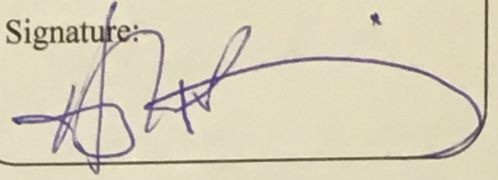


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Asia-Pacific Network for Sustainable Forest Management and Rehabilitation

## EVALUATION REPORT

Innovative Sustainable Forest Management Education  
in the Asia-Pacific Region

[Project ID: 2013P2-FCDMM]

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## Project Evaluation

### Executive Summary

The *Innovative Sustainable Forest Management Education in the Asia-Pacific Region* project [2013P2-FCDMM-PA] was undertaken to improve the capacity in sustainable forest management (SFM) in the Asia-Pacific region. The evaluation results need to consider this goal as well as the specific objectives of the project:

- To build the core courses of SFM education that will provide the basis for developing a widely adopted core curriculum of SFM in the Asia Pacific Region;
- To create a platform for exchanging ideas and experiences on educating the new generation of foresters in the Asia Pacific Region;
- To facilitate collaborations on forestry education between developed economies and less developed economies; and,
- To help promote reforms in forestry education in the Asia Pacific Region and build a model for sharing the results.

From a technical perspective, the project has been very successful in achieving the first objective through the development of an online platform for delivering material that will build knowledge and skills in sustainable forest management.

The current content, however, is somewhat variable in terms of delivering desired outcomes. In particular, the variability of content of each course in terms of background documents, lectures, lecture transcripts, subtitles or PowerPoint copies, clearly linked resources and how they are to be used, and self-assessment materials needs to be addressed to ensure that learning objectives can be achieved in either a MOOC environment or as part of a moderated course.

At this point it is not obvious that the project will achieve the objective of a widely adopted core curriculum or the fourth objective of promoting reforms in forestry education. An immediate focus should be on promotion and uptake of the courses that have been developed. As there is no clear link to any specific needs (e.g. from the forestry school survey) there is a question about whether and how the courses might be used. On one level the project has contributed to the second and third objectives by facilitating collaboration across a number of institutions. It is not clear that the project is a platform for exchanging new educational ideas apart from what is already provided by FCDMM-APR.

A second phase of the project has been proposed. There are a number of recommendations that could be considered if this is to go ahead.

- There must be a clearly articulated end user need (topic areas and format of content) that guides new course development and content to maximize the likelihood that courses and/or topics will be taken up by individuals as part of self-study, or by universities as part of their course content. While there is likely a powerful argument to develop a multi-country story about sustainable forest management that is relevant to wide audience of users, it has not been articulated clearly in this project and it is not clear that

the courses will be picked up.

- A quality assurance process needs to be implemented as part of the project. While the project has a technical quality assurance in terms of look and feel through a single provider of the web content, the remaining content has not gone through the same peer review process.
- It is important to ensure that the development team has both time and expertise to deliver the project objectives. This could entail separating the development of the programme, topics and course outcomes from the development of the detailed content that could use specific and different content experts.
- Look at revising the funding model and structuring courses development so that course and topics have contributions from a number of universities and regions. At the same time, this will help to ensure that content contains the broad spectrum of forest context to maintain relevance and context in any particular region.
- Consider a revised course structure where one topic or module that develops the basic concepts that are largely independent of context and a number of separate modules or topics that applied this knowledge to specific contexts (environment, economic stage, legal/institutional system, forest type).
- Content and focus needs to be on desired learning outcomes (what will someone be able to do at the end of a course and topic. As part of this, it is important to ensure that course content expectations are clearly specified, particularly with reference to how long it is expected that a student would take to read, listen, and reflect to achieve the desired learning outcomes.
- Determine a mechanism for ongoing updating and maintenance of the online material.
- Modify the online content:
  - Develop a mechanism in the online system for providing answers or model answers to self-assessment questions. This includes answers for multiple choice questions (why correct or incorrect) as well as model answers or exemplars for reflective questions.
  - Provide clear links between the resources provided (readings, videos) and expected learning outcomes (specific information or just for interest).
  - Develop and provide background notes, copies of presentation slides and/or transcripts to accompany lectures.

## 1. Introduction

### 1.1. Background Information

The *Innovative Sustainable Forest Management Education in the Asia-Pacific Region* project [2013P2-FCDMM-PA Project Document] was undertaken to improve the capacity in sustainable forest management (SFM) in the Asia-Pacific region. The specific objectives of the project were [2013P2-FCDMM-PA Project Document, p. 3]:

- To build the core courses of SFM education that will provide the basis for developing a widely adopted core curriculum of SFM in the Asia Pacific Region;
- To create a platform for exchanging ideas and experiences on educating the new generation of foresters in the Asia Pacific Region;
- To facilitate collaborations on forestry education between developed economies and less developed economies; and,
- To help promote reforms in forestry education in the Asia Pacific Region and build a model for sharing the results.

The objectives of the project were achieved through the development of Massive Online Open Courses (MOOC's). The project was officially launched in November 2013 [2013P2-FCDMM-PA Project Document] and was largely finished in November, 2015 [2013P2-FCDMM-PA Project Completion Report].

### 1.2. Objective/Purpose of the Terminal Evaluation

The purpose of the evaluation project is to provide a comprehensive assessment of the achievements and impacts of the project, as well as technical and policy suggestions/recommendations to the possible second project phase. This is to be done by addressing the following questions:

- Has the project met the objectives and how has that happened in an effective and efficient manner?
- Has the project been concluded as planned?
- Are the financial expenses reasonable?
- What impacts have the project made to date, and what is it likely to be in the near future?
- How can achievements of the project be sustained? How can the courses developed be applied in the region?
- Are there some weaknesses that can be solved in the next step, and are there recommendations, including those related to more technical aspects, organizational aspects, governance and policy dimensions?

## 2. Evaluation Design and Implementation

### 2.1. Evaluation Scope

The evaluation scope is defined by what can be achieved in 12 working days, and is thus

largely constrained to existing information available for review or additional data that could be developed in this time frame. At the time of the evaluation, five of six of the courses had just been completed and there was no evidence that any of the modules had been used formally for teaching or that other persons were using the courses for self-learning. As such, the evaluation in terms of impact and achievement is limited to the development of the modules rather than their use.

## **2.2. Evaluation Methods**

### **2.2.1. Desk Review**

A number of documents were provided by the two lead universities, Beijing Forestry University (BFU) and the University of British Columbia (UBC), and by the project funder, APFNet. A desk review of these documents, listed in Appendix A, was carried out for the evaluation.

### **2.2.2. Site Visits**

Site visits were made to BFU and UBC. The visit to BFU and APFNet was June 2-5. The visit to UBC was June 15-17. At each visit there were briefings and interviews as well as tours of relevant facilities. The visits provided an opportunity to interview project coordinators, course authors, student evaluators and developers of the online system.

### **2.2.3. Discussions With Relevant Staff**

In the visit to BFU, briefings and discussions were held with the following staff:

Dr. Luo Youqing (Vice President)  
Dr. Liu Junchang (Director of International Cooperation Office)  
Dr. Huang Guohua, (Director of Information Center)  
Dr. Liu Yong (Professor)  
Mr. Lin Yu (International Cooperation Office)  
Ms. Yuan Mei (APFNet)

The programme at BFU, outlined in Annex C, involved discussions at the programme level, BFU's contributions to development of courses and discussions with students. An overview of the entire project from inception to development of courses and how they were managed was provided. There were also opportunities to discuss the operation of the programme and to review the draft completion report. A visit was also made to the video classroom facilities that had been developed as part of the project that facilitated discussions about the experience at BFU with its use for the programme. Discussions were held with one of the authors of a module from BFU about experience developing the module.

At APFNet, discussion was held with the following people:

Mr. Xia Jun (AED, APFNet)  
Dr. Zhuang Zuofeng (Director of project management division, APFNet)

Ms. Yuan Mei (Project manager, APFNet)

The visit to APFNet provided an opportunity to discuss project objectives from the funder perspective and to confirm desired outcomes from the evaluation.

At UBC, briefings and discussions were held with the following staff:

Dr. Guangyu Wang (UBC Coordinator)  
Professor Dr. Hosny El-Lakany (Course content developer)  
Dr. Chris Crowley (UBC CTLT)  
Dr. Hailan Chen (UBC CTLT)  
Dr. Zhuang Zuofeng (Director of project management division, APFNet)

The programme at UBC, outlined in Annex C, provided an opportunity to discuss experiences in developing a course with author of Course 3 and a discussion with students who had been involved in an evaluation of modules. A discussion of the entire project with the UBC coordinator was also carried out. A meeting was held with staff from CTLT. Staff in this centre developed and delivered the training programme for online teaching, and were responsible for building the online platform and editing content that was included in the courses. Information about the development and ongoing operation of the online platform came from this meeting.

#### **2.2.4. Discussions With Relevant Stakeholders**

At UBC, a discussion was held with 6 students who had been involved in an evaluation run by UBC of (some of) the online courses. Given the short timeframe and that the modules had not been formally used for training, it was determined that a survey of potential users in a broad geographic distribution should be done as part of the evaluation. Details of this survey are found later in this report.

### **3. Project Evaluation – Analyses and Findings**

#### **3.1. Project Documentation and Design**

The project concept around sustainability and forest management and the need for this knowledge is important in all economies. This is in terms of understanding what is happening directly in a person's own environment, and indirectly in other economies because of the interconnectedness of the global economy. However, in the case of this project, the process by which the topic of Sustainable Forest Management (SFM) was chosen as the theme is not clear from the documentation. In turn, the rationale for why specific courses and modules were then developed is not obvious. This leaves a fundamental question about why this particular set of courses and content was decided on, and how it will meet a particular need.

During interviews, reference was made to the Results of Forestry Education Survey in the Asia-Pacific Region (2012) done by FCDMM May 2012 as being the driver for the online courses. However, this report does not have a conclusion that identified specific



educational needs or opportunities for the SFM theme and specific courses and modules. Other than the idea of a for-credit degree at UBC (based on interviews), it is not clear how individual universities involved in the project, or those in the wider FCDMM group plan to use the content (courses or individual modules). This means that the specific educational needs of different universities that the online courses would potentially meet still need to be determined and articulated. A particular question for APFNet is that if no one has a plan to use the courses, then what would need to change to make it useful?

The project was otherwise well structured and planned as per information in the Annual Work Plans and how they linked to the project documents. This in particular, relates to the structured process for mechanics of developing the online modules that was facilitated by the Centre for Learning, Teaching and Technology at UBC. For the other parts of the plan it appears that there were changes the design along the way and that what was specified in the project was done differently, but not documented formally as a change to the project design. Specific examples of this type of change that will be covered later in the evaluation are:

- Collaborative development of each Module.
- The conference to showcase the results of the project.

Another observation is that the specification of what was to be delivered as part of each sub-contract is very general, and this appears to have had an influence on how the project was carried out. Each sub-contract outlines the 'deliverables' in Section 3.09. Section 3.09 states:

The Implementing Agency shall accomplish the following work (Detail explanation of the work is defined in the Project Document A1.1, A1.4 and A3.2):

- (a) SFM curricula design for Asia Pacific region
- (b) Development of an online course (include video, taping and materials of selected courses, post production):
  - *[specific topic for module led by a university]*
- (c) Providing a two-week onsite training session

Since the subcontract is non-specific, the detail in the project document is important. The project document however is also very general. The detail in A1.1 consists of confirming the lead professors by name, and that each lead professor is "responsible for his course curricula development in consultation with the experts in the participating university". The detail in A1.4 lists the six courses potentially under consideration, the lead person and institution and other participants in the course. A1.4 also provides some general principles.

- All courses will be developed by the lead institutes separately but following same general principles and a uniform format.
- Courses can be tailored to reflect each particular national context.
- Courses can be integrated into current curriculum planning
- Duplication of course content is minimal.
- Benefits accruing to participating universities are equitable.



- A course contains 4 modules.
- Each module will require approximately 9-12 hours of work.
- Each module will consist of online lectures, lecture assignments, videos of field trip, case studies, case assignments, and student work.
- The course coordinators are responsible for developing the course and running it. He/she will decide the overall structure of the course after consulting [with] the participating instructors and discussing it in the workshop.
- Participating instructors will contribute lectures, videos of field trips, and case studies to the course.
- Post-processing of six courses will be conducted by the UBC CTLT to maintain the quality of the course package and cross-platform usability.

A3.2 has general information about the integrated onsite training package participants are meant to be part of.

The net effect is that the 'deliverables' from the project, particularly in terms of course content and assessment, are not specified to a level that brings certainty about the final product. As will be shown in other parts of this report, a key reflection of this is that there is a wide variation in what has been provided in terms of content by each lead author despite being under the same contract requirements.

### 3.2. Overall Implementation and Management

There are some questions about the execution of the project. This includes the educational needs being met by the courses, the process of developing content, the collaborative approach to developing courses, and peer review. These points are covered in this section.

#### 3.2.1. Project Inception and Steering Committee

There is a question about process of developing content, and in particular, the degree of pre-planning the scope and content of courses, modules and topics. The documentation provided shows only the process for removing overlap through a post-development process (during the training programme at UBC May 2014). While there is a specific, documented process to evaluate overlap, there is no corresponding process to identify key areas that need to be covered, how they would be allocated to particular courses and thus pre-empting the need for the overlap session. The fact that overlap potential existed suggests a lack of coordinated pre-planning and discussion of content.

It looks like the planned collaborative approach to developing each course was in the end not carried out. The plan was:

*"A1.4. Development of six online courses. The course development component of the project, and most resource consuming. All courses will be developed by the lead institutes separately but following same general principles and a uniform format. The general principles include that the courses can be tailored to reflect each particular national context; that they can be integrated into current curriculum planning. The leading professor for each course will be responsible for developing the*

*course and invite partners. He/she will decide the overall structure of the course. Partner instructors will contribute lectures, videos of field trip, and case studies to the course. " (APFNet\_annual\_work\_\_plan-2014.pdf)*

The "Partner instructors will contribute lectures, videos of field trip, and case studies to the course" did not appear to happen. In the end, each course appears to have been developed independently by one university, and often only one person at that university. At BFU, there was a different model where Course 6 was developed entirely at BFU but each module was developed and or delivered by different subject experts. The 'team' developing each course appears to be largely individual content specialists working in isolation for content and the UBC instructional design group (APF%20Net\_CourseDevelopmentOrientation.pdf).

From interviews with staff, it appears that the 'solo' content development model was largely driven by the contracting model used in the project, where each university was contracted to deliver an entire course. An additional factor may be that the individuals who were involved, given this project evolved from a Dean's meeting and consequently used a number of busy Deans as course developers. There were also logistical issues about collaborating on content (communication and meetings) given separate locations and perhaps a lack of familiarity with each other perhaps also contributed to the outcome.

The solo development also means that peer review is much more important. There does not appear that there was any peer-review of content and assessment, either in terms of subject relevance to the broad interest groups involved in the project, or level it was being delivered at. It is also not evident that quality assurance of content was built into the project. The primary quality control was in terms of educational design, and online look. Section A1.5 Course assessment and testing of the Project Document makes reference to something that could be interpreted as a peer-review process, although for the courses once they had been developed (initial assessment and testing). There is no evidence in the documentation that the initial assessment and testing has been completed.

### **3.2.2. Project Accomplishments**

The outputs of the project were:

- Development of six core SFM courses.
- Development of an online learning platform.
- Development of an on-site training package with options.
- International Conference on Online Learning in Forestry Education.

The project review scope did not allow for a detailed assessment of all courses. However, an analysis was done of the content of the courses in terms of evaluating what was provided in the way of learning resources. The training programme was presented by the design team during an interview at UBC, and the documents used in the programme were provided as part of the review. The online learning platform has been developed and is running. The international conference was not held.

### 3.2.2.1. Online Courses

As can be seen in Table 1, one contributor (UPM) has not yet finished their online module, and this has not been incorporated in the evaluation. The Completion Report does indicate that the UPM contribution is 80% complete. The missing material appears to be the recorded lectures.

Table 1. Output Completion by IAs

Course	IA	Completion (%)
Sustainable Forestry Management in a Changing World	UBC	100
Governance, Public Relationship and Community Development	UPLB	100
International Dialogue on Forestry Issue	UBC	100
Restoration of Degraded Forest Ecosystems and Forest Plantation Development	UM	100
Sustainable Use of Forest Goods and Services	UPM	80
Forest Resource Management and Protection	BFU	100

Source: Completion Report

Across the five courses, the content structure at the course level was standardized (elements always present). This is likely driven by interaction with the UBC design team and their control over the online interface. Below this level there is a wide variety of 'output' in terms of content developed for each of the courses (modules and topics within course). As can be seen in Table 2, the number of modules in a course ranged from 3 to 6, and the total number of topics in those modules ranged from 8 to 16. The video lecture content ranged from 100 minutes to 1213 minutes. The total video minutes in Table 2 does not include third party video clips placed with lectures specifically developed for this project.

Table 2 Course content

	Modules	Topics	Total Video Lecture (Minutes)	Total Video Lectures (Number)	Transcript	Subtitles
Course 1	6	16	1213	59		
Course 2	3	11	121	10		
Course 3	4	15	380	30	✓	
Course 5	3	8	100	10		
Course 6	4	12	545	59		✓

Note: Does not include third party video content that has been included in the modules.

Some courses contained content not provided by any other courses. Course 3 provided

transcripts for all the video lectures and Course 6 included subtitles in all videos. One module in Course 1 also provided background notes to go with the lectures. There was a wide variation in access to technology and approach for recording videos. Details of the data used to create Table 2 are in Annex D.

Course content information may be useful in terms of calibrating the learning hours in each course, and particularly the equivalency of credits, one of the possible future outcomes of the project. The wide variation found here may require changes to the packaging of content if credits are to be allocated to equivalent learning hours.

Another use of Table 2 may be for identifying what was delivered versus what was contracted. It is not obvious from the documentation what the specific deliverables were, but this degree of variation suggests that it was not well specified. From a subcontract perspective, 2 courses have under delivered by having only 3 modules, and it is not clear how any of the courses will create 9-12 hours of 'work' (learning).

It not clear how assessment was determined to be appropriate to the target group as there are differences across the courses in the type of assessment that has been set. As can be seen in Table 3, Course 1 used a standard 10 multiple choice questions for each topic, Course 2 used either 5 True/False questions or open-ended questions for each topic, and Course 5 used two sets of 12 multiple choice questions at the module level and open-ended questions at the topic level. The other two courses used open-ended questions.

There are a number of questions about the assessment in the courses. A key observation is that the link between objectives for a topic and the ways used for testing or showing that objectives have been achieved is often not obvious. In particular, the use of multiple choice or True/False questions is generally conducive to checking memorization of facts and more prevalent for junior undergraduate courses rather than senior undergraduate or postgraduate (the target audience in documentation) where analysis, reflection and critical thinking are required. Another observation is that some of the open-ended, reflective questions would be very difficult for person to grasp, much less try to answer.

Table 3 Course assessment

	Multiple Choice	True/ False	Open Ended
Course 1	10		
Course 2		5	✓
Course 3			✓
Course 5	2 x 12		✓
Course 6			✓

Survey responses in a later section of this report identify that a key learning resource is model answers or answers for multiple choice questions and explanation of why they are right or wrong.

### **3.2.2.2. Training Package**

One of the stated outputs of the project was a training package. The working implies that the intent was that this was something that could be replicated in other locations to train more people in developing and maintaining online courses. A training programme was run at UBC by the UBC instructional design group in 2014. The training programme was focused on education pedagogy and structure and techniques relevant to online courses, as well as the overlap workshop. The programme was comprehensive and covered all the key elements one would expect in designing modern learning materials. However, the perception is that this not really a training 'package' that can be easily taken and replicated elsewhere, and was instead more of a workshop.

### **3.2.2.3. International Workshop on Online Learning and Teaching SFM**

The fourth output of the project was to be an international conference to showcase the achievements of the project. The conference "will provide a channel for forestry professionals and practitioners to learn and benefit from the online education, with an explicit focus on the entire Asia-Pacific region." The Work Plan indicated that the conference would be combined with the fourth meeting of FCDMM-APR and also with the last week of the onsite training program. The conference was to be held at the end of 2015 at UPM, Malaysia or BFU, China.

Instead of the international conference, two international meetings of FCDMM-APR were held in conjunction with other international conferences. The first meeting, "Innovating forestry education and training: effective learning in the new era", was a side event held in conjunction with the 2015 World Forestry Congress in South Africa (September). The second meeting, "Regional Forestry Education Resources Sharing and Mutual Course Recognition", was held in conjunction with the 2016 Asia-Pacific Forestry Week in the Philippines (February). It appears as though this was done through mutual agreement with APFNet.

## **3.3. Project Impact**

One of the project evaluation objectives was to look at the achievements and impacts of the project. At the time the project was initiated, none of the courses had been used as a course and there was no feedback to provided the basis of an evaluation. As such it was determined that a survey should be developed to get as wide a range of students as possible to provided feedback.

A survey was developed with the assistance of the UBC educational design team using UBC software (<https://survey.ubc.ca/s/external-review-for-apfnet-phase-1-courses/>). Given the likely time to go through a course and answer a survey, it was decided to ask respondents to evaluate only one of the five courses. The key collaborators at all 5 collaborating universities were contacted to distribute the survey link (Annex E). In addition, APFNet contacted scholarship holders to do the survey and asked some staff to complete it. Students in a Lincoln University (New Zealand) programme in Sarawak were also provided

with the survey links.

In total, 158 people started the survey. It is not known how many people were actually asked to participate. There were 70 'completed' responses as determined by the survey software, although many of the following tables show fewer responses this (e.g. Table 1). It is not clear why this is the case as all results are generated by the survey software. Given the timeframe and purpose of the evaluation, this was not considered to be material to the results of the survey. The overall completion rate of those who started the survey was 45%, which is considered a good response given the average completion time was over 3 hours (3:03:09). The following analysis includes only responses filtered as 'completed' by the software.

As can be seen in Table 4, about 56% of the respondents said their home university was in China, 24% in Canada, 5% in the Philippines and 15% were from other locations including Cambodia, Thailand, Lao PDR, Nepal, Myanmar and APFNet.

Table 4 Your home university location

	Percentage	
Australia	0.0%	0
Canada	24.2%	16
China	56.1%	37
Malaysia	0.0%	0
Philippines	4.5%	3
Other	15.2%	10
Total Responses		66

Including the relevant respondents in the 'Other' category, 70% of respondents indicated that they were students, almost all in forestry forestry (Table 5). Including the relevant respondents in the 'Other' category, the remaining respondents were predominantly working forestry professionals. The non-forestry respondents were mostly working in landscape or horticulture, or were environmental management students.

Table 5 Your role as a reviewer

	Percentage	Count
Forestry working professional	19.7%	13
Forestry student	66.7%	44
Other	13.6%	9
Total Responses		66

77% of respondents had or were studying towards a degree in forestry. Almost 75% of respondents had or were studying towards a Masters degree, and 20% a Bachelor's qualification (Table 6).

Table 6 What degree are you studying or do you have?

	Percentage	Count
PhD	4.5%	3
Master	74.2%	49
Bachelor	21.2%	14
Other qualifications	0.0%	0
Total Responses		66

To provide context for the responses to the survey, respondents were asked to indicate how familiar they were with the course material before they looked at the material. As can be seen in Table 7, about 73% of those who have or are studying towards a forestry degree were somewhat familiar with the material, compared to 81% of those who had not studied forestry. Only 18% of respondents with a forestry degree had formally covered the material in courses. This supports the project premise that SFM was an important topic area to develop course material for. Most respondents in Table 7 without a forestry degree were in Canada. This may reflect a stronger link between forestry and other faculties at UBC.

Table 7 Your prior knowledge of the material covered by the course was (N=67)

	Forestry Degree	No Forestry Degree
Completely new	3	3
Somewhat familiar	37	13
Have covered in senior undergraduate or postgraduate courses	11	0

The first section of the main survey contained questions related to general course information and focused on how information about the course was provided. All questions used a 5-point Likert Scale with 1 being Strongly Disagree and 5 being Strongly agree with the statement.

The questions and mean scores are shown in Table 8. The distribution of respondents across courses was roughly similar. Those distributing the survey were asked to allocate specific courses rather than ask respondents to choose their own course, so the spread reflects the success of this approach. Respondents strongly agreed with the statements, indicating that instructions about each course were well formulated. The only issue appears to be with instructions regarding the minimum technology requirements (1.9) for Course 1.



Table 8 General Course Information

	All Courses	APFNet Course 1: Sustainability Forest Management in a Changing World (N=18)	APFNet Course 2: Forest Governance, Public Relations, and Community Development (N=15)	APFNet Course 3: International Dialogue on Forestry Issues (N=10)	APFNet Course 5: Restoration of Degraded Forest Ecosystems & Forest Plantation Development (N=12)	APFNet Course 6: Forest Resource Management and Protection (N=11)
1.1 Instructions on how to get started and where to find various course components are clear and easy to find.	4.62	4.44	4.73	4.80	4.33	4.91
1.2 The course description and purposes are clearly stated.	4.74	4.50	4.87	4.80	4.67	5.00
1.3 Prerequisite knowledge and required competencies are clearly stated.	4.45	4.28	4.33	4.70	4.67	4.45
1.4 The structure and components of the course are clearly explained.	4.73	4.39	4.87	5.00	4.58	5.00
1.5 A clear and current course schedule with topics, and suggested activity or assignment due dates is posted.	4.42	4.17	4.53	4.50	4.83	4.18
1.6 Instructions to locate activities and applicable communication tools (reflection activities, self-tests, forums, etc) are clear and easy to find.	4.55	4.22	4.73	4.50	4.58	4.82
1.7 Purposes and etiquette expectations for online discussions, chat, email, and/or other forms of communication are stated clearly if applicable to the course.	4.48	4.17	4.53	4.70	4.67	4.55
1.8 Minimum technical skills expected are clearly stated.	4.48	4.28	4.53	4.60	4.58	4.55
1.9 Minimum technology requirements of the course are clearly and adequately stated.	3.01	4.33	4.53	4.60	4.42	4.82

The second section of the survey contained questions related to learning outcomes. All questions used a 5-point Likert Scale with 1 being Strongly Disagree and 5 being Strongly agree with the statement. As can be seen in Table 9, respondents generally strongly agreed with the statements about learning outcomes, indicating that instructions about learning outcomes each course were well formulated. The question on relevance to study (2.7) also scored well.

Table 9. Learning Outcomes

	All Courses	APFNet Course 1: Sustainability Forest Management in a Changing World	APFNet Course 2: Forest Governance, Public Relations, and Community Development	APFNet Course 3: International Dialogue on Forestry Issues	APFNet Course 5: Restoration of Degraded Forest Ecosystems & Forest Plantation Development	APFNet Course 6: Forest Resource Management and Protection
2.1 The course learning outcomes are clearly stated in measurable and observable action verbs.	4.61	4.44	4.80	4.70	4.33	4.82
2.2 The course learning outcomes are described in terms of what the student will be able to do upon completion and are written from the students' perspective.	4.58	4.44	4.40	4.90	4.58	4.73
2.3 The module/unit learning outcomes are clearly stated and are consistent with the course-level outcomes.	4.68	4.44	4.80	4.40	4.83	5.00
2.4 Instructions to students on how to meet the learning outcomes are clearly stated.	4.42	4.28	4.20	4.50	4.58	4.73
2.5 Learning outcomes are evenly distributed among modules/units.	4.58	4.17	4.67	4.70	4.67	4.91
2.6 The learning outcomes require the same level of analysis and understanding as other courses I am currently taking or took in my last degree.	4.39	4.17	4.21	4.60	4.27	4.91
2.7 This course is relevant to what I am studying.	4.11	4.28	3.87	4.20	4.09	4.09

The third section of the survey contained questions related to learner assessment. All questions used a 5-point Likert Scale with 1 being Strongly Disagree and 5 being Strongly agree with the statement. As can be seen in Table 10, respondents generally strongly agreed with the statements about the types of learner assessment provided (3.1, 3.2, 3.3, 3.4, 3.6), indicating that assessment was useful for achieving learner outcomes. Two questions (3.5 and 3.7) referred to additional resources. Respondents strongly agreed with the statements that additional information about why multiple choice answers were or were not correct, and model answers for reflective questions would help learning.

Table 10. Learner Assessment

	All Courses	APFNet Course 1: Sustainability Management in a Changing World	APFNet Course 2: Forest Governance, Public Relations, and Community Development	APFNet Course 3: International Dialogue on Forestry Issues	APFNet Course 5: Restoration of Degraded Forest Ecosystems & Forest Plantation Development	APFNet Course 6: Forest Resource Management and Protection
3.1 The learning activities and assessments are consistent with the learning outcomes.	4.67	4.39	4.67	4.70	4.75	5.00
3.2 Varies forms of self assessment in the course forced me thinking about course materials.	4.36	3.94	4.67	4.10	4.67	4.55
3.3 I had multiple opportunities to measure my learning progress.	4.35	4.00	4.47	4.22	4.50	4.73
3.4 Multiple choice questions provided were useful to test my understanding of the material.	4.59	4.56	4.64	4.83	4.73	4.30
3.5 Extra information about why multiple choice answers are correct or incorrect would help my learning.	4.48	4.33	4.40	4.67	4.67	4.50
3.6 Reflective questions or problems provided were useful to test my understanding of the material.	4.54	4.20	4.47	4.60	4.91	4.70
3.7 Model answers for discussions about reflection questions will help my understanding of materials.	4.67	4.44	4.67	4.75	4.67	5.00

The fourth section of the survey contained questions related to course materials. All questions used a 5-point Likert Scale with 1 being Strongly Disagree and 5 being Strongly agree with the statement. As can be seen in Table 11, respondents generally strongly agreed with the statements about course materials.

There were additional comments about the resource materials. Some references were for materials that a student could not obtain (e.g. a book or article not available at the institution), suggesting linked or downloadable resources should be used. Some resources were just links to organizational websites with no indication of what should be looked for. A general observation is that many of the resources are not explicitly linked to the lectures or other learning materials, leaving a student uncertain as to what they are meant to obtain from the resource.

Table 11. Course Materials

	All Courses	APFNet Course 1: Sustainability Forest Management in a Changing World	APFNet Course 2: Forest Governance, Public Relations, and Community Development	APFNet Course 3: International Dialogue on Forestry Issues	APFNet Course 5: Restoration of Degraded Forest Ecosystems & Forest Plantation Development	APFNet Course 6: Forest Resource Management and Protection
4.1 Course content is sequenced and structured in a way that enabled me to achieve stated learning outcomes.	4.64	4.44	4.60	4.60	4.83	4.82
4.2 Course materials are presented in a consistent and logical structure and layout.	4.63	4.18	4.80	4.70	4.75	4.91
4.3 The supporting materials were useful for the course.	4.58	4.22	4.79	4.60	4.64	4.82
4.4 The distinction between required and optional materials is clearly explained.	4.15	4.00	4.13	3.80	4.08	4.82
4.5 All course materials are free from typos and grammatical errors.	4.52	4.12	4.60	4.70	4.58	4.82
4.6 The course contains text transcripts of videos or copies of PowerPoint presentations.	4.20	4.12	4.20	4.30	4.08	4.40
4.7 The length of the videos was about right.	4.46	4.06	4.67	4.60	4.42	4.73
4.8 It was easy to stop, start, and review the video lectures.	4.45	4.28	4.73	4.80	3.92	4.64
4.9 The course has useful background notes.	4.49	4.28	4.36	4.70	4.42	4.91
4.10 At the end of this course, 1) My understanding of the topic area is greater than before I did the course; 2) I am able to analyse issues related to the subject covered in this course.	4.59	4.56	4.60	4.60	4.42	4.82

The fifth section of the survey contained questions related to learning activities. All questions used a 5-point Likert Scale with 1 being Strongly Disagree and 5 being Strongly agree with the statement. As can be seen in Table 12, respondents generally strongly agreed with the statements about learning activities. Respondents strongly agreed with the statement about a functioning online forum being important to learning.

Table 12. Learning Activities

	All Courses	APFNet Course 1: Sustainability Forest Management in a Changing World	APFNet Course 2: Forest Governance, Public Relations, and Community Development	APFNet Course 3: International Dialogue on Forestry Issues	APFNet Course 5: Restoration of Degraded Forest Ecosystems & Forest Plantation Development	APFNet Course 6: Forest Resource Management and Protection
5.1 The learning activities helped me achieve the stated learning outcomes.	4.62	4.39	4.87	4.60	4.50	4.82
5.2 Learning activities are clearly integrated with specific instructional materials and linked to learning outcomes.	4.56	4.44	4.87	4.40	4.33	4.73
5.3 The online forum (The Knowledge CafŽ) where I can post questions to other students would help facilitate my understanding and mastery of the learning objectives.	4.52	4.18	4.47	4.56	4.73	5.00
5.4 Learning activities actively engage me in meaningful and relevant learning throughout the course.	4.53	4.28	4.80	4.40	4.50	4.73
5.5 The requirements for student engagement and progression through the course are clearly articulated.	4.48	4.22	4.40	4.60	4.50	4.91

Respondents were also asked about their preferred way of learning from the online lectures. As can be seen in Table 13, more than 98% of respondents preferred to have some type of resource to accompany the lectures.

Table 13. Lecture resource preferences

	Percentage	Count
I prefer to only listen to the lectures.	1.5%	1
I prefer to have a copy of lecture PowerPoint or a transcript while listening to the lectures.	63.2%	43
I prefer to have read some background notes for material covered by the lectures before listening to them.	35.3%	24
		68

About two thirds of respondents preferred to have a copy of the lecture slides or a transcript of what was being presented which they could follow while listening to the lecture. The other third of respondents preferred to have background notes to read before listening to the lectures. Since the survey allowed only one response and no opportunity to provide comments it is not possible to determine if respondents actually preferred to have both forms of resource to accompany the lectures.

The last section of the survey contained questions related to the course look and feel. All questions used a 5-point Likert Scale with 1 being Strongly Disagree and 5 being Strongly agree with the statement. As can be seen in Table 14, respondents generally strongly agreed with the statements about course look and feel, including questions download speeds and streaming.

Table 14. Course Look and Feel

	All Courses	APFNet Course 1: Sustainability Management in a Changing World	APFNet Course 2: Forest Governance, Public Relations, and Community Development	APFNet Course 3: International Dialogue on Forestry Issues	APFNet Course 5: Restoration of Degraded Forest Ecosystems & Forest Plantation Development	APFNet Course 6: Forest Resource Management and Protection
6.1 Navigation of the course is logical, consistent and efficient.	4.73	4.44	4.80	4.80	4.83	4.91
6.2 The fonts on the pages was easy to read.	4.61	4.39	4.73	4.90	4.50	4.64
6.3 Course pages and links are self-describing and meaningful.	4.70	4.56	4.67	4.70	4.83	4.82
6.4 The web design accommodates the course appearance and navigation on the device and browser I am using.	4.68	4.44	4.73	4.80	4.67	4.91
6.5 The platform, tools, and media selected to use for course activities are readily accessible from my local institution.	4.64	4.28	4.60	4.80	4.83	4.91
6.6 The page download and video streamed are fast and there are no problems with the links or access to resources.	4.47	4.33	4.40	4.40	4.75	4.55

To provide context for the last section, respondents were also asked a number of questions about how they were accessing the online modules. As can be seen in Table 15, most respondents were using a laptop while at university, with Internet Explorer or Google Chrome as the browser. It is likely that most were using Wi-Fi to access the internet, however the question was incorrectly specified to include location rather than just type of connection.

Table 15 Device, browser, and Internet connection used for the review

Device	Percentage	Count	Internet Connection	Percentage	Count
Desktop	13.6%	9	Wi-Fi	45.5%	30
Laptop	83.3%	55	Fibre	4.5%	3
Tablet	0.0%	0	ADSL	3.0%	2
Smart phone	3.0%	2	University	42.4%	28
Other	0.0%	0	Home	4.5%	3
Total		66	Other	0.0%	0
					66

Browser	Percentage	Count	Survey Location	Percentage	Count
Explorer	39.4%	26	University	74.2%	49
Firefox	6.1%	4	Home	13.6%	9
Chrome	40.9%	27	Public Café	0.0%	0
Safari	7.6%	5	Other	12.1%	8
Other	6.1%	4			66
Total		66			

Generally, the results of the survey show that the online platform works well.

### 3.4. Project Efficiency

Efficiency can be evaluated from the perspective of a plan that made best use of human resource and one that made best use of funds to achieve the project objectives.

The main observation in terms of human resource is the choice of lead coordinators at each university. In most cases, the lead coordinator is also the representative on the FCDMM-APR (mostly Deans). It is not clear why this is the case or what process was used to determine that these were the most appropriate individuals. As a process for developing the content of the online programme, the approach that appears to have been taken was engage 'experts' (Deans from each university) to develop courses around their interests and expertise under the broad theme of SFM. This would have contributed to why part of the training programme at UBC needed to be a retrospective look at overlap.

Another observation from interviews is that the target audience is not clear. There is a difference between a non-specialist who is interested in a topic and specialist who has technical background. Catering for only one or the other means that only part of the potential learner population is catered to. It may be that the courses could be refined to



reflect either of these situations or otherwise explicitly indicating in the course introduction who it is directed at.

An alternative approach would be to use one group of experts (the Deans) to develop the programme and the topics that need to be covered, and then as a separate process, engage relevant experts to develop the required content. The experts could be other staff from each university, as was done at BFU, staff from other universities in the project, or other experts not from the universities involved in the project (other universities, research institutions, NGO or government agency).

Consideration of the alternative approach requires looking at the contracting process and the stated objective of ensuring that funding was spread equitably among the participating institutions. From interviews, it was apparent that payment issues (mechanisms) created problems for collaborative work (effectively subcontracting between the subcontractors). This contributed to each course being developed entirely within one institution. In terms of efficiency, this suggests that the project was not able to be carried out as efficiently as a situation where payments could easily flow where required.

The other consideration of funding efficiency is how changes to the project objectives were factored into the budget. For example, USD 70,000 was budgeted for the international conference that was part of the fourth output. The Project Completion Report mentions that at some point discussions were held with APFNet for an alternative plan. In the end it was decided to host side events at other conferences rather than a separate conference in Beijing. It is not clear that when a decision was made to hold side events at other conferences, how this affected the allocation of the USD 70,000 budget or how it was used.

### 3.5. Project Sustainability

Ongoing maintenance and management of the online content is something that has not been addressed in the project. As was raised in interviews, some courses and/or modules are by nature ones that need to be routinely updated as they deal with policy or current issues rather than fundamental concepts and applications that do not change quickly. All content is currently managed by UBC (Figure 1).

Figure 1 Content curation and management



Presumably there are licensing constraints about non-UBC authors having access to material using software licensed to UBC, meaning that ongoing maintenance will potentially be a problem. If there are licensing constraints, it is also not clear how an individual institution would customize material to match current teaching, one of the objectives/outcomes identified in the Completion Report. A clear plan and process for maintenance and modification is needed as this costs money and needs a clear line of responsibility.

While it is somewhat outside the scope of this evaluation, views were expressed that one way of addressing maintenance was an ongoing, multi-institution endeavor (e.g. permanent 'International Forestry School'). This of course would require a workable funding model and an educational accreditation model. This would then require consideration of future author rights at other institutions.

### **3.6. Summary of Assessments**

The evaluation covered five main areas. The key points arising from the evaluation are as follows:

- **Project Documentation and Design**
  - The rationale for why specific courses and modules have been chosen is not clearly linked to the survey of forestry degrees.
  - The specification of what was to be delivered as part of each sub-contract is very general, and is likely linked to the wide variation in what was delivered by each subcontractor.
- **Overall Implementation and Management**
  - The development of content in institutional silos rather than the planned collaborative, multi-institutional approach to developing each course.
  - The lack of peer-review of content and assessment.
  - A wide variety of 'output' in terms of content developed for each of the courses (number of modules and topics within a course, lectures, resources and assessment).
  - It is not clear how assessment was determined to be appropriate to the target group or course objectives.
  - A comprehensive training programme was developed and delivered at UBC, although this does not appear to be a transportable package.
- **Project Impact**
  - Survey of potential users was carried out to gauge potential impact.
  - Respondents indicated that additional information about why multiple-choice answers were or were not correct, and model answers for reflective questions would help learning.
  - Respondents indicated that many of the resources provided are not explicitly linked to the lectures or other learning materials (uncertain as to why the resource is useful).
  - 98% of respondents preferred to have some type of resource to accompany the lectures.

- **Project Efficiency**

- The approach for developing the content appears to have been taken was engage 'experts' (Deans from each university) to develop courses around their interests and expertise under the broad theme of SFM.
- An alternative approach would be to use one group of experts (the Deans) to develop the programme and the topics that need to be covered, and then as a separate process, engage relevant experts to develop the required content.
- In terms of efficiency, payment issues (mechanisms) created problems for collaborative work (effectively subcontracting between the subcontractors) suggests that the project was not able to be carried out as efficiently as a situation where payments could easily flow where required.

- **Project Sustainability**

- Ongoing maintenance and management of the online content has not been addressed in the project.
- Not clear how an individual institution would customize material to match current teaching (stated objective).

#### **4. Evaluation Results and Conclusions**

The *Innovative Sustainable Forest Management Education in the Asia-Pacific Region* project [2013P2-FCDMM-PA] was undertaken to improve the capacity in sustainable forest management (SFM) in the Asia-Pacific region. The evaluation results need to consider this goal as well as the specific objectives of the project:

- To build the core courses of SFM education that will provide the basis for developing a widely adopted core curriculum of SFM in the Asia Pacific Region;
- To create a platform for exchanging ideas and experiences on educating the new generation of foresters in the Asia Pacific Region;
- To facilitate collaborations on forestry education between developed economies and less developed economies; and,
- To help promote reforms in forestry education in the Asia Pacific Region and build a model for sharing the results.

From a technical perspective, the project has been very successful in achieving the first objective through the development of an online platform for delivering material that will build knowledge and skills in sustainable forest management. The current content is somewhat variable in terms of delivering desired outcomes. In particular, the variability of content of each course in terms of background documents, lectures, lecture transcripts, subtitles or powerpoint copies, clearly linked resources and how they are to be used, and self-assessment materials need to be addressed to ensure that learning objectives can be achieved in either a MOOC environment or as part of a moderated course.

At this point it is not obvious that the project will achieve the objective of a widely adopted core curriculum or the fourth objective of promoting reforms in forestry education. An immediate focus should be on promotion and uptake of the courses that have been

developed. As there is no clear link to any specific needs (e.g. from the forestry school survey) there are a question about whether and how the courses might be used. This could start with the universities participating in the project or in the FCDMM-APR network as this has a mix of developing and developed economy universities and forestry programmes.

On one level the project has contributed to the second and third objectives by facilitating collaboration across a number of institutions. It is not clear that the project is a platform for exchanging new educational ideas apart from what is already provided by FCDMM-APR.

## **5. Recommendations and Lessons Learned**

If phase 2 of the project goes ahead, there are a number of recommendations. The recommendations are divided into project preparation, project implementation and project activities.

### **5.1. Project Preparation**

1. There must be a clearly articulated end user need (topic areas and format of content) that guides new course development and content to maximize the likelihood that courses and/or topics will be taken up by individuals as part of self-study, or by universities as part of their course content. Online courses are expensive to develop and providers of content must ensure that there is sufficient benefit to justify costs of development and delivery.

While there is likely a powerful argument to develop a multi-economy story about sustainable forest management that is relevant to wide audience of users, it has not been articulated clearly in this project. In addition, the rationale for the project in terms of a for-credit programme needs to be developed fully, particularly if a number of institutions are to part of the project rather than only one or a few being able to make use of the content in a fee-paying situation.

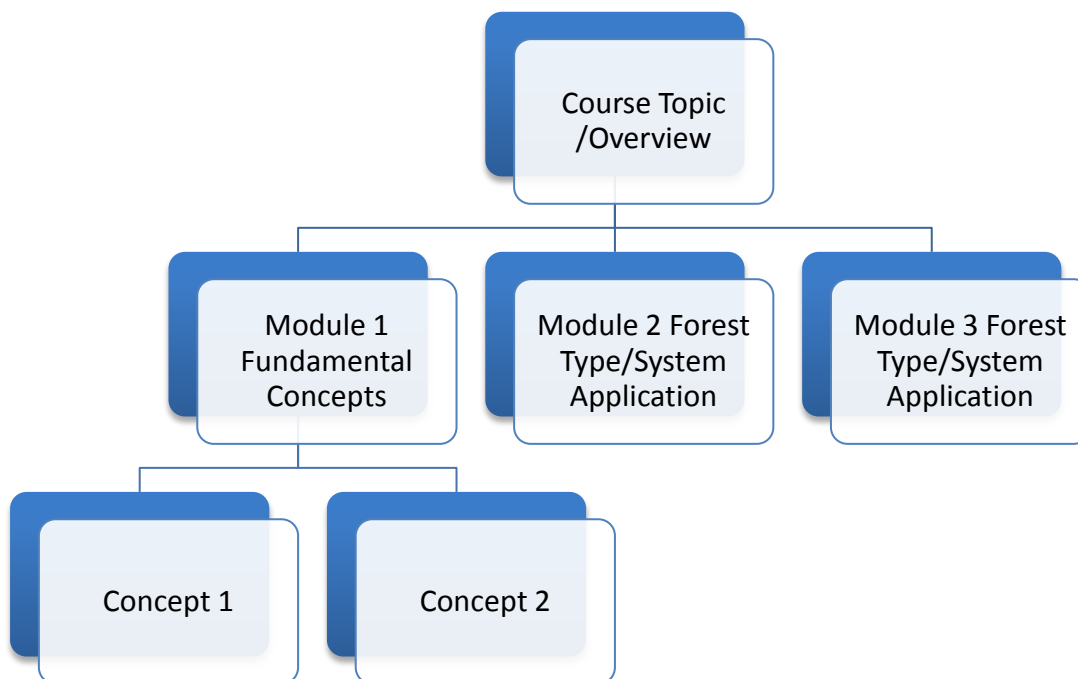
2. A quality assurance process needs to be implemented as part of the project. While the project has a technical quality assurance in terms of look and feel through a single provider of the web content, the remaining content has not gone through the same peer review process. This limits a course's utility for other institutions to easily pick up material as part of their quality assured educational processes. The quality assurance could be as simple as peer-review or part of a more formal process. A formal process may suit the long-term objectives of FCDMM-APR.
3. Ensure that the development team has both time and expertise to deliver the project objectives. This could entail separating the development of a programme or content arising from (1) above, from the development of the content, which could use specific content experts.
4. Look at revising the funding model and structuring courses development so that course and topics have contributions from a number of universities and regions. At the same time, this will help to ensure that content contains the broad spectrum of forest context

to maintain relevance and context in any particular region. There are two consequences for the project. As mentioned previously, a consequence of the 'solo' content development of the current model is that extent to which an individual course's content reflects the full spectrum of Asia-Pacific forestry varies.

In general, the full spectrum largely looks to be missing, reflecting instead the forest types and systems of the course writer's location. As currently developed, the content in individual courses and modules does not have an Asia-Pacific focus that covers the range of forest systems. The proposed approach will help to inform those who work in a particular region as well as those who want to learn how apply fundamental concepts to different contexts.

A revised course structure might be to have one topic or module that develops the basic concepts that are largely independent of context. This could be comprised of a number of individual topics that collectively build a base understanding of a subject area. Added to this would be separate modules or topics that applied this knowledge to specific contexts (environment, economic stage, legal/institutional system, forest type). The course structure could be as in Figure 2 rather than the current structure that tends to be a mélange of fundamental concepts and (limited) context.

Figure 2 Course structure focusing on fundamental concepts and contextual application



## 5.2. Project Implementation

1. Content and focus needs to be on desired learning outcomes (what will someone be able to do at the end of a course and topic. As part of this, it is important to ensure that course content expectations are clearly specified, particularly with reference to how long it is expected that a student would take to read, listen, and reflect to achieve the desired

learning outcomes.

2. It is important to determine the appropriate level and form of assessment given the target audience and expectations of delivering credits. It is not clear to the content specialists whether they are writing for specialist or non-specialist audiences.
3. Determine what the ongoing training needs are, and whether a training 'package' needs to be formally developed that can be delivered in other locations and by different experts.
4. Build quality control into the project by embedding peer-review of content and assessment into the course development.
5. Determine a mechanism for ongoing updating and maintenance of the online material.

### **5.3. Project Activities**

1. Develop a mechanism in the online system for providing answers or model answers to self-assessment questions. This includes answers for multiple choice questions (why correct or incorrect) as well as model answers or exemplars for reflective questions.
2. Provide clear links between the resources provided (readings, videos) and expected learning outcomes (specific information or just for interest).
3. Develop and provide background notes, copies of presentation slides and/or transcripts to accompany lectures.

## **6. Annexes to the Report**

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**Annex A. List of documents consulted**

Annual Work Plan (2015). Innovative Sustainable Forest Management Education in the Asia-Pacific Region.

Annual Work Plan (2014). Innovative Sustainable Forest Management Education in the Asia-Pacific Region.

Financial statements of APFNet Project. Summary report and audited reports from each of the five participating universities.

Innovative Sustainable Forest Management Education in the Asia-Pacific Region. No Date.

Project Agreement on Innovative Sustainable Forest Management Education in the Asia-Pacific Region [Project ID: 2013P2-FCDMM], November, 2013.

Project Completion Report (2016). Innovative Sustainable Forest Management Education in the Asia-Pacific Region. March.

Project Document - Innovative Sustainable Forest Management Education in the Asia-Pacific Region, October 29, 2013.

Project Proposal - Innovative Sustainable Forest Management Education in the Asia-Pacific Region, November 1, 2012.

Project Progress Report (2015). Innovative Sustainable Forest Management Education in the Asia-Pacific Region.

Project Progress Report (2014). Innovative Sustainable Forest Management Education in the Asia-Pacific Region.

Project Sub-Agreement on Innovative Sustainable Forest Management Education in the Asia-Pacific Region [Project ID: 2013P2-FCDMM] between Beijing Forestry University on behalf of Coordinator Office of Forestry College Dean Meeting Mechanism in the Asia Pacific Region and The University of British Columbia (2014).

Project Sub-Agreement on Innovative Sustainable Forest Management Education in the Asia-Pacific Region [Project ID: 2013P2-FCDMM] between Beijing Forestry University on behalf of Coordinator Office of Forestry College Dean Meeting Mechanism in the Asia Pacific Region and The University of Philippines Los Banos Foundation Incorporated (2014).

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Project Sub-Agreement on Innovative Sustainable Forest Management Education in the Asia-Pacific Region [Project ill: 2013P2-FCDMM] between Beijing Forestry University on behalf of Coordinator Office of Forestry College Dean Meeting Mechanism in the Asia Pacific Region and The University of Melbourne (2014).

Results of Forestry Education Survey in the Asia-Pacific Region. June 2012.

The International Workshop of Innovative Sustainable Forest Management Education in the Asia-- - Pacific Region. Organized by Faculty of Forestry and Centre for Teaching, Learning and Technology, University of British Columbia. (2015).

**Annex B. Persons interviewed**

## Beijing Forestry University

Dr. Luo Youqing (Vice President)  
Dr. Liu Junchang (Director of International Cooperation Office)  
Dr. Huang Guohua, (Director of Information Center)  
Dr. Liu Yong (Professor)  
Mr. Lin Yu (International Cooperation Office)  
Ms. Yuan Mei (APFNet)

## University of British Columbia

Dr. Guangyu Wang (UBC Coordinator)  
Professor Dr. Hosny El-Lakany (Course content developer)  
Dr. Chris Crowley (UBC CTLT)  
Dr. Hailan Chen (UBC CTLT)  
Dr. Zhuang zuofeng (APFNet)

## APFNet

Mr. Xia Jun (AED, APFNet)  
Dr. Zhuang Zuo Feng (Director of project management division, APFNet)  
Ms. Yuan Mei (Project manager, APFNet)

**Annex C. Mission itinerary**

## Visit to BFU and APFNet, China

June 2		Dinner hosted by Dr. Luo Youqing, Vice President of Beijing Forestry University (BFU)
June 3	9:00-12:00	Project overview and introduction to the online platform of the six course by Dr Liu Yong; Forestry Building 313, BFU
	15:00-17:00	Visit to APFNet , meeting with AED of APFNet and Staff from Project Division
		A brief introduction of APFNet and its projects in the region
		Discuss the terminal evaluation requirement and framework
		Dinner with APFNet Secretariat
June 4	9:00-10:00	Project documents and materials check and open discussion. Forestry Building 313, BFU
	10:00-12:00	Visits to video course recording center, information center and BFU museum. BFU Campus
June 5	10:00	Departure to Airport (CA109) BCIA T3

## Visit to UBC, Canada

June 15th		Arrival and welcome
June 16th	14:00 – 17:00	Meeting at UBC Forestry (Room 2712, Forest Sciences Centre, 2424 Main Mall Vancouver). Discuss with Professor Dr. Hosny El-Lakany for Course 3 development. Discuss with students
A	17:30	Dinner with UBC Participants : Dr. Guangyu Wang, Michelle Zeng)
June 17 <sup>th</sup>	9:00 – 11:30	Meeting at UBC CTLT for course development evaluation <ul style="list-style-type: none"> <li>• Overview of Phase I – Dr. Guangyu Wang</li> <li>• Introduction to CTLT – Dr. Chris Crowley</li> <li>• Courses Development Overview – Dr. Hailan Chen</li> <li>• Discussion</li> </ul>
A	12:00 -13:30	Grill, hosted by Dr Guangyu Wang, Dr. Chris, Dr. Hailan and Michelle Zeng)
A	14:00- 16:30	Further discussion with project team if needed

**Annex D. Course Content**

Course/ Module/ Topic	Introduction	Background document	Number of Lecture Videos	Lecture notes / transcript	Subtitles	References / Resources	Multiple Choice Questions	Open-Ended Questions
C1M1T1	✓	✓	4			✓	10	
C1M1T2	✓	✓	4			✓	10	
C1M1T3	✓	✓	2			✓	10	
C1M1T4	✓	✓	2			✓	10	
C1M2T1	✓		7			✓	10	
C1M2T2	✓		6			✓	10	
C1M3T1	✓		2			✓	10	
C1M3T2	✓		6			✓	10	
C1M3T3	✓		3			✓	10	
C1M3T4	✓		2			✓	10	
C1M4T1	✓		5			✓	10	
C1M4T2	✓		5			✓	10	
C1M5T1	✓		6			✓	10	
C1M5T2	✓		1			✓	10	
C1M6T1	✓		2			✓		
C1M6T2	✓		2			✓	10	
C2M1T1			1			✓	T/F (5)	
C2M1T2			1			✓		✓
C2M1T3			1			✓	T/F (5)	
C2M1T4			0			✓		✓
C2M2T1			1			✓	T/F (5)	
C2M2T2			1			✓		✓
C2M2T3			1			✓		✓(plus model answer)
C2M3T1			1			✓		✓(video missing)
C2M3T2			1			✓		✓
C2M3T3			1			✓		✓
C2M3T4			1			✓		✓

Course/ Module/ Topic	Introduction	Background document	Number of Lecture Videos	Lecture notes / transcript	Subtitles	References / Resources	Multiple Choice Questions	Open-Ended Questions
C3M1T1	✓		3	✓		✓		✓
C3M1T2	✓		2	✓		✓		✓
C3M1T3	✓		2	✓		✓		✓
C3M2T1	✓		2	✓		✓		✓
C3M2T2	✓		2	✓		✓		✓
C3M2T3	✓		2	✓		✓		✓
C3M3T1	✓		1	✓		✓		✓
C3M3T2	✓		2	✓				✓
C3M3T3	✓		2	✓				✓
C3M4T1	✓		2	✓				✓
C3M4T2	✓		2	✓				✓
C3M4T3	✓		2	✓				✓
C3M4T1	✓		2	✓				✓
C3M4T2	✓		2	✓		✓		✓
C3M4T3	✓		2	✓		✓		✓
C5M1T1	✓		1			✓	2 x 12	✓
C5M1T2	✓		1			✓		✓
C5M1T3	✓		1			✓		✓
C5M2T1	✓		1			✓	2 x 12	✓
C5M2T2	✓		3			✓		✓
C5M3T1	✓		1			✓	2 x 12	✓
C5M3T2	✓		1			✓		✓
C5M3T3	✓		1			✓		✓
C6M1T1	✓		4			✓		✓
C6M1T2	✓		7			✓		✓
C6M1T3	✓		6		✓	✓		✓
C6M2T1	✓		4		✓	✓		✓
C6M2T2	✓		4		✓	✓		✓
C6M2T3	✓		4		✓	✓		✓
C6M3T1	✓		7		✓	✓		✓
C6M3T2	✓		4		✓	✓		✓
C6M3T3	✓		5		✓	✓		✓
C6M4T1	✓		4		✓	✓		✓
C6M4T2	✓		5		✓	✓		✓
C6M4T3	✓		5		✓	✓		✓

## Annex E. Survey Request

From: Bigsby, Hugh [[Hugh.Bigsby@lincoln.ac.nz](mailto:Hugh.Bigsby@lincoln.ac.nz)]  
Sent: Sunday, July 03, 2016 3:43 AM  
To: [impulhin@up.edu.ph](mailto:impulhin@up.edu.ph); [impulhin@uplb.edu.ph](mailto:impulhin@uplb.edu.ph); [lyong@bjfu.edu.cn](mailto:lyong@bjfu.edu.cn); [mzakaria@upm.edu.my](mailto:mzakaria@upm.edu.my); [weston@unimelb.edu.au](mailto:weston@unimelb.edu.au); Wang, Guangyu  
Cc: 袁梅; zhuang\_zuofeng; [xia\\_jun@apfnet.cn](mailto:xia_jun@apfnet.cn); Chen, Hailan  
Subject: APFNet Survey

Hi,

I am reviewing the Innovative Sustainable Forest Management Education in the Asia-Pacific Region project for APFNet. As part of the review a survey of potential users of the courses is being carried out. I am looking for senior undergraduate, Masters and PhD students from a range of universities to review the five courses that have been completed. These are as follows:

APFNet Course 1: Sustainability Forest Management in a Changing World

(<http://blogs.ubc.ca/apfnet01/>)

APFNet Course 2: Forest Governance, Public Relations, and Community Development

(<http://blogs.ubc.ca/apfnet02/>)

APFNet Course 3: International Dialogue on Forestry Issues (<http://blogs.ubc.ca/apfnet03/>)

APFNet Course 5: Restoration of Degraded Forest Ecosystems & Forest Plantation

Development (<http://blogs.ubc.ca/apfnet05/>)

APFNet Course 6: Forest Resource Management and Protection

(<http://blogs.ubc.ca/apfnet06/>)

Given the time it will take to go through each course I would expect a student to evaluate only one course. I would like as many responses as possible from each university to give a representation from that university and thus I am looking for 4-5 reviews from each course. I appreciate that this may not be possible at all locations. As I do not have student contact details, I am seeking your assistance in talking to students about the project and distributing the survey. This will require allocating courses to individual students and then sending them the following link. It contains a link to individual courses so should be the only link required. I would like the review completed by July 15.

<https://survey.ubc.ca/s/external-review-for-apfnet-phase-1-courses/>

Thank you in advance for your help.

Hugh

Hugh Bigsby, PhD FNZIF

## Survey Section 0

External Review for APFNet Phase I Courses - 0%

<https://survey.ubc.ca/s/external-review-for-apfnet-phase-1-courses/>

### External Review for APFNet Phase I Courses

0%

Go to: [0 You as Reviewer](#) | [1 General Course Info](#) | [2 Learning Outcomes](#) | [3 Learner Assessment](#) | [4 Course Materials](#) | [5 Learning Activities](#) | [6 Course Look-and-Feel](#)

#### Instructions

Please respond to the following questions about you as a reviewer first and then use the Quality Checklist starting on the next page to conduct a review on the design and production for one of the APFNet Phase I self-directed learning courses. Your constructive comments would help the course author(s) and developers to improve the design of the course. Your feedback is sincerely appreciated. Thank you.

#### You as Reviewer

0.1 Your home university location:

☐ Australia ☐ Canada ☐ China ☐ Malaysia ☐ Philippines ☐ Other

0.2 Your role as a reviewer:

☐ Forestry working professional ☐ Forestry student ☐ Other

0.3 Are you currently studying and/or already have a degree in forestry?

☐ Yes  
☐ No

0.4 What degree are you studying or do you have?

☐ PhD  
☐ Master  
☐ Bachelor  
☐ Other qualifications

0.5 The course you are reviewing:

☐ APFNet Course 1: Sustainability Forest Management in a Changing World (<http://blogs.ubc.ca/apfnet01/>)  
☐ APFNet Course 2: Forest Governance, Public Relations, and Community Development (<http://blogs.ubc.ca/apfnet02/>)  
☐ APFNet Course 3: International Dialogue on Forestry Issues (<http://blogs.ubc.ca/apfnet03/>)  
☐ APFNet Course 5: Restoration of Degraded Forest Ecosystems & Forest Plantation Development (<http://blogs.ubc.ca/apfnet05/>)  
☐ APFNet Course 6: Forest Resource Management and Protection (<http://blogs.ubc.ca/apfnet06/>)

0.6 Your prior knowledge of the material covered by the course was

☐ Completely new  
☐ Somewhat familiar  
☐ Have covered in senior undergraduate or postgraduate courses



## External Review for APFNet Phase I Courses - 0%

<https://survey.ubc.ca/s/external-review-for-apfnet-phase-1-courses/>

Q7 What device, browser, and Internet connection are you using while you are conducting this review?

Device ☐ Desktop ☐ Laptop ☐ Tablet ☐ Smart phone ☐ Other

Browser ☐ Explorer ☐ Firefox ☐ Chrome ☐ Safari ☐ Other

Internet Connection ☐ Wi-Fi ☐ Fibre ☐ ADSL ☐ University ☐ Home ☐ Other

Location where you access Internet ☐ University ☐ Home ☐ Public Café ☐ Other

If you chose 'Other' for any of the above, please specify accordingly:

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## Survey Section 1

External Review for APFNet Phase I Courses - 14%

<https://survey.ubc.ca/s/external-review-for-apfnet-phase-1-courses/>

### External Review for APFNet Phase I Courses

14%

Go to: [0 You as Reviewer](#) | [1 General Course Info](#) | [2 Learning Outcomes](#) | [3 Learner Assessment](#) | [4 Course Materials](#) | [5 Learning Activities](#) | [6 Course Look-and-Feel](#)

#### Instructions:

Please select your response to the items. Rate each statement on a 1 to 5 scale.

"Strongly disagree 1 2 3 4 5 N/A" Strongly agree". N/A\* = Choose N/A if the item is not appropriate or not applicable to the course.

To help with future changes to the course please provide specific comments to explain your rating for an item.

#### Section I: General Course Information

Statements	Rating Scale	Comments/Recommendations
1.1 Instructions on how to get started and where to find various course components are clear and easy to find.	Select your rating	Type comments here
1.2 The course description and purposes are clearly stated.	Select your rating	Type comments here
1.3 Prerequisite knowledge and required competencies are clearly stated.	Select your rating	Type comments here
1.4 The structure and components of the course are clearly explained.	Select your rating	Type comments here
1.5 A clear and current course schedule with topics, and suggested activity or assignment due dates is posted.	Select your rating	Type comments here
1.6 Instructions to locate activities and applicable communication tools (reflection activities, self-tests, forums, etc) are clear and easy to find.	Select your rating	Type comments here
1.7 Purposes and etiquette expectations for online discussions, chat, email, and/or other forms of communication are stated clearly if applicable to the course.	Select your rating	Type comments here
1.8 Minimum technical skills expected are clearly stated.	Select your rating	Type comments here
1.9 Minimum technology requirements of the course are clearly and adequately stated.	Select your rating	Type comments here

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## Survey Section 2

External Review for APFNet Phase I Courses - 28%

<https://survey.ubc.ca/s/external-review-for-apfnet-phase-1-courses/>

### External Review for APFNet Phase I Courses

28%

Go to: [0 You as Reviewer](#) | [1 General Course Info](#) | [2 Learning Outcomes](#) | [3 Learner Assessment](#) | [4 Course Materials](#) | [5 Learning Activities](#) | [6 Course Look-and-Feel](#)

#### Instructions:

Please select your response to the items. Rate each statement on a 1 to 5 scale.

"Strongly disagree 1 2 3 4 5 N/A" Strongly agree". N/A\* = Choose N/A if the item is not appropriate or not applicable to the course.

To help with future changes to the course please provide specific comments to explain your rating for an item.

#### Section 2: Course Goals and Learning Outcomes

Statements	Rating Scale	Comments/Recommendations
2.1 The course learning outcomes are clearly stated in measurable and observable action verbs.	Select your rating	Type comments here
2.2 The course learning outcomes are described in terms of what the student will be able to do upon completion and are written from the students' perspective.	Select your rating	Type comments here
2.3 The module/unit learning outcomes are clearly stated and are consistent with the course-level outcomes.	Select your rating	Type comments here
2.4 Instructions to students on how to meet the learning outcomes are clearly stated.	Select your rating	Type comments here
2.5 Learning outcomes are evenly distributed among modules/units.	Select your rating	Type comments here
2.6 The learning outcomes require the same level of analysis and understanding as other courses I am currently taking or took in my last degree.	Select your rating	Type comments here
2.7 This course is relevant to what I am studying.	Select your rating	Type comments here

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## Survey Section 3

External Review for APFNet Phase I Courses - 42%

<https://survey.ubc.ca/s/external-review-for-apfnet-phase-1-courses/>

### External Review for APFNet Phase I Courses

42%

Go to: [0 You as Reviewer](#) | [1 General Course Info](#) | [2 Learning Outcomes](#) | [3 Learner Assessment](#) | [4 Course Materials](#) | [5 Learning Activities](#) | [6 Course Look-and-Feel](#)

#### Instructions:

Please select your response to the items. Rate each statement on a 1 to 5 scale.

"Strongly disagree 1 2 3 4 5 N/A" Strongly agree". N/A\* = Choose N/A if the item is not appropriate or not applicable to the course.

To help with future changes to the course please provide specific comments to explain your rating for an item.

#### Section 3: Learner Assessment

Statements	Rating Scale	Comments/Recommendations
3.1 The learning activities and assessments are consistent with the learning outcomes.	Select your rating	Type comments here
3.2 Varies forms of self assessment in the course forced me thinking about course materials.	Select your rating	Type comments here
3.3 I had multiple opportunities to measure my learning progress.	Select your rating	Type comments here
3.4 Multiple choice questions provided were useful to test my understanding of the material.	Select your rating	Type comments here
3.5 Extra information about why multiple choice answers are correct or incorrect would help my learning.	Select your rating	Type comments here
3.6 Reflective questions or problems provided were useful to test my understanding of the material.	Select your rating	Type comments here
3.7 Model answers for discussions about reflection questions will help my understanding of materials.	Select your rating	Type comments here
3.8 Any other forms of self assessment you would like to see for this course?		Type here

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## Survey Section 4

External Review for APFNet Phase I Courses - 57%

<https://survey.ubc.ca/s/external-review-for-apfnet-phase-1-courses/>

### External Review for APFNet Phase I Courses

57%

Go to: [0 You as Reviewer](#) | [1 General Course Info](#) | [2 Learning Outcomes](#) | [3 Learner Assessment](#) | [4 Course Materials](#) | [5 Learning Activities](#) | [6 Course Look-and-Feel](#)

#### Instructions:

Please select your response to the items. Rate each statement on a 1 to 5 scale.

"Strongly disagree 1 2 3 4 5 N/A" Strongly agree". N/A\* = Choose N/A if the item is not appropriate or not applicable to the course.

To help with future changes to the course please provide specific comments to explain your rating for an item.

#### Section 4: Course Materials

Statements	Rating Scale	Comments/Recommendations
4.1 Course content is sequenced and structured in a way that enabled me to achieve stated learning outcomes.	Select your rating	Type comments here
4.2 Course materials are presented in a consistent and logical structure and layout.	Select your rating	Type comments here
4.3 The supporting materials were useful for the course.	Select your rating	Type comments here
4.4 The distinction between required and optional materials is clearly explained.	Select your rating	Type comments here
4.5 All course materials are free from typos and grammatical errors.	Select your rating	Type comments here
4.6 The course contains text transcripts of videos or copies of PowerPoint presentations.	Select your rating	Type comments here
4.7 The length of the videos was about right.	Select your rating	Type comments here
4.8 It was easy to stop, start, and review the video lectures.	Select your rating	Type comments here
4.9 The course has useful background notes.	Select your rating	Type comments here
4.10 At the end of this course, 1) My understanding of the topic area is greater than before I did the course; 2) I am able to analyse issues related to the subject covered in this course.	Select your rating	Type comments here

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## Survey Section 5

External Review for APFNet Phase I Courses - 71%

<https://survey.ubc.ca/s/external-review-for-apfnet-phase-1-courses/>

### External Review for APFNet Phase I Courses

71%

Go to: [0 You as Reviewer](#) | [1 General Course Info](#) | [2 Learning Outcomes](#) | [3 Learner Assessment](#) | [4 Course Materials](#) | [5 Learning Activities](#) | [6 Course Look-and-Feel](#)

#### Instructions:

Please select your response to the items. Rate each statement on a 1 to 5 scale.

"Strongly disagree 1 2 3 4 5 N/A" Strongly agree". N/A\* = Choose N/A if the item is not appropriate or not applicable to the course.

To help with future changes to the course please provide specific comments to explain your rating for an item.

#### Section 5: Learning Activities

Statements	Rating Scale	Comments/Recommendations
5.1 The learning activities helped me achieve the stated learning outcomes.	Select your rating	Type comments here
5.2 Learning activities are clearly integrated with specific instructional materials and linked to learning outcomes.	Select your rating	Type comments here
5.3 The online forum (The Knowledge Café) where I can post questions to other students would help facilitate my understanding and mastery of the learning objectives.	Select your rating	Type comments here
5.4 Learning activities actively engage me in meaningful and relevant learning throughout the course.	Select your rating	Type comments here
5.5 The requirements for student engagement and progression through the course are clearly articulated.	Select your rating	Type comments here

5.6 For this course: (Click on your preference to highlight it.)

☐ I prefer to only listen to the lectures.

☐ I prefer to have a copy of lecture PowerPoint or a transcript while listening to the lectures.

☐ I prefer to have read some background notes for material covered by the lectures before listening to them.

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## Survey Section 6

External Review for APFNet Phase I Courses - 85%

<https://survey.ubc.ca/s/external-review-for-apfnet-phase-1-courses/>

### External Review for APFNet Phase I Courses

85%

Go to: [0 You as Reviewer](#) | [1 General Course Info](#) | [2 Learning Outcomes](#) | [3 Learner Assessment](#) | [4 Course Materials](#) | [5 Learning Activities](#) | [6 Course Look-and-Feel](#)

#### Instructions:

Please select your response to the items. Rate each statement on a 1 to 5 scale.

"Strongly disagree 1 2 3 4 5 N/A" Strongly agree". N/A\* = Choose N/A if the item is not appropriate or not applicable to the course.

To help with future changes to the course please provide specific comments to explain your rating for an item.

#### Section 6: Look and Feel

Statements	Rating Scale	Comments/Recommendations
6.1 Navigation of the course is logical, consistent and efficient.	Select your rating	Type comments here
6.2 The fonts on the pages was easy to read.	Select your rating	Type comments here
6.3 Course pages and links are self-describing and meaningful.	Select your rating	Type comments here
6.4 The web design accommodates the course appearance and navigation on the device and browser I am using.	Select your rating	Type comments here
6.5 The platform, tools, and media selected to use for course activities are readily accessible from my local institution.	Select your rating	Type comments here
6.6 The page download and video streamed are fast and there are no problems with the links or access to resources.	Select your rating	Type comments here

7.7 Any other comments about the look-and-feel of the course?

Type here

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