FAD Deployment

For Improvement of Efficiency and Economics

Project of Promotion of Grace of the Sea in the Coastal Villages, Phase 2, in the Republic of Vanuatu

Vanuatu Fisheries Department
Japan International Cooperation Agency
IC Net Limited

Contents

Selection of deployment position (1)

<From fishers' experience and from chart>

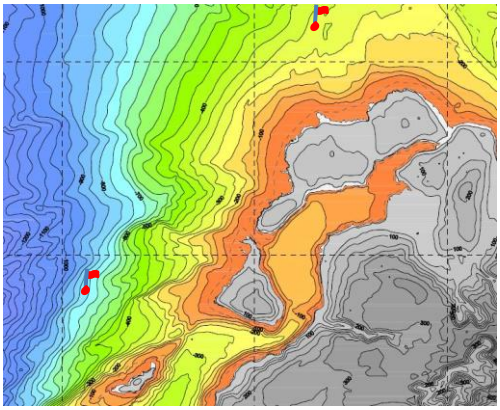
1. Historical fishing ground, such as fish migrating route (area), fish aggregating area
2. Avoidance of ship lane area
3. Avoidance of steep slope area
4. Need to know depth of water and distance from shore

In order to minimize initial cost and operation cost for appropriate FAD design and construction

Need to check available chart

*Attention: Depth of deep water in chart is not precise like as shallow water, however it is important to know approximate depth at least for appropriate FAD design and construction

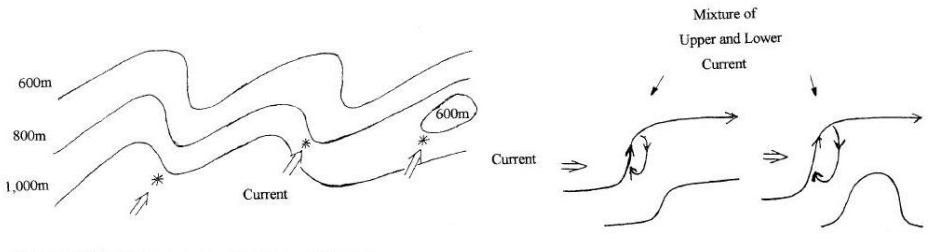
Selection of deployment position (2)



Before FAD deployment operation, GPS coordinate, depth of water, topography condition, distance from shore, distance from other FADs, for expected FAD deployment position should be confirmed

Selection of deployment position (3)

a) Migratory area / Fishing area: The area must be known be frequented by migratory fishes. The area where the upper current mixes with the bottom current has rich nutrition and becomes a good fishing ground
b) Current: Area with slow or moderate current is usually good for FAD
c) Bottom topography: A muddy or sandy bottom is ideal for setting. Also the bottom gradient must be gradual.



What is important for deployment operation?

"Safe & easy operation"
"Economical and efficient operation"

What kind of anchor used?
What type of boat used?
How many fishers required?

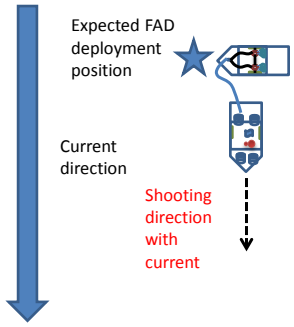
example)
- Sandbag anchor 50kg/pc x 20pc
- Artisanal fishing boat x 2 boats
- 3 ~ 4fishers per boat

- Selection of good weather condition (less wind & wave)
- Need good communication between fishers and boats
  &
- Check of current direction and strength before starting of deployment operation

3. Two boats deployment (1)

In case of use of artisanal fishing boat for deployment, a boat has limited capacity, therefore two boats deployment is much easier and safer than one boat deployment

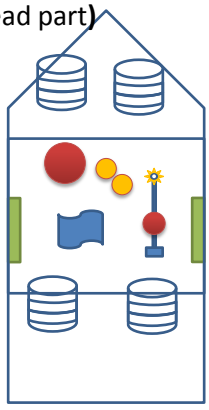
Example)
Type of boat:
Pirogue (27 ~ 34 ft.) w. OBE x 2
Number of fishers:
3 ~ 4 fishers per boat x 2



3. Two boats deployment (2)

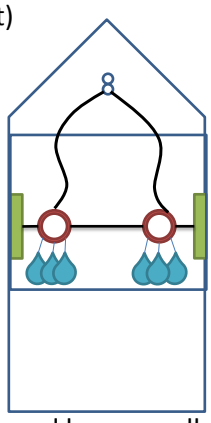
<Loading of FAD>

Boat A (loaded with mooring rope and head part)



Load flag pole, buoys, appendages and mooring rope in order on one boat

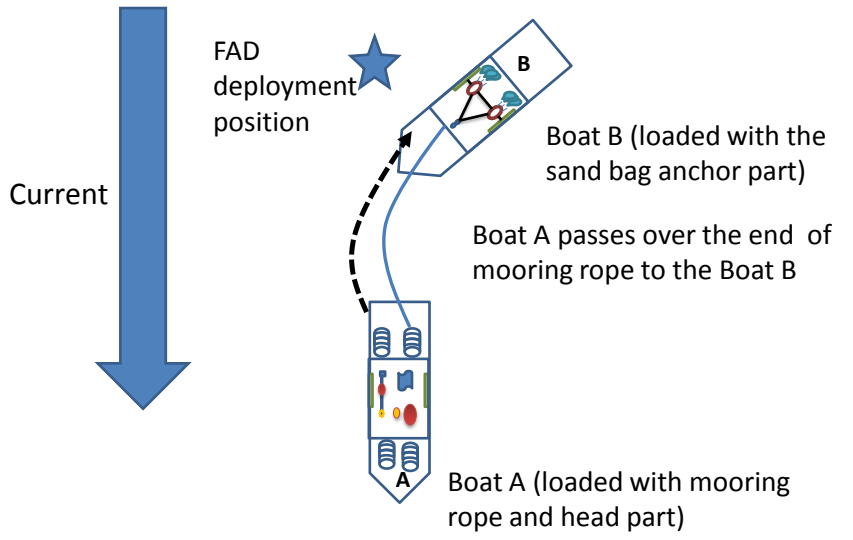
Boat B (loaded with the sand bag anchor part)



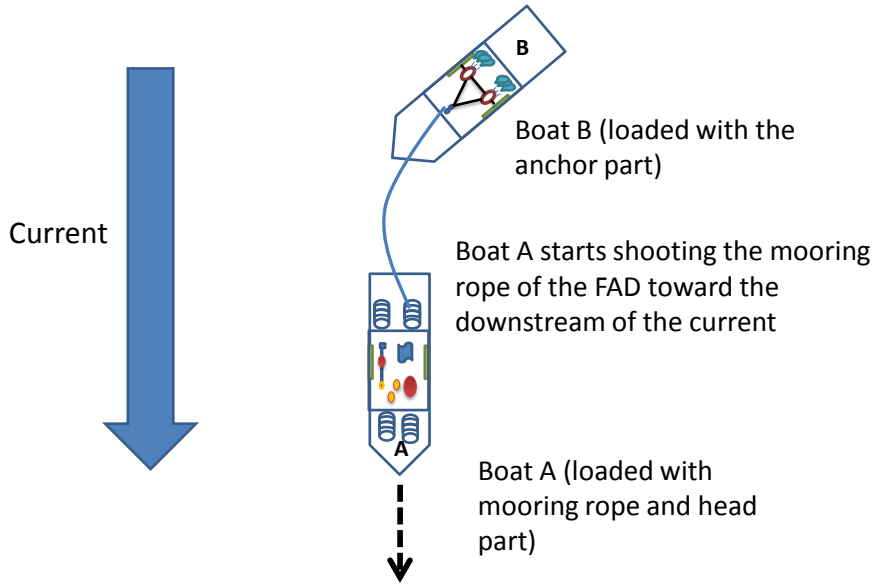
Place sand bags equally on port and starboard sides

3. Two boats deployment (3)

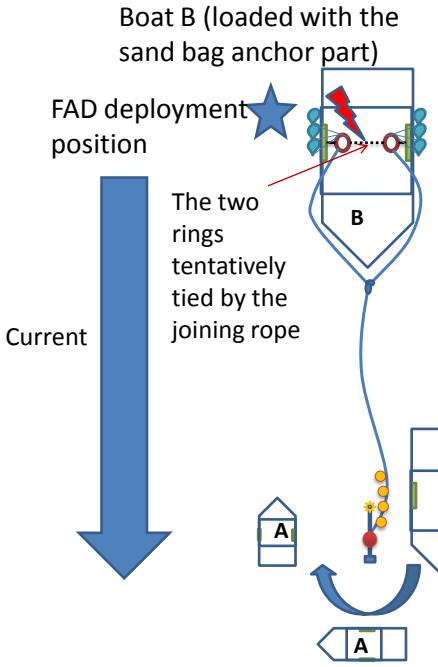
<Deployment Procedure>



3. Two boats deployment (4)



3. Two boats deployment (5)



i) Boat B ties all sand bags on the rings and puts the sandbag anchors one by one out of Boat on both sides in a good balance for ready to shoot.

i) Boat A send signal to the boat B (by turning around, by phone, radio, etc) when shooting is completed

ii) Boat B, being maneuvered on the FAD deployment position, cuts the joining rope between the rings with sand bag anchors to complete the shooting operation.

Boat A (loaded with head part)

4. What should be checked during & after deployment?(1)

Check point

<during shooting operation of mooring rope>

1. No entanglement, no twist and no kink being occurred on mooring rope during shooting operation

   *Attention: Even one week point kills FAD easily

<during shooting operation of sandbag anchor>

1. Check the balance of boat
2. Confirmation on completion of deployment for all head parts by another boat
3. Confirmation of all rope clearly out of boat, just before deployment of all sandbag anchor

4. What should be checked during & after deployment?(2)

Check point

<after shooting operation of sandbag anchor>

1. Confirmation whether mid-water buoy sank (in case of use of mid-water buoy)
1. Confirmation whether any parts of mooring rope are not floating on surface
2. Confirmation whether all buoys on the head part of FAD are steadily floating on surface

5. References

1. Troll fishing & Fish Aggregation Device (FAD) : Regional Fisheries Training Project in Trinidad, JICA/CFTDI 2001
2. FAD fishing digital textbook 1~4: Study on Formulation of Master Plan on Sustainable Use of Fisheries Resources for Coastal Community Development in the Caribbean, CRFM/JICA, 2010
3. Baseline survey report: Project for Promotion of Grace of the Seas for Coastal Villages in Vanuatu, Phase 2, Vanuatu Fisheries Department / JICA 2012