

FAD research

Data collection FO forms

Harmonization

Marking tracking FADs

Flotsam Information Record

Inter-American Tropical Tuna Commission
FLOTSAM INFORMATION RECORD (FIR)

Trip Number	Object No.	Count No.	Set No.	YY	DATE MM DD	TIME	LATITUDE N/S	LONGITUDE W
A. COMPONENTS (check all that are applicable)				B. LOCATING EQUIPMENT (check all that are applicable)				
	As found	As left		As found	As left			
Tree	<input type="checkbox"/>	1 <input type="checkbox"/>		Flag	<input type="checkbox"/>	1 <input type="checkbox"/>		
Dead animal	<input type="checkbox"/>	2 <input type="checkbox"/>		Satellite buoy	<input type="checkbox"/>	2 <input type="checkbox"/>		
Chain / cable / rings / weights	<input type="checkbox"/>	3 <input type="checkbox"/>		Buoy, corks, etc.	<input type="checkbox"/>	3 <input type="checkbox"/>		
Cane / bamboo	<input type="checkbox"/>	4 <input type="checkbox"/>		Lights	<input type="checkbox"/>	4 <input type="checkbox"/>		
Bait container / bait	<input type="checkbox"/>	5 <input type="checkbox"/>		Radio transmitter / beeper	<input type="checkbox"/>	5 <input type="checkbox"/>		
Cord / rope	<input type="checkbox"/>	6 <input type="checkbox"/>		Radar reflector	<input type="checkbox"/>	6 <input type="checkbox"/>		
Floats / corks	<input type="checkbox"/>	7 <input type="checkbox"/>		Unknown	<input type="checkbox"/>	7 <input type="checkbox"/>		
Artificial light for attracting fish	<input type="checkbox"/>	8 <input type="checkbox"/>		Other	<input type="checkbox"/>	8 <input type="checkbox"/>		
Netting material	<input type="checkbox"/>	9 <input type="checkbox"/>		C. LOCATING METHOD (check only ONE)				
Sacks / bags	<input type="checkbox"/>	10 <input type="checkbox"/>		Radar	<input type="checkbox"/>	1 <input type="checkbox"/>		
Planks / pallets / plywood / spools	<input type="checkbox"/>	11 <input type="checkbox"/>		Direction finder	<input type="checkbox"/>	2 <input type="checkbox"/>		
Metal drum / plastic drum	<input type="checkbox"/>	12 <input type="checkbox"/>		Satellite	<input type="checkbox"/>	3 <input type="checkbox"/>	check	
PVC or other plastic tubes	<input type="checkbox"/>	13 <input type="checkbox"/>		Visual – the object itself	<input type="checkbox"/>	4 <input type="checkbox"/>	only	
Plastic sheeting	<input type="checkbox"/>	14 <input type="checkbox"/>		Visual – birds	<input type="checkbox"/>	5 <input type="checkbox"/>	one	
Unknown	<input type="checkbox"/>	15 <input type="checkbox"/>		Not applicable	<input type="checkbox"/>	6 <input type="checkbox"/>		
Other	<input type="checkbox"/>	16 <input type="checkbox"/>		Unknown	<input type="checkbox"/>	7 <input type="checkbox"/>		
D. IF THERE IS NETTING ON THE OBJECT:			E. OTHER DATA					
	Yes	No	Unk		Yes	No	NA	Unk
Netting hanging from the object?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Bait container refilled?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Estimated area of hanging netting (m ²)	<input type="text"/>			Fauna entrapped?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Predominant mesh size (inches)	<input type="text"/>			Maximum depth of the object (m)	<input type="text"/>			
				Dimensions (m)	<input type="text"/>	<input type="text"/>	<input type="text"/>	
				Water clarity	Clear <input type="checkbox"/>	Turbid <input type="checkbox"/>	Very turbid <input type="checkbox"/>	
				% epibiota	<input type="text"/>	Tag number	<input type="text"/>	
F. CAPABILITY OF TRANSMITTING EQUIPMENT (check all that are applicable)			G. PRIOR ORIGIN OF OBJECT (check only ONE)					
	As found	As left		Your vessel – this trip	<input type="checkbox"/>	1 <input type="checkbox"/>		
Direction to the object	<input type="checkbox"/>	1 <input type="checkbox"/>		Your vessel – previous trip	<input type="checkbox"/>	2 <input type="checkbox"/>		
Geographic position of the object	<input type="checkbox"/>	2 <input type="checkbox"/>		Deployed	<input type="checkbox"/>	3 <input type="checkbox"/>		
Water temperature	<input type="checkbox"/>	3 <input type="checkbox"/>		Other vessel – with owner consent	<input type="checkbox"/>	4 <input type="checkbox"/>	check	
Tuna quantity	<input type="checkbox"/>	4 <input type="checkbox"/>		Other vessel – no owner consent	<input type="checkbox"/>	5 <input type="checkbox"/>	only	
Tuna species	<input type="checkbox"/>	5 <input type="checkbox"/>		Drifting object found	<input type="checkbox"/>	6 <input type="checkbox"/>	one	
Unknown	<input type="checkbox"/>	6 <input type="checkbox"/>		Unknown	<input type="checkbox"/>	7 <input type="checkbox"/>		
Other	<input type="checkbox"/>	7 <input type="checkbox"/>		Other	<input type="checkbox"/>	8 <input type="checkbox"/>		
H. EXPERIMENTAL EQUIPMENT (continue on back)								

IATTC FIR 08/2005

OBJ	1	8	8	8
TripNo	1	8	8	8
OBJNo	1	8	8	8
OBJCount	1	8	8	8
Setno				
DateTime				
Lat				
Lon				
ACode				
LocateMethod				
NetHang				
NetHangArea				
NetHangMesh				
ChangeBait				
Entangled				
MaxDepth				
Size1				
Size2				
Size3				
Clarity				
CovPnt				
TagNo				
OBJOrigin				
DeadAnimal				
OtherComponent				
OtherTransmission				
OtherEquipment				
OtherLocateMethod				
EntangledAnimal				
OtherOrigin				
FAD				

OBJComponent	1	8	8	8
TripNo	1	8	8	8
OBJNo	1	8	8	8
OBJCount	1	8	8	8
TimeFrame				
Component				

OBJEquipment	1	8	8	8
TripNo	1	8	8	8
OBJNo	1	8	8	8
OBJCount	1	8	8	8
TimeFrame				
Equipment				

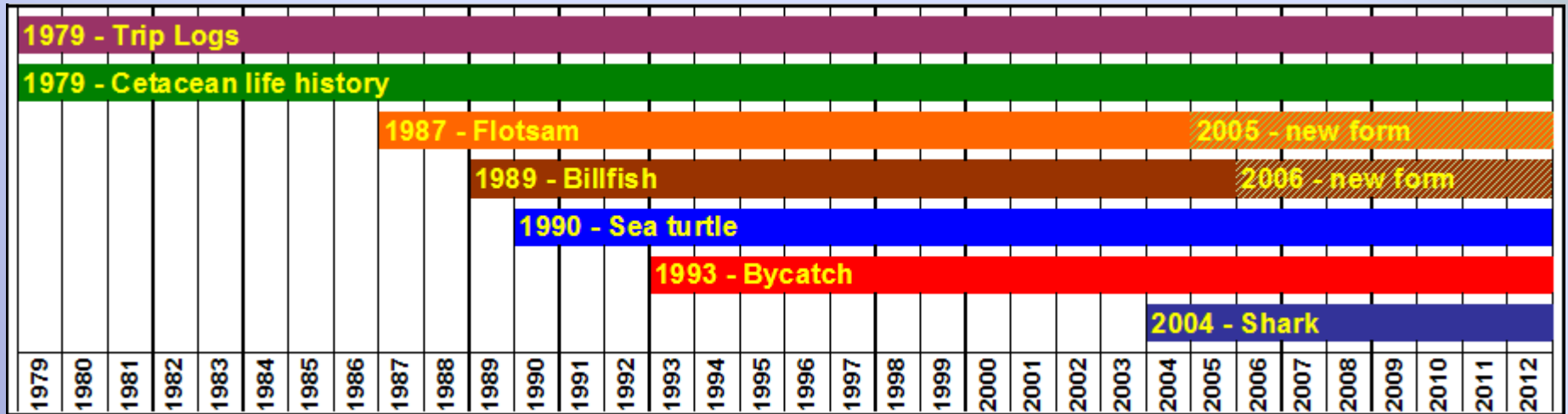
OBJTransmissi...	1	8	8	8
TripNo	1	8	8	8
OBJNo	1	8	8	8
OBJCount	1	8	8	8
TimeFrame				
Transmission				

Ia. OVERHEAD VIEW (include dimensions)	Ib. SIDE VIEW (include dimensions)
J. ADDITIONAL COMMENTS	

IATTC FIR 08/2005

Observer database

Time frame of data sets



1979 – Trip logs

1979 – Cetacean life history

1987 – Flotsam (major modification in 2005)

1989 – Billfish (major modification in 2006)

1990 – Sea turtle

1993 – bycatch (Marine Fauna)

2004 – Shark

**ITEM 11 B II -
FAO FISHERIES TECHNICAL REPORT
NR. 568**

**BYCATCHES AND NON-TUNA CATCHES IN THE TROPICAL
TUNA PURSE SEINE FISHERIES OF THE WORLD**

Martin Hall and Marlon Roman

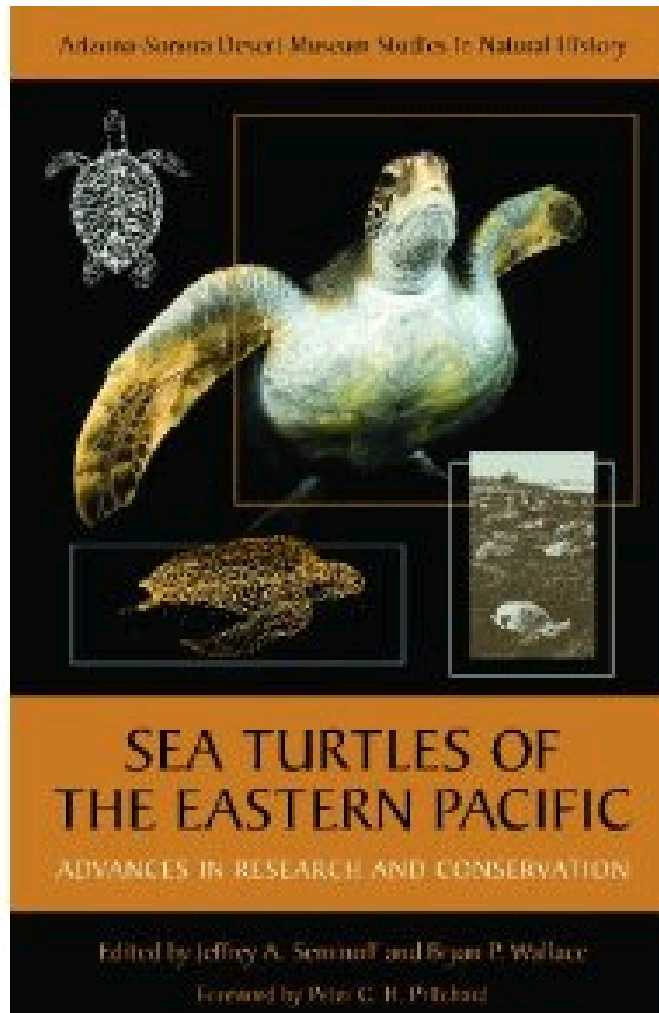
Inter-American Tropical Tuna Commission

TABLE OF CONTENTS

INTRODUCTION.....	4
DEFINITIONS AND FRAMEWORK.....	6
Purse seiners and their fishing operations	6
Captures, catches and bycatches	17
PURSE SEINING.....	20
Types of purse seine sets	21
FROM LOG FISHING TO FISHING ON FISH AGGREGATING DEVICES (FADs).....	29
Fishing on floating objects	38
Hypotheses on the associations of different species with floating objects.....	61
Behavior of different species around floating objects	63
Floating object operations	65
CONDITIONS DURING THE CAPTURE PROCESS THAT MAY CAUSE MORTALITY...	70
DISTRIBUTION OF EFFORT BY SET TYPE	72
SOURCES OF INFORMATION ON BYCATCHES IN THE TUNA PURSE SEINE FISHERIES	74
Bibliographic information	74
Bycatch data	75
Comparison of the data collected by the different observer programs.....	78

ESTIMATING BYCATCHES.....	80
Stratification by types of sets	82
Other possible stratification variables	83
Observer issues and estimation	84
SPECIES TAKEN IN ASSOCIATION WITH TROPICAL TUNAS.....	85
Catches and bycatches	107
Observer coverage.....	113
TUNAS.....	116
BILLFISHES.....	150
SHARK AND RAYS.....	166
LARGE PELAGIC BONY FISHES (other than tunas).....	209
SEA TURTLES	221
MARINE MAMMALS.....	238
IMPACTS OF THE DEVELOPMENT OF THE FAD FISHERY.....	248
Ecological implications of FAD fisheries other than captures	249
Conclusions and challenges for bycatch management and reduction	253
FINAL CONCLUSIONS	255
BIBLIOGRAPHY	260

260 pp. + 400
references
163 Figs. 30 Tables



Sea Turtles of the Eastern Pacific: Advances in Research and Conservation (Arizona-Sonora Desert Museum Studies in Natural History)

[Hardcover]

[Jeffrey A. Seminoff](#) (Editor), [Bryan P. Wallace](#) (Editor), [Peter C. H. Pritchard](#) (Foreword)

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List Price: \$75.00

CHAPTER IN: **SEA TURTLES OF THE EASTERN PACIFIC. SEMINOFF, WALLACE AND PRITCHARD (EDS.) 2012. UNIV. OF ARIZONA PRESS. PP. 136 - 153**

No “Silver Bullets” but Plenty of Options:

Working with Artisanal Fishers in the Eastern Pacific to Reduce Incidental Sea Turtle Mortality in Longline Fisheries.

Martin Hall, Yonat Swimmer, and MariLuz Parga

Item 11 b iii

ELEMENTOS DE UN PROTOCOLO PARA EXPERIMENTOS

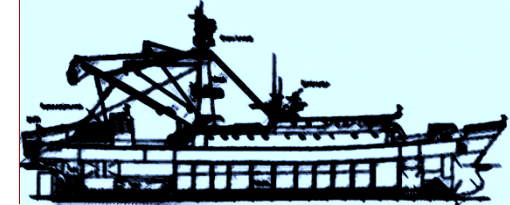
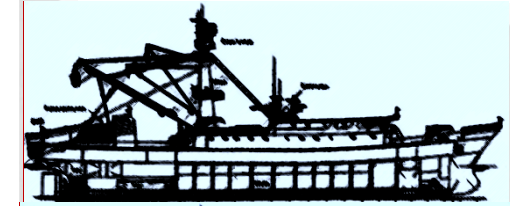
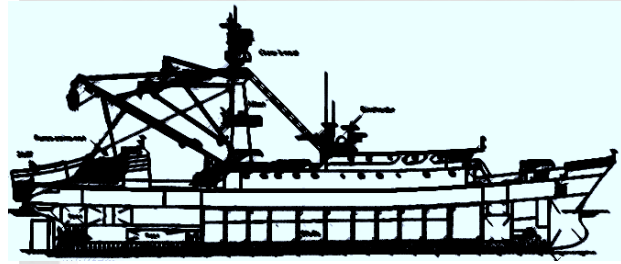
CON LA REJILLA DE SELECCIÓN

OBJETIVOS DEL DESARROLLO DE LAS REJILLAS

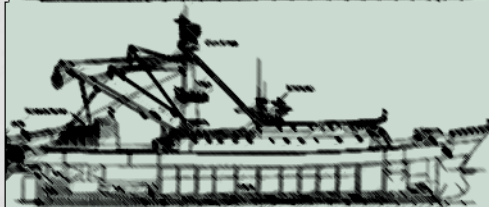
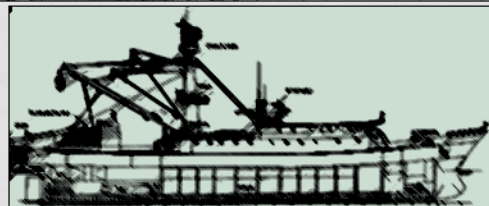
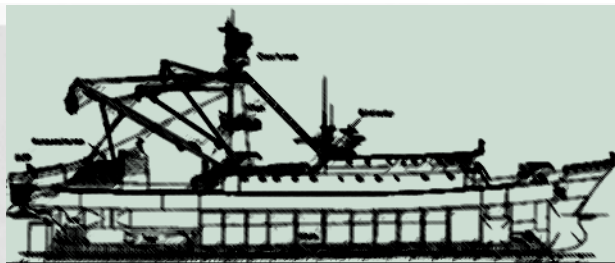
Podemos identificar una variedad de objetivos a lograr. Cada uno de estos tiene valor de por sí, y la utilización de la rejilla podría llegar a adoptarse para satisfacer uno o más de estos.

- 1) Reducir la mortalidad por pesca de juveniles de patudo y de aleta amarilla, cuando ello fuera necesario.
- 2) Reducir la mortalidad por pesca de todas las especies de atunes que no van a ser utilizadas, incluyendo el barrilete, y las especies menores.
- 3) Reducir las capturas de especies asociadas a los plantados que no se desea retener.

2 experimental groups and a control



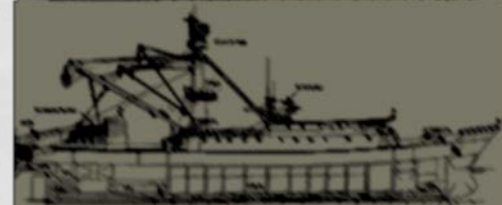
grid model
1



grid model
2

similar

no grid



DESIGN ISSUES

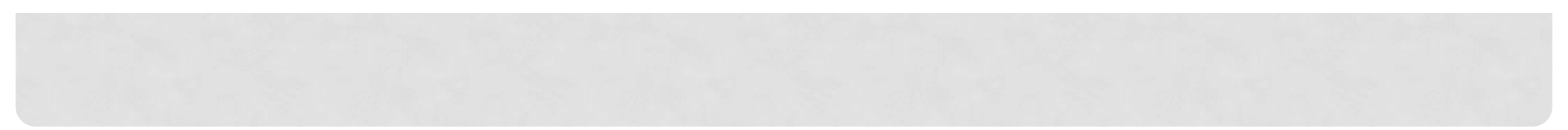
- Pre-determined area
- All FADs similar model
- All fishing operations similar
- GRID 100 % SUBMERGED
ALWAYS

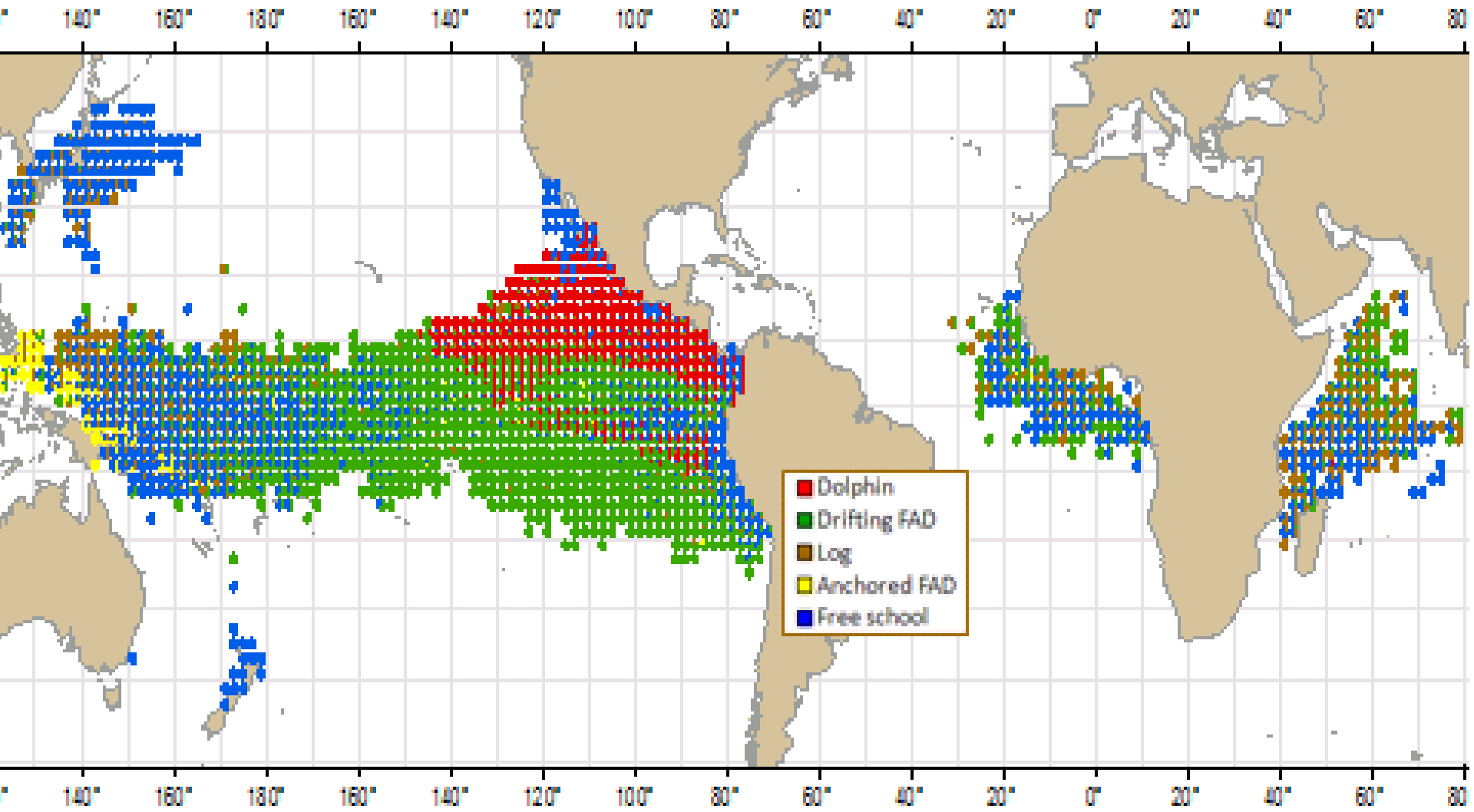
ITEM 11 E: TECHNICAL MEETING OF EXPERTS FROM TUNA
PURSE SEINE FISHERIES OBSERVER PROGRAMS 5-9 MARCH
2012, AT AZTI SUKARRIETA, SPAIN
("SUKARRIETA II")

Objectives:

- ❖ to harmonize data collection systems across oceans
- ❖ to set minimum data standards and data fields
- ❖ to improve data quality and completeness
- ❖ to improve bycatch estimation
- ❖ to assist with the identification of factors that cause or increase bycatch
- ❖ to improve research on bycatch mitigation, stock assessment and other topics
- ❖ to evaluate the performance of mitigation methods
- ❖ to facilitate comparative studies

Funded by the International Seafood Sustainability Foundation
(ISSF)





- Dolphin sets
- School sets
- Floating objects



Item 11 b iv

PUMPS: a selectivity tool ?

An ISSF – funded feasibility study

Options to place the capture in the hopper

From wet deck

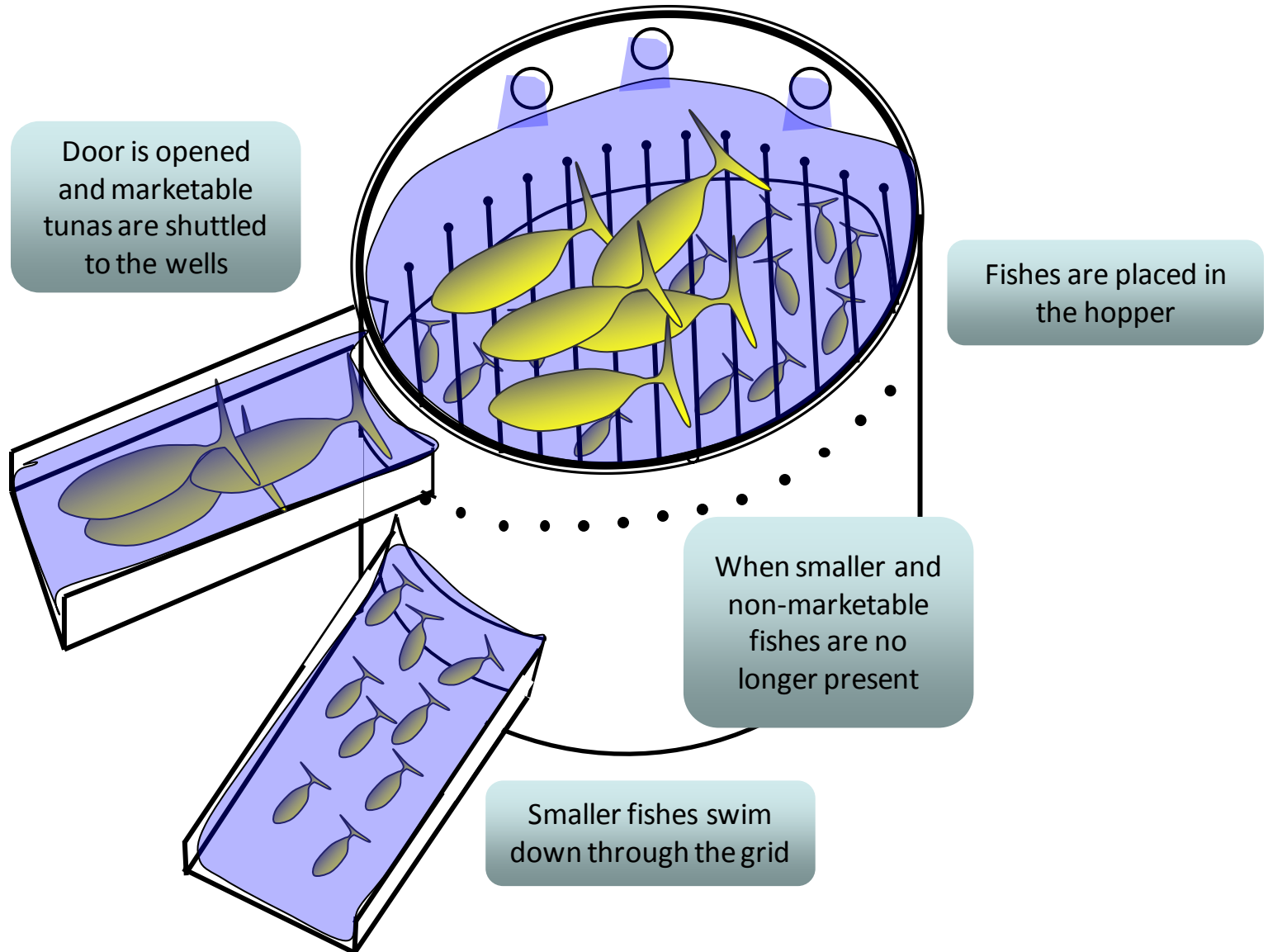


Sorting hopper

Vacuum pump

Solution: Live capture

On-deck sorting tank. Concept by Capt. Dick Stephenson



Uses of pumps

Load fish to vessel

-- Alive for speed, better quality,
selectivity

-- Dead for speed, quality

Unload fish from vessel to land or to cage
Selectivity

**In 20 – 30 yrs. most seiners will have pump
systems**

PUMP SYSTEMS

**Suction: Venturi (none
available)**

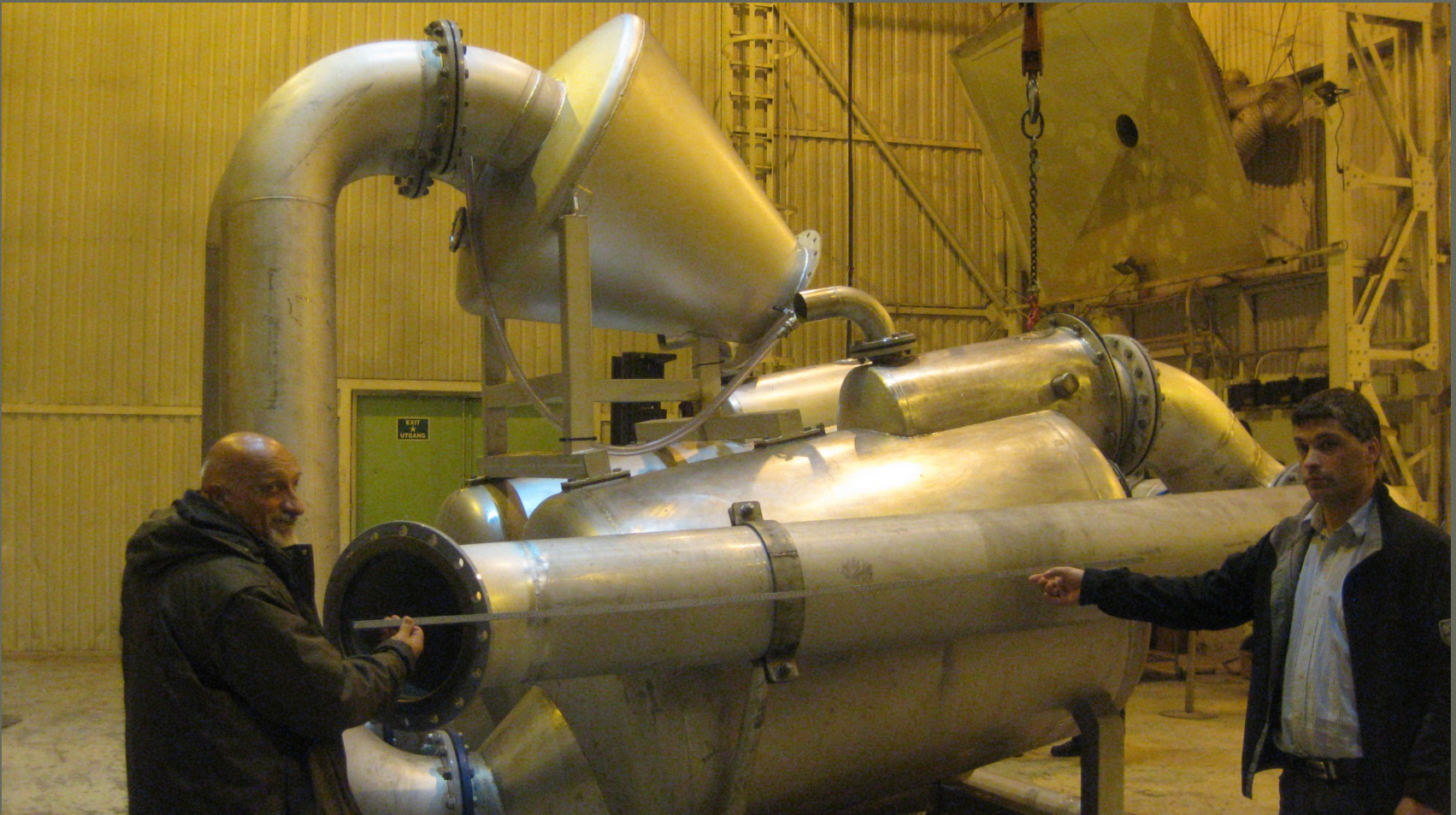
Vacuum

Centrifuge or Impeller

VACUUM

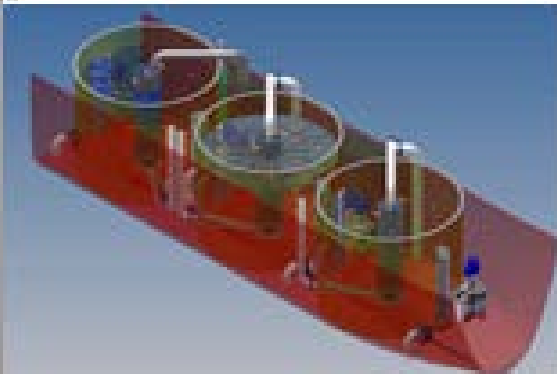
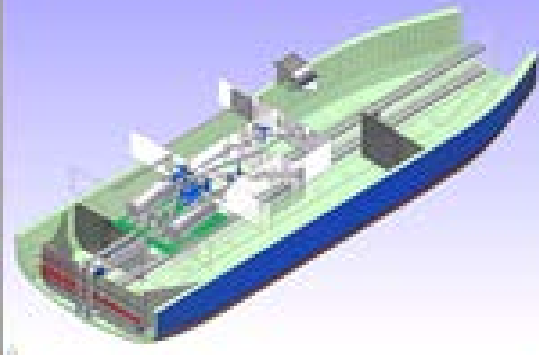
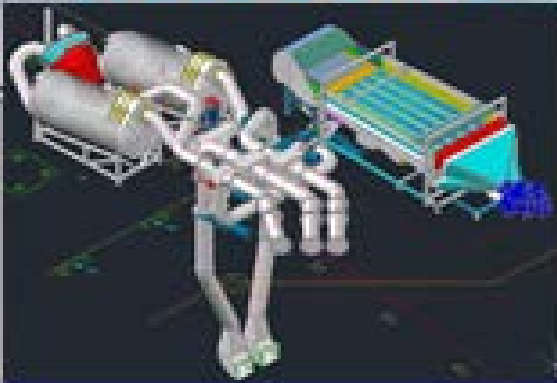
- Vacuum: lower speed, discontinuous or two tanks
- Requires very large area to install
- Major installation costs. Difficult but not impossible
- More expensive \$600K
- Rigid hose
- Only hose enters water
- No mortality

Suction Pump





WELL BOATS



Complete package of equipment for keeping the fish alive and in good condition.

MMC FISH HANDLING WITH CARE

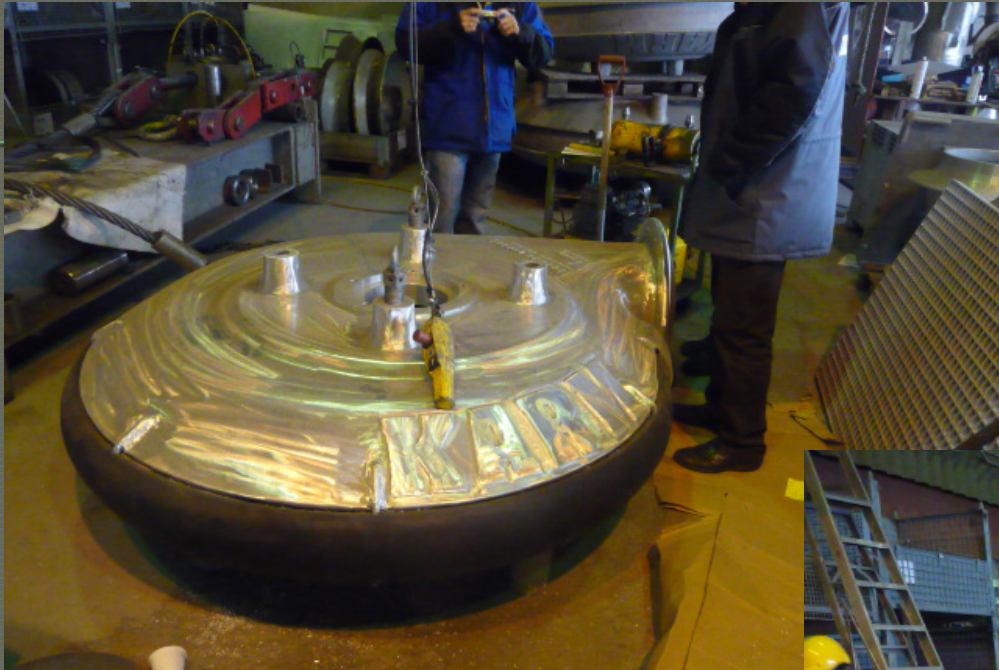
MMC provide design, deliver the equipment, make the installation, and start up



MMC

Centrifuge

- **Faster, continuous**
- **Less space required for pump**
- **Less space required for hose**
- **Cheaper, simpler installation**
- **Much lower cost**
- **Inflatable hose, easier to stow**
- **Probably survival < 100%**



QUESTIONS

- 1 – can we lift the fish ?
 - up to 2 m long? but most 40 – 70 cm
 - up to 1 m diameter but most < 60 cm
 - largest fish in their experience ?
 - largest fish that survived the experience ?
 - maximum diameter of the hose ?

QUESTIONS 2

- 2 – How to handle/maneuver the hose?
- 3 – How to keep large things outside hose?
Cage around tip ? Dimensions ?
Manta rays ?
Net
- 4 -- How to avoid/fix jams in hose ?
- 5 -- Transparent hose ? Partially transp. ?

QUESTIONS 3

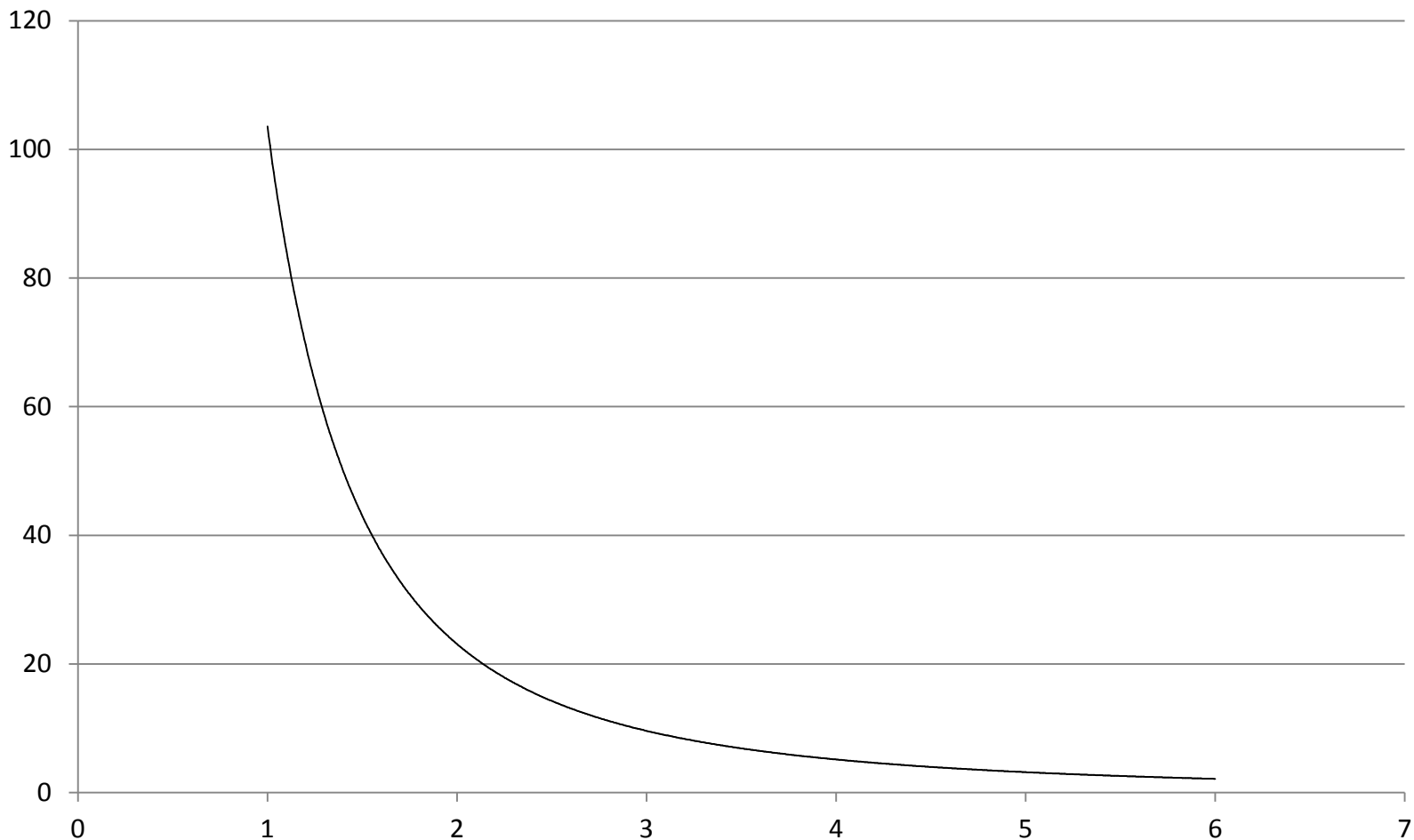
- 6 – How to regulate flow to the deck ?
- 7 -- Damage to the fish caused by the process ? Other fisheries.

QUESTIONS 4

- 8 – Are some sizes sucked first ?
- 9 – Are some species sucked first ?
- 10 – Can stronger swimmers “fight” the suction ?

QUESTIONS 5

- 11 – Suction strength vs distance to hose mouth ?



QUESTIONS 6

- 12 – Power needs
- 13 – Space needs
- 14 – Technical knowledge training needs

QUESTIONS 7

- 15 – Equipment durability/maintenance

Temperature protection

Sunlight protection

Crew training

Equipment complexity

QUESTIONS 8

- 16 – Equipment costs

Pilot project – Existing equipment

Installation cost, process

Unit costs / scale

QUESTIONS 9

- 17 Equipment loans ??
- 18 Equipment weight
- 19 Diagrams of water flows ? Two ?
volume of flow ? water speed ?
- 20 Electrical connections



euskan⁺⁺

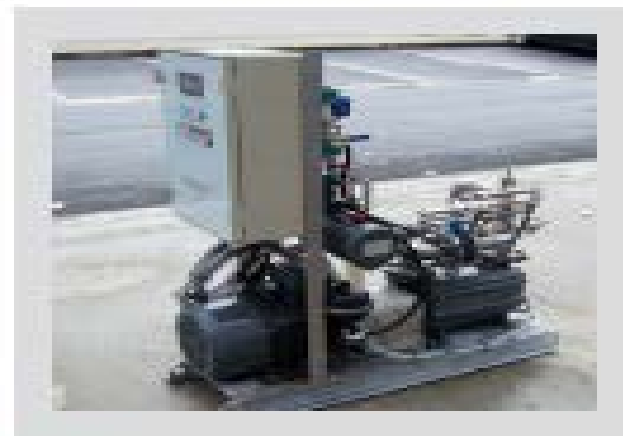
FISH HANDLING
SYSTEMS

VACUUM SYSTEMS



++

All tanks in SS AISI 316
ranging from 250 to
4500 ltr.



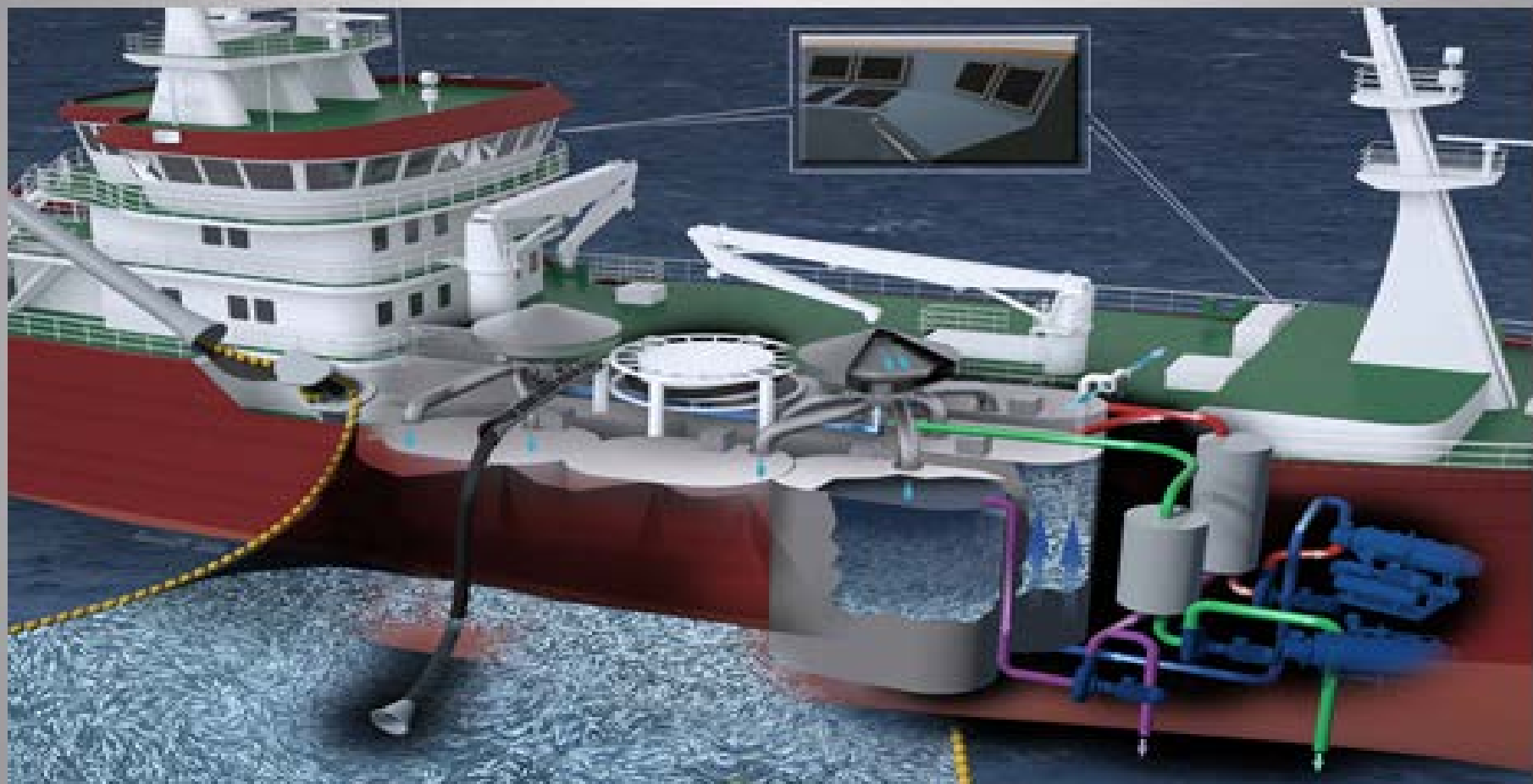
++

Power Units ranging
from 7,5 to 90 kW

FISHING VESSELS

NEW SYSTEM FOR CHILLED FISH HANDLING - CHRISTINA E

MMC



The best raw material a fish buyer can get!

ITEM 11D ---LONGLINE FORMS

- To serve this purpose, IATTC staff recommends the use of the forms that are available in IATTC website (Downloads section).
- These forms include:
- **For unobserved trips:**
 - Regional Longline logbook form (to be filled by fishers)
 - Gear description forms for longlines (to be filled in port)
 - Landings forms (filled at landing sites)
- **For observed trips:**
 - Longline - normal
 - Gear description forms for longlines (filled by observers or in port)
- In all cases, it is recommended to identify the hooks using the codes in the Hook Catalog developed by the program Overseas Fishery Cooperation Foundation of Japan - IATTC, also available in website.

