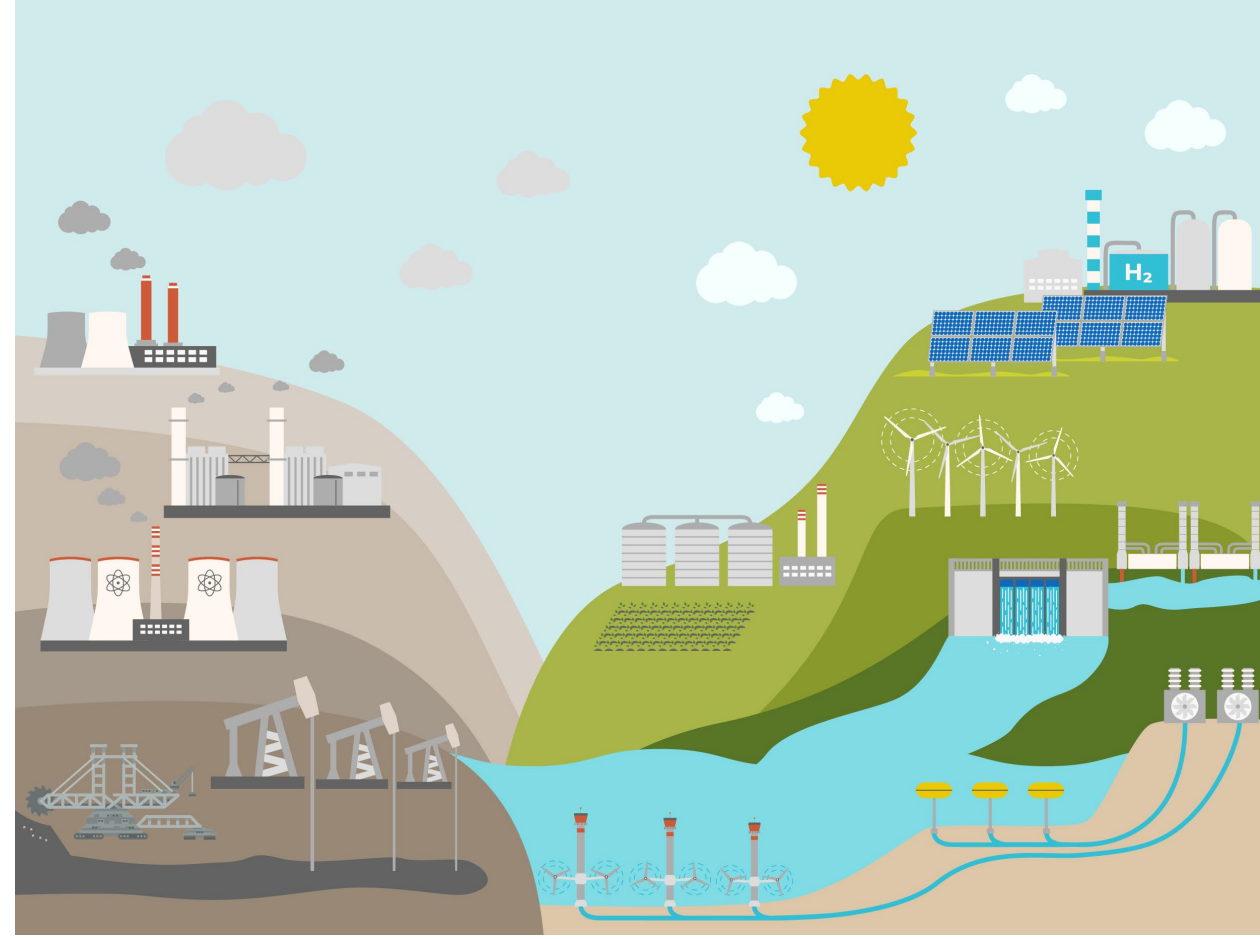


# Minerals for the Energy Transition: Transforming the Extractive Industries for Sustainable Development

**ESCWA Perspectives**



**RESOURCE MANAGEMENT WEEK  
2024**



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# Innovation and Sustainability to ensure the sustainable supply of critical minerals

- **Environmental monitoring and control technologies**, includes air quality monitoring systems, water treatment systems and noise control technologies.
- **Automation and robotics**: help improve the efficiency and productivity of mining operations, while also reducing the need for human labor and potentially improving working conditions.
- **Data analytics and digital technologies**, such as predictive analytics and smart sensors, can help optimize mining operations and improve resource management.
- **Social and community engagement technologies**, can help facilitate communication and engagement with local communities and other stakeholders, allowing for more transparent and collaborative decision-making processes.
- **Deploying advanced technologies** for reuse and recycling of materials and substituting critical resources.

***Careful consideration should be given to the potential impacts and risks of any new technologies, and they should be implemented in a way that is transparent and accountable to all stakeholders.***



# Policy and Governance

- Foster Holistic Approach
- Address inequalities by prioritizing long-term sustainable and inclusive development
- Adopt forward-looking approaches that consider economic, environmental and social impacts, underpinned by financial initiatives that support SMEs, gender and community programmes
- Address energy subsidies, introduce carbon emission taxes and incentives for clean technologies
- Implement the circular carbon economy framework
- Harmonize national standards and further enforce clear regulatory frameworks
- Reinforce governance structures, transparency and accountability by reinforcing legal frameworks
- Strengthen anti-corruption laws and law enforcement
- Enable private sector investment by creating favourable market conditions
- Adopt ESG standards linked to a possible SDG risk index and ensuring strict compliance.



THE VIEWS EXPRESSED ARE THOSE OF [AUTHOR NAME AND/OR ORG] AND DO NOT NECESSARILY REFLECT THE VIEWS OF THE UNITED NATIONS.

# Thank you!

Radia Sedaoui  
Chief Energy

**UNESCWA**

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