

Illegal, Unreported and Unregulated Fishing

Policy Brief 8



Key messages

- Illegal, unreported and unregulated fishing contributes to overexploitation of fish stocks and is a hindrance to the recovery of fish populations and ecosystems. It represents unfair competition for fishers who exploit fish resources legally and adversely affects the economic and social well-being of fishing communities.
- Global losses are estimated to be between US\$ 9 billion and US\$ 24 billion annually, representing between 11 and 26 million tonnes of fish — between 10 and 22 % of total fisheries production.
- Developing countries are most at risk from illegal fishing, with total estimated catches in West Africa being 40% higher than reported catches. There is a significant link between the high levels of illegal fishing and poor governance.
- Concerted efforts and cooperation are needed by coastal states and fishing nations to tackle illegal, unreported and unregulated fishing by improving fisheries governance and management. In particular, support is needed for developing countries to implement the necessary systems to effectively monitor and control fishing activity in their waters.

This brief examines illegal, unreported and unregulated fishing (IUU, see Box 1) and considers the implications for fisheries policy in developing countries. It draws on work conducted by MRAG for DFID. This brief is part of a series concerning fisheries and development issues produced by MRAG and DFID.

Illegal fishing

Illegal, unreported and unregulated fishing (Box 1) contributes to overexploitation of fish stocks and is a hindrance to the recovery of fish populations and ecosystems. A recent DFID and DEFRA-funded study undertook a worldwide analysis of illegal and unreported fishing based on case study analyses of 54 countries and high seas fisheries [1]. Lower and upper estimates of the total current losses to illegal and unreported fishing worldwide are between US\$ 9 billion and US\$ 24 billion annually, representing between 11 and 26 million tonnes of fish. Developing countries have been identified as those most at risk from illegal fishing, with total estimated catches in West Africa being 40% higher than reported catches.

Regional trends reveal issues related to the quality of fishery management and governance in coastal states. For example in the Eastern Central Atlantic there appears to



Possible illegal fishing vessel being boarded by fisheries protection officers in the British Indian Ocean Territory. Photo by: R.Gater

Box 1: Definition of IUU

Illegal fishing refers to activities:

- conducted by national or foreign vessels in waters under the jurisdiction of a State, without the permission of that State, or in contravention of its laws and regulations; or
- conducted by vessels flying the flag of States party to a relevant regional fisheries management organisation (RFMO) but operating in contravention of the conservation and management measures adopted by that organisation and by which the States are bound, or relevant provisions of the applicable international law; or
- conducted in violation of national laws or international obligations, including those undertaken by co-operating States to a relevant RFMO.

Unreported fishing refers to fishing activities:

- which have not been reported, or have been misreported, to the relevant national authority, in contravention of national laws and regulations; or
- undertaken in the area of competence of a relevant RFMO which have not been reported or have been misreported, in contravention of the reporting procedures of that organisation.

Unregulated fishing refers to fishing activities:

- in the area of application of a relevant RFMO that are conducted by vessels without nationality, or by those flying the flag of a State not party to that organisation, or by a fishing entity, in a manner that is not consistent with or contravenes the conservation and management measures of that organisation; or
- in areas or for fish stocks in relation to which there are no applicable conservation or management measures and where such fishing activities are conducted in a manner inconsistent with State responsibilities for the conservation of living marine resources under international law.

Adapted from the International Plan of Action to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated Fishing [2].

have been a steady increase in IUU fishing over the last 20 years, and it is at a much higher level than in the Western Central Atlantic. This is a large area, covering many states with a wide variety of fisheries with complex management requirements and a wide range in governance scores (Morocco to Angola), some of which, such as Guinea, Sierra Leone and Liberia suffered increasing illegal catches as a result of internal conflict in the 1990s. By contrast, some of the countries in West Africa such as Mauritania have been able recently to reduce the amount of illegal fishing in their waters.

The highest levels of illegal fishing are associated with high value demersal fish (e.g. cod & hake), lobsters and shrimps/prawns; and the lowest levels with pelagic fish such as sardines and tunas. In some areas particular species are targets of high levels of illegal fishing. For instance abalone and spiny lobster often suffer high levels of IUU fishing, even in areas which would not normally be thought vulnerable such as New Zealand and South Africa; and although on a world scale the catch and value of sea cucumbers is not significant, in some areas of the Pacific illegal fishing on sea cucumber is very damaging to local economies.

Impacts of illegal fishing

These include direct and indirect economic losses, environmental and socio-economic impacts.

Direct economic losses stem from the value of the catches that could have been taken by the coastal state or licensed vessels if the illegal fishing was not taking place. This results in direct losses to GNP, and additional losses of revenue from foregone landings fees, licence fees, taxes and other levies which are payable by legal fishing operators. These losses can be severe, particularly in developing countries which have a high reliance on fisheries for domestic consumption and export earnings. A study in 2005 [3] found that in Liberia, for instance, elimination of illegal fishing could increase GNP by more than 4%. Legal operators may also suffer reduced catch rates, which reduces their profitability.

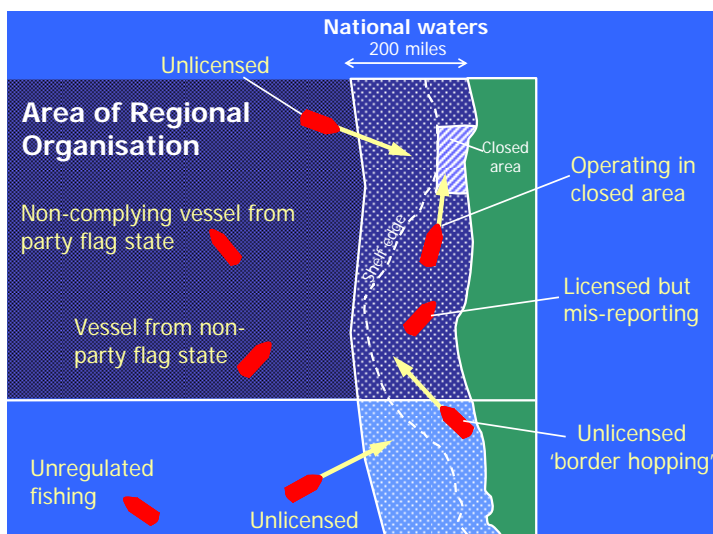
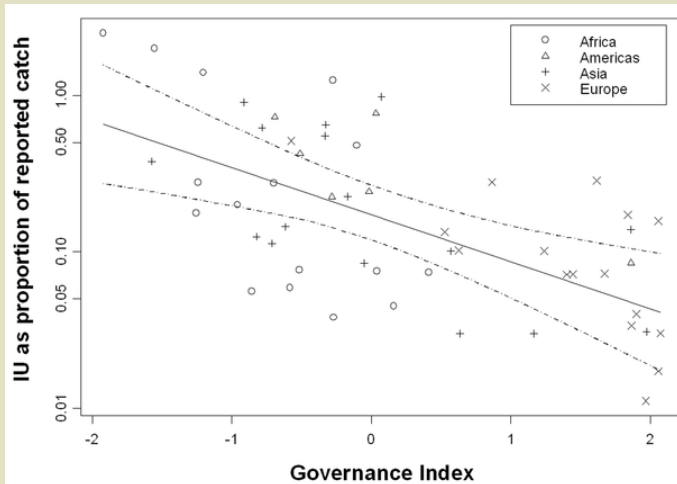


Illustration of types of IUU fishing. Within a country's national waters there may be unlicensed fishing (poaching), under- or non-reporting, or unauthorised fishing by area, seasonal, gear, quota or species. Outside countries' waters there may be non-compliance with RFMO regulations, or there may be unregulated fishing outside the area of an RFMO. Note that many RFMOs also cover adjoining coastal state waters, but the primary jurisdiction remains that of the coastal state.

Box 2: Illegal fishing and governance

Agnew *et al.* (2009) [1] demonstrated a significant relationship on a global scale between the level of illegal and unreported fishing (IU) and indices of governance. Developing countries with poor governance are not to blame for illegal fishing, but they are more vulnerable to illegal activities — conducted by both their own fishers and by foreign vessels. In Africa, for instance, many coastal states license foreign vessels and there is a significant reported illegal fishing problem from many of these. This represents a failure of control on behalf of the flag state as well as the coastal state.



Relationship between the amount of illegal and unreported (IU) fishing (expressed as a proportion of the reported catch that is additionally taken as IU catch) and an average of four World Bank indices of governance (Government Effectiveness, Regulatory Quality, Rule of Law and Control of Corruption, measured in 2003).

Indirect economic losses include impacts resulting from the loss of income and employment in fisheries and other industries and activities in the supply chain upstream and downstream from the fishing operation itself. On the upstream side, IUU fishing reduces the local demand for fishing gear, boats and equipment, and other inputs that otherwise might be required. Downstream there are losses to fish processing, packaging, marketing and transport industries. Any associated reduction in fishing incomes will also have impacts on the demand for consumption goods by fishing families.

Environmental impacts: IUU fishing often results in unsustainable impacts on target species and the surrounding ecosystems. Impacts are most clearly seen in the damage to target fish stocks caused by overfishing as a result of the uncontrolled IUU activity. In addition, damage to vulnerable habitats through the use of prohibited gear and fishing in protected areas, the incidental capture of protected, endangered and threatened species such as turtles, sharks, albatrosses and marine mammals, and discarding of non-target and low-grade fish all have an impact. Overall productivity, biodiversity and ecosystem resilience are all reduced, with a consequent loss of income to legal fishers, and of potential income to coastal states from fisheries. The key problem is that illegal operators have no incentive to comply with regulations aimed at conserving either fish stocks or the environment in which they live.

Socio-economic impacts: the environmental impacts and reduction in productivity leads to reduced catches and a reduction in livelihood and food security for other fishers. This is particularly important for small-scale fishers and those communities which are heavily dependent on fish as a source of animal protein, notably the coastal communities in many developing countries. In some states there is direct conflict between local fishermen and industrial vessels fishing illegally inshore in areas reserved for artisanal fishermen [3]. Such conflicts are particularly prevalent in shrimp fisheries around Africa (e.g. Guinea, Sierra Leone, Liberia, Angola, Mozambique). Conflicts may be direct (collisions between vessels or gear entanglement) or indirect (reducing the available stocks of fish or shrimp). The former often leads to accidents, death and injury amongst artisanal and other local inshore fishers which in itself has economic and social consequences (lower catches through injury, loss of earnings) for fishers and their families.

IUU fishing vessels often provide poor working conditions for their crew. They are often registered with 'Flags of Convenience' or 'Open Registers', implying that the flag states usually do not exert effective control over their vessels in terms of compliance with health and safety and employment regulations.

Combating illegal fishing

The underlying causes of illegal fishing are a continued demand for fish and a lack of control over fishing activities both by vessels' flag states and by the coastal states in whose waters they fish. A range of measures are needed to help combat illegal fishing.

Strengthen monitoring, control and surveillance

Flag states and coastal states need to improve their level of monitoring, control and surveillance (MCS) activities. This is particularly important for coastal developing countries, but it is also most difficult for them to afford. The key to effective MCS activities is to get the most from existing resources in terms of utility and cost through cooperating with other states and providing effective training to enforcement officers. A strong legal system involving effective methods of prosecution and realistic fines is also required.

An efficient licensing system, for both foreign and national vessels, is a precursor for proper control of a fishery. Under-reporting and misreporting of catches from tuna and other highly migratory fisheries, which are not resident in the waters of a coastal state, can be difficult to detect particularly when fishing vessels have little port contact. However, all countries should support and implement port state control measures [4].

The establishment of vessel monitoring systems (VMS) is also of great longer-term value. Although VMS can only track legal fleet movements, it can allow MCS managers to optimise the use of other resources, such as timing port inspections to coincide with the arrival of vessels and coordination with expensive patrol assets at sea.

The deployment of well-trained and motivated fisheries observers can greatly reduce underreporting or at least help to assess the magnitude of the problem. While scientific observers should not be involved directly in an



Illegal fishing results in over-exploitation of fish stocks and can have impacts on the availability of fish in local markets. Photo by: S.F.Walmsley

enforcement role, they can record what they observe and this information can provide useful guidance for the surveillance system. For example they can provide information for the verification of landings and transshipments of fish, and may help to build up profiles of illegal offenders for later action through diplomatic channels or the creation of 'black lists'. In order to reduce the trade in IUU tuna, some RFMOs have recently put in place regional transshipment observer programmes.

Improve information fleet registers

Open registers of fishing vessels still exist although these are becoming fewer in number and not all have vessels that take part in IUU [5].

One of the proposals from the High Seas Task Force (a group of fisheries ministers and international NGOs working to fight IUU fishing) was the establishment of a publically-available international database of information on catching, refrigerated transport and supply vessels on the high seas (i.e. beyond coastal states' waters), to address the information gap on the nature and operation of illegal fishing activities and assist efforts to detect, deter and eliminate IUU fishing. This was taken up by FAO as a new initiative called the Global Record of Fishing Vessels and discussions on its implementation are underway [6].

Improve governance

Better governance of fisheries on the high seas through the participation of all parties in the fisheries management process, including active engagement in RFMOs, will help reduce IUU fishing in high seas areas. Fisheries agreements should be transparent and equitable and in keeping with the value of the resource in question. Reporting requirements should be specific and backed up by port inspections. The ability of coastal states to effectively enforce compliance through a credible threat of penalties is important in ensuring that foreign fleets do indeed seek to buy a fishing licence.

Linkages between states in highly migratory and straddling stock fisheries should be improved in order to share management information and information on perpetrators. This is best done through an RMFO which has the commitment of all stakeholders.

Port state control of foreign fishing vessels [4] using national ports to verify that their fishing activities are complying with the requirements of national and international regulations is a key tool in combating IUU and has been implemented by a number of RFMOs. There are a growing number of instances of port states

denying use of port facilities to IUU vessels. Strengthening port state controls in a region may deter IUU fishing and allow improvements in enforcement but this must be underpinned by domestic legislation and cooperative mechanisms to coordinate action with other port states, flag states and market states. The FAO is contributing to capacity building and sensitisation on port state controls in order to combat IUU fishing.

Better use of market measures

Catch documentation schemes have been imposed by a number of RFMOs for trade in high value fish. These trade restrictions are designed to limit the possibility of IUU fish entering the market place, through the use of documentation that only legally-caught fish is able to obtain. Additional chain of custody schemes have also been introduced under eco-labelling schemes such as the Marine Stewardship Council (MSC), where all fish carrying the MSC label can be traced back to its origin in a legal fishery.

The new EU IUU Regulation [7], due in January 2010, will introduce legislation to ensure that all fishery imports into the EU are from legal sources. A catch certification system will be established, under which it will be the responsibility of the flag state of the catching vessel to attest that the fish have been caught legally and in accordance with the relevant conservation and management measures in place.

Priorities for future work

Future priorities include:

- Collaboration through the MCS network;
- Development of methods to identify specific vessels engaged in IUU using high resolution satellite images;
- Capacity building of MCS functions of developing countries;
- Increased use of observer programmes, particularly on transshipment vessels;
- Regional sharing of information, particularly lists of licensed vessels and real-time VMS records;
- Agreement at FAO on binding port state measures.



Patagonian toothfish from the South Georgia and South Sandwich Islands MSC-certified fishery, ready for inspection.

Photo by: John Pearce

References

- [1] Agnew DJ, Pearce J, Pramod G, Peatman T, Watson R, et al. (2009) Estimating the Worldwide Extent of Illegal Fishing. PLoS ONE 4(2): e4570. doi:10.1371/journal.pone.0004570.
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- [5] Kelleher, K. (2002) Robbers, Reefers And Ramasseurs. A Review Of Selected Aspects Of Fisheries MCS In Seven West African Countries. Sub-Regional Fisheries Commission Project AO/GCP/INT/722/LUX (AFR/013) Version 2. July 2002.
- [6] See www.fao.org/fishery/fishcode/3,14; www.seafoodchoices.org/whatwedo/documents/GlobalRecord_Brochure.pdf
- [7] Council Regulation (EC) No 1005/2008 "Establishing a Community system to prevent, deter and eliminate illegal, unreported and unregulated fishing".

For more information:

Further information about fisheries and development issues can be obtained from the UK Department for International Development (DFID) and MRAG Ltd.

Department for International Development:

More information about DFID's work can be found at:
www.dfid.gov.uk

Department for Food, Environment and Rural Affairs (Defra):

More information about Defra's work can be found at:
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