Deep Seabed Mining: Jurisdiction, Merits and Quantum *

Summary

*** Please note that this summary of the panel was AI-generated and therefore has not been fully vetted for accuracy.**

The session on seabed mining during Washington Arbitration Week featured a panel moderated by Patricia Cruz-Tranny, who introduced key participants with extensive backgrounds in international arbitration and mining law. The discussion focused on the emerging field of deep seabed mining, highlighting its significance as the world shifts towards renewable energy sources, increasing the demand for minerals like manganese, copper, and cobalt found in the seabed.

Panelists included experts from various legal and consulting backgrounds, each bringing unique insights into the complexities of seabed mining. David Attanasio discussed the potential for disputes arising from the regulatory framework set by the International Seabed Authority (ISA) and the various dispute resolution mechanisms available, including commercial arbitration and the Seabed Disputes Chamber. He emphasized the importance of state sponsorship for private entities engaging in mining activities.

The conversation also touched on the obligations of sponsoring states and the potential for investor-state disputes, particularly regarding contract terminations and regulatory changes. The concept of "common heritage of mankind" was highlighted as a crucial legal principle governing seabed resources, raising questions about the environmental implications and the rights of landlocked states.

Chris Milburn and Jim Burrows addressed valuation methodologies for seabed mining projects, noting the challenges posed by the nascent stage of the industry and the need for robust technological advancements. They discussed the potential for economic viability and the importance of establishing a predictable legal framework to attract investment.

The panel concluded with a Q&A session, addressing concerns regarding environmental activism, the role of landlocked states in seabed mining, and the implications of similar principles in outer space resource development. The session underscored the complexity and evolving nature of seabed mining law, highlighting the need for continued dialogue and exploration of legal frameworks as the industry develops.

Authors
Patricia Cruz Tabanino, Tafadzwa Pasipanodya, David Attanasio, Chris Millburn, James Burrows

Topics
Seabed mining

Category
WAW

Full Transcript
00:00:05
Welcome to the 5th day

00:00:07
of Washington, arbitration week, we

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3rd Edition. My name is

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Jose, Antonio Rivas, a co-founder

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of Washington education week together

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with Ian Laird and this

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third edition has been an

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incredible ride and so far.

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And we are saving the

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the best of all for

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Friday today. So we're starting

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with the a panel which

00:00:38
is I'm proud to say

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is is one of the

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topics that there is more

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avant-garde of all the topics

00:00:47
that we have been discussing

00:00:48
a year ago or two

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years ago, we did a

00:00:53
general Mining and shipping mining

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for this this time, we're

00:00:59
supposed to be focusing, only

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on seabed mining, we have

00:01:02
an incredible number of Esprit

00:01:05
Washington DC and I do

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not want still are moderators

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Thunder. My task is simply

00:01:12
to provide some general information,

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logistically. One after the panel

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we will go into breakout

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rooms and that you will

00:01:22
be able to meet the

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stars were in front of

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you. And I'm to the

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most important part is, to

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introduce our moderator Patricia, Cruz

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tranny. Know she has, she

00:01:36
is a legal counsel at

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exit and she is one

00:01:42
of the case management and

00:01:43
she works at one of

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the keys management team. Is

00:01:46
she a joint? Exit this

00:01:50
year in February and before

00:01:52
exit. She work. As an

00:01:56
associate in the international arbitration

00:01:58
practice groups of the law

00:02:01
firm Jenner & block. Between

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2019-2022 and Foley Hoag between

00:02:07
2050 and 2019 in Washington

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DC. So she is fully

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Awash Antonio and she brought

00:02:16
her legal career in international

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trade, practice at Hughes, Hubbard

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& Reed in the ocean

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Washington. D.c. she holds a

00:02:24
law degree from Harvard Law

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School and she's admitted to

00:02:29
practice in New York and

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in the District of Columbia

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most important for this topic,

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she has done research and

00:02:39
written about seabed Mining and

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she she's very well knows.

00:02:44
No. The various aspects from

00:02:48
jurisdiction marriage and the quantum

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Enigma, I respect him. That's

00:02:54
why we were able to

00:02:56
put together this incredible panel

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that is in front of

00:03:00
you. So, Competition, thank you

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for all the work in

00:03:05
bringing together this panel and

00:03:07
the floor is fully yours.

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Thank you so much. Was

00:03:12
Antonio for the kind introduction,

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and welcome to all our

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audience today. Good morning, great

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to see everybody, bright and

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early here, DC time, I'm

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sure we have people joining

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from elsewhere as well. Let

00:03:27
me do a very quick

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introduction of our panelists so

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we can we can get

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straight to hearing from them.

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At our panelists, have incredible

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profiles. I cannot do them

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Justice in the time that

00:03:39
we have. But I am

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going to do a brief

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introduction, but I encourage you

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to talk to them in

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the networking session at the

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end so you can hear

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straight from them about their

00:03:50
work and international dispute resolution

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in arbitration. I assure you.

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They have incredible trajectories and

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achievements, that I would love

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you to come over here,

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but that you could hear

00:04:00
from them about to let

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me first start with the

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fight supposed fun. It's got,

00:04:05
she's a partner in Foley

00:04:07
hugs International litigation and arbitration

00:04:09
Department. She chairs. Friends Africa,

00:04:12
practice and she has extensive

00:04:14
experience representing several States and

00:04:17
state entities before numerous International

00:04:19
forums, including the international court

00:04:21
of justice at the international

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tribunal. Also lost the sea

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and arbitration tribunals has helped

00:04:27
her clients especially successfully resolved

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complex multi-jurisdictional. Disputes concerning, natural

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resources, Mining and energy, the

00:04:35
environment, the law of the

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sea among others. So, she's

00:04:38
got a lot to contribute

00:04:40
to this panel today. At

00:04:43
next, we have David attanasio.

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He is a senior associate

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at dechert. He concentrates his

00:04:49
practice on International arbitration and

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Washington Arbitration Week

international litigation matters, especially those

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with difficult issues of public

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international law or foreign law.

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He has a deep understanding

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of banking, Finance, oil, and

00:05:02
gas, mining Information Technology, as

00:05:05
well as many other sectors

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in multiple geographic region. We

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also have with us today,

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Jim Burrows, use the former

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CEO and current Vice chairman

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of the international consulting. Firm

00:05:18
of Charles River Associates. He

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holds a PhD in economics

00:05:22
from MIT and has five

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Decades of experience in business

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Consulting, and dispute, resolution matters,

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including investor-state arbitration. He founded

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CRA as metals and minerals

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practice, and let its Litigation

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Consulting practice for many years,

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prior to becoming CEO. He

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also has extensive experience in

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all minerals and metals Industries,

00:05:43
including including Iron and Steel,

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Gold Silver, and for our

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purposes today, things like copper

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manganese and others. And last

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but not least, we have

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Chris Milburn with us he

00:05:55
is the managing director at

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Secretariat advisors in Canada. He

00:06:00
has 25 years of experience

00:06:01
in the quantification of economic

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damages and evaluation of business

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interest in the context of

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international arbitration and commercial litigation.

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He has extensive experience in

00:06:13
evaluation and quantification of Damages,

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relating to Mineral projects all

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over the world involving, many

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different kinds of minerals. He

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has been recognized as a

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leading damages and validation expert

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by whose whose legal since

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2014. And he has been

00:06:27
named to Who's Who legal

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list of top mining expert

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since the mining list included

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experts in 2019. So, we

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have an extremely knowledgeable panel

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with us today and just

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to set the stage for

00:06:41
their presentations. I, I wanted

00:06:43
to give a very brief

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overview of the topic. So,

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why deep seabed mining why?

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It's does a timely topic

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and why is it interesting?

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Well, as the world seeks

00:06:54
to transition away from fossil

00:06:56
fuels and towards renewable energies,

00:06:58
the demand for certain minerals

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such as manganese, copper, and

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Cobalt is rising. Sharply the

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seabed in what we call

00:07:05
the area that is the

00:07:07
seabed that is beyond the

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limits of national jurisdiction, is

00:07:11
rich in these minerals and

00:07:13
is there for attracting the

00:07:14
attention of both private and

00:07:16
state actors. At the moment,

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deep seabed mining remains at

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the exploration stage, but exploitation

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May begin very soon. The

00:07:25
international seabed Authority, which regulates

00:07:28
mining activities in the area

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is expected to finalise. The

00:07:32
exploitation regulations by July of

00:07:34
next year. 7 just a

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few months. And once that

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happens what we call the

00:07:39
mining code, that is the

00:07:41
regulatory framework for seabed. Mining

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activity in the area will

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be complete and exploitation activities.

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Were there for expecting to

00:07:49
see a lot of mining

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activity in the area in

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the near future and to

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illustrate the magnitude of this

00:07:57
of this activity. The area

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covers half of the Earth's

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surface and already existing exploration

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contracts cover over a million

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square kilometers of the area

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and that is still just

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half of half a percent

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of the deep seabed Beyond

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national jurisdiction. So there is

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enormous room for growth in

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this activity and given its

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scale, it will require very

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high levels of investment as

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well as a participation of

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both private and state actors.

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There are three main types

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of resources in the seabed

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that have attracted interest. Those

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are kobold rich crust and

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Paula metallic nodules the extraction

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and processing of these resources.

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Isn't necessarily an analogous to

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those of land phase resources.

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Their location about 5 km

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deep in the ocean and

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their mineral composition mean that

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we need new technologies to

00:08:57
enable their extraction and processing

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in a commercial scale. So

00:09:01
this is a cutting-edge Enterprise

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not just from illegal but

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also a technological perspective. So

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the key framework that is

00:09:11
applicable to deep seabed. Mining

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in the area is the

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United Nations convention on the

00:09:17
law of the sea, also

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known as Uncle owes and

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is he legal principles to

00:09:22
keep in mind as you

00:09:23
hear from her panelist today.

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One is that the area

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and all the resources in

00:09:29
it are the common Heritage

00:09:30
of mankind that is no

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State and no private actor

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can unilaterally claim sovereignty over

00:09:37
the area where its resources.

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Instead we have one central

00:09:41
body which I prefer to

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print previously. The international seabed

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Authority that regulates deep seabed

00:09:48
mining on behalf of the

00:09:49
International Community as a whole.

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And to this end, the

00:09:54
international seabed Authority or the

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is a operates, a contract

00:09:58
base licensing system for exploration

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and ultimately exploitation of deep

00:10:04
seabed resources. That means that

00:10:06
private actors corporations can apply

00:10:09
to undertake mining activities if

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they are sponsored by 8,

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your own clothes state-sponsored and

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you can be their state

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of nationality or the state

00:10:18
of control. This sponsorship agreement

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creates a very interesting dynamic

00:10:23
between the state and the

00:10:25
mining contractor with legal rights

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and obligations that we will

00:10:28
explore in today's conversation. So,

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what's up brief introduction? Let

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me post the first question

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for our panelists, David. So,

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clearly as with any industry,

00:10:39
especially one of the magnitude

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that deep seabed mining is

00:10:43
expected to have disputes are

00:10:45
likely to Arise at some

00:10:46
point, where can we expect

00:10:49
disputes to be brought and

00:10:50
what kinds of disputes might

00:10:52
these be? Okay, thank you,

00:10:55
Patricia. Good morning to all

00:10:57
so that's pretty sad. The

00:11:01
area is the common heritage

00:11:02
heritage of mankind but yet

00:11:04
it is a potential Source,

00:11:05
highly commercial disputes. So I'm

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approaching this topic has an

00:11:10
arbitration practitioner with experience in

00:11:12
both commercial and investor-state arbitration.

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We're currently the cost of

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an exciting New World with

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a plethora of potentially overlapping

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options for dispute resolution. I

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really want to approach this

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matter from the perspective of

00:11:26
a commercial entity that may

00:11:28
be engaged in commercial disputes

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with either. The is a

00:11:31
or relevant State parties. Unlike

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many settings are actually lots

00:11:37
of options here for a

00:11:38
company. To see, one will

00:11:41
dispute resolution, but there are

00:11:42
actually also very interesting Lee.

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A lot of options for

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the is a or state.

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However, the means of dispute

00:11:49
resolution in this area are

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effectively untested and their significant

00:11:55
questions outstanding about how these

00:11:57
different options, May relate to

00:11:59
one another. And when they

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might be access, So our

00:12:04
Focus today is really on

00:12:06
deep seabed mining in the

00:12:08
area. Because this is generally

00:12:11
speaking. Where would we find

00:12:13
his probably metallic nodules, sulfides

00:12:16
and Cobalt Ridge Crust and

00:12:19
that's usually in the international

00:12:21
seabed area. But not always,

00:12:23
there are a couple areas

00:12:26
of continental shelf. That is

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well areas closer to the

00:12:31
to the co-host of a

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relevant state that actually have

00:12:36
some of these resources as

00:12:38
well. The Cook Islands for

00:12:40
example, has manganese nodules on

00:12:42
his Continental shelves but nevertheless

00:12:45
are primary, my primary focus

00:12:47
will be on the area.

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I am on the interest

00:12:53
while the dispute resolution mechanisms

00:12:56
are quite extensive in the

00:12:58
interest of time. I'm going

00:12:59
to focus only on the

00:13:00
street resolutions as they apply

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between private parties and their

00:13:04
relationship with the various authorities,

00:13:06
believe the state or the

00:13:07
is a cell. And this,

00:13:12
we could really have a

00:13:13
very significant range of different

00:13:15
types of disputes because the

00:13:18
basic setup, when you're a

00:13:20
private party that's engaged in

00:13:21
mining, exploration activities are present

00:13:25
in the area is that

00:13:26
you first have to get

00:13:28
a state sponsor, for your

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your mining, activity in the

00:13:33
area and then you have

00:13:34
to enter into a contract

00:13:35
or an agreement with the

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is a that contains a

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plan of work. so this

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so you really have whenever

00:13:44
you have a private mining

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interest in the area, you

00:13:47
really have a three party

00:13:48
three parties involved at a

00:13:52
minimum so Let's play the

00:13:55
party. May have disputes words.

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The claimant. Regarding the plan

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of work or the implementation

00:14:02
of his contract with the

00:14:02
ISA could also have a

00:14:06
dispute regarding contract modifications or

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terminations with in sponsoring State.

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You could have a dispute

00:14:13
regarding you laws or regulations

00:14:15
imposed by the sponsoring state

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What is important to note

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that a private contractor or

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is there sometimes called could

00:14:25
also be the respondent in

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disputes in this context? They

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often have even obligations to

00:14:30
the sponsoring State that's off.

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And why the sponsoring state

00:14:34
provides a sponsorship in exchange

00:14:36
for receiving some payments? Nails

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of all sorts of environmental

00:14:41
and other obligations obligations that

00:14:45
appear in other places in

00:14:47
the contract. They entered into

00:14:49
with the is a agreement

00:14:51
but also in other regulatory

00:14:53
documents of the is sacred

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and so on and so

00:14:56
forth. So it was a

00:14:59
lot of different types of

00:15:00
disputes going to ride that

00:15:01
can arise. Where do these

00:15:02
disputes potentially? Get resolved. Well,

00:15:06
I think in very broad

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Strokes, the eye of the

00:15:09
scheme set out in class,

00:15:12
really contemplate, that they will

00:15:13
either go to the seabed

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disputes chamber, and I'll get

00:15:16
to what that is in

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a second or two commercial

00:15:19
arbitration. But I think there

00:15:21
is a third option that

00:15:23
perhaps as an investor State

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arbitration practitioner, I can't help.

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But raising that is investor-state

00:15:28
arbitration and we'll get to

00:15:30
the context in which that

00:15:31
might be an option as

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well. So first, let me

00:15:36
start with the most unique

00:15:39
dispute resolution mechanism that arises

00:15:43
in this particular context. The

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seabed dispute, the chamber arbitration

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practitioners. This may be the

00:15:49
least Familiar of the three

00:15:51
mechanisms I'm going to discuss.

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So what is the seabeds

00:15:55
do? Shiba Inus music chamber.

00:15:58
This is a The tribunal,

00:16:02
effectively, our tribunal, in a

00:16:03
tribunal created, Lyon class with

00:16:05
exclusive and compulsory jurisdiction over

00:16:08
certain categories of disputes. This

00:16:11
is unlike other dispute resolution

00:16:13
mechanisms on Claus related to

00:16:14

other issues of apart from

00:16:16
the seabed, this formally at

00:16:18
chamber of the international Tribunal

00:16:19
for the law of the

00:16:20
sea. But as it's sort

00:16:22
of, a tribunal in a

00:16:23
tribunal, because it really does

00:16:24
have its own really defined

00:16:26
jurisdiction. Thus far it hasn't

00:16:29
been terribly active. Its most

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significant decision or not. The

00:16:32
only decision is an advisory

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opinion on the responsibilities and

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obligations of States sponsoring persons

00:16:39
and entities with respect activities

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in the area which is

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was issued on one February

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2011 and one of the

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reasons it hasn't been so

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active as we are really

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just at the cusp of

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having significant mining activities in

00:16:53
the area, we have a

00:16:54
number of different exploration projects

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but none of them have

00:16:58
yet moved to the exploitation

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base. So, very interesting Lee

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unclog provides that the seabed

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disputes chamber has jurisdiction over

00:17:07
certain disputes involving private parties.

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Yeah, this is the idea

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that a private party can

00:17:17
access. The type of dispute

00:17:19
resolution is fairly unique outside

00:17:22
of investor-state arbitration run and

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not a completely unique, of

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course, but it is not

00:17:28
exactly commonplace yet. Unclog provides

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for it because it's envisioning

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hear that private parties May.

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Well plays a significant role

00:17:35
in the system of mining

00:17:38
in the area. So you

00:17:41
see that disputes chamber has

00:17:42
jurisdiction over a sort of

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enumerate. The categories of disputes

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second involved a certain natural

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parties and these natural natural

00:17:52
or legal entities that are

00:17:55
not state-owned. They are restricted

00:17:58
to those entities that are

00:17:59
actually sponsored by only they

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are going to be able

00:18:02
to access the system and

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largely speaking. Those are also,

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the only answer these would

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really have any particular interest

00:18:08
in meeting dispute. Resolution before

00:18:11
the system are able to

00:18:14
be involved in disputes before

00:18:16
the seabed disputes chamber involving

00:18:18
the interpretation or application of

00:18:20
a and I quote, relevant

00:18:21
contract, or plan of work.

00:18:24
They can also bring involved

00:18:28

in disputes regarding the acts

00:18:30
or omissions of a party

00:18:31
to such a contract relating

00:18:32
to its activities in the

00:18:33
area and directed to the

00:18:35
other party or directly affecting

00:18:37
its legitimate interest. When? A,

00:18:43
a private entity is involved

00:18:45
in negotiating, a contract or

00:18:49
seeking a contract that has

00:18:51
been sponsored. And it's already

00:18:53
been sponsored by a state.

00:18:54
I can actually have a

00:18:56

bring a dispute with the

00:18:58
is a two before the

00:19:00
seabed, the speed chamber concern

00:19:02
the refusal, of the contract,

00:19:03
or some legal issue arising

00:19:05
in the negotiation of the

00:19:06
contract. And finally, they can

00:19:12
also bring disputes regarding various

00:19:14
forms of liability of the

00:19:16
international, the ISA. So it

00:19:21
was a fair number of

00:19:22
types of disputes. I can

00:19:23
be heard before the seabed

00:19:27

disputes chamber and very interesting

00:19:29
Lee. The decisions of the

00:19:30
seabed diffuse chamber are pursuant

00:19:34
to the to unclog are

00:19:36
enforceable as judgments of the

00:19:38
highest court enforcement has sought

00:19:40
for those of us who

00:19:42
do a lot of work

00:19:44
in investor-state arbitration. This may

00:19:49
sound somewhat familiar. These this

00:19:50
is very roughly analogous to

00:19:53
the enforcement terms of the

00:19:54
exit convention. This is Uncle

00:19:57

awesome applies to the seabed

00:19:59
disputes chamber. So again, all

00:20:03
this is untested. It wasn't

00:20:06
very interesting question. That I

00:20:10
think arises in this context.

00:20:11
Hello, more in theory than

00:20:13
in. Practice is how the

00:20:16
sea that disputes chamber might

00:20:17
obtain jurisdiction, especially if a

00:20:20
private party is a respondent.

00:20:25
In an arbitration, how it

00:20:27
would obtain jurisdiction over that

00:20:29
private party given that the

00:20:30

party is not. You know,

00:20:32
it's not a Contracting state

00:20:33
of Uncle office or in

00:20:37
the other relevant treaties that

00:20:38
are sorted that make up

00:20:39
this particular framework. Of course,

00:20:43
generally speaking in international law

00:20:45
will International arbitration certainly but

00:20:48
even in international, adjudication, more

00:20:50
generally, the fundamental basis of

00:20:53
jurisdiction is a is consent

00:20:56
of the party and it

00:20:57
would seem that the private

00:20:58

party has not given Centier.

00:21:00
Now, one commentator says that

00:21:03
we consider the state of

00:21:06
the party of the private

00:21:08
party may have said to

00:21:09
a given consent on its

00:21:11
behalf or otherwise to abound

00:21:12
it. And I think that's

00:21:14
a very interesting possibility, but

00:21:17
in practice this issue, may

00:21:19
prove less important. Because generally

00:21:21
speaking, when you start to

00:21:22
lose, once you've entered into

00:21:24

a contract arrangement with the

00:21:25
is a are the standard

00:21:27
contract terms are going to

00:21:29
actually say that. I said

00:21:31
the dispute will be resolved

00:21:32
pursuant to the terms of

00:21:34
the relevant section of Uncle

00:21:35
Al's. so, as I said

00:21:39
that she been a few

00:21:40
chamber, And it's a jurisdiction.

00:21:44
Over these types of disputes

00:21:45
is unexplored, just because of

00:21:47
where we are at the

00:21:48

early stage, but it has

00:21:50
great potential. Especially once you

00:21:52
look at the enforcement prospects

00:21:54
for decisions out of makes

00:21:57
No, one of the major

00:21:58
are alternatives to dispute resolution

00:22:01
before the seabed disputes chamber,

00:22:04
is commercial arbitration and I'm

00:22:06
closet self actually, Envision dispute

00:22:09
resolution through commercial arbitration. It

00:22:12
says that disputes concerning the

00:22:13
interpretation or application of a

00:22:15
relevant contract between State parties,

00:22:18

The Authority State Enterprises and

00:22:22
natural or physical persons shall

00:22:24
be submitted at the request

00:22:26
of any party to the

00:22:27
dispute to binding commercial arbitration

00:22:29
unless the parties. Otherwise agree.

00:22:33
Do it provides for commercial

00:22:36
that commercial arbitration is one

00:22:39
way in which a one

00:22:40
of those categories of disputes

00:22:42
that I mentioned previously may

00:22:45
be resolved. And in fact,

00:22:47
even goes on to say

00:22:48

that if a contract lacks

00:22:50
arbitration Clause, it's best that

00:22:51
specifies. A procedure arbitration shall

00:22:55
be carried out under the

00:22:56
uncitral rules. Doesn't specify whether

00:22:59
this is supposed to be

00:23:00
no provides for the standing

00:23:02
condensed is not explicit on

00:23:04
that. It just says that

00:23:05
the arbitration in this particular

00:23:07
way, but evidently seems to

00:23:10
raise the possibility that one

00:23:14
might argue that the is

00:23:17

a might be able to

00:23:20
That would be, I say,

00:23:21
maybe I'll bring arbitration under

00:23:23
his contracts with private party,

00:23:24
even though standard contractual Provisions

00:23:27
simply refer to General the

00:23:29
general dispute resolution procedures in

00:23:31
uncross. That one wrinkle hear

00:23:35
about the about commercial arbitration

00:23:36
in the framework of on

00:23:38
Claus. Is that the commercial

00:23:42
arbitral tribunal, specifically lacks jurisdiction

00:23:45
to decide any question on

00:23:48

the interpretation of unclasp itself.

00:23:52
But instead, I'm Clause allows

00:23:54
the commercial arbitral tribunal to

00:23:56
refer such a question to

00:23:58
the seabed disputes chamber. So

00:24:03
it's sort of a referral

00:24:04
that mechanism maybe something like

00:24:07
we see in the European

00:24:08
legal context, that allows the

00:24:13
tribunal exactly. Stop the preceding

00:24:14
and get get a decision

00:24:15
from a supposedly more authoritative

00:24:17
body on the question. So

00:24:21

one interesting question. Let me

00:24:28
just run jump to the

00:24:30
third option that we have

00:24:31
here, which is investor-state arbitration.

00:24:35
Investor-state dispute settlement may be

00:24:37
another option depending on the

00:24:38
precise nature of the dispute.

00:24:39
The applicable trees. Obviously this

00:24:44
is unlikely to be Irrelevant

00:24:45
for disputes with the internet

00:24:47
of the ISA itself or

00:24:48
highly unlikely. Because the is

00:24:54
a is not a state,

00:24:55

is not a party to

00:24:56
any International Investment agreements. instead,

00:25:01
I think in the is

00:25:02
in the context of disputes

00:25:04
in the area, investor-state arbitration

00:25:08
is most likely to be

00:25:10
relevant between a foreign investor

00:25:11
and a sponsoring state. It's

00:25:15
worth noting that the sponsored

00:25:16
party sponsored by the time,

00:25:18
he must be National Bonsai

00:25:19
stayed and not under the

00:25:21
effective control of foreign state.

00:25:23

Which would seem to restrict

00:25:25
to some degree at least

00:25:26
the possibility of investor-state, dispute

00:25:28
resolution. But at least some

00:25:31
of the companies that already

00:25:32
proceeding this with these projects.

00:25:35
One significant example is Nori

00:25:38
which is sponsored by the

00:25:40
Island state of nauru is

00:25:42
wholly owned by the metals

00:25:43
company. Constituted in Canada. So

00:25:46
let me just wrap up

00:25:47
with a one interesting jurisdictional

00:25:50

question here that I think

00:25:51
arises if we were ever

00:25:54
to try to pursue investor-state

00:25:56
dispute resolution. Generally speaking are

00:26:01
many, some tribunals have held

00:26:03
that a Nexus with a

00:26:04
territory of the whole state.

00:26:08
For the investment is required

00:26:08
for an investment treaty to

00:26:11
apply. Now course the primary

00:26:13
a lot of the activity.

00:26:15
For an international mining project

00:26:17
will be in the international

00:26:18

seabed area, the area. This

00:26:23
course, is clearly outside of

00:26:24
any states jurisdiction to buy

00:26:26
definition. So some other Nexus

00:26:28
would be needed to a

00:26:30
given state in order to

00:26:31
invoke an investment treaty or

00:26:34
is this particular issue is

00:26:36
to be generous That said

00:26:39
and I'll just leave you

00:26:39
with this particular point. There

00:26:42
have been a number of

00:26:43
a couple tribunals in a

00:26:44

rather different context that have

00:26:46
upheld disputes over jurisdiction over

00:26:49
disputes with the investment of

00:26:51
the koala contracts, with the

00:26:53
whole state, to perform custom

00:26:56
Inspection Services outside of that

00:26:58
States Territory. And perhaps there's

00:27:02
an argument by some sort

00:27:03
of analogy that a sponsorship

00:27:06
agreement with a hoe State,

00:27:08
might qualify as a similar

00:27:11
type of contract. Provide access

00:27:15
to investor-state dispute, resolution, I

00:27:19

could talk about, but for

00:27:20
the sake of time, I'm

00:27:21
going to wrap up there

00:27:22
and pass the blower back

00:27:24
to Patrician. As you say,

00:27:27
there's there's a lot of

00:27:28
unexplored jurisdictional issues here that

00:27:31
we could talk forever. But

00:27:33
with that, you know, transitioning

00:27:35
from you mentioned treaties and

00:27:37
contract creating rights and obligations

00:27:40
for state and private actors.

00:27:43
I guess my question for

00:27:45

4 to 5 so I

00:27:46
would be what sorts of

00:27:48
obligations might we see there.

00:27:50
And what would, what might

00:27:51
that mean? In terms for

00:27:53
liability questions, that might come

00:27:54
up in the types of

00:27:55
disputes that David has referenced.

00:27:57
Thanks so much better. I

00:28:03
would know what that if

00:28:04
deep seabed mining does proceed,

00:28:06
we can anticipate a large

00:28:08
number of disputes. We know

00:28:10

that a large number of

00:28:11
land mining disputes have arisen

00:28:14
To exit. If you just

00:28:15
look at exit and you

00:28:16
can attest to this Patricia,

00:28:17
but mining together with oil

00:28:20
and gas, make up a

00:28:21
quarter of all of exit

00:28:23
arbitration. So there is a

00:28:25
large repented propensity for disputes

00:28:27
and we are looking right

00:28:29
now at disputes between estate

00:28:31
in the mining company, but

00:28:33

there are various other disputes

00:28:34
that are, that can arise

00:28:35
estate consume, the international Seaboard

00:28:39
Authority and not a state

00:28:41
can sue another state because

00:28:44
of what all of its

00:28:44
its actions before the seabed.

00:28:47
And it's so they're a

00:28:48
lot of different kinds of

00:28:49
just food. If you look

00:28:51
just at the investor State,

00:28:52
my best to stay to

00:28:54
speed so I could come

00:28:55

up with d, c, b

00:28:56
mining. You could we see

00:28:58
a lot of what we've

00:28:59
seen online and these are

00:29:00
disputes about whether or not

00:29:02
a mining contract was lawfully

00:29:04
terminated whether a new regulation

00:29:07
instituted by a state constitutes

00:29:10
a fair and Equitable treatment

00:29:12
or otherwise and When you

00:29:15
look at the actual language

00:29:16
that states and and Contracting

00:29:19
parties are investors, including in

00:29:22

their, in their contract, you

00:29:26
see that, you get, it

00:29:27
becomes very clear that we

00:29:28
are going to see some

00:29:29
of the issues that we

00:29:30
have seen before. And I'll

00:29:32
give one example, which is

00:29:35
the nauru Nori contract. This

00:29:37
is one of about 31

00:29:39
exploration contracts that has have

00:29:42
been issued by the international

00:29:43
seabed authority to date as

00:29:46
as as you mention. Pretty

00:29:47

sure they're all exploration contracts

00:29:49
contracts for now because there's

00:29:51
no expectation. But now route

00:29:53
Inori have now applied for

00:29:56
an expectation contract and so

00:29:58
looking at them is there

00:30:00
at the Nara situation is

00:30:01
helpful And if you look

00:30:03
at the contract that paragraph

00:30:04
10.5, it says in enacting

00:30:07
and implementing our laws and

00:30:09
regulations. The Republic shall at

00:30:11
all times. Accord Dory, fair,

00:30:14

and Equitable treatment, and will

00:30:16
provide a stable and predictable

00:30:17
legal framework, and make decisions

00:30:20
consistently and transparently. And in

00:30:23
accordance with the legitimate expectations

00:30:25
of nori and the Nore

00:30:26
group. So, right there, all

00:30:29
the memories of of of

00:30:30
f e t in the,

00:30:32
in the land. Mining cases

00:30:33
come to mind, and, and

00:30:36
Kaylee could be used as

00:30:37
jurisprudence for deep seabed. Mining

00:30:40

going forward. If you look

00:30:42
at now, is Lost at

00:30:43
Sea bed lower, every state

00:30:44
that every sponsoring space is

00:30:46
required to have a seat

00:30:47
belt law before that she's

00:30:48
wants to the state. And

00:30:50
if you look at an

00:30:50
hour away, is it also

00:30:52
says article 30d, Nara shall

00:30:56
not impose unnecessary disproportionate or

00:31:00
duplicate regulatory burdens on sponsor.

00:31:03
Hardee's those of the investors.

00:31:05

And even if you look

00:31:07
at the advisory opinion of

00:31:08
the it, lost dispute chamber,

00:31:10
that David mentioned, you'll see

00:31:14
that at paragraph. 20, it

00:31:15
says reasonableness and non arbitrariness

00:31:19
must remain the Hallmarks of

00:31:20
any action by the sponsoring

00:31:22
state of deep seabed mining

00:31:24
in the area. So it's

00:31:27
very likely that arbitrators another

00:31:29
judicata Society, where the states

00:31:30
and violated decided. We'll look

00:31:32

at the jurisprudence we have

00:31:33
in line, base Mining and

00:31:36
the cases are familiar to

00:31:37
you all but a CSV

00:31:39
hungry. For example, Crystal x

00:31:41
infinity to Gold Beach. Costa

00:31:43
Rica pack Cumbia Salvador Bear

00:31:46
Creek, which we will touch

00:31:47
on more bit later and

00:31:49
all of these cases is

00:31:50
made very clear that fut

00:31:53
is a very fact intensive,

00:31:55
fact, specific provision and and

00:31:59

it's never clear how exactly

00:32:01
the arbitrator's I'll going to

00:32:02
decide on it and they

00:32:03
have exercised a lot of

00:32:05
discretion and so states that

00:32:08
are entering into contracts with

00:32:11
investors on deep seabed mining

00:32:13
or red promulgating laws related

00:32:16
to Steve C. Medved mining

00:32:18
will want to be as

00:32:19
specific as possible about what

00:32:21
they mean by fair and

00:32:23
Equitable treatment or reasonableness. Going

00:32:26

to see that now already

00:32:28
with, with mining contracts on

00:32:30
land. But but it's important

00:32:31
that that those kinds of

00:32:33
that, kind of tired of

00:32:34
you be included. Also in

00:32:36
deep seabed. Mining contract. They

00:32:40
should be very specific about

00:32:41
what they think that the

00:32:44
investor should foresee a Nazi.

00:32:46
I think it's telling that

00:32:49
now Rule and Tonga have

00:32:50
included, Express, Provisions, that states

00:32:52

are obligated to be reasonable

00:32:54
and not acting a disproportionate

00:32:56
Manner. And yet others, like

00:32:58
the UK, and Belgium have

00:32:59
not open themselves up to

00:33:01
that risk is so pretty.

00:33:05
Look for look for it.

00:33:08
And look at the jurisprudence

00:33:09
and land-based Mining as a

00:33:10
as a negotiate these disputes.

00:33:12
And finally won one of

00:33:15
the similarity and we know

00:33:16
from, we can expect from

00:33:18

the land-based scenario is that

00:33:19
ngos and other members of

00:33:21
Civil Society can play an

00:33:23
important role. In the cases,

00:33:25
we will Probably see them

00:33:27
acting is amicus providing important

00:33:30
details on context and they

00:33:33
can play a strategic role

00:33:35
in supporting the states, in,

00:33:37
in, in cases, in which

00:33:38
two states are being sued

00:33:39
by, by the investors. But

00:33:42
they're also a couple ways

00:33:43

in which deep seabed mining

00:33:44
cases made presenting you matters

00:33:46
on the merits as compared

00:33:47
to some of the land

00:33:49
ones. And a major one

00:33:51
is that I think we

00:33:52
can't hide from is is

00:33:55
is the the fact that

00:33:56
the resources of the area

00:33:57
are supposed to be long

00:33:59
and be used for the

00:34:00
common Heritage of mankind? And

00:34:02
this is, this is a

00:34:04

fascinating principal and an important

00:34:07
principle that many developing States

00:34:10
hard for it to be

00:34:12
included in on clothes, but

00:34:14
it's it's what it means.

00:34:15
It remains very unclear and

00:34:17
depending on what it means,

00:34:18
there may be various ramifications

00:34:20
for how There's issues will

00:34:23
be decided. We know inline

00:34:26
facemyer. That the issue of

00:34:28
a social licence for mining

00:34:31
has come up and this

00:34:33

principle has been what it

00:34:35
was. It was first and

00:34:37
it was, it was first

00:34:38
mooted in Bear Creek explicitly,

00:34:40
but other cases such as

00:34:42
Copa, Nessa, and South American

00:34:44
silver, V. Bolivia also consider

00:34:46
the the issue of the

00:34:47
extent to which and investors

00:34:49
should get some sort of

00:34:50
approval or informal approval from

00:34:54
the communities that are affected

00:34:57
by its activities. And we've

00:34:59

seen that type of noodles

00:35:00
are really hesitant to accept

00:35:01
that an Investor's failure. To

00:35:04
get in formal approval, will

00:35:06
justify State conduct in terms

00:35:09
of the termination of a

00:35:11
contract unless there's an Express

00:35:13
requirement for the investor obtain

00:35:15
that kind of a license.

00:35:16
Now we'll see if she

00:35:17
been whining. You have a

00:35:18
clear obligation that the resources

00:35:20
are to be mined for

00:35:21

the benefit of the common

00:35:23
Heritage of mankind. So that

00:35:25
the social obligation Despite strong

00:35:27
but who can issue a

00:35:29
social license on behalf of

00:35:30
mankind? They may not be

00:35:33
the local communities who are

00:35:34
affected in deep seabed mining

00:35:36
in certain location. Some of

00:35:38
it is in the middle

00:35:39
of the ocean but we

00:35:40
know that the environmental implications

00:35:42
could affect all of us.

00:35:43

So so do we all

00:35:46
have a should be all

00:35:48
be consulted as well as

00:35:50
it remains to be seen,

00:35:51
how the international Seaboard Authority

00:35:53
will look at this issue

00:35:55
and and I I think

00:35:57
another question is just west

00:35:59
of the international Seaboard. Authority

00:36:01
is self granting. A contract,

00:36:03
is sufficient social license because

00:36:06
it is supposed to be

00:36:07
acting on behalf of us

00:36:08

all. And so one could

00:36:10
see investor saying, well, the

00:36:11
fact that they got the

00:36:12
contract in the first place

00:36:14
means that they fulfilled that

00:36:16
obligation to to get any

00:36:18
sort of social licence that

00:36:19
might exist. Finally out and

00:36:22
precise at the Deep seabed

00:36:24
mining scenario remains is, is

00:36:28
different. In the sense of

00:36:29
the level of uncertainty of

00:36:31
the environmental harm that could

00:36:35

be at stake. Because of

00:36:37
my name, we know that

00:36:40
environmental issues are key aspect

00:36:42
of land-based mining, but it's

00:36:45
even worse with with deep

00:36:46
seabed mining. Because so much

00:36:48
of the harm is unknown

00:36:50
as of now, but we

00:36:51
will expect that Technical and

00:36:53
scientific experts will be critical

00:36:55
for tribunal trying to decide

00:36:58
these issues and Ivy knows

00:37:00
maybe even more than in

00:37:01

the land-based. Mining scenera try

00:37:03
to get Experts of their

00:37:04
own so that they can

00:37:06
make sense of the diversion

00:37:07
to pinions between invest in

00:37:09
some states as to the

00:37:11
level of harm that could

00:37:12
be arising from from the

00:37:15
activities. And you get a

00:37:17
sense of how quickly the

00:37:19
the the environmental situation is

00:37:23
evolving even with the contracts

00:37:25
that have been issued to

00:37:26

date earlier this year, a

00:37:29
toobaloo, rescinded, responsive contract, that

00:37:31
it had granted, the Metal

00:37:33
Company for exploration of minerals

00:37:35
in the Deep seabed mining

00:37:36
because of its new understanding

00:37:38
that deep seabed mining will

00:37:40
have a negative impact on

00:37:42
the environment and that hasn't

00:37:44
led to its food. But

00:37:45
you can see that this

00:37:46
kind of this kind of

00:37:49
rapidly evolving extra situation with

00:37:51

the environment and legal disputes

00:37:53
and and and also if

00:37:55
if we know that environmental

00:37:57
laws are going to be

00:37:59
changing in the understanding is

00:38:00
going to be changing. This

00:38:02
might affect the extent, to

00:38:03
which investors can effectively argue

00:38:06
that. They had the legitimate

00:38:07
expectation. That certain laws will

00:38:08
remain the same. When we

00:38:09
know that the situation is,

00:38:11
is evolving rapidly. But these

00:38:14

are just some of the

00:38:15
many issues at week. Expect

00:38:17
to see if DC that

00:38:18
mining continues and I'll stop

00:38:21
there. For now, the overarching

00:38:24
theme that I'm hearing. I'm

00:38:26
having heard from you and

00:38:27
David is that there's a

00:38:28
lot of new ground on

00:38:30
tread ground in this in

00:38:33
this type of dispute. Maybe,

00:38:35
we'll switch now, to issues

00:38:36
of quantum to hear first

00:38:38

from Chris. And then from

00:38:39
Jim on whether there are

00:38:40
similar novel issues on, on

00:38:45
the side of quantum, in

00:38:46
this type of dispute. Maybe

00:38:47
we'll start with you. Chris

00:38:49
Sure, do just discussing some

00:39:03
of the, the valuation methodologies

00:39:07
that I think tribunals my

00:39:08
consider are appropriate and relevant

00:39:10
project in a application dispute.

00:39:14
So and send a picture

00:39:18
to mention the main minerals

00:39:19

and mining companies are interested

00:39:23
in tennis ball-sized polymetallic, nodules

00:39:28
strewn, across the ocean floor,

00:39:32
and they're particularly abundant in

00:39:34
our region of the Pacific

00:39:36
Ocean between Mexico and Hawaii

00:39:39
known as the Clarion clipperton

00:39:41
Zone. And he's not do

00:39:44
is contain a mix of

00:39:45
valuable Metals, including Cobalt nickel

00:39:48
copper manganese and others which

00:39:51
are required for producing batteries

00:39:53
in other other Technologies. The

00:39:57

mining process entails risk is

00:39:59
scooping up. These unattached to

00:40:02
see floor using unmanned Vehicles.

00:40:04
Wiping them off to a

00:40:06
ship with the surf and

00:40:07
then transporting them to land

00:40:08
and where they be refined

00:40:10
using. That was processing, methodologies,

00:40:13
soap work on collecting, you

00:40:17
see for nodules really began

00:40:18
in the late 60s, early

00:40:20
70s, and that time the

00:40:23
process was described as being

00:40:24

like standing on the top

00:40:26
of the Empire State Building

00:40:28
and you're trying to pick

00:40:29
up small stones off the

00:40:30
sidewalk using a long straw

00:40:32
at night. So that's give

00:40:35
you a sense of the

00:40:35
level of difficulty that. The

00:40:37
process have the time now

00:40:39
to technology has advanced significantly.

00:40:42
1 - - sense. Now

00:40:46
it's, it's really as simple

00:40:47
as vacuuming golf balls off

00:40:49

of Allen Greene. That remains

00:40:52
to be seen. Since the

00:40:53
process has not been commercially

00:40:56
has yet. So the proponents

00:41:00
of sea of deep sea

00:41:01
mining minerals is excetera. These

00:41:06
are essential for the transition

00:41:08
away from fossil fuels to

00:41:10
renewable energies and better. If

00:41:13
we want to decarbonise and

00:41:14
reach, a net zero emissions

00:41:16
by 2050. Then we need

00:41:18
to start extracting these resources

00:41:19

from the ocean. But as

00:41:24
with most things, others questioned

00:41:26
this, and I question whether

00:41:28
or not deep sea mining

00:41:29
is necessary at all. In

00:41:31
order for this transition to

00:41:33
to Green energy and they've

00:41:35
expressed significant concerns, environmental organization

00:41:39
say that the risks of

00:41:40
deep sea mining systems and

00:41:48
some of the potential environmental

00:41:49
risks include disturbance of Fisheries

00:41:52
water contamination, sound pollution and

00:41:56

the destruction of the habitat

00:41:57
of many species. So environmentalist

00:42:01
conservation is arguably Reckless to

00:42:04
go ahead with the money

00:42:05
at this point. So much

00:42:06
uncertainty and given the potential

00:42:08
magnitude of environmental damage but

00:42:12
the mining companies argue that

00:42:13
the process is actually less

00:42:15
damaging than terrestrial mining or

00:42:17
the battery minerals. And there

00:42:19
is evidence that there are

00:42:21
some ways to prevent a

00:42:22

potential damages from occurring. There

00:42:27
are, there are a number

00:42:29
of countries, large companies that

00:42:33
share some of these environments

00:42:34
in August of 2021, the

00:42:38
Northern Territory of Australia. They

00:42:40
have 9 more months, to

00:42:41
April, BMW Volvo, Google and

00:42:48
Samsung all joined a World

00:42:50
Wildlife Fund call for a

00:42:52
moratorium on seabed mining and

00:42:54
these companies actually committed to

00:42:56
not Source, materials mine from

00:42:58

the depot. The back-to-back, the

00:43:00
market with products in June

00:43:03
chilly out for 15-year moratorium

00:43:06
side environmental concerns and a

00:43:07
lack of sufficient data and

00:43:10
4 Island States of Micronesia

00:43:12
Samoa, Fiji and Palau are

00:43:14
also calling for a moratorium

00:43:15
on deep-sea mining. But there's

00:43:18
also significant interest and support

00:43:21
for deep sea mining. Another

00:43:23
mother areas as the mention

00:43:25
the authority has issued permits

00:43:30

and entered into a contract

00:43:32
for see, bad, mineral exploration

00:43:34
of these contracts, at least

00:43:37
18 are held by the

00:43:38
seven countries, so China, France,

00:43:41
Germany, India, Japan, Russia, and

00:43:44
South Korea, deep sea Mining

00:43:48
and 73 private companies. So,

00:43:53
one of the Canadian company

00:43:54
that's listed on the NASDAQ

00:43:55
called, the mineral Corporation, One

00:43:59
is a subsidiary of the

00:44:00
US Army Belgian company is

00:44:15

Washington Arbitration Week

currently in the market and

00:44:17
the industry as as the

00:44:23
messages out of early-stage around

00:44:26
at the early stage. So

00:44:27
there are no commercial Polly

00:44:29
Metallica collection operations that have

00:44:32
started anywhere in the world.

00:44:33
A few projects are in

00:44:35
development, but he still living

00:44:36
at Grayson stages. For example,

00:44:39
the mineral company that I

00:44:40
mentioned is in two projects

00:44:43
and targeting the Clarion clipperton

00:44:45

Zone. They've issued mineral Resort

00:44:47
statements and conducted some initial

00:44:50
assessments into the project, economics,

00:44:52
and scheduling commercial operations. But

00:44:58
they're just loaded. The market

00:44:59
states, that do to the

00:45:01
preliminary nature project planning and

00:45:03
design, and the untested nature

00:45:05
of the specific see for

00:45:06
production systems of a commercial

00:45:08
scale, economic viability has not

00:45:11
been demonstrated. So I think

00:45:13
that's a pretty good summary

00:45:14

of Where the industry is

00:45:16
right now and GMC. And

00:45:19
other companies can't proceed until

00:45:21
Global rules are established waiting

00:45:26
for that to be done

00:45:28
by the international 2023. Ethan.

00:45:39
Then these companies will need

00:45:40
exploitation contracts from the is

00:45:43
a than these environmental permits

00:45:44
and other permits and social

00:45:47
licence, which is mentioned But

00:45:59
I'll just turn to the

00:46:00
valuation approaches that I think

00:46:01

tribunals will consider the project

00:46:07
is that we used and

00:46:10
general talk about the more

00:46:12
detailed that there's a mine

00:46:21
in the appropriate approach that

00:46:23
we use a base that

00:46:25
is the X on the

00:46:26
stage of development of the

00:46:27
project. So typically the income

00:46:31
approach is not appropriate until

00:46:33
you've bought the project to

00:46:35
give me sufficient stage where

00:46:36
you can forecast cash flows.

00:46:38

So that's usually not until

00:46:39
you've done a feasibility. Study

00:46:41
the market for find market

00:46:46
data from a similar project

00:46:49
itself is very challenging. And

00:46:53
the cost approach typically only

00:46:54
relevant for an earlier, stage

00:46:56
products projects have been reluctant

00:47:04
to apply the income approach

00:47:06
into DCF in mining cases.

00:47:08
And dress remind cases, mineral

00:47:12
Project based their Awards on

00:47:18
song. I do think the

00:47:20

tribunal will be able to

00:47:22
refer to the considerations, in

00:47:24
the criteria to, determine the

00:47:29
valuation approaches that are appropriate

00:47:31
for a deep-sea mining cases,

00:47:33
because the underlying valuation considerations

00:47:36
are largely the same. Example

00:47:39
of an approach to value.

00:47:51
A mining project 62 will

00:47:57
be particular particularly problematic morning

00:48:02
at the moment. One is

00:48:03
the need to show and

00:48:04
establish record of financial performance

00:48:06

and the need for a

00:48:12
predictable, not yet. But all

00:48:17
of that may change in

00:48:18
the next two years as

00:48:19
the industry continues to develop,

00:48:21
And given the significant environmental

00:48:25
concerns for the tribunal did

00:48:30
not even though that project

00:48:33
feasibility study into find reserves

00:48:37
because they considered the opposition

00:48:39
to the project was so

00:48:40
great that it made it

00:48:41
highly uncertain that the project

00:48:44

would ever become profitable even

00:48:47
absent. The alleged breaches of

00:48:48
Corey. And then, lastly, there

00:48:51
is one on going back

00:48:52
to State arbitration involving seabed.

00:48:55
Mining that provide some insights

00:48:57
into an Irish methodologies expect

00:49:00
to see if there's no

00:49:03
word yet and that's enough

00:49:04
the case between the Odyssey

00:49:06
Marine exploration and Mexico be

00:49:10
bad. Phosphate mining project off

00:49:11
the coast of Mexico. So

00:49:13

this is not international waters.

00:49:18
And the claimants expert in

00:49:21
that case used in income

00:49:23
approach argued that is not

00:49:29
appropriate because it's too early

00:49:31
a stage and the market

00:49:34
approach based on the current

00:49:35
share price and looked at

00:49:37
the Clements and that project

00:49:38
mc2 projects for it seems

00:49:55
that the the issues are

00:49:56
very similar to terrestrial mining,

00:49:58
the germs of the valuation

00:50:01

approaches used by the experts,

00:50:02
the arguments advanced in support

00:50:04
of those methods and the

00:50:06
disagreement between the experts. Thank

00:50:12
you so much questions coming

00:50:15
in through the top. So

00:50:16
I want to be mindful

00:50:17
that we have enough time.

00:50:18
Meridian. 22, answer those in

00:50:20
the Q&A. So, what we'll

00:50:23
get to that after we

00:50:24
hear from Jim. So, you

00:50:26
know, you've set up the

00:50:27

stage perfectly for, for Jim

00:50:29
to tell us about valuation

00:50:30
methodologies, that may apply here

00:50:32
and how they might work,

00:50:34
versus how they work in

00:50:35
land-based mining. So the store

00:50:37
is yours, 10 points. First.

00:50:45
I know, there's some of

00:50:47
the people in the audience

00:50:47
may have seen manganese nodules

00:50:49
are made, not so, I

00:50:50
will hold up some actual

00:50:52
manganese nodules. These are a

00:50:56

little bigger than golf balls

00:50:57
little heavier than golf balls.

00:50:59
Just came from. The Kennecott

00:51:07
project in the 1970s of

00:51:10
the project, we consulted on.

00:51:12
I wish I could trust

00:51:14
you on poison. People to

00:51:15
see rated at work on

00:51:16
that project. It went for

00:51:18
kind of got so I

00:51:22
can't use on my desk

00:51:24
for 40 years. I've had

00:51:25
a chance to shut up.

00:51:28

A couple of other stylized

00:51:30
facts before you my answers.

00:51:35
Manganese nodules plus if they

00:51:38
come in and volume will

00:51:39
cause some disruption to Marcus

00:51:41
the first planet blown. If

00:51:49
the technology Works manganese, nodules

00:51:51
production will be profitable enough

00:51:53
to and encouraged lot of

00:51:55
Investments that are straightened out.

00:52:01
So, with volume. And I

00:52:03
could have started singing part

00:52:05
it, back to Marcus. But

00:52:06

if you just looked at

00:52:07
1 plan, The only metal

00:52:09
that would be mean to

00:52:10
destruct. It would be manganese

00:52:11
metal, which is primarily produced

00:52:14
in China. Megan, he's not

00:52:16
ferromagnesian and all the other

00:52:21
big one is Copa. One

00:52:22
plant, would be, perhaps 2.3%

00:52:25
to 25%, of world coal

00:52:26
production and then lost our

00:52:29
mouths for a nickel. And

00:52:30
so, There is an issue

00:52:34

of effects on land-based Mineral

00:52:36
production but that would come

00:52:38
into play. Probably after an

00:52:42
expansion of the deep seabed

00:52:47
Mining, and I are moving

00:52:50
on to the quantum issues.

00:52:52
I agree with everything croissant,

00:52:55
the Chimes for Quantum estimation,

00:52:59
they're not fundamentally different, but

00:53:05
they're obviously some challenges because

00:53:06
of the fact that the

00:53:07
technology is near On the

00:53:14
market approach, the probably won't

00:53:18

be much Market evidence or

00:53:19
Market valuation have enough in

00:53:20
the only days unless the

00:53:23
project itself is a public

00:53:25
company or loss of his

00:53:27
transactions involving deep sea mining

00:53:30
Ventures, but in the only

00:53:33
days that you'll be very

00:53:35
hard to use the market

00:53:36
approach. You really can't do

00:53:39
it by inference from land-based

00:53:41
project because they're just two

00:53:44
different should. I would not

00:53:46

recommend using information from the

00:53:49
lamb basement. Address to value

00:53:50
a note, remind me project,

00:54:01
Although it has some challenges.

00:54:03
Again, obviously, in the only

00:54:06
days, I won't be in

00:54:07
his babish record of performance.

00:54:09
That's not, that's not a

00:54:11
bar to valuation, but it

00:54:14
requires a tribunal it. I

00:54:19
have done many times for

00:54:23
pre-production projects in Copper case

00:54:29
against Pakistan. That was a

00:54:32

pre-production project. It was, it

00:54:34
was after the feasibility study

00:54:36
and the award was an

00:54:38
excessive or billion dollar. So

00:54:40
that was a fair tribunal

00:54:43
recently made a mess of

00:54:45
the ward show project. It

00:54:47
was not production and had

00:54:48
no no breath and get

00:54:48
a straight across history about

00:54:53
that would be an issue

00:54:54
with come up in a

00:54:55
case A number of other

00:54:58

issues. Rizal, first of all,

00:55:04
the technology is improving. So

00:55:07
there be an issue of,

00:55:09
even if you have a

00:55:11
feasibility study, and you have

00:55:13
cash flow projections, and as

00:55:19
we all know, when you're

00:55:20
not new technologies, a high

00:55:22
chance of failure and pack.

00:55:25
Expensive looking at what's happening

00:55:31
with project with no Technologies

00:55:33
and even their failures, you

00:55:38
are the average over run.

00:55:40

Almost all project over run

00:55:42
almost all projects have project,

00:55:45
delays are at least two

00:55:46
years and there are many

00:55:48
examples of projects project for

00:55:52
the minerals. Are you using

00:55:54
nanotechnology basically didn't work and

00:55:57
had to be shut down

00:55:58
within a year or two.

00:55:58
So this would be a

00:56:00
bigger issue before the actual

00:56:05
record of successful Ventures so

00:56:08
they would have to be

00:56:08

extensive Analysis of an engineering

00:56:12
perspective. At least more extreme

00:56:23
for the finish in the

00:56:24
morning. What's the problem has

00:56:36
to do with the production

00:56:37
of Crisis? If we could

00:56:38
do a UCF, if you

00:56:42
just had one project, you

00:56:43
can probably base but economic

00:56:45
son off the shelf price

00:56:48
reductions or production done by

00:56:50
an elastic except for magnetic

00:56:54
metal. It was the first

00:56:55

project would would account for

00:56:57
over 35% of world. Maggie's

00:56:59
bottle production. But if you

00:57:04
have multiple projects have a

00:57:07
problem because you wouldn't be

00:57:09
able to use off-the-shelf forecast,

00:57:11
With market prices, you have

00:57:12
to do a detail study

00:57:14
with one or a few

00:57:20
producers that you've got to

00:57:25
understand the market dynamics. So

00:57:30
that becomes a big issue,

00:57:31
there's also an issue with

00:57:35

the cost of capital. There

00:57:39
would be no information in

00:57:41
the early days, on the

00:57:43
beta of it would be

00:57:45
appropriate for a wedding project.

00:57:46
Again you couldn't necessarily is

00:57:48
Beto's from a company's, you

00:57:51
might be able to From

00:57:55
licking in various Metals prices,

00:57:57
but again, if there's no

00:57:59
production the you can, that

00:58:02
would be suspect. So there's

00:58:05
an issue. There is also

00:58:08

obviously issues about the regulatory

00:58:09
risk and the rest of

00:58:10
the social licence not being

00:58:12
given. Even if the project

00:58:15
is permitted license, will there

00:58:18
be enough opposition that it

00:58:19
never make it never got

00:58:21
off the ground. So so

00:58:26
Isabel. And there has to

00:58:30
be a thumb. Difficulties are

00:58:34
different than magnitude. Finally, the

00:58:41
cost price method. It's likely

00:58:46
the case that it the

00:58:48

cost for a single project

00:58:50
would include a lot of

00:58:51
cost for this aren't either

00:58:52
put them all to multiple.

00:58:54
Projects are two other applications

00:58:57
at the start of the

00:58:59
project Pacific cost vs General

00:59:02
Tso. But as I said

00:59:07
earlier. He's issues are with

00:59:11
the blocks and it would

00:59:17
be different. Thanks so much.

00:59:25
It sounds like this. There's

00:59:27
a lot of untried ground

00:59:29

here to the entire field.

00:59:32
Sounds like it's ripe for

00:59:33
for practitioners and Scholars to

00:59:36
really contribute to the development

00:59:40
of the law and expertise.

00:59:44
I'm going to take a

00:59:45
little bit of time to

00:59:46
to share some questions from

00:59:48
the audience. Before we we

00:59:50
moved to the to the

00:59:51
breakout rooms are or the

00:59:53
networking session. We have a

00:59:56
question that has been erased.

00:59:57

4425 Saint David. The question

01:00:02
is, what could be some

01:00:03
examples of State action related

01:00:05
to deep seabed mining activities

01:00:07
of private parties that could

01:00:09
eventually be considered as preaching

01:00:11
investment treaties. And I think

01:00:16
some of that was already

01:00:17
a reference in some of

01:00:18
the discussion that maybe 22

01:00:20
to summarize it again, for

01:00:22
for the audience. Yeah, I

01:00:25
can I can start thank

01:00:27

you for that the I

01:00:28
think looking at the contracts

01:00:31
that exist. Now the exploration

01:00:33
contracts in the draft mining

01:00:35
codes that the international seabed

01:00:37
Authority has has issued in

01:00:39
and that they are the

01:00:40
states are negotiating country hardly.

01:00:42
It looks like a lot

01:00:44
of the disputes will be

01:00:45
similar to what we've seen

01:00:46
on the land. So whether

01:00:48
or not a termination of

01:00:50

a, of a Contractor License

01:00:52
is is lawful, or is

01:00:54
it an expropriation or not?

01:00:55
Or is it unfair? And

01:00:57
it's in some way, is

01:00:58
it reasonable? We talked about

01:01:00
sending his contract is that

01:01:03
a reason? Is that reasonable

01:01:04
given given what we know

01:01:06
of the environment or is

01:01:07
that an unfair and inequitable

01:01:09
action will, there will be

01:01:14
a lot of disputes and

01:01:15

whether the measures that states

01:01:16
are taking to protect the

01:01:19
environment, which is, which they

01:01:20
are required to do Under

01:01:21
the Influence. They have to

01:01:22
be sure that all of

01:01:23
the activities. This once attacked

01:01:25
states are of the sponsoring

01:01:27
companies are, are promoting the

01:01:30
environment and so states have

01:01:32
that application and will want

01:01:34
to have certain measures that

01:01:35
address that but they must

01:01:37

be from proportionate to an

01:01:40
end. So there will be

01:01:41
a lot of disputes. I

01:01:42
think potential disputes on whether

01:01:44
the states actions are actually

01:01:46
reasonable and and so forth

01:01:49
at two will look the

01:01:51
jurisprudence of land-based mining will

01:01:52
be important with tribunals wanting

01:01:55
to see what was the

01:01:56
objective. Was it proportionate, could

01:01:59
anything else have been done

01:02:00
before and in seeking expert

01:02:02

advice and in making those

01:02:04
determinations? Would you like to

01:02:07
add anything David? Yes, just

01:02:10
a brief comment more on

01:02:13
context rather than on sort

01:02:14
of legal principle. You know

01:02:17
it's sometimes said that less

01:02:19
is known about the Deep

01:02:20
seabed then about the moon.

01:02:22
So this is a rather

01:02:24
unpredictable, are welcome unknown environment.

01:02:28
Some very interesting example when

01:02:34
you find some of these

01:02:35

mineral deposits around hydrothermal vents,

01:02:38
these are basically at the

01:02:41
bottom of the ocean floor

01:02:43
there, where hot water hits

01:02:45
my face with Magma under

01:02:47
the ocean surface and then

01:02:49
is a ejected with a

01:02:51
heavy mineral content into the

01:02:53
ocean and around these thermal.

01:02:55
Then at the bottom of

01:02:56
the ocean floor, where there

01:02:58
is no natural white arising,

01:03:00
you get these collections of

01:03:02

exotic life sometimes sometimes microscopic,

01:03:05
but I don't even understand

01:03:07
various types of worm like

01:03:10
And things like that and

01:03:11
they ultimately draw their energy

01:03:12
from the chemical compounds rather

01:03:15
than from the energy arriving

01:03:16
from the sun which relay

01:03:17
Powers the rest of life

01:03:19
on the planet and it

01:03:22
was an environmental matter. But

01:03:23
also you know, the scientific

01:03:24
matter these Arabic, it quite

01:03:26

quite interesting and because my

01:03:30
other things and made shed

01:03:31
light on how life arose

01:03:33
on this planet or maybe

01:03:36
even played an actual actor

01:03:37
Roland. So, I mean, this

01:03:38
is the only point I

01:03:40
want to make sure. It's

01:03:41
just that there's a lot.

01:03:44
we don't know a lot

01:03:45
that we can also learn

01:03:46
from this environment, which may

01:03:49
ultimately be the Crux of

01:03:52

certain disputes that arise. Great.

01:03:54
Thank you, just a quick

01:03:56
word to to the audience

01:03:58
and please feel free to

01:03:59
send your questions. The other

01:04:00
chat function, you can send

01:04:02
them directly to me. If

01:04:03
you prefer we have another

01:04:06
question. It's not addressed to

01:04:08
anyone in particular but the

01:04:11
question is is a state

01:04:13
that is not a party

01:04:14
to unclose precluded from being

01:04:16

Washington Arbitration Week

a sponsoring steak for exploration

01:04:18
and exploitation in the area?

01:04:20
I don't know if anybody

01:04:22
wants to take a stab

01:04:23
at that. You can go

01:04:26
ahead, first date. They are

01:04:28
precluded from from, it's a

01:04:32
big state that's precluded is

01:04:33
is the United States but

01:04:35
as, as Chris mentions, you

01:04:37
do have Lockheed, which is

01:04:39
your company. Doing this. But

01:04:44
it's been, you can't have

01:04:45

us. Companies can participate as

01:04:48
sponsoring at this sponsored state

01:04:49
so so one of the

01:04:52
states that is a party

01:04:53
can have a US company

01:04:55
participate and there's they're those

01:04:58
kind of linkages in which

01:04:59
US companies us is still

01:05:01
involved in this space. I

01:05:06
don't know if anybody wants

01:05:07
to add anything. Tonight. All

01:05:11
right, I'll give it a

01:05:14
minute to see if we

01:05:15

have any more questions come

01:05:17
in through the chat. Otherwise

01:05:18
we can probably transition to

01:05:20
our networking and in a

01:05:22
few minutes while we wait.

01:05:26
I just wanted to make

01:05:28
a comment on something that

01:05:30
James Jim said earlier, which

01:05:33
I think is, is really

01:05:34
fascinating about the impact of

01:05:37
deep seabed mining on land

01:05:40
base Mining. And then the

01:05:41
potential impact of Manganese and

01:05:43

Cobalt. And and, you know,

01:05:46
of course, for for a

01:05:47
lot of developing countries in

01:05:49
Africa, States in particular, really

01:05:52
fought hard to make sure

01:05:53
that they would be some

01:05:54
sort of compensation for that

01:05:56
kind of impact on, on

01:05:58
base Mining. And if you

01:06:00
want to read more on

01:06:00
this, I would commend you

01:06:03
to read mad when he

01:06:04
get his book. I see

01:06:05

that he's on the call,

01:06:06
but he's written a lot

01:06:07
about deep sea, bad area

01:06:09
and a negotiation. I'm close.

01:06:11
But in, but there's actually

01:06:12
a provision in on Clause

01:06:13
that requires those states to

01:06:16
be compensated for the mining

01:06:18
and the impact on deep

01:06:20
seabed and it's unclear as

01:06:22
a task to know how

01:06:23
like how they will be

01:06:24
affected. But this will be

01:06:26

an evaluation issue that comes

01:06:27
up and that's been foreseen.

01:06:29
And one of the many

01:06:30
issues at the international seabed

01:06:32
Authority has to resolve in

01:06:34
the coming year. Thank you.

01:06:37
Daddy. That's very insightful. I

01:06:40
have another question. The question

01:06:44
is, where can 14c wiegel

01:06:46
activism by environmental and social

01:06:49
groups? Where would it take

01:06:50
place? I think I, I

01:07:00
think we're seeing it every,

01:07:02

at every stage you're seeing

01:07:04
it now because a lot

01:07:06
of already because because of

01:07:09
the, the, the level of

01:07:11
activism of environmental groups, there's

01:07:14
we're at a stage where

01:07:15
it's it's suddenly, it's more

01:07:18
and more unclear. When, and

01:07:20
if deep seabed mining will

01:07:22
take place in certain countries

01:07:24
like France, who had initially,

01:07:26
I'm sponsored states are now

01:07:28
saying it may be Reckless

01:07:30

to proceed with it. So

01:07:32
there's a lot of of

01:07:33
activism I'm at by environmentalists

01:07:36
and trying to show how

01:07:37
much we don't know 20

01:07:39
years ago, that there was

01:07:40
an understanding that there was

01:07:42
nothing there. So we can

01:07:43
do this in. This isn't

01:07:44
lots of environmental impact and

01:07:46
land-based Mining. And now because

01:07:47
of what's known, it's clear

01:07:49
that there's a lot, we

01:07:50

don't know. And and clearly

01:07:51
there's a lot of what's

01:07:53
happening. There is affecting the

01:07:55
rest of the world and

01:07:56
we don't know those connections

01:07:57
and it's Reckless to proceed.

01:07:58
So So you're single activism

01:08:00
by environmentalists and slowing down

01:08:04
the action. A lot of

01:08:05
ngos are against this in

01:08:07
a very vocal about it,

01:08:08
prominent ngos. And then, I

01:08:11
think you'll see them serving

01:08:13

as is amicus Amici, and

01:08:16
in different cases, the way

01:08:17
we seen in that bass

01:08:18
cases, trying to support us

01:08:21
state regulations that are on

01:08:22
their environment. And it will

01:08:25
be interesting to see if

01:08:27
they can sponsor or work

01:08:29
with States on advisory opinions

01:08:31
and and more direct access

01:08:32
through the Deep seabed mining

01:08:34
cuz of what David talked

01:08:35
about it. That the jury

01:08:39

that the jurisdiction of the

01:08:41
seabed authority is pretty Broad

01:08:42
and and you might see

01:08:44
activism in that way as

01:08:45
well. Thank you, Kathy. We

01:08:50
have a couple other questions.

01:08:54
I'll put both to to

01:08:56
the group, give me the

01:08:58
time and see what we

01:08:59
can cut. The first question

01:09:00
is, what is the role

01:09:02
of landlocked States in seabed

01:09:04
mining? And the second question

01:09:07

is about the implications of

01:09:11
the concept of common Heritage

01:09:13
of mankind to to development

01:09:16
in outer space because outer

01:09:18
space is also considered a

01:09:20
common good, but there is

01:09:21
less discussion on restricting development

01:09:23
legally in that area. So

01:09:25
what is the role of

01:09:26
landlocked States? And the other

01:09:28
is a potential implications for

01:09:30
the commercial explication in outer

01:09:33
space. That's a great questions

01:09:38

I could, I could start

01:09:39
with a landlocked state ones.

01:09:41
I mentioned African States and

01:09:44
I think Africa has the

01:09:45
largest number of landlocked states

01:09:47
have any any region and

01:09:50
and they, they were the

01:09:53
states were quite vocal in

01:09:54
during on clothes and an

01:09:57
end. And I think one

01:09:58
thing about this, the third

01:10:00
negotiation of of the convention

01:10:02
was, was the level to

01:10:04

which landlocked rights were Incorporated

01:10:06
in in the law of

01:10:08
the sea. I think they,

01:10:10
they will, they will be

01:10:13
able to, to sponsor sponsor

01:10:18
companies. It's interesting that for

01:10:22
now, the only reason that

01:10:23
doesn't have hasn't spotted or

01:10:25
has no activity in the

01:10:26
Deep seabed area is I

01:10:29
forgot. But then it may

01:10:30
be caution from the states.

01:10:32
It's unclear or it may

01:10:33

be development priorities, but they

01:10:35
are the only reason that

01:10:36
don't have but that But

01:10:37
Alex said could indeed have

01:10:39
a have a sponsor estate

01:10:42
and Eddie conduct activities there

01:10:44
and because what the proceeds

01:10:48
of deep seabed mining are

01:10:50
supposed to be for the

01:10:51
common Heritage of mankind. This

01:10:53
is one of the issues

01:10:54
again that have to still

01:10:55
be resolved. But how, how

01:10:56

then does everybody benefit? Including

01:10:59
the landlocked States from the

01:11:01
from the minerals that are

01:11:02
that are mined and developed

01:11:05
I'll try to jump in

01:11:07
and just make some speculative

01:11:08
comments on the outer space

01:11:10
element of this out of

01:11:13
the major treaty governing. The

01:11:15
outer space has the outer

01:11:17
space treaty and it does

01:11:20
not have any mechanism similar

01:11:22
to the is day or

01:11:24

really in any detail address

01:11:27
the question of resources and

01:11:29
I think it does pose

01:11:31
a rather different problems in

01:11:34
a number of different respect.

01:11:35
First, you do not have

01:11:37
the same environmental potential environmental

01:11:41
challenges are issues with outer,

01:11:43
space, mining, and second, you

01:11:48
probably actually have a much

01:11:49
more extensive set of resources,

01:11:51
even that are available in

01:11:53
the sea bugs, in outer

01:11:55

space, but at the same

01:11:56
time, economically, probably much less

01:12:00
accessible some private initiatives to

01:12:03
the contrary So, I mean,

01:12:07
if the technology space technology

01:12:09
advances enough that mining, say,

01:12:12
asteroids starts to become feasible.

01:12:15
You know, perhaps some of

01:12:19
the lessons that we will

01:12:20
learn in the coming years

01:12:21
from the operation of the

01:12:24
is a and of the

01:12:25
treatment from classes treatment of

01:12:27

the deep sea, that may

01:12:31
provide some guidance on how

01:12:34
we might manage a resource

01:12:36
scramble in outer space. Thank

01:12:41
you. And I think we

01:12:42
just probably brings us to

01:12:44
to the end of of

01:12:45
the panel before the networking.

01:12:46
I hope everybody can stay

01:12:47
at least a few minutes

01:12:48
to chat with our panelists

01:12:51
in a more informal setting.

01:12:52
And I just wanted to

01:12:54

thank all of our panelists

01:12:56
for their wonderful contributions. Obviously

01:12:58
this is an enormous topic

01:12:59
we could talk about for

01:13:00
days and days. So I

01:13:02
thank you for forgiving us

01:13:04
this, this glimpse into this

01:13:05
growing nason's area of Industry

01:13:10
law and you know, just

01:13:12
wanted to have of everyone

01:13:15
in the audience. I'm sure

01:13:16
want to thank you for

01:13:17
for being here today and

01:13:19
sharing with us.