Darwin Initiative for the Survival of Species

South East Asian Wetland Restoration Initiative

Annual Report 2004-2005

Project partners:

Royal Holloway Institute for Environmental Research, UK
Can Tho University, Vietnam
An Giang University, Vietnam

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Annual Report

1. Darwin Project Information

Project Ref. Number	*162/12/034*
Project Title	*The Darwin South East Asian Wetland Restoration Initiative*
Country(ies)	*Vietnam*
UK Contractor	*Royal Holloway Institute for Environmental Research*
Partner Organisation(s)	*Can Tho University, An Giang University*
Darwin Grant Value	*£109, 514*
Start/End dates	*1 June 2003 to 30 November 2005*
Reporting period (1 Apr 200x to 31 Mar 200y) and report number (1,2,3..)	*1 April 2004 to 31 March 2005 Report 4*
Project website	*http://www.rhul.ac.uk/Environmental-Research/Research/Darwin/Darwin.html*
Author(s), date	*Prof. E Maltby, Dr Conor Linstead, Dr Chris Sollars, 29th April 2005*

2. Project Background

Wetlands are amongst the most species rich and diverse ecosystems in the world. Furthermore, physical, chemical and biological processes may interact with the structure of the ecosystem to support vital ecological functioning, through which wetlands have the potential to provide essential goods and services (for example, food supplies and flood reduction) of socio-economic benefit. Despite this, significant areas of wetlands in the Mekong Delta, Vietnam have been lost or degraded by agricultural conversion, intensive use or mismanagement. This has led to a loss of biodiversity and a decline in the quality of human life.

During the past 30 years, vast areas of natural wetland, which formerly supported one low-yielding crop of rice per year, have been cleared and replaced with high-yielding varieties of rice giving two or three crops per year. To support this rise in production farmers now use more chemicals and this has had a detrimental effect on biodiversity in wetlands and waterways. The driving force for this change has been Vietnam's determination to achieve self sufficiency in rice production, feed an expanding population, improve rural livelihoods and provide a surplus of rice for export. However, the contribution that wetlands as maintained ecosystems provided to livelihoods and to sustainable development was perhaps not sufficiently examined before these changes were implemented, and their loss has been exacerbated by fluctuations in agricultural returns, particularly the price of rice. Consequently the loss of socio-economic benefits from wetlands may have been far greater than anticipated.

Effective wetland management and/or the restoration of degraded areas could deliver biodiversity conservation and enhancement, sustainable development and wider benefit sharing. However, restoration has been hindered by a number of factors,

including: lack of knowledge about the socio-economic benefits (particularly in the short-term) associated with restoration; a lack of human capacity in assessment and restoration techniques; and a need for greater integration of these benefits with existing expertise and science in water and agricultural policies.

3. Project Purpose and Outputs

The purpose of the project is to build the capacity of wetland managers and farmers to meet commitments to the CBD through the restoration and protection of biodiversity and sustainable livelihoods based on the diversity of wetlands in the Mekong Delta, Vietnam.

RHIER scientists are working with two Vietnamese universities to address three key biodiversity needs in Vietnam:

- Loss of biodiversity associated with wetland conversion
- Problems of rural poverty caused by lack of access to wetland resources
- Lack of human resource capacity to bring about wetland restoration

In addition, the project will help to achieve the three main objectives of the Convention on Biological Diversity (conservation, sustainable development and equitable sharing of benefits) by building the capacity of wetland managers in the Mekong Delta and developing new tools for wetland restoration and sustainable use of wetlands. The project provides an opportunity to apply the Ecosystem Approach, (a requirement of the Convention) in Vietnam in order to establish alternatives to wetland conversion to intensive agriculture and its inherent biodiversity loss, whilst sustaining rural livelihoods.

The specific outputs of the project will be:

1. The training of scientists, farmers and other stakeholders in wetland restoration and management

2. The development of a wide range of practical tools and information resources for Vietnamese scientists and communities, including restoration and management guidelines, together with databases of wetland functions

3. Improved awareness of the requirements of local communities, the biodiversity and functioning of various wetland types and the environmental variables determining their distribution

4. A strategic management and restoration plan for areas of wetland in the Mekong Delta, using the Ecosystem Approach including an analysis of threats, to permit the more effective management and protection of these habitats and assist in the use of this approach to deliver the Biodiversity Convention in Vietnam.

5. Further regional capacity building by the targeted dissemination of project outputs

There have been some changes to the originally proposed operational plan over the course of the last year to adapt to the way the project has evolved.

In the initial project proposal the field data collection was scheduled to take place monthly from November 2003 to May 2004. As agreed with the Darwin Secretariat and discussed in the previous annual report, the original survey schedule was modified so that surveys are carried out bi-monthly for one whole year rather than monthly for six months. This allows the data collection a full flooding cycle, picking up annual changes, and is a more scientifically useful sampling strategy than the original proposal.

As a result of this change to the project and changes in project staff just before the reporting period, the training workshop for local staff on data analysis was postponed from June 2004 to November 2004, so that it occurred at the end of the data collection period. This activities for this workshop are reported on below.

In place of the June workshop, the new project co-ordinator, Dr Conor Linstead, visited the Vietnamese partners. It was thought that a familiarisation meeting was necessary in place of the workshop, however, as the current coordinator had only recently taken over the role. This visit is reported on below. It was a result of the discussions and field visits held during this trip that the additional field data collection needed to ensure the integration of the socio-economic and biophysical data was proposed. The detailed information on these additional surveys is presented in the following section.

The original work programme scheduled a dissemination workshop to take place in Vietnam in December 2004. Because of the rescheduling of the data analysis workshop and the additional survey work undertaken in the past year by the Vietnamese partners, there has been a greater need for data analysis, reporting and conversion to user-friendly formats to facilitate the preparation for the dissemination workshop. Consequently it was not considered realistic to run the dissemination workshop until early in year 3. This change had been discussed and agreed with the Darwin secretariat. A revised Gant chart outlining these changes to the schedule is attached.

We have also identified an urgent new priority to capture an immense amount of spatial and associated information in the study areas in Vietnam which can be imported into a GIS platform for subsequent analysis and further exploitation beyond the end of the project, such as decision support system development. Assisting our partners to process this data for GIS application will help to develop capacity in the area of GIS, and will have important benefits for the research teams, further enhancing the legacy of the project and an element of this has been built into the work programme.

4. Progress

This Darwin project arose out of a long-standing relationship between RHIER and the Universities of Can Tho and An Giang. RHIER and Can Tho University carried out a previous Darwin project in the region (the Darwin *Melaleuca* Wetlands Project) which aimed to promote sustainable management of *Melaleuca* ecosystems. The current project aims to build on this project by increasing the understanding of the interactions between local communities and natural areas and promoting the sustainable management of natural resources at various levels from community to national government.

To date the key milestones of the current project have been:

- the project start-up workshop, which trained the project staff in the host institutions in socio-economic and biophysical field techniques
- a workshop on the Ecosystem Approach
- the collection of field data on the availability and use of natural resources by local communities using the techniques taught in the earlier workshops
- a data analysis workshop was held in November to examine the data already collected and explore appropriate data analysis techniques with the host country partners

Project implementation timetable for the reporting period incorporating changes agreed with the Darwin Secretariat.

Date	Key milestones	Progress
10/2004	Biophysical and socio-economic surveys completed	Initially planned data collection completed. Additional surveys completed in December 2004
11/2004	Training workshop for local staff on data analysis	Completed November 2004

03/2005	Data analysis completed, reports submitted for peer-reviewed publication	Ongoing. As a result of the extra data generated by the additional surveys. Data analysis will be completed by the Dissemination workshop
10/2004	Material for stakeholder training workshops completed	In progress but not required until stakeholder training workshops
12/2004	Training for local staff in preparation for stakeholder training workshops	Rescheduled 07/2005 to 10/2005 as a result of change in timing to Dissemination workshop
01/2005	Stakeholder training workshops for farmers and women's groups	Rescheduled 07/2005 to 10/2005 as a result of change in timing to Dissemination workshop
02/2005	Stakeholder training for University students and DOSTE (now VEPA) officials	Rescheduled 07/2005 to 10/2005 as a result of change in timing to Dissemination workshop

Data collection

As discussed above, and agreed with the Darwin Secretariat, a visit to the Vietnam partners replaced the planned data analysis workshop planned for June 2004, which was postponed to November 2004. Meetings were held with Dr Ni of Can Tho University and Mr Thanh at An Giang University to review the progress with the data collection. Some of the field sites were visited for familiarisation. Hoa An research station, which will play an important role in later deliverables was also visited. One of the key outcomes from the meeting was the decision to request permission from the Darwin Secretariat to carry out additional field data collection. It was felt that this additional data was needed to ensure the integration of the socio-economic and biophysical data as there were few points of comparison between the two sets of data. This additional data collection was subsequently agreed by the Darwin secretariat.

Following on from this meeting Dr Ni from Can Tho University visited RHIER from 15-8-04 to 19-8-04 as part of a trip to Europe for a conference and meetings. This gave the opportunity for the whole RHIER project team (Prof Maltby, Dr Sollars and Dr Linstead) to discuss in more detail progress with the revised fieldwork schedule.

Additional surveys

The additional surveys were designed to cross-check the socio-economic data using biophysical data. The initial field results demonstrated that most of the wetland products being accessed by local people are from protected areas. The surveys are designed to identify habitat types and habitat suitability for the resources accessed in the three field sites. Local people are afraid to truthfully answer questions concerning the extent of their use of natural resources that they illegally exploit.

In previous studies it was apparent that there are some periods of the year when there is a clear difference in the environmental conditions of native wetland and farm lands. For example, in July to August water quality (pH) in native wetland was higher than the adjacent riceland by approximately 1 pH unit and at the end of November, when farmers begin farming in their land, all of the water in their land is pumped into the river or the canals. These differences in environmental conditions provide a means of assessing the degree to which local people exploit resources in the protected areas but do not reveal this in surveys. During these periods, it is hypothesised that the wetland products (e.g. fish, wildlife, aquatic plants) that are used by the locals have come from the native wetlands because only these areas have suitable water quality for these resources. Thus, a comprehensive survey in these periods will provide important information for integrating the physical factors (water quality, plants, fish, amphibians, birds) with the socio-economic factor (daily

consumption, fishing productivity, market prices). The results will provide a scientific basis for sustainable wetland resources management because biodiversity conservation can only be achieved when wetland productivity is higher than the resources harvested by the local communities.

The primary goals of the additional surveys were therefore to:

- support data for integration of physical and socio-economic values in wetland areas
- provide field checks in the protected areas and rice land on water quality, water levels, plant species, fish species, amphibians, birds
- provide surveys for assessing the economic value of the wetland: firewood, fish, birds, amphibians, plants, drinking water, material for making handicrafts and household goods.

All the data collection for the project is now complete. The following biophysical data have been collected to date:

- bi-monthly water quality data from December 2003 to December 2004[1]
- two additional surveys to integrate the socio-economic and biophysical data were carried out in October and December and collected information on:
    - fish species being caught by fishermen
    - vegetation species present at each site
    - bird species present at each site and habitats being used

The following socio-economic data have been collected:

- Two socio-economic surveys and PRA sessions have been completed at each of the three sites.
    - livelihoods
    - seasonal activities
    - natural resources accessed
    - people's attitudes to wetlands
    - health
- Two additional surveys have been conducted where information was gathered on the fish species available in the market (as indicated in the justification for the additional surveys, this provides a cross check to the truthfulness of the responses to the questionnaires and PRA sessions as some species of fish can only be found in the protected areas where it is illegal to fish)

The analysis of these data is ongoing in advance of the planned dissemination workshop in Year 3.

[1] *water quality parameters measured were: pH, conductivity, salinity, turbidity, BOD, DO, N-NO3, N-NO2, S-SO4, PO4, NH4, E.coli and coliform*

Website

In response to comments made in the review of the previous project annual report, the website has been substantially updated. The website now contains all the presentations from the November 2003 Ecosystem Approach and Start-up workshops and the outputs from the group discussions. It also contains a selection of photographs from these events. The website is available at: http://www.rhul.ac.uk/environmental-research/research/darwin/darwin.html.

Data Analysis workshop

A data analysis workshop was held from 8th-13th November 2004. The workshop was held for 10 local staff involved in the Darwin project and the aims were to:

- organise and carryout the initial analysis of the data collected
- discuss the initial results and the implications for the project
- identify gaps in the data to be filled in the final additional survey
- agree structure of final report and responsibilities

The whole group was present for initial presentations by Dr Linstead to review the project to date and to remind the participants of the objectives of the project discussion. Following these presentations the group was split into the two teams (socio-economic and biophysical) to review in detail the data collected. The biophysical group was facilitated by Dr Linstead and Dr Ni. The socio-economic group was facilitated by Dr Beazley, who led the initial project design and training in November 2003 for the socio-economic component of the project. As Dr Beazley had since left Royal Holloway, she was engaged on a consultancy basis for this workshop.

Once each team had reviewed their data and formatted it in line with the recommendations of the team facilitators, the two sets of data were presented to the combined group. This was followed by a discussion on the methods to be used to integrate the data and the identification of gaps for both sets of data.

The facilitators then set out plans for the final additional survey identifying the data that should be collected to fill the remaining gaps.

Finally, the structure of the final report was agreed on and responsibilities discussed.

The presentations given at this meeting are appended to this report as supporting information.

As discussed with the Darwin Secretariat, there has been an enhancement to the fieldwork component of the project. The biophysical surveys have been carried out bi-monthly rather than monthly so that the data collection a full flooding cycle, picking up annual changes. This is a more scientifically useful sampling strategy than the original proposal.

Two additional joint socio-economic and biophysical surveys were also carried out as, following discussion with the project partners in June 2004, it became apparent that a small additional field effort would make a significant improvement to the integration of the socio-economic and biophysical data being collected. As discussed above, there will also be additional GIS based analysis of the project data as it became apparent that presentation of the spatial dimension of the data will be important for dissemination.

Year/Month	Description
April 2005	Completion of data analysis
April/May 2005	Preparation of materials for stakeholder training workshops and dissemination workshop
June/July 2005	Project dissemination workshop/conference for 20-30 key participants with wider dissemination objectives. Presentations of the project findings of wetland functioning and the values (socio-economic and biodiversity) of restored/ managed areas (support materials will be available in leaflet and poster form as well as fully supported on the website). Guidelines for management/restoration presented and biodiversity priority areas identified and discussed. To contain a training element for 5-10 key decision-makers through a wetland educational trail at the demonstration site established and improved in Hoa An . Case studies on experience in application of the Principles of the Ecosystem Approach written up for publication and disseminated through the CBD Clearing House Mechanism. Strategic management plan drafted.
June/July 2005	Demonstration site and educational trail facilitation(labelling plants, products and areas).
June/July 2005	UK and Vietnamese staff to prepare 'training trainers' workshops
July – October 2005	Vietnamese trainers to carry out a series of workshops aimed at a variety of stakeholders involved in or with an interest in wetland management/restoration, education and decision making. Interested parties include the Women's Union and the Farmer's Union, VEPA (formerly DOSTE) officials and University students.
April – October	Production of final report and reports for dissemination

Table 1 Workplan for the next reporting period

5. Actions taken in response to previous reviews (if applicable)

In response to the issues raised in the review of last year's annual report the following actions have been taken:

- The project website has been updated to include the proceedings from earlier workshops.
- Data analysis workshop presentations are appended to this report as supporting information.
- The review of the previous annual report noted a lack of stakeholder engagement in the development of the recommendations from the project. Taking this into account the workshops will be used to engage stakeholders and their feedback will be incorporated into the final project documents. Engagement at the policy level will be carried out at the Dissemination workshop. The workshops to be held by the Vietnamese partners will be conducted in Vietnamese and used to engage with stakeholders at the local level.
- Other sections of this report have been strengthen in response to the comments received, such as including more information on the contribution of the host country partners to the project and the reporting, inclusion of materials for the workshops as annexes, the sustainability and viability of the project and the consideration of the project exit strategy.

6. Partnerships

Collaboration between the UK and host country partners has been good over the last year. The UK project co-ordinator visited the partners in June 2004 for project meetings and to review progress with the partners. This was followed by a visit to the UK by Dr Ni in August 2004, which included Darwin project meetings, and the data analysis workshop in November 2004 facilitated by Drs Linstead and Beazley.

In November 2004 the project co-ordinator was invited to present the work of the Darwin project at the first meeting of the Mekong Regional Wetlands Coordination Forum during the World Conservation Congress held in Thailand.

The Mekong Regional Wetlands Coordination Forum is an annual meeting of organizations involved in wetland conservation and sustainable use in the Mekong region, for sharing experiences and identifying issues that may be addressed by the programme and its partners through policy level initiatives, regional and national planning processes.

In November 2004, Dr Ni was invited to give a presentation in Hanoi to approximately 40 participants from the Ministry of Agriculture and Rural Development, Ministry of Environment and Resource Management, managers of parks and reserves, and researchers. The presentation was on the subject of the Ecosystem Approach and Dr Ni's experience of its application in Vietnam, a major component of which is the current and previous Darwin projects.

7. Impact and Sustainability

As discussed above, Dr Ni was invited to give a high level presentation in Hanoi to approximately 40 participants from the Ministry of Agriculture and Rural Development, Ministry of Environment and Resource Management, managers of parks and reserves, and researchers. This is an important outcome for the project.

The Mekong Regional Wetlands Coordination Forum meeting attended by the project co-ordinator also helped to raise the profile of the project within the country as the meeting was attended by delegates from Vietnam.

To date the main increase in capacity for biodiversity over this reporting period has been through the workshops held for staff at the partner institutions. The important tasks with regard to increasing interest and capacity more widely will be carried out in the next reporting period.

8. Post-Project Follow up Activities (max 300 words)

9. Outputs, Outcomes and Dissemination

Some of the outputs agreed in the initial Project Implementation Timetable have been moved from the reporting period covered by this report to later in the year. According to the original timetable the dissemination workshop and stakeholder training workshops should have been completed by this stage. The rescheduling is as a result of the extension of the field data collection to bi-monthly sampling over 12 months rather than monthly sampling over 6 months and the postponement of the data analysis workshop from May 2004 to November 2004.

It is not envisaged that these changes will have an impact on the final completion date of the project or substance of the outputs, simply their timing, nor will they have any budgetary implications.

As discussed above, in November 2004, Dr Ni was invited to give a presentation in Hanoi to approximately 40 participants from the Ministry of Agriculture and Rural Development, Ministry of Environment and Resource Management, managers of parks and reserves, and researchers. The presentation was on the subject of the Ecosystem Approach and Dr Ni's experience of its application in Vietnam, a major

component of which is the current and previous Darwin projects. The key dissemination activities are planned for the next reporting period.

Table 1. Project Outputs (According to Standard Output Measures)

Code No.	Quantity	Description
6A	10	Attendees at the 4 –day data analysis workshop in November 2004
6B	8	Total training weeks for the data analysis workshop
8	4	Time spent in Vietnam on project visits and training workshops
14B	2	Project co-ordinator attended Mekong Regional Wetlands Coordination Forum and gave a presentation on the work of the Darwin project. Host country co-ordinator presented at workshop in Hanoi on Ecosystem Approach

Table 2: Publications

Type * (e.g. journals, manual, CDs)	Detail (title, author, year)	Publishers (name, city)	Available from (e.g. contact address, website)	Cost £

10. Project Expenditure

Table 3: Project expenditure during the reporting period (Defra Financial Year 01 April to 31 March)

Item	Budget (please indicate which document you refer to if other than your project schedule)	Expenditure	Balance

A request for £7296 of the budget to be deferred to year 3 was made and granted early in 2004 ; this is reflected in the budget figure in the table.

The budget data also reflects two approved virements during the year.

11. Monitoring, Evaluation and Lessons

Over the course of the reporting period the project has been monitored through regular trips to the host country for meetings and workshops. The success of this approach can be seen in outcomes of the June 2004 trip. The principal purpose of this trip was for monitoring and evaluating the progress of the data collection stage of the project. The fact that the process identified the need for additional field surveys to bridge the socio-economic and biophysical data apparent supports this approach to monitoring and evaluation.

The purpose of the project is to build capacity of wetland managers and farmers to meet commitments to the CBD through the restoration and protection of biodiversity and sustainable livelihoods. The process by which this is being achieved is firstly the development of the understanding of the interlinkage between biodiversity and sustainable livelihoods in the Mekong Delta, with a parallel aim of increasing the capacity within local researchers. This is to be followed by the engagement of stakeholders at various levels and their capacity building using the insights gained from the biophysical and socio-economic research. The outputs and outcomes of the project at this stage primarily relate to the first part of this process. The indicators of achievement for this part of the project are the successful implementation of the techniques demonstrated and discussed during the initial training workshops in November 2003. This will be apparent by the successful collection of robust scientific data, shown by the completion of the analysis of the data, and the development of a set of principles for wetland management from that data analysis which are appropriate for the training of local wetland managers and farmers.

12. OPTIONAL: Outstanding achievements of your project during the reporting period (300-400 words maximum)

■ **I agree for ECTF and the Darwin Secretariat to publish the content of this section**

In this section you have the chance to let us know about outstanding achievements of your project over the year that you consider worth highlighting to ECTF and the Darwin Secretariat. This could relate to achievements already mentioned in this report, on which you would like to expand further, or achievements that were in addition to the ones planned and deserve particular attention e.g. in terms of best practice. The idea is to use this section for various promotion and dissemination purposes, including e.g. publication in the Defra Annual Report, Darwin promotion material, or on the Darwin website. As we will not be able to ask projects on an individual basis for their consent to publish the content of this section, please note the above agreement clause.

Annex 1 Report of progress and achievements against Logical Framework for Financial Year: 2003/2004

Project summary	Measurable Indicators	Progress and Achievements April 2004-Mar 2005	Actions required/planned for next period
Goal: To draw on expertise relevant to biodiversity from within the United Kingdom to work with local partners in countries rich in biodiversity but poor in resources to achieve • The conservation of biological diversity, • The sustainable use of its components, and • The fair and equitable sharing of the benefits arising out of the utilisation of genetic resources			
Purpose To build the capacity of wetland managers and farmers to meet commitments to the CBD through the restoration and protection of biodiversity and sustainable livelihoods based on the diversity of wetlands in the Mekong Delta, Vietnam.	1. Short and long-term socio-economic benefits derived from (restored) wetlands. 2. Tools and educational demonstrations for evaluating, managing/restoring wetland functioning. 3. Identification of priority sites for potential restoration and establishment of wetlands 4. Skills and ability for sustainable management of wetland resources. 5. On-going training programs established.	The principal achievements in this reporting period have been against purpose indicators 2, 4 and 5. The data analysis workshop run in November has contributed significantly to the skills and ability of the participants and form part on the on-going training program. This workshop was also part of the development of tools for evaluating and managing/restoring wetland function within the Mekong Delta.	Over the next reporting period the principal purpose level indicators that will be addressed will be 2, 4 and 5, through the development of stakeholder engagement training, stakeholder engagement at local and national level and the continuing development of tools and the educational demonstration site.
Outputs			
1. Trainers trained: wetland functioning and restoration techniques, Ecosystem Approach training.	Reports produced, training attendance monitored and progress posted on web-site.	Project management and review meetings (June 2004 in Vietnam and August 2004 in UK) Training workshop on data analysis delivered to 10 local project staff (November 2004)	Key actions for the next reporting period are the convening of: • dissemination workshop • stakeholder engagement training workshops • stakeholder training workshops

2. Scientific and socio-economic databases of wet-land biodiversity and values	Outputs from the analysis of field research described and catalogued on a database.	Data collection completed	• Complete analysis of the data • Compile into database
3. Materials produced to support training and build awareness.	Published materials as an output of the data collection, analysis and expert knowledge.	Outputs from the start-up workshop and Ecosystem Approach training workshop are being compiled and posted on the website.	• Production of material for the dissemination workshop • Production of material for stakeholder training workshops.
4. Stakeholder engagement and capacity building between university and research staff in Vietnam and other areas in SE Asia.	Capacity building through project research and training program.	The data analysis workshop and the participation of the project team in national and international meetings as described above have contributed to this output	Dissemination and stakeholder training workshops
5. Production of case study for inclusion in CBD Clearing House Mechanism and on website, draft plan circulated to relevant stakeholders, improved demonstration site accessible	Case study accessible on CBD website, draft plan circulated to relevant stakeholders, improved demonstration site accessible	No outputs scheduled for this reporting period	Case study completed Improved demonstration site accessible

Note: Please do NOT expand rows to include activities since their completion and outcomes should be reported under the column on progress and achievements at output and purpose levels.

Project summary	*Measurable indicators*	*Means of verification*	*Important assumptions*
Goal: To draw on expertise relevant to biodiversity from within the United Kingdom to work with local partners in countries rich in biodiversity but poor in resources to achieve • the conservation of biological diversity, • the sustainable use of its components, and • the fair and equitable sharing of the benefits arising out of the utilisation of genetic resources			
Purpose To build the capacity of wetland managers and farmers to meet commitments to the CBD through the restoration and protection of biodiversity and sustainable livelihoods based on the diversity of wetlands in the Mekong Delta, Vietnam.	1. Short and long-term socio-economic benefits derived from (restored) wetlands. 2. Tools and educational demonstrations for evaluating, managing/restoring wetland functioning. 3. Identification of priority sites for potential restoration and establishment of wetlands 4. Skills and ability for sustainable management of wetland resources. 5. On-going training programs established.	1. and 2. Training materials; workshops (manuals; AV; website). 3. Facilitation of the methods needed for the identification of sites through project notes and reports. 4. Training materials; workshops (manuals; AV; website) 5. Improvements to a potential training centre in Hoa An, Vietnam.	1 + 2. Sites can be identified, accessed and sampled. 3. Successful engagement and facilitation of relevant wetland managers and farmers. 4. Engagement of significant stakeholders, workshop participation of motivated trainees, subsequent wider dissemination 5.Continued relationships between collaborators.
Outputs 1. Trainers trained: wetland functioning and restoration techniques, Ecosystem Approach training. 2. Scientific and socio-economic databases of wet-land biodiversity and values. 3. Materials produced to support training and build awareness. 4. Stakeholder engagement and capacity building between university and research staff in Veitnam and other areas in SE Asia. 5. Production of case study for inclusion in CBD Clearing House Mechanism and on website, draft strategic management plan, improved demonstration site	1. Reports produced, training attendance monitored and progress posted on web-site. 2. Outputs from the analysis of field research described and catalogued on a database. 3. Published materials as an output of the data collection, analysis and expert knowledge. 4. Capacity building through project research and training programs. 5. Case study accessible on CBD website, draft plan circulated to relevant stakeholders, improved demonstration site accessible	1. Review of reports from the project, web-site updates. 2. Multi-variate and uni-variate statistical tests carried out as well as descriptive data analysed and published in manuals, reports and papers submitted for publication 3. and 4. On-going training course at an established training centre, attendance monitored and web-site updated. Workshop reports and questionnaires posted on web-site. 5. Feedback from website and draft plan incorporated into final plan and updating of website	1. Successful engagement of stakeholders. Successful knowledge transfer. 2. Successful field data collection, a statistically valid sample is taken. 3. Production of materials. 4. Regional participants willing and able to travel to Vietnam. 5. Maintenance of awareness generated by Darwin project
Activities Workshops/Meetings and Training	**Activity Milestones (Summary of Project Implementation Timetable)** Yr 1: Project planning; task allocation, identifying locations and relevant permissions (May-July '03); Training on socio-economic and natural scientific field techniques and methodologies, survey design (Nov '03); Yr 2/3: Training on the analysis of data (July '04); Dissemination workshops (training trainers from SE Asia) (Dec '04-Mar '05).		
Field Research	Methods and protocols for habitat and socio-economic surveys to be established July '03, sites identified and mapped Aug '03. Field research to be carried out between Dec '03 to June '04. Identify priority habitats throughout field research.		
Training Materials	Analysis of data and collation of field surveys and other relavent information by Nov '04. Production of manuals for training workshops Nov '04; database and website available by May '05		
Dissemination and publicity material	Final reports; publications as manuals in Vietnamese and English by Sept '05. Website containing the training information and database May '05. Facilitation of demonstration sites May-Sept '05		

Annex 2 Updated Gantt Chart

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N
Activity																														
Establish stakeholder network																														
Confirm study sites and permissions																														
Initial project workshop																														
Ecosystem Approach training workshop (results to feed into COP8)																														
Flooding																														
Training workshop biophysical surveys																														
Training workshop socio-economic surveys																														
Biophysical and socio-economic surveys																														
Training workshop data analysis																														
Data analysis and report writing																														
Production of material for stakeholder training workshops																														
Dissemination workshop																														
Stakeholder training workshops																														
Demonstration site and educational trail facilitation																														
Material Produced																														
Website production/updates																														
Newsletter/press releases/6-monthly and annual reports																														
Field manuals produced																														
GPS for field sites (mapping produced)																														
Biophysical and socio-economic survey data produced																														
Papers submitted for peer reviewed publication																														
Training manuals and tools produced																														