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# **Study on international law rules concerning the exploration and exploitation of space resources**

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# I Introduction: an important issue to be solved

[prerequisites]

- the exploration and use of outer space shall be conducted in accordance with international space law;
- sustainable human/robotics space explorations need space resources; and
- the present international space law does not have a clear answer with respect to space resource activities.

[purpose of the presentation]

review of the efforts until today and some thoughts for future frameworks on space resource activities

# II UN treaties on outer space and space resources

## 1. Outer Space Treaty

### Art. II

“Outer space, including the moon and other celestial bodies, is not subject to national appropriation by claim of sovereignty, by means of use or occupation, or by any other means.”

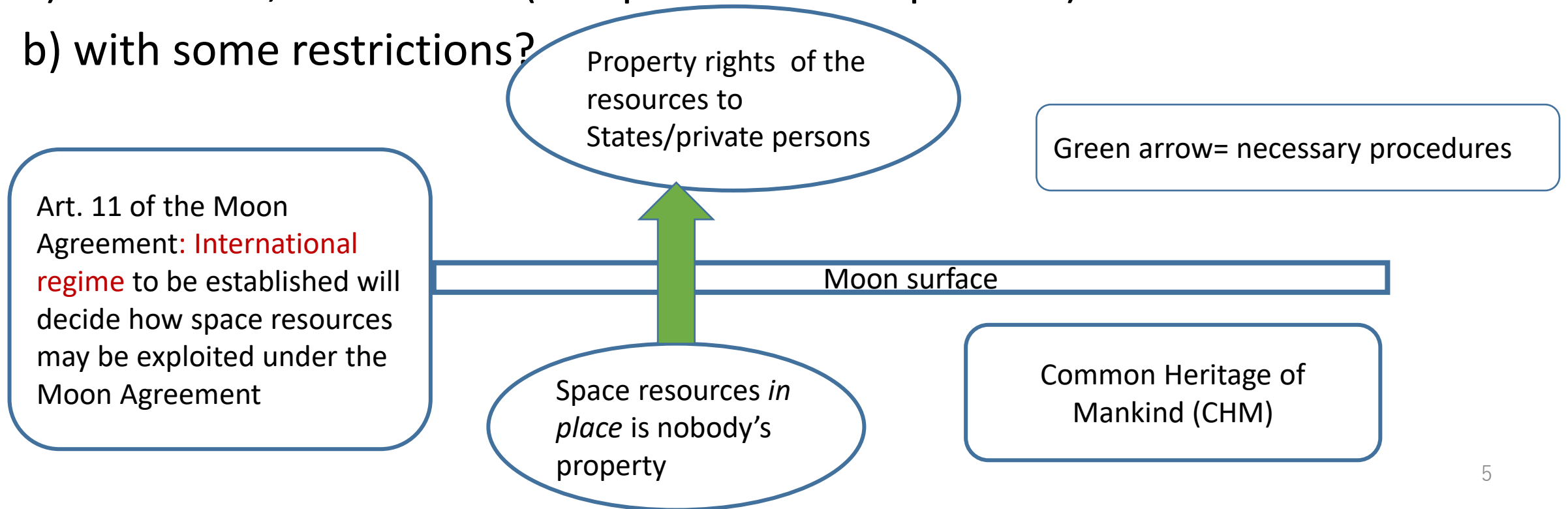
No reference on **space resources**.

Signature/ entry into force	Name of the treaty	Number of states parties
1967	Outer Space Treaty (OST)	112
1968	Rescue and Return Agreement	99
1972	Liability Convention	98
1975 1976	Registration Convention	72
1979 1984	Moon Agreement (MA)	18
A/AC.105/C.2/2022/CRP.10 (28 March 2022),p. 10.		

## 2. Space resource regime by the Moon Agreement

The Moon Agreement (1979) denies property rights of space resources *in place* to any States and any persons. But only 18 States are parties to the Moon Agreement. To most States which are only parties to the Outer Space Treaty, space resource exploitation rules are unclear:

- a) first come, first served (complete free competition)? or
- b) with some restrictions?

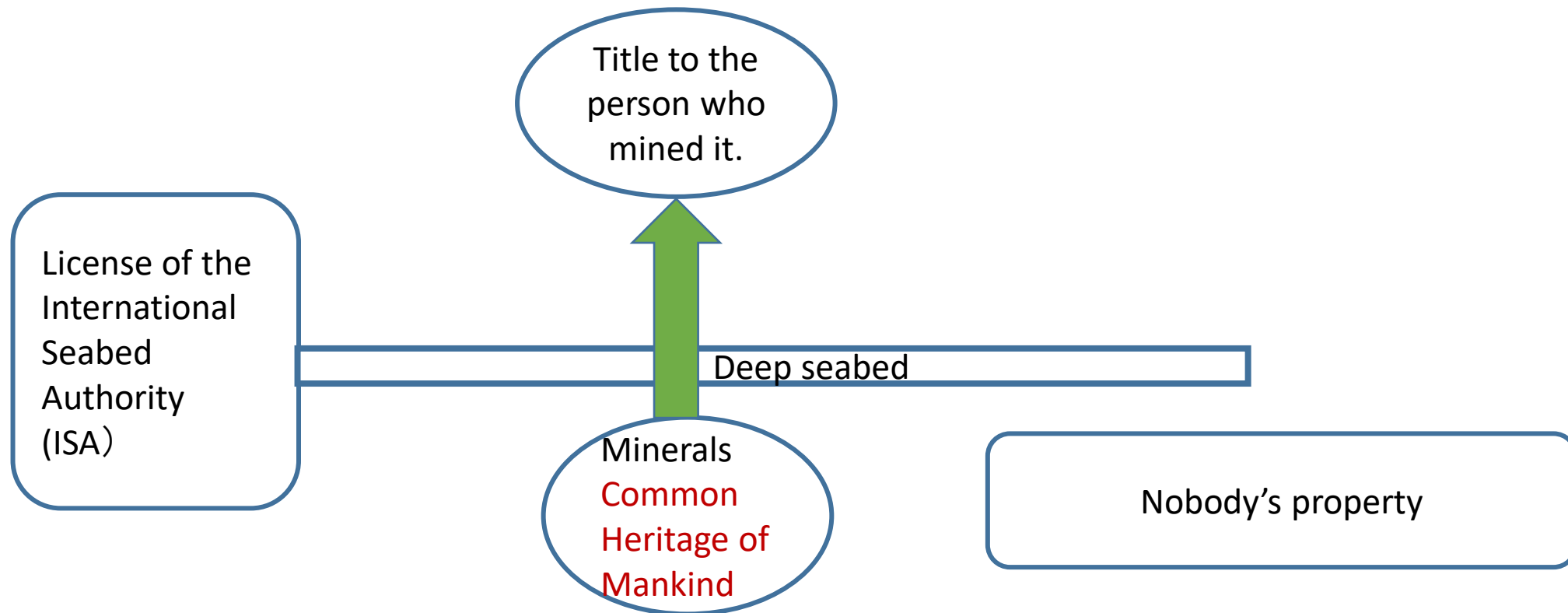


### 3. A precedent on earth: deep seabed minerals exploitation

\* deep-seabed = subsoil of the high seas

Annex III, Art. 1 of the UN Convention on the Law of the Sea (UNCLOS)



“**Title** to minerals shall pass upon recovery in accordance with this Convention.”



### III Search for international law rules on space resources exploitation

#### 1. two school of thoughts

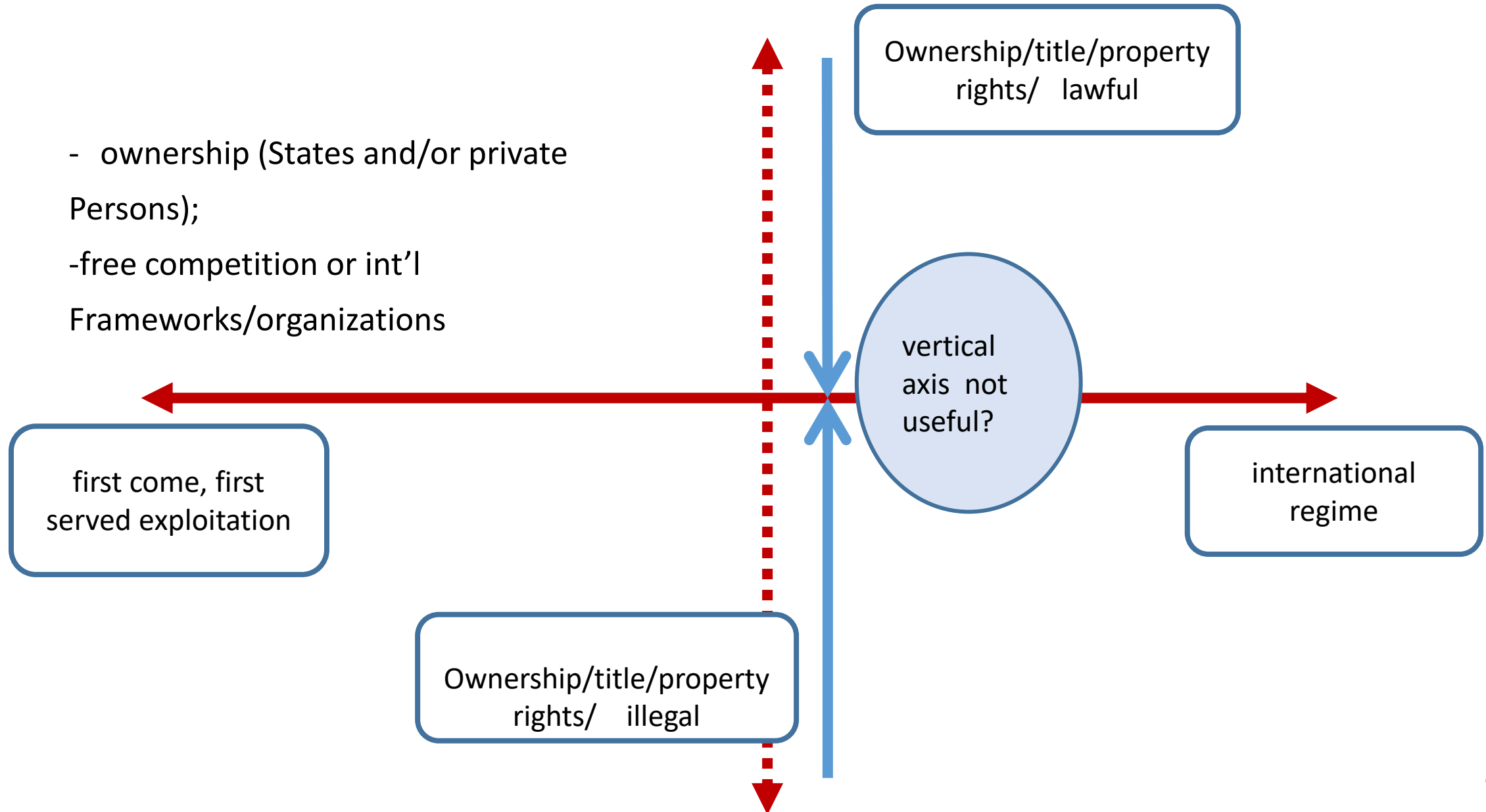
##### 1) unilateral action is permissible

no explicit rule exists.  What is not prohibited means the freedom of action by the sovereign States  making a national law to authorize and continuingly supervise its nationals to explore, exploit, extract, use, and sell natural resources in place on celestial bodies. (Art.VI of the OST requires authorization and supervision of non-governmental activities)

##### 2) multilateral action needed

No explicit rule exists.  States have to find international rules from relevant articles of the OST, other UN space treaties, UNGA resolutions, etc. and also to create preferable rules multilaterally.

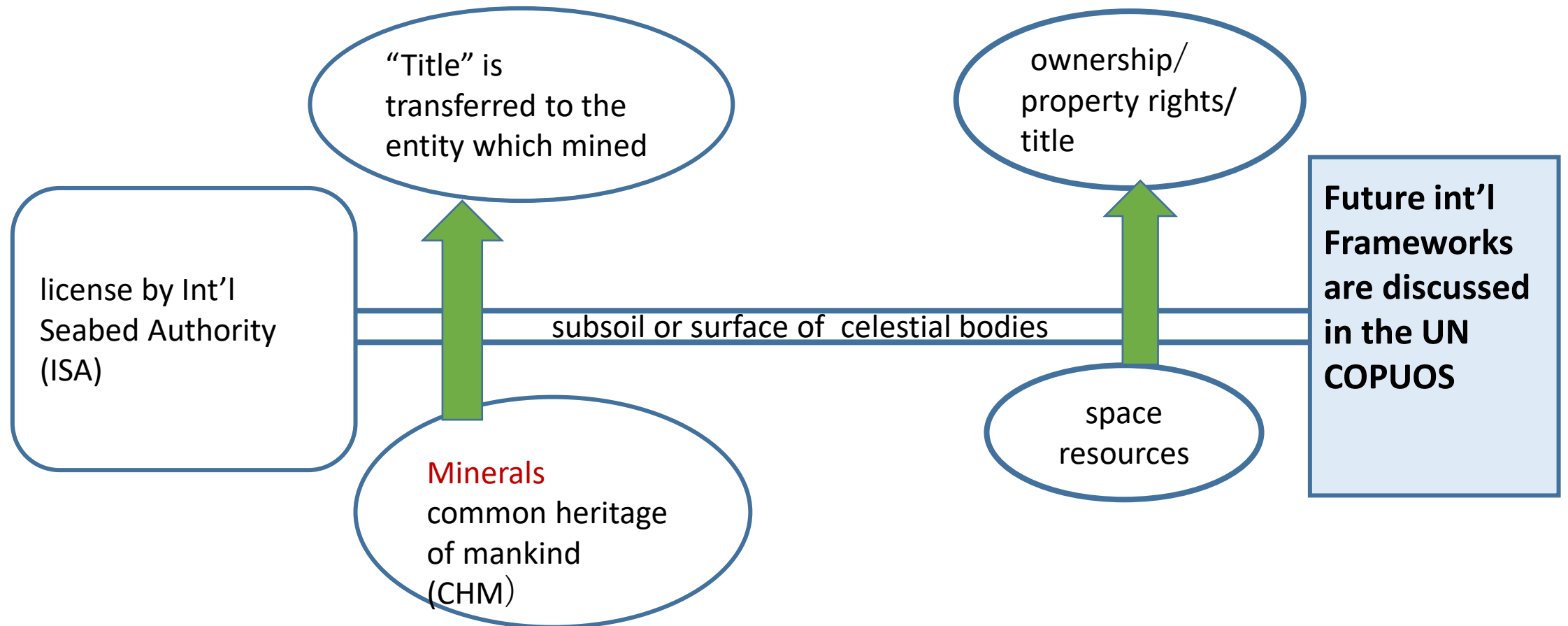
## 2. two possible axis: ownership and unilateral/multilateral





### 3. comparison: deep seabed and outer space under the OST

Green arrows = necessary procedures



# IV international discussions and national legislation

## 1. From 2015-2022

2016-2019 The Hague International Space Resources Governance Working Group  
2019 **Building Blocks** for the development of an international framework on space resource activities

2017- Legal Subcommittee (LSC) of the UNCOPUOS General Exchange of views on Potential Legal Models for Activities in the Exploration, Exploitation and Utilization of Space Resources

2021 decision to establish the WG on space resources

5 year work plan 2023- 2027 initial recommended principles → possibly a UNGA resolution

2020 The Artemis Accords (non-legally binding)

Space Resource Act

2015 US

2017 Luxembourg

2019 UAE (a part of the comprehensive Space Activities Act)

2021 Japan

National laws underline their application in accordance with international space law

## 2. An example of the future frameworks: “safety zones” for space resource activity (1) The Hague Working Group

### 2019 The Building Blocks

11.3 a safety zone or other area-based safety measure around an area identified for a space resource activity

avoid any harmful interference with that space resource activity

#### conditions

i) not impede the free access to any area of outer space

ii) for a limited period of time

a) timely public notice

b) reasons of restrictions in writing

iii) obligation of information provision but not extending it to national export control laws or the confidentiality of commercial information

\* balance and  
coordination

## (2) The Artemis Accords

The first multilateral instrument referring to “safety zone” and a specific program of activities has been in progress.

Section 11 deconfliction of space activities

how to set: notification and coordination

depends on size and scope

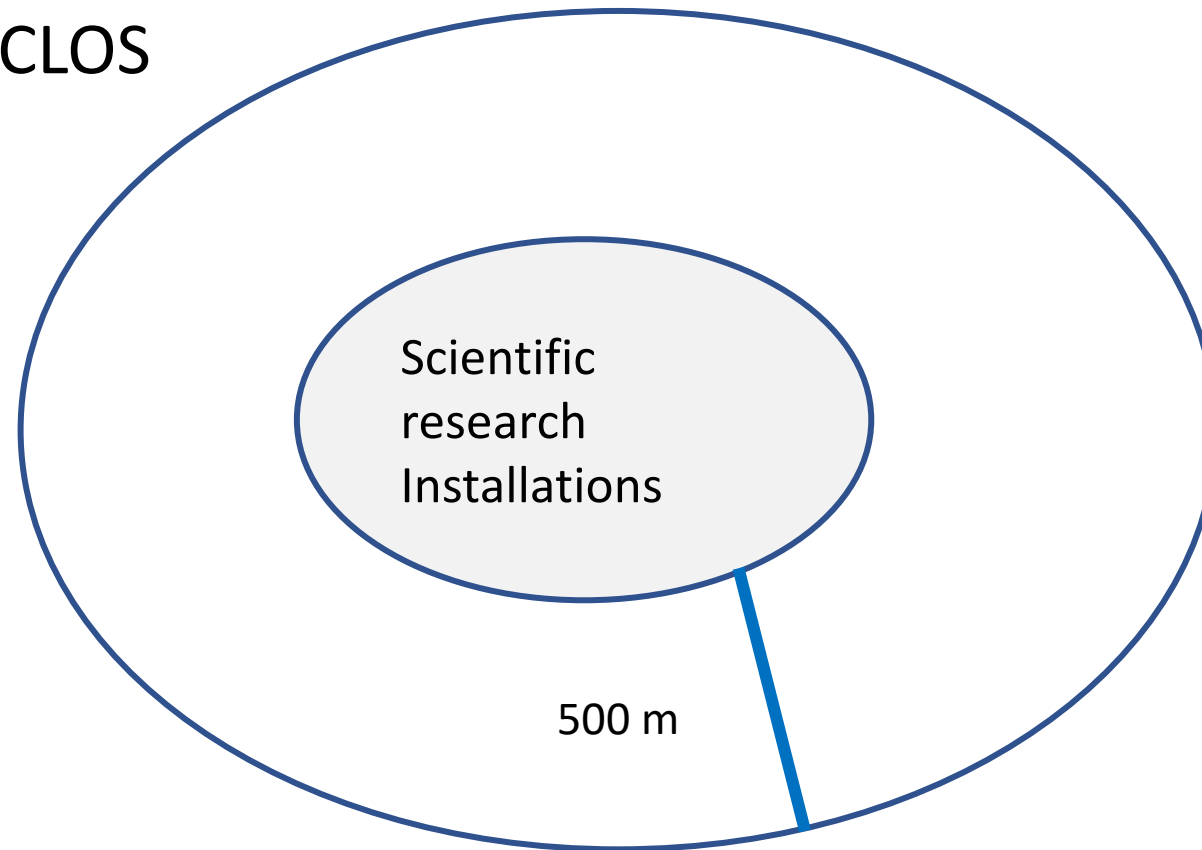


[purposes] safety of operations + various interests

(3) Precedent on earth: safety zone on the high seas

safety of scientific research installation v. navigation  
conditions

-observance with UNCLOS



## V Conclusion

- 1 A UN framework of Space resource activities will be formulated in the COPUOS → non-legally binding recommended principles may/will be adopted before 2030.
- 2 Either States, international intergovernmental organizations and non-governmental entities may exploit, extract, and use of space resources in accordance with international law, preferably under the UN framework. To accelerate the formulation of the UN framework, making international agreements and national laws are useful as state practice are to be noted.

(cont'd)

3 The UN framework will include:

- any rights and obligations under international space law;
- any established rights and obligations under other fields of international law, including international environmental law, international human rights law, international law of development, international economic law, etc. with necessarily adjustments and harmonization; and
- new rules specific to space resource activities such as “safety zones”.

For the sustainable exploration and innovation of space, an active involvement of the UNCOPUOS is recommended to every State, such as providing/exchanging its own views and practice.