills</i> , promoting and publishing the achievements of the MSP Department, and pushing towards the internationalization of the MSP Department	Improvement of change management in facing the dynamics of problems and the demands of the outside community towards universities
	Improvement of the recruitment system for educators and education staff that supports the internationalization and <i>branding image</i> of the MSP Department	Improving the welfare of educators and education staff

MSP Department development strategy directives 2018-2023:

1. Build and improve communication and **collaboration with PS MSP alumni** and related stakeholders in developing PS MSP, especially to keep the PS MSP curriculum *updated* and relevant to the needs of the world of work
2. **Build, maintain, and improve communication and cooperation between** PS MSP and foreign universities that can be used as *benchmarking*,
3. Improving **continuous improvement** efforts in quality assurance of learning processes and educational administration,
4. Promoting **and propaganda of ps MSP** which is programmatic and intensive by prioritizing excellence in excellent student service, high student achievement, high scholarship opportunities, high self-development activities, both national and international levels, and great job opportunities,
5. Encouraging and facilitating **students to achieve scholarships**, both from the government and the private sector,
6. **Rewarding outstanding students**, both nationally and internationally,
7. **Increase cooperation**, both in the fields of education, research, community service, and joint scientific publications, between PS MSP and various institutions / agencies in the field of PS MSP, both government , private, and universities , both domestic and foreign, by involving lecturers and students of PS MSP,
8. **Mincrease the participation of** PS MSP education personnel to improve their qualifications and competencies,
9. Encouraging and facilitating lecturers to participate in capacity and competency development programs, making proposals to obtain research funds, community service , and writing scientific papers, as well as attending seminars/ symposia / conferences international
10. Increasing diversification of learning methods in learning activities

11. PS MSP encourages and facilitates **PS MSP lecturers to make optimal use of grant funds**, both for research, community service, and for publishing textbooks and scientific articles,
12. Increase **the capacity and quality of information systems** in terms of improving administrative services and easy access to scientific information, laboratory management, and promotion of PS MSP,
13. **Encouraging and facilitating PS MSP lecturers to make optimal use of grant funds**, both for research and community service,
14. **Increase and strengthen cooperation** in the field of research and its application for community service with various institutions, both at home and abroad, and
15. **Improving the quality and quantity of scientific publications and textbooks of PS MSP lecturers**, both independently and with partner institutions, both at home and abroad.

3.1. Vision and Mission

Vision:

To become an international standard higher education institution in the field of resource management and tropical water environment as well as determining trends in planning aquatic resource policies for fisheries and marine development that are principled on sustainability and based ecosystem.

Mission :

1. Organizing research-based education in order to produce high-quality human resources in managing resources and tropical aquatic environments,
2. Assessing and developing and disseminating science and technological innovations to manage tropical aquatic resources and environments,
3. Play an active role in fisheries and marine development through the application of science and technology in the management of tropical aquatic resources and environment as well as policy planning management,
4. Providing quality services for the community in solving problems in tropical water resources and environments.

3.2. Department Development Direction

The development direction of the MSP Department is focused on 3 main pillars, namely:

1. Improving the quality of higher education in the field of water management (undergraduate and pascasarjana levels) through the development of an adaptive curriculum to the problem of water resource management at the national, regional and global levels.
2. Improving the quality of higher education governance in good management practices, good procedures, and quality human resources and having good integrity with the principle of *good university governance*.
3. Improving the quality and environment of research and community service within the scope of the MSP Department, especially related to improving the quality of post-graduate level education for both coastal and marine resource management study programs and aquatic resource management study program.

3.3. Departmental Development Strategy

1. Implementing the curriculum and education system based on KKNI (Indonesian National Curriculum Framework) that has been prepared to produce quality graduates who meet the needs of current and future development and are able to compete with graduates of other colleges, both at home and abroad.
2. Build a professional organizational, administrative and financial management system and make optimal use of asset management owned by the MSP Department which includes human resources, equipment and existing facilities and infrastructure, staff expertise, technology and alumni potential.
3. Promoting proactive and intensive cooperation with other institutions, both inside and outside IPB and looking for opportunities for cooperation with foreign institutions to raise funds.
4. Improve *branding image* and planned and directed promotion of all elements of the department towards the internationalization of the MSP Department.

The MSP Department Operational Plan consists of 5 areas presented as follows: (in detail can be seen in Appendix 1)

4.1 Education and Student Affairs

Short Term (2018-2019)

1. The implementation of the curriculum in the S1 strata starting from the 2013-2014 academic year is in line with the KKNI (Indonesian National Curriculum Framework) curriculum with high implementation and relevance between the intended learning outcomes, competencies, and course ingredients that are taught.

2. Increasing the capacity and quality of facilities for lectures, practicums and research.
3. Improvement and guidance of student activities through the empowerment of himpro and improvement of student *soft skills* through curricular and extra-curricular activities.
4. Plan and actively support student research programs in scientific work competitions and writing competitions.
5. Improving the quality and quantity of student participation in the research program of educators as part of triggering the acceleration of the study period.
6. Improving English language skills for students to prepare for global competition.
7. Evaluation of foreign cooperation programs that have been and are being carried out, and formulate new cooperation in the field of education.

Medium Term (2020-2021)

1. The implementation of the curriculum in the S2 and S3 strata starting from the 2015-2016 school year is in line with the KKNi Curriculum (Indonesian National Curriculum Framework) with high implementation and relevance between the intended learning outcomes, competencies, and the ramof the courses they are taught.
2. Increasing the capacity and quality of facilities for lectures, practicums and research.
3. Completion of iso 9001:2008 certification preparation program.
4. Preparation and proposal of the International Accreditation process of the MSP S1 Study Program.
5. Improvement and guidance of student activities through the empowerment of himpro and improvement of student *soft skills* through curricular and extra-curricular activities.

6. Plan and actively support student research programs in scientific work competitions and writing competitions.
7. Improving the quality and quantity of student participation in the research program of educators as part of triggering the acceleration of the study period.
8. Evaluation of foreign cooperation programs that have been and are being carried out, and formulate new cooperation in the field of education.
9. Improving English language skills for students to prepare for global competition.

Long Term (2022-2023)

1. The implementation of the curriculum in the Undergraduate and Postgraduate strata is in line with the KKNi (Indonesian National Curriculum Framework) curriculum with high implementation and relevance between the intended learning outcomes, competencies, and course ingredients that are taught.
2. Improving the capacity of bags and the quality of facilities for lectures, practicums and research.
3. Improvement of the student recruitment system and promotion system by cooperating with alumni and student networks, and through cooperation with the central and local governments.
4. Improvement and development of student activities through himpro empowerment and improvement of student *soft skills* through curricular and extra-curricular activities.
5. Plan and actively support student research programs in scientific work competitions and writing competitions.
6. Improving the quality and quantity of student participation in the research program of educators as part of triggering the acceleration of the study period.

7. The establishment of *a Production House* in an effort to produce lecture book products or practicum guides and scientific journals.
8. Improving English language skills for students to prepare for global competition.
9. Development of educational cooperation with foreign universities either in the form of sandwich homeworkograms, *twinning programs* or *dual-degree programs*.

4.2 Field of Research and Community Service

Short Term (2018-2019)

1. Create an MSP research *roadmap* until 2018 based on the Inventory and evaluation of research results that have been produced by educators and students as a basis for evaluating umbrella research that has been formulated previously.
2. Development of an incentive system for educators who enrich lecture materials with their research results.
3. Increased dissemination activities for the research results of students and educators through various activities such as seminars, symposiums, workshops or in the form of publishing scientific journals in Indonesian and English.
4. Fostering the quality of research and the ability to write English-language scientific journals for educators.
5. Inventory and evaluation of individual cooperation that has been built by individual educators to improve institutional cooperation.

Medium Term (2020-2021)

1. Development of an incentive system for educators who enrich lecture materials with their research results.
2. Increased dissemination activities of research results of students and educators through various activities such as seminars,

symposiums, workshops or in the form of publishing scientific journals in Indonesian and English.

3. Fostering the quality of research and the ability to write English-language scientific journals for educators.

Long Term (2022-2023)

1. Increased dissemination activities of research results of students and educators through various activities such as seminars, symposia, workshops or in the form of publishing scientific journals in Indonesian and English.
2. Establish a group of educators who are tasked with capturing information and preparing programs to obtain *grants*, both at the national and international levels.
3. Manufacture of mobile cars for the analysis of the quality of the aquatic environment and to provide free services for fish farmers who experience water quality problems in the fish farming production process.
4. Increasing the service capacity of testing laboratories for the community and ensuring service quality through KAN accreditation through the fulfillment of ISO / IEC 17025: 2005.

4.3 Areas of Capacity Building and Improvement

Short Term (2018-2019)

1. Improving the function of alumni in improving the curriculum and professional cooperation.

Medium Term (2020-2021)

1. Improving the function of alumni in improving the curriculum and professional cooperation.

2. Promotion *by design* to bring out MSP educators to become national and international experts in their fields.

Long Term (2022-2023)

1. Improving the function of alumni in improving the curriculum and professional cooperation.
2. Promotion *by design* to bring out MSP educators to become national and international experts in their fields.
3. Planning the career development of educators and education staff, both in the fields of education, research and bureaucracy, as well as looking for opportunities for sending schools abroad.

4.4 Welfare Improvement Field

Short Term (2018-2019)

1. Development of an incentive system for education personnel who want to improve their education level.

Medium Term (2020-2021)

1. Development of an incentive system for education personnel who want to improve their education level.
2. Development of funds through services and consultancy from the department, for example in the form of trainings, *summer / winter course offers, edu-tourisms, etc.*
3. Development of health insurance in the form of outpatient insurance for educators and education staff.

Long Term (2022-2023)

1. Development of funds through services and consultancy from the department, for example in the form of trainings, *summer / winter course offers, edu-tourisms, etc.*

2. Improving the standard of incentives for education, research and community empowerment.

4.5 Management System Strengthening Field

Short Term (2018-2019)

1. Strengthening administrative governance for Undergraduate and Post-Graduate programs through the creation of the necessary SOPs.
2. Strengthening of databases and Information Systems of the MSP Department.

Medium Term (2020-2021)

1. Strengthening administrative governance for Undergraduate and Post-Graduate programs through the creation of the necessary SOPs.
2. Strengthening of databases and Information Systems of the MSP Department.
3. Improvement of the education administration evaluation system, both at the S1 and S2 / S3 levels.

Long Term (2022-2023)

1. Evaluation of the quality goals of departments that are integrated between divisions.

The work programs outlined above are made as applicable as possible. However, the success of achieving each program will only be achieved through the cooperation of all parties within the MSP Department with the spirit of togetherness and nita developing a sincere department.

By asking for the blessings of Allah SWT, I am happy so that the programs mentioned above can be carried out properly, and hopefully the implementation of it will be carried out making a positive and significant contribution in spurring IPB to become a *Research Based University, World Class University (WCU) and Entrepreneurial University*.



Appendix 1. Operational Plan of the Department of Aquatic Resources Management

No	Program	Sub-program	Implementation (Year)				
			19	20	21	22	23
1	Education and Student Affairs n	The implementation of the curriculum in the S1 strata starting from the 2013-2014 academic year is in line with the KKNi (Indonesian National Curriculum Framework) curriculum with high implementation and relevance between the intended learning outcomes, competencies, and course ingredients that are taught	.	.	.	.	.
		The implementation of the curriculum in the S2 and S3 strata starting from the 2015-2016 school year is in line with the KKNi Curriculum (Indonesian National Curriculum Framework) with high implementation and relevance between the intended learning outcomes, competencies, and course ingredients that are taught	.	.	.	.	.
		Capacity building and quality of facilities for lectures, practicum and research	.	.	.	.	.

		Improvement and coaching of student activities through himpro empowerment and improvement of student <i>soft skills</i> through curricular and extra-curricular activities	.	.	.	.	.
		Planning and actively supporting student research programs in scientific work competitions and writing competitions	.	.	.	.	.
		Improving the quality and quantity of student participation in the educator research program as part of triggering the acceleration of the study period	.	.	.	.	.
		Improving English language skills for students to prepare for global competition	.	.	.	.	.
		Completion of ISO 9001:2008 certification preparation program		.	.		
		Preparation and proposal of the International Accreditation process for the MSP S1 Study Program		.	.		

		Evaluation of foreign cooperation programs that have been and are being carried out, and formulate new cooperation in the field of education	.	.	.		
		Improvement of the student recruitment system and promotion system by collaborating with alumni and student networks, and through cooperation with the central and local governments				.	.
		The establishment of a <i>Production House</i> in an effort to produce lecture book products or practicum guides and scientific journals				.	.
		Development of educational cooperation with foreign universities either in the form of sandwich programs, <i>twinning programs</i> or <i>dual-degree program</i>				.	.
2	Field of Research and Community Service	Create an MSP research <i>roadmap</i> until 2018 based on inventory and evaluation of research results that have been generated by power	.				

	educators and students as a basis for evaluating umbrella research that has been formulated previously					
	Development of an incentive system for educators who enrich lecture materials with the results of their research	.	.	.		
	Increased dissemination activities of research results of students and educators through various activities such as seminars, symposia, workshops or in the form of publishing scientific journals in Indonesian and English	.	.	.	.	.
	Fostering the quality of research and the ability to write English-language scientific journals for educators	.	.	.		
	Inventory and evaluation of individual cooperation that has been built by individual educators to improve institutional cooperation	.				

		Establish a group of educators tasked with capturing information and preparing programs to obtain <i>grants</i> , both at the national and international levels				.	.
		Manufacture of mobile cars for analysis of the quality of the aquatic environment and to provide free services for fish farmers who experience water quality problems in the fish farming production process				.	.
		Increasing the service capacity of testing laboratories for the community and ensuring service quality through KAN accreditation through the fulfillment of ISO / IEC 17025: 2005				.	.
3	Areas of Capacity Building and Improvement	Improving the function of alumni in improving the curriculum and professional cooperation	.	.	.	.	.
		Promotion <i>by design</i> to bring out MSP educators to become national experts and		.	.	.	.

		international in the field					
		Planning the career development of educators and education staff, both in the fields of education, research and bureaucracy, as well as looking for overseas school delivery opportunities				.	.
4	Welfare Improvement Field	Development of an incentive system for support workers who want to improve their education level	.	.	.		
		Development of funds through services and consultancy from departments, for example in the form of trainings, <i>summer / winter</i> course offers, <i>edu-tourisms</i> , etc.		.	.	.	.
		Development of health insurance in the form of outpatient insurance for educators and support staff		.	.	.	.
		Improving the standard of incentives for education, research and community empowerment				.	.

5	Management System Strengthening Field	Strengthening administrative governance for Undergraduate and Postgraduate programs through the creation of the necessary SOPs	.	.	.		
		Strengthening the database and Information System of the MSP Department	.	.	.		
		Improvement of the education administration evaluation system , both S1 and S2 / S3 levels		.	.		
		Evaluation of departmental quality goals that are integrated between Divisions				.	.