AwF Newsletter

28 November 2005

HAPPY CHRISTMISAND HAPPY NEW YEAR!

Since this will be the last newsletter before 2006, we wish all our readers



The following items of recent news are copied from our website (<u>www.aquaculturewithoutfrontiers.org</u>).

You are welcome to reproduce any of this material, with acknowledgement to AwF.

THE LATEST NEWS FROM ACEH PROJECTS #1 AND #2

Several earlier reports about our work in Aceh have appeared in this news column. Now, AwF is grateful to the authors of the following report on progress with the first two projects there (see 'projects' on our navigation panel for project details)......

The support involves the rehabilitation of tambaks and canals and three small-scale hatcheries.

The following is a brief report prepared by Mr. Hassanudin and Michael Phillips, based on visits to project sites made during September/October 2005.

SMALL-SCALE TAMBAK AND WATER SUPPLY CANAL REHABILITATION (PROJECT # 1)

Jeumerang village, Kempang Tanjung, Pidie

Support was provided for a cash for work program, lasting 6 days. Around 414 people were employed provided to men/women labourers from the tsunami affected village of Jeumerang, resulting in the clean up around 1.3 km of water supply canal. Because some of the canals were seriously damaged an excavator was also hired for canal rehabilitation, and a wooden barrier constructed to control canal erosion in critical points. The barrier construction provided 144 workers. The rehabilitation work was completed by end of October, but subsequent high tides have caused damage to around 300m of canal that now requires more substantial investment in canal lining. This investment will be made by a French Red Cross project that will start in December.

Following from the rehabilitation support, some farmers have started to stock mainly milkfish in the area. The main stocking season will start again in January. The AWF project is much appreciated by farmers and has been instrumental in helping farmers to re-start farming in the village.



Tsunami damaged water supply canal



Clean canal in Jeumerang, after the AwF support

SMALL-SCALE HATCHERY REHABILITATION (PROJECT #2)

Rehabilitation of two small-scale shrimp hatcheries is being conducted in one village in Bireuen district, and another in Aceh Besar district.

Ulee Kareng village, Samalanga, Bireuen.

Two hatcheries have been selected for rehabilitation support in this village. The villagers themselves are doing the rehabilitation work, with technical supervision by staff of the Ujung Batee aquaculture centre and local (District) fisheries department.

The work started during October, and construction is now complete. The remaining work involves purchase of minor equipment (root blower) for the hatchery and provision of operational items. Ujung Batee staff estimate the hatchery will start to operate during late November or early December.



Damaged hatchery before rehabilitation



Children enjoying the new roof as it begins to take shape

Ujung Karung village, Mesjid Raya, Aceh Besar.

One hatchery has been selected for rehabilitation support in this village. The owner himself is doing the rehabilitation work, with technical supervision by staff of the Ujung Batee aquaculture centre staff (the site is close by to Ujung Batee). The hatchery was original used for shrimp, but is being rehabilitated to use for milkfish hatching and nursing, due to high local demand for milkfish.

The work started during October, and construction is now complete. The remaining work involves again purchase of minor equipment for the hatchery, their installation and provision of operational items. Ujung Batee staff estimate the hatchery will start to operate during early December.

EARLIER REPORT ON ACEH PROJECT NO. 1

A total of nearly US\$ 29,000 (\$10,000 from NACA and \$19,000 from the AwF administered WAS Tsunami Relief Fund-funded by YSI) was granted for the first AwF project in Indonesia (see projects in the navigation panel for details). The following article on this work is reproduced by kind permission of the author and the Network of Aquaculture Centres in Asia-Pacific, in whose NACA Newsletter (Volume XX No.2) it was originally published. This pilot project is now being scaled up (see related story "MIGHTY OAKS FROM LITTLE ACORNS GROW".......

CASH FOR WORK, ACEH

Dr John Ackerman, Bureau of Rural Sciences, Department of Agriculture, Fisheries and Forestry, Australia

Photos by Hasanuddin Hasan, Ujung Batee Regional Brackishwater Aquaculture Development Centre

Aquaculture is an important activity for many small-scale farmers in the coastal communities of Aceh, Indonesia. Before the tsunami of the 26th December 2004, around 10,000 tonnes of shrimp and 6,000 tonnes of fish were produced per year from some 47,000 ha of coastal ponds, known locally as tambaks. Preliminary assessments conducted in early 2005 indicated that as many as 90,000 people in Aceh may directly depend on the aquaculture sector for their employment.

The Food and Agriculture Organization of the United Nations (FAO) assessment of the impacts of the tsunami on the aquaculture sector in Aceh found that over 20,000 ha of tambaks had been severely damaged or destroyed with lower levels of damage to at least an additional 5,000 ha, and disruption to more than 800 km of water supply canals. The impact on the livelihoods of small-scale farmers has been significant, and most now face considerable difficulties in restarting farming activities, which are their main source of income. The assessments indicate that the most urgent priorities for restoring tambaks for small-scale aquaculture are in the north-eastern coastal districts of Pidie, Bireuen and Aceh Utara.

Consultation with small-scale farmers in these districts revealed that they had difficulties in starting fish and shrimp production due to a lack of access to water, as a result of damage to water supply canals and drainage systems, and a lack of financial assets to repair ponds and to purchase the necessary inputs such as seed and fertiliser. Farmers in these districts have few other work options available and consider restoration of water supplies to tambaks a priority, requiring removal of sediment clogging canals. A "cash for work" program was seen as a practical way to clean up debris and silt from suitable secondary and tertiary water supply canals while providing farmers and their communities with opportunities to earn income, and take the first steps in restoring their farms and primary source of livelihood. NACA, the World Aquaculture Society and Aquaculture without Frontiers therefore designed and implemented a pilot project in the villages of Pasi Lhok and Jemerang, in the Pidie District to:

- i) Support farmers to restore the tambak water supply; and
- ii) Learn from the experience in order to apply the lessons to the development of future cash for work programs in other villages.

The project was developed in direct consultation with the farmers, the subdistrict Tambak Farmer Association and the Pidie Fisheries Office. It was organized through and technically supervised by the Ujung Batee Regional Brackishwater Aquaculture

Development Centre (Ministry of Marine Affairs and Fisheries). The project was the first step in restoring small-scale traditional aquaculture in these villages, providing a learning experience for all concerned.

Initially, a cash for work contract was provided to the Ujung Batee Centre. The contract covered the following items:

- i) Cash to pay for daily work of farmers/villagers. The workers were selected by the Tambak Farmers Association Chief of the sub-district. The village Chief organised the work schedules to share the work among villagers who wanted to work (including farmers, labourers and other people in need of income).
- ii) Purchase of manual digging tools, sandbags and water gates.
- iii) A provision that public canals and water gates are to be managed—as before—by the local Tambak Farmer Association.

Clearing canals is tough work.



Villagers in Pasi Lhok rebuilding water supply canals damaged by the tsunami

The length of canal to be cleared in the villages of Pasi Lhok and Jemerang was initially estimated at around 1,250m and 3,195m respectively; and the volume of silt to be removed—by hand tools alone—in the order of 2500m³ and 6390m³. It was estimated that clearance of each canal would take about 45 days with 50–60 labourers in Pasi Lhok and 25–30 labourers in Jemerang.

By early June 85 farmers in both villages had been working for approximately three weeks, for a total of 1,530 worker-days. During this period they cleared approximately 2,500m of canal, 78% of the original objective, and removed about 1,650m³ of silt. However, there are still three sections of canal that need repair, a total of about 60m, which need supporting barriers made from bamboo (to be held in position with stakes). These sections lie on sandy soil, which does not permit freestanding dykes, so some infill with more cohesive soil will also be necessary. Due to changes in the landscape an additional large water gate has been proposed for Pasi Lhok in conjunction with the two small water gates.

A learning experience

The cash for work program has achieved its goals of providing villagers with income while they worked to rehabilitate their means of livelihood. However, the programme has had to contend with some unforeseen issues. Listed below are some issues to be aware of before planning and starting a cash for work programme. We hope that our experience will help others.

Finance

- Some unforeseen circumstances are bound to arise, so it is important to include some provision in the budget to cover uncertainties in the work. In Aceh, these have included rain, abnormally high tides and additional equipment requirements such as water gates and pumps.
- Paying a daily rate may not make most efficient use of funds where work is likely to be continually disrupted by high tides or weather. A solution may be to pay upon a daily standard of work to be completed (i.e. the notion of a start-stop-finish).
- There is also the problem that additional staff may need to be seconded to perform the tasks of the supervisor, as the officers with the experience to carry out this work are likely to be busy and unable to operate on a daily basis in the field. This may increase the cost of supervision, highlighting the necessity of covering for uncertainties.

 If the budget gets tight towards the end of the project and there are additional work requirements not accounted for in the original proposal, it can be difficult to choose who works and who does not.

Construction

- Sandy soils can add to construction costs, for example, we had to construct additional barriers to support dykes in affected areas of the canals, which required more than excavation alone.
- There may be additional needs to replant mangroves to control erosion, or even to build additional structures for mangrove replanting. It is important to obtain farmer support for these activities, particularly if replanting will encroach on pond area.
- Water gates should reduce the incidence of erosion within the canals and this may be figured into the budget. This may only become evident once the canals are operational again, whereas it may not have been necessary prior to the tsunami, nor evident before progressing with the work.
- Tidal profiles have changed since the tsunami, possibly due to erosion and sediment deposition across different areas. Normally the months of March to September would have relatively small tidal variation, however, the tidal variation currently being observed is indicative of the larger October to February tides. This has delayed clearance of canals and rebuilding of dikes as work can only be done during low tide.
- Monitoring is essential to ensure that quality is maintained and standard depths are met.

Employment and social issues

- Young men can place a lot of pressure on coordinators to give them work. However, placing them into working groups by themselves was found to be an effective way to confine any aggression towards those organising working parties, which generally subsided after a few days of labour.
- Although the labourers were mostly men, the tambak cash for work also provided opportunities for employment of women. The design of the cash for work needs therefore to take an equitable and gender sensitive approach.
- Our experience has been that it can be difficult to maintain a reasonable quality of work due to the diversity of workers employed. However, if the primary objective is to give the people immediate financial support, then physical ability should not be a consideration. It is more important that each person feels that they have an equal chance of employment, or the selection process will create tension. On a daily basis most targets were not reached but with adequate supervision and a monitoring program in place, it should be possible to maintain an acceptable standard of quality and progress.
- Controlling worker numbers can be difficult—some days the required number may not arrive, and this needs to be carefully coordinated.
- Local governing authorities (e.g. Dinas Perikanan), farmer groups and the head of the village must be brought into the program as they play a critical role in coordination, mobilising local people and resources and in maintaining good relations with the villagers.



The hard work pays off - after nearly two months of planning and work, the canal is ready for operation

AID TO LADONG FISHERIES & AQUACULTURE COLLEGE ARRIVES IN ACEH THROUGH AWF ASSISTANCE

In an earlier story entitled 'LARGE CHEQUE PROVIDES FURTHER AID TO TSUNAMI VICTIMS IN ACEH' we reported that an AwF volunteer had secured further assistance to help replace losses in Aceh.....

In an earlier story entitled 'LARGE CHEQUE PROVIDES FURTHER AID TO TSUNAMI VICTIMS IN ACEH' we reported that an AwF volunteer had secured further assistance to help replace losses in Aceh. A group of University of Arizona faculty staff had contributed US\$ 1,573 to assist the Ladong Fisheries and Aquaculture College in Aceh. These funds were to be used to buy books and water quality kits requested by the College, which suffered great losses during the tsunami. WAS had also offered to donate some additional texts. This welcome contribution was raised through support lunches at the University of Arizona for use by the World Aquaculture Society (WAS) and AwF.

In late October, AwF volunteer Kevin Fitzsimmons reported that he had purchased the requested equipment from Aquatic Ecosystems. These materials, and the books contributed by WAS, were mailed to the US office of our colleagues at Professionals International. PI's Michael Densmoor hand-carried them to Indonesia and he and Paul Mak are currently delivering them to the College.

MIGHTY OAKS FROM LITTLE ACORNS GROW (14th Century proverb)

The pilot tambak rehabilitation project, now completed, has encouraged major support from several sources for tsunami disaster relief in Aceh.....

The pilot tambak project in Aceh, Indonesia (see AwF Aceh Project # 1 on our projects page for details), initially modestly funded by NACA and augmented with a more substantial contribution from YSI granted through the WAS Tsunami Relief Fund and AwF, is now complete.

It is gratifying to read in the July-September issue of Aquaculture Asia (which can be downloaded by accessing www.enaca.org) that this pilot activity (with a total budget of US\$ 29,000) has now been topped up by a US\$ 600,000 fund from the French Red Cross to expand similar activities. In addition, the Asian Development Bank has set up a US\$ 30 million project aimed at rehabilitating the aquaculture and fisheries sector of Aceh. NACA (Network of Aquaculture Centres in Asia-Pacific) has been awarded a 2-year contract to manage this project, in association with Sloane Cook & King Pty. Ltd. Australia and PT Trans Intra Asia, Indonesia.

Disaster relief is not the prime activity of AwF but we were glad to be able to help the people of Aceh in a modest way through this project and through another three ongoing AwF activities (two also funded through YSI/WAS and the other comprising technical assistance to another NGO, Professionals International).

One of the advantages of small NGOs is our ability to act quickly, while the major funders are marshalling their substantial resources.

We wish every future success for the fish and shrimp farmers of Aceh and all those who are working so hard to assist them in these difficult times.

PROFESSIONALS INTERNATIONAL SENDS NEWS OF ITS WORK (ACEH PROJECT #3)

Paul Mak has contributed some news and photos about the work of Professional International in Aceh and the assistance being received from AwF volunteers (Aceh Project # 3).........

AWF PROVIDES TECHNICAL ASSISTANCE FOR LAMNGA (ACEH, BANDA ACEH AND SIGLI, INDONESIA)

Two AwF volunteers, Kevin Fitzsimmons, the current President of the World Aquaculture Society and Dallas E. Alston, Department of Marine Sciences, University of Puerto Rico, were contacted to advise Mr. Paul Mak of Professionals International who are assisting the local community of Lamnga, Banda Aceh, Indonesia which lost about 134 houses and 109 lives during the tragic tsunami. Lamnga has about 60 families who owned abut 110 ha of artisanal shrimp culture ponds. Shrimp culture provides the main source of income to the village. As a result of the tsunami, pond dikes were

destroyed and ponds were filled with debris, tree trunks, and vehicles. Because the pond dikes measured more than 15 km in length, it was estimated that it would take at least six months to reconstruct the ponds.

The goals of the community project were to improve shrimp farming methods using sustainable culture techniques. Dallas Alston responded with information related to general topics for the community to consider while they repaired their ponds, including information related to site location, pond layout, pond construction (dikes; fill structures; drain structures; preventable problems) and high health shrimp. This marked the first AwF volunteer effort to provide advice to directly benefit small-scale farmers. This was a very exciting milestone for AwF. Kevin Fitzsimmons set another milestone, to be the first AwF volunteer to make a field visit to the community.

The practical recommendations made by Dallas Alston included:

- Advice to ensure ponds could be totally drained;
- Determination of soil quality for retaining pond water;
- Suggestions to save (or plant) mangroves to benefit the ecology;
- Use of mangroves or other vegetation to serve as a buffer zone;
- Suggestion to deal with serious dike erosion by oceanic waves;
- Proper pond depth;
- Testing river water;
- Drying ponds;
- Polyculture techniques using shrimp and either seaweed, milkfish or clams;
- Benefits of tilapia (and possible environmental problems of culture tilapia in marine waters);
- Natural productivity and shrimp growth;
- Liming ponds;
- Size of screen to minimize predators entering the ponds;
- Reduction of water exchange during the culture period;
- Cage culture in un-repairable ponds (which hopefully could still hold water).

As the project developed, Dallas sent information related to culture, including aeration, pond preparation, postlarval transportation, nursery phase, juvenile transfer, growout pond management, and prawn polyculture.

Future goals include utilising a demonstration pond to be a model for the community and to station someone with knowledge and skills to permanently assist the small-scale farmers with sustainable aquaculture technology.

The demo ponds are already in place utilising semi intensive and traditional techniques. The semi intensive ponds will stock tilapia and shrimp whilst the traditional ponds will stock softshell crabs in cages, tilapia and milkfish. The demo semi intensive ponds will start operating in mid-November whereas the traditional ponds will start in late October.

Around 40 hectares of the community ponds are also ready to begin production. The farmers are in the process of clearing debris and trash from their ponds. As soon as the water gates are in place the ponds will start producing with start up capital provided by Professionals International. The local fisheries dept has also stationed someone permanently in Lamnga to provide technical assistance to the farmers.

Regrettably more than half of the ponds could not be repaired utilising excavators alone because of their location on the sea front. After much consultation with AwF the decision was made to hold off repairing those ponds for the time being whilst other possibilities such as cage culture are being explored.

Having Kevin Fitzsimmons make a field visit to Aceh in the early stages of the reconstruction process, coupled with his recommendations, provided PI with much needed confidence to pursue the work.

The following photographs and captions were provided by Paul Mak:



Community pond



Constructing a channel for the water gate



Draining the pond



Hauling mud to seal the water gates



Installing the portable pump



Moving the pump



Constructing the water gate



Sealing the water gate



Putting the final touches to the water gate



Repairing the dykes



Repairing the dykes near the river



Working in wet conditions!



Semi-intensive pond



Semi-intensive polyculture pond

SEAWEED PROJECT (ACEH PROJECT #4)

The funds for this project (see Aceh Project # 4 on our projects page for details) have arrived in Aceh and the project is scheduled to commence in November 2005.

LARGE CHEQUE PROVIDES FURTHER AID TO TSUNAMI VICTIMS IN ACEH

An AwF volunteer has secured further assistance to help replace losses in Aceh....

Through the WAS Tsunami Fund (supported by YSI), AwF has several rehabilitation projects ongoing in the tsunami-devastated area of Aceh, Indonesia (see various news items on this page and

click 'projects' on the navigation panel of this website for details). These projects are being administered by the Directorate General of Aquaculture and monitored by AwF.

In addition, two AwF volunteers (Dallas Alston and Kevin Fitzsimmons) have been providing on-site and email technical advice since May 2005 to another group (Professionals International - PI) that is conducting relief work with shrimp farmers in this area (see other news items on this page).

Following his visit to the tsunami area and his assistance to various of these projects, AwF volunteer Kevin Fitzsimmons has also attracted funding from a group of University of Arizona faculty staff to assist the Ladong Fisheries and Aquaculture College in Aceh. The photo below shows Kevin (right) receiving a cheque for US\$ 1,573, which he will use to buy books and water quality kits requested by the College. WAS has also offered to donate some additional texts. The materials will be mailed to the office of Professionals International in the USA and Michael Densmoor will hand carry them to Indonesia and deliver them to the college.



MORE NEWS FROM BISHRAMGANJ

AwF volunteer M.C. Nandeesha has submitted the following news about the first AwF project in India....

Recently, the farmers in the AwF Bishramganj-India project (see 'projects' on this website for details) were brought to the ICAR (the Indian Council of Agricultural Research) farm to enable them to understand the farming system models developed by ICAR for the region. Farmers having only a small amount of land need to maximise its utilisation to get the best output. All the 30 farmers working in our AwF project cultivate not only fish, but also several other animals and plants. Women family members carry out most of the activities related to plant and animal husbandry, but their participation in aquaculture has been limited. Recognising this situation, and in order to encourage their participation, it was agreed that women family members should join the field trip along with the men.



Heavy rains on October 2 prevented some of the families from joining the field trip. However, eighteen families, along with 50 students undergoing training on integrated farming were brought to the farm in the two vehicles provided by ICAR and the College of Fisheries. Even the rain did not prevent the farmers enthusiasm. They expressed their satisfaction as they were able to gain knowledge on the best use of pond bunds for growing vegetable, the integration of fish culture with other animals such as pigs, and the rearing of rabbits, poultry and cattle. This has provided them with scope for diversification to increase their income. Professor N.P. Singh, Joint Director of ICAR, suggested that project farmers should take advantage of the technologies evolved to improve their farm productivity. At the College of Fisheries, AwF farmers were given demonstrations on value-addition to fish by preparing products like fish pickles. Silver carp was used for the preparation of the pickle and farmers appreciated its taste. In an interactive session, farmers' questions were answered. While returning to their homes, each farmer was given a packet containing a self recruiting species - the mola carplet (Amblypharyngodon mola) was provided. It was agreed that those families that missed the field trip will be given another opportunity to visit the ICAR Farm at a later date.



A curious woman observing the poultry breed Giriraja, which is suitable for growing in backyards



Farmers observing the cage farming of rabbits, which make a very profitable crop



Women were delighted not only with the field visit but also with the food that was cooked by the research scholars for more than 100 people



A view of a fish pond integrated with various crops



Farmers returning home after a day's visit; for some of the women, it was the first technical visit ever made by them



This lady, Ms. Debbarma, has not been able to attend any of the meetings that have been organised so far because she cannot leave home and travel long distances to attend them. So we went to her. When we arrived, she was busy collecting drumstick leaves to prepare soup for lunch. She is one of the farmers that are strongly advocating village level meetings so that many others like her can take an active part in training and other activities.



Both husband and wife are involved in keeping the pond green by applying green manure plant, which is grown widely in the area. The plant is rich in nitrogen and most farmers are finding it a good source of manure.

AWF PATRON VISITS BISHRAMGANJ PROJECT

AwF Patron Professor M.S. Swaminathan visited Agartala on 24 October 2005, where he discussed progress in the AwF Bishramganj-India Project with the project leader, Fr. K.J. Joseph.

THIRD WORLD AID DONATES TO AWF

A local interdenominational charity from Marlow, England has donated to AwF.....

Third World Aid raises money to help the poor in developing countries through the work of a dedicated group of people who organize coffee mornings, collections, the sale of local and home-made produce, and other activities. It is a local charity in Marlow, England that is very selective when considering how its hard-earned funds shall be spent.

AwF is therefore delighted that, following an appeal by our Chairman, Third World Aid has kindly donated £ 500 (approximately US\$ 900) for our work and we wish to express our gratitude to those involved.

Most of AwF's income so far has come from the friends, colleagues and families of our trustees, together with other supporters from within the aquaculture community. Few attempts have been made so far to raise money from the general ('non-aquaculture') public.

However, this generous donation again demonstrates what can be done (see our earlier story about dragon boat racing). This significant assistance from Third World Aid means that a total of almost £ 2,000 (approximately US\$ 3,600) has been raised from the general public in one small English town (Marlow has a population of about 20,000) between June and October 2005.

The trustees of AwF hope that our many friends around the 'developed' world will consider fund-raising activities for AwF in their own localities. The public is clearly willing to support our work, <u>if asked</u>. If this much can be raised within a small community in England in a few months, imagine what could be achieved if all the hundreds of friends of AwF were to copy the kind people of Marlow! There's a challenge......!

AWF VOLUNTEER WORKING IN BANGLADESH

Initial work by an AWF volunteer may lead to more activities in Bangladesh.......

AwF volunteer Professor M.C. Nandeesha recently took part in an evaluation of CARITAS Community Based Fisheries Management (CBFM) activities in Bangladesh. Dr. Nandeesha has very generously donated his fee for this work to AwF and we hope that it can be used by CARITAS to establish a small AwF-CARITAS project.

Since he completed his evaluation work AwF has received a letter of thanks from the CBFM Director, Dr, Anwara Begum. An excerpt from this letter follows:

"Greetings from Caritas Fisheries Program! We are taking the opportunity to thank you for providing a renowned aquaculture scientist like Dr. M.C. Nandeesha with a view to conducting an evaluation work on Community Based Fisheries Management (CBFM) as a volunteer under AwF. Caritas administration deeply acknowledges his valued contribution. We believe that his sincere effort and valued recommendations would further strengthen CBFM project activities and the impecunious community people will be benefited. Happy to inform you that Caritas has started work to implement the thoughts of AwF and Dr. Nandeesha. Meanwhile......"

PROGRESS IN THE AWF BISHRAMGANJ-INDIA PROJECT

AwF has just received news from the Director of this project......

The following is an excerpt from a letter received from Fr. K J. Joseph SDB., who is in charge of the AwF Bishramganj-India project (for details, see 'projects' in the navigation panel of our website):

"We have started the implementation of the project with the help of (AwF volunteer) Prof. Nandeesha and his team from the College of Fisheries, Lembucharra, Agartala. They have conducted three meetings of the beneficiaries. They have also gone with our team to all thirty beneficiaries' fish tanks and motivated them to prepare the ponds with liming and manuring. As instructed by them we have started the periphyton programme. We are stocking the ponds with fingerlings as per instruction. We have completed the stocking in 50% of the tanks. Within 5 days (of 12 September 2005) all the 30 tanks will be stocked. We are encouraged by the interest and enthusiasm of the people, both men and women, in the scientific way of aquaculture. Thank you for your concern and love for the people of this region. We pray for you, your collaborators and benefactors."

LATIN AMERICAN CHAPTER OF WAS DONATES US\$ 1,000 TO AWF

During the 11 September 2005 board meeting of the Latin American Chapter of the World Aquaculture Society, it was decided to make a grant to AwF of US\$ 1,000, specifically for use in the area devastated by the 'Christmas 2004 tsunami'. AwF is deeply grateful for this new donation.