

UNIVERSITY of PALANGKA RAYA - MARKET SURVEY

A market survey was conducted among stakeholders in Central Kalimantan (Appendix 1). The total respondent of the market survey is 70, that come from: 1) local government institution such as Forestry, Agricultural, Regional Planning, Environmental Impact Agency in several Regency and Palangka Raya Municipality, 2) High level staff of the University of Palangka Raya such as vice rector, dean of all Faculty in UNPAR, head of school/department, 3) Informal leader.

The result of market survey then was discussed in a day workshop to formulate the need on the programme. This workshop was held in CIMTROP office with the total of participant are 30 people, coming from the University of Palangka Raya (Asia Link team-8 staff and also invited staff), and also each delegation from several Regency in Central Kalimantan and Palangkaraya Municipality.

The main programmes on the workshop are:

- Presentation on the Asia Link project to provide the information on the purpose of the project as well as the activity for this project.
- Discussion and formulation of the result of market survey

RESULT

The concepts of questioner that provided by the coordinator of Asia Link programme (Wageningen University), was completed by the Asia Link team of UNPAR. The questioner then, was translated to Indonesian in order to remove the language barrier.

1. General

- 1.1 Since the University of Palangka Raya did not has a post graduate programme, while on the other hand, the need to improve human resource in high, all the respondent as well as participant of workshop agree that the programme that want to develop through the project should be in master level. Since 2002, in collaboration with the University of Brawijaya, Malang, Indonesia, UNPAR run several programme for master (economics, law, Urban planning and counselling) and also make preparation for post graduate in UNPAR itself.
- 1.2 Most of respondent prefer to develop and establish a “general programme” and not specific on peatland as mentioned in the main objective of the Asia link project. In the workshop, most of participant agree to put the curriculum on the sustainable development of peatland as the main part of the project can be continued, but then the result of the project can be utilised in the master programme as one of the pathway in an umbrella of “Management of Natural Resources and Environment” as the main target of another project funded by the British Council, Jakarta. The Vice rector II and the Director of Postgraduate programme said that in 2004, UNPAR is preparing a proposal to establish master programme on “Management of Natural Resources and Environment”, and the result of Asia Link Programme will support this programme.
- 1.3 The reason to have “general programme”, because the respondent and participant of the workshop worry about the continuity of the programme in term of input (student), whilst for the “specific programme on peatlands” stated that UNPAR need to provide

a specific programme to attract student from other province in Indonesia and also to follow the UNPAR mission statement : “Development of science and technology of river catchments including peatland, wetland, and swamp forest.

2. Relevance of topics/modules

- 2.1 Two respondents suggested adding the module on Sociology, besides other 5 modules in the questioner but in the workshop the staff of Unpar said that it could be incorporated in the module 5. Human dimensions and resources economics. Prof. KMA M. Usop, MA; provide an additional 8 topics on Human dimension to the concept that Asia-Link UNPAR already prepared.
- 2.2 It seems that for module 4, GIS and remote sensing for peatland management, a bit new for respondent. The participants of the workshop understand that the limitation of knowledge and experience on this subject, however this subject or module need to be developed.

3. Gap between existing and required knowledge and skills

- 3.1 None of respondents fill the information on the gap between existing and required knowledge and skills.

4. Knowledge dissemination environment and methods

- 4.1 For dissemination of knowledge, a wide range of methods can be applied, however blended education, combination between “classical” classroom lecturers, distance learning with hard copy of material is the most appropriate ways. On the workshop, the participants agree that for e-learning methods, several potential constraints are can be: the culture of using, maintenance of hardware system (including electricity).
- 4.2 All of respondent and participants put the study load of 10-20 weeks for the whole curriculum.

5. Market needs and career opportunities

- 5.1 Three market sectors where beneficiaries of the course may find employments are: university (including research institute), local government and consultant.
- 5.2 Three functions that beneficiaries of the course may obtain are: Continuation of study (MSc; PhD), Lecturer-including researcher, designer and planner (in company) or Policy implementer (government employee).
- 5.3 Three areas of expertise in which beneficiaries of the course may be employed are: Environmental management, resource planning, and specific ecological studies.

6. RELATION OF THE COURSE WITH YOUR OWN ORGANISATION

- 6.1 In general, most of respondents have not sponsored any student to study on the area or subject on peatland yet. For UNPAR staffs that take postgraduate programme, taking the subjects on peatland is their own decision. However, most of the respondent will encourage their staff to take the course of wise use of peatland as the main target of the Asia link project. The participants of the workshop agree that the decision to choose the subject on the study is still dominantly taken by the students themselves.

6.2 All the respondent agree to take part or to provide their contribution to the programme that Asia Link-Unpar want to established, for example through offering practical work to students, assistance in regular field practical, guest lecturing

SHORT COURSES EVALUATION

As part of the plan to establish master programme and short courses on “Management of Natural Resources and Sustainable Development” at UNPAR, from 27 to 29 August 2003, a pilot project for short courses was carried out. There are 3 main topics or module that run in the short courses, those are: 1) natural resources function, 2) peat and forest fire, and 3) new approach to sustainable development

Participants

1. There are 100 participants were registered to attend the short course, coming from invited institution such as university, local government as well as NGO, as well as from public based on the announcement in a local newspaper. However, only 44 participants actively attend the short course until the programme finish on the fourth day.
2. The active participants are: 39 from the University of Palangka Raya, 1 Journalist, 2 Local government staff and 2 public participants.
3. Background of participant
4. The participant has a wide range of background: socio-economic, architect, fisheries, forestry, and education. Also, for formal education, there are student of UNPAR and diploma (13.6%), graduated (S-1, 47.7%) as well as master (38.7%).
5. The motivations to come to the short courses are:
 - Curiosity: want to know and add knowledge about peat and peatlands.
 - As additional activity for their carrier, especially for lecturer as a credit point.

Speakers

1. The speaker for this event mainly from the University of PalangkaRaya (11 speakers or 76.2%) with support from national and international institution (Prof. Jack Rieley-UNINOT, Prof. Bostang Radjagukuguk-UGM, Prof. Fakhrurozie-UNSRI, Marcel Silvius-Wetlands International).
2. Based on the evaluation from that distributed during each session, the participant evaluate that in general agree: a) the speaker has really knows about the subject, b) easy to understand.
3. Only two speakers (9.5%) did not maximize to use teaching tools such as LCD or OHP projector

Language

The short courses was designed to use English as the language, however the speaker who can speak Indonesian change to use Indonesian. Ninety percent of the participant said that the main constraint for them to follow the short course is the language problem. We understand that several candidate of participant decided not to come to the workshop also because of their worry on the using of English language.

Miscellaneous

1. The entire participants agree that duration of each session (30 minutes) is too short, and this will have the consequence that the content of the topic is not so detail. Total topic of 28 For 3 days is also too hard. Therefore to extend the periods of short course and also each session probably better.
2. Less than 50% of the speakers provide hand out before the topic was delivered. Most participants agree that the handout of the topic will help them to understand and follow the course. This is also to help them because it relate to the English language.
3. The venue for the short course is inappropriate because that was too big for 40-50 people. In addition, the setting up of audio system in the venue needs to be improved.

Appendix 1 - Questionnaire

Module	1	2	3	4	5
1. Ecology and Natural Sciences	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Water Resources and Hydrology	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Soil and Land Use	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Human Dimensions and Resource Economics	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. GIS and Remote Sensing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. Field Course and Research Projects	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. <i>Sociology</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Relevance of subjects of Module

Module 1. Ecology, Natural Resources and Environment Dr. Sehat Jaya (Forest ecology) Dr. Supramono (Biology)	1	2	3	4	5
1.1 Ecology: Basis for environmental management	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.2 Biodiversity: Introduction to ecological biogeography.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.3 Ecological hierarchy; major ecosystems, communities, populations	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.4 Environmentally sensitive areas; assessment for conservation and protection	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.5 Environmental degradation, carrying capacity and new ecology, degradation and change, deforestation, and soil erosion.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.6 Aquatic biodiversity and conservation: Bio indicators, bio monitoring, habitat management	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.7 Introduction to sustainability and criticality concepts in land use and NRM	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.8 Approaches to NRM – political ecology, socio-cultural aspects, local knowledge and participation, and livelihood strategies	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.9 Competing land use systems	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.10 Water rights and governance	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.11 Global and regional conventions (UNCED, Ramsar, Dublin, WWForum etc); Agenda 21: Environmental politics and reality.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.12 The Federal Constitution and legal framework for environmental management.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.13 The National Policy on the environment.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.14 Institutional framework for environmental management.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.15 Principles of environmental enforcement and compliance	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.16 Environmental Acts, Regulations/Orders, guidelines and standards	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.17 Paradigm Shift in Natural Resource and Environmental Management Environmental Management System (EMS)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.18 Environmental Impact Assessment (EIA)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Module 2. Water resources and hydrology of peatland Dr. Sulmin Gumiri Adi Jaya, MS.		1	2	3	4	5
1.1	Water resources, introduction : properties, utilisation and economic importance	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.2	Peatland as a water reservoir	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.3	Hydrological cycle and its component	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.4	Climatic variation and water balance	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.5	Rainfall: meteorological factors that affecting rainfall, measurement and its variation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.6	Run off and river flow: variations and factors affecting	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.7	Watershed morphology	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.8	Evaporation and transpiration, including the role of vegetation and soil moisture, its measurement and the estimation for evaporation and transpiration	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.9	Watershed management: planning and problems including deforestation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.10	Water policy and management, including legislation, issues on water use: national and international, conflict and the need for water management, effect of global climate change	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.11	Water resources management including surface and groundwater use, its sustainability: utilisation and protection, environmental impact, water table change, salt water intrusion, subsidence and socio-economic impact	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.12	Water quality and pollution: measurement, monitoring, and control	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.13	Aquatic diversity	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Module 3. Soil and Landuse Prof. Dr. Salampak Dohong (Soil Science) Dr. Yusurum Jagau (Agronomy) Yustinus Sulistiyanto, MP. (Soil Science)		1	2	3	4	5
1.1	Definition of peat and peatland	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.2	Formation process of peatland	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.3	Peat distribution, especially tropical peat	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.4	Physical characteristic of peat (Bulk density, porosity, permeability, subsidence etc.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.5	Chemical characteristics of peat (pH, colloid, CEC)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Chemical characteristics of peat (Base saturation, macro and micro nutrient, source of acidity)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.7	Biological characteristic of peat (micro organism on peat soil)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Peat classification, especially for tropical peat	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.9	Mapping and evaluation of tropical peatland	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.10	Peat for horticulture use (management and its constraint for agriculture)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Nutrient dynamics on agricultural peatland	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.12	Peat for plantation use (management and its constraint for plantation)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.13	Nutrient dynamics on peatland use for plantation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Forestry on peatland (management and its constraint for forestry)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.15	Nutrient dynamics on peatswamp forest	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.16	Peatland for natural conservation area and the rstration	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

1.17 Peat for energy	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.18 Wise use of peatland	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Module 4. GIS and Remote Sensing for Peatland Management Drs. Komang Gde Suastika, MS. (Geography) Ir. R. M. Sukarna, MS. (Forestry)	1	2	3	4	5
1.1 Introduction: understanding of GIS, software and file system	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.2 Data in GIS and Remote sensing: source, raster, vector, and point; thematic, meta and tabular	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.3 Digital Terrain Analyses: map slope, aspect, curvature, profiles and view sheds, perspectives and shaded relief	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.4 Spatial Interpretations: density slices, category reclasses, map overlays, spatial querying	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.5 Location Analyses: watersheds, proximity and buffers, friction, least-cost paths, raster-vector, simplification algorithms	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.6 Spatial Analyses: windows, weighting & smoothing, interpolations, splines, kriging	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.7 Remote Sensing: data collection, data types, EM spectrum, radiation and earth, simulated- and false-colour images, LUTs and band correlation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.8 Data processing on remote sensing: rectification, band stretching, atmospheric corrections, ratio, principle component analysis	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.9 Image Enhancement :edge detection, change detection, GPS data acquisition	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.10 Data classification on remote sensing: simple discriminan, supervised and unsupervised classification.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.11 Land and forest fire : detection and the satellite based assessment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Module 5. Human Dimensions and Resources Economics Kumpiady Widen, PhD (Anthropology) Sidik Rakhman Usop, MA (Sociology) Prof. KMA. M. Usop. (Philosophy) Prof. Cornelis Rintuh (Resource Economics)	1	2	3	4	5
1.1 Concept and pattern of culture (to understand the general concept of culture and its pattern)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.2 Universal categories of culture (to understand seven categories of culture and their concepts)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.3 Social institution (to understand general perspective on 8 cultural institutions and their concepts)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.4 Traditional law (customs): to understand cultural values, philosophy of life, norms and law, ideal, traditional knowledge and belief	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.5 Culture and theoretical framework of action (to understand the relation between culture and the frame work of action)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.6 Cultural ecology (to understand how human beings have to adapt their life with certain environment)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.7 Ecology and agriculture	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.8 Man and ecosystem: mythological perspectives	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.9 “Petak Ayungku”: cultural perspective of Dayak	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.10 Sustainable agriculture	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.11 Local knowledge in management of environment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.12 Cultural perspective on the space management	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

1.13	Shifting cultivation : a case from Dayak	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.14	Causes of forest and peatland fire	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.15	Consequences of forest and peatland fire: cultural, ecological, economic and health perspective	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.16	(Resilience of ecology)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.17	Resources economic :.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.18	Resources economic :.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.19	Resources economic :.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.20	Resources economic :.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>