Lessons learned notes

Procuring boats for community use

Many communities are located in isolated bays, lakes, coasts and river deltas. Without boats, life and livelihoods would be very difficult. Boats are used for fishing as well as transport of people and produce. They are also used for law enforcement and monitoring and control of natural resources such as fisheries and forests.

The Regional Fisheries Livelihoods Programme for South and Southeast Asia (RFLP) funded by Spain and implemented by the Food and Agriculture Organization of the United Nations has provided boats to communities mainly for patrolling purposes. This paper highlights some of the recommendations, risks and lessons that RFLP has learned through this process.

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Assess needs and plan carefully

Boats are expensive to buy, maintain and operate. It is therefore vital that a thorough needs assessment takes place in order to justify any decision to purchase boats.

Analyse the present situation relating to the problem at hand.

- Identify what is the root cause of the problem (illegal fishing, isolation, outside normal navigation routes, vessels destroyed by disaster, need to fish further offshore, depleted resources etc.).
- How will the acquisition of a boat solve or improve the situation? (Reduce illegal fishing, re-establish livelihoods, better access to market, increased safety, better community organization etc.).
- Is the boat replacing an existing one? If yes, why is this necessary? (Why was the existing boat not maintained? Who was responsible for its operation and maintenance? Did the boat fulfill its role? Etc.).

Also consider:

- Current or envisaged resource or community management frameworks (e.g. does the boat form part of a larger fishery management plan?).
- Sources of budget and income of communities/agencies to pay for fuel, maintenance, etc.
- Capacity of communities/agencies to manage and operate a boat.
- Past experiences of other projects or government initiatives to provide boats.
Boats must be fit for purpose

Boats need to be suited to the job required e.g. patrolling, transport of goods or people, fishing etc. The conditions in which they will be used must also be analyzed. A poor design or the wrong use can result in injury or deaths so it is vital that experts are consulted before any procurement takes place.

The following considerations are important when defining a design.

- The required range and distances to travel, as well as the fuel capacity necessary for foreseen journeys must be determined.

- The minimum depth of water in the operating area must be obtained. Water levels in lagoons or rivers may fall considerably during dry seasons making some boats unusable. This determines the draft of the boat. Maximum tide heights will determine the clearance under bridges.

- If there are no jetties or piers close by, then the boat will need to be pulled up on the beach. The beach substrate and the normal wave height and whether there are breaking waves needs to be analyzed as this will determine the design and shape of the vessel and the engine installations. It may be necessary to have a trailer or winch to lift or pull the boat out of the water, especially if the area of operation is frequented by storms and cyclones.

- It will be necessary to determine the wind and wave height where the vessel will operate.

- The carrying capacity of the vessel needs to be determined. The number of people, quantity and type of cargo must be also analyzed. Fish hold space, gear and equipment storage, seats, berths, the need for a galley etc., must be determined and
Lessons learned notes

**Fishing vessel design**

Fishing is the world’s most dangerous occupation and special emphasis needs to be placed upon the design and safety of fishing vessels. Voluntary guidelines exist for the design, construction and equipment of small fishing vessels as well as safety recommendations for decked fishing vessels of less than 12 meters in length and undecked fishing vessels.

For more information see

www.fao.org/cofi/33133-0a043ce5794ca94a0773a3f605ee81e4a.pdf

and www.sigling.is/pages/1266

- The speed the boat will need to be able to reach or operate at needs to be determined. Patrol boats for example will need to be fast enough to catch illegal fishers.

- Engines must be suitable to the boat size and design as well as its function.

- Locally available competent mechanics and availability of spare parts to repair both boats and engines are vital.

- The quality and type of fuel locally available is important for the long-term longevity of the engine. Fuels with high sulphur content require more frequent oil changes and higher maintenance.

- National regulations regarding the design, safety, construction and on-board safety equipment required may exist and should be adhered to. Where no national standards are in place then internationally accepted standards should be followed.

- Donors may be able to afford high-specification boats but communities almost certainly won’t. Do not expect communities (or government agencies etc) to replicate the use of any vessel that is unaffordable to them.

- Get expert advice. Just because it’s always been done that way (design, engines, materials etc.) doesn’t mean it is good practice. While traditional designs have evolved over decades, new fishing gears and methods can overly stress traditional designs and fishing farther offshore as stocks decline increases risks.
Consider management and maintenance

Once the need and design of the boats has been identified, further consideration is required on how they will be managed and maintained. All stakeholders including fisheries agencies, local authorities and communities need to be consulted in depth.

Ownership of any boat needs to be decided. Ideally it should belong to an officially recognized entity such as a Fisheries Society or Fisheries Association and their ownership and responsibilities formalized.

Prepare a management plan for the boat. This does not have to be a lengthy or complex document but should clearly state the roles and responsibilities of the community, local authorities and the project, etc., with regards to boat management and continued funding of routine operational costs. Donors or agencies should not handover any boat unless a management plan has been agreed and signed. A management plan should specify and/or consider areas such as:

- Who is responsible for the day-to-day management of the boat?
- Who is allowed to use the boat?
- How often will the boat will be used (e.g. patrolling once a week) and how much fuel it will need?
- What the boat can be used for? (e.g. if not out patrolling can it be used for fishing or eco-tourism purposes.)
- How often the boat will need maintenance and where it will take place?
- The estimated budget for fuel and maintenance and how this will be funded.
- Where the boat will be routinely moored?

Fibre glass boats pose maintenance problems

A safety at sea assessment carried out by RFLP in Timor-Leste highlighted safety issues relating to certain fibre glass boat models provided to communities by government. The boats were easily damaged as they needed to be dragged out of the sea onto the beach every time they were used. In addition, few fishers could either afford, or had the skills to perform fibre glass repairs. As a result, these boats were often quickly damaged and were not used. The report can be downloaded at www.fao.org/docrep/field/009/an038e/an038e.pdf
Donors or agencies may need to approve any design before procurement can commence to ensure that it is safe, as well as suitable for the proposed use and conditions (e.g. for any FAO project the FAO Fisheries Department must give technical clearance).

Boats are expensive and can push costs above ceilings that trigger public or international tender mechanisms. This may lead to processes being slower as well as the involvement of larger companies in bidding. As a result, smaller, local boat builders may be unable to compete.

If procurement rules allow, invite potential bidders to attend an information session to ensure that they understand the technical specifications as well as other requirements.

Visit boat yards along with an expert to get an idea of the standards of potential builders.

Bidding documents should be available in local languages.

Plan for the possibility that the process will be slow and do not raise unrealistic expectations of when boats may be delivered to avoid dissatisfaction amongst communities or local government.

It may be best to hire a professional boat builder to provide routine inspections during the construction process to ensure that the boat is being built to the specifications as per the contract and to authorize any design changes that may be necessary.
Lessons learned notes

Think how operational costs will be met

Operation of boats is expensive with fuel and maintenance costs likely to be a major obstacle for fisheries authorities and communities alike.

- Consider how fuel/maintenance, etc. will be paid for from the very start of the planning process and not once boats have been procured. A cost and benefit analysis should be undertaken.
- Reliance on donor funding for fuel, etc. is not advisable and is unsustainable. A sustainable model for funding needs to be developed.
- Costs can possibly be supported by fines imposed on illegal fishers, or the proceeds from alternative livelihoods activities in communities.
- If agreed, boats can be used for other purposes to generate income e.g. eco-tourism. However this should be considered from the start as changing the planned use of boats for certain activities may not be safe.

Safer design, but no takers in Cambodia

In Cambodia, RFLP worked with boat builders to introduce a more stable fishing boat design and improve local boat building skills. Hands-on training saw participants construct nine 12-meter timber boats to a new and safer more stable design developed by an FAO naval architect. These boats were then provided to communities to undertake monitoring, control and surveillance (MCS) activities as part of resource co-management plans, the development of which was also supported by RFLP. However, despite being safer, these heavier boats were hard to navigate in shallow waters. They were also more expensive to buy than traditional boats; as a result fishers were not willing to pay for boats built to the new design.
Lessons learned notes

Make safety top priority

The safety of the boat and those operating in it (as well as other water users) is vital and must be prioritized.

- Boat design must suit the conditions and planned usage. At the very least the boat should meet national boat building design and safety standards, if these exist.
- The boat design and build quality should be approved by an expert before construction or purchase.
- Basic safety equipment (lights, life-jackets, radio etc.) in line with national standards or international best practice should be provided.
- Training should be provided for operators on basic navigation, operating procedures, maintenance, etc.
- The captain and or operator should have an appropriate national navigation certificate for the size and operation of the vessel.

Viet Nam boat too big

In Viet Nam, two boats for community patrolling purposes were provided by RFLP to commune Fisheries Associations in Thua Thien Hue province. However, in one of the communes falling water levels during the dry season meant that the 12-meter wooden boat could not be used as its draft was too deep for the shallow lagoon water. Efforts were instead made to identify another commune and to swap the RFLP provided vessel with one which could be put to better use. The key lesson learned was the need for greater consultation with communities on water depths at different times of the year.
Lessons learned notes

Keep expectations realistic

Ensure that there are realistic expectations of what boats will or will not be able to do before they are delivered in order to avoid community dissatisfaction.

- Good communication and relationships with communities will help avoid misunderstandings and keep expectations realistic.
- The end users and eventual owners must be part of the design planning and involved from start to finish.

In Sri Lanka RFLP provided an ambulance boat to service fisher communities in the Kalpitiya Islands, some 40 km from the mainland. Initial requests had been for a large, sophisticated vessel. However after visiting the area and discussing the needs and requirements with coastal communities, as well as assessing the operational skills of the beneficiaries, berthing facilities, operational costs and the frequency of utilization, a smaller 19 foot (approx 6 m) vessel was procured.

Sometime after the ambulance boat was provided to communities it needed to be taken back by the authorities, following disputes amongst the three Fisheries Societies which were responsible for it. Further discussions with the intended recipients took place and a written agreement was drawn up specifying exactly how the boat should be used. Increased monitoring will also take place.
Link boats to livelihoods

The provision of boats can be linked to training on the construction of improved vessel designs. This can help enhance safety at sea, while better boat building and repair skills can also help support livelihoods.

- Training in building and repairing boats to a higher standard can help introduce safer construction techniques.

- The operation of maintenance or repair facilities can be an important source of income for either communities or individuals. However, the capacity of communities to manage such facilities needs to be strengthened, through continued support. Projects should ensure that there is sufficient time for these capacity strengthening activities as this type of activity is time consuming.

Getting engines running in Timor-Leste

In Timor-Leste the government has supported small-scale fishers by providing outboard engines. However few fishers had the skills to maintain the engines or could afford to have them fixed. As a result, many were unusable. In response, RFLP provided outboard engine maintenance training to fishers around the country. This has helped enhance fisher safety (less likelihood of engine failure at sea) and their ability to fish. In addition some fishers have built on these new skills and now offer engine repair services to others, as an alternative livelihood option.
Monitor boat use carefully

It is important that monitoring of donated boat usage takes place by donors, government agencies and especially the communities themselves. This will provide data regarding the implementation and effectiveness of any fisheries resources management plan. It can also provide benchmarks against which the operation of other boats can be monitored or assessed.

- Ensure records are kept of: Patrols made, number of arrests, income from fines and gear confiscation, fuel use, maintenance regularity and cost.
- Information on patrols, arrests etc. should be shared with the community at large and/or through the media to highlight the consequences of breaking the law.
- Consider taking the boat back from a community or agency, etc., if records show it is not being used as agreed.
- When building boats keep careful records of costs (materials, working hours etc) so that benefits can be accurately assessed.

Breaking the cycle of dependency

A safety at sea assessment in the Timor-Leste small-scale fisheries sector carried out by RFLP revealed that the policy of various institutions and NGOs to donate boats (as well as nets and engines) to coastal families had increased their dependency on external aid. In the context of Timor-Leste, the report strongly discourages the provision of ‘free’ boats and instead recommends that efforts are made to engage fishers to take a more responsible role in the sustainable development of the sector. The report can be downloaded at www.fao.org/docrep/field/009/an038e/an038e.pdf
Lessons learned notes

Good beneficiary selection is vital

Successful use of boats largely depends upon the ability of the recipients to manage and operate them effectively.

- Communities with strong leadership and good cohesion are more likely to be able to manage, fund and maintain the use of a boat.
- Boats should not be provided to communities with weak leadership or where there is conflict between members.
- Beneficiaries should be selected in a transparent manner.
- People with no experience with boats should not be selected as beneficiaries.

Cambodian communities manage maintenance

The wooden 12-meter patrol boats provided by RFLP in Cambodia ideally need lifting out of the water every six months for regular maintenance. For certain communities this posed a problem as they were unable to afford the cost and turned to the government and donors for further help. Other communities however, usually those with strong cohesion and good leadership, were able to generate funds from livelihoods activities or from fines levied on illegal fishers. These were used to fund boat maintenance as well as for patrol costs.
The Regional Fisheries Livelihoods Programme for South and Southeast Asia (RFLP) sets out to strengthen capacity among participating small-scale fishing communities and their supporting institutions in Cambodia, Indonesia, the Philippines, Sri Lanka, Timor-Leste and Viet Nam. By doing so RFLP seeks to improve the livelihoods of fishers and their families while fostering more sustainable fisheries resources management practices.

The four-year (2009–13) RFLP is funded by the Kingdom of Spain and implemented by the Food and Agriculture Organization of the United Nations (FAO) working in close collaboration with national authorities in participating countries.

For more information about RFLP, see www.rflp.org or contact steve.needham@fao.org (Information Officer)