



Overseas Development Institute
111 Westminster Bridge Road
London SE1 7JD
www.odi.org.uk

The Indian Ocean Tsunami: what are the economic consequences?

1. These notes are based on research by ODI staff on the economic and financial consequences of natural disasters¹.
2. The geographical scale of the disaster is unprecedented, the loss of life immense and the level of physical damage very significant.
3. However, so far this is not the worst such disaster in modern times - the cyclone and storm surge that hit the coast of Bangladesh in 1970 killed at least 300,000 people. As that disaster showed, many of those killed are poor, and living in places with weak record systems: we will never know the full extent of the loss of life.
4. The immediate relief needs in the Indian Ocean are large and complex, and there will be a long term need for rehabilitation and reconstruction in the areas affected. The disaster is complicated because there are the effects of the earthquake near the epicentre (Aceh) and the widespread effects of the tsunami wave. In effect, there are two disasters, a very severe earthquake as well as the effect of the tsunami.
5. It is important to understand that natural disasters on this scale have less visible, but critically important, economy-wide (macro-economic) effects. This is because of the impact of damage to productive sectors (fishing, tourism) which generate jobs, tax revenue and foreign exchange, but also because government expenditure has to be diverted from other uses.
6. At the same time, the size of these secondary impacts depends very much on the structure of economies and on their resilience. The effects are greater when: other sectors depend very much on the affected sector (e.g. tourist hotels are one of the main markets for food or

¹ The author, Dr Edward Clay, Senior Research Associate, Overseas Development Institute, London [e.j.clay@odi.org.uk] and colleagues have been working on the economic and financial consequences of natural disasters for the last decade and results are summarised in a World Bank publication that can be accessed via the ODI web-site - or directly:

http://www.odi.org.uk/speeches/disasters_2004/natural_disasters_report.html

The full report on the study can be found on the World Bank's Publications web-site at:

http://www-wds.worldbank.org/servlet/WDS_IBank_Servlet?pcont=details&eid=000012009_20040420135752

Charlotte Benson and Edward Clay, 'Beyond the Damage: Probing the Economic and Financial Consequences of Natural Disasters', *Humanitarian Exchange*, no. 27, July 2004.

Charlotte Benson and Edward Clay 'Understanding the Economic and Financial Impacts of Natural Disasters' just published by the World Bank (ISBN: 0-8213-5685-2 SKU: 15685)

handicraft production); or the impact on government expenditure is large; or if government finances are poorly managed. In general, more developed economies are more resilient than those that are less developed.

7. As a general rule, the macro-economic effects of natural disasters tend to be relatively short-lived. The research evidence is that it is unusual to find significant decreases in national income or drops in the growth rate from sudden impact earthquakes, tsunamis or tropical storms. Indeed, in some cases, natural disasters have had a positive effect, because of increased spending on the rehabilitation of infrastructure.
8. In the case of the Indian Ocean tsunami, the countries affected cover a wide spectrum. The most vulnerable is probably Somalia, a very poor country, with few resources no effective government and many people dependent on the affected sectors. The Maldives will also be very badly affected, because of the dependence on tourism. Aceh is suffering all the effects of a major earthquake, with rescue and rehabilitation hampered by isolation and poor governance.
9. In other countries, the effect is likely to be more localised, though no less catastrophic for the individuals and communities concerned. Some countries are lower middle rather than low income countries (e.g. Thailand, Sri Lanka); most have well-diversified economies; most also have reasonably well-performing governments, with at least some response capacity, and also active civil societies. In all countries, it is important to emphasise that the main response will come from governments and people themselves.
10. The effects will be most severe where a large number of *people*, *infrastructure* (roads, railways, ports, electricity, telephones, water supply, sewage disposal) and *economic activity* (fishing, tourism) are concentrated along the coast. The effects are likely to be *relatively* most severe for small island economies and regions dependent on the sea and near the epicentre of the earthquake (Aceh, Andaman and Nicobar Islands, Maldives).
11. In the longer term, those most seriously affected will be:
 - ◆ Poor coastal communities especially *fishing communities* where families will have lost their breadwinners, homes, boats and equipment, and face debts for boats and equipment lost, also those on the margins of the tourist economy.
 - ◆ Smaller, remoter economies especially
 - Aceh (remote, poor and with severe governance problems because of the struggle for greater local autonomy and the wider near chaotic economic situation in Indonesia);
 - Andaman and Nicobar Islands; and
 - The Maldives because of its smallness and overwhelming dependence on disaster-affected tourism and the sea

(economy and government finances could be very severely hit in short term).

12. Tourism is likely to recover quickly because: tourist operators and tourists are largely insured for loss and the bigger companies for disruption to business; multi-national tourism has the internal funding and can raise finance for rapid reconstruction; and demand will revive because a 1 in 1000 year event will be quickly forgotten.
13. The greatest challenge will be in ensuring that the poor, especially those in fishing, on the margins of the tourist economy and in remoter areas are helped to recover.
14. As far as aid is concerned, the research evidence is that the immediate response to natural disasters involves some new money, but that rehabilitation needs are often met by switching aid money between uses rather than increasing total aid to the countries affected. In this case, the level of need suggests that aid for both humanitarian and rehabilitation purposes should be additional. WHO has emphasised the importance of aid for health and sanitation in the immediate aftermath of the tsunami. The EU development and humanitarian commissioner, Louis Michel, has emphasised the need for a seamless link to longer term rehabilitation.
15. There are some important lessons for the future. The international community must
 - invest much more in globally monitoring natural hazards that can cause disasters;
 - help developing countries that under invest to provide warning systems²;
 - invest in protecting lives and livelihoods (Coastal embankments break the force of storm surges and tsunamis).
 - The poor, who are most at risk and most vulnerable to the effects of disasters, need insurance. *2005 is the International Year for micro-credit*. A major effort is needed to ensure that those successfully providing micro-credit to millions of poor people, such as the Grameen Bank BRAC and Proshika in Bangladesh, are able to include insurance in their loans and then have the funding in place and guarantees to withstand the effects of disasters.
16. The UN Kobe Conference in January on reducing the impacts of natural disasters offers an opportunity to look more carefully at these issues.

Note:

² Warning systems work: The numbers killed by the cyclone in Bangladesh -300,000 plus in 1970 dropped to 138,000 in 1991 and since then fatalities caused by more recent storms have been few. The Mont Pelé eruption killed everyone (22,000) in St Pierre the capital of Martinique except a convict in the goal, but the Soufrière Hills eruption going on since 1995 on Montserrat has killed only a hand full who had been warned to evacuate

Some facts about the countries:

Sri Lanka: population 20m; GNI per capita \$930;

Thailand: population 62m; GNI per capita \$2190;

Indonesia: population 212m; GNI per capita \$710;

Maldives: population 300k; GNI per capita \$2350;

Tamil Nadu: population 60m; GNI per capita (India) \$540;

Somalia: population 9m; GNI per capita - not available but probably around \$100

For further information please contact Ed Clay, ODI Senior Research Associate (e.j.clay@odi.org.uk).