

Artisanal fishers

Don't ignore us

Malaysia's new economic prowess does not seem to have encompassed the problems of its small-scale fishers

As Malaysia races to its new national goal of becoming the next Asian economic powerhouse, the country's coastal fisherpeople find themselves still immersed in chronic and growing problems.

Some of these issues were highlighted at the Malaysian Coastal Fishermen's Workshop from 25 to 27 July 1995 in Penang. Organized by Sahabat Alam Malaysia (SAM or Friends of the Earth, Malaysia), the workshop brought together 15 coastal fishermen's representatives from the States of Kedah, Peninsular and Johor.

During this workshop, numerous problems were raised and discussed. Most of these were the familiar ones encountered by countless numbers of artisanal fisherpeople around the world: pollution of rivers and coasts; encroachment into inshore waters by trawlers; dwindling catches; new ecological predicaments thrown up by aquaculture; and the absence of sound fishery management and enforcement policies.

One problem, particularly pronounced in Kuala Kurau in Perak and Kuala Tunjang in Kedah, is the tendency to convert mangrove swamps into crab and prawn breeding farms. This practice has destroyed the breeding ground of several species of fish. Further, the mangrove swamps served as a barrier to protect the shore from the fury of the waves. Once cleared, the result is erosion.

In Pulau Pangkor in Perak, Kuala Perlis in Perlis and Pontian in Johor, chemical and organic pollutants from factories, hotels and pig farms have also affected the catch of the local fishermen. S. M.

Mohammed Idris, president of SAM, urged the Malaysian Fisheries Department and the Marine Police to enforce existing laws and arrest those who violated the laws.

He also suggested that seafood exports be reduced to prevent the export market from further commercializing Malaysia's fisheries and overexploiting marine resources.

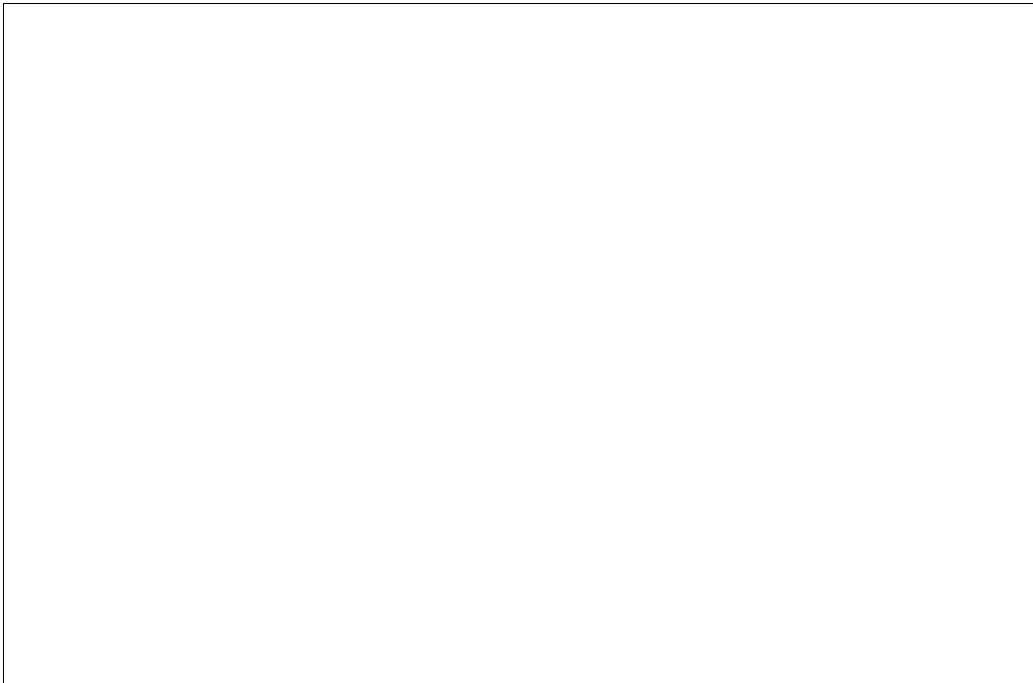
The workshop formulated and adopted a resolution, which was presented to the authorities in the Malaysian government. The resolution urged the Department of Fisheries to enforce the relevant laws and to control and prevent incursions into the coastal waters by trawlers and Kenka boats ('apollo nets').

It requested the authorities to increase the number of the armed enforcement personnel to face the increasing incursions of trawlers into the coastal waters of Malaysia. It asked the State governments to notify in the official gazette mangrove forest areas as reserves for conservation purpose to maintain biodiversity, prevent erosion and conserve feeding, refuge and breeding grounds for fisheries.

The resolution called on State governments to be careful and meticulous in planning industrial developments nation-wide so that their implementation would neither result in marine pollution nor threaten the livelihoods of small-scale or coastal fishers.

Act effectively

The participants at the workshop requested the Department of Environment to act effectively to control, reduce and prevent marine and river pollution in Malaysia by effectively enforcing the amended Environmental Quality Act of 1974.



They also urged the government to carefully plan all development so that the benefits will be equitably distributed and in a manner that the coastal fishermen's livelihood are not threatened.

middlemen in the marketing of fish catches.

The resolution entreated the Department of Fisheries, Department of Environment and the Marine Department to co-operate and consolidate their forces to prevent the recurrence of the dumping of sludge by tankers in Malaysian coastal areas. Sludge dumping threatens marine resources and only exacerbates the coastal fishers' problems.

The workshop beseeched the Department of Fisheries to ban the shell-dredging boats, which are operating in the Perlis and Kedah coasts. It also requested the government to control, reduce and prevent the destruction of coral reefs, which are important in maintaining the fishery ecology.

On the question of poverty, the resolution urged the government to pay immediate attention to the issue and to take appropriate actions to alleviate the plight of the coastal fishers.

The participants called on the Malaysian Fisheries Development Board and the National Fishermen's Association to play their roles effectively to overcome the problems posed by profiteering

This piece is based on material sent by Nora Ibrahim of Sahabat Alam Malaysia, whose Artisanal Fishermen's Network is co-ordinated by Zulkifli Yusuf

Marine and coastal protected areas

The following is the draft decision on marine and coastal biological diversity taken at the recent CBD meet

Draft Decision Submitted by the Chair of the Working Group I on Marine and Coastal Biological Diversity

Review of the programme of work on marine and coastal biodiversity

The Conference of the Parties

1. *Takes note* that progress has been made in the implementation of the programme of work at the national, regional and global levels and that facilitation of implementation has been undertaken by the Secretariat;

2. *Recognizes* that the programme of work on marine and coastal biological diversity must incorporate a diverse range of tools and approaches and address the three objectives of the Convention, and notes the need to ensure integration between the programmes of work on protected areas and on marine and coastal biological diversity, and in particular the programme element on MCPAS, to ensure effective coordination in their implementation;

3. *Agrees* that the programme of work on marine and coastal biological diversity should be applied and interpreted consistently with national law, and where applicable, international law, including the United Nations Convention on the Law of the Sea;

4. *Decides* that the programme elements of the programme of work still correspond to global priorities, which are not fully implemented, and therefore *extends* the time period of the programme of work by an additional six years, taking into account the multi-year programme of work of the Conference of the Parties up to 2010;

5. *Notes* that the programme of work has been refined to take into account recent developments and new priorities and *endorses* for the guidance of Parties and any other relevant organizations or bodies the elaborated programme of work as presented in annex I to the present decision and its appendices 1-5, noting that Parties will implement those suggested activities that are consistent with their national priorities.;

6. *Welcomes* the entry into force of the Agreement on the Conservation of Albatrosses and Petrels, and *notes* the adoption of the International Convention for the control and management of ships' ballast water and sediments under IMO and *encourages* Parties to the CBD and other governments to consider ratifying these conventions.

7. *Agrees* that further technical advice is required to support the implementation of the programme elements related to sustainable use and to support the work of developing countries in achieving sustainable use of their marine and coastal areas, including in relation to tourism and fishing, and *requests* the Executive Secretary to work with the Food and Agriculture Organization of the United Nations (FAO) and other relevant organizations to develop that advice and support;

8. *Taking into account* the AHTEG report on biodiversity and climate change and the recommendations of SBSTTA at its ninth meeting and the decision of the Conference of the Parties at its seventh meeting on biodiversity and climate change, agrees that the programme of work on marine and coastal biodiversity should address issues related to biodiversity and climate change, and

further encourages Parties to make use of it as relevant source of useful information and take measures to manage coastal and marine ecosystems, including mangroves, seagrass beds and coral reefs so as to maintain their resilience to extreme climatic events;

9. Recognizing the particular significance of this programme of work to small island developing States, *invites* the Global Environment Facility, other funding institutions, and development agencies to provide financial support for the implementation of the elaborated programme of work on marine and coastal biodiversity; and its annexes and appendices

Marine and coastal protected areas

10. *Welcomes* the report of the Ad Hoc Technical Expert Group on Marine and Coastal Protected Areas (UNEP/CBD/SBSTTA/8/INF/7), / *expresses its gratitude* to the Governments of New Zealand and the United States of America, and the World Conservation Union (IUCN), for their financial, organizational and technical support for this work, and *expresses its gratitude* to the Chair and members of the Ad Hoc Technical Expert Group for their work;

11. *Notes* that marine and coastal biodiversity is under rapidly increasing and locally acute human pressure, such that globally, regionally and nationally marine and coastal biodiversity is

declining or being lost. One of the reasons for this level of threat is the very low level of development of marine and coastal protected areas;

12. *Notes* that marine and coastal protected areas have been proven to contribute to:

- (a) Protecting biodiversity;
- (b) Sustainable use of components of biodiversity; and
- (c) Managing conflict, enhancing economic well-being and improving the quality of life;

13. *Notes* that there are increasing numbers of marine and coastal protected areas, but in many cases they have not been effective because of problems related to their management (including as a result of lack of resources), size and habitat coverage;

14. *Notes also* that according to available data, marine and coastal ecosystems are severely underrepresented as protected areas, and these protected areas probably protect a very small proportion of marine and coastal environments globally and consequently make a relatively small contribution to sustainable management of marine and coastal biodiversity;

15. *Takes note with appreciation* of the joint note of the International Coral Reef Initiative and the Convention on

Biological Diversity (UNEP/CBD/COP/7/INF/26) on the ICRI resolution on small island States (see annex 1) and on cold water coral reefs (see annex 2) of the document. This is proposed pursuant to decision VI/3 of the Convention on Biological Diversity;

Goals of marine and coastal protected areas

16. *Agrees* that marine and coastal protected areas are one of the essential tools and approaches in the conservation and sustainable use of marine and coastal biodiversity

17. *Notes* that there is an international body of evidence demonstrating that those marine and coastal protected areas where extractive uses are excluded have benefits for fisheries in surrounding areas, and in many cases for communities, and for sustainable tourism and other economic activities within and outside the marine and coastal protected area;

18. *Agrees* that the goal for work under the Convention relating to marine and coastal protected areas should be:

- The establishment and maintenance of marine and coastal protected areas that are effectively managed, ecologically based and contribute to a global network of marine and coastal protected areas, building upon national and regional systems, including a range of levels of protection, where human activities are managed, particularly through national legislation, regional programmes and policies, traditional and cultural practices and international agreements, to maintain the structure and functioning of the full range of marine and coastal ecosystems, in order to provide benefits to both present and future generations.

19. *Notes* that the World Summit on Sustainable Development Plan of Implementation promotes the conservation and management of the oceans, and agreed to develop and facilitate the use of diverse approaches and tools, including the ecosystem approach, the elimination of destructive

fishing practices, the establishment of marine protected areas consistent with international law and based on scientific information, including representative networks, by 2012, and time/area closures for the protection of nursery grounds and periods, proper coastal land use; and watershed planning, and the integration of marine and coastal areas management into key sectors; and *agrees* to adopt this approach for the work of the Convention on marine and coastal protected areas, and to develop a strategy to meet this goal, including indicators of progress;

20. *Aware* that MCPAS should be part of a wider marine and coastal management framework, urges Parties and other governments, as appropriate, to make efforts to adopt, as a matter of high priority (while taking into account the resource limitations of small island developing States), such a framework, taking into account Appendix 3 of Annex I.

National framework of marine and coastal protected areas

21. *Agrees* that an effective marine and coastal biodiversity management framework as set out in appendix 3 to annex I to the present decision would comprise sustainable management practices and actions to protect biodiversity over the wider marine and coastal environment, including integrated networks of marine and coastal protected areas consisting of:

- (a) Marine and coastal protected areas, where threats are managed for the purpose of biodiversity conservation and/or sustainable use and where extractive uses may be allowed; and
- (b) Representative marine and coastal protected areas where extractive uses are excluded, and other significant human pressures are removed or minimized, to enable the integrity, structure and functioning of ecosystems to be maintained or recovered;

22. *Agrees* that the balance between category (a) and (b) MCPAS in paragraph 21 above would be selected by the country concerned.

23. *Notes* that the Ad Hoc Technical Expert Group on MCPAs advised that certain objectives of MCPAs, such as scientific reference areas can only be accomplished through the establishment of category (b) MCPAs, and encourages Parties to take this advice into account when determining an appropriate balance between categories (a) and (b);

24. *Notes* that there are some benefits of the framework that can be provided with any degree of certainty only by including highly protected areas, and that to achieve the full benefits a network needs to include representative and distinctive areas and contain a sufficient area of the coastal and marine environment to be effective and ecologically viable;

25. *Agrees* that key factors for achieving effective management of marine and coastal protected areas include effective governance, clear national legal or customary frameworks to prevent damaging activities, effective compliance and enforcement, ability to control external activities that affect the marine and coastal protected area, strategic planning, capacity-building and having a sustainable financing for management;

26. *Urges* Parties to urgently address, through appropriate integrated marine and coastal management approaches, all threats, including those arising from the land (e.g. water quality, sedimentation)

and shipping/transport, in order to maximize the effectiveness of marine and coastal protected areas and networks in achieving their marine and coastal biodiversity objectives taking into account possible effects of climate change such as rising sea levels;

27. *Agrees* that the full participation of indigenous and local communities and relevant stakeholders is important for achieving the global goal, and for the establishment and maintenance of individual marine and coastal protected areas and national and regional networks in line with decision VII/—on protected areas;

28. *Notes* the technical advice provided by the Ad Hoc Technical Expert Group, contained in annex II to the present decision and in its report, relating to marine and coastal protected areas within national jurisdiction, and *urges* Parties and Governments to utilize that advice in their work to establish marine and coastal protected areas networks;

Marine protected areas in areas beyond national jurisdiction

29. *Notes* that there are increasing risks to biodiversity in marine areas beyond national jurisdiction and that marine and coastal protected areas are extremely deficient in purpose, numbers and coverage in these areas;

30. *Agrees* that there is an urgent need for international cooperation and action to improve conservation and sustainable use of biodiversity in marine areas beyond the limits of national jurisdiction, including the establishment of further marine protected areas consistent with international law, and based on scientific information, including areas such as seamounts, hydrothermal vents, cold-water corals and other vulnerable ecosystems;

31. *Recognizes* that the law of the sea provides a legal framework for regulating activities in marine areas beyond national jurisdiction and *requests* the Executive Secretary to urgently collaborate with the Secretary-General of the UN and relevant international and regional bodies in accordance with their mandates and their rules of procedure on the report called for in UNGA resolution 58/240 paragraph 52 and to support any work of UNGA in identifying appropriate mechanisms for the future establishment and effective management of marine protected areas beyond national jurisdiction.

Assessment, monitoring and research priorities

32. *Notes* that the research priorities and pilot projects set out in appendix 4 to annex I to the present decision would provide important assistance to national and, where appropriate, regional efforts to establish and maintain marine and coastal protected areas and national and regional networks, and that research programmes on the conservation of marine and coastal biodiversity resources are needed while setting up national biodiversity research priorities;

33. *Agrees* to incorporate the research priorities and pilot projects contained in appendix 4 to annex I to the present decision into the programme of work in marine and coastal biodiversity, and *requests* the Executive Secretary to identify partners to adopt the research priorities and undertake these projects as a matter of urgency;

34. *Notes* that it is necessary to develop research programmes on the conservation of marine biological diversity resources beyond marine and coastal protected

areas, with a view to establishing protected-area networks;

International support for the creation of networks of marine and coastal protected areas

35. *Urges* Parties, other Governments and relevant organizations to provide active financial, technical and other support for the establishment of a global system of marine and coastal protected area networks and the implementation within it of relevant provisions contained in this decision, including identification and removal of barriers to the creation of marine and coastal protected areas, and removal of perverse incentives for unsustainable activities in the marine and coastal environment, pursuant to decision VI/15, on incentive measures, within the framework of relevant marine-related international law;

36. *Decides* to examine the need for support through the financial mechanism to developing country Parties, in particular the least developed and small island developing States among them, for country-driven activities aimed at enhancing capabilities for activities relating to the establishment and maintenance of marine and coastal protected areas and networks of marine and coastal protected areas and in particular to assist Parties to develop systems to make their marine and coastal protection area networks self-sustaining in the medium to long term;

37. *Notes* that further technical advice related to network design and in particular ecological coherence of networks may be needed to assist Parties in implementation work, and request the Executive Secretary, in consultation with the Bureau of Subsidiary Body on Scientific, Technical and Technological Advice, to identify appropriate mechanisms for developing this advice.

Monitoring progress toward the global goal

38. *Invites* the UNEP-WCMC (World Conservation Monitoring Centre of the United Nations Environment Programme), in collaboration with relevant organizations and authorities, to provide and maintain up-to-date information on marine and coastal

protected areas, in line with the proposed categories for inventory and contextual information set out in annex III below, to provide a basis for the assessment work under the Convention;

39. *Requests* the Executive Secretary to provide an assessment of progress toward the global goal, as part of reporting on the programme of work on marine and coastal biological diversity;

Mariculture

40. *Welcomes* the summary report of the Ad Hoc Technical Expert Group on Mariculture (UNEP/CBD/SBSTTA/8/9/Add. 2) and the full report of the Group as presented as an information document for the eighth meeting of the Subsidiary Body on Scientific, Technical and Technological Advice (UNEP/CBD/SBSTTA/8/INF/6);

41. *Expresses its appreciation* to the Food and Agriculture Organization of the United Nations (FAO) for the technical support and meeting facilities provided for the meeting of the ad hoc technical expert group on mariculture;

42. *Takes note* of the negative biodiversity effects of mariculture, as described in section II of the summary report of the Ad Hoc Technical Expert Group on Mariculture, and of the methods and techniques available for their mitigation,

as described in section III of that summary report;

43. *Notes also* that the AHTEG in section IV of the summary report identified some positive effects for biodiversity of some forms of mariculture with native species,;

44. *Urges* Parties and other Governments to adopt the use of relevant methods and techniques for avoiding the adverse effects of mariculture on marine and coastal biological diversity, and incorporate them into their national biodiversity strategies and action plans;

45. *Recognizes* the complexity of mariculture activities, the highly variable circumstances of different geographical areas, mariculture practices and cultured species, as well as social, cultural and economic conditions, which will influence mitigation options, and, accordingly, taking into account the special needs of and the difficulties faced by stakeholders in developing countries, *recommends* that Parties and other Governments adopt the use of the following specific methods, techniques or practices for avoiding the adverse biodiversity-related effects of mariculture:

- (a) The application of environmental impact assessments, or similar assessment and monitoring procedures, for mariculture

- developments, with due consideration paid to the scale and nature of the operation, as well as carrying capacities of the environment, taking into account the guidelines on the integration of biodiversity considerations in environmental impact assessment legislation and/or processes and in strategic impact assessment, endorsed by the Conference of the Parties in its decision VI/7 A, as well as the recommendations endorsed in decision VI/10, annex II, on the conduct of cultural, environmental and social impact assessments regarding developments proposed to take place on, or which are likely to impact on, sacred sites and on lands and waters traditionally occupied or used by indigenous and local communities. There is a need to address the likely immediate, intermediate and long-term impacts on all levels of biodiversity;
- (b) Development of effective site-selection methods, in the framework of integrated marine and coastal area management, taking into account the special needs and difficulties encountered by stakeholders in developing countries;
- (c) Development of effective methods for effluent and waste control;
- (d) Development of appropriate genetic resource management plans at the hatchery level and in the breeding areas, including cryo-preservation techniques, aimed at biodiversity conservation;
- (e) Development of controlled low-cost hatchery and genetically sound reproduction methods, made available for widespread use, in order to avoid seed collection from nature, where appropriate. In cases where seed collection from nature cannot be avoided, environmentally sound practices for spat collecting operations should be employed;
- (f) Use of selective fishing gear in order to avoid or minimize by-catch in cases where seed are collected from nature;
- (g) Use of native species and subspecies in mariculture;
- (h) Implementation of effective measures to prevent the inadvertent release of mariculture species and fertile polyploids, including, in the framework of the Cartagena Protocol on Biosafety, living modified organisms (LMOs);
- (i) Use of proper methods of breeding and proper places of releasing in order to protect genetic diversity;
- (j) Minimizing the use of antibiotics through better husbandry techniques;
- (k) Ensure that fish stocks used for fishmeal and fish oil are managed in such a way as to be sustainable and to maintain the trophic web;
- (l) Use selective methods in industrial fisheries to avoid or minimize by-catch.
- (m) Considering traditional knowledge, where applicable, as a source to develop sustainable mariculture techniques;
46. *Urges* Parties and other Governments to adopt relevant best management practices and legal and institutional arrangements for sustainable mariculture, taking into account the special needs and difficulties encountered by stakeholders in developing countries, in particular through implementing Article 9 of Code of Conduct on Responsible Fisheries, as well as other provisions in the Code dealing with aquaculture, recognizing that it provides necessary guidance to develop legislative and policy frameworks at the national, regional and international levels;
47. *Requests* the Executive Secretary to undertake a comprehensive review of relevant documents on best practices

Annex I

Elaborated Programme of Work on Marine and Coastal Biological Diversity

Para 6,7 and 8 under Basic Principles are relevant to fishworkers.

6. The involvement of all relevant stakeholders in implementation of the programme of work should be promoted. The role of the Secretariat is to promote and facilitate the implementation of the programme of work.

7. The implementation of the programme of work should be carried out with the full and effective participation of indigenous and local communities as appropriate and respect of their rights under domestic and applicable international law. In this context, Article 6.18 of the FAO Code of Conduct for Responsible

Fisheries that highlights the need to protect the preferential access rights of fishers and fishworkers, particularly those engaged in subsistence, small scale and artisanal fisheries, to traditional fishing grounds and resources should be noted.

8. In accordance with the Millennium Development Goals, the implementation of the programme of work aims to make a direct contribution to poverty alleviation. Its successful implementation will require national and regional capacity-building and financial resources for developing country Parties, in particular the least developed and small island developing States among them.

relevant to mariculture, and to disseminate the results, as well as relevant case studies, through the clearing-house mechanism prior to the tenth meeting of the Subsidiary Body;

48. *Agrees* to incorporate the research and monitoring priorities identified by the Ad Hoc Technical Expert Group on Mariculture as outlined in appendix 5 to annex I to the present decision into the programme of work on marine and coastal biological diversity;

49. *Recommends* that the Executive Secretary, in collaboration with the Food and Agriculture Organization of the United Nations and other relevant organizations, explore ways and means for implementing these research and monitoring priorities, including an evaluation of means through which mariculture can be used to restore or maintain biodiversity;

50. *Recommends* that the Executive Secretary, in collaboration with the Food and Agriculture Organization of the United Nations and other relevant organizations, harmonize the use of terms in regards to mariculture by further developing and adopting the glossary of the Food and Agriculture Organization of the United Nations;

51. *Expresses its support* for regional and international collaboration to address transboundary impacts of mariculture on biodiversity, such as spread of disease and invasive alien species;

52. *Decides* to promote technical exchange and training programmes, and transfer of tools and technology;

53. *Decides* to examine the need for support through the financial mechanism to developing country Parties for country-driven activities aimed at enhancing capabilities to mitigate the adverse effects of mariculture on biological diversity;

Conservation and sustainable use of deep seabed genetic resources beyond national jurisdiction: arising from the study of the relationship between the Convention on Biological Diversity and the United Nations Convention on the Law of the Sea

54. *Requests* the Executive Secretary, in consultation with Parties and other Governments and the International Seabed Authority, and in collaboration with international organizations, such as the United Nations Division for Ocean Affairs and the Law of the Sea, the United Nations Environment Programme, and the Intergovernmental Oceanographic Commission of the United Nations

Educational, Cultural and Scientific Organization, if appropriate, to compile information on the methods for the identification, assessment and monitoring of genetic resources of the seabed and ocean floor and subsoil thereof, in areas beyond the limits of national jurisdiction; compile and synthesize information on their status and trends including identification of threats to such genetic resources and the technical options for their protection; and report on the progress made to the SBSTTA

55. Welcomes the United Nations General Assembly's resolution 58/240 and *invites* the Parties to raise their concerns regarding the issue of conservation and sustainable use of genetic resources of the deep seabed beyond limits of national jurisdiction at the next meeting of the General Assembly and further *invites* the General Assembly to further coordinate work relating to conservation and sustainable use of genetic resources of the deep seabed beyond the limits of national jurisdiction.

56. *Invites* Parties and other States to identify activities and processes under their jurisdiction or control which may have significant adverse impact on deep seabed ecosystems and species beyond the limits of national jurisdiction, in order to address Article 3 of the Convention.

Conservation and sustainable use of biological diversity in marine areas beyond the limits of national jurisdiction

57. *Recalling* paragraph 32(a) and (c) of the Johannesburg Plan of Implementation from the World Summit on Sustainable Development, that calls on the international community to "maintain the productivity and biodiversity of important and vulnerable marine and coastal areas, including in areas within and beyond national jurisdiction";

58. *Notes* that United Nations General Assembly in its resolution 58/240 of 23 December 2003, paragraph 51, has reiterated "its call for urgent consideration of ways to integrate and improve, on a scientific basis, the management of risks to the marine biodiversity of seamounts, cold water coral reefs and certain other underwater features";

59. *Recalls* paragraph 52 of the above-mentioned UNGA Resolution that "invites the relevant global and regional bodies, in accordance with their mandate, to investigate urgently how to better address, on a scientific basis, including the application of precaution, the threats and risks to vulnerable and threatened marine ecosystems and biodiversity beyond national jurisdiction; how existing treaties and other relevant instruments can be

used in this process consistent with international law, in particular with the Convention, and with the principles of an integrated ecosystem-based approach to management, including the identification of marine ecosystem types that warrant priority attention and to explore a range of potential approaches and tools for the protection and management”;

60. *Concerned about* the serious threats to the biological diversity, *stresses* the need for rapid action to address these threats on the basis of the precautionary approach and the ecosystem approach, in marine areas beyond the limits of national jurisdiction, in particular areas with seamounts, hydrothermal vents, and cold-water corals, other vulnerable ecosystems and certain other underwater features, resulting from processes and activities in such areas;

61. *Calls upon* the United Nations General Assembly and other relevant international and regional organizations, within their mandate, according to their rules of procedure, to urgently take the necessary short-term, medium-term and long-term measures to eliminate/avoid destructive practices, consistent with international law, on scientific basis, including the application of precaution, for example, on a case by case basis, interim prohibition of destructive practices adversely impacting the marine biological diversity associated with the areas identified in paragraph 60 above.

62. *Recommends* Parties to also urgently take the necessary short-term, medium-term and long-term measures to respond to the loss or reduction of marine biological diversity associated with the areas identified in paragraph 60 above. 3

This draft decision on the review of the programme of work on marine and coastal biological diversity (Agenda item 18.2) was submitted by the Chair of Working Group I of the Seventh Meeting of the Conference of the Parties to the Convention on Biological Diversity on 20 February 2004 at Kuala Lumpur

New year sans joy

Despite the terrible tragedy, ironically enough, Malaysia saw some positive results from the tsunami disaster

The tsunami of 26 December 2004 caught Malaysians offguard. Malaysia was fortunate because it was shielded by Sumatra island in Indonesia, which bore the brunt of the tsunami. In Malaysia, the most affected were fishing villages. The impact on capture fisheries, especially on inshore fishing and aquaculture, was significant.

Seventy-four lives were lost to the tsunami, which left a trail of destruction, overturning motorcycles, moving concrete road dividers and cars, and damaging homes along the coast. Fishing boats went under waves measuring 2.5-3 m. Fishing boats were found stuck on tree tops and deep in nearby mangrove forests. The salty trail of the tsunami could be seen for almost 2 km inland.

The wave hit the shore at different times. A tremor was felt at 8.45 am for about one to two minutes. The first hit came after three hours (at 11 am) at Kuala Pulau Betong in southwest Penang. The first tide hit the popular picnic spot, Batu Ferringhi in the northeast around 12.30 pm, and a stronger second tidal wave came around 2.15 pm. Tanjung Tokong, another northeast town, was hit from 1.45 pm to 2 pm. The neighbouring Kedah State was hit at 1.15 pm.

Overall, the losses incurred by the four tsunami-hit States were around Rm55.7 mn (Rm1 = US\$ 0.263). A total of 5,997 fishermen were affected, and 2,387 traditional fishing craft and 271 boats were damaged. Boatowners and their crew recorded Rm30 mn worth of losses.

Aquaculture operators estimated their losses at Rm24 mn. A total of 103 jetties were damaged, costing about Rm1.69 mn. Around 5,000 people were evacuated to relief centres.

As immediate aid, the government gave out Rm1,000 for each person lost to the tsunami, Rm200 for the injured, and Rm200 for families to evacuate. From the Governor's Relief Fund, each schoolgoing child got Rm80. Later, as a first-stage payment, displaced families were given Rm500 each. In the second stage, Rm5,000 were given for houses completely destroyed, Rm2,000 for damaged houses, Rm1,000 for damaged small boats and Rm3,000 for damaged bigger boats. Assessments of the actual loss of each family were done at the third stage. The estimated losses per family range from Rm10,000 to Rm100,000. The government has set aside Rm50 mn for interest-free loans to be given through the Fishermen Development Board. The Education Department has given priority for scholarships for the affected children.

The deputy Finance Minister announced that the government was prepared to use Rm100 mn from the National Housing Project as an interest-free loan to rebuild tsunami-destroyed houses. It was also announced that the National Housing Company would build houses on flat land priced at Rm40,000 each, with a government subsidy of Rm13,333. Houses on stilts would cost Rm50,000, with a subsidy of Rm16,666. Repayments can be made at Rm100 for 22 years or Rm50 for 44 years.

Supplies dropped

After the tsunami, fish supplies dropped temporarily by 90 per cent and the prices of white pomfret, black pomfret and threadfin fish went up accordingly. A hundred tonnes of dead fish got washed ashore on the morning after the tsunami at Pasir Pandak beach in Teluk Bahang, a fishing village in the northeast. Dead fish were also seen in other areas along the coast.

Many sad stories were related during this time. The wave swept away everything on the day of the wedding of Mohamad Anuar Mohd Akhir and Juliana Mohd Nayan at Sungai Petani, Kedah. Zulkifli Md. Noor, 43, lost his five children to the tidal wave. 42-year-old Anna Mary's 20-day old baby was fortunately saved by a floating mattress. The fishermen who lost their homes and gear, in general, had no savings and had to depend on well-wishers.

In Malaysia the situation is now slowly returning to normal. The affected people are already returning to their homes, some of which have been newly built. The fishermen's boats are being repaired at designated workshops. Some of the fishermen have started going out to sea, while others are waiting for their boats and engines to be ready. It might take another month or two before everyone can go out to sea to continue their livelihood. Long queues are seen for boat repair; spare parts and nets are scarce because of increased demand, and most of the material is sourced from Thailand. Even as the fishermen are in the process of rebuilding their lives, they worry about the possibility of another tsunami and how to protect their lives and properties.

The Malaysian Prime Minister has voiced his support to save Malaysia's remaining mangroves, which acted as a buffer during the tsunami, and to replant mangroves wherever possible. Local newspapers widely reported how fishermen's lives were saved by mangroves. Mangrove forests act as protection against storms, soil erosion and floods. Mangroves are also important breeding, feeding and nursery grounds for many aquatic species. Most importantly, they serve as habitat for many flora and fauna, and the biodiversity they sustain is crucial for conservation.

The fishermen in Malaysia affected by the tsunami have appealed to the Penang Inshore Fishermen Welfare Association (PIFWA) to continue to plant mangroves in the coastal areas. PIFWA is a community-based non-profit organization that deals with issues of coastal environment and inshore fishing

communities, and especially of mangrove restoration. Since 1997, the fisherfolk have planted more than 32,000 mangrove saplings. The latest replanting project was implemented in November 2004.

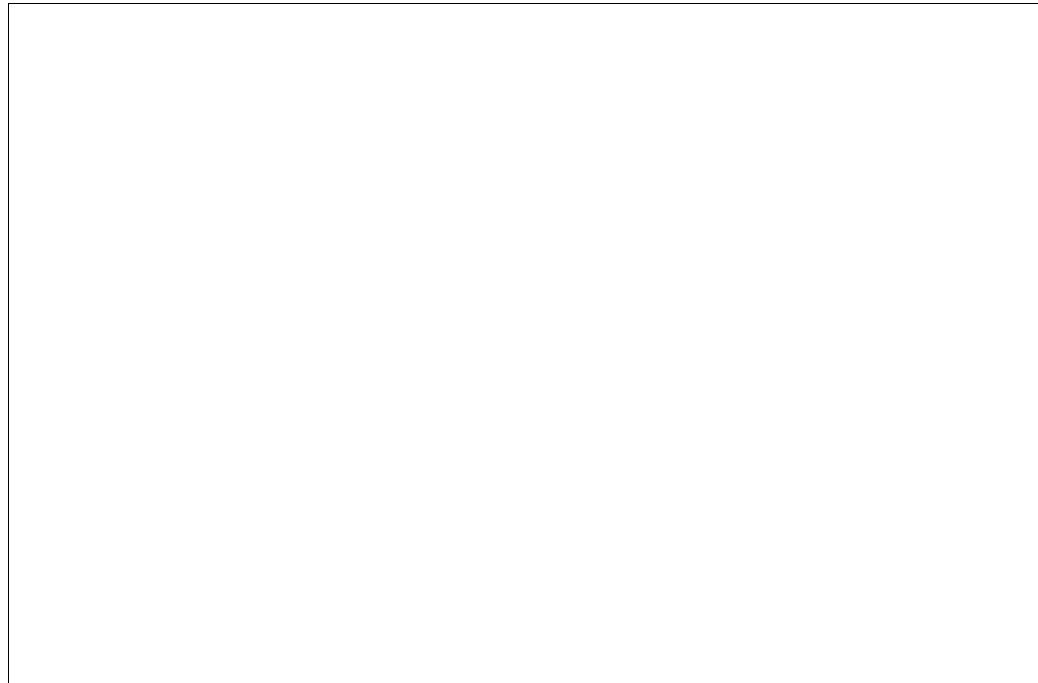
The growing demand for aquaculture development has caused more mangrove forests to be felled. Since 1966, 130 ha of mangroves areas have been cleared and now there are only 900 ha left in the State of Penang. If this trend is left unchecked, Penang will lose all its mangroves by the year 2025. Thus, there is an immediate need to rehabilitate and regenerate the mangrove forests in the State.

The damages to the physical structure of the coastal ecosystem in Penang is quite obvious. The tsunami onslaught physically removed flora and fauna, and caused siltation and sedimentation of river mouths, and erosion of river banks, making it difficult for the fishermen to go out to the sea. Sea water intrusion into the paddy fields also occurred. The increase in water runoff has, however, enriched the sea with nutrients from the land.

Despite the terrible and unprecedented tragedy caused by the tsunami, there were, ironically enough, some positive results of the disaster. Apart from the renewed importance to mangroves, the second positive outcome of the tsunami is the return of the traditional *bisik-bisik* (whisper) auction among the fishermen selling their catches. After 17 years, the crowds are trailing back to Kuala Muda to buy fish directly from fishermen. Both the fishermen and middlemen rely on the traditional *bisik-bisik* auction, which was last carried out in 1998. It is a "lock, stock and barrel" deal where the successful bidder walks away with all types of fish wrapped in a plastic sheet or in baskets. No weighing scale is used as everything is based on estimates. Fishermen do not fear being cheated as everyone involved knows the market value of the fish. Earlier, the fishermen were unhappy as they had to buy ice to keep the fish fresh until the bidding opened at 1 pm. Usually, the fishermen are back from sea by 10 am.

Middlemen

The authorities stopped the *bisik-bisik* auction 17 years ago to protect the fishermen's interests as middlemen were



monopolizing the market and controlling prices. However, the move did not go down well with the fishermen since open bidding was time-consuming and they had to wait a long time before disposing their catches. They also had to buy blocks of ice to keep the fish fresh.

The *bisik-bisik* system gave them the freedom to sell their catches to the highest bidder as soon as they reached the shore. (There is an unwritten rule preventing middlemen from approaching the boat; they have to wait until the fisherman calls for bidding.) Prized species like prawns, pomfrets and groupers are sold separately, especially during the festival period. Although the *bisik-bisik* system is practised in certain northern States of Malaysia, it is not widespread and is unlikely to catch on since the authorities do not favour it.

The third positive outcome of the tsunami could be said to be the revival of solidarity between the public and the fishermen. Participation from NGOs, voluntary organizations and corporate bodies need to be commended. The amount of food donated and clothings collected surpassed the needs of the moment. Monetary donations were handed over to the government in most cases, even though some organizations preferred to hand over money directly to the affected fishermen. Women's groups arranged to go to the fish landing sites to buy fish

directly to allay fears of contaminated fish. The fear of contaminated fish and water-borne diseases surfaced quickly and disappeared as quickly, as the Chinese New Year was fast approaching. Fish and prawns are the main items on the menus of Chinese communities during the traditional reunion dinner.

However, by and large, the Chinese New Year of the Rooster following the tsunami saw no festive joy, no cooking, no new clothes, no decorations or celebrations. Mandarin oranges were the only prayer offering, instead of the usual cookies, fruits, groundnuts, meat and sweets. 3

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Hope for the Future

A recent National Dialogue on Fisheries sought to shift the focus of Malaysia's forthcoming national fisheries policy to issues that concern inshore fishers

During 28-29 April 2009, Sahabat Alam Malaysia (SAM) or Friends of the Earth Malaysia, successfully organized in Penang, a National Dialogue on Fisheries. For the first time, all the relevant stakeholders in the country's fisheries—ranging from government agencies and enforcement bodies to non-governmental organizations (NGOs), academicians and fishermen's leaders—gathered under one roof to discuss common issues.

The participants were mainly drawn from fishermen's groups in Langkawi, Kuala Perlis, Kuala Kedah, Penang, Kuala Kurau and Johor. Also in attendance were representatives from government agencies like the Malaysian Marine Enforcement Agency (APMM), the Fisheries Department, the Maritime Institute of Malaysia (MIMA) and the Marine Department, as well as NGOs like Jaringan Kerja untuk Pesisir dan Laut (JARING), the Indonesian NGO network for marine and coastal resources; the International Collective in Support of Fishworkers (ICSF); Koalisi Rakyat untuk Keadilan Perikanan (KIARA), or the People's Coalition for Fisheries Justice, Indonesia; Malaysian Nature Society (MNS) and the World Wide Fund for Nature (WWF), along with academicians from local universities.

The main objective of the dialogue was to discuss aspects of Malaysian fisheries, identify problems and weaknesses in current policies and practices, and suggest ways for sustainable and effective management of the fisheries sector. The focus was also on advocating strong and sustainable fisheries policies that emphasize the

interdependency of ecosystems and communities.

In his opening remarks to the meeting, S.M. Mohamed Idris, the president of SAM, said the major issue in the country's fisheries is overexploitation, depletion and extinction of resources. Past policy focused on growth and increase of fish landings, while neglecting issues of resource sustainability, environment

The focus was also on advocating strong and sustainable fisheries policies that emphasize the interdependency of ecosystems and communities.

protection and socioeconomic upliftment of the fishing community. Since 2003, the country's annual total fish landings have been exceeding the maximum sustainable yield, which is 900,000 tonnes. As a result, several species of local fishes have disappeared. Moreover, marine life habitats such as mangroves, seagrass beds and coral reefs, which are sanctuaries for the reproduction and regeneration of marine life such as fish, prawns and crabs, have been destroyed. Much of this is due to the absence of protective measures in the national fisheries policy, Idris added.

Modern fisheries practices

He also stressed the impact of modern fisheries practices that often create conflicts between traditional fishermen and those operating trawlers. SAM is concerned about the extensive use of destructive gear that destroy the

This article has been prepared by Sahabat Alam Malaysia (sam_inquiry@yahoo.com), Penang, Malaysia

marine habitats and, consequently, the sources of affordable protein for fishing households. The current fisheries policy encourages deep-sea fishing without prior consideration of its risks, including its potential to decimate fish stocks. Aquaculture is being promoted as a quick-fix solution to maintain a high growth rate in fisheries production, despite its several drawbacks.

Another issue, Idris pointed out, is the management of coastal and ocean spaces, which includes the physical development of coastal areas, and mining, which is a major source of pollution. The absence of a coastal zone management law has only aggravated matters. These gaps in the management, governance and welfare of Malaysia's fishing communities require urgent remedial measures, he said.

The Dialogue was then officially launched by the honorable Dato' Dr. Baharom Jani, Deputy Secretary General, Ministry of Agriculture. He lauded SAM for holding such a meeting to discuss issues in fisheries with respect to the forthcoming national policy that calls for participation from all relevant parties. Moreover, the ministry is looking forward to enhancing the effectiveness of fisheries management. While acknowledging that fish landings have contributed significantly to the

economic growth of the country, Jani said the demand for fishery products continues to rise, leading to mounting expectations on aquaculture and deep-sea fishing to meet national targets and earn export revenues, as mandated in the country's Third National Agriculture Policy. The Agriculture Ministry is also building up the research and development capacity of government agencies to rehabilitate marine habitats and tackle overexploitation of marine resources.

The third session of the Dialogue featured presentations of papers by distinguished persons from diverse backgrounds. The representative from Malaysia's Fisheries Department addressed the key issues in the gaps in policy, and provided answers to questions on marine resource depletion and vessel licensing, among other issues. The Department is aware of the problems faced by the fisheries sector. However, a greater political will is needed for any significant change to happen, especially in terms of a comprehensive and integrated management mechanism. Enforcement agencies are often overburdened with a large enforcement jurisdiction as they have to tackle the smuggling of goods, trafficking of illegitimate immigrants, encroachment into fishing zones, and other illegal fishing activities. The absence of sufficient resources and facilities is another impediment. Being newly established, APMM, the enforcement agency, is devoid of adequate infrastructure.

Socioeconomic issues

The other important issue that was extensively discussed throughout the Dialogue was the impact of aquaculture and deep-sea fishing on the marine ecosystem and traditional fishermen. Welfare and socioeconomic issues, including those related to licensing and diesel subsidies, were hotly debated. As a national policy, aquaculture is being seen as an alternative that will offset the depletion of fisheries resources while sustaining high yields from the sector. Yet, the large and ever-increasing presence of aquaculture industries in Malaysia is causing massive destruction of

SAM



Norsalila Aris (SAM), Mohamad Shahrul Anuar (Moderator), Choo Poh Sze (WorldFish Centre) and Jamaluddin Mohamad (JARING) at the meeting

Memorandum

The following Memorandum was submitted to Malaysia's Minister of Agriculture and Agro-based Industry by the Malaysian Inshore Fishermen Action Network (JARING), the Penang Inshore Fishermen Welfare Association (PIFWA) and Sahabat Alam Malaysia (SAM) or Friends of the Earth Malaysia.

The fishery industry in Malaysia is a very fast-growing one. Unfortunately, apart from advancing the growth of the industry, many of the fisheries and fishermen's issues and problems have not been tackled seriously or effectively.

The situation has raised concerns among the inshore fishermen. Hence, the Malaysian Inshore Fishermen Action Network (JARING), the Penang Inshore Fishermen Welfare Association (PIFWA) and Sahabat Alam Malaysia (SAM) or Friends of the Earth Malaysia take this issue seriously and feel obliged to raise these concerns and bring them to the attention of the Minister of Agriculture in the hope that the issue could be well resolved collaboratively.

JARING, PIFWA and SAM have outlined a few related issues that need serious attention. Among the principal issues and problems are:

Malaysia's national fisheries policy is seen to be neglecting the development and welfare of the country's inshore fishermen as its focus is more on two sectors, namely, deep-sea fishing and aquaculture, which are believed to be able to ensure that the targets of annual national fish production are met.

The expansion of aquaculture industry through high-impact aquaculture industrial zones (ZIA HIP) not only involves high costs but their effects to the environment, society and economy, especially to mangrove forests and coastal ecosystems, are also negative, and tend to increase the income gaps among inshore fishermen, thus threatening their livelihoods.

Trawl nets, and *pukat boya* or *pukat apollo* (pair-trawl net) have major negative impacts on the seabed and marine environment. Their operations have also spelt disaster for inshore fishermen. Zones were introduced to prevent conflicts between the inshore fishermen and the deep-sea fishermen. The laws, however, have not been able to resolve the issue as the deep-sea fishermen continue to encroach into Zone A, which is reserved for inshore/traditional fishermen. JARING, PIFWA and

SAM demand a total ban on this type of fishing using trawl nets and *pukat boya* or *pukat apollo*.

Destructive fishing practices and gear, which affect the ocean ecosystem, continue to exist due to the absence of specific laws against them and also due to poor enforcement of existing laws. Amongst the nets proposed to be banned or whose use should be regulated are *jaring tagan kurau*, *pukat siput retak seribu* (carpet clam nets), *pukat kisa* (boat-seine), *pukat cekam* (barrier nets), and *pukat rawa sorong* (push-nets). These fishing gear destroy the small fish and shrimps as well as the seabed.

The freeing up of licences for vessels was something long awaited by the inshore fishermen. However, there should be proper management and transparency in the process. One issue of concern is that the Fisheries Department has approved and issued licences to non-traditional fishers or recreational fishers. Moreover, the traditional fishermen, who come from a background of poor education, find it difficult to cope with the tedious licensing procedures and conditions put up by the Fisheries Department. As a result, the fishermen have lost trust in the Fisheries Department. They would rather risk going out to the sea without licences, although fully aware of the peril of being detained by the authorities for doing so.

There is need to improve the integrity of the management and enforcement authorities, who now face widespread distrust among the fishermen and the public on account of corruption and inefficiency.

Improvement in fish marketing is needed, through initiatives and incentives to encourage direct selling by fishermen via local fishery co-operatives, transparently managed by the fishermen themselves. The Ministry of Agriculture should try to reduce the functioning of middlemen in fish marketing.

Immediate actions should be taken by the Ministry to arrest the depletion of fisheries resources through an appropriate conservation policy that will seek to regenerate areas like mangrove forests, seagrass beds and marine parks.

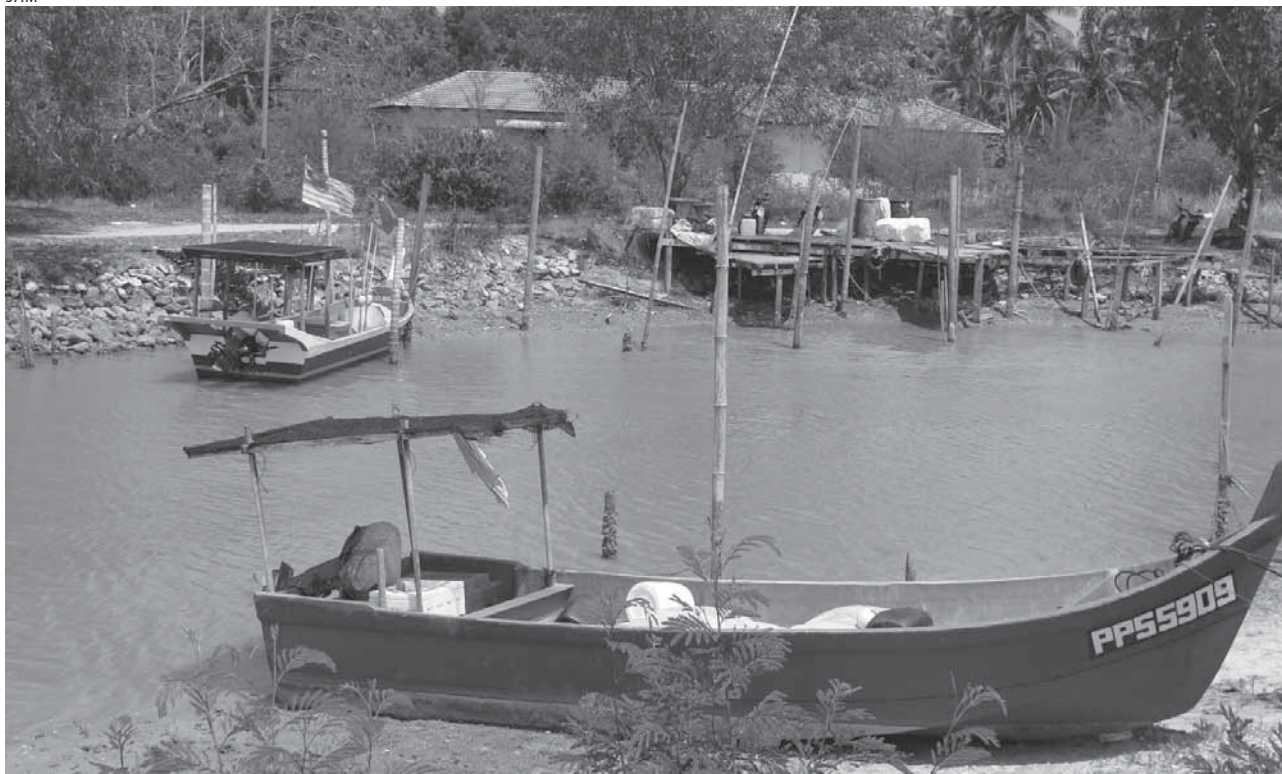
Specifically with regard to the cockle fishery, permits should be given to local fishers and the community to harvest the cockles rather than collecting toll fees from private individuals and companies to harvest the cockles.

mangroves and coastal habitats. Official statistics show that the mangrove area in peninsular Malaysia has declined by 65 per cent between 1973 and 2004 due to development activities, including aquaculture. Seagrass beds are now found in only 81 areas, totalling 295.5 ha. Aquaculture is being promoted mainly to generate export revenues and not for local consumption needs, even

though its negative impacts are on local ecosystems.

The rampant issue of licences to fishermen, both deep-sea and traditional, has led to overexploitation of resources, destruction of marine habitats and breeding grounds, and conflicts. However, the more important matter is the lack of transparency in the issuance of these licences, and mismanagement, since bona fide

SAM



A *sampan*, a traditional fishing boat in Malaysia, used by inshore fishermen operating in Zone A (up to five nautical miles). Malaysia's national fisheries policy is up for review

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fishermen claim that many of the licences go to non-fishers.

At the Dialogue there were also calls to ban trawling operations, which have historically been shown to repeatedly encroach into the inshore zone. Malaysia should follow the models of its neighbouring countries, namely, Indonesia and the Philippines, and some regions in Thailand, which have moved to ban such destructive fishing gear. There is a need for environment-friendly fishing technology to replace destructive gear. Priority should be given to traditional fishermen who are the ones who have long been practising environment-friendly methods of fishing.

The Dialogue was equally vociferous on the need to reconsider the development of the aquaculture industry through high-impact aquaculture industrial zones (ZIA HIP), and make proper assessment of the impacts on fishing communities, marine resources, mangroves and inshore ecosystems. Forest Department statistics reveal that between 1980 and 1995, almost 9,000 ha of mangrove forests have been cleared for shrimp ponds. Mangrove areas should no

longer be converted into zones for aquaculture activities, it was stressed.

Several participants said that the Fisheries Department should issue licences in a transparent manner through open and widespread dissemination of information, especially on the bona fides of applicants, thus ensuring that only genuine fishermen are entitled for permits and assistance.

The Dialogue ended with great hope for change and betterment of the lives and livelihoods of Malaysia's fishing communities. 3

For more



www.fao.org/fishery/countrysector/FI-CP_MY/en

Fishery and Aquaculture Country Profiles: Malaysia

www.foe-malaysia.org/
Sahabat Alam Malaysia

Caged in

The aquaculture industry in Malaysia is plagued by a range of problems that need to be addressed immediately

Aquaculture has a long history in Malaysia. Initially, aquaculture started as a traditional practice, integrated with agriculture and done on a small scale. Around 1970, the aquaculture industry began to grow in the country when semi-intensive shrimp farming was introduced in Johor State. Cage culture also began to be developed at that time, followed by cockle and mussel farming.

Between 1970 and 1980, the aquaculture industry collapsed due to land degradation in ponds as a result of increased acidity in the soil, which interferes with the immune system of organisms, and affects the rate of production of livestock and aquaculture resources.

Aquaculture activities began to increase rapidly in early 1990 with the introduction of high-capacity commercial aquaculture and supplements in fish and shrimp hatcheries set up by the government and private companies.

A widespread shrimp disease hit aquaculture farms in many countries in 1999 and led to the closure of farms and hatcheries in Malaysia. Poor management practices also contributed to the collapse of aquaculture farms.

At present, the industry is growing fast and is being promoted by the government, which views it as a good source of foreign exchange, since most of the output of intensive aquaculture is exported.

The Annual Fisheries Statistics of 2010 indicate that the total area of brackishwater aquaculture ponds is 7,722.82 ha, compared to 5,623.69 ha in 2006. An analysis of changes in mangrove areas in Manjung district

in the State of Perak, conducted by the Forest Research Institute of Malaysia (FRIM), showed a notable decline of 64 per cent in the extent and distribution of mangrove forests between 1989 and 2009. One of the causes of this decline is aquaculture development.

The Malaysian government has taken various initiatives to develop the aquaculture industry, such as the introduction of Aquaculture Industrial Zones (ZIAs), zoning of land and waters as areas for

The aquaculture industry has contributed to the destruction of mangrove forests and agriculture...

aquaculture development in the Ninth Malaysia Plan, a specific provision of RM119.12 mn (approx. US\$38 mn) for aquaculture development in the Tenth Malaysia Plan, and a Code of Good Aquaculture Practice (GAQP).

Mangrove destruction

However, Sahabat Alam Malaysia (SAM) believes the development of the aquaculture industry will have more negative effects on ecosystems and the economy. The aquaculture industry has contributed to the destruction of mangrove forests and agriculture; reduction of natural habitats; deterioration of coastal protected areas; catching of juvenile fish to feed livestock; pollution and deterioration of water quality; introduction of alien species; and deterioration of land quality.

*This article has been written by **Azrilizam Omar** (azrilo@gmail.com) of Sahabat Alam Malaysia (SAM)—Friends of the Earth Malaysia*

SAHABAT ALAM MALAYSIA (SAM)



Malaysia's aquaculture industry has destroyed coastal areas and adversely affected the ecosystem

development in the form of the GaqP, which is issued by the Department of Fisheries, Malaysia. Unfortunately, the code of practice is not mandatory.

Furthermore, environmental impact assessment (EIA) reports are only required to be provided if the aquaculture project involves a mangrove area of over 50 ha. Although aquaculture projects often involve reclamation of vast areas of paddy fields, they are exempt from EIA.

To worsen the situation, there is no legally binding requirement for social impact assessment (SIA) for aquaculture projects. The absence of laws to regulate aquaculture projects denies the community a mechanism to voice their concerns and views on aquaculture development.

There is also no law to control wastewater from aquaculture ponds. The provisions in the Environmental Quality Act of 1974 apply only to sewage and industrial waste.

The absence of policies and regulations has allowed aquaculture industries to exploit resources for their own interests and benefit.

B. Lack of co-ordination in implementing government policy

Planning for aquaculture development is not in line with several existing government policy initiatives. Any aquaculture development plan should be consistent with the planning schemes of local, State and national bodies.

Take for example the issue of Integration of Prawn Aquaculture Project (i-SHARP) under the High Impact Projects—Aquaculture Industrial Zones (HIP-ZIA). The Detailed Environmental Impact Assessment (DEIA) report for i-SHARP stated that the project is implemented in environmentally sensitive areas, where only projects for recreational purposes and that do not affect the ecosystem are permitted. The i-SHARP project is also inconsistent with the Setiu District Local Plan. However, the State Executive Council (MMKN) has gazetted the area for agricultural use, with priority for shrimp farming.

The development of aquaculture industries in coastal areas has indirectly affected the quality of life of coastal communities, especially of fishermen. SAM believes the preservation and conservation of natural coastal areas should be a priority. The Indian Ocean tsunami of 26 December 2004 should be a lesson on the importance of mangrove forests in the preservation of coastal areas.

The Malaysian government believes that the development of aquaculture will help meet the country's requirement for protein, which cannot be met by marine fishery resources alone. SAM, however, feels that these initiatives are only temporary and not sustainable. The government should focus on efforts to conserve natural fisheries resources and should not encourage aquaculture as a solution to the depletion of fishery resource.

SAM believes the following are some of the deficiencies and challenges facing Malaysian aquaculture:

A. Absence of comprehensive policy, legislation and enforcement in aquaculture areas

Malaysia does not have an act or special law to regulate aquaculture comprehensively. There are only guidelines for aquaculture

C. Impact of the Aquaculture Industrial Zone (ZIA) on the ecosystem and local communities

The ZIA, one of the High Impact Projects (HIPs) under the Ministry of Agriculture and Agro-based Industry (MOA), has several negative impacts on the ecosystem and local communities since the projects are designed on a large-scale commercial basis.

Some areas of the proposed ZIA are mangrove forests and marine or coastal waters. Large-scale aquaculture projects will contribute to environmental degradation and the destruction of ecosystems and the livelihoods of fishermen. The privatization of this aquaculture project will only benefit corporate interests and private profits.

D. Reclamation of mangrove areas for aquaculture projects

Aquaculture activities destroy mangrove forests, many of which are converted into shrimp farms. According to Forestry Department statistics, almost 9,000 ha of mangrove forests have been destroyed for aquaculture.

In coastal areas, mangrove forests act as a buffer zone against storms, erosion and tsunamis. They are also breeding grounds for marine life. About 75 per cent of commercial fish species are bred in mangrove areas. Each ha of mangrove forest destroyed is estimated to result in an annual loss of 480 kg of marine products.

E. Trash fish as food in aquaculture

Trash fish is mainly used in the aquaculture industry as food. About 90 per cent of the aquaculture industry uses trash fish as a source of food. However, the use of trash fish is not efficient, as shown in the food conversion ratio for major aquaculture species as 8 – 15:1, depending on the quality of trash fish. This implies that a total of 8 to 15 kg of trash fish is required to produce only one kg of aquacultured fish.

The Annual Fisheries Statistics for 2010 indicate that the total landings of trash fish that year were 307,439 tonnes or 21.52 per cent of the total marine fish landings (1,428,881 tonnes). Trash fish also accounted for

the second-largest amount of fish landings by trawlers in 2010, totalling 718,168 tonnes or 35.37 per cent. The high demand for trash fish for the aquaculture industry will encourage the use of trawl nets, which will, in turn, destroy the marine ecosystem and deplete fish stocks. Evidently, the use of trash fish for the aquaculture industry should be banned to ensure the survival of marine species.

F. Promotion of aquaculture in government policies

The government has encouraged the expansion of the aquaculture industry in the Ninth Malaysia Plan and the National Fisheries Policy/ National Agriculture Policy. It has provided various incentives, including financing the cost of basic infrastructure, and supplying planning

About 90 per cent of the aquaculture industry uses trash fish as a source of food.

and technical support to attract more entrepreneurs to invest in aquaculture industries. As a result, more and more areas will be converted into aquaculture farms, leading to the destruction of natural resources.

In view of these considerations, SAM offers the following recommendations:

- i. Policy, Legislation and Enforcement
 - a. Enact special laws for the aquaculture industry;
 - b. Make the GAqP compulsory;
 - c. Enforce EIA and SIA for every aquaculture project, regardless of size;
 - d. Review the viability of aquaculture activities in mangrove swamps and coastal and agricultural areas;
 - e. Strengthen the enforcement and protection of coastal mangroves in the National Physical Plan, the State Structure Plan and the Local Plan;
 - f. Gazette mangrove areas as protected areas, and enforce the mangrove buffer zone boundaries to prevent encroachment;

SAHABAT ALAM MALAYSIA (SAM)



The shrimp aquaculture project in Sanglang, Johor, Malaysia. Since 1970, the aquaculture industry has grown due to the introduction of semi-intensive shrimp farming

g. Create legislation to control wastewater discharge and precipitation from aquaculture ponds;

h. Ban semi-intensive and intensive aquaculture as well as extensive aquaculture projects involving large areas;

i. Ban the export of marine products unless there is a surplus of production;

j. Promote traditional polyculture aquaculture projects;

k. Tighten enforcement against illegal aquaculture projects;

2. Co-ordination of government policies related to aquaculture areas

Aquaculture development plans should be consistent with policies at the national, state and local levels. Any company or individual who wishes to carry out aquaculture projects should approach the Department of Town and Country Planning (DTCP) or local authorities to ensure that there is no conflict in use of land, as stipulated in the existing National Physical Plan, Structure Plan and Local Plan.

3. Review the ZIA project

Review the role of HIP-ZIA in contributing to the enhancement of the country's fishery resources. Opening up new areas for ZIA must be stopped and existing areas restored once the project has ended.

4. Stop clearing mangrove forests area for aquaculture projects

Aquaculture projects should be banned in mangrove forests and other environmentally sensitive natural habitats. Abandoned mines can be used as an alternative.


5. Stop use of trash fish

The use of trash fish as food in the aquaculture industry should be stopped to ensure the survival of marine species. Uncontrolled capture of trash fish, mostly smaller species that have a commercial value, affects fisheries stocks.

6. Encourage fisheries resource conservation

Enhancing and restoring fisheries resources should be a priority focus. The government should consider protecting and conserving marine and coastal ecosystems, including mangrove swamps, which are natural habitats for marine life. Encouraging the development of the aquaculture industry will only lead to the destruction of ecosystems.

The government should create policies that promote coastal fisheries, which contribute substantially to fish production, compared to deep-sea fisheries and aquaculture. There should be a ban on the use of destructive fishing gears.

SAM hopes that a special law will be formulated to regulate the aquaculture industry in Malaysia and protect natural ecosystems to ensure that the country's fishery resources remain available for future generations. 

For more

apps.dof.gov.my/mahazia/display.html

Information for High Impact Projects (HIP) in Aquaculture Industrial Zones in Malaysia

www.dof.gov.my/55

Department of Fisheries, Malaysia

ms.wikipedia.org/wiki/Sahabat_Alam_Malaysia

Sahabat Alam Malaysia (SAM)

About to Disappear

A field trip to Teluk Bahang, a fishing village on the northwestern tip of Penang in Malaysia, shed light on the lives of small-scale fishers

Malaysian fisherwoman Ani Zubaida did not mince words when she spoke about the adverse impact of trawlers on her life: “Trawlers are stealing our fish. They should not be allowed to fish in the territory of small-scale fishers. Else, we will be forced to quit this job.”

What provoked Zubaida was the abysmally low catch she got in February this year. The average daily income of the 52-year-old from Teluk Bahang, a fishing village in Malaysia’s Penang state, fell from Malaysian Ringgit (RM) 200 (about US\$50) to RM 50 (less than US\$15).

The dwindling catch is a result of indiscriminate trawling; Teluk Bahang has a large concentration of small-scale fisherpeople, who have been seriously concerned about the trawlers for a while now. In February, they interacted with journalists, members of non-governmental organizations (NGOs), policymakers and researchers from six Asian countries—they had gathered in Penang for a week-long workshop on ‘small-scale fisheries, food security and wholesome nutrition’, organized by the WorldFish in association with the Food and Agriculture Organization of the United Nations (FAO).

For the 400-odd small-scale fisherpeople in Teluk Bahang, trawlers are the biggest adversaries because of their unscientific fishing practices. “Trawlers are not supposed to fish between 14.8 km and 28 km from the shore. But they often violate the practice, denying us our livelihood,” complained Zubaida.

Zubaida, one of the two fisherwomen in Teluk Bahang, started fishing at the age of 20 after her marriage with Rahim. “I turned to fishing to support my family,” she said. “Now, my husband does not have

to employ a helper. It helps us save money,” she said.

Of late, the reduction in catch has cut a hole in the family’s revenue. Zubaida and Rahim said they may be forced to quit fishing if the government fails to take action. “What is the point in continuing in this job without getting decent returns for your effort?” she asked. “Only the government can help us now,” she said.

Persatuan Pendidikandan Kebajikan Jaringan Nelayan Pantai Malaysia (JARING), the Malaysian Inshore Fishers’ Association for Education and Welfare, estimates that trawling has caused a 50 per cent drop in fishers’ income in Malaysia.

Besides, said the organization’s chairman, Jamaluddin Mohamad, the trawlers are causing large-scale environmental damage. “The trawl gear traps juvenile fish during their sweeping action. In the process, they destroy mangroves and the marine ecosystem,” he said.

“Juvenile fish should be left to grow in the sea. Trawlers have to catch 92 juvenile fish to make one kg of fish. If the fish is left to grow, each fish may attain an average weight of 12 kg. We are losing huge quantity of marine wealth because of trawlers,” he said. Jamaluddin added that the government should allow trawl gear only in ‘Zone C’ fishing area that lies beyond 28 km from the coast.

Abundant commodity

Fish was an abundant commodity in Teluk Bahang until a few years ago. It was a time when small-scale fishers never ventured too far to get a good catch.

Sixty-five-year-old Nurdin Hussein, one of the oldest fishermen in the village, said his village is experiencing

This report is by T A Ameerudheen (ameerudheen@scroll.in), a senior writer with Scroll.in, who participated in the Multi-Stakeholder Information and Communication workshop on “small-scale fisheries, food security and wholesome nutrition”, organized by WorldFish in association with FAO in Penang, Malaysia, Masood Siddique, (masood.cnrs@gmail.com) Natural Resource and Fisheries Expert, Center for Natural Resource Studies (CNRS), Bangladesh and Azrilnizam Omar (azril.jaring@gmail.com) of Persatuan Pendidikandan Kebajikan Jaringan Nelayan Pantai (JARING), Malaysia.

T A AMEERUDHEEN



A small-scale fisherman in Teluk Bahang on the island of Penang in Malaysia. The dwindling catch – a result of indiscriminate fishing by the trawl boats – has been a major cause of concern for the small-scale fishers in Teluk Bahang

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the adverse effects of trawling now. “The fish came to us when I started fishing 35 years ago. We had to put in little effort then,” reminisced Hussein. “But we have to search for fish now. Fish wealth has dwindled because of trawlers.” The fishers said indiscriminate development activities too have destroyed marine life.

Thirty-six-year-old fisherman Faisal said jellyfish population is on the rise in Teluk Bahang. And he believes it is linked to the extinction of sea turtles. “Turtles eat jellyfish. The number of turtles decreased drastically due to nonavailability of nesting space and this caused an increase in the jellyfish population,” he said.

The Resonance of MuSIC

The capture fisheries of Bangladesh comprise nearly 70,000 fishing boats, offering livelihood to about 3.3 million artisanal fishers. They catch nearly 1.8 million tonnes of fish, which is almost 80 per cent of the total capture fisheries production of the country. Despite such a large contribution, the fishers and their livelihoods have been given scant attention by the authorities concerned, including the national policymakers.

The Multi-Stakeholder Information and Communication (MuSIC) Workshop, jointly organized by the WorldFish Center and FAO in late February 2019 in Penang, Malaysia, gave an opportunity for some Bangladeshi government organisations (GOs), NGOs and communication personnel to share their understanding and views with some of the regional country representatives, including international agency personnel and experts.

The workshop, designed with a high degree of professionalism, could establish a common platform for the respective stakeholders who are expected to act as the forerunners for the betterment of small-scale fisheries in their own country. To this end, WorldFish Bangladesh has organised some formal and informal consultation meetings/discussion sessions on small-scale fisheries, where the participants shared their experiences and took the learning back to their respective countries. Meanwhile, WorldFish Bangladesh has taken the initiative to design a future project that will address issues related to the small-scale fisheries of the country. In this regard, the MuSIC participants are trying to contribute in designing the project with the knowledge and learning.

The MuSIC platform requires further strengthening with the facilitation of the organisers. WorldFish and FAO can organise similar refresher workshops in regional countries with GO/NGO support. 3

– by Masood Siddique,
Natural Resource and Fisheries Expert, CNRS, Bangladesh

Man-made Islands and the Future of Penang's SSF Communities

The Multi-Stakeholder Information and Communication (MuSIC) Workshop was held in Penang, Malaysia, on February 18-23, 2019, with the objective of sharing and learning more about small-scale fisheries (SSF). It was co-hosted by WorldFish and FAO.

The MuSIC Workshop involved journalists, NGO activists and fishery researchers from six countries, namely, Bangladesh, Cambodia, India, Myanmar, Malaysia and the Philippines.

There are 4,817 licensed fishermen in Penang island and most of them are small-scale fishers. Currently, the main challenge for the SSF community in Penang, apart from decreasing fish catch, is coastal development and reclamation. Starting a few years ago, a few fishing grounds in coastal areas have been reclaimed by the state government for housing, most of it for luxury housing projects that locals cannot afford to participate in.

Affected by these reclamation activities, the SSF community in Penang began losing their fishing grounds. Pollution from reclamation forced fishers to travel far away to fish, increasing their cost of operation. As the amount of catch shrinks, they find it difficult to continue as fishermen. Slowly, Penang island is losing its SSF community.

The Penang state government plans to reclaim 4,500 acres south of Penang island. The proposed Penang South Reclamation (PSR) Project involves the creation of three islands stretching from the south of the Penang International Airport. The main rationale for the PSR is to create land banks to finance the Penang Transport Master Plan (PTMP), another controversial project.

PSR will have a tremendous impact on fisheries. In all, 4,817 fishermen in Penang will be directly affected by the project. Fishing activities are conducted extensively within the proposed PSR area as well as in the surrounding sea. The proposed reclamation project will lead to the total loss of mudflats, hitting the marine food chain and the fishing industry. Loss of coastal habitat due to this proposed project is a major environmental blow.

The mining of marine sand and aggregates used for reclamation and development projects is also increasing, affecting the seabed flora and fauna. Millions of tonnes of sand must be mined, and rocks quarried to create new land.

Dredging and extraction of aggregates from the benthic (sea bottom) zone destroys organisms, habitats and ecosystems—the impact is deep on the composition of biodiversity. This leads to a net decline in faunal biomass and abundance or a shift in species composition, research shows.

The Environmental Impact Assessment report of the PSR states that the wholesale value of fish landed at the study area was an estimated RM42.09 million, which amounted to 12.4 per cent of the total wholesale value of fish landings in Penang Island in 2015. Adding on to the downstream activities, this multimillion-ringgit fisheries sector, on which thousands depend, is being traded off for development. Fish are being wiped out, as will the fishermen as they lose their fishing grounds. Is that the intention of the state government?

Hopefully, the MuSIC workshop will be a starting point for the SSF community in Penang to join together and fight for their future. ♣

— by **Azrilnizam Omar** of Persatuan Pendidikan dan Kebajikan Jaringan Nelayan Pantai Malaysia (JARING), Malaysia

Little wonder, then, that the small-scale fishery has become a less attractive profession for youngsters. Moreover, fisher parents do not encourage their wards to pursue fishing. “I don’t want my children to pursue fishing. Let them get a good government job,” said Rahim.

Statistics reveal that the number of fisherpeople has been dwindling in Teluk Bahang. Of the 7,000 residents, only 10 per cent pursue fishing full time now. “There is apathy among youngsters for fishing,” said Shadier Iman, a State Fisheries Department official.

However, Jamaluddin said the lives of small-scale fisherpeople have improved after they started lobbying. “Our elders didn’t demand anything from the government,” he said. “But things began to change starting from 2008. We began to raise our voice, and the government began to implement welfare schemes for us.”

The small-scale fishers now enjoys fuel subsidy, a monthly allowance of RM 200 and personal accident insurance of RM 50,000.

Trawl ban

That is why Jamaluddin believes that the government will definitely ban trawlers entering into the territory of small-scale fishers. “Small-scale fishers contribute heavily to the gross domestic product of Malaysia. The government cannot ignore our demands. So I hope the government will enforce a ban on trawl fishing by 2020,” he said. ♣

For more

<https://www.worldfishcenter.org/events/worldfish-hq-events-multi-stakeholder-information-and-communication-music-workshop>

WorldFish HQ events: Multi-Stakeholder Information and Communication (MuSIC) Workshop

<https://dc.icsf.net/en/component/dnews/article/detail/13301-World-News--In-.html>

World News: In Focus: Small-scale fisheries in Asia