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Iron Fertilizer and Ocean Dumping **October 15, 2012**

WWF Background

A story about ocean fertilization involving 100 tons of iron ore dust that was dumped into the Pacific ocean off Haida Gwaii in July hit the front pages this week in Canada. Meanwhile across the globe in India, nations are discussing how to limit the impacts of geoengineering, including ocean fertilization, on biodiversity at the meeting of the Conference of the Parties to the Convention on Biological Diversity (CBD). Geoengineering is a brave new world for international law. However ocean fertilization is one area where the rules are relatively clear both at the international level and in Canada.

What is ocean fertilization?

The most widely used definition is: any activity undertaken by humans with the principal intention of stimulating primary productivity in the oceans, not including conventional aquaculture, or mariculture, or the creation of artificial reefs.

Is ocean fertilization allowed in Canada?

No, it is generally prohibited and allowed only in a very limited set of circumstances. A 2011 Information Bulletin from Environment Canada spells it out: "Ocean fertilization activities are currently not allowed except for qualified research." The Bulletin explains that ocean fertilization activities are considered to be disposal at sea, are not allowed without a permit, and there are currently no provisions for such permitting, except for "legitimate scientific research" projects.

Environment Canada's website succinctly explains the law. Canada is a Party to two international marine pollution control treaties expressly designed to prevent ocean dumping: the *Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter, 1972* (the London Convention) and the related *1996 Protocol to the Convention on the Prevention of Marine Pollution By Dumping of Wastes and Other Matter, 1972,* (the 1996 Protocol), together known as LC/LP. The original Canadian law to implement these obligations was called the *Ocean Dumping Control Act,* which was folded into the *Canadian Environmental Protection Act*, now *CEPA 1999*. *CEPA 1999* prohibits ocean dumping (with some limited exceptions) unless a permit has been granted.

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So, the bottom line is that ocean fertilization can only be conducted if it qualifies as “legitimate scientific research”. Environment Canada will assess projects using the internationally agreed 2010 LC/LP "Assessment Framework for Scientific Research Involving Ocean Fertilization “(the “Framework”) before granting a research permit.

Is ocean fertilization allowed under international law?

Again, just like the law in Canada which gives effect to the international rules, the answer is generally No, with some limited exceptions for legitimate scientific research and then only if an assessment of the risks to the environment has been conducted pursuant to the Framework.

Rules for ocean fertilization have been under development since 2008 when the Parties to the LC/LP decided that ocean fertilization was a topic they should consider. Academic experts agreed that the LC/LP was the appropriate forum for this issue, concluding that: “ocean fertilization is governed by the dumping regime and that its commercialization is inconsistent with international law unless and until independent, internationally peer-reviewed scientific research and assessment demonstrates that it is effective and that its benefits outweigh the risks to the marine environment.”1

A recent CBD report examining gaps in the regulatory framework for geoengineering found that unlike many geoengineering activities, there are international rules for ocean fertilization, and they work: “Ocean fertilization is addressed by the LC/LP and CBD. The Assessment Framework established by the LC/LP provides an elaborate and comprehensive governance effort of scientific research projects.”

What about other types of geoengineering- are they allowed?

This is where the rules aren’t as clear, and where gaps exist.

“Climate-related geoengineering” is a general term that includes both solar radiation management (SRM) and carbon dioxide removal (CDR) techniques, and may or may not also include large scale mitigation activities such as afforestation, reforestation and biochar.

[1] Freestone, David and Rayfuse, Rosemary G., Iron Ocean Fertilization and International Law (May 14, 2008). Marine Ecology Progress, 2008/9; UNSW Law Research Paper No. 2008-37. Available at SSRN: http://ssrn.com/abstract=1397400

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Two years ago, at a meeting of the Parties to the Convention on Biological Diversity, nations effectively banned climate-related geoengineering activities that could affect biodiversity, until there was an adequate scientific basis on which to justify such activities and appropriate consideration had been given to the associated risks for the environment and biodiversity as well as the associated social, economic and cultural impacts.

The CBD then established expert groups to compile information on the impacts of climate related geoengineering on biological diversity, and to look at how well international law covered this new set of issues. Both these reports came out earlier this year. The legal review concludes that: “The current regulatory mechanisms that could apply to climate-related geoengineering relevant to the CBD do not constitute a framework for geoengineering as a whole that meets the criteria of being science-based, global, transparent and effective.” This report singles out ocean fertilization as one exception to this conclusion, as noted above.

This week in India, these reports will be discussed and new decisions will be made on the next steps for regulating geoengineering that affects biodiversity.