

Status of the designation of PRZ and IRZ in DORD's license area in the CCZ

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Workshop on the design of Impact Reference Zones (IRZs) and Preservation
Reference Zones (PRZs) in the Area, Berlin, 27-29 September 2017



Outline



1	DORD's License Area in the CCZ
2	Preference Reference Zones (PRZs): Definition
3	High Abundance Area
4	Designation of a PRZ
5	Setting of a PRZ
6	Further Steps to be taken for a PRZ
7	Impact Reference Zones (IRZs)
8	Request to ISA

1. DORD's license areas in CCZ

Area Size: 57,000 km²
(Yearly Survey since 2011)



Area Size: 18,000 km²

Exploration contract (in 2001) : 15 years
-> another contract (in 2016) ; 5 years

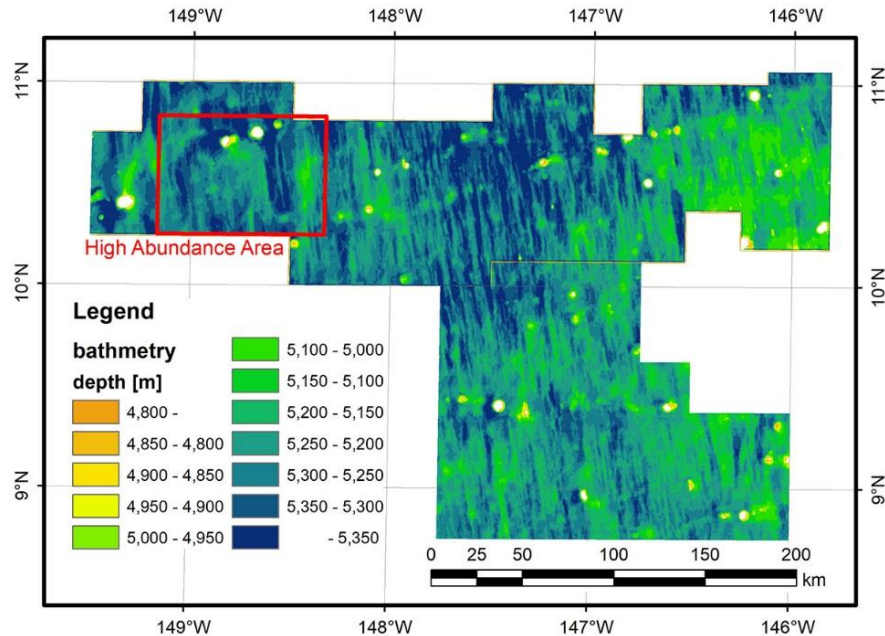
Ref: p.10, ISBA/22/LTC/10

2. Preservation Reference Zones (PRZs): Definitions

requests from ISA	references
“Preservation reference zones” means areas in which no mining shall occur to ensure representative and stable biota of the seabed in order to assess any changes in the flora and fauna of the marine environment.	(mining-code) ISBA/19/C/17 Regulation31-6
....should be designated to include some occurrence of polymetallic nodules in order to be as ecologically similar as possible to the impact zone, and to be removed from potential mining impacts.	(EMP) ISBA/17/LTC/7 41c
Areas representative of the test-mining site, but in which no test mining shall occur	(guideline) ISBA/19/LTC/8 glossary

3. High Abundance area (HA)

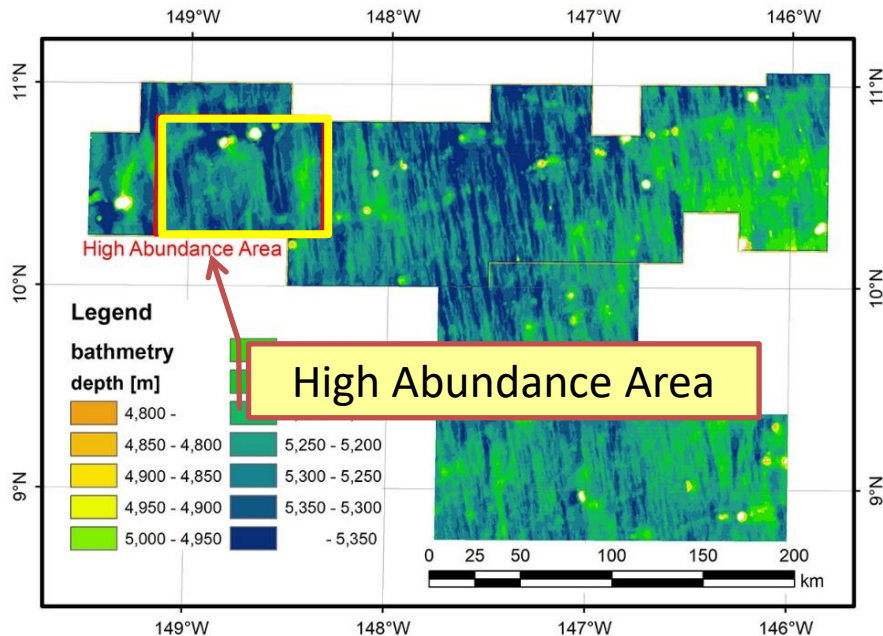
Geological surveys in the entire West Area



The West area

3. High Abundance area (HA)

Geological surveys in the entire West Area



The West area

- Selected as a Mining-targeted area in 2011 (also considered as an impact zone)
- High abundance of nodules (abundance: >10 kg/m², for most part of area)
- Area Size: Approx. 90 km × 60 km
- Depth: Mainly 5,100 m to 5,400 m

4. Designation of a PRZ

Starting Points Considered:

- ✓ Nodule abundance data in the entire West area has been identified through previous surveys.
- ✓ HA area has already been designated as a mining-targeted area.



- ✓ DORD's PRZ shall be:
 - inside of the "West Area".
 - outside of the "HA area".

5. Designation of a PRZ

1. **No mining shall occur** (ISBA/19/LTC/17; mining code)
 - ✓ PRZ should be selected from places not affected by mining activities.
 - > certain distance from the HA area
2. **Ecological Similarity** (ISBA/17/LTC/7; EMP)
 - ✓ PRZ should be selected from areas with similar environment to the "HA" area.
 - > **Geological data**
(water depth, latitude, nodules abundance etc.)

A large, dark blue downward-pointing arrow connects the list of criteria to the final designation box.

Designation of a PRZ



5. Designation of a PRZ

1. No mining shall

- ✓ PRZ should be safe from disturbance by mining activities
- > certain distance

2. Ecological Similarity

- ✓ PRZ should be similar to the environment to be protected
- > Geological data

(water depth, latitude, nodules abundance etc.)

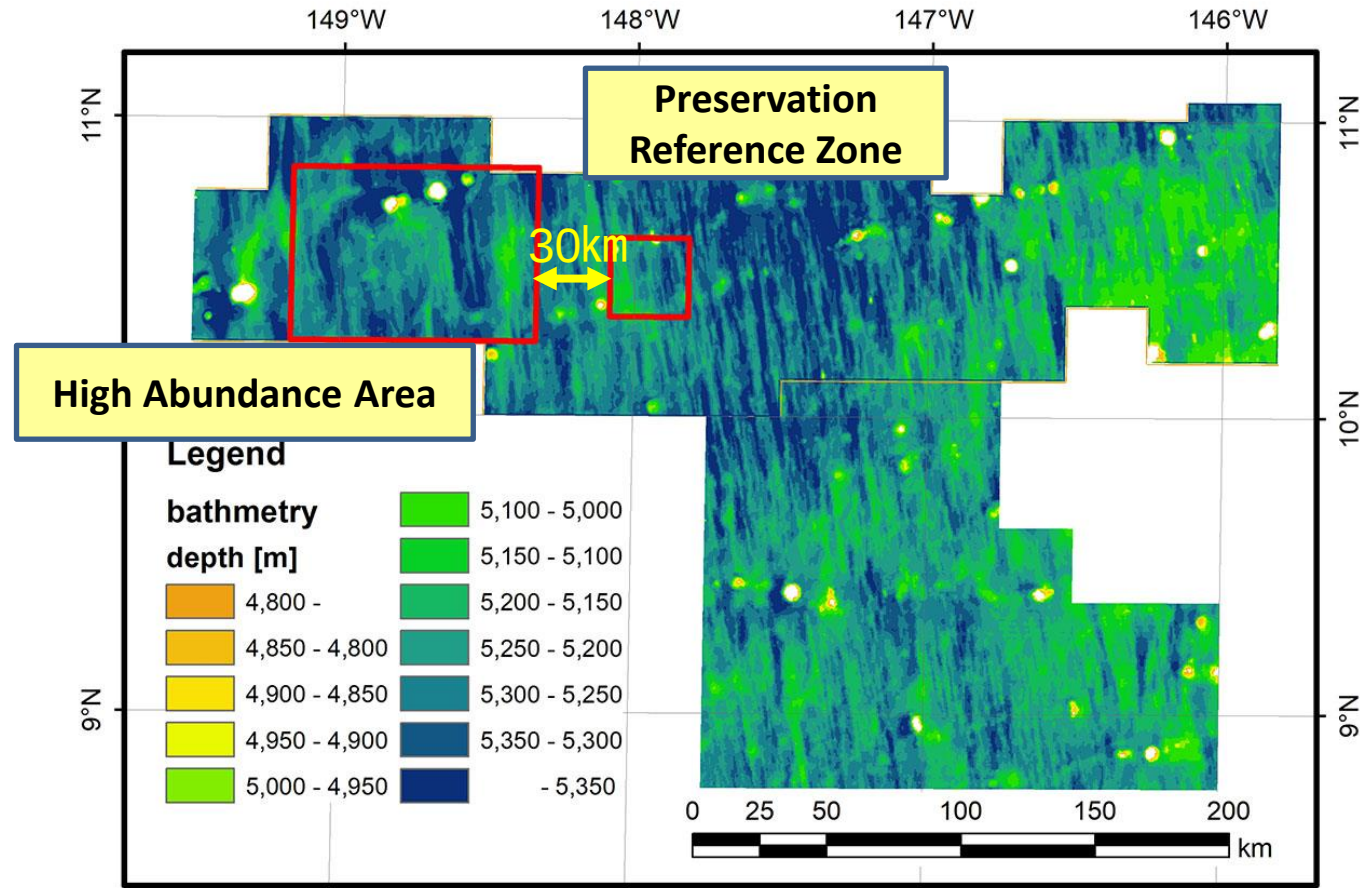
It is important to note that:

1. To conduct an environmental survey is time-consuming and very costly, therefore to collect environmental data of the entire area is not realistic and practical.
2. Geological data obtained in the past surveys can be used effectively.
3. The geological characteristics is one of the components to evaluate the ecological similarity.

Designation of a PRZ

6. Setting of a PRZ

Setting a PRZ with consideration of the HA area



PRZ information:

Size: approx. 30 km x 30 km

Distance from HA area: approx. 30 km
(maximum distance for geological similarity)

7. Further Steps to be Taken for a PRZ

1. Consideration about Ecological Similarity:

- In order to ensure and evaluate ecological similarity between HA area and the designated PRZ, it is necessary to examine what kind of environmental data is further required.

2. Accumulation of Environmental Baseline Data:

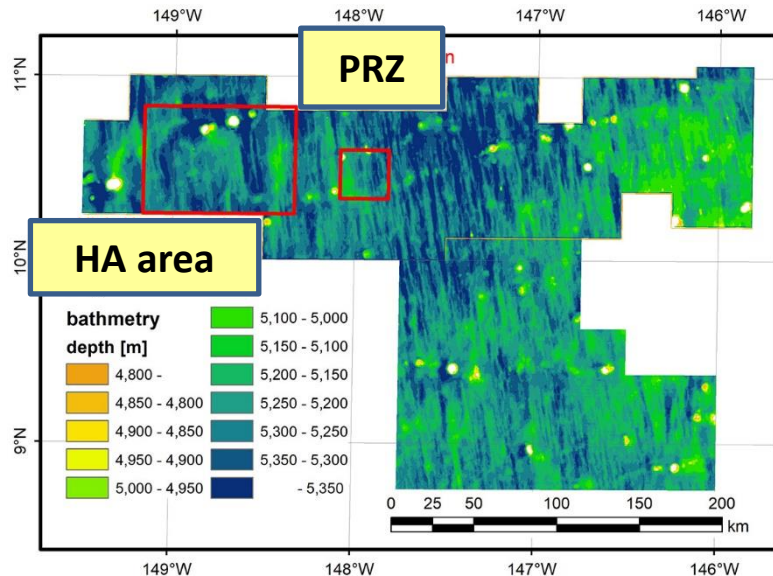
- Continuous efforts on cruise surveys to collect and accumulate environmental baseline data is encouraged.

3. Numerical simulation of flow field near HA area:

The potential plume dispersal will be assessed.

8. Impact Reference Zones (IRZs)

An IRZ is not yet designated in the our contract area



- ✓ An IRZ is likely to be located in somewhere in the HA area
- ✓ Its location and size may be decided together with a concrete test-mining plan
- ✓ Mining technologies are yet to be developed
- ✓ Details of IRZs need to be clarified through the ISA Guidelines

9. Requests to ISA

Although DORD has established a PRZ in the West area, further guidance from ISA will be necessary as follows:

1. Quantitative criteria of size, number and location of PRZs and IRZs
2. Consideration of transboundary impacts from other mining activities (esp. for PRZs)
3. Monitoring requirements for PRZs and IRZs (monitoring parameters, frequencies, locations, equipment, etc.)

Thank you for your attention!