



Sustainable Resource Management and the 2030 Agenda

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UNECE

Training on data collection
related to sustainable energy
and water resources
management and monitoring
and UNFC application

Human creativity is not that great



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Wheels ~8000 years ago



Yesterday



Today

We can be blind to the obvious, and we are blind to our blindness



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US shale has a glaring problem

November 2, 2018 by [Nicholas Cunningham](#)



In Q2 2018, Anadarko had the highest negative free cash flow of the US shale oil and gas companies studied. Photo: Anadarko

With oil prices high and production booming, 2018 was supposed to be a year of profits for US shale oil and gas companies. A report from the Institute for Energy Economics and Financial Analysis (IEEFA) and the Sightline Institute shows that hasn't happened. As 3Q 2018 results start coming in, investors around the world should be considering if there is a fundamental problem with the fracking business model, says Nick Cunningham of [Oilprice.com](#).



Oil prices are down a bit, but are still close to multi-year highs. That should leave the shale industry flush with cash. However, a long list of US shale companies are still struggling to turn a profit.

Is A Zero-Waste Society Possible?

We're running out of space to put our trash. But can we ever get to a place where we re-use and recycle so much that we make landfills a thing of the past?



The 2030 Agenda



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By 2030, achieve sustainable management and efficient use of natural resources



Natural Resources Trends



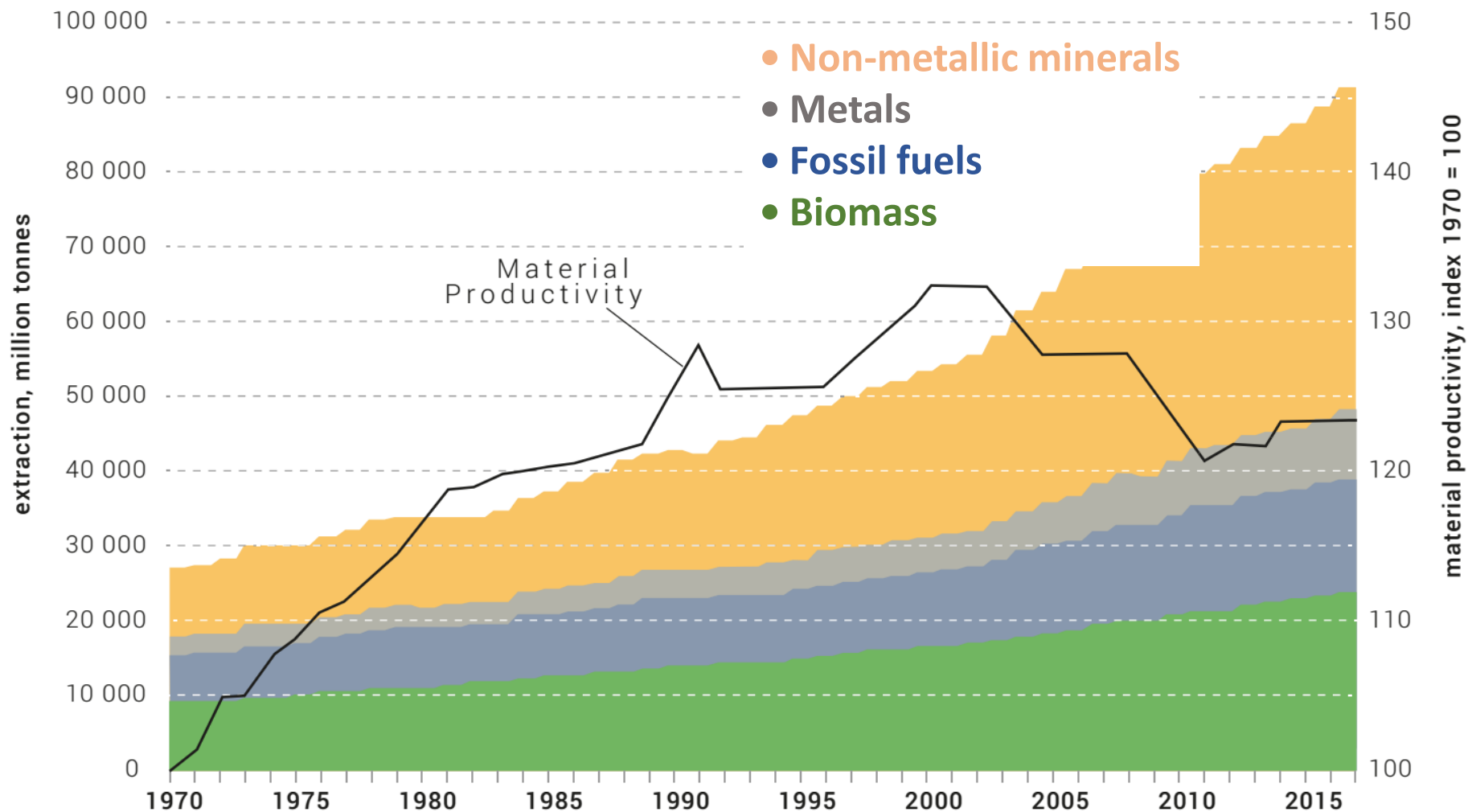
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**From 1970 to 2017, annual
global extraction of materials grew
from 27 to 92 billion tonnes**

Natural Resources Trends



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Natural Resources Trends



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Material Footprint tonnes per capita



Low
Income



Lower-Middle
Income



Upper-Middle
Income



High Income

● 1970
● 2017

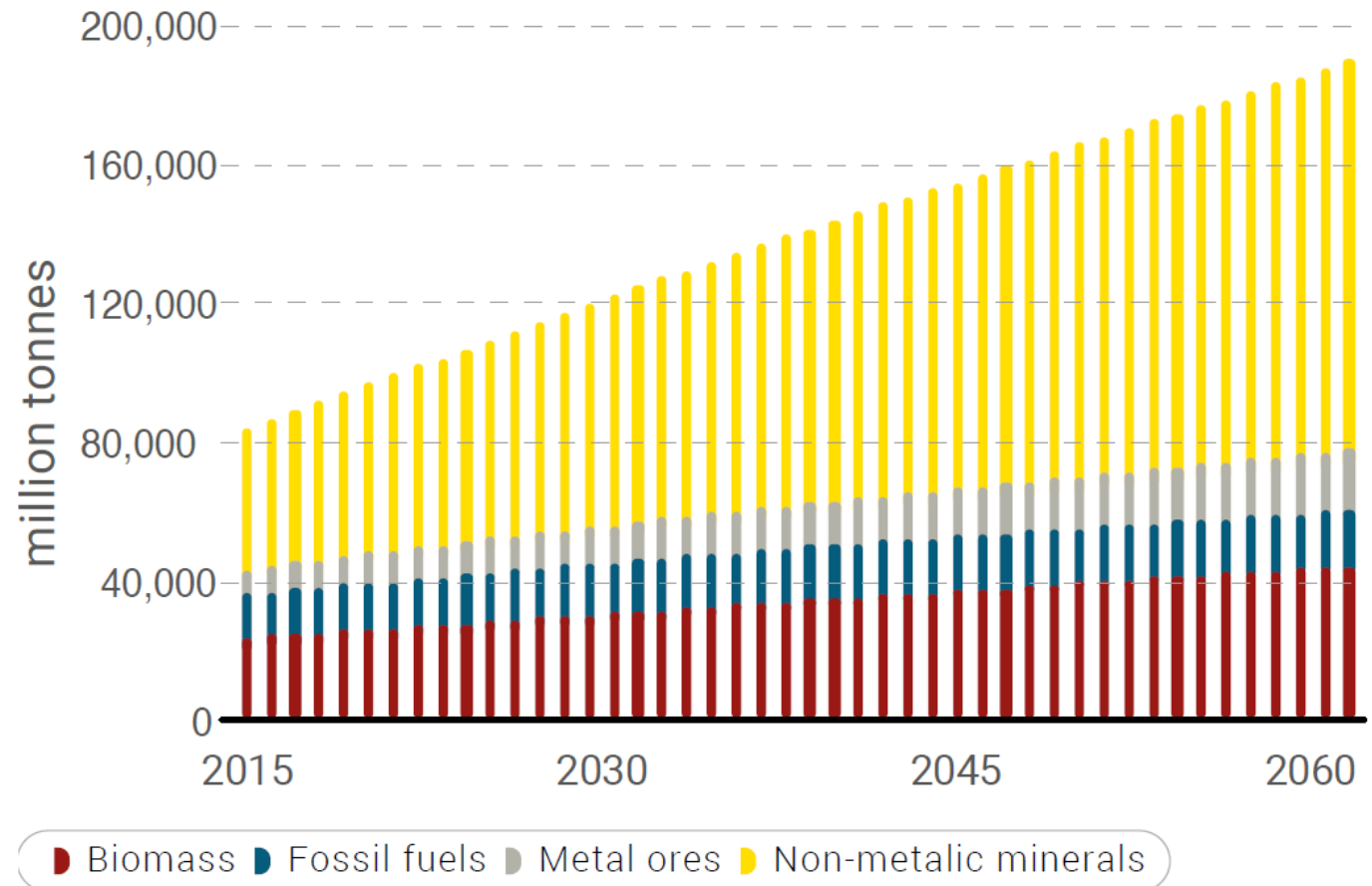
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Natural Resources Outlook



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**By 2060
resource use
is expected to
grow from
11.9 tonnes
to 18.5
tonnes per
capita**



Natural Resources Outlook



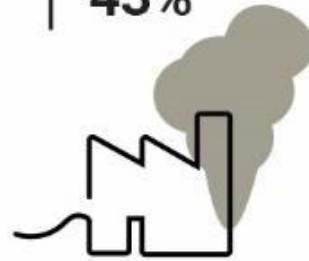
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↑ more than
doubles



Global material
extraction

↑ increases by
43%



Greenhouse gas
emissions

↑ increases by
more than **20%**



Area of
agricultural land

↑ increases by
25%



Global
pasture land

↓ reduces by
over **10%**



Forests

↓ reduces by
around **20%**

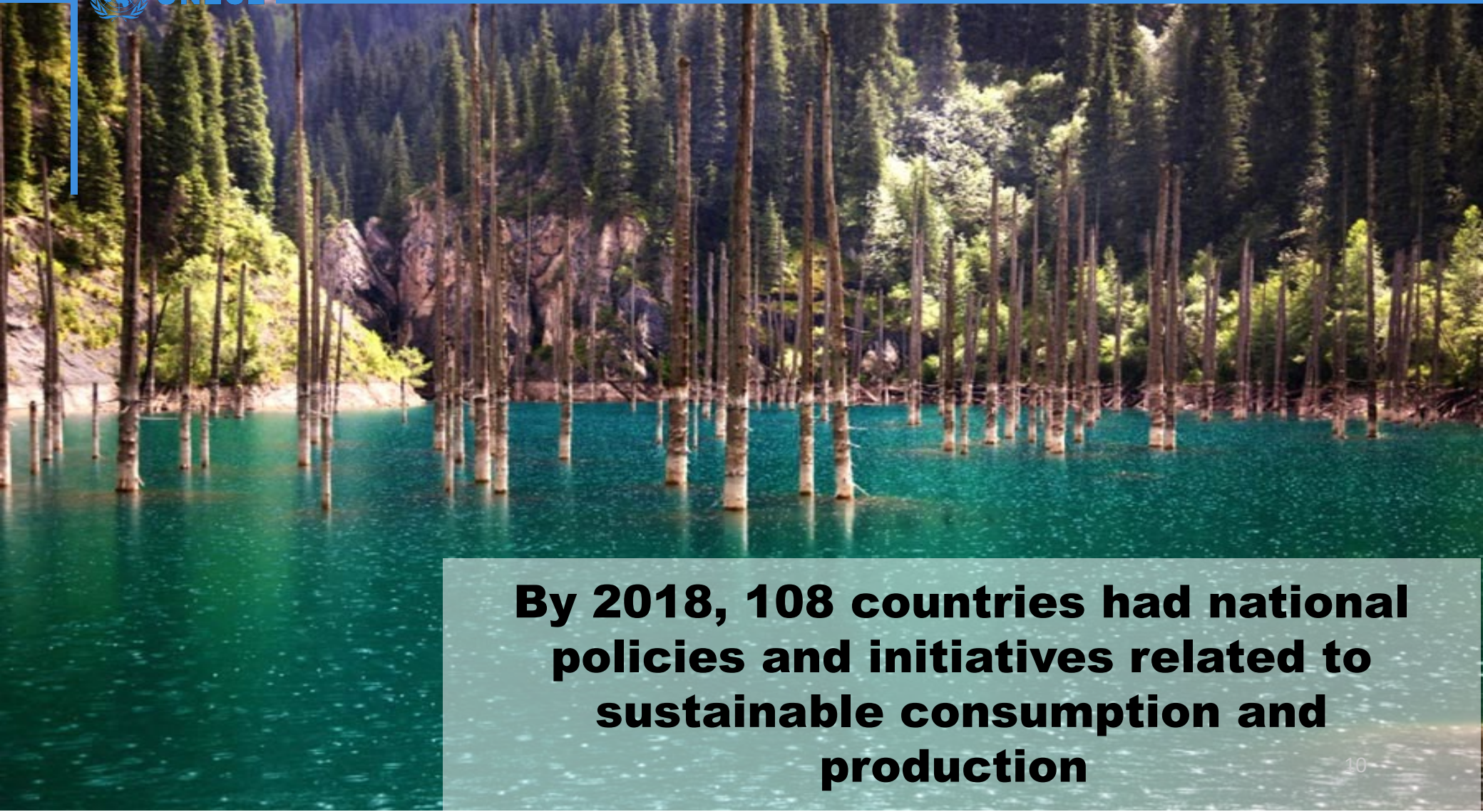


Other
natural habitat

Sustainability in resource production



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By 2018, 108 countries had national policies and initiatives related to sustainable consumption and production

Sustainability in resource production



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**Over 90% of the
world's 250 largest
companies report on
sustainability**



There is an image problem



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**Petroleum and minerals
are seen as “drain
industries” that
“extract” wealth and
leave behind social and
environmental problems**



What is lacking?



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**A tool-kit for
sustainable
management of
resources**



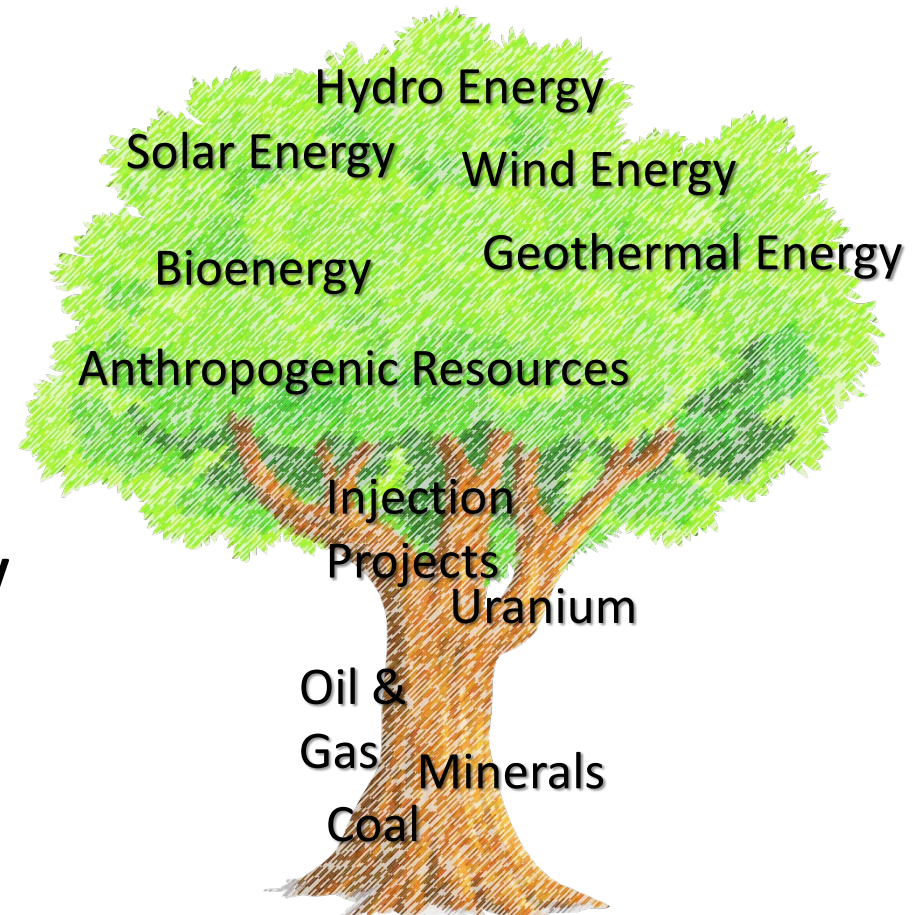
Bridging the gap

United Nations Framework Classification for Resources (UNFC)
and United Nations Resource Management System (UNRMS)



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- Applicable to all **energy and raw material** resources
- Align resource management to the **2030 Agenda**
- Derive good **social, environmental and economic** outcomes
 - Comprehensive Resource Recovery
 - Zero waste
 - Zero harm
- Improve financial resilience through business process **innovation**
- Obtain **social license** to operate



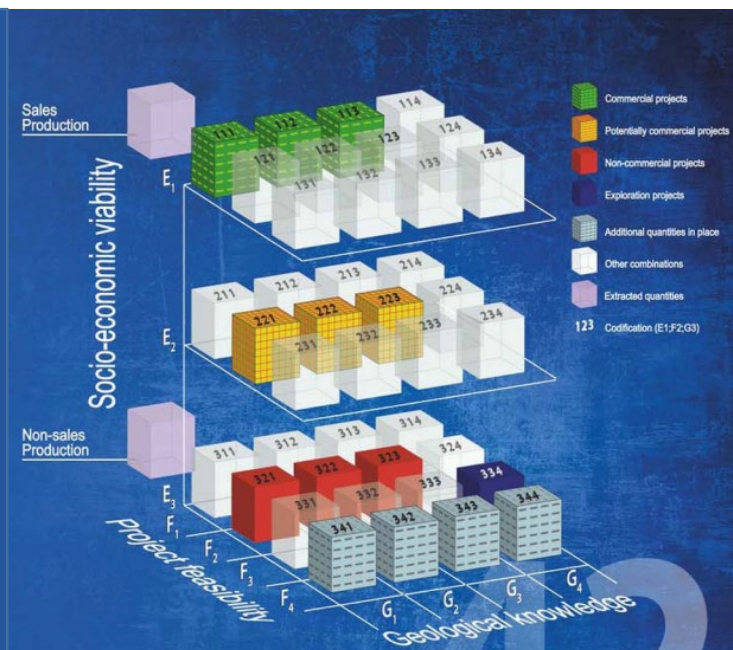
Why UNFC and UNRMS?

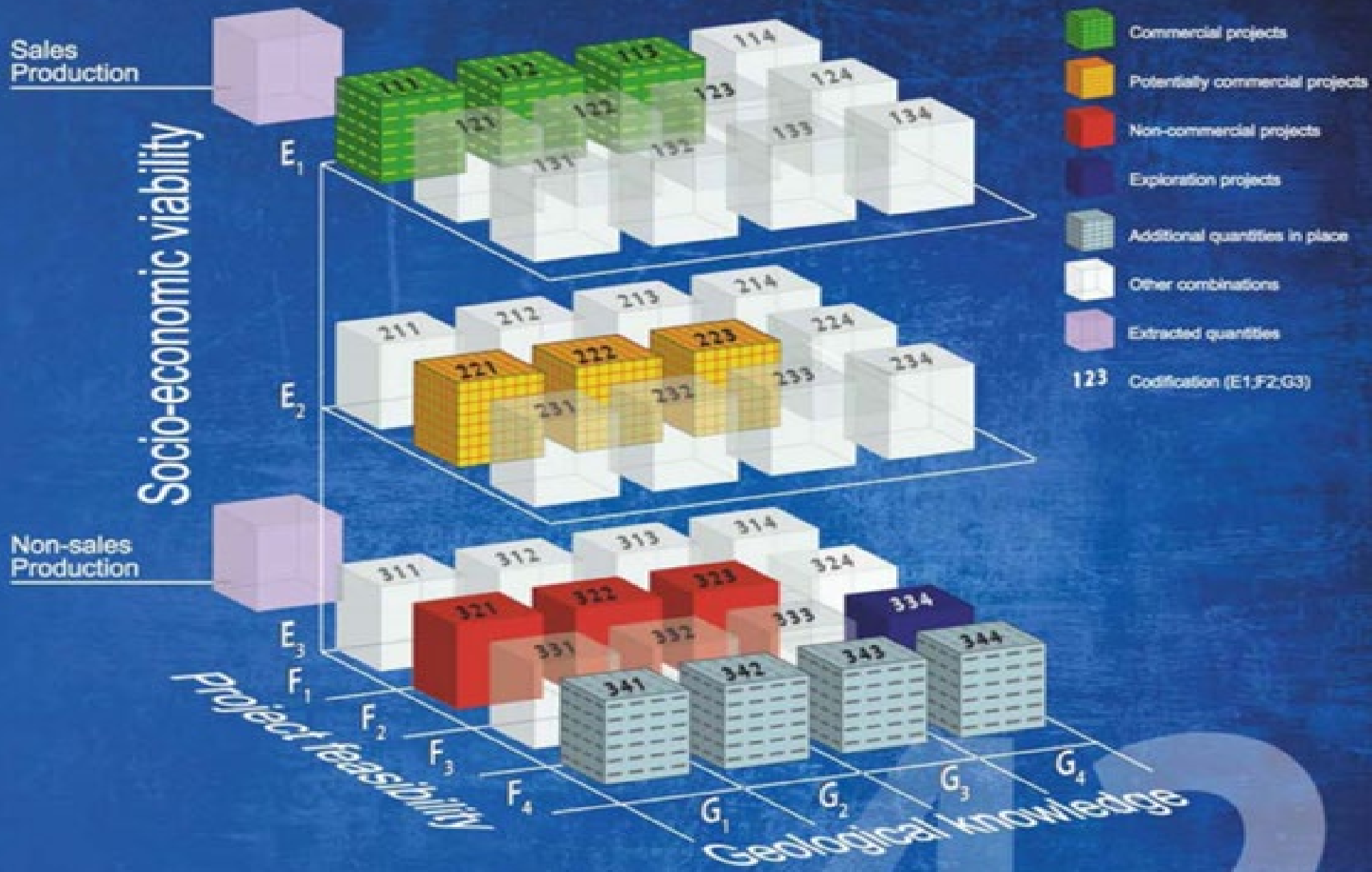


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- Understand and manage all resources in a coherent framework
- Applicable horizontally and vertically to all sectors
- Embeds all project risks and opportunities

UNFC and UNRMS promote clear thinking and a shared vision

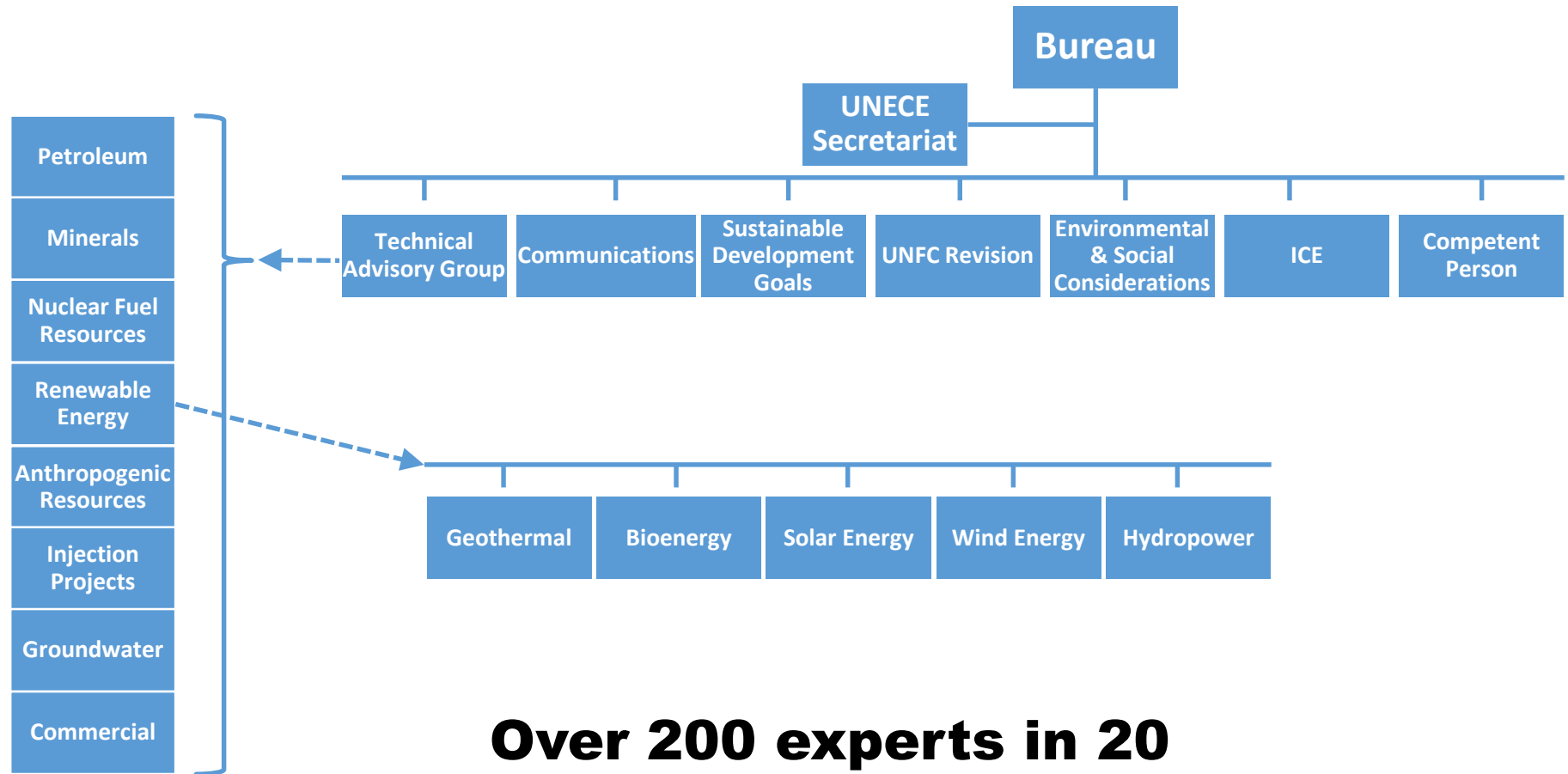




EGRM Work Groups



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Over 200 experts in 20 work groups

UNFC Adoption

Global Deployment of UNFC



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- **UNFC for Africa - African Union Commission** adopting UNFC as the sustainable management tool for Africa
- **UNFC for Europe – European Commission**-led initiative to assess use of UNFC in Europe.
- **Mexico** pilot study
- **China** has bridged its minerals and petroleum classifications
- **Russian Federation** bridged oil & gas classification
- Coordinating Committee for Geoscience Programmes in **East and Southeast Asia** (CCOP) to develop guidelines
- UNFC is part of United Nations **System of Environmental-Economic Accounting (SEEA)**, a system for national information on economy and environment.



Achieving the 2030 Agenda



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A network of International Centres of Excellence on Sustainable Resource Management to drive implementation and build human and institutional capability



Thank you

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www.unece.org/energy/se/reserves.html

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