Illegal fishing: the Costs to EU Member States

Some questions and answers

4 November 2008

Q: What are IUU activities?

The recently adopted Council Regulation on illegal, unreported and unregulated (IUU) fishing gives, in Article 3, the most detailed definition of IUU activity. The text of the Article reads as follows:

"A fishing vessel shall be presumed to be engaged in IUU fishing if it is shown that, contrary to the conservation and management measures applicable in the fishing area concerned, it has:

a) fished without a valid licence, authorisation or permit issued by the flag State or the relevant coastal State, or
b) not fulfilled its obligations to record and report catch or catch-related data, including data to be transmitted by satellite vessel monitoring system, or prior notices under Article 6, or
c) fished in a closed area, during a closed season, without or after attainment of a quota or beyond a closed depth, or
d) engaged in directed fishing for a stock which is subject to a moratorium or for which fishing is prohibited, or
e) used prohibited or non-compliant fishing gear, or
f) falsified or concealed its markings, identity or registration, or
g) concealed, tampered with or disposed of evidence relating to an investigation, or
h) obstructed the work of officials in the exercise of their duties in inspecting for compliance with the applicable conservation and management measures, or the work of observers in the exercise of their duties of observing compliance with the applicable Community rules, or
i) taken on board, transhipped or landed undersized fish in contravention of the legislation in force, or
j) transhipped or participated in joint fishing operations with, supported or re-supplied other fishing vessels identified as having engaged in IUU fishing under this Regulation, in particular those included in the Community IUU vessel list or in the IUU vessel list of a regional fisheries management organisation; or
k) carried out fishing activities in the area of a regional fisheries management organisation in a manner inconsistent with or in contravention of the conservation and management measures of that organisation and is flagged to a State not party to that organisation, or not cooperating with that organisation as established by that organisation, or
l) no nationality and is therefore a stateless vessel, in accordance with international law."

Q: What is the 36 percent loophole?

According to the Court of Auditors' special report No. 7/2007, the margin of error for quantity estimates declared in logbooks is set at 20 percent. This does not allow the imposition of penalties for practices that result from under-declarations that may be as high as 36 percent in the absence of landing inspections.[1]

Q: Who is eftec?

eftec is the leading environmental economics consultancy in the UK and provides economic analysis for sound, effective and sustainable environmental policy and management. Since 1992, eftec has collaborated with environmental scientists, engineers and market researchers as follows.

- To generate and interpret qualitative and quantitative evidence on the benefits provided by the environment and cultural heritage, and on the costs of their degradation such as air and water pollution, biodiversity loss, climate change, coastal erosion, and others.
- To conduct cost-benefit and cost effectiveness analyses that reflect social preferences for environmental policies, major infrastructure projects, flood prevention, and remediation of contaminated land and groundwater, among others.
- To design and review green taxes, tradable permits and voluntary agreements in waste management, agriculture and the control of air and water pollution.
- To provide training in all aspects of environmental economics.

Q: What are Large Marine Ecosystems?

Large marine ecosystems (LMEs) are regions of the world's oceans that encompass coastal areas, from river basins and estuaries to the seaward boundaries of continental shelves and the outer margins of the major ocean current systems. They are relatively large regions of around 200,000km² or greater that have been delineated according to continuities in their physical and biological characteristics, hydrography, productivity and trophically dependent populations. As an organisational unit, the LME facilitates management and governance strategies that recognise the ecosystem's numerous biological and physical elements and the complex dynamics that exist among and between them.

Q: What are ecosystem services?

Humankind benefits from a multitude of resources and processes that are supplied by natural ecosystems. Collectively, these benefits are known as ecosystem services and include products like clean drinking water and processes such as the decomposition of wastes. Ecosystem services are distinct from other ecosystem products and functions because there is human

[1] Taking an exact catch quantity of 1,000kg, a declaration of 800kg in the logbook will lie within the 20 percent tolerance if there is a landing inspection; if there is no inspection, a declaration of 640kg on the landing declaration will show a difference of 20 percent from the logbook, and if the difference between the two declarations is discovered no penalties can be applied, even though the total under-declaration is 36 percent.

demand for these natural assets. The services can be subdivided into five categories: provisioning, such as the production of food and water; regulating, such as the control of climate and disease; supporting, such as nutrient cycles and crop pollination; cultural, such as spiritual and recreational benefits; and preserving, which includes guarding against uncertainty through the maintenance of diversity.

Q: What is modelling?

Modelling is a simulation technique that takes current available data and projects that data into future scenarios. It gives insight into the long term effects of current behaviours as well as offering best case scenarios if alternative action were to be taken. Modelling techniques include statistical methods, computer simulation, system identification and sensitivity analysis.

Q: What does "zero-IUU scenario" mean and how does it relate to modelling?

The consultant modelled two different scenarios for fish stocks: one in which the amount of fish taken out of the ecosystem is equal to the catch limit; the other where there are additional fish caught due to IUU fishing. The difference between the two represents the costs of IUU fishing.

Q: Why did the analysis not include all stocks and costs?

The extent of IUU fishing is by its very nature extremely difficult to assess and there is no reliable information on the levels of IUU activity for all fish stocks. In the analysis, only stocks for which sufficient information on IUU fishing activities was present were included. IUU fishing activities entail a larger number of costs, such as risk of extinction, data quality, reduced access to labelling, or even a weaker position in international fisheries negotiations, for example on Fisheries Partnership Agreements.

Q: How could fisheries-related employment be 27,000 higher if IUU fishing were stopped?

A simplified methodology to assess costs in employment is to assume that data on employment in the fisheries sector is linearly related to catch size. In other words, relating future catches to future jobs in fishing and processing based on current catch/employment ratios shows that there could be more than 27,000 more jobs in the European Union if IUU fishing were eliminated. (This result only reflects the missed additional employment for fish stocks representing 46 percent of all landing value.)

Q: Can you define "distorted competition"?

Both EU fishermen operating legally and aquaculture producers are competing with the unfair practices of IUU operators. This results in a loss of market share for legitimate EU operations and trade distortions due to the different cost structures of legal and illegal operators. Some IUU fishing is associated with poorer employment practices and may be more likely to be associated with employment in the informal economy, where costs such as employment taxes or social security contributions are not paid, which leads to a loss of revenue for governments.

Q: Can you define "poorer data quality for management"?

Absence of IUU fishing would have a further impact on fisheries through improving the quality of data and fisheries management. At present, the fact that IUU activity is largely an unknown quantity makes interpreting fisheries data difficult: the European Commission has noted (COM(2008) 331 final) that: "Largely because of inaccurate catch reports, the state of some 57 percent of stocks is unknown." This reduces the quality of scientific advice to managers as well as the ability of authorities to undertake optimal management of fisheries' resources. In turn, this can have a potentially large impact on the expected value of the fishery. Therefore, the value of improving data quality could be significant.

Q: Can you give a brief explanation of the links between IUU fishing, jellyfish and tourism?

Exacerbated by IUU fishing, populations of jellyfish predators such as tuna and turtles are diminishing; for example, in the Mediterranean IUU fishing accounts for approximately 40–50 percent of legal catch limits. Due to dwindling fish stocks, jellyfish have more opportunities to grow and end up in coastal areas, where they impact the tourism industry.

Q: What are the costs of IUU fishing?

1. Landing value modelled. Due to limited information, on the levels of IUU fishing in particular, we only modelled selected fish stocks and commercial groups. The stocks we modelled represent that percentage of the total landing value.
2. Stock value. This is the value of the modelled stock – basically the fish in the sea. The predicted value of the stocks could be much higher without IUU in 2020.
3. Annual value of landings. This is the predicted average value of landings until 2020 that could be gained if IUU were eliminated by 2020.
4. Employment. These are the estimated average gains in employment if IUU were to be stopped by 2020. It has been calculated using present day employment figures related to the value of landings.

Q: The briefing states that a management regime that sets catch limits according to scientific advice is better equipped to react to IUU fishing activity and to counter stock depletion and, as a result, the cost of IUU fishing would be more moderate.

Basically such a regime could react to overfishing due to a high degree of IUU by setting a lower catch limit in subsequent years. As the research modelled IUU as a percentage of a catch limit, this would also entail the IUU fishing in the next year being much lower.

Q: The briefing states that a number of costs are amplified over time. Can we give examples of what these costs would be?

The average value of landings and the resulting employment in the fisheries sector and some of the costs that were not included in the modelling exercise, such as the risk of extinction, represent costs that are amplified over time.

Q: The briefing states that fish stocks could reach maximum sustainable yield (MSY) levels by 2020. What has to be done to achieve this?

All the stocks modelled could recover to around MSY levels by 2020 – under the assumptions of the model, which does not take account of age structure, etc. Basically, all the species considered are highly productive and capable of sustaining significant fishing pressure, which is why they're still there. But there are two conditions: management that keeps catches low enough to allow the recovery; and effective control of IUU fishing.