



# DOSI comments on the Discussion Paper on the Development and Drafting of Regulations on Exploitation for Mineral Resources in the Area (Environmental Matters)

DOSI workshop

1-3 February 2017



## Mission Statement

DOSI seeks to **integrate** science, technology, policy, law and economics to advise on **ecosystem-based management** of resource use in the **deep ocean** and strategies to maintain the **integrity** of deep-ocean ecosystems within and beyond national jurisdiction.

## Working groups

- **Minerals** – V. Tunnicliffe, R. Boschen
- **Oil & Gas** – E. Cordes, D. Jones
- **Fisheries** – M. Gianni, L. Watling, C. Nouvian
- **Deep-sea Genetic Resources** – K. Gjerde, H. Harden-Davies, E. Escobar
- **Deep-sea Tailing Disposal** – Ramirez-Llodra
- **Climate Change** – N. Le Bris, L. Levin
- **New Technologies** – D. Lindsay
- **Capacity Development** – B. Currie, K. Sink, M. Baker, C. Neumann
- **Policy** – S. Garrett
- **Knowledge Gaps and Global Ocean Assessment** – T. Koslow, M. Baker
- **Communication** – M. Baker, L. Levin

**DOSI at ISA:** Observer Status at ISA since 2016



DOSI KO meeting, Mexico City, April 2013



DOSI Town-hall meeting, Aveiro, Aug. 2015

# DOSI workshop goals

## Goal & participants

- Evaluate and review the ISA discussion paper (EREGs)
- Predominantly natural sciences perspective
- 20 experts, different backgrounds, 9 countries

## Approach

- Preliminary **review of >40 documents**
  - Griffith workshop report (May 2016)
  - MIDAS, JPI-O, NZ Shelf Act, SPC, ISA studies, etc.
  - Stakeholder comments to Draft Exploitation Regulations
  - Guiding concepts
  - Lessons learned from APEI process
  - Discussion Paper on EREGs
- 3-day **workshop** in Scripps
  - Plenary sessions: Document reviews; VMEs; Use of Terms and Scope in Draft EREGs.;
  - Break out groups: Aims of EREGs; Env. Baseline; Env. Goals/Objectives; EIA; Guiding principles; Serious Harm
  - Report on DOSI's discussions on the review of the Draft EREGs.



## First response to Draft EREGs (plenary)

### Overall

- Overall impression and direction **positive**. It provides a good starting point for **discussions/inputs** on difficult issues.
- Provides a **comprehensive outline** for the contract **application process**, from submission to decision.

### Further work needed

- Overall **Environmental Goals and Objectives** need to be set.
- Align with **Strategic Environmental Assessment (SEA)** and **Management Plans (SEMP)**
- How to **operationalise terms** (e.g. serious harm, significant adverse change) and set thresholds.
- Clarity of **responsibilities** is required – DOSI flowchart.
- Address **roles and responsibilities of Sponsoring States**.
- Cover **all deposit types** - additional **deposit-specific guidelines**.
- Need for **open reporting** of **all environmental data** and **greater standardisation** between contractors.
- Greater emphasis on the **Common Heritage of Mankind** and concept of “**the benefit of mankind**”.
- Better approaches for **deep-ocean monitoring**.

# Vulnerable Marine Ecosystems (plenary)

## Overall

- How is the **VME concept** applied in terms of mining?
- The **FAO approach** may be applicable, but: destructive effects of fishing may differ from destructive effects of mining, both in **space** (e.g. larger for vent mining) and **time** (e.g. longer for nodules).

## Outcome

- Need to build on **ongoing discussions** of VMEs (e.g. SEMPIA workshops).



# Definitions (plenary)

## Overall

- Internationally accepted definitions are essential.
- Most definitions need further work.

## Outcome

- Suggested **input** to available definitions.
- Several **key terms** selected for priority attention by us:
  - Acceptable
  - Benthic Plume
  - Environmental Baseline
  - Environmental Effect/Impact
  - Environnemental Target
  - Impact Reference Zones

# Environmental Baseline (breakout)

## Overall

Suggestions and recommendations on some **key points**.

## Outcomes included (amongst others):

- Include more detailed **requirements** of **Sponsoring States** and separate **guidance document** on **roles and responsibilities**.
- EREGs should cover **all deposit types**, with **deposit-specific** guidance documents.
- **Data-management** system to ensure **open reporting** of all environmental data.
- Workshops on data **standardisation** and sampling **methodology**, including **“at sea”** training.
- **Best practice updates** available to contractors on the ISA website.



Kristoff. Nat. Geo.



Menot, Ifremer



Mills et al., 2007. WHOI

# Environmental Goals and Objectives (breakout)

## Overall

- EGOs **standard practice** in SEAs.
- Goals essential also to **operationalise** certain terms (e.g. serious harm, significant adverse change; effective protection for the marine environ.) and set measurable **targets** allowing for **monitoring**.
- Goals are referred to in the Discussion Paper, but **no goals or objectives** are stated.

## Outcome

Suggestion of goals and objectives, but need further dedicated work:

**Goal 1.** To preserve **CHM** for future generations.

**Goal 2.** Development of DSM is done in the context of **sustainable development**.

**Goal 3.** Protect and preserve the marine environment by the application of **precautionary approach**.

**Goal 4.** Sustain marine benthic and pelagic ecosystem **integrity**.

**Goal 5.** Generate and share **best scientific information** available for decisions-making and improve techniques for dealing with **risk and uncertainty**.

**Goal 6.** Ensure ecosystem integrity on regional scales by integrating **strategic and contractor environmental management plans**.



# Environmental Impact Assessment (breakout)

## Overall

Structure and elements of EIA, including [scoping report](#), discussed.

## Outcome

Key points discussed and proposed (amongst others):

- The [Scoping Report](#) should be [mandatory](#);
- Include [full expert review](#) at the [scoping](#) stage;
- Need to define [thresholds](#) for impacts;
- Identification of [Environmental Impact Area](#): plumes example. But [other processes](#) important (e.g connectivity and source populations, nursery areas, migration routes, noise, trophic interactions);
- [Ecosystem function](#) should be included in the environmental [baseline](#) and [EIA](#).



# Serious Harm (breakout)

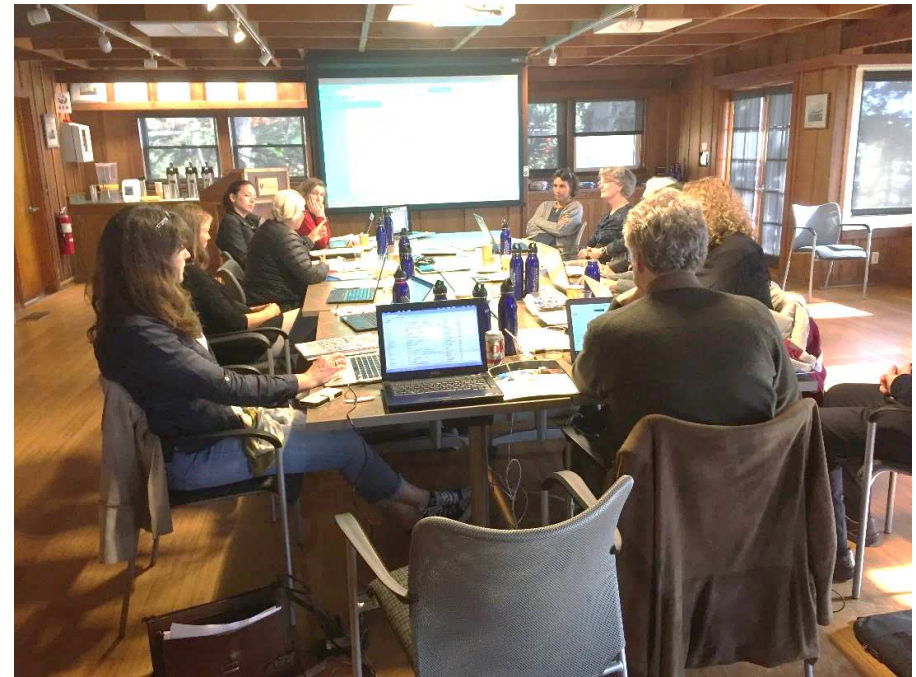
## Overall

- Many aspects of EREGs linked to **operational definition** of serious harm.
- Need **further dedicated discussion** on definition, thresholds and indicators.

## Outcomes

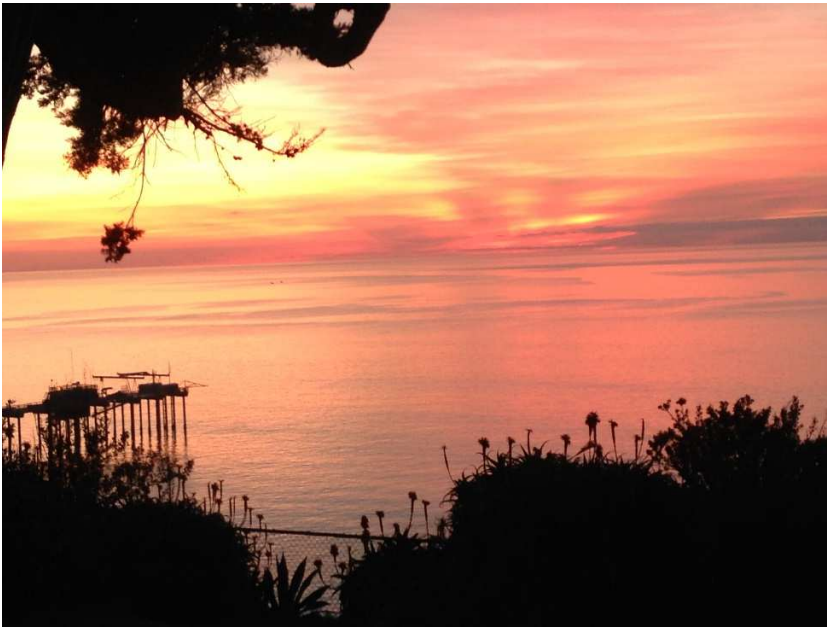
Many issues raised including:

- Need common definition of serious harm;
- Operationalisation of term
- Spatio-temporal scales
- Evaluated against environmental objectives and targets
- Deep-ocean health index



## Next steps for DOSI-Minerals group

- DOSI [workshop report](http://dosi-project.org/working-groups/minerals) available online: <http://dosi-project.org/working-groups/minerals>
- DOSI [letter](#) with main outcomes of workshop sent to [ISA](#) and online
- Present outcomes to [Berlin workshop](#) (Ramirez-Llodra, Billett, Levin, Jaeckel, Gjerde, Adron, Gianni)
- Contribute science-based recommendations for [definitions of terms](#)
- Develop a [position paper](#) on the ecological and cultural value of [active vents](#) (van Dover/GOBI)
- DOSI stands ready to help [collect](#) and [compile](#) deep-sea community input on Draft Env. Reg. in [public consultation](#).
- DOSI [representation](#) and [side event](#) at the [ISA 23<sup>rd</sup> Annual Session](#), Jamaica, August 2017.



### EREGS participants:

<b>Ardron, Jeff</b>	Commonwealth Secretariat, UK
<b>Baker, Maria</b>	University of Southampton, UK
<b>Billett, David</b>	Deep Seas Environmental Solutions Ltd, UK
<b>Boschen, Rachel</b>	University of Victoria, Canada
<b>Cobley, Amber</b>	University of Southampton, UK
<b>Escobar, Elva</b>	Universidad Nacional Autónoma de México, Mexico
<b>Gebruk, Andrey</b>	P. P. Shirshov Institute of Oceanology, Russia
<b>Gianni, Matt</b>	Deep Sea Conservation Coalition, The Netherlands
<b>Gjerde, Kristina</b>	International Union for Conservation of Nature, USA
<b>Jaeckel, Aline</b>	Macquarie Law School, Australia

<b>Le, Jennifer</b>	Scripps Institution of Oceanography, USA
<b>Levin, Lisa</b>	Scripps Institution of Oceanography, USA
<b>Majiedt, Prideel</b>	South African National Biodiversity Institute, SA
<b>Metaxas, Anna</b>	Dalhousie University, Canada
<b>Ramirez-Llodra, Eva</b>	Norwegian Institute for Water Research, Norway
<b>Smith, Craig</b>	University of Hawai'i, USA
<b>Swadling, Alison</b>	University of Sydney, Australia
<b>Tunnicliffe, Verena</b>	University of Victoria, Canada
<b>Van Dover, Cindy</b>	Duke University, USA