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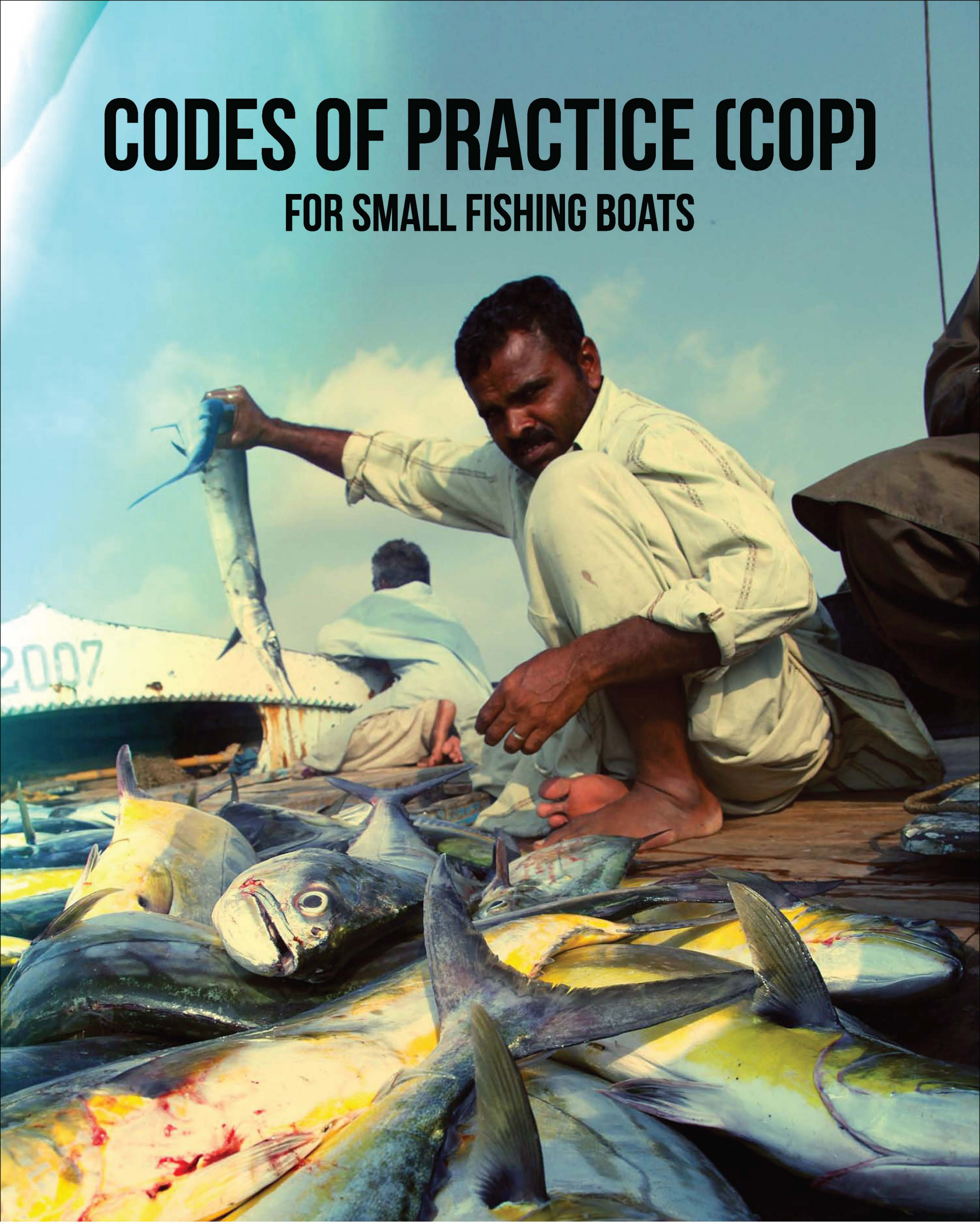
CODES OF PRACTICE (COP)

FOR SMALL FISHING BOATS



Trade Related Technical Assistance (TRTA II) Programme

(The TRTA II Programme is funded by the European Union)

Foreword

Fifty thousand fishermen go out to sea from the coastal area of Baluchistan every day to earn a living for their families. They retrace the same ritual every day, like their fathers and grandfathers have done for centuries. They manage to catch something around 150,000 tons for a total value of 330 million dollars per year, but alarmingly 70% of the result of their efforts is not suitable for human consumption and it goes largely to feed the fish meal industry spoiling the remuneration of these hard workers.

Several reasons are preventing these fishermen from generating a better livelihood. On the sea,they are still using inadequate techniques to fish and handle the catch on board. Further, the lack of financial means doesnt allow them to improve their simple and small boat; therefore the fish goes from the water into an inappropriate fish hold, where in addition the lack of ice means the fish spoils rapidly whcih greatly reduces the value of the catch.

Its to help these workers to improve their skills and therefore increase their income that the EU funded Trade Related Technical Assistance (TRTA II) programme implemented by United Nations Industrial Development Organization (UNIDO), trained a batch of 30 Master Trainers from Baluchistan Fisheries Department, Lasbela University and local leading NGOs who will now carry out a training programme in April 2014 for the fishermen community of Baluchistan.

The Development of Codes of Practice (COP) for handling the fish on small boats therefore was an essential element as a prerequisite for training as well as for ready reference for fishermens use. The international and national experts along with the trainers of Baluchistan Fisheries Department of TRTA II programme have developed this first version of COP in an illustrated form which has an easy to understand approach for the Fishermen. Once developed and implemented, this COP would enable the fishermen to get optimum income from their catch.

It is worth appreciation here, the efforts put in by the TRTA II programmes team especially Dr Mike Dillon, Mr. Christopher Leftwhich and Dr Nasim Akhtar in authoring and translating these Codes of Practice for fishermen operating on small fishing boats so that they can improve the quality of their catch, Improve their health & sefaty leading to improved income and livelihood thereof. Moreover, Ms. Sehrish Waqars efforts in designing and streamlining this illustrated version of COP in an easy-to-understand manner is commendable.

We greatly acknowledge the support of the European Union Delegation to Pakistan in compilation of this COP through provision of funds to the TRTA II Programme.

Bruno Valanzuolo
Chief Technical Advisor-CTA
Trade Related Technical Assistance (TRTA II) Programme
United Nations Industrial Development Organization (UNIDO)

LIST OF CONTENTS

Outcome of Implementing COPs on Small Fishing Boats

Outcome of Implementing Codes of Practice for small fishing boats

COP's for handeling practices on small vessel

- Essential use of communication and safety equipment.
- Appropriate boat design and structure.
- proper icing and storage of fish.
- Proper grading techniques.
- Good hygiene practices.

Improved Safety

Good Quality Fish Shrimps and Crabs

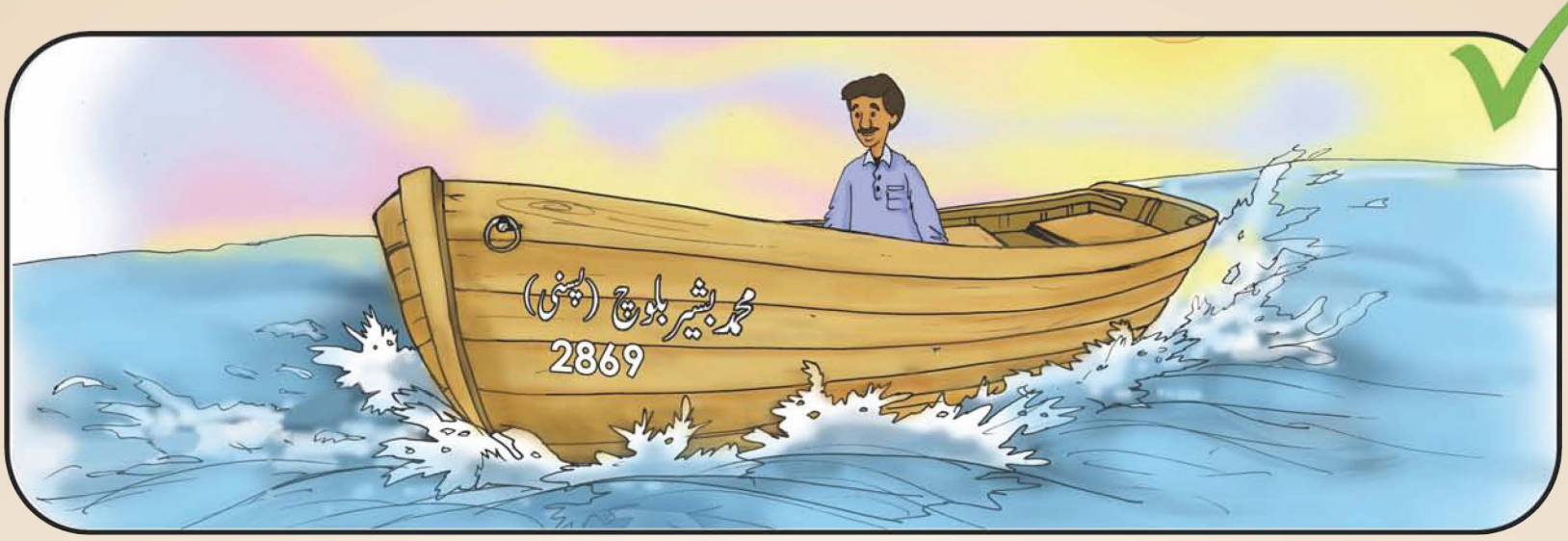
Better Health

Better Income

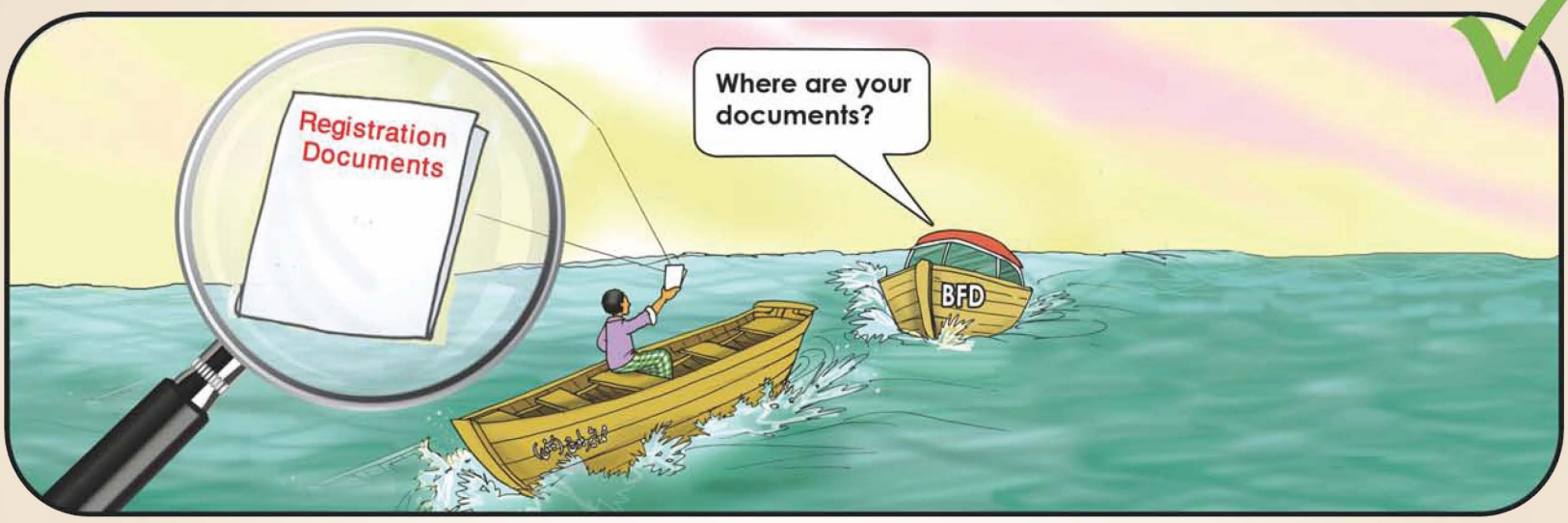
Trade Related Technical Assistance (TRTA II) Programme
(The TRTA II Programme is funded by the European Union)

Section 1

Essential Requirements for Small Fishing Boats/Vessels



The name and license number of the owner should be clearly visible on the side of the vessel.



The owners of the vessel must get their boats registered and should carry the documents on-board, during fishing.

There should be a proper sanitation system and a separate area for washing hands on small boats where design and space permits.

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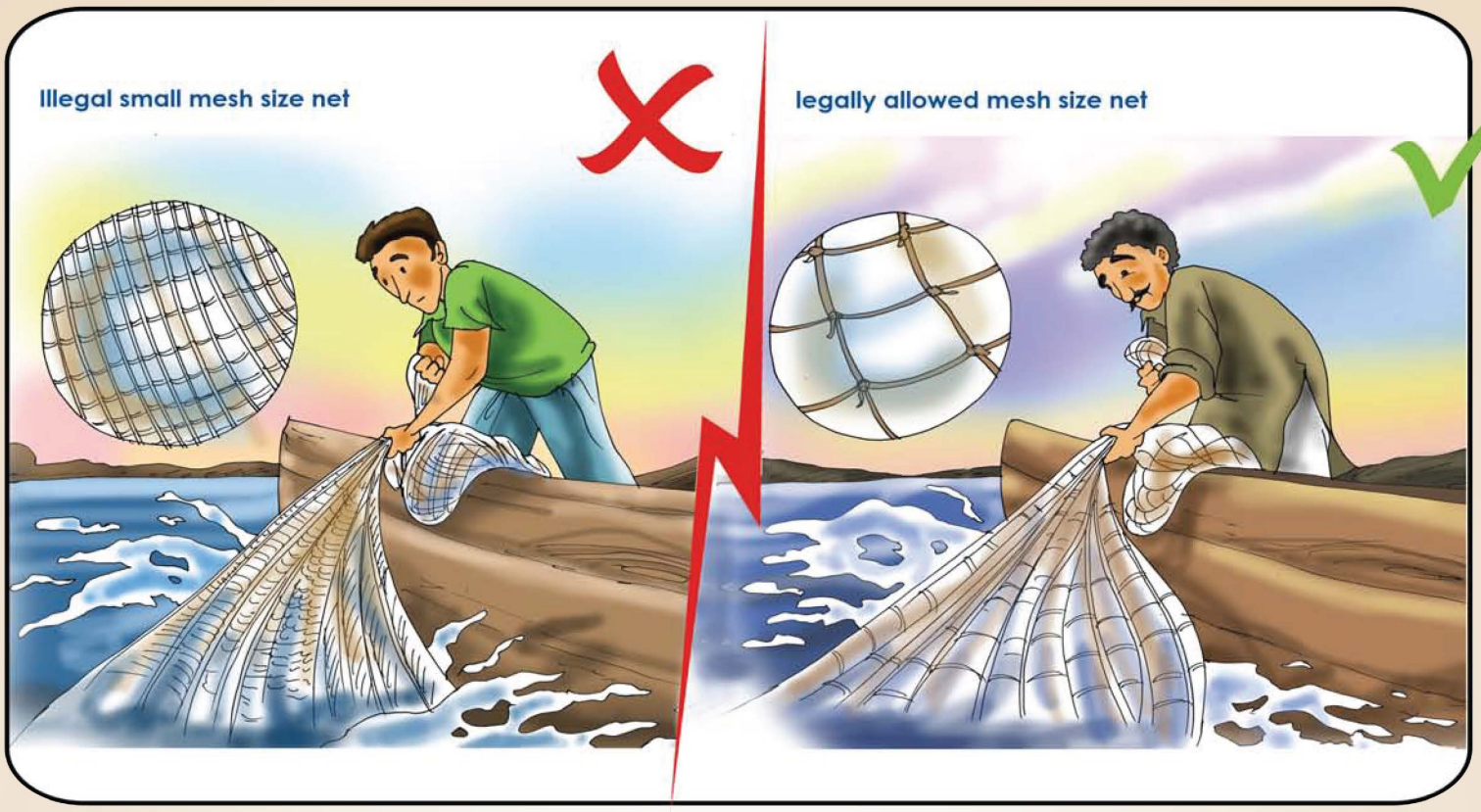
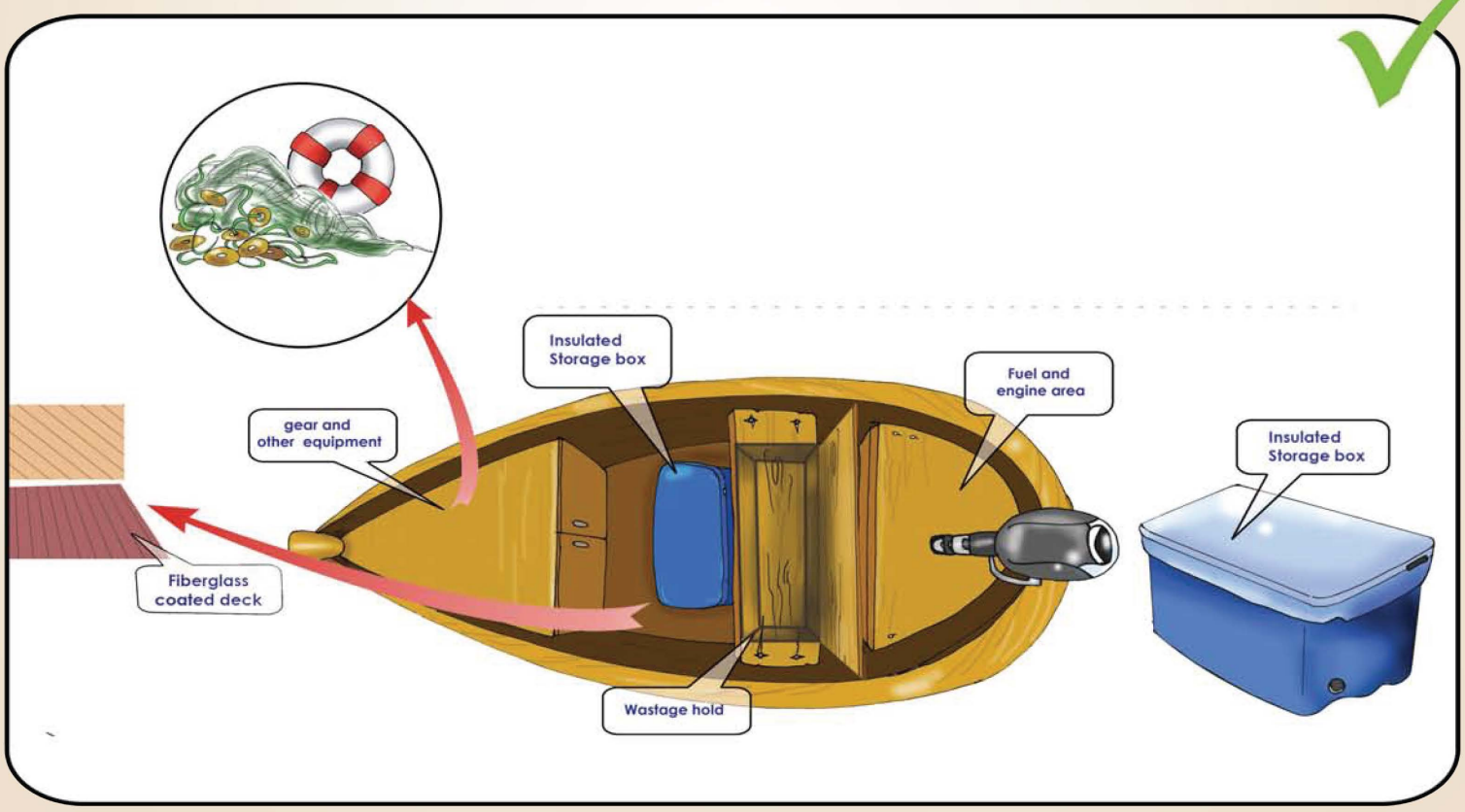
Essential Requirements for Small Fishing Boats/Vessels



Fishermen should not use any sort of illegal fishing net



Fishermen must take steps to ensure that the catch is properly looked after. The boat should be upgraded to a new design having separate compartments for various functions.

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(The TRTA II Programme is funded by the European Union)

Essential Requirements for Small Fishing Boats/Vessels

Walkie Talkie /Mobile

First-Aid

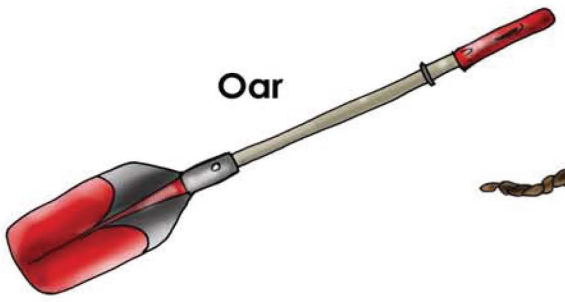
Buoy

Tool Kit

Fire Extinguisher

Flashlight

Life Jacket



Oar

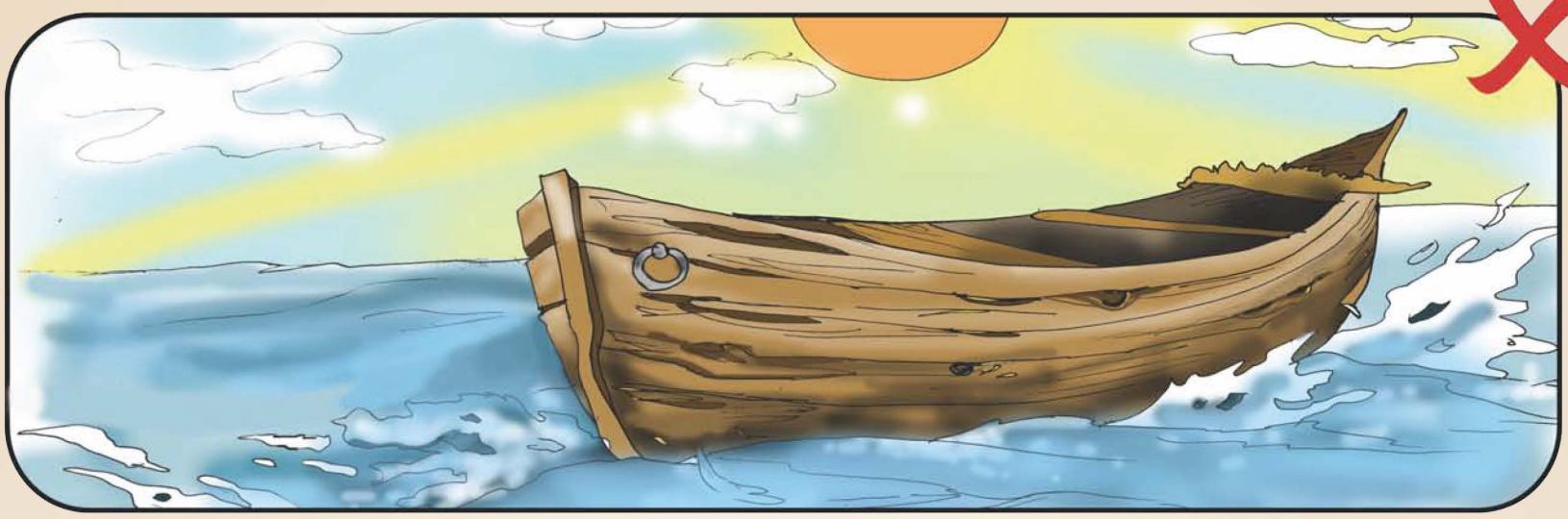
Anchor

Bamboo pole

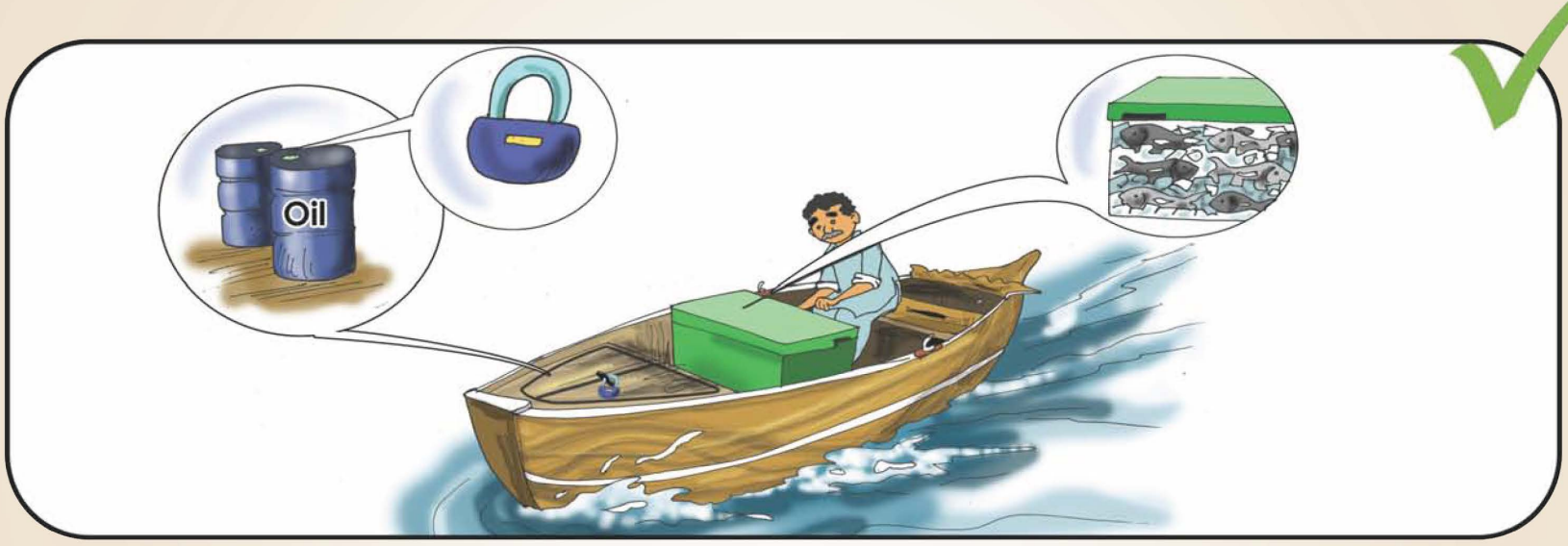
Communication and safety equipment/gadgets should be available on the vessel at all times.

Section 2

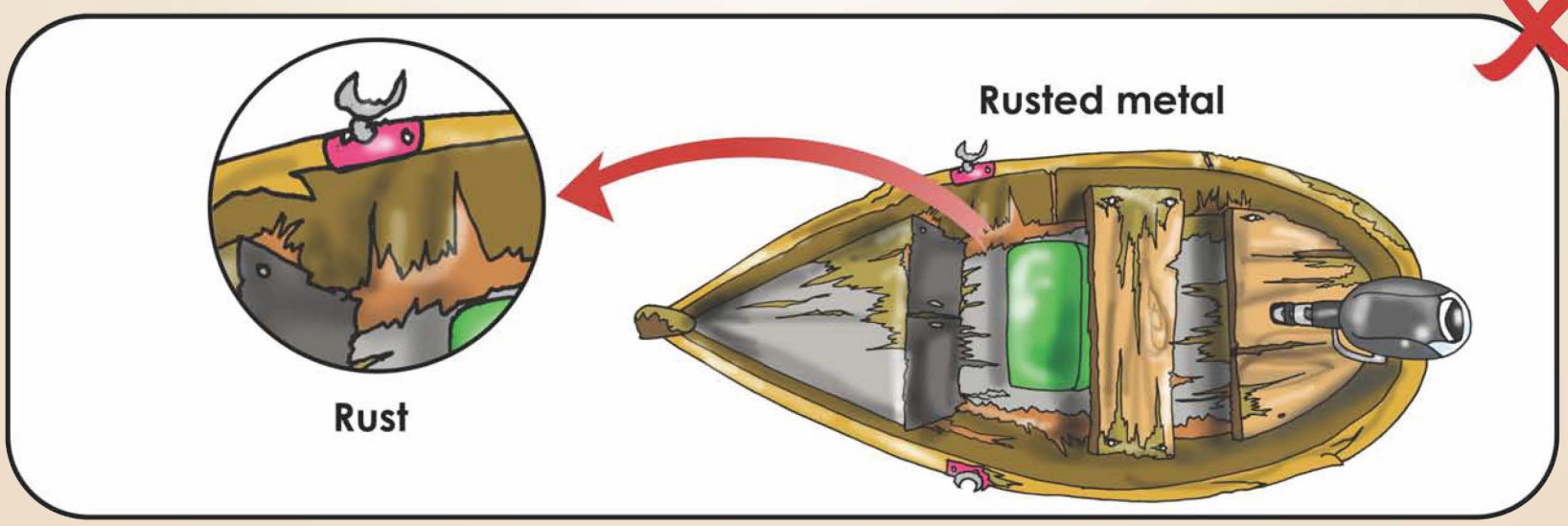
Requisites for Boat Design and Structure in Order to Prevent Fish Contamination and Boat Damage



The vessel should be strong and durable



Areas with fuel and oil should be well sealed and separately stored to prevent fish contamination.



The vessel should be well maintained with no rough, damaged or rusted surfaces, which may cause contamination.

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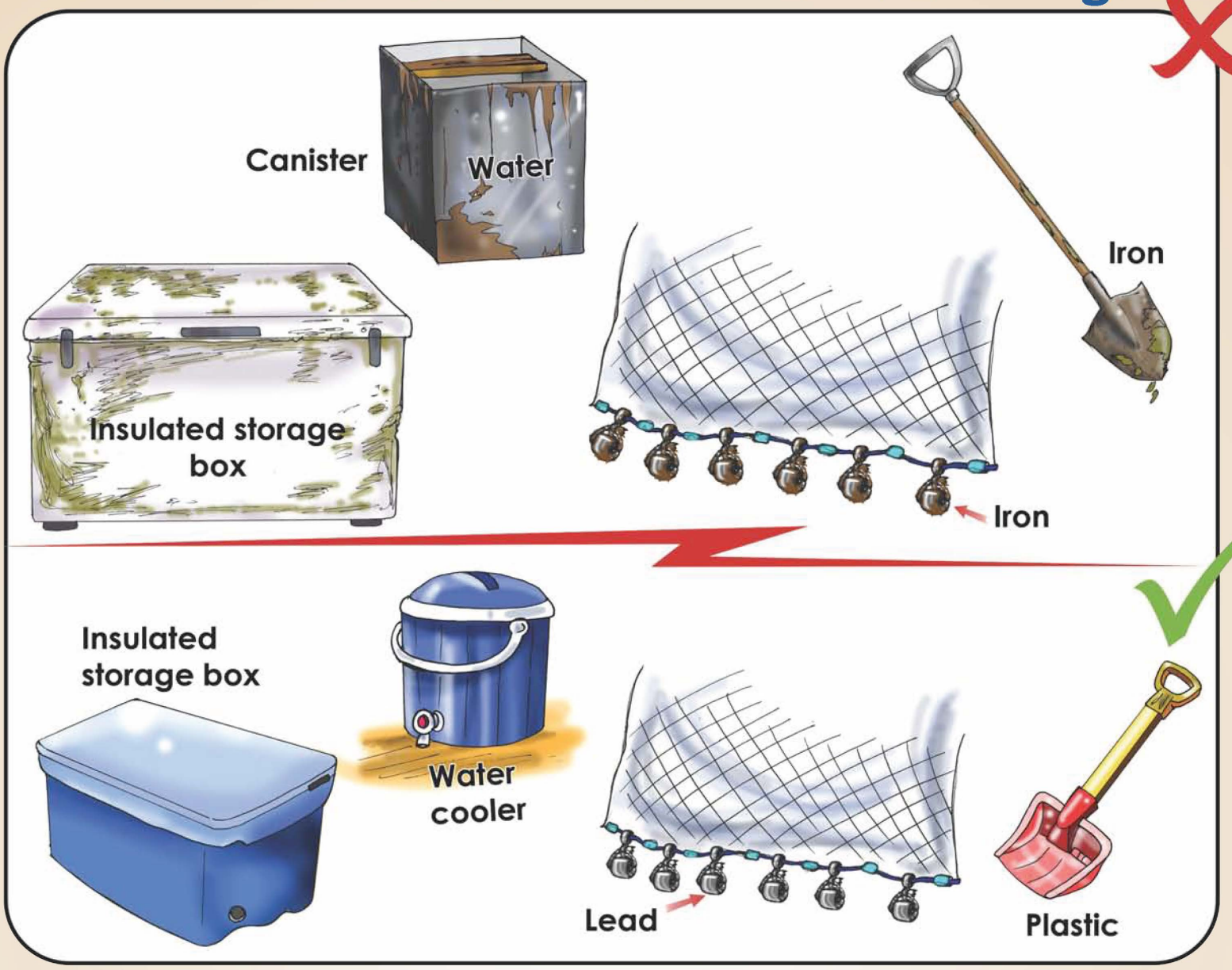
Trade Related Technical Assistance (TRTA II) Programme
(The TRTA II Programme is funded by the European Union)

Requisites for Boat Design and Structure in Order to Prevent Fish Contamination and Boat Damage



Equipment and material such as shovel, net, fish hold and water container should be made from corrosion resistant material that is easy to clean and disinfect.

Smoking, chewing of tobacco, eating beetle leaf and spitting should be avoided on-board, especially while handling fish.

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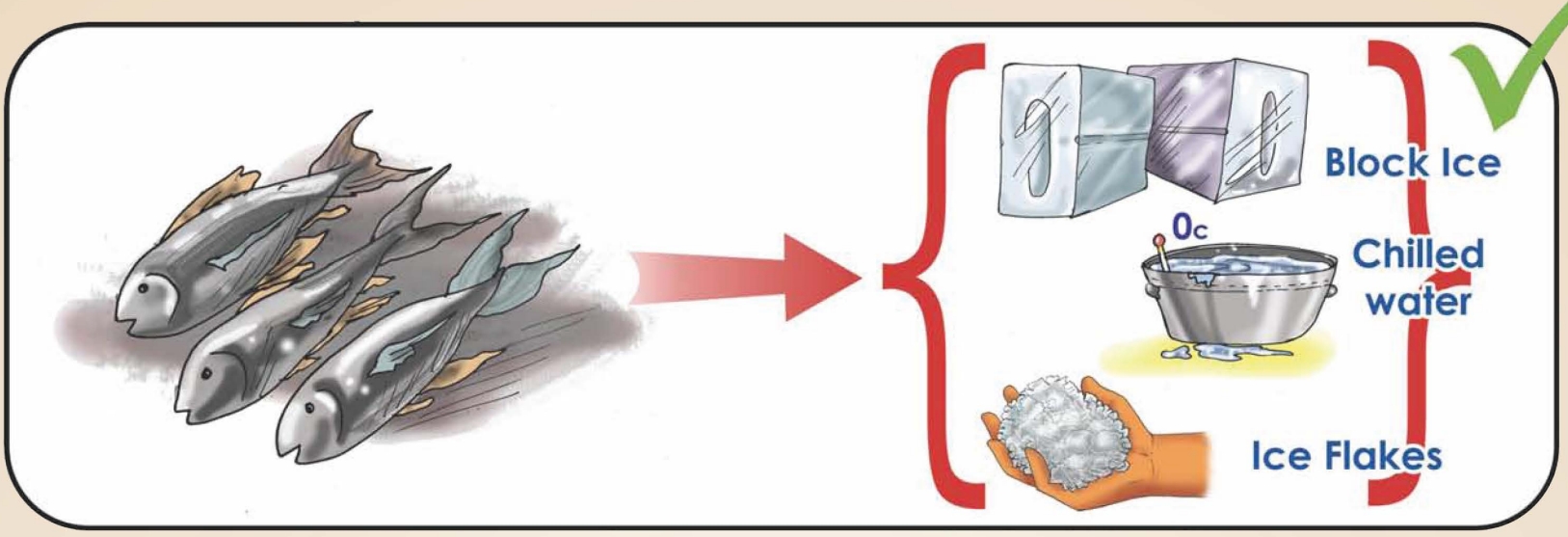
Section 3

Use of Clean Ice and Preventing Ice Wastage



Chilling can be done through block ice, chilled sea water (temp 0'C) and ice flakes.

Fishermen should buy ice from a reliable source.

Ice should be made from clean potable water and must not be crushed with dirty shovels or dragged on dirty floors.

Trade Related Technical Assistance (TRTA II) Programme
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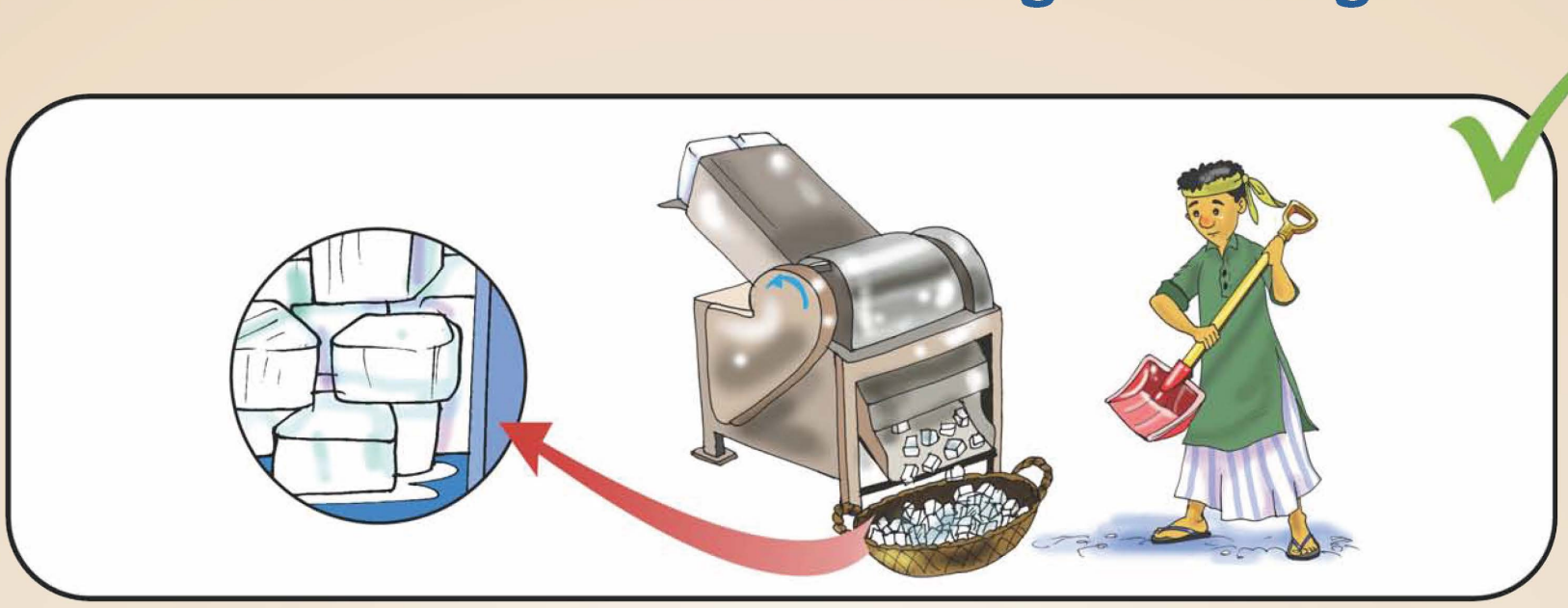
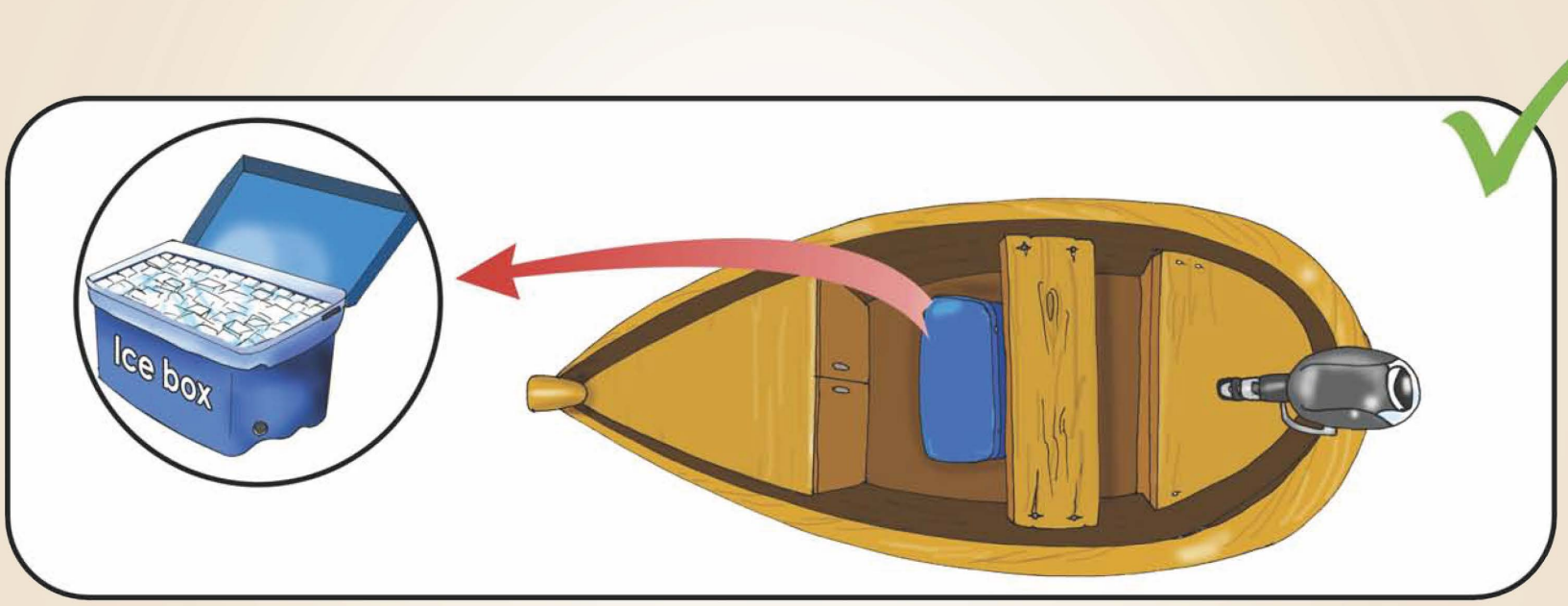
Use of Clean Ice and Preventing Ice Wastage



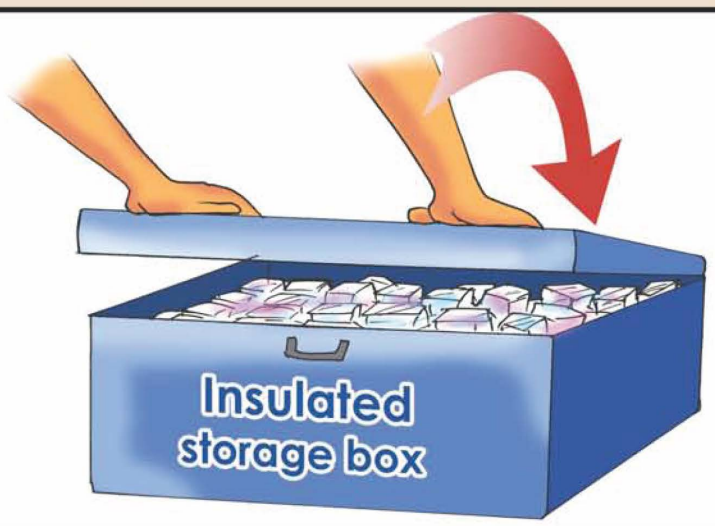
Ice crushing machine should be used to crush the ice.



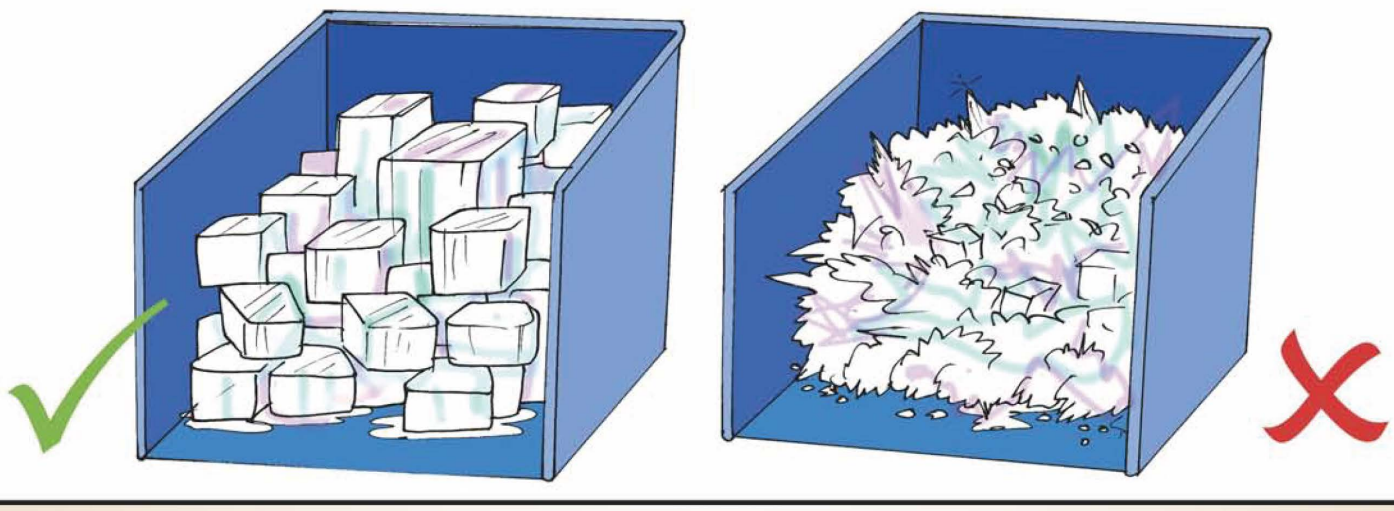
Ice should be stored in covered insulated containers.

Section 4

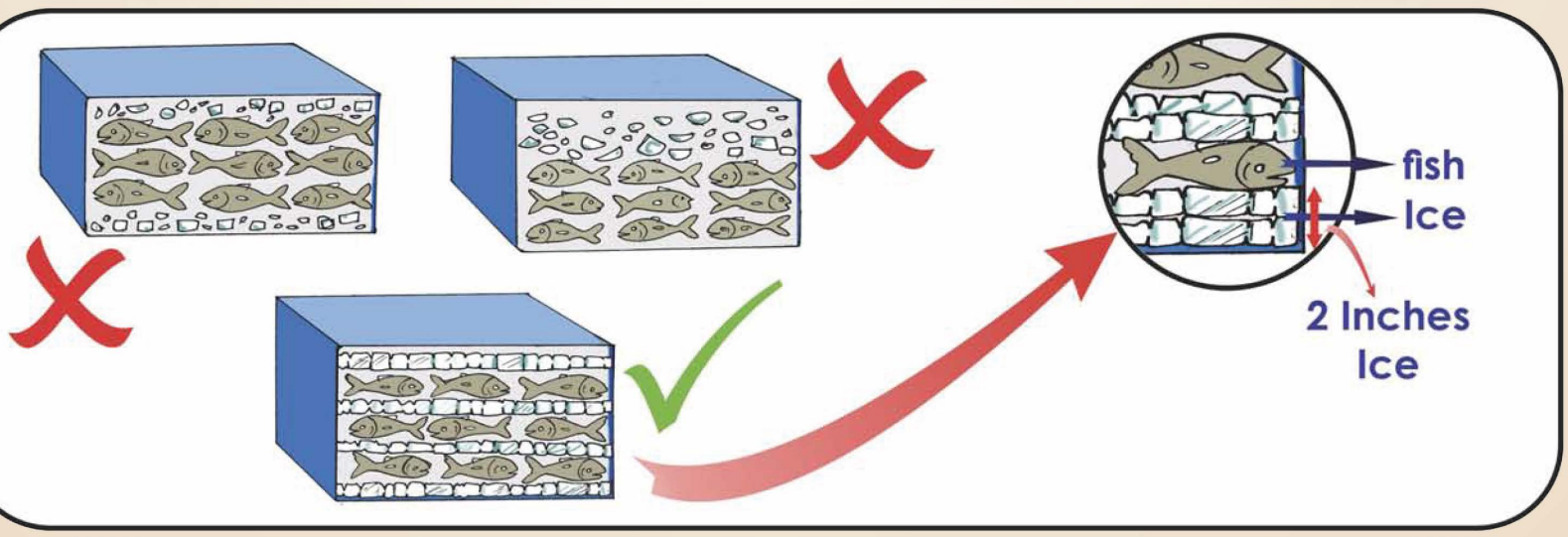
Proper Techniques of Icing Fish on Small Boats



When ice is stored in a container, lid should be put on top immediately after use.



Ice should be properly crushed and should not have sharp edges that can harm the fish.



Proper methods of icing should be used for storage of the fish.
Cover each layer of fish with at least two inches of ice.

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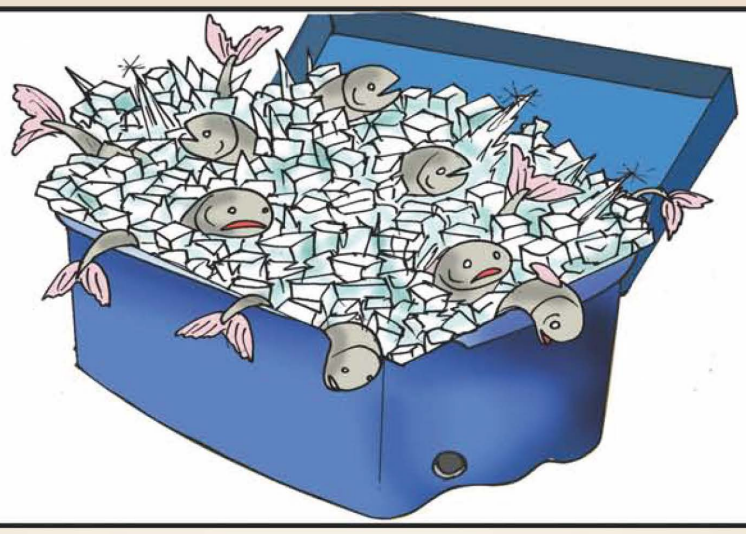
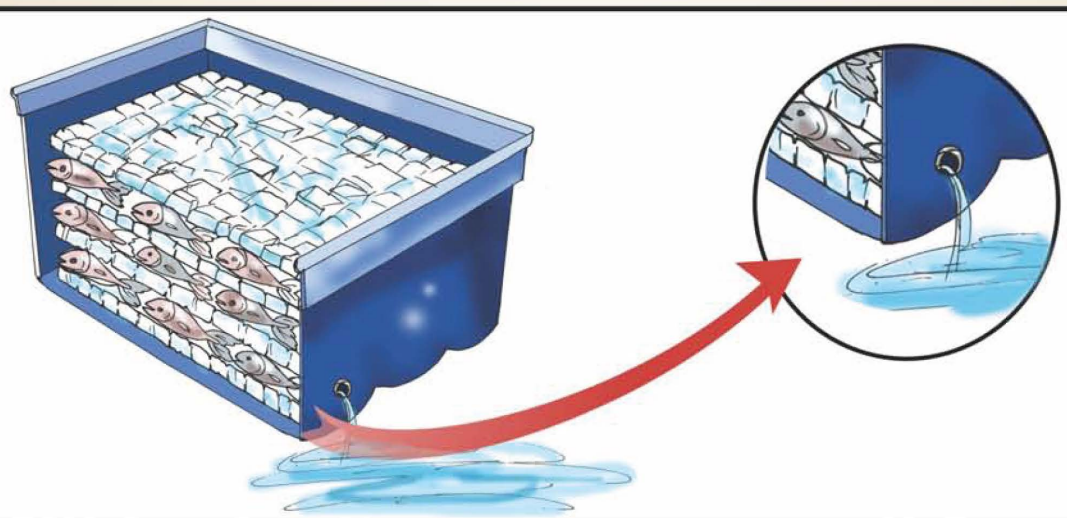
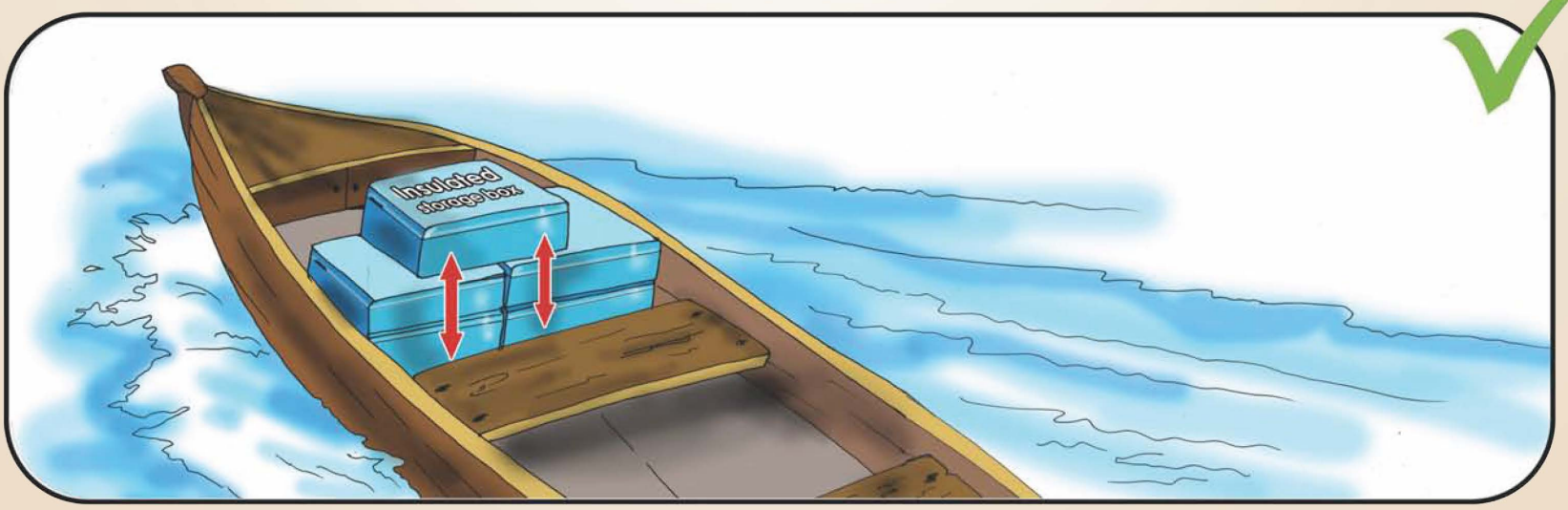
Proper Techniques of Icing Fish on Small Boats



There should not be any head or body part of the fish sticking out of the ice.



Insulated containers must have a proper drainage system.
Melt water should be allowed to properly drain out of the container.

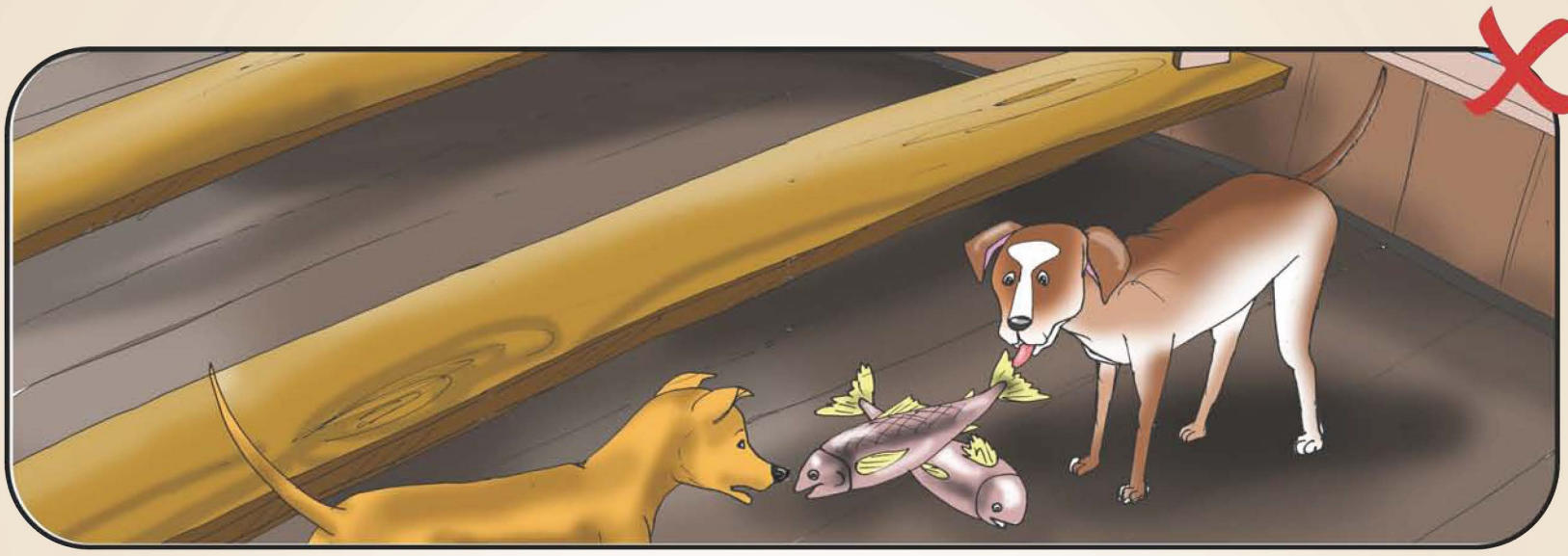


Ice boxes should be properly stacked on the vessel.

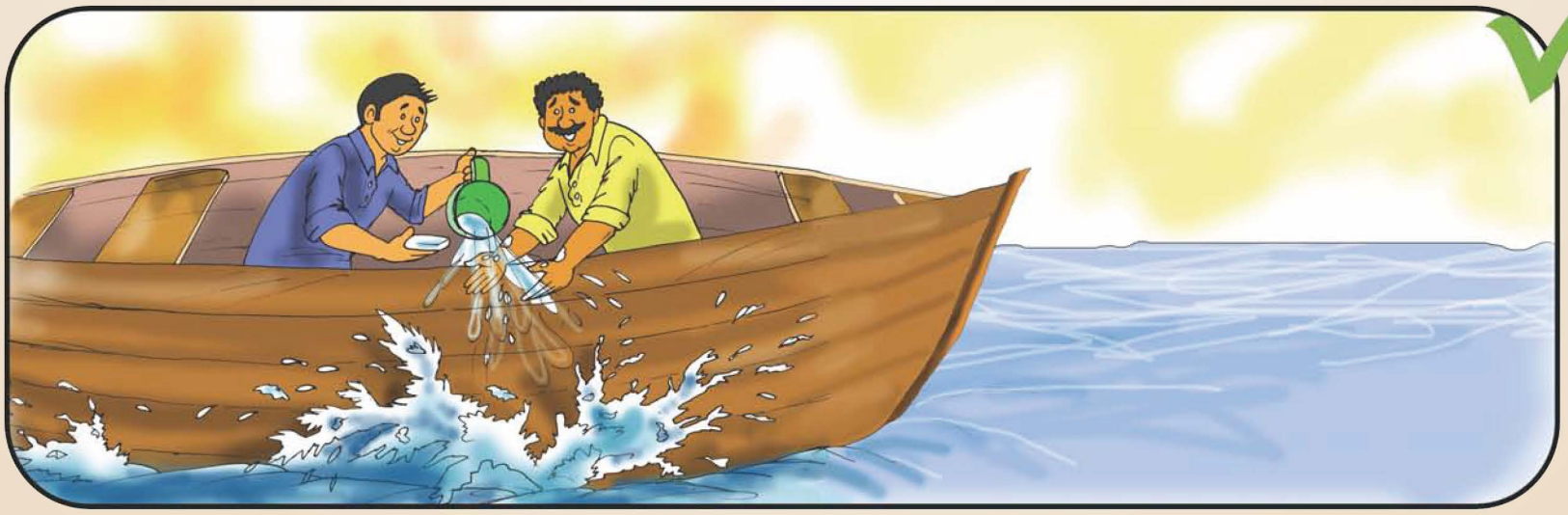
Section 5

Good Hygiene Practices On-Board

The vessel should be washed regularly with clean sea water using detergent.



Animals must be kept physically away from the vessel and fish.



Fishermen should wash hands with clean water and an odorless soap/hand cleaner should be available on the vessel at all times.

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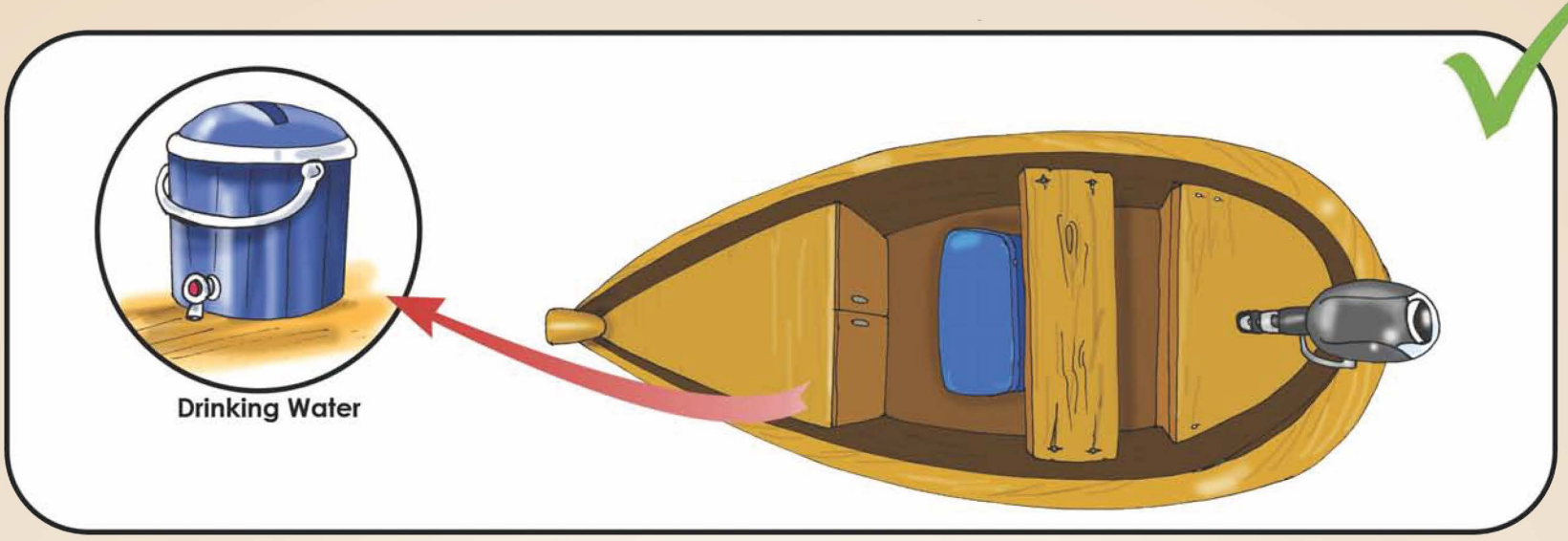
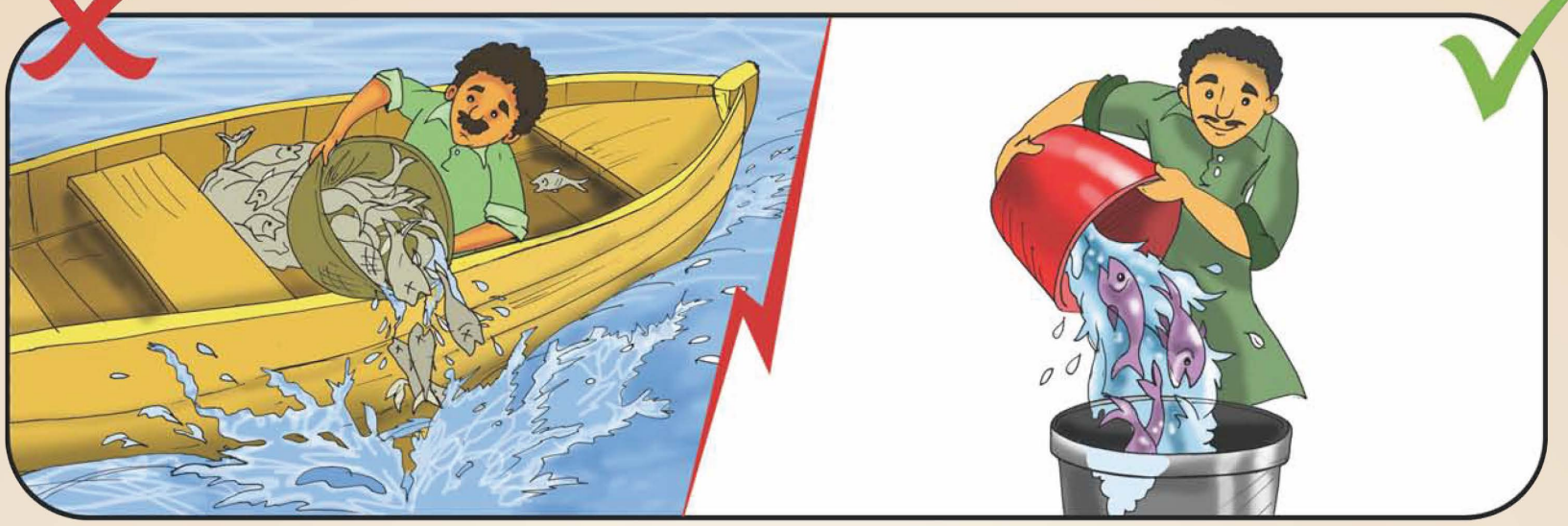
Good Hygiene Practices On-Board



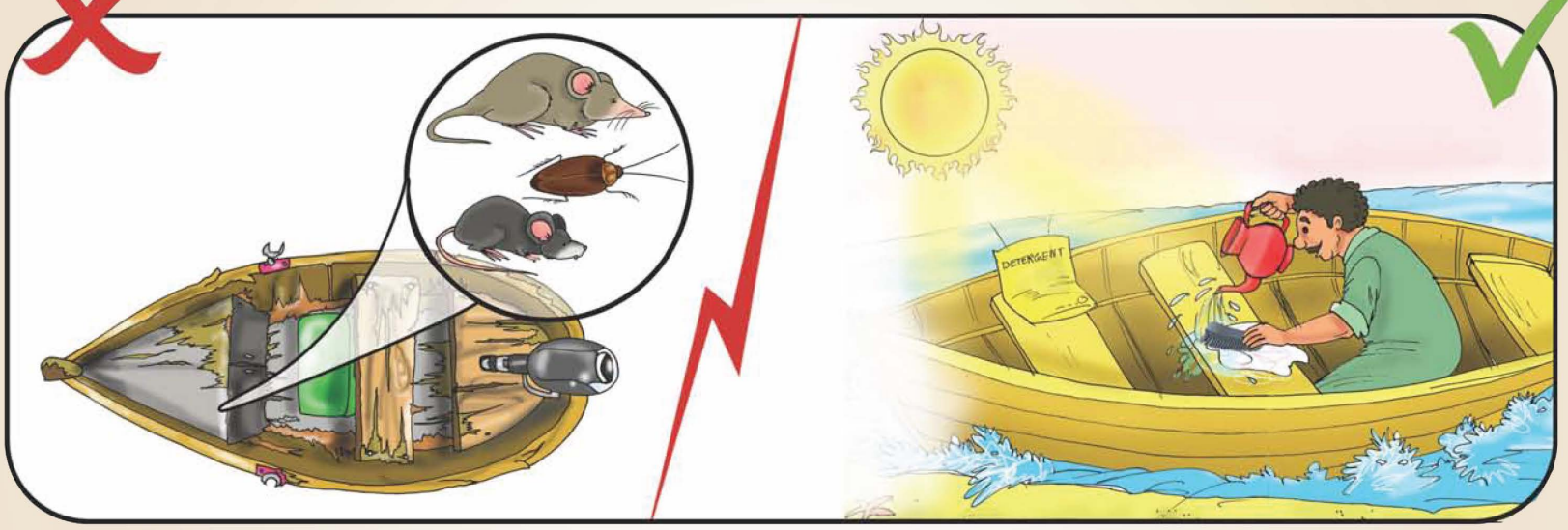
The drinking water should be clean and stored in a separate place on the vessel.

Fishermen should wear clean clothes and avoid wearing any accessories that may harm the fish.

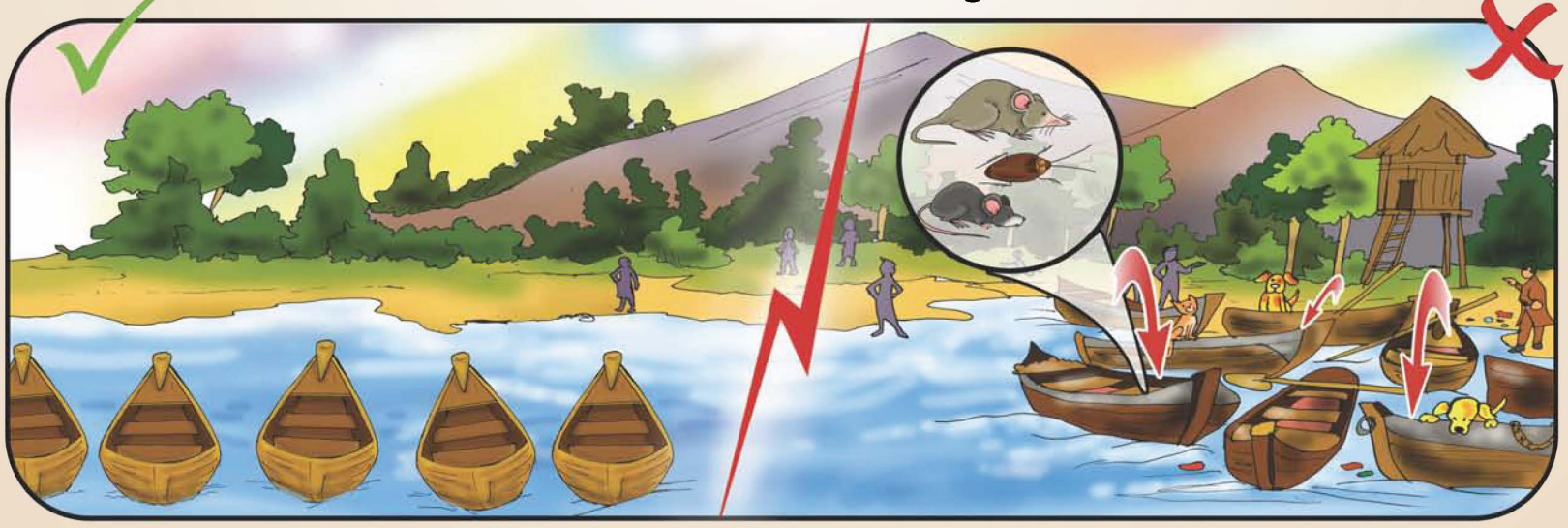
Good Hygiene Practices On-Board



All waste fish should be properly discarded from the vessel and should not be dumped in the sea.



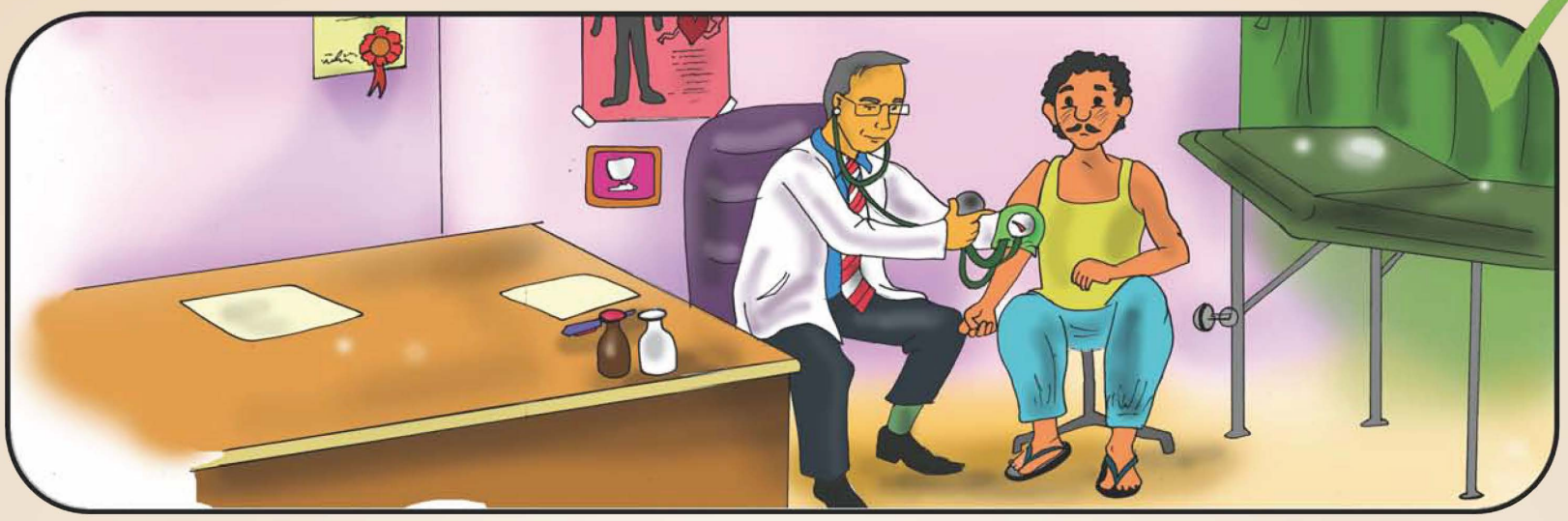
All areas on the boat should be cleaned after use with clean sea water and detergent.



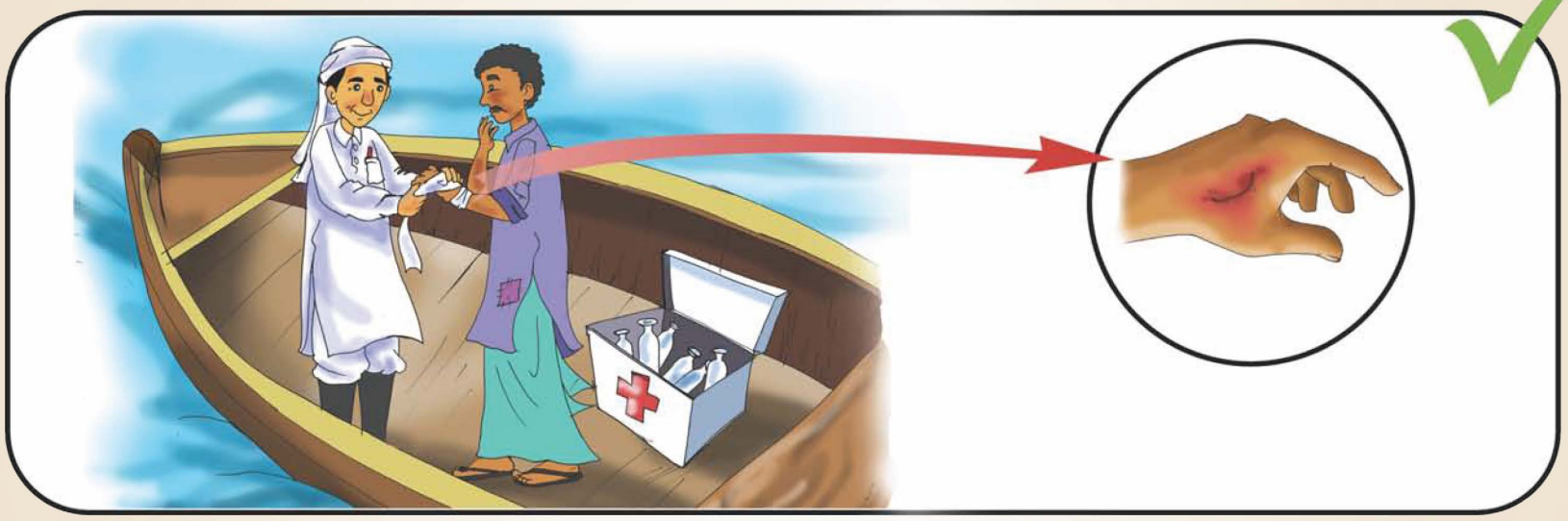
Crowding of the boats should be avoided in order to control pest transfer from one boat to another.

Section 6

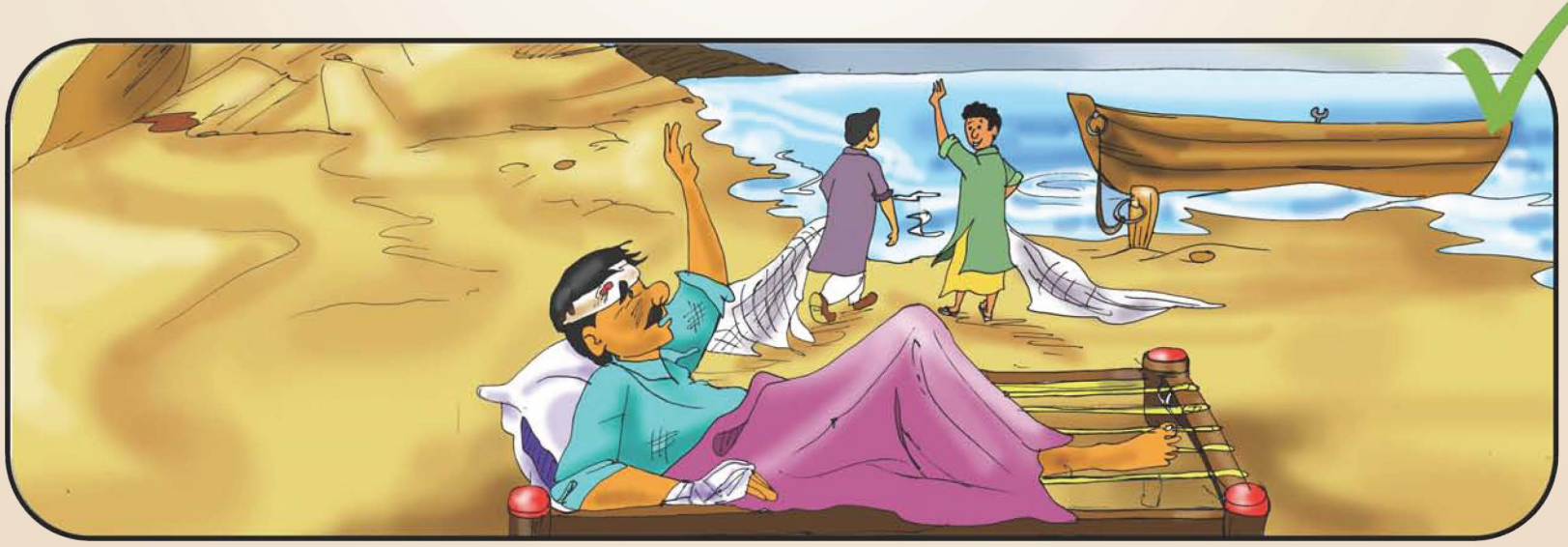
Good Health Care for Fishermen and Other Crew Members on the Boat



The fishermen and other crew members should receive a regular health check.



Someone in the crew on-board should be trained in providing First Aid.



Any fisherman suffering from illness must avoid accompanying the crew.

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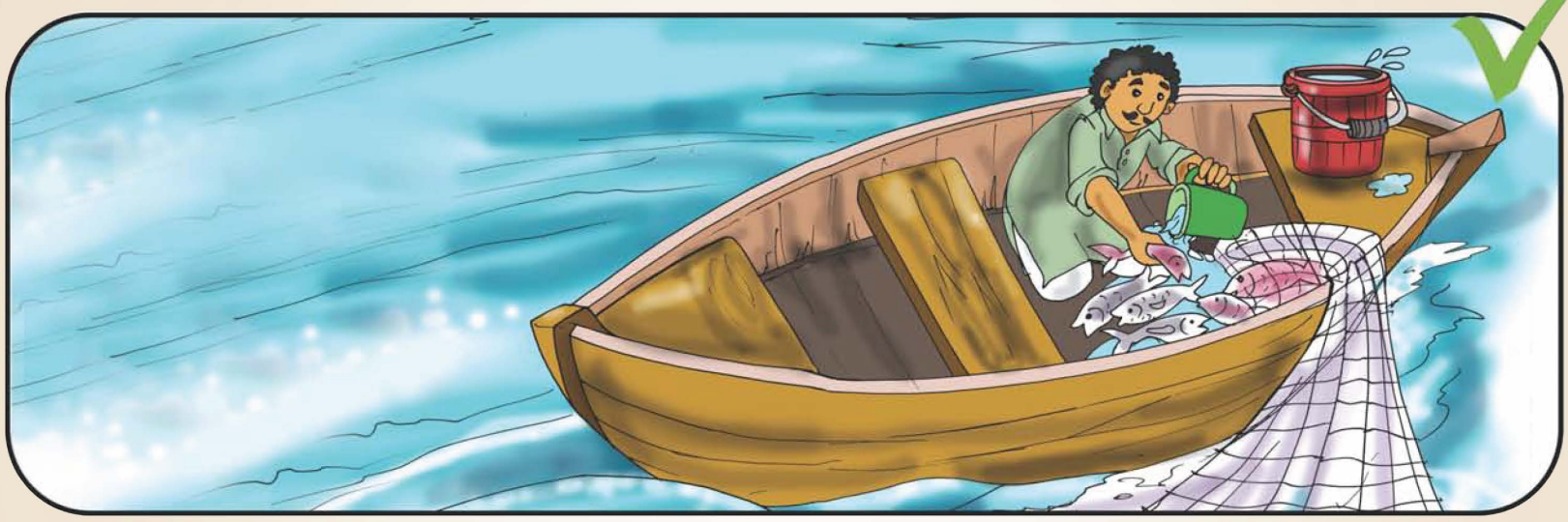
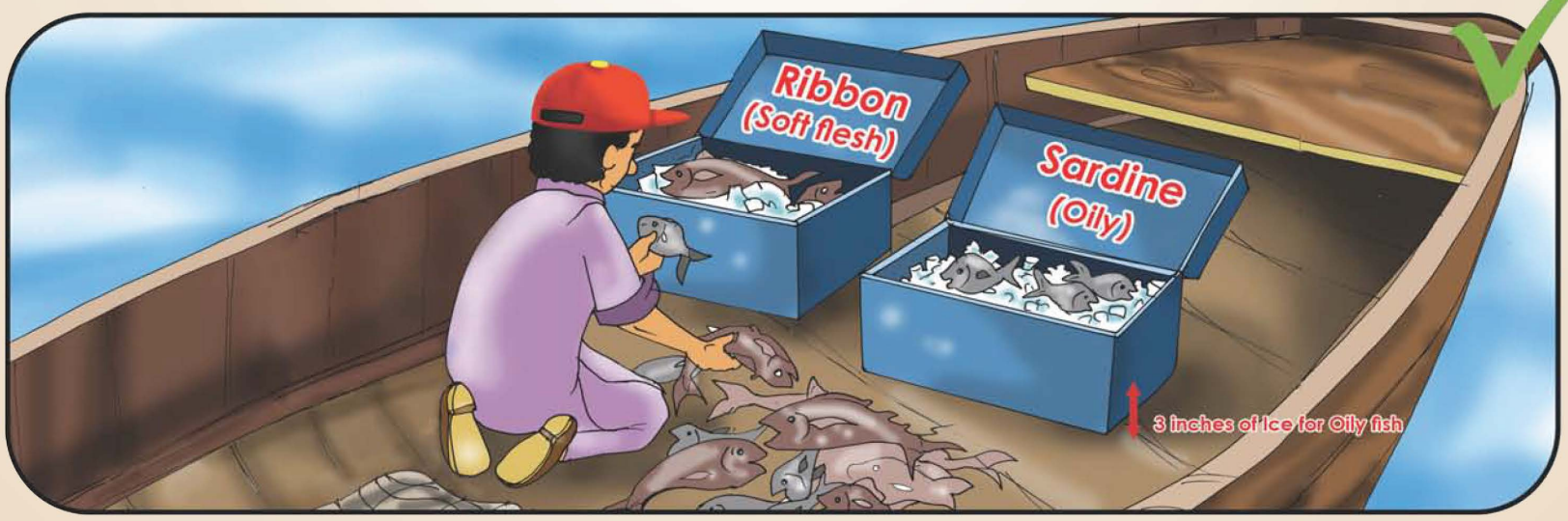
Section 7

Sorting and Grading of Fish On-Board

The Fish hold should be washed with clean sea water before loading and after unloading the fish.



Fish should be washed immediately with clean sea water as soon as it is brought on-board.



For the purpose of sorting out the fish, different methods of icing should be used for oily (sardines) and soft flesh (ribbon) fish respectively.

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Trade Related Technical Assistance (TRTA II) Programme
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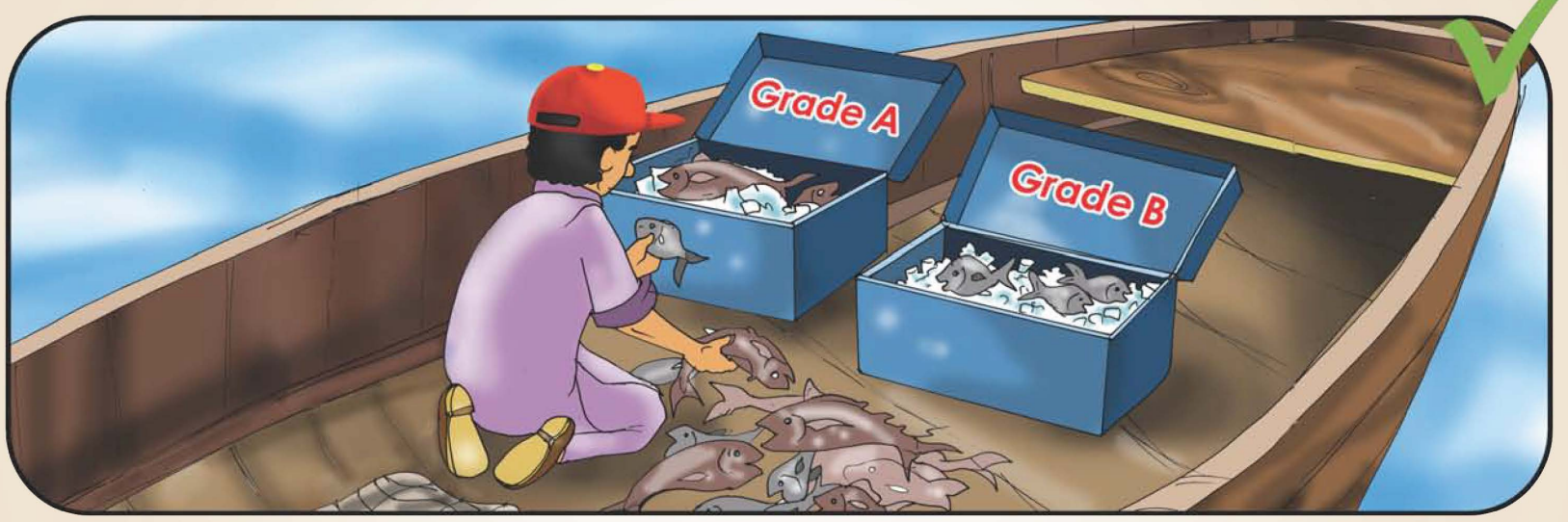
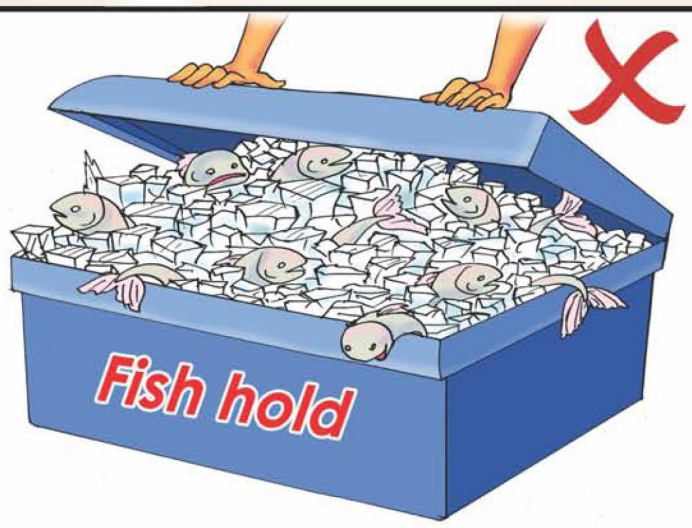
Sorting and Grading of Fish On-Board

Improper fish handling and storage cause revenue loss.

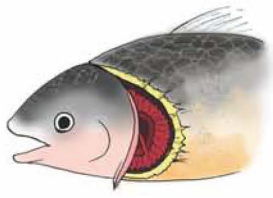
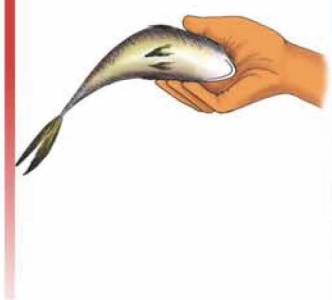
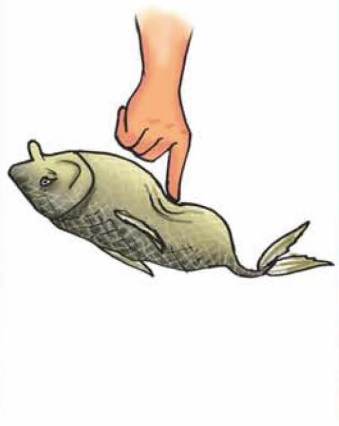
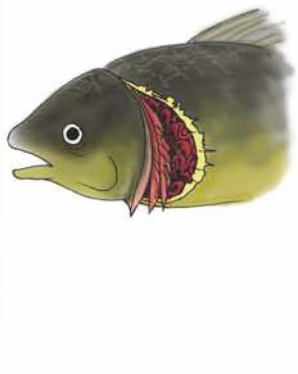


Fish should be stored in different compartments on-board according to its grading type and freshness.



Avoid overloading.

Sorting and Grading of Fish On-Board

Good	Smell	Appearance	Texture	Gills
✓				
Bad				
✗				

Grading should also be done according to the smell, appearance and touch of the fish.

Section 7A (continued...)

Grading of **Fish**

Four Types of Fish Grades

Grade **E**	Grade **A**	Grade **B**	Grade **U**
EXCELLENT	**GOOD**	**ACCEPTABLE**	**UNFIT FOR HUMAN CONSUMPTION**

Freshness Criterion
Appearance

Skin & Mucus
Eyes
Gills & Mucus

SKIN & MUCUS

Grade E
Skin: Shiny Bright and in full Bloom
Mucus: Transparent or Water White

Grade A
Skin: Slight Dullness and loss of bloom
Mucus: Milky and Slightly Brown

Grade B
Skin: Definite Dullness and Lose of Bloom
Mucus: Brown

Grade U
Skin: Completely Dull, Faded and DeColourized
Mucus: Very Slimy and Dark Brown

EYES

Grade E
Convex, Clear and Translucent Cornea

Grade A
Flat, Dull and Slightly Opaque Cornea

Grade B
Slightly Concave and Opaque Cornea

Grade U
Fully Sunken Opaque Eyes

GILLS & MUCUS

Grade E
Gills: Bright Red Colour
Mucus: Translucent

Grade A
Gills: Colour Fades to Pink
Mucus: Slightly Opaque

Grade B
Gills: Bleached and Grey in Colour
Mucus: Opaque

Grade U
Gills: Fringed, Pale and Dark Grey
Mucus: Fully Opaque and Slimy

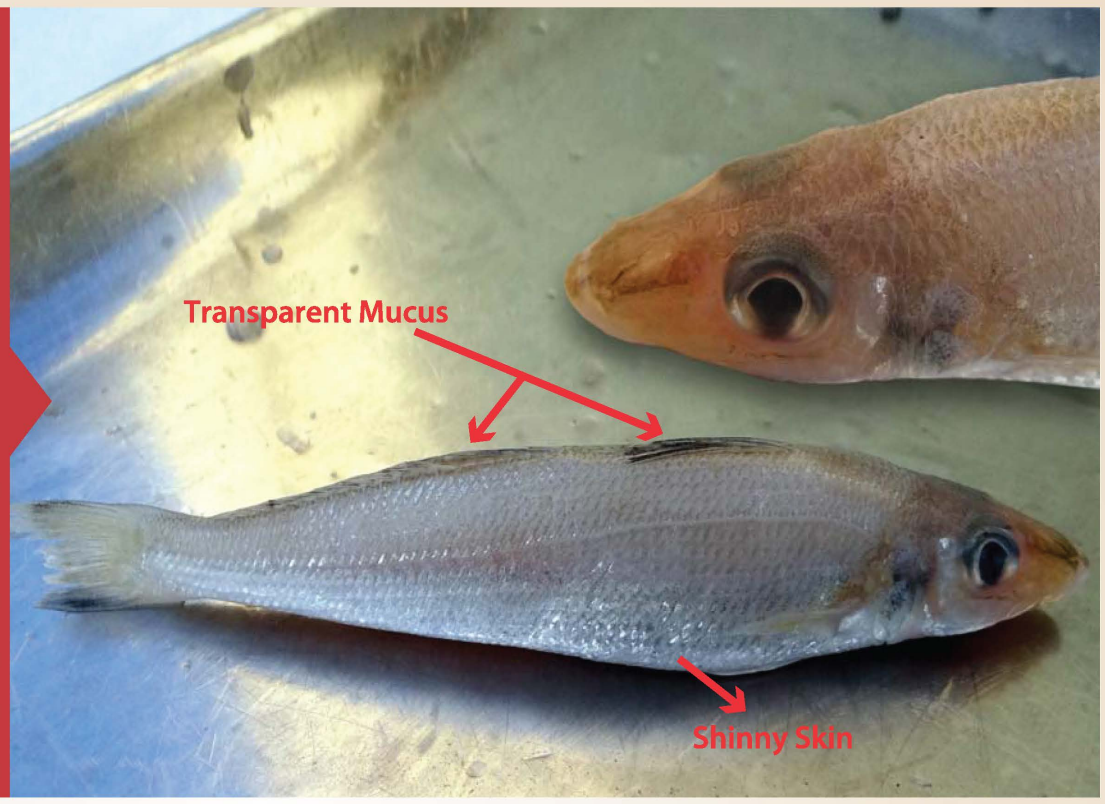
Section 7A (continued...)

SKIN & MUCUS

Grade **E**

Skin: Shiny Bright and in full Bloom

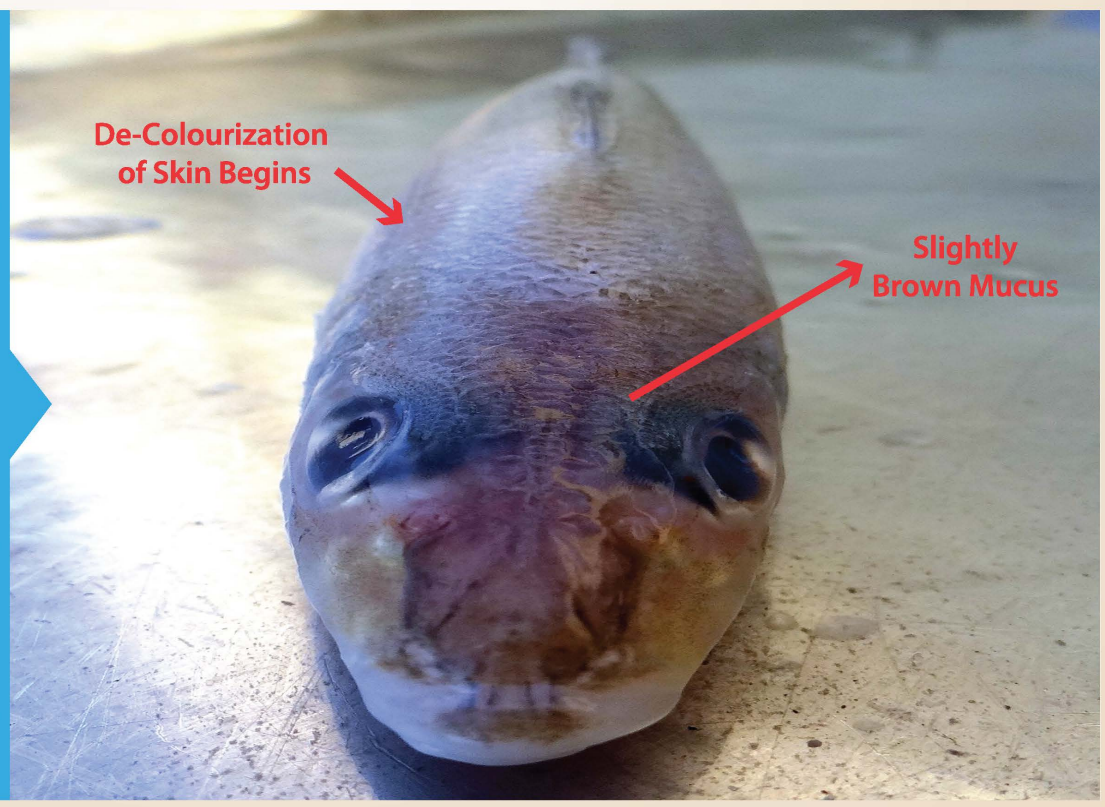
Mucus: Transparent or Water White



Grade **A**

Skin: Slight Dullness and loss of bloom

Mucus: Milky and Slightly Brown



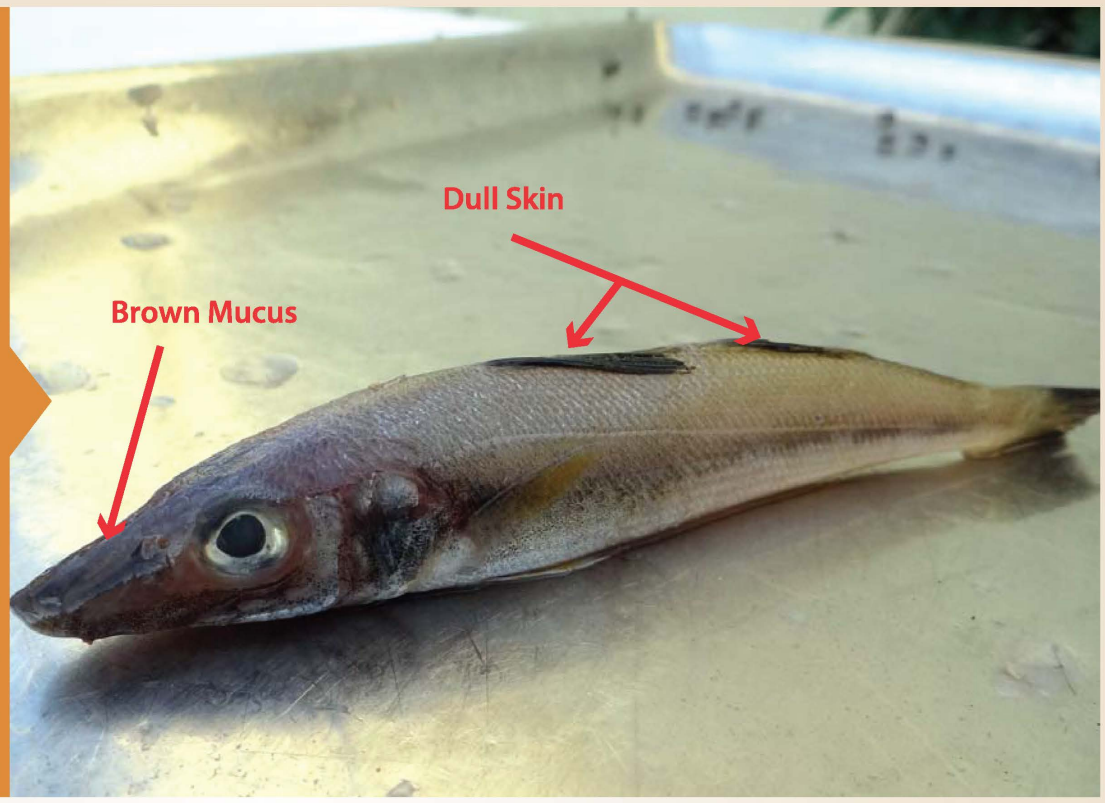
Section 7A (continued...)

SKIN & MUCUS

Grade **B**

Skin: Definite Dullness and Loss of Bloom

Mucus: Brown



Grade **U**

Skin: Completely Dull, Faded and DeColourized

Mucus: Very Slimy and Dark Brown

Section 7A (continued...)

EYES

Grading of **Fish**

Grade **E**

Convex, Clear and Translucent Cornea

Grade **A**

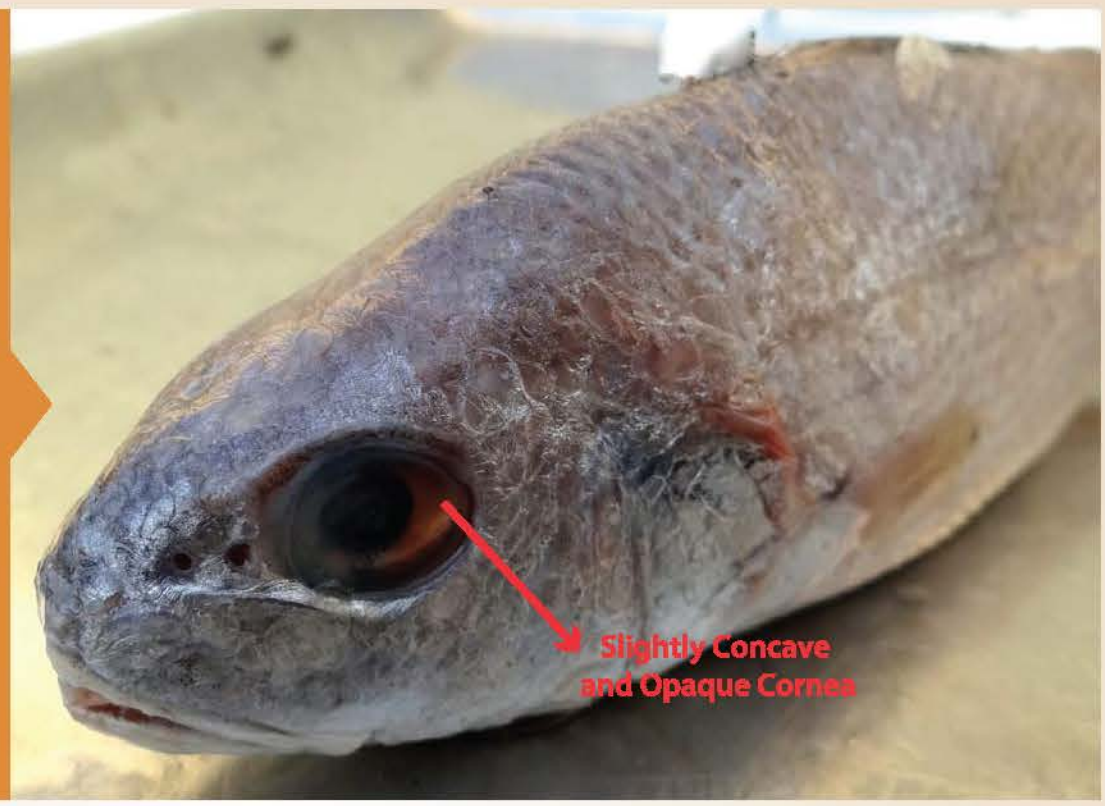
Flat, Dull and Slightly Opaque Cornea

Section 7A (continued...)

EYES

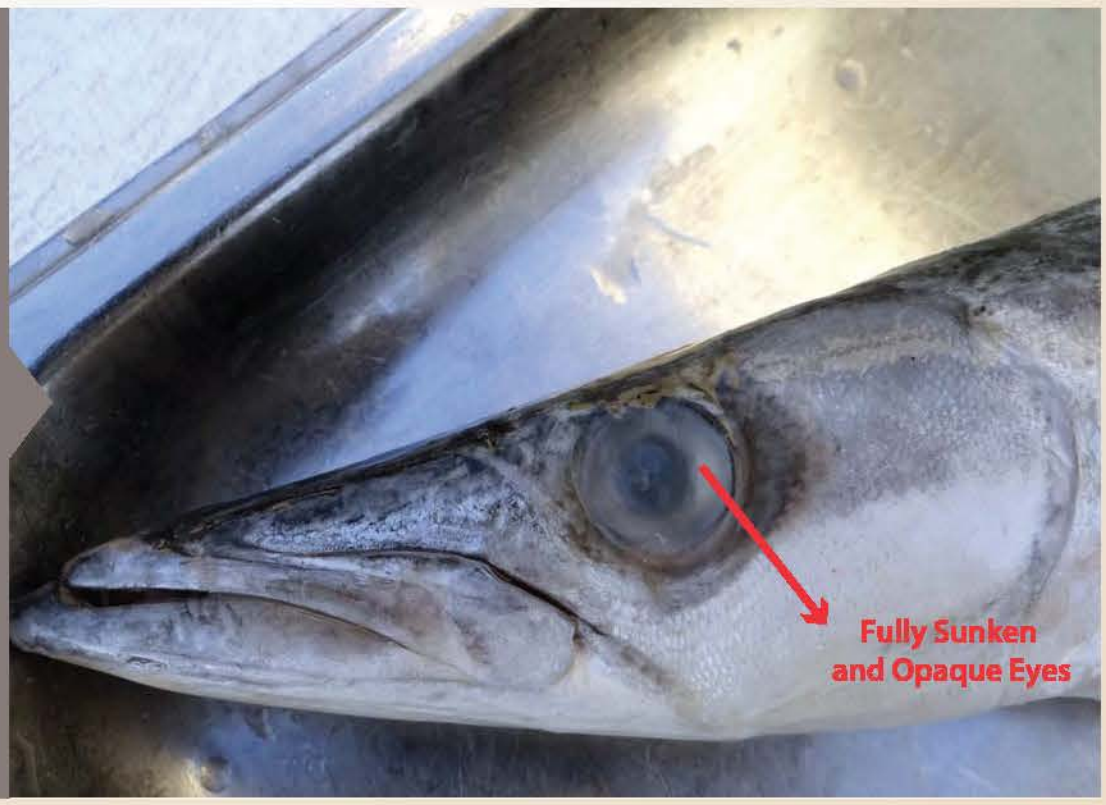
Grade **B**

Slightly Concave and Opaque Cornea



Grade **U**

Fully Sunken Opaque Eyes



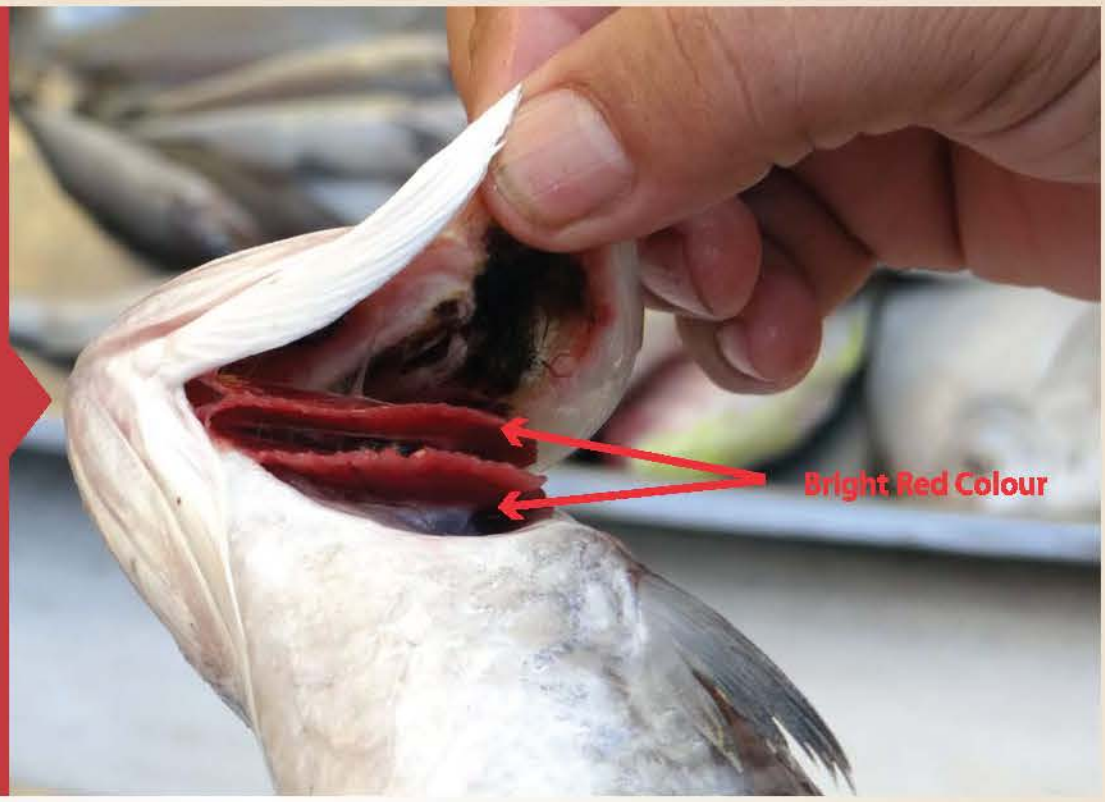
Section 7A (continued...)

GILLS & MUCUS

Grade **E**

Gills: Bright Red Colour

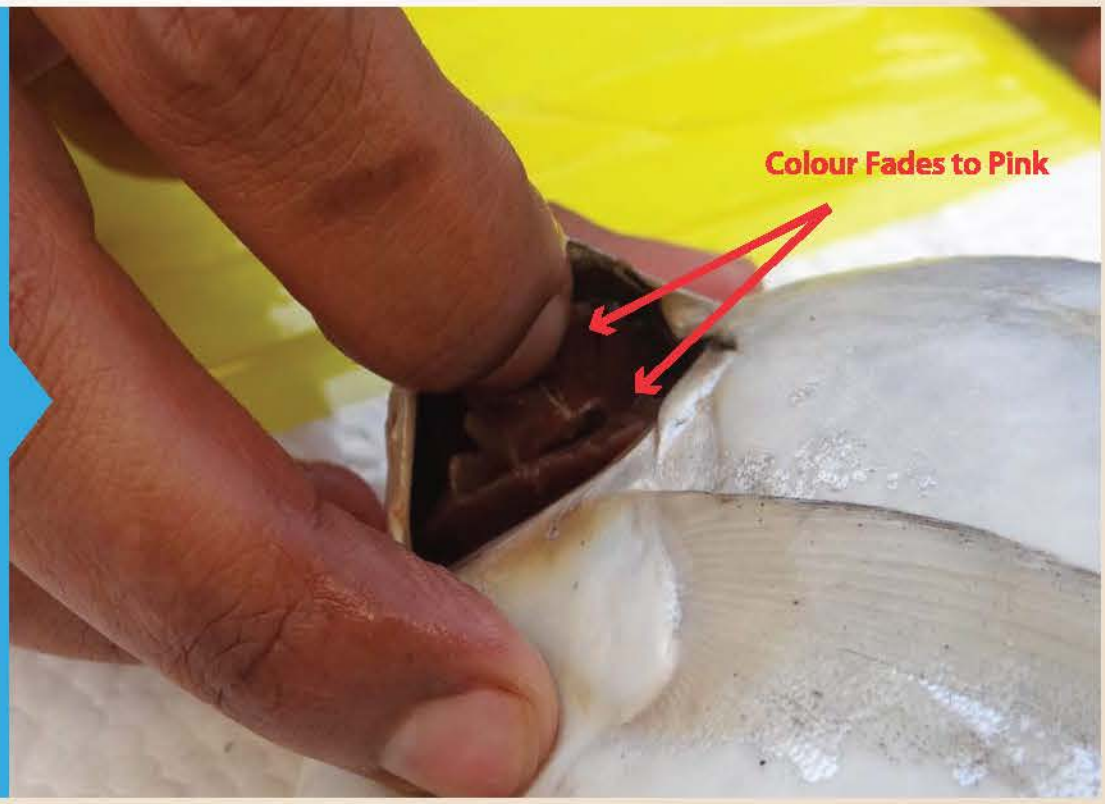
Mucus: Translucent



Grade **A**

Gills: Colour Fades to Pink

Mucus: Slightly Opaque



Section 7A (continued...)

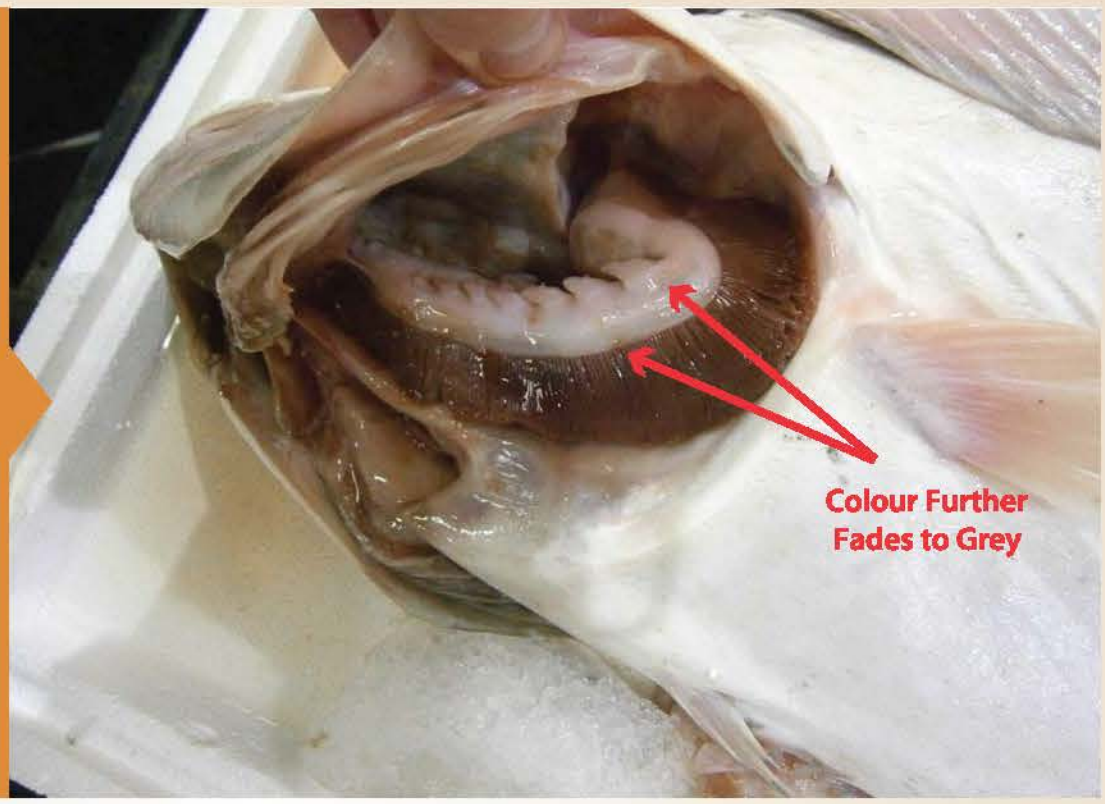
GILLS & MUCUS

Grading of **Fish**

Grade **B**

Gills: Bleached and Grey in Colour

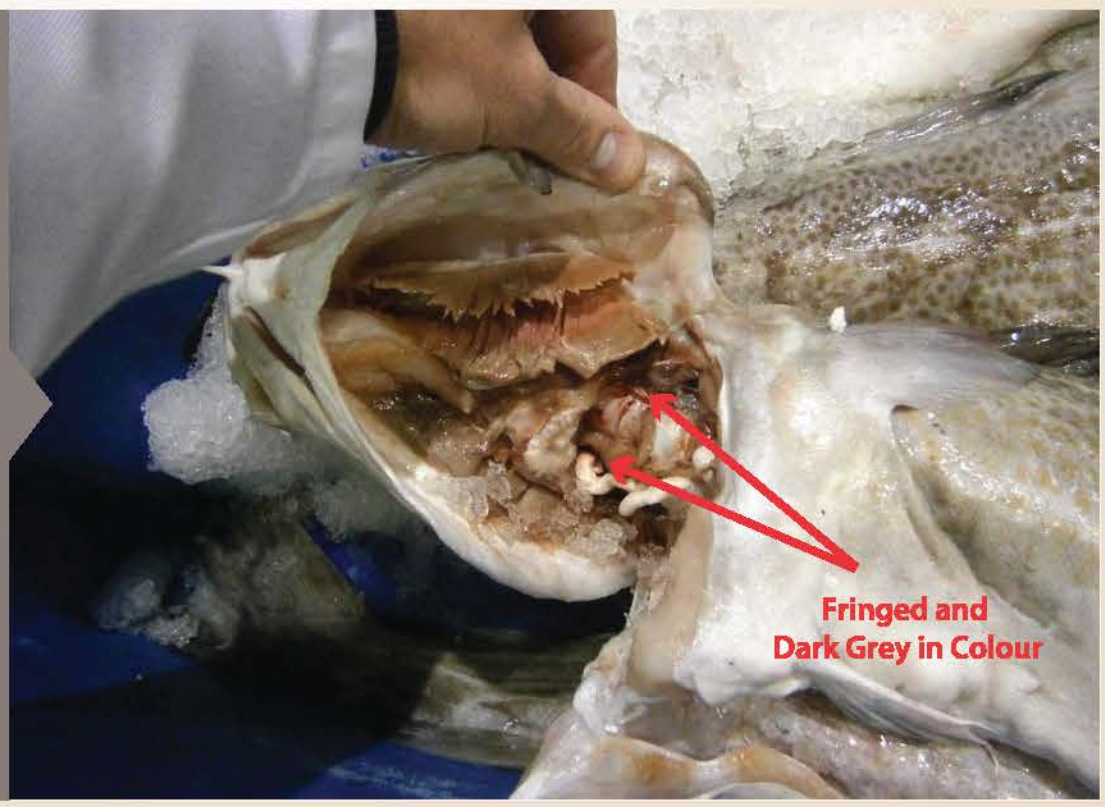
Mucus: Opaque



Grade **U**

Gills: Fringed, Pale and Dark Grey

Mucus: Fully Opaque and Slimy



Section 7B

Grading of **Shrimps & Crabs**

Three Types of Grades of Shrimps & Crabs

Grade E	Grade A	Grade U
EXCELLENT	GOOD	UNFIT FOR HUMAN CONSUMPTION

Freshness Criterion

Shell/Texture | Colour | Odor | Flesh

SHRIMPS

Grade E	Grade A	Grade U
Shell/Texture: Surface of shell firm, moist and shiny **Colour:** Translucent **Odor:** Odorless **Flesh:** Translucent and intact body	**Shell/Texture:** Shell still firm with slight loss of moisture and shine **Colour:** Slight Discoloration **Odor:** slightly unpleasant odor **Flesh:** Intact body but flesh starting to lose translucence	**Shell/Texture:** Softshell with sticky surface **Colour:** Blackening of shell and discolorati on of tail **Odor:** Bad Odor **Flesh:** Complete loss of translucence with tail hanging from the body (separation of head and tail)

CRABS

Grade E	Grade A	Grade U
Shell/Texture: Live Crab **Colour:** Live Crab **Odor:** Live Crab **Flesh:** Live Crab	**Shell/Texture:** Freshly Dead, bright in color with clean white underside. **Colour:** Freshly Dead, bright in color with clean white underside. **Odor:** Odorless **Flesh:** freshly dead. The underside is firm and white	**Shell/Texture:** Loss of liquid from the body **Colour:** Discolored bottom/ underside of carapace and mouth parts. **Odor:** Bad Odor **Flesh:** Open mouth parts and loose and limp legs and claws

Section 7B (continued...)

SHRIMPS

Grading of **Shrimps & Crabs**

Grade **E**

Shell/Texture: Surface of shell firm, moist and shiny

Colour: Translucent

Odor: Odorless

Flesh: Translucent and intact body

Grade **A**

Shell/Texture: Shell still firm with slight loss of moisture and shine

Colour: Slight Discoloration

Odor: slightly unpleasant odor

Flesh: Intact body but flesh starting to lose translucence

Section 7B (continued...)

SHRIMPS

Grading of **Shrimps & Crabs**

Grade U

Shell/Texture: Soft shell with sticky surface

Colour: Blackening of shell and discoloration of tail

Odor: Bad Odor

Flesh: Complete loss of translucence with tail hanging from the body (separation of head and tail)

Section 7B (continued...)

CRABS

Grading of **Shrimps & Crabs**

Grade **E**

Shell/Texture: Live Crab

Colour: Live Crab

Odor: Live Crab

Flesh: Live Crab

Grade **A**

Shell/Texture: Freshly Dead, bright in color with clean white underside.

Colour: Freshly Dead, bright in color with clean white underside.

Odor: Odorless

Flesh: freshly dead. The underside is firm and white

Section 7B (continued...)

CRABS

Grading of **Shrimps & Crabs**

Grade **U**

Shell/Texture: Loss of liquid from the body

Colour: Discolored bottom/ underside of carapace and mouth parts.

Odor: Bad Odor

Flesh: Open mouth parts and loose and limp legs and claws

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