



DARWIN INITIATIVE



APPLICATION FOR GRANT FOR ROUND 12 COMPETITION: STAGE 2

Please read the Guidance Notes before completing this form. Give a full answer to each section; applications will be considered on the basis of information submitted on this form. Please do not cross-refer to information in separate documents except where invited on the form. The space provided indicates the level of detail required but you may provide additional information on a separate A4 sheet if necessary. Do not reduce the font size below 12pt or alter the paragraph spacing.

Ref (Defra only):

1. Name and address of organisation

Institute of Aquaculture, University of Stirling, Stirling FK9 4LA

2. Project title (not exceeding 10 words)

Sustaining livelihoods and protecting biodiversity through development of pez blanco aquaculture.

3. Principals in project. Please provide a one page CV for each of these named individuals.

Details	Project leader	Other UK personnel (if working more than 50% of their time on project)	Main project partner or co-ordinator in host country
Surname	Ross		Martinez Palacios
Forename(s)	Lindsay Glenn		Carlos Antonio
Post held	Professor		Investigador Titular C
Institution	University of Stirling, Stirling FK9 4LA		Universidad Michoacana, Morelia, Mexico
Department	Institute of Aquaculture		Aquaculture, INIRENA
Telephone			
Fax			
Email			

4. Describe briefly the aims, activities and achievements of your organisation. (Large institutions please note that this should describe your unit or department)

Aims Research and Training in support of Sustainable Aquaculture and sustainable use of natural aquatic resources
Activities Higher Education, Research, Training, Consultancy
Achievements RAE grade 5; 100 staff; 100 postgraduate students; probably largest such organisation in the world and internationally recognised as excellent by the sector.

5. Has your organisation received funding under the Initiative before? If so, please give details.

- The Institute of Aquaculture has not received such funding up to now.
- School of Biological and Environmental Sciences: £40715, May 2003.

6. Please list the overseas partners that will be involved in the project and explain their role and responsibilities in the project. The extent of their involvement at all stages in the project should be detailed, including in project development. Please provide written evidence of this partnership.

Dr Carlos Martinez Palacios, Head of department of Aquaculture, Instituto de Investigaciones Sobre los Recursos Naturales [INIRENA], Universidad Michoacana de San Nicolas de Hidalgo [UMSNH], Morelia, Michoacan, Mexico. Pioneer (with Ross) in native species development for aquaculture and conservation and protection of biodiversity in Mexico. Leader of wide ranging programmes on endangered *Chirostoma estor* which have developed present basis for controlled culture of the species. He is the Mexican project leader, has developed the project with Ross and will lead the team in Mexico to train young researchers and to promote biodiversity through controlled production and exploitation of the species.

7. What steps have been taken to (a) engage at all appropriate levels within the host country partner organisations to ensure full support for the project and its outcomes; and (b) ensure the benefits of the project continue despite staff changes in these organisations?

Substantial long-term collaboration with Dr Martinez at INIRENA and elsewhere on native species issues and the implementation of culture as a conservation mechanism. The project has been designed in such a way that the natural stakeholders, who are peasant farmers, will be involved from the outset and will quickly become the base of operations. Although support will be given by the academic project partners throughout, the intention is that the work will rapidly become self-sustaining. The involvement of small businesses (SME's) is also important, because although the juvenile supply will be ensured by INIRENA throughout the project, the long term security of the plan will depend upon non-governmental resourcing to ensure success and this applies particularly in hatchery operations. There has also been dialogue with the aquaculture support group of the Department of Agriculture, SAGARPA, and the state fisheries department, COMPECSA. COMPECSA has attempted work with this species for many years with very limited success. Now that the technology exists to support it properly, both SAGARPA and COMPECSA have a strong continuing interest in ensuring sustainability of the project. The involvement of staff from SAGARPA and COMPECSA will be very important at the appropriate stages of the work.

8. What other consultation or co-operation will take place or has taken place already with other stakeholders such as local communities. Please include any contact with the government of the host country not already provided.

There has been substantial dialogue with members of affected communities who wish to engage in the work; in particular Sr Mauricio Dolores Ponciano who is a community leader in Ichupio, on Lake Patzcuaro, will be a keystone in demonstration work and supporting dissemination.

There has been a developing dialogue with a medium sized company, BAKITY in Uruapan, who are poultry producers. They wish to diversify activities and would welcome the opportunity to be involved with this native species. This approach is very important for the long term supply of juveniles.

PROJECT DETAILS

9. Define the purpose of the project in line with the logical framework.

This project will extend a recently developed technology to small scale stakeholders in communities whose livelihoods have suffered due to rapid decline in the fishery for the high-value but endangered *Chirostoma estor estor*, pez blanco, and its close relatives. Pez blanco is the major species in a relict flock of Atherinid fishes unique in central Mexican lakes. The species is a symbol of the area and for centuries has been the basis of an artisanal fishery with a high cash value which sustained large numbers of fisher families from the indigenous P'urhepecha community. The fishery has declined markedly and rapidly due to overexploitation, changes in land use and poor environmental management. Rural communities [campesinos] involved in this activity have a mixed economy [similar tocrofting] and collapse of the fishery has reduced their income and a source of high quality protein. Families who previously depended upon this resource have suffered as a result of its decline, and the species itself is now under severe pressure. Some other species in the flock are under similar pressure and the current, unconfirmed, view is that there have probably been extinctions in the last 20 to 30 years.

The project will further develop capacity at INIRENA to take research findings into the field and will train researchers and stakeholders at a range of levels in approaches to conservation of biodiversity and sustainable aquaculture. There is a substantial training component to the project, including training of trainers, training of developers and policy makers and training of stakeholders. A baseline study of livelihoods issues in the target groups will be incorporated into the stakeholder training and this will allow continuous assessment of issues, impacts and benefits. The Mexican staff trained to MSc Sustainable Development in the UK will be key workers in implementing the second half of the project and in influencing biodiversity policy.

A major goal is to develop a network of campesino nurserymen and on-growers that will produce pez blanco for sale or restocking. The project will promote stakeholder hatchery and on-growing developments using appropriate farming systems. A major hatchery is in development at INIRENA which will provide the initial support to stakeholders in terms of supply of juveniles. However, the involvement of SME's as juvenile suppliers for the long term is a major objective which will ensure sustainability of supply. This in turn will allow small scale stakeholders to focus on nursery and on-growing activities which are less technically demanding. The economics of these options will be evaluated as the project develops.

The project will fulfil two of the main goals of the Convention on Biodiversity using technology and juvenile production facilities recently developed by the Principal Investigators at INIRENA. A number of small aquaculture production projects will be commenced as soon as possible during 2004, in conjunction with already-identified campesino and small scale business partners. Pond facilities will be constructed and training and support will be provided so as to enable stakeholders to conduct the on-growing themselves. Detailed monitoring will be undertaken by project researchers to ensure a sound scientific validity for the outcomes. The efficacy of different farming systems will be tested, ranging initially from simple monoculture to integrated culture including native catfish and freshwater prawn. In preparation for this, pilot work with these native species is already underway at INIRENA.

The conservation of the species flock is consequent upon development and adoption of small scale aquaculture, as well as better management of wild fisheries. Introduction of the technology will allow fisher communities to continue to exploit the species while reducing pressure on the natural stocks. The species remains highly regarded and of very high value (currently \$25 US per kilo) and there are considerable social and financial consequences for stakeholders including producers, resellers and the important tourist industry. The training provided and facilities created will, in conjunction with policy makers in the State Fisheries Department [COMPESCA] and the Department of Agriculture [SAGARPA], ensure that the activity and relevant policy is sustainable.

This project is needed urgently because fisheries have collapsed, livelihoods have been affected and biodiversity is threatened. UK expertise, in collaboration with Mexican counterparts, will play

a part in eliminating poverty and developing more sustainable livelihoods. The existence of the project will enable complimentary funds to be accessed, both from the public and private sectors. Because the project builds on deep background research which has already been achieved, it will be able to move forward rapidly over the next few years and so will represent excellent value for money.

10. Is this a new initiative or a development of existing work (funded through any source)?

This is a logical and necessary development of fundamental work which has already been carried out and supported by many sources. The work to date has resulted in sufficient knowledge to pilot a number of small scale production trials and demonstrations which have resulted in very significant interest from campesinos and small aquaculture producers in the State of Michoacan. Further development through the Darwin project will enable and promote adoption by the target beneficiaries. This will, over a few years, reduce pressure on the fishery, allow maintenance of livelihoods for many families and hence will contribute to conservation of this unique species.

11. How will the project assist the host country in its implementation of the Convention on Biological Diversity? Please make reference to the relevant article(s) of the CBD, thematic programmes and/or cross-cutting themes (see Annex C for list and worked example) and rank the relevance of the project to these by indicating percentages. Is any liaison proposed with the CBD national focal point in the host country? Further information about the CBD can be found on the Darwin website or CBD website.

The project will strengthen cooperation between researchers and will increase the capacity of INIRENA and COPMPESCA to protect a species flock through sustainable use of a natural resource. Through the project, general emphasis will be placed on Articles 5 (5%) and 6 (5%), under the overarching theme of **Inland Waters Biodiversity**. Strong emphasis will be placed on Article 10 (45%) and Article 12 (25%), while promulgating the effects and benefits through Article 13 (10%).

12. How does the work meet a clearly identifiable biodiversity need or priority within the host country? Please indicate how this work will fit in with National Biodiversity Strategies or Environmental Action Plans if applicable.

The National Biodiversity Strategy in Mexico is the responsibility of CONABIO, a government department established in 1997 specifically for its implementation and promotion. UMSNH were actively involved in the consultation phase of this strategy. The strategy consists of four prioritised strands: Protection and Conservation, Valuation of Biodiversity, Understanding and Management of Information and Diversification of use. This project satisfies aspects of each theme. As it is based on a production activity it satisfies strand 4 particularly strongly. The components of strand 4 are: Diversification of production, Criteria and Indicators for use of a resource and Promotion and Commercialisation of sustainable, "green" Markets; all to be achieved through diversification of production methods which benefit the natural environment and local communities. Clearly, all of these issues will be addressed directly in this project.

13. If relevant, please explain how the work will contribute to sustainable livelihoods in the host country

This is a very important feature of this project. As previously noted, livelihoods of families in the catchment of the altiplano lakes in which this species flock is unique, have been affected over several decades by massive decline in the fishery for a number of reasons. Most fisher families are involved in multiple activities to sustain their livelihoods and the reduction of the fishery has resulted in both a loss of income and a loss of an important protein source. This project will allow these families to continue to benefit from the resource initially through aquaculture for the market but also through wild stock maintenance [via restocking] which will be developed with COMPECA.

14. What will be the impact of the work, and how will this be achieved? Please include details of how the project outputs will be disseminated and put into effect to achieve this impact.

- MSc's trained in Sustainable Development. (2).
- Pond trial sites created in the field. (4)
- Use of above as demonstration sites (4).
- Small business assistance provided (2 SME and multiple small aquaculturists).
- Number of families involved. (3 per year).
- Training workshops and dissemination of information at a number of levels. (2-3 per year).
- Public awareness of biodiversity and extinction issues. (Newspapers and TV).
- Improved policy on biodiversity and sustainability through SAGARPA & COMPESCA involvement.

15. How will the work leave a lasting legacy in the host country or region?

- By uptake of aquaculture of a species previously only fished, the species will move towards being protected, livelihoods will be improved and the unique species flock will be preserved. This approach can also be extended to other species in the flock in the altiplano lakes which are under similar pressures.
- Effective dissemination of findings to policy-makers and involvement of policy makers throughout the project will ensure a commitment to sustainability of this approach.
- Provision of strong support and careful and sensitive management of stakeholder groups will ensure that output from systems is efficient and beneficial to livelihoods, thus ensuring that practices are sustained over a period.

16. What steps have been taken to identify and address potential problems in achieving impact or legacy?

- Having insufficient science and technology behind culture of a species can be a bottleneck. However, this project has been developed based on substantial research and practice over the last 4 years.
- A problem in all such projects is related to adoption of practices by stakeholders. There have been substantial discussions with stakeholders to involve them in the work and there is considerable enthusiasm to go ahead, so maximising chances of success.
- Appropriate non-interventionist support from relevant agencies is important and the involvement of COMPESCA attempts to ensure that this is not an issue.

17. How will the project be advertised as a Darwin project and in what ways would the Darwin name and logo be used?

- The project will be Darwin-badged and this will be displayed on project boards at each field site and at INIRENA.
- Darwin will be acknowledged in all published work.
- A web site [www.aquaculture.stir.ac.uk/gisap/Pubs/Chirostoma.htm] has been established to promote the current work This will be enhanced to include the Darwin project and will prominently display the logo.
- Darwin will be strongly promoted in all publicity work and in dissemination in local press and TV.

18. Are you aware of any other individuals/organisations carrying out similar work? Are there completed or existing Darwin Initiative projects which are relevant to your work? Please give details, explaining the similarities and differences and how your work will be distinctive and innovative. Show how the outputs and outcomes of this work will be additional to any similar work, and what attempts have been/will be made to co-operate with such work for mutual benefits.

There have been attempts at this work in the past which have not been successful. There are some groups investigating limited scientific aspects of some of the species in the flock and a special Seminar on *Atherinopsid* fishes was held by the Mexican Ichthyological Society in November 2003. While some work by other groups adds to the biology of the species flock, these projects do not materially contribute to aquaculture of the species and there have been few publications of any quality from any of these strands. None of these projects will conflict with the Darwin project, nor will they be able to support such a project in the same way that the Darwin project partners can in the near future, should they ever wish to do so. Inter-group cooperation is good.

19. Will the project include training and development? Please indicate who the trainees will be and criteria for selection. How many will be involved, and from which countries? How will you measure the effectiveness of the training and will those trained then be able to train others? Where appropriate give the length and dates (if known) of any training course. How will trainee outcomes be monitored after the end of the training?

To meet immediate needs and develop capacity, in the first year of project 2 Mexicans will be trained in MSc Sustainable Development at Stirling (Sep 2004 to August 2005). These will be selected by INIRENA on the basis of excellence and commitment. They will return to the project during year 2 and will work with INIRENA and COMPECSA to develop strategic frameworks for biodiversity conservation and sustainable use of the resource. They will also enhance in-country training capacity and will take responsibility for managing the training programmes with stakeholders.

Stakeholder training will take place at INIRENA and in the field.

20. How are the benefits and/or work of the project expected to continue after the end of grant period? Please provide a clear exit strategy.

- A sustainable hatchery system at INIRENA
- Sustainable hatchery systems with SME's
- Sustainable pond production technology and sites with campesinos and SME's
- A legacy of trained staff at INIRENA, SAGARPA and COMPECSA.
- Input into future policy on biodiversity and sustainability of production activities
- Through promotional activities, a greater regional awareness of biodiversity issues and threats

21. Provide a project implementation timetable that shows the key milestones in project activities.

Project implementation timetable		
Date	Financial year:	Key milestones
4-5/04	Apr-Mar 2004/5	Management group first meeting establishes parameters
5/04		Identify secondees, RA, etc
5-6/04		Train trainers (above) in biodiversity and extension issues for project
6-7/04		Train stakeholders in pond management and on-growing using participatory techniques
6-7/04		Conduct baseline livelihoods assessments in conjunction with above
9/04		Train 2 staff members in MSc Sustainable Development at Stirling.
12/04		Develop at least 1 campesino pond site; start trials
12/04		Develop at least 1 SME pond site; start trials

3/05		Complete construction of key hatchery (from complimentary funding)
2-3/04		Train stakeholders in pond management and harvesting techniques.
4/04 to 3/05		Publish significant results in journals
4/04 to 3/05		Promote biodiversity issues through press and fisheries department.
4/05 to 3/06	Apr-Mar 2005/6	Work on sustainable approach to on-growing through use of integrated systems with other native species (this already in progress at INIRENA).
4/05 to 3/06		Develop second tranche of pond trial sites with campesinos and SME's
4/05 to 3/06		Extend technology to related candidate species.
4/05 to 9/05		Train stakeholders in pond management and on-growing using participatory techniques
9/05		3rd national Conference on Native Species for Aquaculture
10/05 to 3/06		Train stakeholders in pond management and harvesting techniques.
10/05 to 3/06		With SAGARPA & COMPECSA commence development of sustainable biodiversity plan(s) related to the activity and the species group
4/05 to 3/06		Publish significant results in journals
4/06 to 3/07	Apr-Mar 2006/7	With SAGARPA and COMPECSA, develop sustainable aquaculture policies to ensure preservation of species flock. .
4/06 to 3/07		Develop final tranche of pond sites with campesinos and SME's
4/06 to 9/06		Train stakeholders in pond management and on-growing using participatory techniques
10/06 to 3/07		Train stakeholders in pond management and harvesting techniques.
4/06 to 3/07		Further promote Darwin and biodiversity issues through press, TV and fisheries department
4/06 to 3/07		Publish significant results in journals
4/07		Produce Final Project Report(s)
4/07		Biodiversity & Aquaculture Policy manual completed in years 2/3 in conjunction with stakeholders

22. How will the most significant outputs contribute towards achieving the purpose of the project? (This should be summarised in the Log Frame as Indicators at Purpose level)

- Threatened fish species in Mexican altiplano lakes conserved through strengthened institutional capacity, work with stakeholders and increased public awareness.
- Establishment of pond trial sites. This will help reduce demand from fisheries, providing evidence that culture is possible and practicable should restocking be necessary.
- Training of campesinos. This will also help reduce fishing pressure.
- Training of project staff (including to MSc). This will contribute strongly to sustainability of the activity and to policy development.
- Development of policy on sustainability of the activity

23. Set out the project's measurable outputs using the separate list of output measures

PROJECT OUTPUTS			
Year/Month (starting April)	Standard Output Number (see standard output list)	"N"	Description (include numbers of people involved, publications produced, days/weeks etc)
2004/2005			
3/05	2	2	Masters in Aquaculture [Mexican, at INIRENA]
3/05	3	2	Licenciatura (u/g) degrees [Mexican, at INIRENA]
9/04	6A	10	Project staff trained in principles of SD and biodiversity
9/04	6B	2	Training weeks for above
3/05	6A	15	Campesinos/SME staff trained in pond management and grow-out techniques
3/05	6B	2	Training weeks for above.
3/05	7	1	Field training manual: Pond management
3/05	8	8	Visits involving 3 UK staff
3/06	11A	1	Paper published
3/05	11B	2	Manuscripts submitted
11/05	14B	2	Mexican Ichthyological Society, Mexican Zoological Society
3/05	15B	1	In La Voz de Michoacan
3/05	15C/D	1	Syndicated release via SU press office
12/04	18C	1	Local TV station
3/05	17A	1	INIRENA/SAGARPA/COMPESCA aquatic biodiversity network established
3/05		1	New enlarged hatchery site created at INIRENA.
3/05	23		Positive, but unquantifiable as subject to fluctuating policy etc
2005/2006			
6/05	1B		PhD on nutrition of <i>C. estor estor</i> . [Mexican]
3/06	2	2	Masters in Aquaculture [Mexican, at INIRENA]
3/06	3	2	Licenciatura (u/g) degrees [Mexican, at INIRENA]
7/05	2	2	Master of Science in Sustainable Development
12/05	3	2	Undergraduate degrees (Mexican)Graduates (Licenciatura)
3/06	6A	15	Campesinos/SME staff trained in pond management and grow-out techniques
3/06	6B	2	Training weeks for above.
3/06	8	8	Visits involving 3 UK staff
3/06	11A	2	Papers published
3/06	11B	2	Manuscripts submitted
9/05	14A	1	3rd national Conference on Native Species for Aquaculture
11/06	14B	2	Mexican Ichthyological Society, Mexican Zoological Society
3/06	15B	1	In La Voz de Michoacan
3/06	15C/D	1	Syndicated release via SU press office
12/05	18C	1	Local TV station
3/05	23		Positive, but unquantifiable as subject to fluctuating policy etc
2006/2007			

6/06	1A		PhD on pond culture of <i>C. estor estor</i> . [Mexican, at INIRENA]
7/05	2	2	Master of Science in Sustainable Development
12/06	3	2	Undergraduate degrees (Mexican) Graduates (Licenciatura)
3/07	6A	15	Campeños/SME staff trained in pond management and grow-out techniques
3/07	6B	2	Training weeks for above.
3/07	8	8	Visits involving 3 UK staff
3/07	9	1	Biodiversity & Aquaculture Policy manual completed in years 2/3 in conjunction with stakeholders
3/06	11A	2	Papers published
3/07	11B	2	Manuscripts submitted
10/07	14B	2	Mexican Ichthyological Society, Mexican Zoological Society
3/07	15B	1	In La Voz de Michoacan
3/07	15C/D	1	Syndicated release via SU press office
12/06	18C	1	Local TV station
3/07	21	1	Significantly strengthened aquaculture group at INIRENA.
3/05	23		Positive, but unquantifiable as subject to fluctuating policy etc

MONITORING AND EVALUATION

24. Describe how the progress of the project, including towards delivery of outputs, will be monitored and evaluated in terms of achieving its overall purpose. This should be both during the lifetime of the project and at its conclusion. Please make reference to the indicators described in the Logical Framework.

- A management group will be established which will meet every 3 months, depending on availability and location of staff.
- Six monthly or annual reports will be evaluated against milestones and indicators.
- The final report will be evaluated against milestones and indicators.

25. How will host country partners be involved in monitoring and evaluation of the project?

- INIRENA and COMPESCA staff will be members of the management group.
- Stakeholder representatives will also be members of the management group.

26. How will you ensure that the project achieves value for money?

The principal components of the project are training, travel, salaries and workshop & printing support. Project costs will be monitored in the UK by Ross and the SU Finance office. Local costs will be monitored in Mexico by Martínez and the UMSNH research office. Although salaries, training, etc, have set costs, best value for money will be obtained wherever possible on all project components through departmental purchasing staff.

27. Reporting Requirements. All projects must submit six monthly reports (by 31 October each year) and annual reports (by 30 April each year). Please check the box for all reports that you will be submitting, dependent on the term of your project. You must ensure that you cover the full term of your project.

Report type	Period covered	Due date	REQUIRED?
Six month report	1 April 2004 – 30 September 2004	31 October 2004	Yes

Annual report	1 April 2004 – 31 March 2005	30 April 2005	Yes
Six month report	1 April 2005 – 30 September 2005	31 October 2005	No
Annual report	1 April 2005 – 31 March 2006	30 April 2006	Yes
Six month report	1 April 2006 – 30 September 2006	31 October 2006	No
Annual report	1 April 2006– 31 March 2007	30 April 2007	Yes
Six month report	1 April 2007 – 30 September 2007	31 October 2007	Yes ?
Final report	1 April 2004 – project end date	3 months after project completion	Yes

LOGICAL FRAMEWORK

28. Please enter the details of your project onto the matrix using the note at Annex B of the Guidance Note.

Project summary	Measurable indicators	Means of verification	Important assumptions
<p>Goal:</p> <p>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</p> <ul style="list-style-type: none"> • 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 			
<p>Purpose</p> <p>Threatened fish species in Mexican altiplano lakes conserved through strengthened institutional capacity, work with stakeholders and increased public awareness.</p>	<p>Establishment of pond trial sites.</p> <p>Training of campesinos.</p> <p>Training of project staff (including to MSc).</p> <p>Development of policy on sustainability of the activity.</p>	<p>Project reports.</p> <p>Workshop reports.</p> <p>Student progress reports (MSc).</p> <p>Scientific publications by partners.</p>	<p>INIRENA and COMPESCA release staff for training.</p> <p>Campesinos continue to cooperate.</p> <p>Campesino/INIRENA/COMPESCA cooperation is maintained.</p> <p>No unforeseen impediment to available technology.</p>
<p>Outputs</p> <p>Staff trained in Sustainable Development</p> <p>Campesinos trained in pond management and grow-out techniques</p> <p>Hatchery facilities completed</p> <p>Small businesses involved in hatchery and supply side activities</p> <p>State wide policy is developed on native fish species and sustainable aquaculture.</p>	<p>~10 Project staff trained.</p> <p>2 MSc's achieved in year 2.</p> <p>6 Workshops held for 45+ participants.</p> <p>Functional production ponds achieved in year 1 and 2.</p> <p>New enlarged hatchery site created at INIRENA.</p> <p>Hatchery methods extended to 2+ SME business sites</p> <p>Policy manual completed in years 2/3 in conjunction with stakeholders</p>	<p>Project reports.</p> <p>Graduation.</p> <p>Project reports, pond outputs, performance monitoring programme.</p> <p>Project reports, hatchery operational in 2004 and supplying pond sites.</p> <p>Project reports</p> <p>Copies of manual to Darwin Initiative</p>	<p>Suitable staff are identified.</p> <p>Campesinos continue to cooperate and to use land as ponds</p> <p>Support from Fondos Mixtos project application [Stage 1 approved, Stage 2 tba Jan 2004]</p> <p>Small businesses follow their current plans for involvement.</p> <p>COMPESCA continue to cooperate.</p>
<p>Activities</p> <p>Workshops</p>	<p>Activity Milestones (Summary of Project Implementation Timetable)</p> <p>Year 1: Through workshops in spring, 2004; train trainers in biodiversity issues and extension. Years 1, 2 & 3: Through workshops in spring, summer and autumn train stakeholders in pond management and on-growing techniques.</p>		
MSc training	Years 1 and 2: Train 2 staff members in MSc Sustainable Development at Stirling.		
Conference	Year 2: Autumn 2005 - Run third National Conference on native species for Aquaculture in Morelia. [Martinez and Ross were instrumental in staging the first two of these, and a third is now timely].		
Development of pond trial sites and their consolidation.	Year1: Develop minimum of two pond sites for trials, one campesino, one business-based. Year 2: Develop second tranche of pond trial sites. Develop sustainable approach to on-growing through use of integrated systems with other native species. Extend technology to related candidate species.		
Policy Development	Years 2 and 3: With COMPESCA, develop sustainable aquaculture policies to ensure preservation of species flock.		
Promotion of Biodiversity issues	All years: Further promote biodiversity issues through press, radio broadcasts and TV. Promote sustainability of developments through COMPESCA reports. Publish scientific results.		