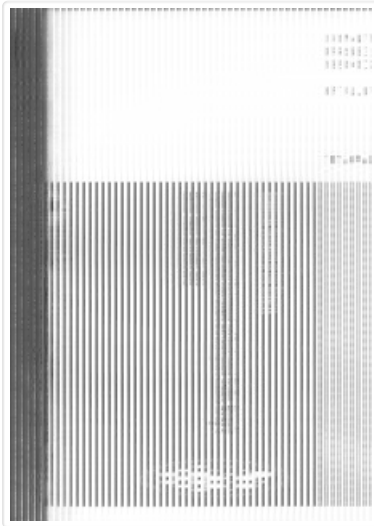


International negotiations of natural resources on the moon and other celestial bodies : future cooperation or conflict?

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Sammendrag

This thesis aims to assess the degree to which one can expect conflict or cooperation over the natural resources on the Moon and other celestial bodies in the future. By describing and exploring how the emerging global space industry may benefit humankind, it covers existing

international space treaties and how fairer administration may help to eradicate poverty by, amongst other things, providing a clean source of environmentally friendly energy. This sixtyyear young industry is redeploying rapidly from once a total governmental responsibility and

concern to a more entrepreneurial, commercialized, and privatized sector, hence leading to competition between major space faring nations. Many of our daily activities today are highly dependent from space activities. Fossil fuels are becoming increasingly challenging to commercially exploit as new areas rich in oil and gas are found in harsher climates such as the Arctic and deeper waters. Due to expensive exploration and exploitation costs, only developed and rich countries will benefit

future access, whereas the Less Developed Countries may be left out and remain in

sustainable poverty. The alternative energy sector for renewable energy resources such as bioenergy, solar, wind and hydropower have their limits. Nuclear power is today a much debated. The Moon and other celestial bodies contain a vast amount of natural resources. One, and in abundance, is helium-3. It is estimated that forty tons can meet twenty five percent of the

global energy demand for one year. This clean, non-radioactive and safe source of energy scarcely exists on Earth. Helium-3 derives from the dismantlement of old and outdated nuclear warheads. Helium-3 is used within medicine, scientific research, and well logging operations¹ in the oil and gas industry, and for homeland security. Major space nations such as

Russia, China, India, and Japan appear to have integrated within their space programs to commercially exploit the Moon for helium-3 in the future. The United Nations 1967 Outer Space Treaty (OST) prohibits any commercial exploitation on

the Moon and other celestial bodies² and permits only scientific research for peaceful uses. The Moon and other celestial bodies including the Antarctica

and the deep seas (including the Arctic) belong to the Common Heritage of Mankind (CHM). This raises issues whether or not new treaties will be required, and whether or not a new mandating body to be established. The

1 Hydrocarbon detection in rock formation

2 Excluding the planet Earth.

CHM is a principle within international law, which holds that defined areas such as the Moon and other celestial bodies, Antarctica, and the deep seas (including the Arctic) should be held in trust for future generations and be protected from exploitation. However, legal and much

debated legal loopholes exist.

The quest for profitable natural resources may often be a basis for conflict, and even wars so-called 'resource wars'. 'Space' is also a resource, for example Low Earth Orbit (LEO) where satellites are positioned. Accordingly, conflicts among some nations are already in tension due to outdated LEO treaties where 'first-in, first use' principle is used. LEO is becoming quite crowded with satellites, and both nation states and private companies want to position

themselves in the best space. Another debate is the delimitation and demarcation of space; where does space start and even where does space end. Therefore, to which degree can one expect conflict or cooperation on the Moon or other celestial body if we cannot even set rules

for something as close as LEO ?

Clean energy is the most important challenge Mankind has to face³. Dr. Richard Smalley also fears for the world the shortage of affordable and achievable energy resources, which are a

necessity for stability in a global world.

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The Moon Treaty restricted use of the Moon (and other celestial bodies) "exclusively for peaceful purposes." The prohibition on military activities is broad, though obviously unenforceable: "Any threat or use of force or any other hostile act or threat of hostile act on the Moon is prohibited. Years of negotiation yielded an almost comical Rube Goldberg system, in which the least capable states would rule. The Authority would control seabed mining. On the issue of conflicting uses by different parties, the pact merely calls on countries to "undertake appropriate international consultations before proceeding with any such activity or experiment." In succeeding years efforts have been made to develop some detailed guidelines, but with little success. Ventures, like mining the natural resources of the Moon and asteroids, are likely to become technologically feasible in the near future. The question is what would be the most appropriate approach to address the future needs of exploitation of space resources: should it remain the exclusive province of state governments; should the private sector take over such space activities; or should a public-private partnership type of venture be encouraged? This article addresses the current lack of a legal framework for the use of space resources found on asteroids and other celestial bodies. Reaffirming the importance of international cooperation in the field of the exploration and peaceful uses of outer space, including the moon and other celestial bodies, and of promoting the rule of law in this field of human endeavour, Recalling its resolution 2779 (XXVI) of 29 November 1971, in which it requested the Committee on the Peaceful Uses of Outer Space and its Legal Subcommittee to consider the question of the elaboration of a draft international treaty concerning the moon, as well as its resolution 2915 (XXVII) of 9 November 1972, 3182 (XXVIII) of 18 December 1973, 3234 (XXIX) of 1... 1. Commends the Agreement Governing the Activities of States on the Moon and Other Celestial Bodies, the text of which is annexed to the present resolution