



**Australian Government**

**Australian Fisheries Management Authority**

Our Ref F2005/0611

20 December 2005

Dear SESSF Concession holder

### **SESSF Direction No. 05 Gear Requirements for the Commonwealth Trawl Sector**

Please find enclosed a new SESSF Direction relating to codend specifications that will come into force on 14 January 2006 and will apply to all holders of a trawl boat statutory fishing right in the Commonwealth Trawl Sector (CTS), excluding Danish seine and prawn trawl.

Also enclosed are:

- The Explanatory Statement for the Direction; and
- An information guide from SETFIA and SeaNet showing how to cut out and fit square and rotated mesh panels into the codend.

This Direction requires that the codends conform to one of the following options:

- 90 mm single twine mesh; or***
- Double twine mesh of at least 102 mm (4 inch) or greater; or***
- 90 mm double twine mesh, with one or more of the following prescribed bycatch reduction modifications:***
  - ***A single large square mesh panel (at least 90 mm) in the upper side of the codend bag (dimensions 15 bars X 20 bars); or***
  - ***A single large rotated mesh (T90) panel (at least 90 mm) in the upper side of the codend bag (15 meshes X 20 meshes).***

This Direction is the result of gear modification work undertaken by industry in an effort to reduce bycatch, including the catch of small or juvenile quota species. While the uptake of larger mesh and the use of square or rotated mesh panels have been significant on a voluntary basis, it is recognised that more needs to be done to further reduce incidental bycatch and discarding of quota species. Work will continue to measure the performance of the modifications. It is expected that this work may provide some important information into the potential of T90 extensions (extensions constructed solely out of rotated mesh) as a tool to improve selectivity in the trawl fishery.

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SETMAC also recommended to AFMA that 115 mm mesh (4 ½ inch) be adopted as the minimum mesh size used in the wings and net mouth (shoulders, belly and veranda) of the trawl gear. While AFMA has agreed to this recommendation, due to the limited advance notice and considering the extent of work and netting required to make these changes, AFMA has agreed to implement the mesh size limits for the wings and net mouth through a second Direction that will come into force on 1 July 2006. AFMA will provide further detail on this Direction early in 2006.

If you require any further information on the Direction please contact Matt Piasente at AFMA on 02 62725587 or e-mail [matthew.piasente@afma.gov.au](mailto:matthew.piasente@afma.gov.au). If you require technical information about square or rotated mesh panels, please contact either Jim Newman from SeaNet (03 9824 0744) or Ian Knuckey (0408 581599).

Yours sincerely

A handwritten signature in black ink, appearing to read 'Steve Bolton', written in a cursive style.

Steve Bolton  
Manager  
South East Trawl Fishery

## EXPLANATORY STATEMENT

Issued by the Authority of the Managing Director  
of the Australian Fisheries Management Authority

*Fisheries Management Act 1991*  
*Southern and Eastern Scalefish and Shark Fishery Management Plan 2003*

### SESSF Direction No. 05

Subsection 17(5A)(a) of the *Fisheries Management Act 1991* (the Management Act) provides that a plan of management made under the Management Act may provide for the Australian Fisheries Management Authority (AFMA), after such consultations (if any) as set out in the plan of management, to direct that fishing is not to be engaged in, in the fishery, or a particular part of the fishery, during a particular period of periods.

Subsection 17(5B) provides that a Direction under 17(5A)(a) in relation to a part of a fishery may identify the part concerned in any way or ways, including by reference to a particular kind, size or quantity of fishing equipment.

Subsection 56(1) of the *Southern and Eastern Scalefish and Shark Management Plan 2003* (*SESSF Plan*) provides that AFMA may direct that fishing is not to be engaged in the fishery, or a part of the fishery, during a particular period or periods. Section 5 of the *SESSF Plan* provides objectives of the *SESSF Plan*, including the implementation of efficient and cost effective management of the fishery.

Subsection 56(2) of the *SESSF Plan* provides that, before AFMA issues a direction, it must consult and consider the views of, each relevant management advisory committee about the content of the direction unless the direction is issued in circumstances of an emergency.

Section 92 of the *Fisheries Administration Act 1991* provides for AFMA to delegate its powers and functions to, among others, the Managing Director of AFMA. Subsection 17(11) of the Management Act permits AFMA to delegate its powers to make directions (among other things) only to the Managing Director. AFMA has delegated its power to make Directions to the Managing Director.

### **Background**

Over the past couple of years, the South East Trawl Management Advisory Committee (SETMAC) has discussed the need to reduce bycatch, especially of small and juvenile fish (such as juvenile grenadier, eastern gemfish and small redfish). While the uptake of larger mesh and the use of square or rotated mesh panels has been significant on a voluntary basis, it is recognised that more needs to be done to further reduce this incidental catch. Industry have been motivated to develop net modifications because

mortality of juvenile or small quota species is taken into account in setting total allowable catches and therefore has a negative impact on their potential revenue.

### **Purpose**

Specified fishing gear requirements are recommended based on industry trials and the experience of South East Trawl Fishery (SETF) fishers using modified gear in some or all of their activities. These specifications have been elaborated on through specific Fisheries Research and Development Corporation (FRDC) Projects. Work on further quantifying the performance of some of the modifications will be ongoing. It is expected that this work may provide some important information into the potential of T90 extensions (extensions constructed solely out of rotated mesh) as a tool to improve selectivity in the SETF.

Advantages of the proposed refinements of the regulated codend mesh size in the South East Trawl Fishery include:

- Cost effective
  - operators can continue using their current codends (albeit with the addition of bycatch modification (square or rotated panel). This has minimal cost implications because material from current codends is used.
  - minimum compliance time required, as the panel is easily visible on the net drum.
- Potentially significant reduction in bycatch of small and juvenile fish.
- Pursues Industry's commitment to the *EPBC Act*, Strategic Assessment requirements and AFMA's Ecologically Sustainable Development legislative objective.

### **Consultation**

At the South East Trawl Fishing Industry Association (SETFIA) meeting in June 2005, industry members developed and discussed two options available to the industry to reduce discards. These were to move to 102/115 mm (4 / 4 1/2 inch) mesh codend or to adopt the use of 90 mm single twine. SETFIA undertook extensive consultation with industry in developing the options. The meeting was advised that single twine 90 mm may burst with larger catches and may wear out more quickly than double twine. Based on the gear modification being tested, industry agreed that an alternative would be that if an operator was using 90 mm double twine mesh, a square or rotated-mesh panel would have to be fitted within the top panel of the cod end. Industry members advised the meeting that various codend and net modifications were being developed by industry that could appropriately address many of these issues. It was agreed that Industry recommendations of appropriate gear changes were to be developed and considered at SETMAC 91 (November 2005).

SETMAC 91 recommended to AFMA that permissible mesh size in codends be defined in a statutory Direction to take effect on 1 January 2006.

On the 2<sup>nd</sup> of December 2005 AFMA wrote to the Office of Regulatory Review (ORR) seeking advice on whether a Regulation Impact Statement (RIS) was required for this Direction. A RIS exception was advised (ID 7843) due to the proposal being of a minor or machinery nature and does not substantially alter existing arrangements.

Details of the Direction are set out below:

*Clause 1* provides for the Direction to be cited as SESSF Direction No. 05.

*Clause 2* provides for the commencement of the Direction.

*Clause 3* states to whom the Direction applies.

*Clause 4* sets out the period of application of this Direction.

*Clause 5* defines certain terms used in the Direction and provides that terms used in the Direction that are defined for the purposes of the Plan have the same meanings as they have in the Plan. The note indicates that terms defined in the Management Act have the same meaning in the Direction.

*Clause 6* states the specific gear requirements and the bycatch reduction devices are detailed in Schedule 1.

**SESSF No. 05**

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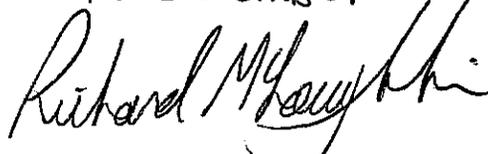
**FISHERIES MANAGEMENT ACT 1991**  
**SOUTHERN AND EASTERN SCALEFISH AND SHARK FISHERY**  
**MANAGEMENT PLAN 2003**

**SESSF DIRECTION No. 05**

**GEAR REQUIREMENTS FOR THE COMMONWEALTH**  
**TRAWL SECTOR**

I, Richard John McLoughlin, Managing Director of the Australian Fisheries Management Authority, as delegate, make the following Direction under subsection 17(5A)(a) of the *Fisheries Management Act 1991* and subsection 56(1) of the *Southern and Eastern Scalefish and Shark Fishery Management Plan 2003*.

Dated 17 December 2005



Managing Director,  
Australian Fisheries Management Authority

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**Citation**

1. This Direction may be cited as SESSF Direction No. 05.

**Commencement**

2. This Direction commences on the 14 January 2006.

**Application**

3. This Direction applies to a holder of a trawl boat statutory fishing right in the Commonwealth trawl sector (excludes danish seine and prawn trawl) of the Southern and Eastern Scalefish and Shark Fishery and to a person acting on behalf of the holder.
  - 3.1 However, this Direction does not apply to the holder of a scientific permit that authorises the use of an alternative fishing gear type.

**Period of Application**

4. This Direction applies for a period beginning on the date this Direction commences and ending at 2400 hours UTC on the 31 December 2006.

**Interpretation**

- 5.1 In this Direction:
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**"boat"** means a boat that is nominated on a trawl boat statutory fishing right for the Southern and Eastern Scalefish and Shark Fishery;

**"fishing"** means the commercial fishing activities that are referred to in section 20 of the *Southern and Eastern Scalefish and Shark Fishery Management Plan 2003* and defined in the *Fisheries Management Act 1991*;

**"equipment"** means equipment for fishing;

**"bycatch reduction device"** means a device that allows fish and other animals to escape immediately after being taken in the net and is constructed in accordance with Schedule 1;

**"UTC"** means Coordinated Universal Time, the time scale based on the second (SI), maintained by the International Bureau of Weights and Measures. For the purposes of this Direction UTC is equivalent to mean solar time at the prime meridian (0 degrees longitude), formerly expressed in Greenwich Mean Time (GMT).

**5.2** A term used in this Direction that is defined for the purposes of the Southern and Eastern Scalefish and Shark Fishery Management Plan 2003 has the same meaning in this Direction as it has in that plan.

- [Notes: 1. Terms defined in the *Fisheries Management Act 1991* have the same meanings in this determination.
2. Terms defined in the Southern and Eastern Scalefish and Shark Fishery Management Plan 2003 include "Southern and Eastern Scalefish and Shark Fishery" and "Southern and Eastern Scalefish and Shark Fishery area". ]

### **Gear requirements**

- 6** The fishery is closed to a boat using a net unless the net or nets used by the boat has the following requirements:
- (a) A codend of 90 mm single twine mesh; or
  - (b) A codend of double twine mesh of at least 102 mm (4 inch) or greater;
- or
- (c) A codend of 90 mm double twine mesh, with one or more bycatch reduction device (as described in Schedule 1).

Note: All mesh sizes are measured from knot centre to knot centre when stretched diagonally.

## **SCHEDULE 1**

**Each of the following are bycatch reduction devices:**

1. A single large square mesh (at least 90 mm) panel in the upper side of the codend bag (dimensions 15 bars X 20 bars).
  2. A single large rotated mesh (T90) panel (at least 90 mm) in the upper side of the codend bag (15 meshes X 20 meshes).
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smarter fishing for industry

## **Design and fitting of square/rotated mesh panels in codends.**

Square mesh and rotated mesh panels have shown to improve the escape of juvenile commercial species along with small bycatch fish species from the codend of trawls. Bycatch is reduced by allowing the escape of small fish through meshes that are held open with towing tension applied. The following outlines how to construct a square or rotated mesh panel and fitted into the codend.

### **Square mesh panel**

#### **Cutting out**

Sheet netting is usually produced with meshes on the "diamond". The square mesh panel is cut out of sheet netting by cutting along the bar (Figure 1). One extra mesh should be included around the perimeter which is marled back by one bar onto the actual perimeter to give some added strength. The marling can be in either single or double twine and should give the panel a neat stiff perimeter (Figure 2).

#### **Panel fitting**

Before joining the window into the net, check that its length corresponds exactly to the hole cut out of the net, by measuring length for length along the intended seam. The codend and the panel edge should be stretched tight for the measurement. With the front and rear joins in place, the panel should be a close fit (**neat to the hole**) enabling the panels sides to be neatly laced into the codend (Figure 3).

The square meshes can be joined directly to the diamond meshes. It is best to clove hitch every square mesh bar and apply a weaver's knot to the diamond meshes. Every second or third square mesh can be clove hitched with the twine looped through the intervening meshes for quick attachment. Alternatively, diamond meshes can be attached with a hanging ratio of 2/1 whereby every second mesh is tied to a knot of the panel.

#### **Maintenance**

Regular inspection for knot slippage is required with knotted netting. Replacement of the panel may be required with bad knot slippage as the panel may distort the entire shape of the codend and may affect its catching ability.

Repairs to square mesh netting can be carried out in two ways. Clean regular shaped holes can be replaced by installing a piece of netting of the same size and shape, and marling round the edge. Alternatively the common method for repairing diamond mesh may be adopted.

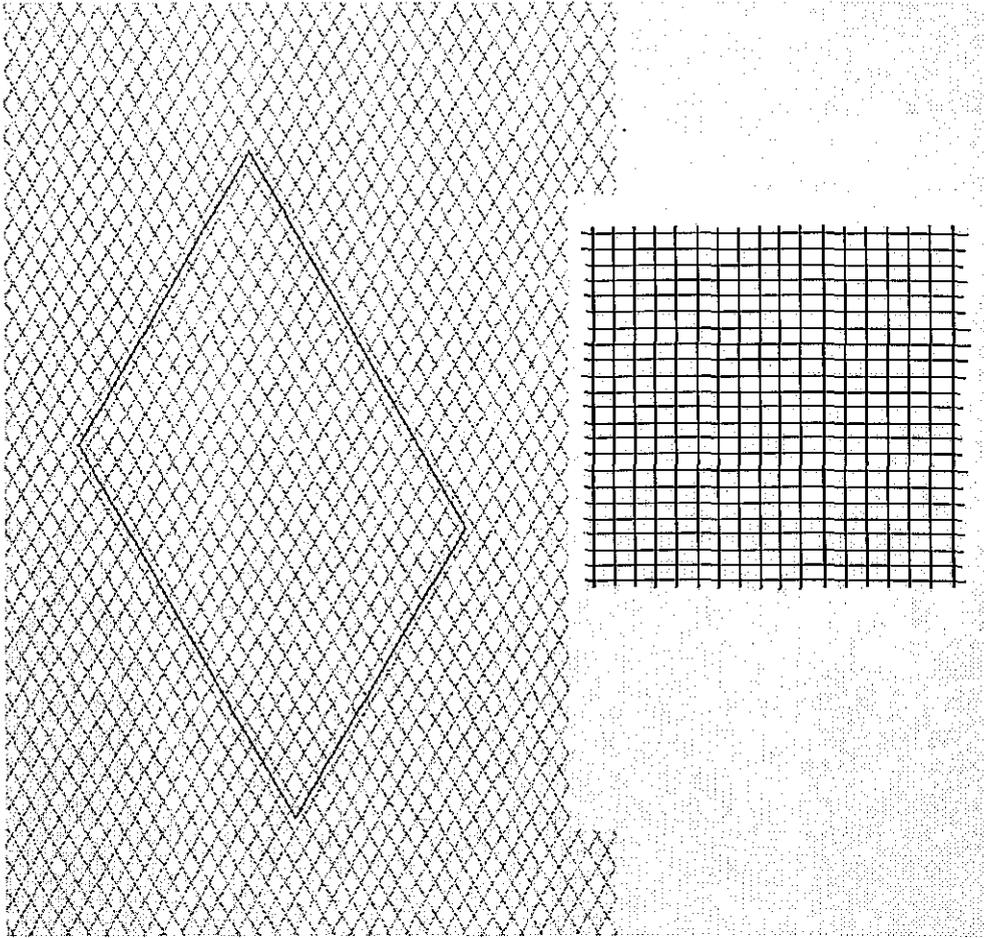


Figure 1. The square mesh panel is cut from diamond sheet netting (on the left), then stretched out to give the characteristic shape of the panel (on the right).

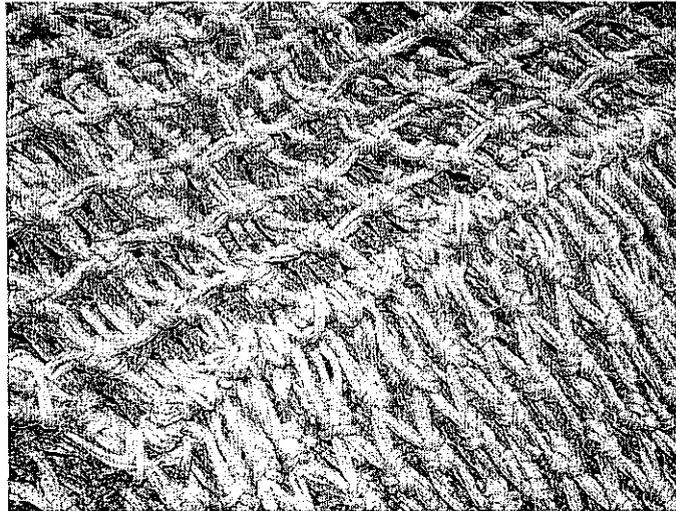


Figure 2. One corner of the square mesh panel showing marling of one full mesh to give added strength.

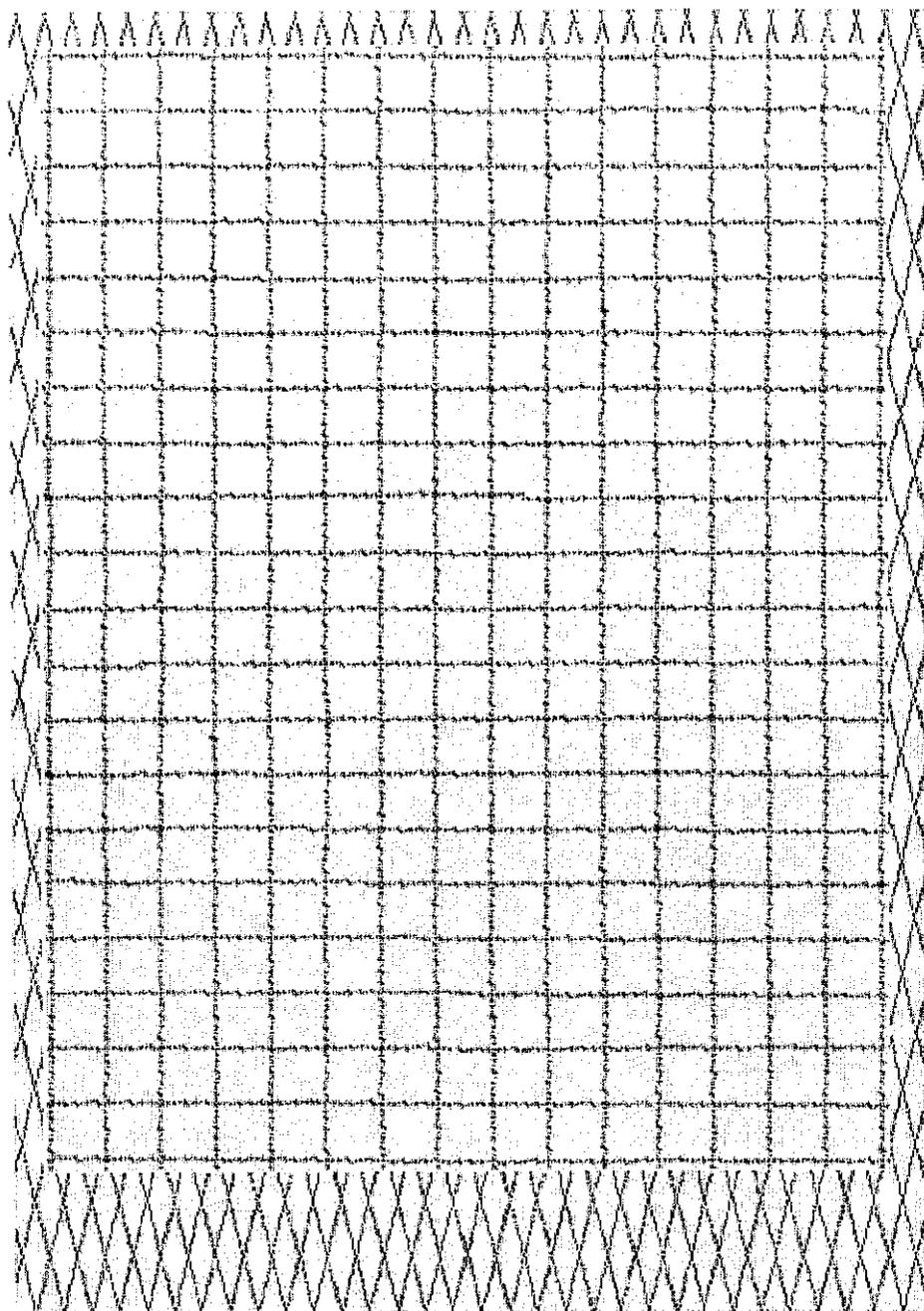


Figure 3. Suggested cut out and fit pattern for a square mesh panel. Note that the minimum requirement of a square mesh panel in the upper side of the codend bag is 15 bars X 20 bars.

## Rotated mesh panel (T90)

### Installing a rotated-mesh panel in a trawl codend

This guide assists fishers to install a panel of rotated-mesh into an ordinary codend. The panel is designed to allow small fish to escape in the same manner that a square mesh panel works. This method achieves that aim of keeping meshes open during the shot, but does not result in material wastage and is not as prone to the stretching and lifting constraints of square mesh. The panel is also easier to install than square mesh.

The panel is located in the upper side of the codend which is the normal pathway for escape for many fish species. In some cases it may be appropriate to install two panels, one in the codend proper and another above the splitter. This is important so that there is still opportunity for small fish to escape once the first panel is 'blocked' by the retained catch.

Figure 4 and 5 show the cut-out, rotating and sewing-in procedure with a suggested panel size of 20 meshes by 15 meshes.

### Cutting out

Cut out a panel so that the piece to be removed is 20 meshes across by 15 meshes down.

### Panel fitting

1. Take the panel out and rotate it 90 degrees so that it is orientated across the lay of the rest of the codend.
2. Replace the panel into the gap. Stretch it against the lay of the codend to fit into the gap.
3. Sew the rotated-mesh panel into the codend. In the diagram example, it is necessary to 'pick up' **5 extra meshes** on the top and bottom of the panel. The sides can be laced down as seams, remembering that there are **5 extra meshes** in length to account for the reduced stretch of the meshes across the lay.

### Maintenance

Meshes can be mended as normal meshes.

For further information contact Jim Newman, SeaNet Extension Officer (Victoria) on: (03) 9824 0744, mobile 0413 949 562 or email: [seanet@siv.com.au](mailto:seanet@siv.com.au).

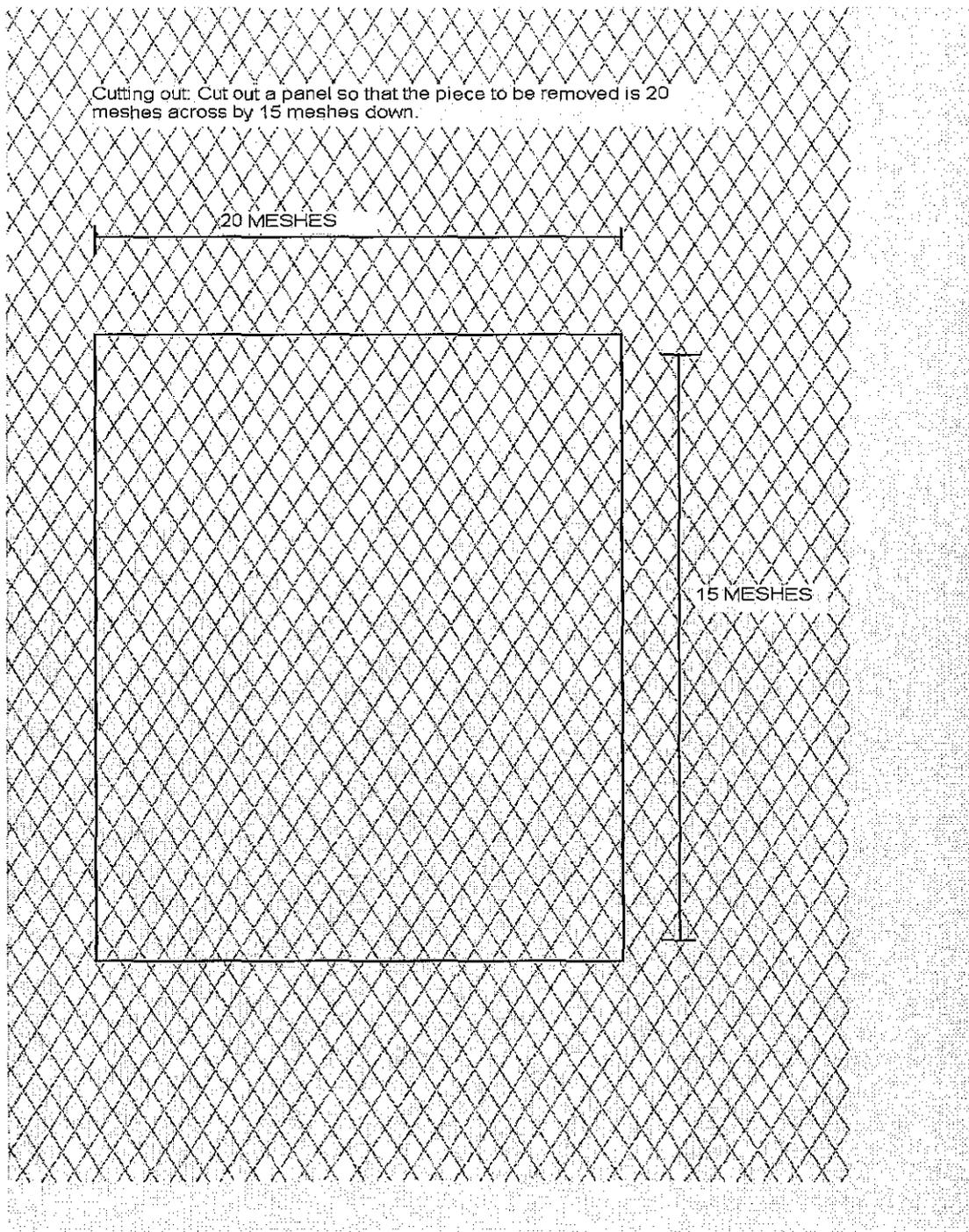


Figure 4. The panel is removed by cutting 20 meshes across by 15 meshes down.

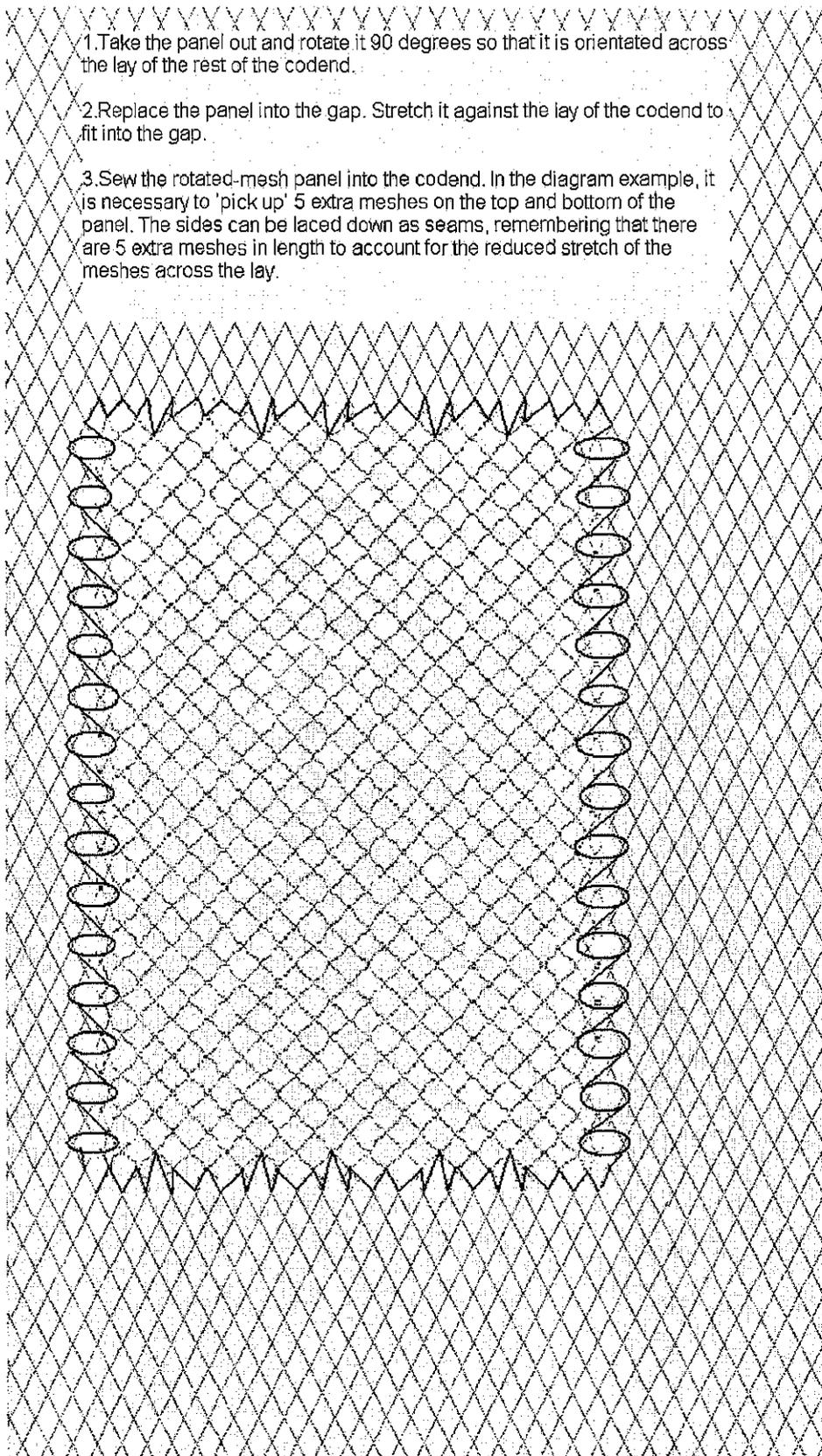


Figure 5. Fitting the rotated mesh panel into the codend. Note that the minimum requirement of a rotated mesh panel in the upper side of the codend bag is 15 meshes X 20 meshes.