

Let them go: Release undersized, untargeted or unwanted fish!

Is it weird for fishers to release fish? Not at all. It is actually smart to let some fish go back to the ocean, such as fish that are under the minimum size limit or are protected during their spawning season. Fishers who catch them and release them alive give them a chance to reproduce. Also, fish that are poisonous or not edible should go back to the ocean because they help keep the reefs alive and healthy.

Fish remain on the surface, sometimes belly up

Have you ever noticed that some released fish remain on the surface, sometimes belly up? That is the result of what is called barotrauma: when you quickly bring a fish from the bottom to the surface, the rapid change in pressure causes the gases in the fish's body to expand. Sometimes it causes the stomach to get pushed out through the mouth and leaves it with swollen eyes.

Why release a fish if it will just float helpless at the surface, ready to be eaten by large predators such as sharks or barracuda? Because, thanks to a specific gear (called descending gear), you can quickly send fish back down to the deep, where the pressure of the gases will go back to normal naturally, allowing it to recover and swim away.

Field trip

In November 2019, Fiji's Ministry of Fisheries requested the Pacific Community (SPC) to provide advice on simple and practical ways for Fijian fishers to immediately release groupers that they catch incidentally during the four-month grouper ban.

Following this request, SPC worked to produce and test various types of descending gear. A small "SPC grouper release team" (Ian Bertram, Alexandre Brecher, Celine Muron, Watisoni Lalavanua and William Sokimi) was formed in May 2020 to collect information on methods used in other parts of the world, contact a few well-known Pacific Island fishers, and produce several models of descending gear using materials commonly available in the Pacific Islands region. In the middle of the worldwide lockdown due to COVID-19, the team could not travel to Fiji and decided to tap into local networks to finalise the method and produce a training video with images taken locally. The team travelled to New Caledonia south lagoon with local fishers to test the descending gear and refine the method with the help of New Caledonia's Province Sud fisheries authorities. And it worked!

How to produce and use descending gear

You can make a simple descending gear using a hook, a longline clip or a clothes hanger, and a weight. The idea is to make a special "hook" linked to a weight that will allow the fish to free itself when it reaches the right depth or the bottom. The illustrations displayed on the two following pages detail how to make descending gear, and how to use it.

A video and brochure to promote the use of descending gear

Using images taken during the field trip as well as illustrations and animated images specifically created for the project, a brochure and a training video have been produced and made available at:

Brochure: <http://purl.org/spc/digilib/doc/zjtmz>

Video: <https://youtu.be/3R2f7pWMisg>

This regional information tool was produced by the Pacific Community thanks to the New Zealand-funded Effective Coastal Fisheries Management project¹ and the Pacific-European Union Marine Partnership Programme.²

For more information:

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¹ The Coastal Fisheries Governance project, officially titled "Improving fisheries food security and sustainable livelihoods for Pacific Island communities", is funded by the New Zealand Ministry of Foreign Affairs and Trade. More information is available at: <https://fame1.spc.int/en/projects/mfat>

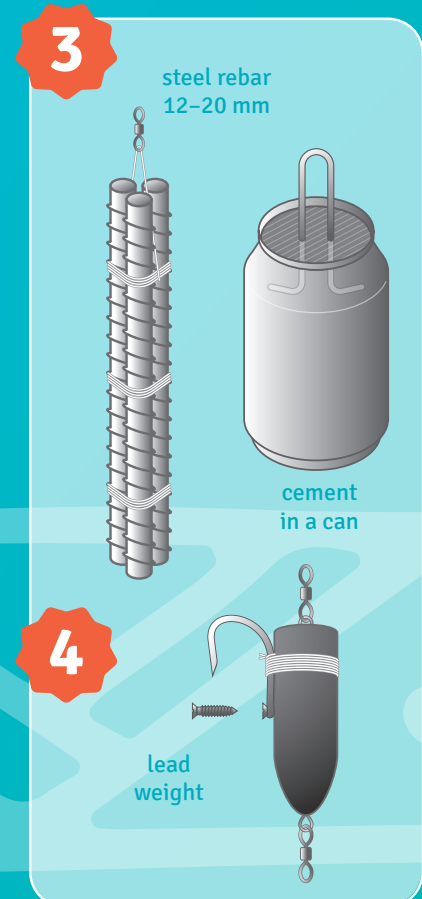
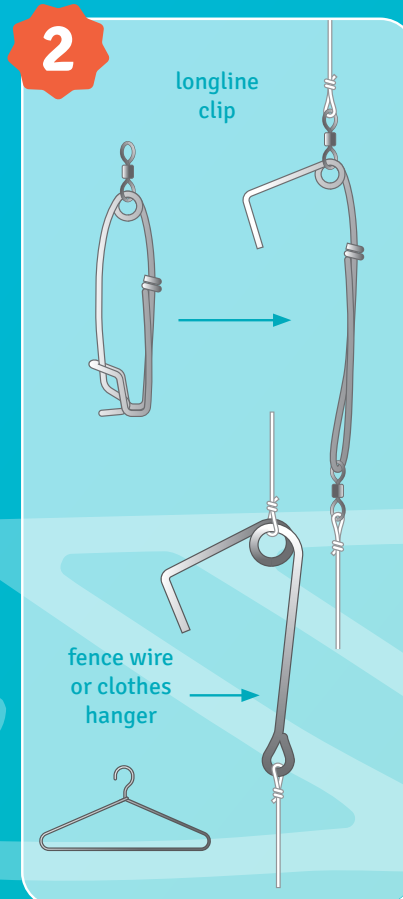
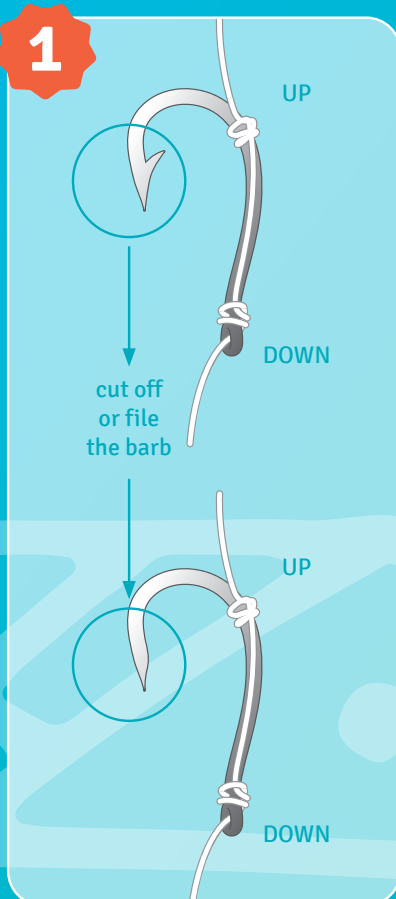
² Funded by the European Union and the Government of Sweden, the EUR 45 million PEUMP programme promotes sustainable management and sound ocean governance for food security and economic growth, while addressing climate change resilience and the conservation of marine biodiversity. It follows a comprehensive approach, by integrating issues related to oceanic fisheries, coastal fisheries, community development, marine conservation and capacity building under one single regional action.

How to make descending gear?

A descending gear is a device that allows you to take a live fish back down to the bottom.

You can make a simple descending gear using a **hook**, a **longline clip** or a **clothes hanger**, and a **weight**. The idea is to make a special “hook” linked to a weight that will allow the fish to free itself when it reaches the right depth or the bottom.

- 1 If using a large “J” **hook**, you need to cut off or file the barb.
- 2 If using a **longline clip** or a **clothes hanger**, you will have to cut the ends and give it the shape of a big barbless hook. Small gauge (but strong) wire can be easily shaped as release hooks.
- 3 As for the **weight**, it can be made of lead, steel rebar, cans or PVC pipes filled with cement, or any other heavy material.
 - The size of the weight should match the size of the fish released, so it doesn’t go too fast to the bottom.
 - For small fish, 500 grams should be enough. For bigger fish, more than 750 grams may be needed.
- 4 You can also fix the **barbless hook** to the weight.



How to use descending gear?

You've just caught an undersized, untargeted or unwanted fish. How to deal with it?

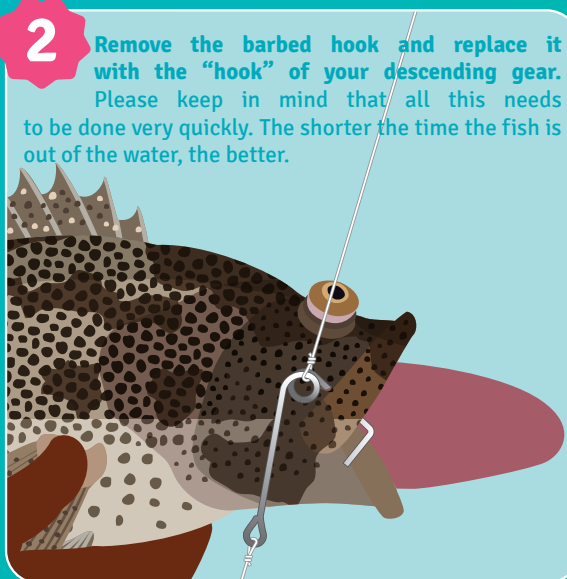
1

Take it out of the water carefully.



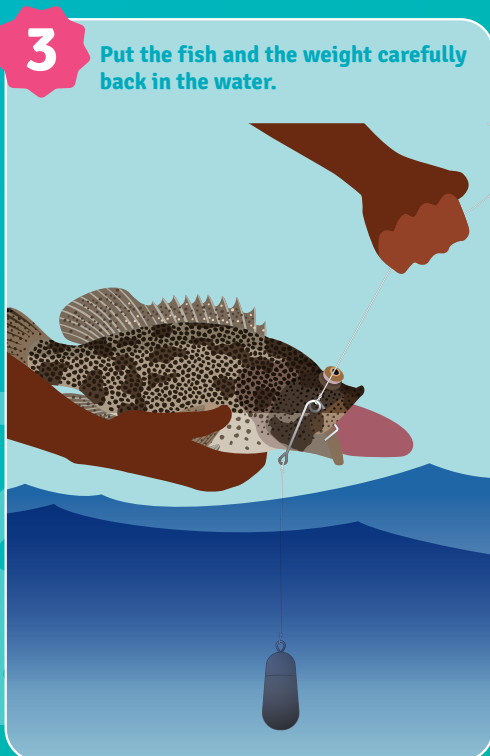
2

Remove the barbed hook and replace it with the "hook" of your descending gear. Please keep in mind that all this needs to be done very quickly. The shorter the time the fish is out of the water, the better.



3

Put the fish and the weight carefully back in the water.



4

Let them sink to the bottom.

The weight will drag the fish down until it reaches the bottom. Then, just give some slack to the line and a little tug, and you will allow the fish to free itself from the hook and swim away for protection. And that's it!

