Australian Government
Great Barrier Reef Marine Park Authority

MARINE SHIPPING INCIDENT
Great Barrier Reef Marine Park - Douglas Shoal

INFORMATION SHEET 1

What happened and when?
At 5.10pm on Saturday 3 April 2010, the 230m long bulk coal carrier *Shen Neng 1* ran aground on Douglas Shoal, around 92km north east of Gladstone. Bound for China, the ship had left the Port of Gladstone carrying approximately 68 000 tonnes of coal.

Who is involved?
The grounding of the ship *Shen Neng 1* has required a co-ordinated response across many Australian and Queensland Government departments in accordance with the *National Plan to Combat Pollution of the Sea by Oil and other Noxious and Hazardous Substances and the Queensland Coastal Contingency Action Plan*. Maritime Safety Queensland (MSQ) is the lead operational agency with support from the Australian Maritime Safety Authority (AMSA) and environmental advice and operational support from the Great Barrier Reef Marine Park Authority (GBRMPA) and Queensland agencies.

AMSA and the GBRMPA are co-ordinating an investigation into the incident as well as continuing to assist MSQ in minimising risks to the environment.

What is the latest information?
The amount of oil leaked from the ship has been minimal. Dispersants have been applied and there have been no reports of continuing oil loss.

To date, no oil has impacted the shoreline or islands. The GBRMPA has response staff and equipment ready to be deployed for cleaning up spills and treating oiled wildlife if required. Other agencies such as MSQ, AMSA, Queensland Department of Environment and Resource Management (DERM), Queensland State Emergency Services, and regional councils are also making preparations to respond.

Commercial salvage arrangements for the vessel have been put in place. Salvors on board the vessel are conducting assessments and preparing salvage plans. Latest information suggests that the salvors will be taking steps to transfer the fuel oil from the vessel to a barge.

What else is being done?
The Government's priority is to ensure that any environmental damage to the World Heritage listed Great Barrier Reef is minimised.

The GBRMPA is co-ordinating a science panel. This panel will assess and advise on environmental issues related to the grounding. Panel members have a broad range of experience.

Once the *Shen Neng 1* is refloated from Douglas Shoal, the GBRMPA will co-ordinate assessment of damage to the coral reef and shoal area. In the meantime, water samples are being collected to provide additional impact assessment information.

The Federal Minister for Environment Protection, Heritage and the Arts will be working with the Minister for Infrastructure, Transport, Regional Development and Local Government to consider whether additional measures are required for the management of shipping in the Great Barrier Reef.

About Douglas Shoal
Most of Douglas Shoal appears to be covered by 10-20m of water. At these shallow depths, we can expect sparse but patchy presence of reef corals dominated by encrusting and robust forms because of the high exposure of the site. Recent surveys of shallow slopes on the adjacent reefs showed average coral cover of just 10-20 per cent in ideal coral habitats which is below the long-term average for this area. A recent decline in cover seems to be the result of a large regional storm in 2008 and the passage of Cyclone Hamish in March 2009.

Surveys of adjacent reefs also found small amounts of standing dead coral and soft corals (less than 5 per cent). Consequently, the shallower surfaces of Douglas Shoal may have substantial amounts of bare space, devoid of large sessile animals but covered by encrusting and turf algae. Sandy areas with buried animals may be found in major depressions and around the perimeter. Surveys of adjacent shoals suggest that sea fans, whips and sponges will be abundant and dominant at depths deeper than 30m.

What risk does dispersant pose?
Dispersants are used to minimise the environmental impact of an oil spill. Dispersants do not eliminate the problem of an oil spill but are intended as a means of reducing the overall environmental impact of an oil slick at sea. Oil Spill Dispersant (OSD) use accelerates the weathering and biological breakdown of oil at sea and reduces the impact of oil on sensitive foreshore environments.

Oil Spill Dispersants are also highly effective in reducing exposure of sea birds to oil as most sea birds are oiled by slicks on the surface of the sea or in near shore coastal habitats.

What risk does the oil pose?
The impact of oil spills on coastal and marine environments can be both short and long-term.

The degree of the damage caused by an oil spill event depends primarily upon the quantity of oil spilt, the chemistry and properties (type) of the oil, how it has been treated (e.g. use of dispersants) and the sensitivity of the biological resources impacted.

What risk does the coal pose?
Information on the impact of coal in the marine environment is limited. Coal dumped in the marine environment may have two types of effect; physical and chemical.

Physical
Typically coal is a mixture of chunks of various size as well as coal dust. Large quantities dumped will bury marine organisms and the finer coal dust will choke and smother organisms as well as reduce water clarity. Effects are similar to the dumping of other sediments in the marine environment.

Chemical
Depending on the type of coal, the chemical composition varies. Generally coal contains trace levels of toxic contaminants such as heavy metals and polycyclic aromatic hydrocarbons (PAHs) but these are unlikely to be released from the coal into seawater. Consequently direct toxicity is not thought to be a major threat.