

Experts' Report
for the Evaluation of the
World Fisheries University Pilot Programme
operated by
Pukyong National University
Busan, South Korea



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I. Executive Summary of the Experts' Findings

General Observations and Conclusions

The experts appreciate the general vision underlying the WFU Pilot Programme and the future World Fisheries University. The programme's prime mission of building capacity in the fisheries sectors of developing countries has the experts' full support.

The experts are impressed by what has already been achieved, considering that the pilot programme was launched within a relatively short period of time following the joint decision of the FAO and the Korean government to start the first phase of the project.

The experts especially appreciate the state of implementation of the curriculum, the expertise of the teaching faculty involved as well as the quality of the facilities and the technical staff supporting the programme. A further asset of the programme is clearly the impressive fisheries science environment at Pukyong National University which provides the students of the programme with an exceptional variety of possibilities to get involved into actual research.

The on-site talks have clearly revealed to the experts that the central **challenge** of the pilot programme lies in the very **diverse educational, national, professional and cultural backgrounds** of its students, at least some of whom lacked even basic knowledge in Fisheries Science, Biology and other relevant disciplines at the time of their enrolment. For some, language barriers also turned out to be a significant obstacle to their learning success.

By and large, these challenges appear to have been tackled successfully, not least due to the strong personal commitment of the teaching faculty to the cause of the programme. Only weeks away from their graduation, the students interviewed on site displayed a high level of satisfaction with the programme.

In spite of that, the experts find that the programme's admission policy bears inherent risks. The diversity of entrance qualifications resulted in a high variation of student performance: while some students excelled, others struggled to meet course requirements. For the sake of not leaving any student behind, the programme fails to provide the level of in-depth knowledge typically associated with a Master's degree course.

The experts are aware that the first student cohort was recruited under high time pressure, which may have had a certain impact on the selection and admission decisions. For the future strategic development of the pilot programme (and the WFU as a whole), the experts see two alternative pathways, depending on which of the two goals prevails: **allowing for student diversity** or **providing an educational qualification at Master's level**.

- a) *Students without an academic or practical background in Fisheries Science continue to be admitted to fulfill the programme's underlying political agenda.*

In this case, the experts strongly recommend developing a **more flexible curriculum** which accounts for the students' different knowledge and qualification levels. Extending the programme by a fourth semester (mandatory or optional) may be a viable solution.

b) *The academic level of the programme is significantly raised.*

If this goal is pursued, **admission should be restricted** to students with a background in Fisheries Science (Bachelor's degree or equivalent). However, the FAO and the Korean government should be aware that such a strategy would most likely reduce the size of the programme's target group significantly, as many developing countries lack professionals with such specific qualifications. Hence, a stricter admission policy may not be in line with the prime mission of the programme.

Additional Recommendations of the Expert Panel

The following recommendations address a variety of aspects that the experts consider vital to the overall educational quality of the pilot programme and a possible future World Fisheries University. To what extent the responsible parties choose to follow these recommendations may in some cases depend on the chosen programme strategy (cf. remarks above). This applies particularly to the recommendations concerning the teaching contents and curriculum.

Infrastructure and Resources

- More **funding is required to provide for an adequate research infrastructure**, particularly laboratory facilities. Otherwise it will not be possible for students to work on their thesis projects in order to obtain a qualification at Master's level, especially within the natural science majors (e.g. experiments, field trips, material and consumables).
- Students should have easier **access to relevant literature**, especially to online journals in related research fields.

Faculty and Staff

- The experts regret that upon graduation of the first student cohort, the contracts of both the international visiting professors and the programme's administrative staff will terminate. Even though they may re-apply for their positions later in 2019, the programme is very likely to suffer severely from this break in continuity, as future students won't be able to benefit from the expertise and experience of long-term staff that is familiar with the special academic and administrative requirements of the programme. The experts would like to emphasize that sustainable human resources are of vital importance for the quality and long-term success of any study programme. In the future development of WFU, particular attention should therefore be paid to designing a **strategy for sustainable human resource management**.
- The **teaching faculty should gain more influence** on the contents of the programme. Student feedback should also be considered in the further development and enhancement of the curriculum.

Intended Learning Outcomes

- **The intended learning outcomes** of the WFU pilot programme should be **described in more detail** on the website, in the Academic Handbook or in other public sources of information. In particular, the qualification profile of the graduates should become more palpable in the descriptions.

The **course syllabi** should also outline the intended outcomes of each educational unit more clearly. At present, the syllabi focus mainly on the course contents and do not clearly separate the teaching input given from the intended learning outcomes and imparted competences.

Teaching Methods, Contents and Curriculum

- **Research methods should be given more weight within the curriculum.** Ideally, methods training should be repeatedly offered across the entire duration of the programme (instead of short intensive classes at the very start of the programme or shortly prior to the thesis).
- The **“applied” element of the programme should be strengthened.** For example, there should be more excursions, visits to aquafarms, networking and internship opportunities; more intense site visits and field work. Students should be more strongly involved in “applied science” projects.
- **Optional beginners’ classes** should be offered to those students who lack basic knowledge in key areas such as the fundamentals of Biology or English, especially if the programme coordinators choose to maintain the diversity of the student body. In that case, bridging classes are highly recommended in order to harmonize the students’ levels of knowledge and capacity in Fisheries Science.
- The **Korean language classes** should be maintained, but should be reduced in scope.
- Some **mandatory courses should be turned into electives**, as they are not relevant for all three majors (as e.g. Fisheries Economics).
- The **Social Science major** should be either renamed or shifted in focus. At present, the majority of topics covered belong to the field of Bio-Economics rather than Social Science.

Transparency

- The **student selection procedure is not fully transparent yet.** Student admission and selection should be based on clear, binding and published rules and regulations.
- An official **appeals and complaints policy** should be established.

Student Support and Advisory Services

- Students should receive **more support and guidance as regards their future careers**. For instance, they should be assisted in identifying and contacting potential employers, relevant organizations and networks, including the FAO offices in their home countries. Annual career days could also be helpful.
- **Advisory services for students should be further improved**, especially regarding non-academic matters (social aspects, insurance, housing etc.). The **Academic Handbook** should also be extended to include more detailed information on such aspects.

II. Evaluation Report of the Expert Panel

1. Introduction: Purpose, Design and Context of the Assessment Procedure

The **World Fisheries University Pilot Programme** (hereinafter referred to as: WFU Pilot Programme) is part of a joint initiative of the Korean government and the Food and Agriculture Organization (FAO) of the United Nations. The ultimate goal of this long-term project is to establish a new, UN-affiliated higher education institution, the **World Fisheries University**, with the prime mission of providing a post-graduate education in Fisheries Science and related disciplines to students from developing countries. In doing so, the WFU is meant to contribute substantially to capacity building and, as a result, to alleviating hunger and poverty in those countries.

The final decision on the establishment of the WFU depends on the overall success of the WFU Pilot Programme, which comprises a Master's programme (or "Graduate School", as it is also called), a Lecture Series and a Certificate Programme. The Master's programme enrolled a first cohort of 30 students from various African, Asian and Latin American countries in September 2017. The programme is currently operated by **Pukyong National University** (hereinafter referred to as: PKNU) in Busan/South Korea, which has been running an international Master's programme in Fisheries Science for many years and therefore provides a favourable environment for the purpose of the WFU Pilot Programme, both in terms of infrastructure and human resources. In case FAO decides in favour of continuing the WFU project beyond the pilot phase, new premises (including lab facilities) will be erected for the new university on the PKNU campus.

The first students are expected to graduate from the Master's programme in February 2019. In September 2019, a second cohort is going to be enrolled.

In order to evaluate the outcomes and the overall quality of the WFU Pilot Programme, the Central Evaluation and Accreditation Agency Hanover (ZEVA) was commissioned with conducting an external peer review based on the *Standards and Guidelines for Quality Assurance in the European Higher Education Area* (ESG). By request of the contracting authority, the focus of the evaluation lay exclusively on the Master's programme. For the sake of completeness, the Lecture Series and the Certificate Programme were touched upon in the self-report, but were not subject to the assessment.

As stipulated in the ESG, the review procedure involved a desktop validation of a self-report as well as a three-day site visit of the expert panel and the ZEVA project coordinator at PKNU in Busan in November 2018. In the course of the site visit, the panel members held separate talks with the Dean and the Graduate School Committee of the WFU Pilot Programme, the teaching faculty and students.

The assessment framework applied is fundamentally based on Part 1 of the ESG. It is laid out in the "ZEVA Manual for the External Assessment of Study Programmes", which served as a central reference document for both the experts and the programme coordinators.

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II Evaluation Report of the Expert Panel

Introduction: Purpose, Design and Context of the Assessment Procedure

The experts would like to thank the representatives of the WFU Pilot Programme, the students as well as the faculty and staff of Pukyong National University for the open and friendly atmosphere and the fruitful discussions throughout the site visit. They hope that their findings and recommendations will be helpful to those in charge of the programme and will positively contribute to its future development.

2. Experts' Appraisal of the WFU Pilot Programme

2.1 Mission, Vision and Intended Learning Outcomes

The mission of the WFU Pilot Programme is described on the website of Pukyong National University and in the Academic Handbook for the Programme.

According to the Handbook, the central learning objectives of the programme are

- *to educate fisheries specialists in a variety of subjects in fisheries sciences including Aquaculture Technology, Fisheries Resource Management, and Social Science.*
- *to contribute to the development of the fisheries industries in participating countries.*
- *to facilitate cooperative relationships and expand networks in the field of fisheries science.*

The underlying vision of the programme is summarized as follows: "...securing human well-being and improving the welfare of poor and disadvantaged communities in developing countries, through providing overseas aid aimed at the development of human resources, especially in the field of fisheries and aquaculture" (cf. Academic Handbook, p. 3).

The intended learning outcomes of the educational units are described in the course syllabi. The complete course catalogue was submitted to the expert panel as an annex to the self-report.

Experts' Appraisal

The experts appreciate the general vision underlying the WFU Pilot Programme and the future World Fisheries University. The programme's prime mission of building capacity in the fisheries sectors of developing countries becomes immediately palpable in the programme descriptions and has the experts' full support.

Nevertheless, the experts find that the intended learning outcomes of the programme should be described in more detail. In all sources of information available to the experts, the qualification profile of the graduates remains largely intangible. The descriptions focus mostly on the contents of the programme rather than the competences and skills imparted or the career prospects that the programme opens up. The experts are aware that this vagueness is rooted in the diversity of the target group: as the programme was designed to address students from a large variety of academic and professional backgrounds (cf. Chapter 2.2), a further sharpening of the programme profile might not serve its immediate interest.

Regardless of that, the experts recommend describing the intended learning outcomes of the programme in more detail on the website, in the Academic Handbook and other publicly available sources. The focus of the descriptions should be on the intended learning outcomes and imparted qualifications, rather than the teaching input provided. It may be helpful in this context to refer to existing qualifications frameworks or learning taxonomies, as e.g. Bloom's taxonomy of learning domains.

The same recommendation applies to the level of the educational units: the course syllabi should outline the intended outcomes of each unit more clearly. At present, the syllabi focus mainly on the course contents and do not clearly separate the teaching input/imparted knowledge from the intended learning outcomes.

2.2 Contents, Structure and Overall Concept

Student Selection and Admission

As already mentioned above, the WFU Pilot Programme is open to students from developing countries with a professional and/or academic background in the fisheries sector. Applicants must hold a Bachelor's degree or equivalent and must possess sufficient proficiency in spoken and written English. On principle, the programme can enroll a maximum of 30 students per year.

To the experts' knowledge, there are currently no official rules or regulations regarding the process of student selection and admission. General admission guidelines exist and are published on the PKNU website, but contain only the most basic information on the application and selection process and on the required entrance qualifications.

In the course of the on-site talks in Busan the experts learned that the recruitment of the first cohort happened under high time pressure within a period of only four months. In order to identify possible candidates, both FAO and the Korean government made use of their extensive global networks. These joint efforts resulted in a total of more than 160 applications. A first pre-selection was carried out by means of face-to-face interviews with government officials in the applicants' home countries. Based on the recommendations of the FAO member states, the WFU Graduate School Committee took the final admission decision. The committee consists of four members of faculty of Pukyong National University.

In the future, the admission process will be modified: the interviews will be conducted by WFU staff instead of the public authorities of the member states.

Curriculum

The on-site talks have revealed that the design of the curriculum has been (and still is) very strongly influenced by its funding bodies. Even minor changes to the curriculum require the prior consent of the FAO and the Korean governmental authorities.

The programme comprises three semesters (ca. 18 months). The final semester is entirely dedicated to the Master's thesis and is therefore free of additional classes. In total, all students must complete a minimum of 24 Korean credit hours, which equals about 40 ECTS credit points (ca. 20 ECTS credit points per semester). The number of credit hours calculated for the final Master's thesis is not clearly stipulated, but considering the time reserved for the thesis project, an additional student workload of about 20-30 ECTS credits (12-18 Korean credit hours) may reasonably be assumed for this part of the programme.

The curriculum is divided into three elective subjects or “majors”: Aquaculture Technology, Fisheries Resource Management and Social Science. Applicants to the programme have to indicate their preferred major subject as part of their application. On principle, an equal distribution of students across the three majors is aimed at, i.e. there is a maximum of 10 places for each major.

The programme starts with three compulsory courses (one from each elective area) that all students have to study during the first semester: *Aquaculture Systems and Management*, *Fisheries Stock Assessment* and *Fisheries Economics and Trade*. In addition to that, all students take an introductory class on *Thesis Research Methodologies* and another compulsory unit that depends on their chosen major.

Also, the students receive an extra-curricular intensive course in Korean language which comprised 90 hours over a period of nine weeks.

In the second semester, the unit on Fisheries Management and Governance is compulsory across all majors. Furthermore, students take four classes in their chosen major (2-3 mandatory units, 1-2 electives). One additional credit point is granted for research in the context of the Master's thesis, which includes the final oral defense. Apart from this exception, three credit hours (= 5 ECTS credit points) are awarded upon successful completion of each course unit.

The following chart provides a survey of the curriculum:

Major	Aquaculture Technology		Fisheries Resource Management			Social Science	
Research	Thesis Research Methodologies (1 st Sem., 3 CP)						
	Thesis Research (3 rd Sem., 1 CP)						
Compulsory Courses	Aquaculture	Systems	Aquaculture	Systems	Aquaculture	Systems	
1st Sem.	and Management		and Management		and Management		
(3 CP)							
	Fisheries	Economics	Fisheries	Economics	Fisheries	Economics	
	and Trade		and Trade		and Trade		
	Fisheries	Stock	Fisheries	Stock	Fisheries	Stock	
	assessment	As-	assessment	As-	assessment	As-	
	Finfish Aquaculture		Principle of Inland Fish-		Small Scale and sub-		
			eries		sistence Fisheries		

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Compulsory Courses 2nd Sem. (3 CP)	Fisheries Management and Governance	Fisheries Management and Governance	Fisheries Management and Governance
	Crustean and Molluscan Aquaculture	Fisheries Technology and Operation	Blue Growth and Economy
	Seafood Diseases and Safety	Climate Change and Impacts on Fisheries	
Elective Courses 2nd Semester (1 out of 3/ 2 out of 4)	Fisheries Technology and Operation	Crustean and Molluscan Aquaculture	Fisheries Technology and Operation
	Climate Change and Impacts on Fisheries	Seafood Diseases and Safety	Crustean and Molluscan Aquaculture
	Blue Growth and Economy	Blue Growth and Economy	Seafood Diseases and Safety
			Climate Change and Impacts on Fisheries

Chart 1: Survey of the Curriculum

Experts' Appraisal

Based on the on-site talks with the students and faculty of the WFU Pilot Programme the experts have identified the diversity of the students as both the greatest asset and the biggest inherent challenge of the programme.

Firstly, it became obvious during the on-site talks that the students' entrance qualifications varied strongly, both in terms of language proficiency and in terms of academic and professional backgrounds. Some of the students hold Bachelor's degrees in subject disciplines that are not or only remotely related to Fisheries Science (as e.g. Law), or have worked outside the fisheries sector before their enrolment, as, for example, in Forestry. Hence, they were more or less unfamiliar with the fundamentals of Fisheries Science upon entering the (graduate) programme. For others, language barriers turned out to be a significant obstacle to their learning success. Clear entrance requirements as regards language proficiency, as e.g. minimum scores in TOEFL or IELTS, have not been defined.

From the experts' point of view, the generous admission policy pursued so far bears a high risk of compromising academic standards. The on-site talks have clearly shown that the diversity of entrance qualifications resulted in a high variation of student performance: while some students excelled, others struggled to meet course requirements. For the sake of not leaving any student behind, the programme fails to provide the level of in-depth knowledge typically associated with a Master's degree course. Instead, courses often remain at a rather basic and superficial level, even though the course contents as such are in line with what is usually expected from a Master's programme in the discipline.

This impression was fully confirmed by the majority of the teaching faculty interviewed in Busan. The members of faculty also took a critical view at the relatively short programme duration of only 18 months, which sets a fairly rigid and pressurizing learning pace. Therefore, they were strongly in favor of extending the programme by at least one semester. Some of the students also shared this opinion, reporting that the research elements of the programme (methodological training and thesis projects) had particularly suffered from the time constraints: basic research methods (as e.g. statistics methods) are taught, but only very superficially, and the academic calendar does not always warrant sufficient time for finishing lab experiments in connection with the thesis.

The experts are aware that the first student cohort was recruited under high time pressure, which may have had a certain impact on the selection and admission decisions. For the future strategic development of the pilot programme (and the WFU as a whole), the experts see two alternative pathways, depending on which of the two goals prevails: allowing for student diversity or providing an educational qualification at Master's level.

- a) *Students without an academic or practical background in Fisheries Science continue to be admitted to fulfill the programme's underlying political agenda.*

In this case, the experts strongly recommend developing a **more flexible curriculum** which accounts for the students' different knowledge and qualification levels. Extending the programme by a fourth semester (mandatory or optional) may be a viable solution. Another option would be to create alternative pathways through the programme which are tailored more specifically to the needs of the students, as e.g. by offering bridging courses or introducing different modules for beginners and advanced learners during the starting phase of the programme.

- b) *The academic level of the programme is significantly raised.*

If this goal is pursued, **admission should be restricted** to students with a background in Fisheries Science (Bachelor's degree or equivalent). However, the FAO and the Korean government should be aware that such a strategy would most likely reduce the size of the programme's target group significantly, as many developing countries lack professionals with such specific qualifications. Hence, a stricter admission policy may not be in line with the prime mission of the programme.

Regardless of the strategic decision taken, the experts strongly recommend increasing the transparency of the student selection process. Student admission and selection should be

based on clear, binding and published rules and regulations which clarify the exact entrance requirements. If possible, the requirements regarding foreign language proficiency should be more clearly defined, as e.g. by requesting minimum scores in TOEFL or other standard foreign language tests from non-native speakers of English.

In addition, applications from women should be more strongly encouraged and supported in the future. As yet, only five female students have been enrolled. Concerted action should be taken to increase this low percentage.

The experts appreciate the decision to involve the teaching faculty more intensely into the selection of students. Academic considerations should gain more weight in this key process in comparison to political ones. The same applies to the aspect of curriculum design: the experts fully share the faculty's view that those who implement and teach the programme should have a significant impact on its contents and structure. Generally, FAO and the Korean government should grant more academic freedom to the faculty of PKNU and to the faculty of a future World Fisheries University.

By and large, the experts find that the curriculum is adequate for a Master's programme in this subject discipline. With a view to the wide target group they also support the decision to divide the curriculum into three elective majors with a technical, managerial or socio-economic focus, respectively.

However, based on the feedback provided by the different stakeholders during the on-site talks, the experts would like to make a few additional recommendations regarding the further development of the curriculum. To what extent the responsible parties choose to follow these recommendations may depend on the future strategy chosen for the programme (cf. remarks above).

- **Research methods should be given more weight within the curriculum.** Ideally, methods training should be repeatedly offered across the entire duration of the programme (instead of short intensive classes at the very start of the programme, as currently practiced).
- **Optional beginners' classes** should be offered to those students who lack basic knowledge in key areas such as the fundamentals of Biology or English, especially if the programme coordinators choose to maintain the diversity of the student body. In that case, bridging classes are highly recommended in order to harmonize the students' levels of knowledge and capacity in Fisheries Science.
- The extracurricular **Korean language classes** should be maintained, but should be reduced in scope. In the course of the site visit, the students reported unanimously that the course had consumed too much of their time for the overall benefit it had had.
- Some **mandatory courses could be turned into electives**, as they are not equally relevant for all three majors. This applies, for example, to the course in Fisheries Economics and Trade. This particular unit could also be split into two, as it covers a very broad spectrum of topics. Generally, the pool of elective subjects would benefit from further extension, provided the necessary human resources are available.

- The **Social Science major** should be either renamed or shifted in focus. At present, the majority of topics covered belong to the field of Bio-Economics rather than Social Science.

2.3 Human Resources

The teaching faculty of the WFU pilot programme consists of nine full-time professors of Pukyong National University and three visiting professors from Canada, the USA and Bangladesh (one responsible person for each of the three elective majors). The CVs of all professors involved were submitted to the experts as an annex to the self-report.

As a general rule, each student on the programme was assigned a personal supervisor/mentor from among the teaching faculty to provide close guidance and support in all academic matters. Each visiting professor tended to five students, while all others were supervised by professors of PKNU. Staff members of the Korean National Institute of Fisheries Science acted as co-advisors to the students. In addition, a total of seven staff was hired for the administrative support of the programme.

As the experts learned during the site visit in Busan, both the visiting professors and the administrative staff were hired on a temporary basis, i.e. for the duration of the pilot programme only. Upon graduation of the first student cohort in February 2019, all contracts will terminate, and a new staff recruitment process will have to be initiated in preparation for the start of the second cohort in September 2019.

Experts' Appraisal

Based on the documents submitted and the outcomes of the on-site talks, the experts have no doubt that all faculty involved in the WFU pilot programme possess excellent academic and professional qualifications from which the students benefit enormously. The mixed national backgrounds of the professors fit in very well with the general international profile of the programme. Of course, this internationality bears its problems, too: for instance, the students reported that language barriers often hampered communication with their supervisors. Due to a large number of advisees from other programmes, the professors of PKNU did not always have sufficient time capacities to tend to the needs of the WFU students to a satisfying degree. Nevertheless, the experts' overall impression is that the teaching and supervision processes generally worked quite well, not least due to the high commitment and efficient teamwork of the faculty and a highly qualified and motivated administrative staff.

The greatest problem that the experts see regarding the human resources of the programme is clearly the current lack in sustainability. The experts strongly regret that upon graduation of the first student cohort, the contracts of both the international visiting professors and the programme's administrative staff will terminate. Even though they may re-apply for their positions later in 2019, the programme is very likely to suffer severely from this break in continuity, as future students won't be able to benefit from the expertise and experience of long-term

staff that is familiar with the very special academic and administrative requirements of the programme. The experts would like to emphasize that sustainable human resources are of vital importance for the quality and long-term success of any study programme. In the future development of WFU, particular attention should therefore be paid to designing a strategy for sustainable human resource management. This strategy should not only aim at securing a sufficient basis of academic expertise for the programme, but also at recruiting and binding excellent administrative staff.

2.4 Infrastructure, Resources and Student Support

For the first ten years, the financial funding of the WFU project will be jointly secured by the Korean Ministry of Oceans and Fisheries and the city of Busan. Full scholarships were given to all students of the pilot programme, which included a monthly support of 550 \$ per person as well as the reimbursement of traveling expenses. In addition, all students were guaranteed free board and lodging in the dormitories on campus.

A separate building was provided for the WFU pilot programme on the PKNU campus. The building is used for teaching purposes, but also houses the offices of the visiting professors and the administrative staff.

In addition to that, the buildings and labs of the College of Fisheries Sciences at PKNU were open to the students and faculty of the WFU pilot programme. During their visit in Busan the experts were given an extensive tour of the PKNU campus, particularly the Fisheries Science departments.

The WFU students have full access to the PKNU library and to the computer centre.

For support in all non-academic matters, the students can approach an administrative officer. The academic supervisors also provide additional help wherever they can. A number of measures were taken to help students settle in and strengthen their group spirit, as e.g. field trips to cultural heritage sites or a Sports Day.

In line with the general policy of PKNU, a Special Support Committee has been set up for the support of students with disabilities.

Experts' Appraisal

The experts appreciate the generous financial support provided to all students of the WFU pilot programme which allows them to concentrate exclusively on their studies during their time in Korea.

During their guided tour of the campus, the experts got the general impression that PKNU provides an excellent environment for the pilot programme. The university possesses rich experience in the field of Fisheries Science which the students can benefit from and disposes of an excellent research infrastructure and facilities for the needs and purposes of the programme.

In spite of this very positive general impression, the on-site talks have clearly revealed that the pilot programme has so far lacked sufficient funding for research purposes. In particular, both the visiting professors and the students see the need for an adequate lab infrastructure (including materials, equipment and consumables) that primarily serves the needs of the WFU students and is headed by the WFU faculty. Without such lab facilities, students will not have sufficient opportunity to conduct experiments, as e.g. in the context of their Master's projects. This applies especially to those students enrolled in the Aquaculture Technology major. Even though, on principle, the laboratories on campus are open to the WFU students, this option has not been sufficiently utilized and does not appear sustainable. At the initiative of the visiting professors, extra funding was provided for a new lab that is already in use, but a further expansion will be necessary in this realm to enable the students to reach their qualification goals.

Sufficient financial means should also be provided for research-related field trips and excursions.

According to the students, another problematic aspect in the realm of resources is access to literature. Basic sources are available in print at the PKNU library, but mostly cannot be borrowed. Hence, students often end up having to buy the books they need. The experts recommend providing for an easier access at least to the most central reference literature. Especially, student access to online journals in the relevant areas should be significantly improved.

During the on-site talks, the students also expressed the wish for more support and guidance regarding their future careers. To date, the programme offers no career service, and no contact person has been named who students could approach about such questions. The experts therefore recommend assisting students more intensely in identifying and contacting potential employers as well as relevant organizations and networks, including the FAO offices in their home countries. Another helpful measure could be annual career days to which representatives of possible employers may be invited as guest speakers.

Furthermore, some of the students claimed that they had been ill-informed about central administrative issues prior to their arrival in South Korea, including insurance, housing conditions at the dorm and other social aspects. Therefore, the experts recommend further enhancing the information provided to students. This includes a revision and amendment of the Academic Handbook as the prime source of general information for students.

2.5 Methods of Teaching and Student Assessment

As already indicated above, the didactic approach of the WFU pilot programme is marked by a relatively high teaching input (of up to 4-5 in-class hours per day) and a tightly knit calendar that dictates a rigid learning pace. Classes usually include lectures as well as group discussions, case studies and student presentations (individually or in groups).

PKNU has released specific academic regulations for the WFU Pilot Programme, including regulations for student assessment. This document was submitted to the experts as part of the self-report.

In each course, a variety of assessment forms is applied, including quizzes, written exams, reports or multiple choice questions. In addition to the final examination there are usually mid-term assessments and further assignments spread across the entire semester. Also, the regulations of PKNU stipulate that students must pass a comprehensive examination which covers contents from all three major subjects. The comprehensive exam can be taken as soon as 24 Korean credits have been acquired, i.e. as soon as all classes have been successfully absolved.

Wherever possible, students were encouraged to publish their research results. Some papers have already been accepted by conferences.

In the course of the site visit, the experts were provided with an extensive compilation of written tests, assignments and papers from the past 18 months. In this way they received a good overview of the assessment system and got further insight into the educational level of the programme.

Experts' Appraisal

Based on what they saw and heard in the course of the site visit, the experts conclude that the methods of teaching and student assessment applied in the WFU pilot programme are, by and large, appropriate for an educational programme at Master's level. Each course combines a variety of assessment forms which address different skills and competences, and teachers strongly encourage critical discussion and interaction in class.

The experts agree with the students' opinion that a comprehensive examination at the end of the second year is not actually necessary, as students have to undergo assessment to receive credits for each educational unit. Hence, there seems to be no plausible didactic reason for an additional final exam that covers nothing beyond what has been assessed before. Considering the high pace of the programme, the time required for exam preparation would be more wisely spent on the thesis project or methodic training.

If the programme aims at imparting advanced research skills (which is apparently the case), lab classes should gain more weight as compared to lecture/seminar formats. Students should have more opportunity to conduct applied research, especially in preparation for their final thesis. To this end, it would also be a good idea to offer more excursions and site visits (as, for example, to aquafarms), as well as more opportunities for field work, involvement in projects and internships.

2.6 Quality Assurance

Due to its current status as a Graduate School of PKNU, the WFU Pilot Programme is subject to the university's general quality assurance policy.

Course evaluation is conducted by means of a standard questionnaire. A sample questionnaire was submitted to the experts as part of the self-evaluation report.

Outside the realm of teaching and learning, the Korean government as the main funding organization conducts its own quality assurance, as e.g. regarding the use of financial resources.

Experts' Appraisal

As soon as the World Fisheries University is opened as an independent higher education institution, it should be one of the top priorities to implement a quality assurance system comprising an official quality assurance policy, regular course evaluation and a close monitoring of student success and student workload. It may also be helpful to conduct surveys on student satisfaction with administrative processes, services and support measures, the learning environment and facilities etc. Also, a clear and efficient strategy against academic fraud and plagiarism should be developed, as this has turned out to be a significant problem in the course of the first pilot phase.

The experts would like to stress once more that all of this will only be worthwhile if the future WFU is granted more institutional autonomy and, as a result, a higher impact on the design and continuous development of its educational programmes.

2.7 Transparency and Public Information

As mentioned above, PKNU has published general academic guidelines in English for the WFU pilot programme which can be downloaded from the university website. The document contains basic rules and regulations for assessment and grading, and for the general organization and administration of the programme.

Further general information on the contents of the programme and on campus life at PKNU can be found in the Academic Handbook, which is available online and was handed out to all students.

PKNU has also launched a separate website in English for the WFU pilot programme that contains all core information.

Experts' Appraisal

As already described above, the experts find that the student selection process is not yet fully transparent. The procedural steps are roughly described in the admission guidelines and

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on the programme website, but transparent rules and regulations are apparently not in place. In particular, it does not yet become clear from the available sources which principles are applied for the ranking of the applicants.

Furthermore, the experts were informed during the site visit that an official appeals and complaints policy for the programme does not exist. Thus, there is no way for students to appeal against grades awarded or against other decisions of the faculty that they consider unfair. The experts strongly recommend developing such a policy upon the opening of the future World Fisheries University, or even prior to that.

More comprehensive information on central social and administrative issues should also be provided to students prior to their arrival in Busan (cf. Chapter 2.4).

Apart from these aspects, the experts have gained the overall impression that sufficient information on the WFU pilot programme is provided to students, applicants and the general public.

III. Appendix

1. Response of WFU to the Experts' Report

The World Fisheries University (WFU) Pilot Programme would like to express our gratitude to the Expert Panel and the representative of the ZEvA Secretariat for participating in this evaluation. In particular, we are honored to have the support that the expert panel provides towards the vision and goal of the WFU Pilot Programme.

This evaluation was conducted within approximately 1 year after the initiation of the pilot programme. So it is unfortunate that we couldn't have the ZEvA accreditation. However, this evaluation gives us an opportunity to review the status of the 1st pilot programme and we will try to incorporate recommendations of the evaluation report in the 2nd pilot programme.

2.1 Mission, Vision and Intended Learning Outcomes

- We thank the expert panel for their full support on the vision of the WFU Pilot Programme, "...securing human well-being and improving the welfare of poor and disadvantaged communities in developing countries, through providing overseas aid aimed at the development of human resources, especially in the field of fisheries and aquaculture" (cf. Academic Handbook, p. 3).

2.2 Contents, Structure and Overall Concept

- We agree with the opinion of the experts that diversity of students is the biggest asset and challenge of the WFU. However, this derives from the WFU's goal of providing students from developing countries with an opportunity to education. In the 2nd pilot programme, we will try to narrow down the academic achievement gap among students by providing elective courses for beginners as was recommended in the evaluation report.

- We will also seek measures to increase the ratio of female students (currently 5 female students out of 29 students).
- One thing we would like to note is that the WFU already continuously provides training on research approaches throughout the master's course. The WFU not only offers a course on thesis research and writing (3 credits) but also training on thesis research and writing throughout the master's programme, helping the students to improve their skills of writing thesis.

2.3 Human Resources

- Experts have expressed their concern that the programme may lack sustainability in terms of human resources. But this limitation is not that of the WFU but of the pilot programme only. The 1st pilot programme runs for 18 months and the 2nd pilot programme will begin after some time has lapsed upon completion of the 1st programme. That is why the contract period for human resources is unavoidably 18 months.

2.4 Infrastructure, Resources and Student Support

- As was mentioned in the report, we will continue to work hard to provide more scholarship programs and a good studying environment so students can focus on studying. In addition, when the main programme opens, we will establish the infrastructure for laboratories and provide more support on coaching students with their career.
- On the other hand, we do not agree to the point that students do not have good accessibility to books, journals and documents. Students can use Pukyong National University(PKNU)'s library to access books and the library's website to access online journals. Going forward, we will seek ways to educate students more on how to use online journals.

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Response of WFU to the Experts' Report

- Furthermore, the WFU Pilot Programme offers 1 on 1 counseling through Programme staff to students who ask for help with their academic, personal or cultural issues. Also counseling in English is available at PKNU's student counseling center.

2.5 Methods of Teaching and Student Assessment

- The experts have recommended that the comprehensive examination which students take at the end of the 2nd year be abolished, but since this exam evaluates the level of achievement of students, abolishing it requires an in-depth discussion among the faculty and relevant persons.

2.6 Quality Assurance

- In order to monitor the level of student satisfaction, academic achievement and time spent in studying, the WFU ran a lecture evaluation program for each course. We also ran a survey to study the level of satisfaction on the entire curriculum of the WFU upon completion of the 1st pilot programme.

2.7 Transparency and Public Information

- Clearer criteria for student admission will increase transparency in the admission process. So we will work harder to establish clearer criteria including language skills to select students.
- However, we don't agree to the point that there is no official appeals and complaints policy. At the end of each semester, students can check their GPA's and file an appeal regarding their GPA's, which is included in the official academic schedule. In the 2nd pilot programme, we will help students to make better use of this system.