



# Space Resources Activities: Current Legal Issues and Road Ahead

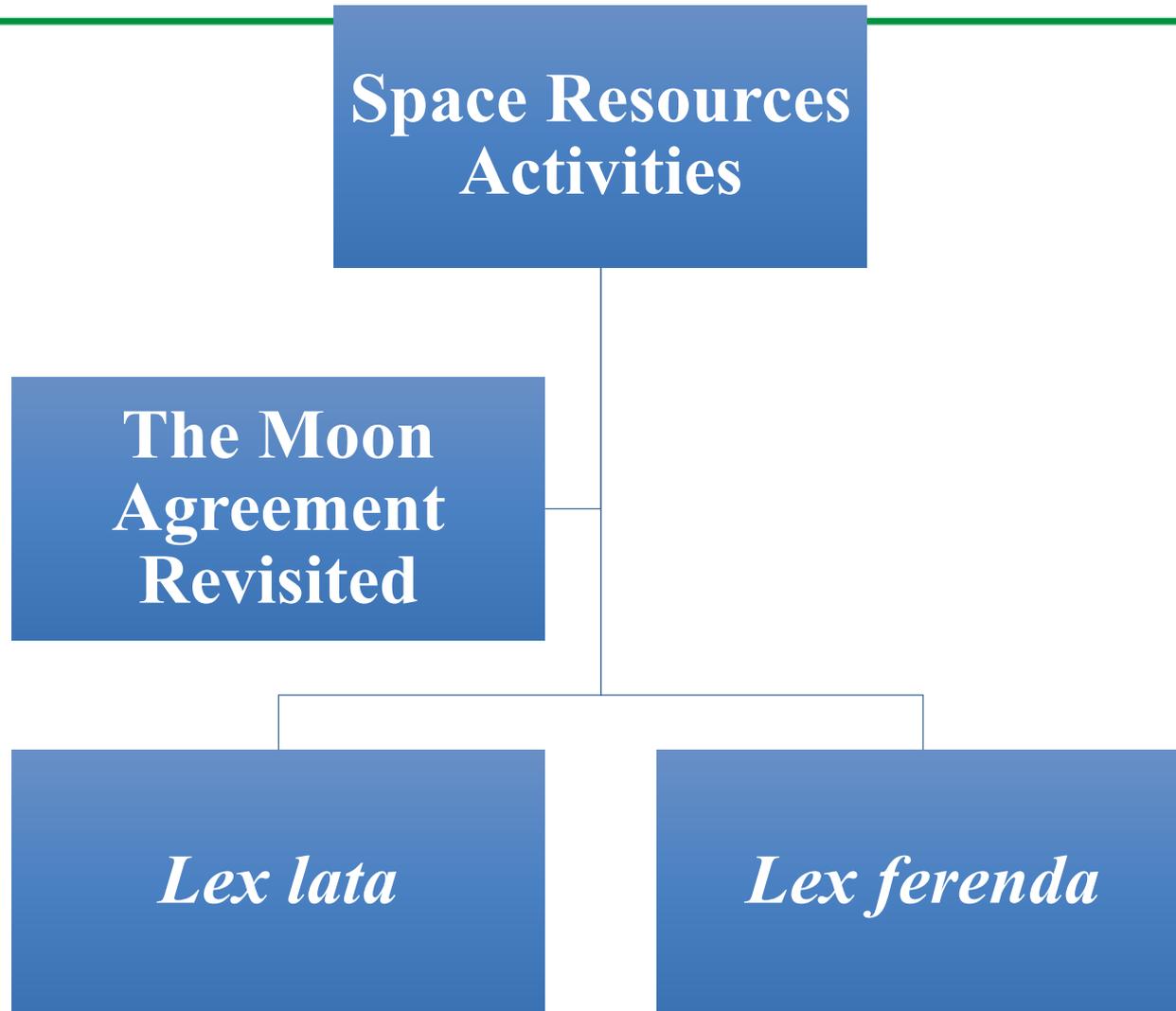
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# methodology





# Questions-oriented

## ● Principles and Concepts of Space Law in *lex lata*

- exploration, use and exploitation
- non-appropriation
- for the benefits and in the interests of all countries

## ● Space Law in *lex ferenda*

- approach
- principle
- mechanisms





# I. Principles and Concepts of Space Law in *lex lata*





# I. Principles of Space Law in *lex lata*

- i. Does current international space law allow for exploration, use and exploitation of space resources?
  - “The *exploration and use* of outer space...shall be the province of all mankind.” - Art. I, OST
  - Noting the *achievements* of States in the *exploration and use* of the moon and other celestial bodies.” “Bearing in mind the benefits which may be derived from the *exploitation* of the natural resources of the moon and other celestial bodies”. - Preface, MA



# I. Principles of Space Law in *lex lata*

- i. Does current international space law allow for exploration, use and exploitation of space resources?
  - “*States Parties to this Agreement hereby undertake to establish an international regime, including appropriate procedures, to govern the **exploitation** of the natural resources of the moon as **such exploitation is about to become feasible.** ”. -Art. 11 (5), MA*





# I. Principles of Space Law in *lex lata*

- i. Does current international space law allow for exploration, use and exploitation of space resources?
  - Conclusion 1 (C1): Free to explore and use of space resources should be part of the freedom of exploration and use contained in OST, and the exploitation of space resources is not prohibited. In addition, it's allowed by MA but without specific mechanism.

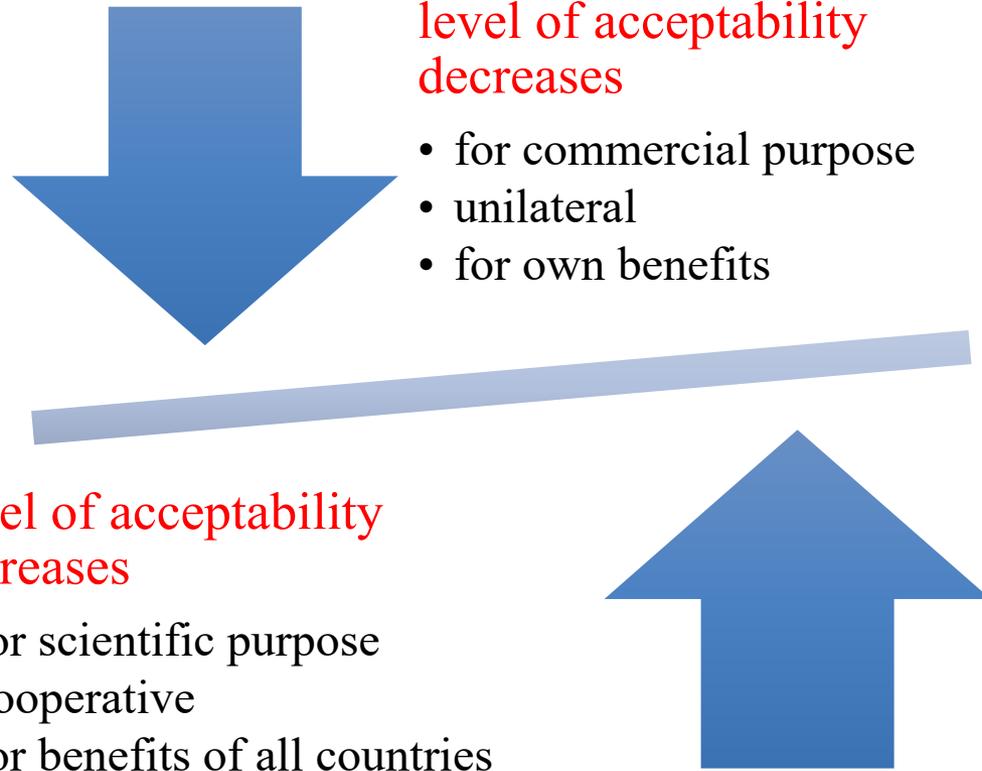




# I. Principles of Space Law in *lex lata*

- i. Does current international space law allow for exploration, use and exploitation of space resources?

➤ C 2:





# I. Principles of Space Law in *lex lata*

- ii. Is the principle of national non-appropriation of space / celestial bodies applicable to space resources? Can extra-terrestrial resources be appropriated and owned (by states and business) from the current legal perspective?
  - “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. ” -Art. II, OST





# I. Principles of Space Law in *lex lata*

- ii. Is the principle of national non-appropriation of space / celestial bodies applicable to space resources? Can extra-terrestrial resources be appropriated and owned (by states and business) from the current legal perspective?
  - “*The moon is not subject to national appropriation by any claim of sovereignty, by means of use or occupation, or by any other means.*”-Art. 11(2), MA.
  - “*Neither the surface nor the subsurface of the moon, nor any part thereof or natural resources in place shall become property of any State, international intergovernmental or non- governmental organization, national organization or non-governmental entity or of any natural person...*”-Art. 11(3), MA.



# I. Principles of Space Law in *lex lata*

- ii. Is the principle of national non-appropriation of space / celestial bodies applicable to space resources? Can extra-terrestrial resources be appropriated and owned (by states and business) from the current legal perspective?
  - C3: Yes, it applies, but only applies to the natural resources **in place**.
  - C4: The appropriation of samples for scientific purpose has become general practice and right of disposal has been set up under Art. VI, MA.
  - C5: The legitimacy of commercial activities, for instance, space mining, is still not clear. For the benefits of all humankind should be considered.



# I. Principles of Space Law in *lex lata*

- iii. What do the principles of space activities carried out “in the interest of all countries” and “for the benefit of all mankind” concretely mean and how to ensure that space resource activities are carried out according to these principles?
  - C6. It should be taken as limits to “free exploration and use” than an independent obligation.
  - C7: It always has a sensing of benefits-sharing in certain reasonable methods, for instance, sharing of data and scientific achievements of samples and other kinds of international cooperation.





## II. Space Law in *lex ferenda*



## II. Space Law in *lex ferenda*

- i. Which approach is preferable to promote exploration, exploitation and utilization of space resources: a set of principles only, a compendium of guidelines for states/private actors, a set of binding legal instruments governing specific aspects of future activities, or a comprehensive document?
  - C8: Principles are necessary and fundamental but not sufficient.
  - C9: Evolutionary approach might be considered, from soft law to hard law, from guidelines to treaties within UN framework.
  - C10: Associated closely with the developments of other issues, for instance, space tour, small satellites, on-orbit service and other commercial activities.



## II. Space Law in *lex ferenda*

- ii. What new specific principles might a future international legal regime of exploration, exploitation and utilization of space resources be based on?
  - C11: The Principle of Common Heritage of Mankind (CHM) needs to be interpreted and developed appropriately to meet the needs of space resources activities.
  - “*The moon and its natural resources are **the common heritage of mankind** which finds its expression in the provisions of this Agreement, in particular in paragraph 5 of this article.*”-Art. 11 (1), MA
  - C12: “**No more, no less**” principle is defined for interpretation of CHM in MA.



## II. Space Law in *lex ferenda*

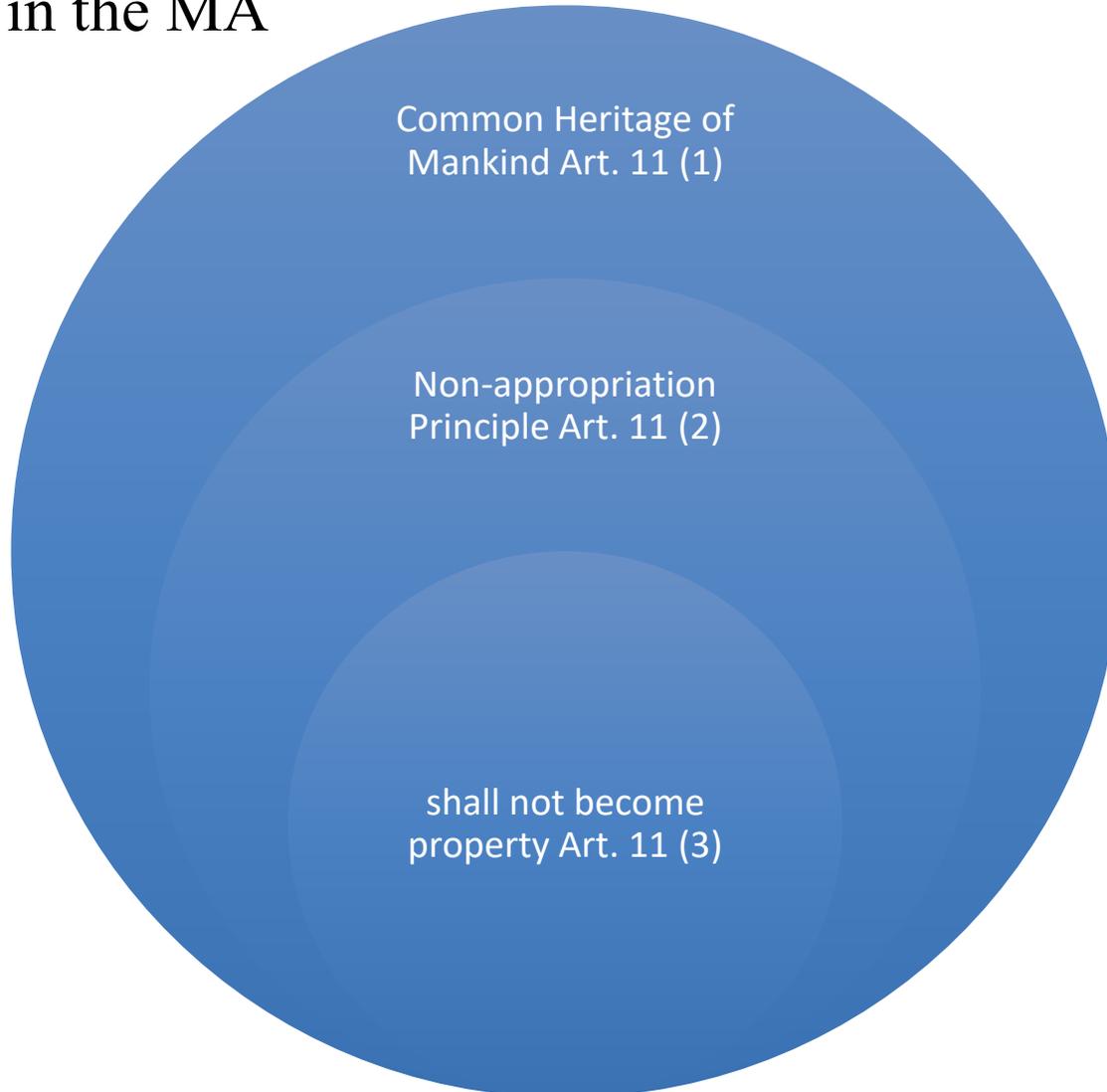
### ➤ C13: CHM in the MA

- ✓ **The Moon** shall not be appropriated, but it's not common property. -*Art. 11(2)*
- ✓ **Natural resources in place** shall not become property of anyone, but might be appropriated legally by use in certain circumstances. -*Art. 11(3)*
- ✓ **The removed samples** of its mineral and other substances for scientific purpose could be appropriated through the right of disposal (Art. 6), and might become property pursuant to national legislation or general practice.
- ✓ **The abstracted or retrieved space resources** for commercial purpose could be appropriated legally, and might become property but shall pursue to the objectives of “orderly, safe, rational management, expansion of opportunities in the use and an equitable sharing.” -*Art. 11(7)*



## II. Space Law in *lex ferenda*

### ➤ C14: CHM in the MA





## II. Space Law in *lex ferenda*

- C15: CHM of space law in *lex ferenda*
  - ✓ “CHM in space” per se should be deemed as a historical, dynamic, open and developing process in international law.
  - ✓ It should have the legal implications between **common property** and *res communes*, and should be developed, recognized and reflected in the forms of specific rights and obligations containing in cooperative agreements, soft laws and treaties within UN framework.
- C16: The CHM principle is the corner stone of a future international regime and would be continuously developed along with the development of this regime.



## II. Space Law in *lex ferenda*

- iii. What issues should this prospective regime address (specific to governments and business)?
  - C17: This prospective regime could be deemed as the international regime to be established once the exploitation is feasible, or could be taken as a preparatory regime for the above one.
  - C18: Four mechanism: incentive, cooperative, collaborative and reasonable-sharing mechanisms.
    - ✓ transparency, duty of authorization and supervision, registration of space product, title of space resources or space product [**priority rights**], liability and limits, and specific format of cooperation and sharing.



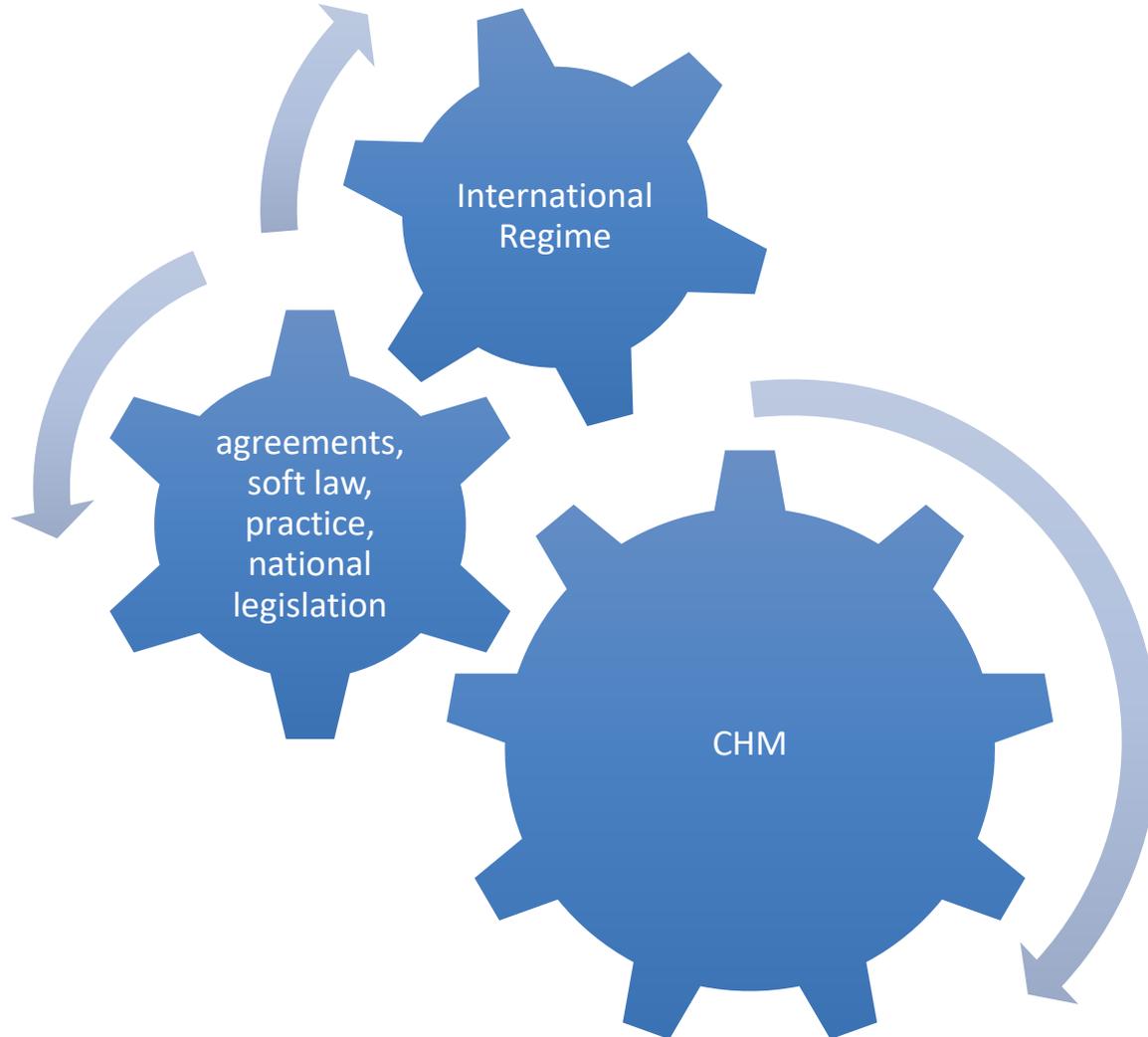
### III. the road ahead

*“Whether the new concept of the common heritage of mankind introduced by the treaty develops into a shining reality or degenerates into a myth will depend on whether in the years to come the State Parties display the necessary will to comply with not only the letter of the treaty, but also its spirit.”*

● Prof. Bin CHENG



# III. the road ahead





*thank you!*

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