

NGO Perspectives on the Regulation of Deep-Sea Mining

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Seas At Risk – DSCC Workshop

Deep Sea Mining: Exploring the Unknowns

26 April 2016

21st Session ISA

July 2015

- Agreed priority issue areas for drafting mining regulations over next 12-18 months – incl requirements for EIAs, EMPs, SEMP + ‘zero’ draft, financing, adaptive management, liability, data management and serious harm
- Review of the working methods of the ISA (to be completed in 2017)
- Review of CCZ Regional EMP, welcomes SEMP initiative in the Atlantic (and other regions)
- Draft stakeholder consultation strategy
- Challenges in decision-making and in monitoring/enforcing compliance by contractors

NGO recommendations/input to ISA stakeholder consultations

- Precautionary and ecosystem approach
- Clear & robust conservation objectives
- Strategic/Regional Environmental Assessments and Plans prior to exploitation
- Periodic review of SEMP/cumulative impact assessments (every 5 years? Siting mining, preservation reference zones etc)
- Prior EIAs:
 - comprehensive baseline information (whole claim/bioregion)
 - independent scientific review
 - publically available
- Feedback loop between EIAs and SEMPs and information generated while monitoring mining

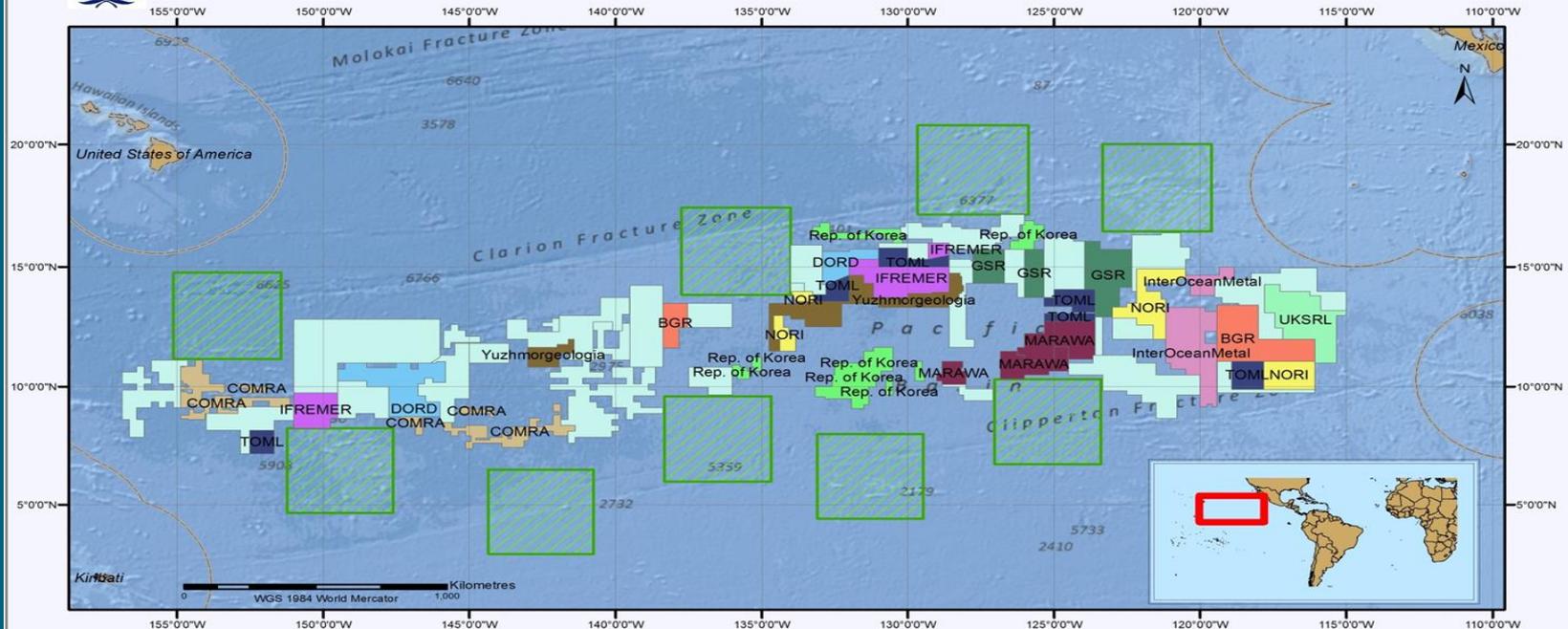
SIAs/EIAs

- How do you determine the risk of significant adverse change? Acceptable level of risk?
- Over what time scales? Biogeographic scales?
- What are the metrics, proxies, or quantifiable indicators of risk?
- What and how much baseline information is necessary prior to mining to be able to assess the risk?
- What can and should an EIA determine or demonstrate? To what degree of certainty?
- How much precaution needs to be built into the management system based on what we don't know?
- What impacts does 'test' mining need to assess, how, and what procedures/timeframe needed to evaluate results?

Clarion Clipperton Zone



Polymetallic Nodules Exploration Areas in the Clarion-Clipperton Fracture Zone Areas under contract and areas reserved for the International Seabed Authority



Contract area or contract approved as of 28 February 2013

- | | |
|---|---|
| Marawa Research and Exploration Ltd (Kiribati) | Institut français de recherche pour l'exploitation de la mer (IFREMER; France) |
| Bundesanstalt für Geowissenschaften und Rohstoffe (BGR; Germany) | InterOceanmetal (IOM; Bulgaria, Cuba, Czech Republic, Poland, Russian Fed., Slovakia) |
| China Ocean Mineral Resources Research and Development Association (COMRA; China) | Nauru Ocean Resources Inc. (NORI; Nauru) |
| Deep Ocean Resources Development Company (DORD; Japan) | Tonga Offshore Mining Ltd (TOML, Tonga) |
| G-TEC Minerals Resources NV (GSR; Belgium) | UK Seabed Resources Ltd (UKSRL, UK) |
| Government of the Republic of Korea | Yuzhmorgeologia (Russian Federation) |

- Reserved area*
 Area of particular environmental interest (APEI)**
 Exclusive Economic Zones (VLIZ, 2011)

* In the case of polymetallic nodules, the so-called parallel system provides that each application for exploration by a developed State must cover two parts of "equal estimated commercial value". One part is allocated to the applicant and the other is to become the reserved area, which is set aside for the conduct of activities by the Authority or developing States.

** In July 2012, the Authority adopted an environmental management plan for the Clarion-Clipperton Zone to be implemented on a provisional basis over an initial three-year period. The plan includes the designation of a network of areas of particular environmental interest (ISBA/18/C/22).

©International Seabed Authority, 2013. Background map: ESRI

Restoration/Remediation

- Is it possible?
- If not, what then?
- How much irremediable/irreversible damage is acceptable?
- Over what time scales?
- Can this be measured/quantified?
- What are the metrics/quantifiable indicators?
- What and how much baseline information is necessary to be able to do so?
- Precaution and the unknowns?

Possible Structure of regulatory regime

- Clear conservation objectives (ecological and social values)
- Sufficient baseline information at appropriate bioregional scales
- Environmental and strategic environmental impact assessments to assess potential impacts against conservation objectives/obligations
- Regional/Strategic Environment Management Plans (SEMPs)
- Active feedback between site/claim EIAs and environment management plans and SEMPs
- 50-100 year plans: collecting baseline information, SEMP, EIA and review of EIA, test mining, evaluation, commercial mining, post mining monitoring

NGO recommendations/input to ISA stakeholder consultations

- access to information, public participation, and transparent review procedures
- transparent and effective monitoring, control and enforcement procedures (IUU mining?)
- polluter pays principle
- liability fund
- sustainability fund

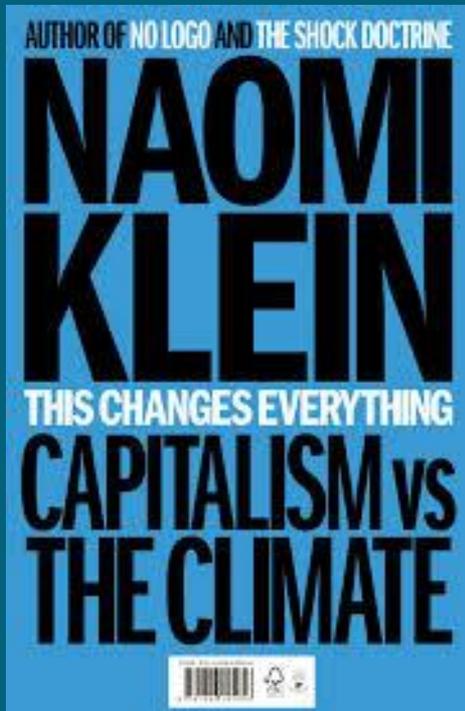
United Nations resolutions on managing the impacts
of deep-sea fisheries in ABNJ
2002, 2004, 2006, 2009, 2011, [2016]
implementation by regional fisheries treaty orgs



The Anthropocene

- “Clearly we are in the midst of one of the great extinction spasms of geological history” E.O. Wilson, *The Diversity of Life*
- “We know that seamounts support large pools of undiscovered species, but we cannot yet predict what is on the unstudied ones. The tragedy is that we may never know how many species become extinct before they are even identified”
Dr. Frederick Grassle, Rutgers University

Growing social awareness of human impacts on a planetary scale



The deep-sea is one of the largest reservoirs of biodiversity on the planet.

The Megafaunal Mass Extinction (the global spread of Homo sapien hunter-gatherers)

“a geologically instantaneous ecological catastrophe that was too gradual to be perceived by the people who unleashed it”

John Alroy - A Multispecies Overkill Simulation of the End-Pleistocene Megafaunal Mass Extinction
SCIENCE VOL 292 8 JUNE 2001



Policy developments since the Pleistocene

“The absence of adequate scientific information shall not be used as a reason for postponing or failing to take conservation and management measures”

(UNFSA Art 6.2/Rio Principle 15)

In other words, ignorance is no longer an excuse under international law

Conservation objectives

21st Century

DSM impacts in CCZ may risk being be ecologically irreversible and/or no reasonable possibility for recovery

Can extinction be justified if the activity cannot be demonstrated to be necessary to society and other less harmful options for providing the materials or service have not been effectively explored?

Go/no go DSM a social choice – across many levels of society: companies, investors, consumers, regulators, conservationists

The regulatory processes adopted over the next few years may well represent our generation's collective choices regarding the fate of deep-sea species and ecosystems potentially for many years to come

Decisions we take today may have long lasting impacts, one way or another. What choices will we make?

We have a responsibility to future generations...

Publications

Obrigado!
And thanks to the
Adessium Foundation,
Synchronicity Earth,
Oceans5, Pew
Charitable Trusts,
DSCC member
organizations and the
many scientists
working on deep-sea
fisheries and biology

The impact of deep-sea
fisheries and implementation
of the UNGA Resolutions
61/105 and 64/72

Report of an international scientific workshop



Unfinished business: a review of the
implementation of the provisions of United Nations
General Assembly resolutions 61/105 and 64/72,
related to the management of bottom fisheries in
areas beyond national jurisdiction

Deep Sea Conservation Coalition
September 2011

The Implementation of UNGA Resolutions
61/105 and 64/72 in the Management
of Deep-Sea Fisheries on the High Seas

A report from the International Programme on the State of the Ocean
Dr Alex D. Rogers
Matthew Gianni

MAY 2010



The International Programme on the State of the
Ocean (IPSO) brings together world experts in the
science, environmental and governance of marine
ecosystems to identify how humanity is changing the
capacity of the Global Ocean to support life and
nature services on Earth.

IPSO will use this knowledge to identify solutions
to restore the health of the Ocean, so as to sustain
environmental security and benefits for the present
and future generations. The programme will
communicate its findings to the public, industry and
policymakers in order to track the human changes in
human behaviour needed to achieve these solutions.

www.stateoftheocean.org

The Deep Sea Conservation Coalition (DSCC) is
a coalition of over 60 organizations worldwide
promoting bilateral cooperation and the
protection of biodiversity on the high seas.

The DSCC has been actively involved in the
international debate and negotiations
concerning the adverse impacts on deep-sea
biodiversity in areas beyond national
jurisdiction from bottom trawling and other
methods of bottom fishing on the high seas
since 2003/2004.

www.savethehighseas.org

DSCC

www.savethehighseas.org



ISA Exploration Regulations Nodules (Crusts/SMS)

- Regulation 2.3 (nodules) “Prospecting shall not be undertaken in an area ... which the Council has disapproved for exploitation because of the **risk of serious harm to the marine environment**”
- Regulation 1(f) “Serious harm to the marine environment” means any effect...which represents a **significant adverse change in the marine environment**”
- Regulation 31.4 “implement procedures for determining...whether proposed exploration activities in the Area would have serious harmful effects on vulnerable marine ecosystems and ensure that...those **activities are managed to prevent such effects or not authorized to proceed.**”