

INTERIM REPORT - TECHNICAL

CASITA II – Sustainable Capacity Building on Urban Disaster Mitigation in Asia using IT&C Learning Tools (CASITA)

Name of the Asia-wide Programme: Asia IT&C Program

Contract reference no.: TH/Asia IT&C II/04 (96405)
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Project Title: CASITA II

Name of Beneficiary: Asian Disaster Preparedness Center (ADPC)
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Period covered by this Interim Report: 20 December 2004 – 31 December 2005
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Due date of this Interim Report: 15 th January 2006
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<i>Project Budget</i>	<i>EUR 411,346.00</i>
<i>Funds Disbursed by Commission to date</i>	<i>EUR 93,490.00</i>
<i>Expenditure Incurred by Project to date</i>	<i>EUR 275,277.32</i>

I. Introduction

Provide an executive summary (show overall progress as well as progress in the last 12 months) of your report highlighting:

- *The main activities that have been implemented.*
- *The main results achieved.*
- *Difficulties encountered.*

The CASITA project aimed at institutionalizing graduate and postgraduate courses on the application of modern IT&C tools in curricula at university level. The target group consisted of primarily of faculty members of the respective universities but eventually will consist of urban planners, geographers and other professionals knowledgeable of modern disaster mitigation tools. The main objectives of CASITA 2 were to promote research and develop a postgraduate program in the field of GIS/RS applications in natural hazard and risk assessment in several universities in Asia and to develop a distance education course at ADPC to help practitioners aspiring to advance the knowledge and skills in application of modern disaster mitigation tools and to advocate for increased collaboration between European and Asian academic institutions for joint academic programs, courses and distance education using modern IT&C techniques.

In the first year of the CASITA phase 2 the overall progress of the project has been as planned and it is foreseen that the project will clearly contribute towards the aim of Asia IT&C Programme. All the activities planned during the first year were implemented as scheduled. They were:

- **Kick-off workshop of project partners**
- **Needs assessment and capacity assessment of project partners and universities**
- **Development of website and implementation of a communication strategy for the project**
- **Short course on GIS and Remote Sensing for Natural Hazard and Risk Assessment at ITC, the Netherlands**

- **Development of guidelines for a joint research program**
- **Conduct of landslide hazard mitigation regional course**
- **Conducting hazard specific courses at regional and national levels**
- **Support for joint research and curriculum development in the selected universities.**
- **Development of distance education course**
- **Mid-term workshop**
- **Development workshop on curriculum development of distance education course on “Multi-hazard risk assessment”**

Main Results Achieved

- The target countries have experienced extreme events in the recent past resulting in considerable losses. Disaster risk management has become an imperative feature for most of the vulnerable countries. Therefore the development of postgraduate programs in the universities, eventually leading to Master of Science degree programs on Hazard and risk assessment have contributed immensely towards enhancing the capacity of the vulnerable communities.
- The CASITA project has provided an active forum for faculty and students of the universities for sharing of information, data on case studies, and course materials. Therefore networking of Asian universities of similar interest and academic programs with European institutions is the key achievement of the CASITA. More universities are expected to join this network.
- The disaster situations and the socio-economic situations are different in the target countries. A serious difference is also present in terms of level of subject knowledge of disaster risk management, land use planning, etc and the level in expertise in application of tools such as GIS/RS. Therefore the needs and capacity assessment on subject matter as well as the capacity and infrastructure needs of respective universities will help immensely in development of curriculum on disaster management.
- With IIRS a joint MSc course on Geoinformation for Hazard and Risk Analysis has been developed, and the first group of MSc students recently graduated at IIRS. UGM has also developed an MSc programme on Geo-Information for Disaster Management, with the support of ITC, which will result in joint Msc degree. CMU is developing MSc courses in Geoinformatics with emphasis to Natural hazards and University of Ruhuna is planning to develop a master's course on Disaster management Support to the Master Programme on Disaster Management at (PGIS) in Peradeniya University, Sri Lanka, has also been planned.
- The faculty members of the partner universities had the opportunity to enter in to collaborative programs especially joint research and publications with European universities and to share the experience in Asia with European counterparts. The European partners were able to have research assignments in Asia in a new environment.
- The CASITA Phase II website was established which is regularly uploaded for updates on CASITA II activities. CASITA II information is also available on the ITC blackboard distance learning platform- <http://bb.itc.nl>
- The guidelines for research work were developed by ITC and were given to universities for collection of data to have uniformity in information to be gathered.

- Hazard specific courses on Tsunami Wave modelling, Landslide Hazard Mitigation and Urban Disaster Management contributed towards skill and knowledge enhancement of the partner Universities
- The feedback and review received from workshop on curriculum development of distance education course on “multi hazard risk assessment” will help immensely in the development of final partly web based and partly interactive distance course.

Project outputs till date

1. Proceedings of the kick-off workshop
2. Detailed project work plan and tasks assigned to partners
3. A report on capacity assessment, inventory of needs and opportunities
4. Trip report by four participants from the partner universities attending the short course on GIS and Remote Sensing for Natural Hazard and Risk Assessment at ITC, the Netherlands
5. Course report on Urban Disaster management Course at Chiang Mai University
6. Report on Regional Training Course on “Tsunami wave modeling & Multi-temporal satellite image processing and analysis of the impact of the December 26th event” 28th March-1st April, 2005
7. A website of the project
8. Guidelines of joint research
9. Postgraduate curriculum on GIS/RS for natural hazard and risk assessment in partner universities in Asia.
10. Joint research related to postgraduate programs in the field of GIS/RS natural hazard and risk assessment, resulting in two papers ready for publication till now
11. Outline of distance education course on Multi hazard risk assessment developed for review and feedback at development workshop on curriculum development of the distance education course at Hanoi, Vietnam from 14 to 25 November 2005
12. Minutes of the mid term workshop
13. CD of presentations of the development workshop on curriculum development of the distance education course on “Multi hazard risk assessment”

II. Implementation of Activities versus Work Plan and Logical Framework

- *Ensure that the activities are consistent with those indicated in the work plan and logical framework relevant to that period. Highlight and justify any divergence.*

Describe:

- *The activities implemented in relation to the activities described in your work plan and logical framework.*
- *Quantify activities and outputs where applicable, according to the logical framework and the objective verifiable indicators included.*
- *Explain any divergences between planned and actual activities.*
- *Describe the actual resources used compared to planned.*
- *Highlight any changes to the logical framework, if any.*

The project activities for the first year of CASITA phase 2 have been consistent to the activities given in the work plan as well in the logical framework. The only divergence from the work plan was in the conduct of joint courses in the universities. The joint courses could not be organised in University of Ruhuna, due to unforeseen circumstances. There was a strike called in the University, which impeded the course being held. The joint courses are now planned for next year in the months of March in Gadjah Mada University and in June or July in University of Ruhuna and IIRS Dehradun.

Activity 1: Kick-off workshop of project partners

The kick-off workshop took place on 14-15 February at ITC, Netherlands with ten Participants from ADPC, BU, ITC, Thailand, Sri Lanka, Indonesia and Norway. During this workshop the project planning was done with the main partners and agreement was reached on a detailed outline of activities and methodology of execution. A detailed work plan was prepared identifying appropriate dates for workshops, trainings and other activities and the roles of each partner. Sub-contracts on the partnership for execution of activities under the project were also finalized. The minutes of the kick off meeting was one of the main project outputs.

Activity 2: Needs assessment workshop of project partners and universities

Needs assessment of four of the universities under the CASITA Phase II was carried out

1. Indian Institute of Remote Sensing, Dehradun, India
2. Gadjah Mada University, Indonesia
3. University of Ruhuna, Sri Lanka
4. Chiang Mai University, Thailand

These universities were approached to obtain more information on the needs and special features to be included in academic programs. The needs assessment was conducted by ADPC and ITC through email discussion list, questionnaire survey, preliminary assessments and interviews and visit to the selected universities. As a result of this activity a report on capacity assessment, inventory of needs and opportunities for the partner universities was produced.

Activity 3: Implementation of a communication strategy for the project

As part of the overall strategy of CASITA Phase II, a separate web site was created by ADPC and it is being maintained by ADPC. It contains information on the CASITA project phase II activities and outputs. It is also linked to the CASITA Phase I. The website address is (www.adpc.net/CASITA/default.html). The website is regularly updated for updates on CASITA II activities as well as CASITA updates are given in the ADPC's monthly e-Newsletter. CASITA II information is also available on the ITC blackboard distance learning platform- <http://bb.itc.nl> . Knowledge sharing was continued through Blackboard, an Internet-based platform for E-learning used under the project phase I. Scholarship announcements were also given in CASITA II website http://www.adpc.net/casita/casita_researchscholarship.html

Activity 4: Short course on GIS and Remote Sensing for Natural Hazard and Risk Assessment at ITC, the Netherlands

The selected faculty from the participating universities were awarded fellowship to follow a three-months short course on the use of GIS and Remote Sensing for Natural Hazard and Risk Assessment in ITC, the Netherlands 14th February to 13th May 2005. It was an intensive tailor made course on application of IT&C tools for hazard and risk assessment and data capturing, data analysis and data presentation. The course comprised 4 modules each of three-week duration. The selected participants were also exposed to use of the Blackboard tool for course support. The participants were:

1. Mr Rahul Srivastav, IIRS Dehradun
2. Dr. V. Hari Prasad, IIRS Dehradun

3. Dr. Sudibyakto, UGM, Indonesia
4. Mr. Tawee Chaipimonplin, CMU, Thailand
5. Prof. P. Liyana Arachchi, University of Ruhuna, Sri Lanka

Activity 5: Development of guidelines for a joint research program

In order to make the postgraduate courses more sustainable they should be accompanied by a research programme. The research under the purview of CASITA 2 focused on applications of GIS/RS in natural hazard and risk assessment. The guidelines for research were developed by ITC and were given to universities for collection of data to have uniformity in information to be gathered.

The report on guidelines for research was one of the project outputs under activity 5.

Activity 7: Conducting landslide hazard mitigation regional course

ADPC in partnership with Norwegian Geotechnical Institute (NGI) implemented the phase one of Asian Program for Regional Capacity Enhancement for Landslide Hazard Mitigation (RECLAIM) in six countries in Asia. The faculty and postgraduate students from the selected four partner universities also participated in the International Seminar on Landslide Risk Management, 6th June in Colombo, Sri Lanka and also for the Regional Training course on Landslide Risk Mitigation from 8-12th June at Banadarawela, Sri Lanka. A short report on the two courses is attached.

Activity 7: Conducting hazard specific courses in universities

During the 1st year of the project, three joint courses at regional level had been organized with the participation of selected universities. These courses were Regional training course on “Tsunami wave modeling & multi-temporal satellite image processing and analysis of the impact of the December 26th event” organized by ADPC in partnership with AIT, ITC and ITB Indonesia from 28 March – 1st April 2005 at AIT, Thailand; International seminar on Landslide risk Management, Colombo, 6th June 2005 and Regional Training Course on landslide risk Mitigation at Bandarawela, 7-12th June 2005. Another course on Urban Disaster mitigation was organised in collaboration with Chiang Mai University from 9-11 April, 2005 at Chiang Mai. A refresher course on curriculum development of distance education course on “Multi hazard risk management” was also organised at Hanoi, Vietnam from 14th to 25th November 2005. A meeting between ADPC and IIRS Dehradun took place on 27th October 2005 at Dehradun to discuss and plan out the short training course at IIRS. Several courses also had been organized at national level on the request of target universities. The conduct of such courses was aimed at building the capacity on disaster risk management of participants such as young professionals, academics, and students.

Activity 8: Support for joint research and curriculum development in the selected universities

Based on the needs assessment, each selected university has been provided with necessary support in developing the course curricula and conducting the postgraduate research. The disaster management modules made available during the phase I of CASITA project to the participating urban planning schools, have already been made available to all the universities. Support for postgraduate research and curriculum development has been provided to each selected university, depending on specific requirements as per the discipline (geography, environment, etc.). The curriculum is specific to the socio-economic and hazard environment of each country.

UGM has already developed an MSc programme on Geo-Information for Disaster Management, with the support of ITC, which is planned to result in a joint MSc, starting September 2006. With IIRS a joint MSc course on Geoinformation for Hazard and Risk Analysis has been developed with support from ITC and the first group of MSc students recently graduated at IIRS. Based on the experience of conducting M.Sc. Course for the past 2 years, IIRS would like to review its syllabus and broad research themes with an expert committee.

University of Ruhuna is planning to develop a masters course on Disaster management. CMU is developing MSc courses in Geoinformatics with emphasis to Natural hazards.

Support to the Master Programme on Disaster Management at (PGIS) in Peradeniya University, Sri Lanka, has also been planned.

In the past one year 2 papers have been made ready for publication;

Singh, L.P., van Westen, C.J., Champati Ray, and P.K. Pasquali, P. (2005) Accuracy Assessment of InSAR derived Input maps for Landslide Susceptibility Analysis: A Case study from the Swiss Alps. In: Landslides: journal of the International Consortium on Landslides, 1 (2005)

Khatsu, P. and Van Westen, C.J., (in preparation) Urban multi-hazard risk analysis using GIS and Remote Sensing: A case study from Kohima Town, Nagaland, India - Proceedings Asian Conference on Remote Sensing, November 2005, Vietnam. Accepted for publication)

Activity 9: Development of distance education course

Based on the materials and case studies developed during the first phase of CASITA project, a distance education course on natural hazard and risk assessment has been developed. The Blackboard has been used as a virtual platform for development of the course. A workshop for curriculum development of the distance education course on “Multi Hazard risk Assessment” took place in Hanoi, Vietnam from 14th to 25th November 2005, which was considered as the first trial run of the distance education course. The refresher course focussed on presenting the outline of the distance education course on “Multi-hazard risk assessment” for evaluation by experts in training in the field of Geo- Information for Disaster Management. (The outline of the course is attached). Participants were mostly the senior lectures representing universities in the CASITA network. This workshop was very interactive with a lot of feedback from the participants, which would help in introducing further modifications to course material for making them more oriented towards target audiences. It was also decided during the workshop that the course would be made partly interactive and partly web based as most of the purely web based courses have a lot of dropouts and there are a lot of factors and variable conditions in various countries which make them non conducive.

Activity 10: Mid-term workshop

All the project partners participated in the Mid Term workshop held at Hanoi, Vietnam on the 12th June to review the status and progress of the CASITA Phase 2 under the below paradigms:

- to review the status and progress of curriculum development
- to review the joint research activities
- to comment on the distance education course and its delivery
- to discuss the problems faced by each university and plan for the next year

The decisions reached at the mid term workshop were

- The distance-based course will not be totally Internet based. It would be partly web based and partly interactive. ADPC would be the core agency to operate and moderate the course. The course would be developed by ITC with inputs from ADPC and BU.
- The trial run of the course on "Multi-hazard risk assessment" will be made in ITC, from 25 April to 12 May 2006.
- Support to Master Programme on Disaster Management at (PGIS) in Peradaniya University, Sri Lanka will be provided
- The marketing of the distance-based course will be done through the existing networks of ADPC, ITC and BU and also of the partner universities. Main lead for this activity will be ADPC
- Two short courses each, one on Urban Disaster Mitigation and another one on Damage and Loss estimation, will be conducted in all four partner universities. The timing of these courses have been tentatively decided. ADPC will take the lead in conducting these courses
- More emphasis has to be laid on research by Universities and production of research papers. The final output should show, at least one paper from each partner university
- The Universities have to show more initiative and should be more proactive
- The joint postgraduate programs in IIRS and UGM have already commenced. The other two universities have to take initiative for starting these specialized courses
- The final workshop would be held in Bangkok. The core project team, and selected universities will review the outcome of the project during this workshop. ADPC will be responsible for conduct of this workshop

The minutes of the mid-term workshop are attached.

The activities implemented are summarised in the table below:

Activities	Indicators	Means of verification	Quantification
The kick-off workshop on 14-15 February at ITC, Netherlands	Ten Participants from ADPC, BU, ITC, Thailand, Sri Lanka, Indonesia and Norway.	Proceedings of the workshop	1
Completion of needs assessment of the four partner universities and compilation of the results and submission of the report	- Electronic distribution list - Preliminary assessments and interviews - Questionnaires sent to the universities	Needs assessment report	1
A strategy for implementation of effective communication, between partners and beneficiaries, was adopted which would be implemented throughout the project	ADPC website Emails to CASITA network ITC Blackboard site	CASITA II website (www.adpc.net/CASITA/default.html) Regular updates on CASITA II activities in ADPC's monthly e-News CASITA II information is also available on the ITC blackboard distance learning platform- http://bb.itc.nl Scholarship announcements in CASITA II website http://www.adpc.net/casita/casita_researchscholarship.html Web Based virtual platform for e-learning	1
Short course on GIS and Remote Sensing for Natural Hazard and Risk Assessment at ITC from 14 th February to 13 th May 2005	One participant from each of the four university received fellowship from the project to attend the short course at ITC.	A short trip report by each participant	1 report compiled
Development of guidelines for a Joint research program	Joint research undertaken by partner universities.	Guidelines for joint research developed	1
Regional training course on "Tsunami wave modeling & multi-temporal satellite image processing and analysis of the impact of the December 26 th event" organized by ADPC in partnership with AIT, ITC and ITB Indonesia	12 participants from 6 countries - India, Sri Lanka, Bangladesh, Thailand, Indonesia and Philippines.	Report of the training course	1
Organization of Urban Disaster mitigation course, Chiang Mai, 9-11 April, 2005 in collaboration with Chiang Mai university	57 participants attended the course	Report on the UDM course	1

Support for curriculum development in the selected universities and joint research work.	Visit by ITC specialists to partner universities	Travel by ITC personnel to these universities	NA
* Visit by Dr. Cees van Westen of ITC to Department of Geography, ChiangMai University, 22-24 June 2005	Discussion with Faculty of Department of geography for introduction of more modules within the M Sc on Geoinformatics dealing with Disaster Management	Mission Report by ITC	1
* Workshop on research collaboration with Department of Geography, Ruhuna University: 27 June- 28 June 2005	12 Teaching staff of Department of Geography attended the course	Mission Report and Workshop report by ITC	1
Workshop on curriculum development and joint research with Gadjah Mada University, 2-8 July 2005	6 faculty staff participated for discussions on planning and implementation of the Joint MSc program agreement, library support, support from ITC staff, software, and research collaboration.	Mission Report by ITC	1
Visit for research collaboration by D. Rossiter, ITC to IIRS, India: 20 August-4 September, 2005	Review of the Joint ITC-IIRS M Sc Programme and joint research work undertaken	Mission Report by ITC	1
Research work done by Bonn university on use of remote sensing data for mapping of landslides	Research work done by Mr. Torsten Drey from Bonn University in Chiang Mai with support from ITC	PhD Progress report	
Announcement of M.Sc program on Geo-Information for Disaster management by Gadjah Mada University, with support from ITC	Enrollment of students for the above course	Brochure and announcements by Gadjah Mada University (GMU), Indonesia	1
Development of guidelines for a Joint research program. Information of various research activities at ITC, ADPC and Bonn University as well as the four partner universities was added. Links to websites providing free soft software, remote sensing information and tutorials was added	Joint research undertaken by partner universities	The final guidelines	1

Organization of International seminar on Landslide risk Management, Colombo, 6 th June 2005 and Regional Training Course on landslide risk Mitigation at Bandarawela, 7-12 th June 2005. These courses were jointly organized by ADPC, NGI, Norway and NBRO, Sri Lanka	About 100 persons, including the chief guests and organizers, attended the international seminar 23 participants from six partner countries and 4 partner universities of CASITA II participated in the regional training courses	Proceedings, short trip report, course presentations and documents	1
Linking of CASITA website to the website of the Department of Geography of the University of Bonn and as well to the website of the working group of the involved staff from Bonn University. Additionally, the ITC has been linked to the Department of Geography of the University of Bonn.	Department of Geography, Bonn University website	http://www.giub.uni-bonn.de/personal/welcome.html ; http://www.giub.uni-bonn.de/gidi/seiten/research.html	NA
Publication of two joint papers with partners Universities	Joint research work undertaken	Singh, L.P., van Westen, C.J., Champati Ray, and P.K. Pasquali, P. (2005) Accuracy Assessment of InSAR derived Input maps for Landslide Susceptibility Analysis: A Case study from the Swiss Alps. In: Landslides: journal of the International Consortium on Landslides, 1 (2005) Khatsu, P. and Van Westen, C.J., (in preparation) Urban multi-hazard risk analysis using GIS and Remote Sensing: A case study from Kohima Town, Nagaland, India - Proceedings Asian Conference on Remote Sensing, November 2005, Vietnam. Accepted for publication)	2
Acceptance of a final version of the proposal by BU for the joint PhD project within the framework of the CASITA II project by ITC	Literature review about the use of optical remote sensing data for the mapping of landslides, which can be provided to the four participating universities	PhD progress reports	
Preparation of CASITA Phase II, Mid-tem workshop and Refresher course at Hanoi, Vietnam	Collaboration and exchange between ITC, ADPC and Hanoi Architectural University	E-mails and Invitation letters to the participants Participants list	NA
Visit by ADPC staff to IIRS Dehradun for planning the agenda and organization of short course at IIRS	Course planned for either march or July 2006	Mission report	1

CASITA midterm workshop , 12 th November 2005, Hanoi, Vietnam	Review of the activities during first year and action plan for the coming year by ADPC, ITC and BU as well as representatives from the four partner universities	Minutes of the Mid term workshop	1
Adaptation of existing course material at Bonn University concerning hazards, risk and vulnerability for the distance education course	Adaptation of the new course	Presentation of the distance education course at the Refresher course in Hanoi from 14-26 November, 2005	NA
Preparation and development of the distance education course on “Multi-hazard risk analysis”	Task force for development of the distance education course	Presentation of the distance education course at the Refresher course in Hanoi from 14-26 November, 2005	NA
Workshop on Curriculum development of the distance education course on “Multi hazard risk assessment”, 14-25 November 2005 , Hanoi , Vietnam	Presentation of the developed distance education course for modifications and comments by experts in the field	List of participants and agenda of the workshop	1

III. Partnership

Information on the functioning of the Partnership should be provided here:

- *What has been the main role of each partner in implementing the activities described?*
- *What have been the main strengths and weaknesses of the partnership during this period?*
- *Describe any problem faced and how you have overcome the obstacles.*

The partnership between ADPC, ITC and BU has been very fruitful in implementing various activities according to time plan as can be seen from the table below:

Activity	Responsible Partner(s)
Kick-off workshop Organization	ITC (lead) with inputs from ADPC
Planning of activities in the project	ITC, ADPC, BU with 04 partner universities
Setting up of electronic distribution list	ADPC
Needs assessment of the universities	ADPC and ITC
Short Description of the project information for distribution through e-newsletter	ADPC/ITC/BU
Setting up of CASITA II website on ADPC server	ADPC with inputs from ITC and BU
Setting of space on blackboard environment and Uploading of files and Ongoing work on blackboard environment	ITC
Regular updates on CASITA II activities in ADPC's monthly electronic newsletter	ADPC with inputs from ITC and BU
Identification of representatives for the short course from the four universities and organization of the course	ITC with support from ADPC
Guidelines for Joint Research Programme	ITC with inputs from ADPC and BU

Regional Training course on Tsunami Wave Modeling	ITC and ADPC
RECLAIM Participants to get access to the Blackboard	ADPC & ITC
Needs assessment report	ITC in consultation with ADPC and BU
Conduction of the short course on GIS for the representatives from the four universities Submission of the report by the four representatives on the short course	ITC Compilation of the reports by ITC and submit to ADPC
Organization of the UDM course at Chiang Mai	ADPC and CMU
RECLAIM Participants to get access to the Blackboard	ADPC & ITC
Support for curriculum development in the selected universities and joint research work	ITC and ADPC
International seminar on Landslide Risk Management	ADPC and NGI
Regional training course on Landslide Risk Mitigation	ADPC and NGI
Workshop on research collaboration with Department of Geography, Ruhuna University	ITC and University of Ruhuna
Workshop on curriculum development and joint research with Gadjah Mada University	ITC and GMU
Visit for research collaboration by D. Rossiter, ITC to IIRS, India	ITC and IIRS
Publication of two joint papers with partners Universities	ITC and IIRS
Preparation of CASITA Phase II, Mid-term workshop and Refresher course at Hanoi, Vietnam	ADPC and ITC
Mid term workshop at Hanoi on 12 th November	ADPC and ITC
Preparation and development of the distance education course on “Multi-hazard risk analysis”	ITC with inputs from ADPC, BU and partner Universities
Development workshop on course development of distance education course on “Multi-Hazard Risk Assessment”	ITC and ADPC

Each partner has its own specialized area and strengths and together they bring complementarily to the goal of the project. Therefore joint efforts of the project partners have contributed towards the success of the project. The main strength of the partnership has been the excellent collaboration and communication between the partner organizations. No weaknesses have been found till now.

IV. Methodology and effectiveness

Describe the methodology applied and if any change has been produced from the initial methodology proposed:

- *Management structure, showing current management capacity and technical expertise.*
- *Any changed needs or circumstances that have forced a change in management approach and the methodology.*

The vast experience of the partners in conducting research and capacity building and implementing disaster risk management projects in target countries has been very useful. It is hoped that partners will be able to further expand their interventions and replicate the experience of ongoing work to a larger number of other countries in the region. This project has provided each partner an opportunity to learn from each other and integrate the new experience to benefit their own organizations too.

1. Joint brainstorming session during the kick-off workshop at ITC on 14-15 February were very effective in planning and discussing the activities and division of tasks and responsibilities among the partners. This methodology was also used for consultations partner universities in order to find out their needs for curriculum development and joint research work.
2. The four selected participants from the universities underwent the short course on GIS and remote sensing for natural Hazard and risk assessment at ITC, which was an intensive tailor made course on application of IT&C tools for hazard and risk assessment and data capturing, data analysis and data presentation. All the four participants also used blackboard actively during their stay at ITC, which greatly enhanced their skills and provided them opportunities for learning by doing.
3. Training of faculty and participatory approach in training was used at the regional training course on “Tsunami wave modelling & multi-temporal satellite image processing and analysis of the impact of the December 26th event”, which was organized by the ADPC in collaboration with AIT. The faculty members from ITC, ITB and ADPC contributed in training and there was sharing of data and experiences among the participants.
4. Participatory approach in training was used at the international seminar and regional training course on Landslide Risk Mitigation at Sri Lanka. The personnel from Norwegian Geotechnical Institute (NGI), ADPC and National Building Research Organization (NBRO), Sri Lanka contributed in training and there was sharing of data and experiences among the participants from the six countries, Bhutan, India, Indonesia, Nepal, Sri Lanka and Thailand, involved in RECLAIM project. This approach was also used for training on Urban Disaster mitigation at Chiang Mai University.

The faculty and the professionals of the four partner universities were trained to make an assessment of the problems through joint research, collection, collation and analysis of data related to the disaster situation of each country at city level will allow them to assess the situation themselves. Research on the subject will pave the way for innovative solutions.

5. Strengthening of network of participating universities established under CASITA I was done by regular updates on CASITA II activities in its monthly electronic newsletter which is sent to about 2,500 subscribers including past and present CASITA network partners.
6. Guidelines on joint research opportunities enabled to train the faculty to make their own assessments of their country specific problems and innovative solutions.
7. Training of faculty was undertaken during workshops at University of Ruhuna, Gadjah Mada University and IIRS. This would also help them in learning by doing.
8. Guidelines on joint research opportunities enabled to train the faculty to make their own assessments of their country specific problems and innovative solutions.
9. Joint Brainstorming sessions were held out discuss the development of the distance education course on “Multi-hazard risk analysis”.
10. Collaboration and sharing of work between the partners for Organization of Mid Term workshop and the refresher course

11. Joint brainstorming sessions were held between the implementing partners and the four partner universities during the mid term workshop in Hanoi on the 12th November 2005. The brainstorming sessions helped in thrashing out the shortcomings and to plan for the future action for the next year
12. The development workshop on curriculum development on distance education course on “Multi hazard risk assessment” took place at Hanoi, Vietnam from 14th to 25th November 2005 which included lot of interactive sessions and feedback from the participants
13. There is no change in the management approach and methodology during the reporting period. The technical capacity and technical expertise envisaged in the proposal are adequate and no changes were made during the reporting period.

There has been no change in the management structure and the management structure remains the same as reported in the project document. The management team consists of:

Senior Technical Supervisor, ITC

Project Coordinator (Europe), ITC

Senior Technical Expert, BU

Senior Technical Expert, ADPC

Project Coordinator (Asia), ADPC

Other Technical experts involved in project activities are

Senior Technical Expert, ITC

Technical Experts, ITC

Technical Expert, BU

Senior Technical Experts, ADPC

Technical Experts, ADPC

Curriculum Development Specialist, ADPC

V. Impact to date

List of achievements in concise format, e.g. bullet points or tabular

- *Provide a list of project achievements to date. This section should allow persons not directly involved with the project to assess impact to date.*
- *What is the impact on target groups?*
- *What is the impact on applicant and partners?*

Explain in which ways the project is increasing the technical and management capacities in the partner organisations.

- *Is the project contributing to the achievement of the objectives of the Asia-wide Programme? Each project should foster long lasting relations between the EU and Asian partners. There should be a transfer of know-how, and joint collaboration between EU and Asian organisations. Explain here how your project contributes to these aims and objectives.*

List of Achievements to Date

- Networking of Asian universities of similar interest and academic programs with European institutions is the key achievement of the CASITA
- Needs assessment of the partner Universities was undertaken which has helped immensely in development of postgraduate curriculum on GIS/RS for natural hazard and risk assessment in two universities in Asia and gave shape to development of such courses in Chiang Mai university and University of Ruhuna also

- The expansion of network of the Asian Universities under CASITA 2 is proven by the fact support to the Master Programme on Disaster Management at (PGIS) in Peradeniya University, Sri Lanka, has also been extended
- CASITA 2 gave impetus to research work undertaken in Bonn University, University of Ruhuna, University of Gadjah Madah and Indian Institute of Remote sensing, Dehradun
- Guidelines for joint research were established in order to help the universities in having uniformity in information to be gathered for research
- Regional training courses on “Tsunami wave modelling” and Landslide Risk Mitigation which were attended by the four partner universities enhanced their skills and knowledge on these subject areas
- Curriculum development of distance education course on “Multi-hazard risk assessment” was achieved for feedback by specialists in this field during the development workshop at Hanoi. IT would be further put on a trial run in the month of May 2006
- A strategy for implementation of effective communication, between partners and beneficiaries, was adopted by establishment of the CASITA 2 website, the electronic distribution list. The Blackboard Platform was also effectively used

Impact on target group: The universities targeted in this project are now more equipped and have developed or are at planning stage of developing post graduate courses on disaster management. The training courses that have taken place have been very beneficial and lot of knowledge has been exchanged between the European and Asian partners, which has helped strengthen the network of universities. The topic of disaster management is more prominently placed on the action agenda of the universities with the use of modern e-learning tools in the Universities. The universities are now more equipped with teaching and training materials which will help them in integrating issues of urban disaster mitigation in their own academic program and to spread the information to their colleagues.

Immense growth seen in the recent past of cities in target countries, in terms of infrastructure, buildings and roads, presents both challenges and opportunities. The project has enhanced the skills of urban planning professionals on the use of GIS as a decision support tool and demonstrate the methodology for risk reduction through land use planning endeavours. Through the capacity enhancement the project has made the urban land use planners abreast of the latest technological development in city planning and management.

The faculty members of the universities lacked support of the authorities in improving the academic programs and therefore were highly incompatible with the needs of the country. The IT&C tools have been an excellent tool for data management and presentation which have immensely helped university staff to sensitise the decision makers and authorities to support new academic and research programs.

The project has enhanced the capacity of university faculty of target universities in conducting research and postgraduate studies related to IT&C applications for disaster risk management. It is foreseen that integrating such solutions in urban planning and development and the faculty will be benefited due to participation of European experts

Impact on applicant and partners:

The impact on ADPC is considerable. With inclusion of university partners ADPC has strengthened its network building of Asian organizations involved in urban disaster mitigation and ADPC’s capacity building efforts have become sustainable. With the launch of the distance education course planned, ADPC as a regional resource center will be able to develop the competence in conduct of the distance

education component in disaster risk management with the help of European experts. ADPC will also be able to increase the effectiveness of distance education by introducing new programs to cover other subject areas. The European partners also will have direct experience in managing such programs in an unfamiliar environment with limited facilities. The launch of the distance education course will also help ADPC in further dissemination of disaster risk management throughout the world. CASITA Phase 2 has also upgraded capacity of ADPC staff in modern IT&C tools as well as in use of Blackboard environment. This project has also helped ADPC in building of synergies with other projects and programmes in ADPC.

Through CASITA, ITC has access to an active network of universities, which enables them to connect easily with different universities and to exchange knowledge and staff for joint courses, project activities and student recruitment. Further, the student's acquired ability in using software tool ILWIS causes good promotion of ITC. Also development of distance education course on "Multi hazard risk assessment" with contributions from ADPC and Bonn University. This would help them in wider outreach of their disaster management programmes.

The impact on Bonn University is also considerable as CASITA gave it an opportunity to be involved in a large university network in Asia and enabled them to make many new and valuable contacts. It also gave impetus to the research work done in the fields of hazard and risk assessment.

Impact on IT&C sector

It is difficult to really have an impact on the huge and powerful IT&C sector in such a short span of time but at least the project made the universities know about the new software tools. The Universities have been trained in the use of software such as ILWIS and ERDAS, which are very suitable for training at University level. Regional training courses on "Tsunami Wave Modelling" as well as on "Landslide Risk Mitigation" have also helped in enhancement of skills on new softwares and research in these areas. With the launch of distance education course, there would be further enhancement and usage of modern IT&C tools in the universities as well would increase the outreach to different parts of the world.

In all these respect the project has clearly contributed to the aims of the Asia IT&C programme, building capacities in Asia by using modern IT&C tools.

VI. Links with other projects/programmes (if any)

Describe any links built with other projects/programmes:

- *Highlight synergies created with similar projects.*
- *Are these projects/programmes funded locally, nationally or internationally?*

The CASITA phase II was closely linked with The Asian regional Program on Landslide risk mitigation (RECLAIM), which ADPC is implementing with Norwegian Geotechnical Institute of Norway. The Royal Norwegian Government is funding this program. The RECLAIM project is being implemented in six countries, Bhutan, India, Indonesia, Nepal, Sri Lanka and Thailand. The partner universities under the CASITA 2 project have also been actively involved and participated in the training courses held under the RECLAIM project.

Synergies have also been developed with SNV, The Netherlands Development Organization, which funded the Earthquake and Tsunami Vulnerability Reduction for Cities (EVRC-5) training course and Training workshop on "Damage and Loss estimation for Risk Management".

Further, in 2005 ITC has become associated partner of the United Nations University. Within the UNU-ITC partnership, a program is being developed on Disaster Management. The CASITA-2 project is considered as an important project within this UNU-ITC program on Disaster Management, which gives it a broader scope and strategically places it in an internationally recognised academic network of relevant academic partners.

VII. Sustainability

Describe here the plan for sustainability. Even if the project is at an early stage, the Beneficiary should start to work out a potential exit strategy.

- *What are the potential areas for project success?*
- *What lessons, both positive and negative, can be drawn from the experience of the project to date? What action will be taken as a result? Mention any emerging issues relating to sustainability.*
- *Describe the planned multiplier effects?*

Describe how this project can be replicated within the country, or in other countries, or in other fields of activity.

- *Describe any post project financing plans after EC funding ceases.*
- *Describe the post project institutional arrangements, giving due consideration to local ownership.*
- *Does the project have governmental support?*
Explain dialogue and support mechanisms set with local government.

Potential Areas of Success

The results generated during the 1st year through the CASITA project II show following anticipated key achievements

- Development of Post Graduate programmes on Disaster management with emphasis on Modern IT&C tools in remaining partner Universities
- More research work and projects undertaken by the partner universities using the application of modern IT&C tools such as GIS and RS
- Support to other universities in the region for development of postgraduate curriculum on disaster management and conduct of similar courses. Already support to the Master Programme on Disaster Management at (PGIS) in Peradeniya University, Sri Lanka, has been planned
- Further networking of Asian universities of similar interest and academic programs in European institutions
- Increase in usage of IT tools by professionals in the Disaster Risk management disciplines and recovery program planning.

Lessons Learnt

- All four universities selected for development of Postgraduate courses were from Tsunami affected countries. The need for applications of modern IT&C tools for recovery planning became very essential and the initiative proved to be a timely action by the principal partners and the action of EU to fund the project activities is very commendable.
- Projects such as CASITA Phase II are very beneficial for knowledge and skill enhancement in application of modern disaster mitigation tools. More such projects need to be planned in future by the implementing agencies to generate long term success
- The CASITA project has provided an active forum for faculty and students of the universities for

sharing of information, data on case studies, and course materials. The project has shown the possibility and effectiveness of networking of Asian universities of similar interest with academic programs in European institutions. The network should be further expanded to include more universities in future

- There are a lot of emerging areas in application of modern IT&C tools for disaster management, which also provides lot of opportunities for research work. More research work and projects should be undertaken by the universities involving application of modern IT&C tools for disaster management.
- The project helps to create a long term demand for a Postgraduate studies and research on disaster management as well as in application of IT tools as a cost effective practice. Success of such a proactive approach to develop skills of professionals to use IT tools in subjects such as risk & hazard assessment is evident from the demand already created in partner universities to have regular PG courses on disaster management integrating such disciplines. Sustainability of the project would be evident from the effective and enthusiastic participation by high number of students in PG courses already commenced during project period.
- The project demonstrated the ways of building up synergies between the initiatives, projects and programs undertaken by different institutions (in this case ADPC, ITC, BU) to reduce duplication through effective and optimum usage of resources provided by different funding institutions.
- Success of any project is mostly dependent on effective coordination among the partners, beneficiaries and stakeholders. The project brought together two European partners and five Asian Institutions and many professionals within the institutions to work together for a common objective using an effective coordination mechanism.
- This kind of project helps to develop professional links between institutions in Asia and Europe and there is no doubt that it will lead to increasing European IT&C presence in Asia eventually.

Multiplier Effects and Sustainability Plan

Continued maintenance and updating of shared platforms, the website and the blackboard site.

ADPC will continue to host and maintain the CASITA website and have linked the CASITA network to their other network and have given access to their electronic urban disaster newsletter. ITC will continue to host the blackboard site and ADPC will take charge of the website

- Multiplier effects: The ADPC website gets around 30,000 hits per month, the ITC gets around 60,000 hits per month. The electronic newsletter of ADPC is disseminated to approximately 3000 persons. The other programmes of ADPC has a lot of direct and indirect partners as well as works in coordination with most municipalities, local, provincial and national government
- Post project Financing plan: low costs involved, will be borne by ADPC and ITC
- Post project institutional arrangement: ITC and ADPC will take the responsibility of website maintenance

Continued networking between the universities, specifically in taking the joint research activities leading to enhancement of skill of university professionals and students.

There would be low cost involved and the universities can themselves bare that cost. The students from the partner universities will travel to each other universities and will undertake joint research work. Postgraduate students will receive training in data capturing analysis and presentation using GIS. Such skill enhancement will be useful for application in other subject areas. The ITC, BU and ADPC will continue involvement in research programs through other projects. ITC will be having students from CASITA partners for MSc courses on regular basis and they will also be involved in joint research programs initiated during the project. Similar opportunities exist with BU and ADPC (for example ADPC has a regular program funded by ProVention consortium for research). In addition, within the scope of the

UNU-ITC collaboration, linkages with other UNU associated institutions are being made, such as with the UNU Institute for Environment and Human Society (UNU-EHS) in Bonn, Germany.

- Multiplier effects: multiplication of experiences and exchange of knowledge to more colleagues within the universities involved, also expanding to other universities in their respective countries
- Post project financing plan: low cost involved, which will be borne by the universities themselves
- Post project Institutional arrangement: The partner universities will take the lead with support from ITC and ADPC

Promotion of active participation of other European institutions in joint collaborations with Asian partners ITC and ADPC will continue their collaboration in a number of other project activities related to urban disaster mitigation in Asia and also organization of short joint courses.

- Multiplier effect: multiplication of experiences and strengthening of exchange of knowledge to more universities and staff within the universities involves, but also expanding to institutes and local/national government bodies in their respective countries.
- Post project financing plan: activities being financed out of other project resources
- Post project institutional arrangement: Already the project partners have MOUs signed with all CASITA partners and continuation of such arrangements for partnerships between organizations involved

Postgraduate curriculum developed the partner universities will help in sustainability and dissemination of knowledge on Disaster Management in their respective countries and in the region.

Multiplier effect: After the completion of project teaching staff of participating universities will have the capacity to conduct postgraduate and high quality research programs in disaster risk management. They will be able to conduct similar programs in other disciplines. Universities will also be able to conduct short term capacity building programs for urban development professionals working in other institutions, municipality staff, through their proposed capacity building activities. The approach adopted in conducting Distance Education course would be to associate the universities in the CASITA network to deliver courses. This will have a better marketing prospects and involvement of CASITA network partners in a regular manner. It will have a multiplier effect since more people will be involved in the course conduct and marketing.

Post project financing plan: The activities being financed out of other project resources

Post project institutional arrangement: Already the project partners have MOUs signed with all CASITA partners and continuation of such arrangements for partnerships between organizations involved

The distance education course that has been developed and would undergo trial run at ITC in April. The distance education course would be moderated by ADPC and it is envisaged to have a very wide outreach, which would help foster greater understanding of the tools for disaster management.

Multiplier effect: The distance education course will not only help the partner university professionals and students but will also be open for people in various sectors all over including 6000 strong alumni of ADPC. ADPC as a regional resource center will be able to develop the competence in conduct of the distance education component in disaster risk management. It will help them to introduce new programs to cover other subject areas.

Post project financing plan: The course would be later made fee based in order to sustain it

Post project institutional arrangement: ADPC will adapt and moderate the course

The learning from the project will be incorporated in to the institutional memory of ADPC.

Multiplier effect: Utilizing its unique position as regional resource center on disaster management, the ADPC would be able to promote the project experiences in other countries through various forums,

regional training courses and its publications, e.g. the Asian Disaster Management News, web-site. The learning experience of the project might get introduced to other disciplines/courses by other institutions, as the project outcome will be disseminated through the web site.

Post Project Financing Plan: From centralised ADPC funds and other projects in ADPC

Post project institutional arrangement: ADPC would undertake the activities as part of its information and unit.

In addition, project expects to create general awareness of community members and hopefully they will pass the information to family members friends, and colleagues etc and it will help to develop a culture of safety among urban population. The project will also have multiplier effects regarding promotion of concepts of urban disaster mitigation in to the region since many other professionals access ADPC web site. Especially this experience will be useful for academic institutions in the region. As demonstrated by ADPC’s experience, successful experiences at the city level become learning examples for other city, provincial and national governments within and outside the country. Although the realization of this objective would take longer time, however, the impact would be enormous

Benefit from the project to local government institutions to demonstrate and find solutions to the prevailing problems connected with natural hazard environment

The four partner universities under the project are part of the governmental setup in their respective countries and come under the purview of either the provincial or national government. They get the funding support mainly from their government for implementation of capacity building programs and research. Most of the research work and projects undertaken for disaster management by the universities are for the benefit of the local government institutions and in a way to demonstrate and find solutions to the prevailing problems connected with natural hazard environment. The data collection for research is done by the support of the local government and the results and outputs of this research is used by the local government in their development plans. Therefore the project will help to strengthen the mutually beneficial support mechanism existing in the respective countries between the universities and the local government institutions.

VIII. Other Issues

- *Mention any other issues you deem relevant.*
None

ANNEXES

- Annex 1-Action Plan.*
- Annex 2 -updated logical framework*
- Annex 3- Attachments providing Supporting Documents*
- Annex 4- CASITA II Website*

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