Supported by: BlackRock

Seminar Investing in the (EV) Energy Transition

Louwman Museum

12-11-2024

VBDO

Vereniging van Beleggers
voor Duurzame Ontwikkeling

Opening

Angelique Laskewitz

Executive director, VBDO

Programme

- 3:00 pm | **Word of Welcome** | Angélique Laskewitz, VBDO
- 3:10 pm | **Navigating the Energy Transition Investor Landscape** (key results of the theme study *Asset managers facing the energy transition & more)* / Freek van Til, VBDO
- 3:30 pm | **BlackRock Transition Scenario** | Charlotte Månsson, BlackRock
- 4:00 pm | **Short break**
- 4:10 pm | **The True Cost of EV Growth: How Nickel and Mineral Extraction Fuel Deforestation** | Jasmine Puteri, Rainforest Foundation Norway
- 4:30 pm | **Energy transition in mobility: a multi-path and integrated approach** | Wilbert Muilenburg & Ruud Jacobs | Louwman
- 5:00 pm | **Closure & drinks**

Navigating the Energy Transition Investor Landscape

12 November 2024

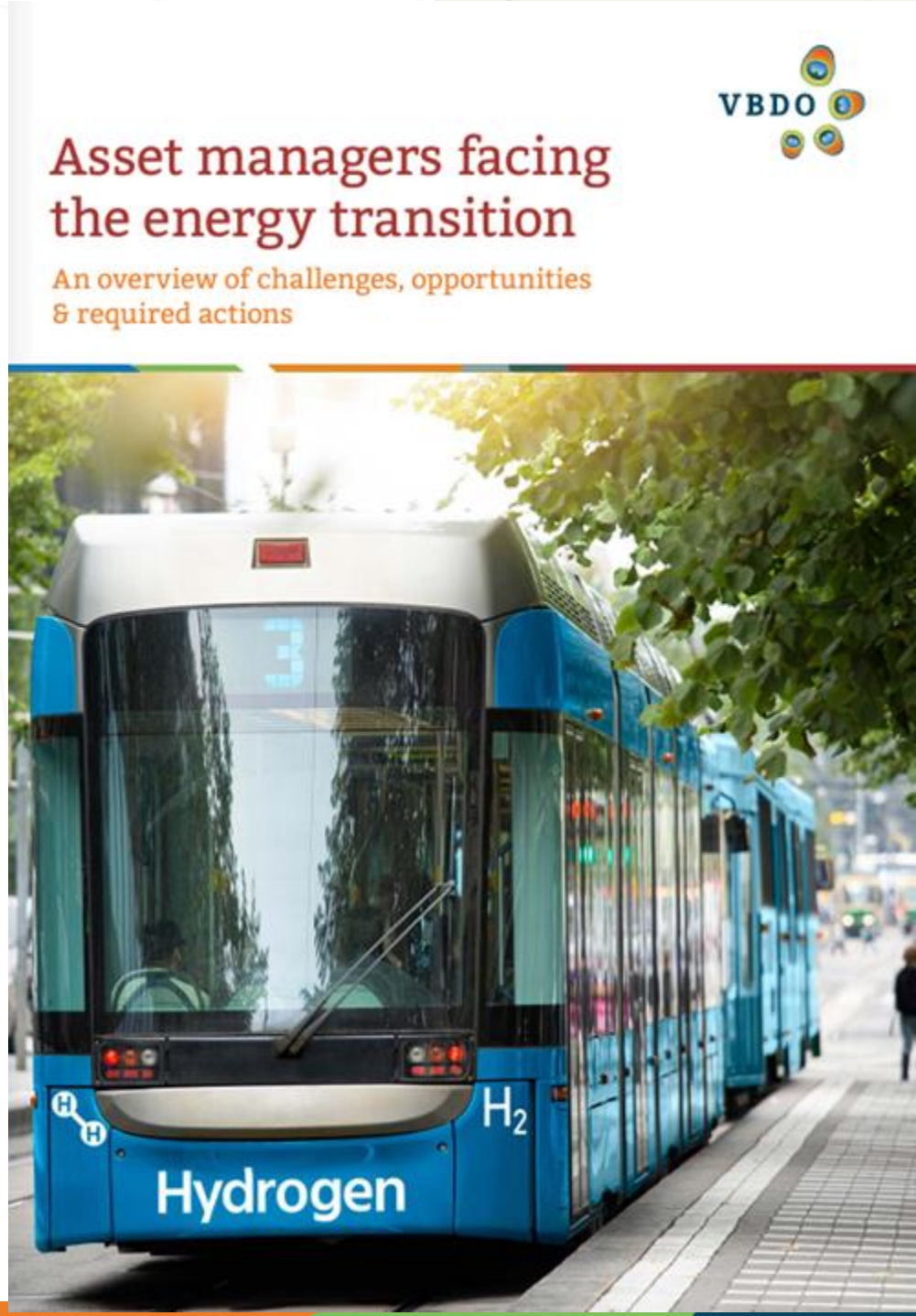
VBDO

Vereniging van Beleggers
voor Duurzame Ontwikkeling

Freek van Til
Project Manager
VBDO

Study on the energy transition

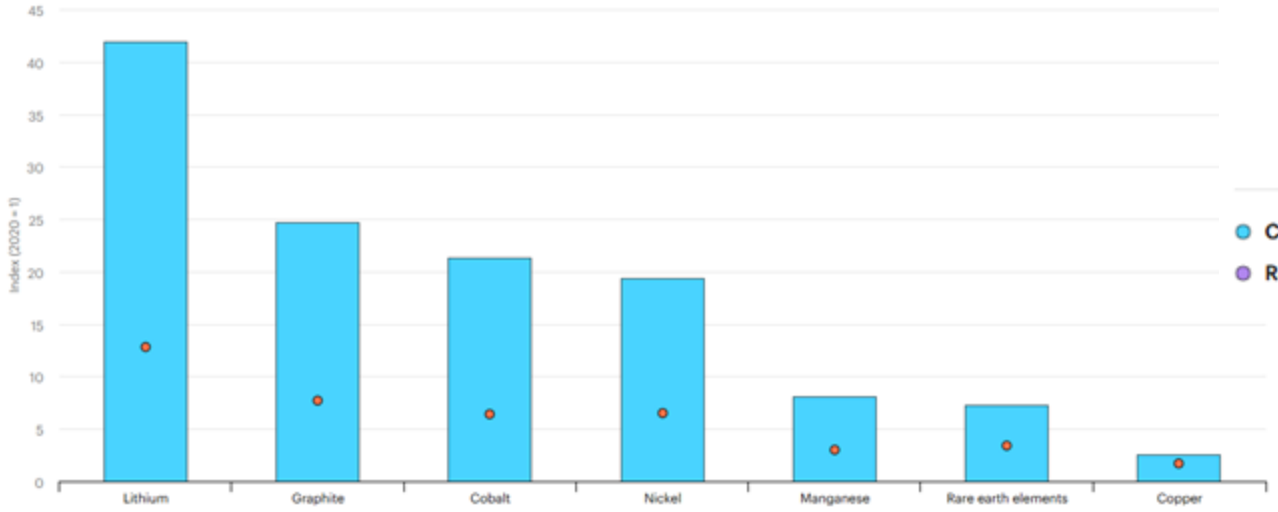
- **About the study**
  - The study explores how asset managers contribute to the energy transition, what their challenges are and how they can overcome some of these challenges. Scope of $4.3 trillion assets under management.
- **Key findings:**
  - Current investments still fall short of reaching 1.5°C
  - Focus remains on passive, need for swift switch to active and increased impact-focused investments
  - Increase collaboration, specifically in engagement and through initiatives (knowledge building, clear sector-signal to companies/sectors)
- **Recommendations**
  - Develop ambitious engagement programmes:
    - On setting Paris-aligned capex budgets
    - Across sectors (e.g., with energy suppliers and heavy industry companies)
    - Develop a comprehensive engagement strategy that includes an escalation strategy (e.g., voting or divestment)
  - **Consider absolute GHG reduction as a means to an end, and not as an end in itself**
  - Dare to deviate from traditional forms of finance
  - Join, support and contribute to collaborative responsible investment initiatives

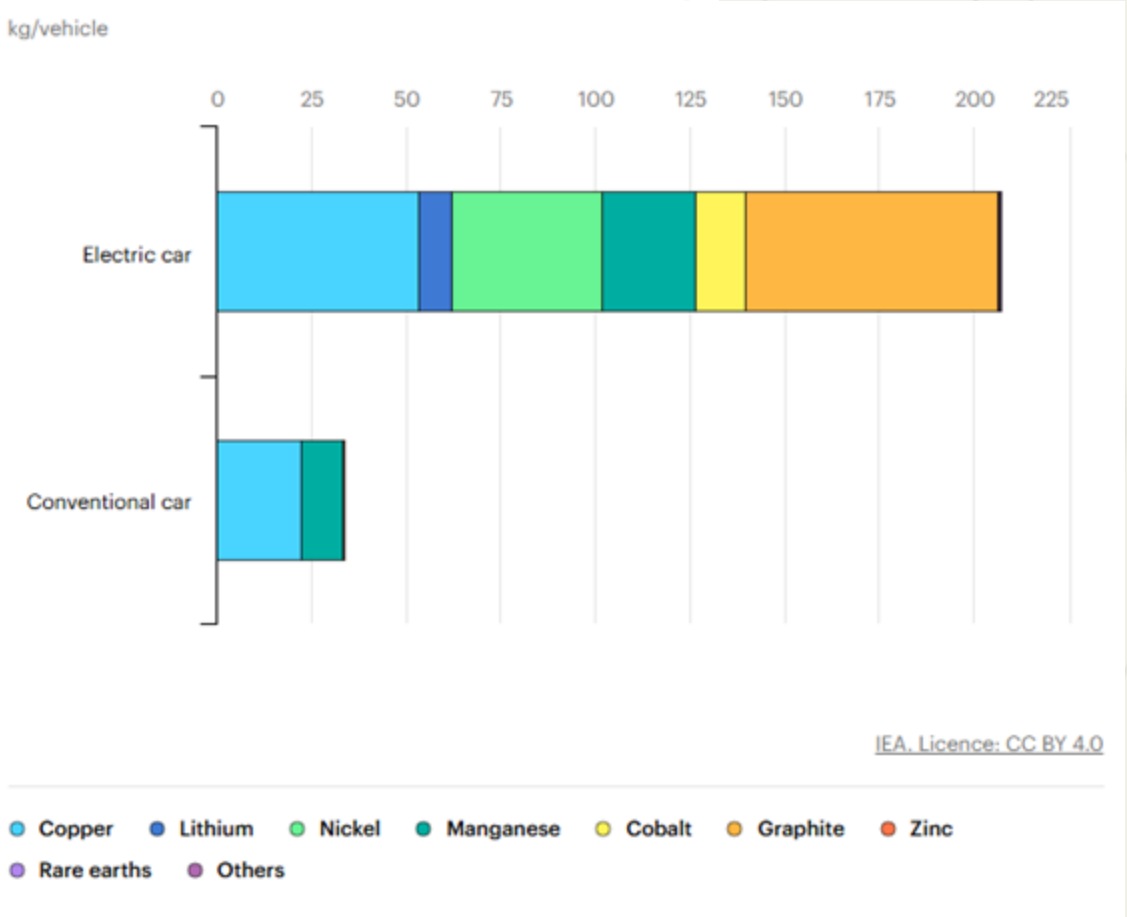


Demand critical minerals is skyrocketing

- **Energy Outlook IEA 2024**
  - Massive increase in minerals like Lithium, Graphite, Cobalt and Nickel.

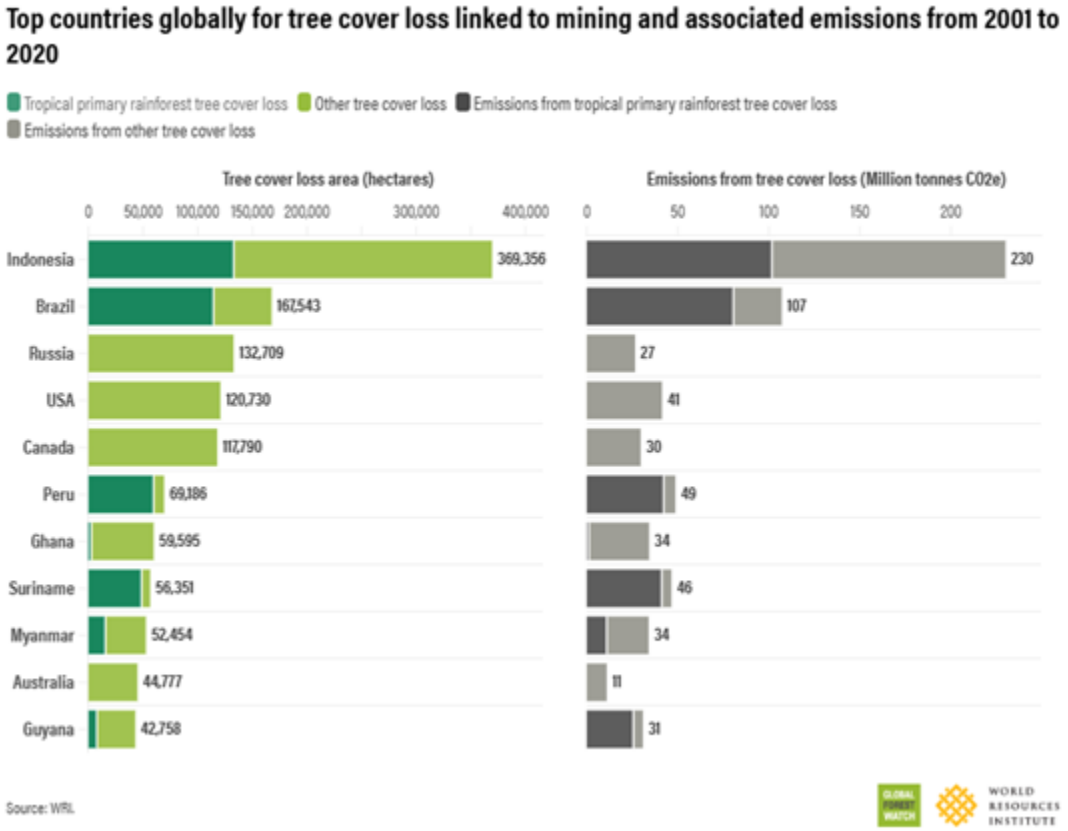
- **Increase in demand comes from:**
  - Solar panels
  - Wind turbines
  - EVs and battery storage

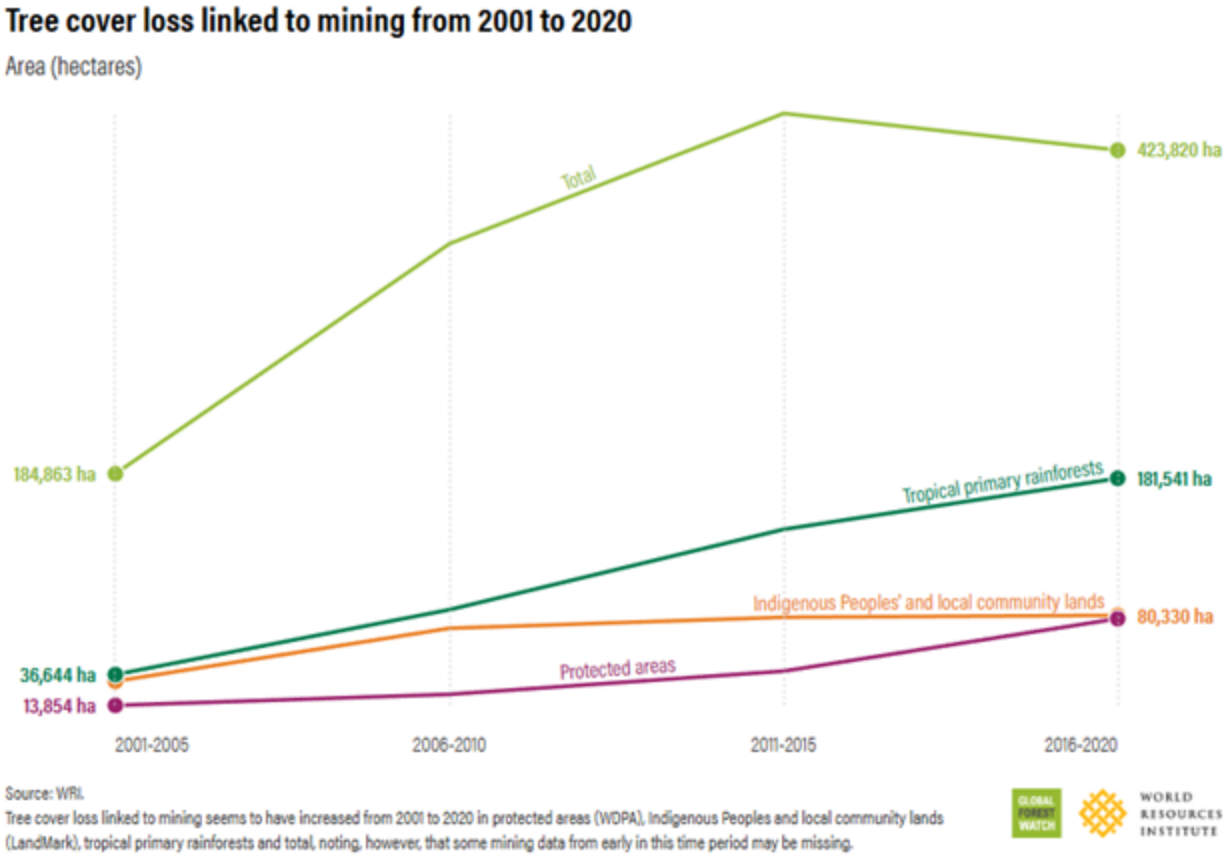




Solving one crisis → creating another one

- By focusing on one key issue (carbon emissions), we are losing track of the bigger picture (biodiversity and ecosystem destruction, social inequalities and human rights)
- Absolute need for interconnected approach





Polycrisis

- **Biodiversity and Ecosystem Loss:**
  - **44 trillion US$ global GDP depended on nature:** Global biodiversity is declining at an unprecedented rate, with species extinction rates accelerating due to habitat destruction, pollution, climate change, and overexploitation of resources. Ecosystems are being degraded, leading to loss of services that are essential for human survival, such as clean water, food security, and carbon sequestration.
  - **Impact on communities:** Indigenous Peoples, affected communities, and local communities that rely on biodiversity for their livelihoods are disproportionately affected.
- **Social Inequalities:**
  - **Disproportionate Impact:** Vulnerable populations, including low-income communities and marginalized groups, often bear the brunt of environmental degradation. These groups typically have less capacity to adapt to environmental changes and are more likely to experience negative health impacts due to pollution and loss of resources.
  - **An energy transition for all** Inequitable access to natural resources exacerbates social inequalities. Wealthier nations or corporations often exploit resources in developing countries, leading to environmental degradation while local communities are left with the consequences.
- **Human Rights Infringements:**
  - **Environmental Justice:** The intersection of environmental issues and human rights is critical. Environmental degradation often leads to violations of human rights, including the right to health, water, and a safe environment. Communities opposing harmful projects may face repression, violence, or displacement.
  - **Indigenous Peoples rights:** Indigenous peoples frequently face human rights violations when their lands are appropriated for mining, agriculture, or other industries without their consent. The principles of Free, Prior, and Informed Consent (FPIC) are often overlooked, leading to conflict and further marginalization.

EU Regulatory Landscape

- **Sustainable Finance Disclosure Regulation (SFDR):**
  - Requires financial market participants to disclose sustainability risks and the environmental, social, and governance (ESG) impact of their investments.
  - **Intersection with Polycrisis:** SFDR promotes transparency, guiding investors to consider interconnected crises—climate, biodiversity, and social impacts—when making decisions.

- **Corporate Sustainability Reporting Directive (CSRD):**
  - Expands the scope of sustainability reporting for companies, mandating detailed disclosures on environmental, social, and governance factors.
  - **Intersection with Polycrisis:** CSRD ensures that companies account for their contributions to climate change, biodiversity loss, and social inequalities, fostering responsible business practices.

- **Corporate Sustainability Due Diligence Directive (CSDDD):**
  - Requires companies to conduct due diligence on human rights and environmental impacts throughout their supply chains.
  - **Intersection with Polycrisis:** CSDDD addresses the social and environmental dimensions of the polycrisis, ensuring companies actively mitigate risks related to human rights violations and ecosystem degradation.

- **Battery Regulation:**
  - Sets requirements for the production, recycling, and disposal of batteries, ensuring they are sourced responsibly.
  - **Intersection with Polycrisis:** This regulation supports a clean energy transition by promoting sustainable practices in the sourcing of critical minerals, helping to mitigate environmental harm and social injustices tied to resource extraction.

Collaborative initiatives and standards

- **Nature Action 100**
  - Global investor-led engagement initiative aiming to drive corporate action to reverse nature and biodiversity loss.
  - **Intersection with Polycrisis:** By focusing on companies with significant environmental impacts, Nature Action 100 addresses the dual crises of biodiversity loss and climate change, promoting responsible practices that also consider social implications.

- **Finance for Biodiversity Pledge**
  - A commitment by financial institutions to align their investments with the goal of halting biodiversity loss by 2030.
  - **Intersection with Polycrisis:** This pledge encourages financial actors to integrate biodiversity considerations into their decision-making processes, addressing the environmental and social dimensions of the polycrisis.

- **Initiative for Responsible Mining Assurance (IRMA)**
  - Provides a certification system for responsible mining practices, focusing on environmental, social, and governance standards. Has a multi-stakeholder equal-voting governance system in place, including the financial sector.
  - **Intersection with Polycrisis:** IRMA promotes responsible mining practices that mitigate environmental degradation and respect human rights, directly addressing the crises of biodiversity loss and social inequalities.

- **Drive Sustainability**
  - A partnership of leading automotive companies aiming to drive sustainability throughout the automotive supply chain by promoting a common approach within the industry and integrating sustainability into the overall procurement process.
  - **Intersection with Polycrisis:** By focusing on responsible sourcing and ethical practices, Drive Sustainability addresses environmental impacts and social issues within the automotive sector, contributing to a more responsible and equitable supply chain.

Investor Initiative on Responsible Nickel Supply Chains

- Signed by 33 institutional investors, totaling US$4.4 trillion assets under managed.
- Collectively engaging the EV sector, focusing on 28 automakers and EV battery producers
- Investor-led initiative that is civil society supported, with the support of 10+ national and international organisations
- VBDO coordinates, in collaboration with RFN as knowledge partner
- Launched on February 20th 2024.
- Engagement phase has started

Investor expectations for enhanced social and environmental due diligence in nickel supply chains of the electric vehicle (EV) industry

February 20th, 2024

I. Setting the scene

As governments and corporates around the world take measures to transition towards a green economy built on renewable energy, companies will need to increase their supply of critical minerals such as nickel, cobalt, lithium, and graphite. At the same time, reports on the negative environmental and social impacts of mining activities are mounting. To ensure a just and responsible global transition to renewable energy, the extraction of raw materials and minerals must avoid creating damages to Indigenous Peoples, local communities, and the environment. Amongst the critical minerals needed for our energy transition, nickel is receiving increased public attention due to both its expected steep rise in demand within the next decade, as well as the significant environmental and social risks associated to its extraction[1].

Reports on the negative environmental and social impacts of nickel mining activities in the wider South-East Asian region are spreading. These include deforestation[2], water and air pollution[3], conflicts with Indigenous Peoples and local communities[4], biodiversity loss[5], and high greenhouse gas (GHG) emissions due to use of non-renewable energy during refining processes[6]. Stakeholders have raised concerns over the lack of Free, Prior, and Informed Consent (FPIC), and the loss of food security, water contamination, and destruction of the surrounding rainforests[7].

The single-largest growth in the demand of nickel in the next two decades is expected to come from the electric vehicle (EV) industry[8]. However, environmental impacts are often overlooked in the downstream[9] mineral supply chain policies of EV battery producers and EV manufacturers. In addition, the requirement to respect the rights of Indigenous Peoples, as recognized in the UN Declaration on the Rights of Indigenous Peoples, including the requirement for FPIC is often neglected in supply chains.

We, investors and their representatives, believe that EV battery manufacturers and automakers should leverage their position to raise the environmental and social standards of nickel extraction and refinement. Nickel supply must be met with

Expectations

I: Incorporate responsible mining practices into mineral supply chain policies

- Commitment to implement and respect the FPIC of Indigenous Peoples and local communities, including right to withhold consent.
- Third-party, independent auditing using transparent standards as well as multi-stakeholder consultations during social and environmental impact and risk assessments of mining and refining sites.
- Adherence to the mitigation hierarchy of avoiding, minimising, restoring, and offsetting any negative impacts on natural ecosystems with no net loss as a core guideline.
- Fair compensation to affected rightsholders, including people who are physically or economically displaced, and an effective grievance redress mechanism that can offer fair and equitable remediation.
- Time bound commitment for net-zero smelting and refining processes, prioritising the phase out of fossil fuel energies.
- Publicly report and disclose on the implementation of the above policies.

II: Enhanced social and environmental due diligence, with increased disclosure and transparency.

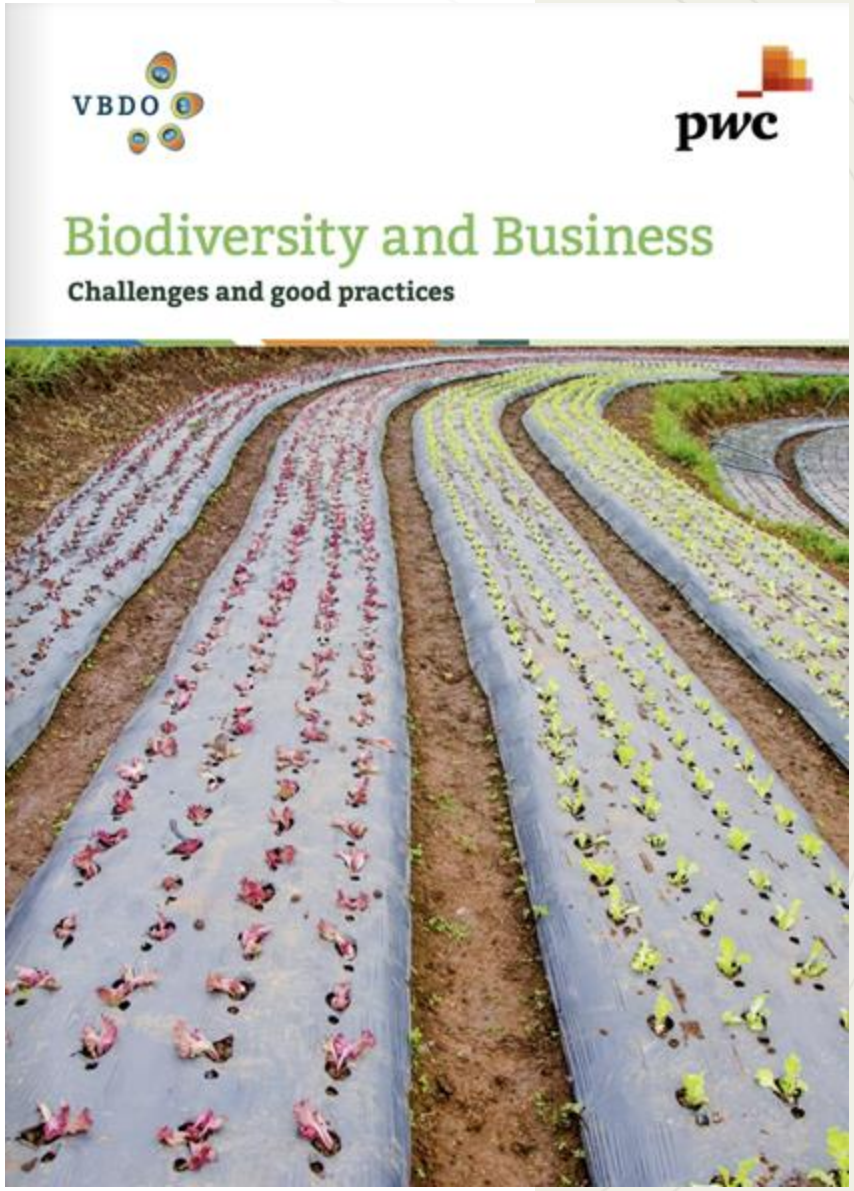
- “We expect companies to conduct enhanced due diligence for biodiversity, pollution, climate change and Indigenous Peoples and local communities’ rights risks in nickel supply chains. We also expect companies to have increased disclosure on the environmental and social impacts embedded in their nickel supply chains.”

III: Adopt a time bound commitment to have deforestation-free nickel supply chains

- “We expect companies to make time-bound commitments for deforestation-free nickel supply chains, by avoiding and minimising the extraction of nickel that leads to deforestation and loss of tropical forests, as well as by adopting circular economy measures and technologies that maximise extracted nickel’s performance.”

Biodiversity Benchmark 2025

- 30 EU listed companies
- Selection based on impact, dependence and risk (ENCORE)
- Extractive, Food & Beverage, Pharmaceuticals
- CSRD E4: Biodiversity & Ecosystems
- Four pillars:
  - Strategy & business model
  - Policy
  - Actions and implementations
  - Targets & metrics
- Five drivers of biodiversity loss:
  - Land and sea use change
  - Overexploitation
  - Climate change
  - Pollution
  - Invasive (alien) species



Reflecting on COP16 - Biodiversity Credits

- **Biodiversity Credits** (certificats) represent quantifiable units of biodiversity conserved or restored and aim to mobilize financial resources for conservation initiatives.
- **Debatable:** while biodiversity credits offer potential funding sources for conservation, there are concerns about their effectiveness. Consider the following risks:
  - The biodiversity credit market is still evolving and lacks comprehensive regulation. This **unregulated environment** may lead companies to purchase credits as a substitute for implementing substantial changes to reduce their environmental impact.
  - **Not all ecosystems are equivalent.** For instance, compensating for the destruction of a biodiversity-rich area like the Amazon by planting trees elsewhere may not effectively offset the loss.
  - The acquisition or leasing of land for conservation purposes can sometimes occur without the consent or knowledge of Indigenous Peoples or local communities who depend on that land for their livelihoods, leading to potential conflicts and ethical concerns. Otherwise known as **Land Grabbing**.
  - **Relying solely on financial compensation through biodiversity credits is insufficient**. A robust biodiversity strategy requires proactive measures, such as avoiding harmful activities, minimizing unavoidable impacts, and restoring ecosystems where possible, rather than relying on compensation as a last resort.

The International Finance Corporation (IFC) promotes the **mitigation hierarchy** as a framework to manage environmental and social risks in development projects. This approach consists of the following steps:

- **Avoidance**: Implement measures to avoid potential adverse impacts on biodiversity and ecosystems during project planning and execution. This step emphasizes careful site selection and project design to prevent harm to critical habitats.
- **Minimization**: If impacts cannot be avoided, the next step is to minimize them through design modifications and operational practices. This might include reducing the extent or duration of the impact.
- **Restoration**: Where impacts occur, efforts should be made to restore affected areas to their original state or enhance their ecological value. Restoration aims to reinstate the biodiversity and ecosystem services lost due to the project.
- **Offsetting**: As a last resort, if impacts cannot be avoided, minimized, or restored, compensatory measures should be taken to offset residual impacts on biodiversity. This could involve investing in conservation projects that provide equivalent ecological benefits elsewhere.

Recommendations

Integrate multi-dimensional lens “Climate, Nature, and Human Rights”:

- Encouraging responsible investments that prioritize ecological health, social equity, and human rights can help mitigate these crises. Investors have a pivotal role in advocating for corporate accountability and sustainability. Assess the full value chain. Adhere to the mitigation hierarchy (IFC).

Engage in collaborative initiatives:

- Recommend joining initiatives like Nature Action 100, IPDD, the Finance for Biodiversity Pledge, and VBDO's Investor Initiative for Responsible Nickel Supply Chains. Collaboration can enhance influence and drive meaningful change across sectors.

Support responsible sourcing initiatives:

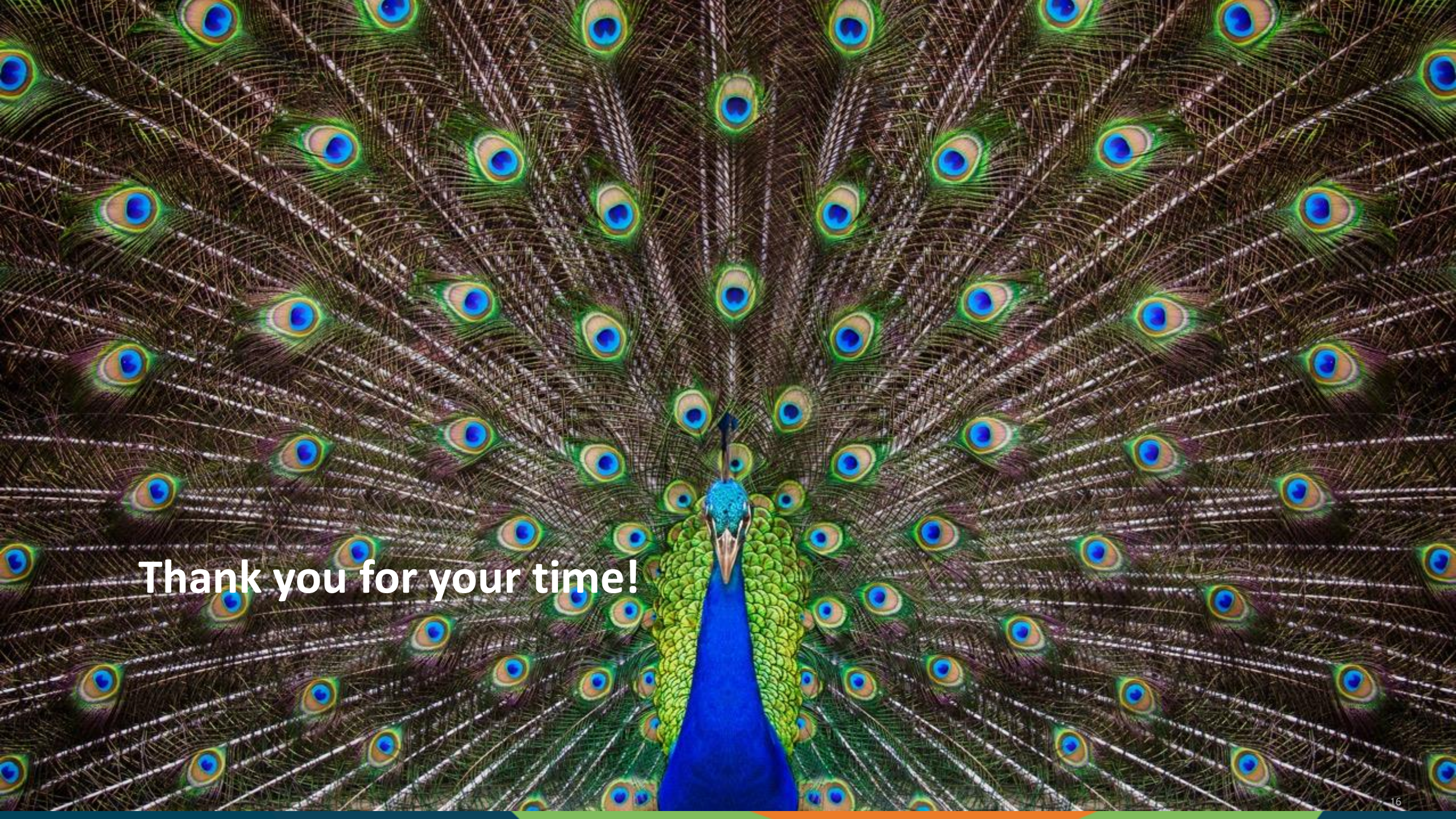
- Promote investments in companies that prioritize responsible sourcing of critical minerals and adhere to frameworks like IRMA and RMI. This will help mitigate the negative impacts of mining on ecosystems and communities.

Engage with Policymakers on supportive regulations:

- Encourage active engagement with policymakers to support regulations that promote biodiversity conservation, responsible resource extraction, and social equity. Collective advocacy can help shape a regulatory environment conducive to responsible practices.

Inclusive Stakeholder Engagement:

- Engage Affected Communities: Recommend actively involving Indigenous Peoples, affected communities, and local communities in investment decisions, ensuring their rights and knowledge are respected in biodiversity conservation efforts.


Thank you for your time!

November 2024

Charlotte Månsson
Head of Sustainable & Transition Solutions,
Nordics and Netherlands

BlackRock

Transition outlook *(slides not available)*

BlackRock
Investment
Institute

Nickel, EV Growth, and Deforestation: The Hidden Costs of the Energy Transition

Jasmine Puteri
Senior Supply-Chain Advisor,
Rainforest Foundation Norway

Agenda

1. Introduction: Setting the Scene
2. The Ground Reality: Deforestation and Indigenous People and Local Communities Impact
3. Mining Concessions: Early Indicators of Risk
4. The Role of Investors: Mitigating On-the-Ground Risks

Rainforest Foundation Norway – Who we are

- International non-profit organisation with public and private funding
- Key goal: protect largest remaining contiguous forests and IP rights
- HQ in Norway, programs in 6 rainforest countries
- Global Advocacy and Country Teams with +55 local partners

Context: Mining and forests

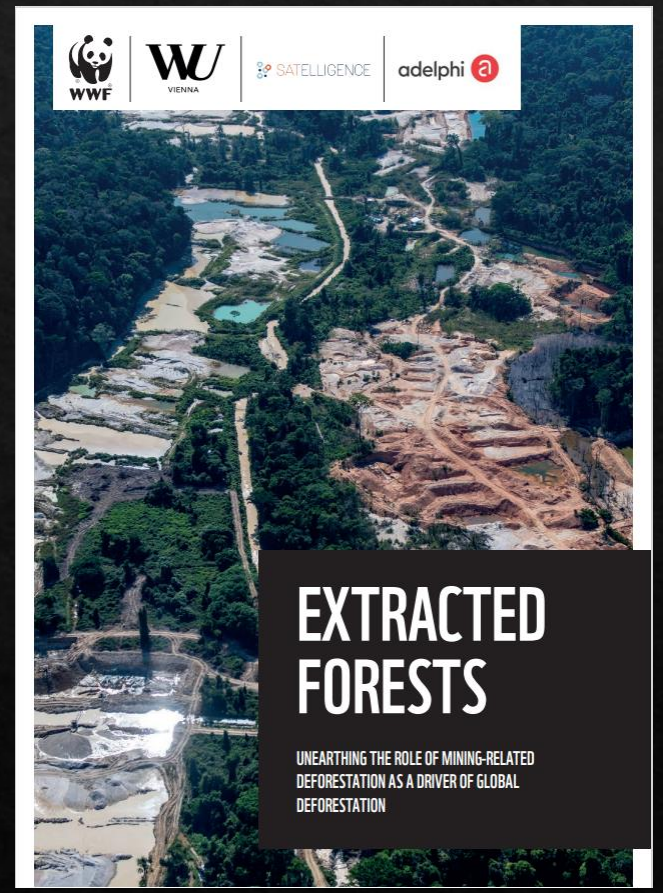
- Mining activities affect rainforests and Indigenous People and Local Communities (IPs and LCs)
  - Approximately ¼ of global deforestation is due to mining and/or urban expansion (WWF, 2023)
  - Mining overlaps with indigenous territories
- Four biggest deforestation-related minerals*: iron ore, bauxite, copper, manganese, and nickel (WWF, 2023)
- Increase of nickel related deforestation in Indonesia, linked to EV production.

* After gold and coal

EV Makers Confront the 'Nickel Pickle'

Large amounts of the mineral are needed for electric car batteries, but getting it out of the ground and refining it often requires clearing rainforests and generating large amounts of carbon

Source: The Wall Street Journal



Nature and the energy transition

- Nature balance in energy transition: tropical rainforest ecosystem
- Nickel: critical mining for energy transition
- Nature impacts from nickel mining operations and smelters
- EV growth should not be driver of biodiversity loss

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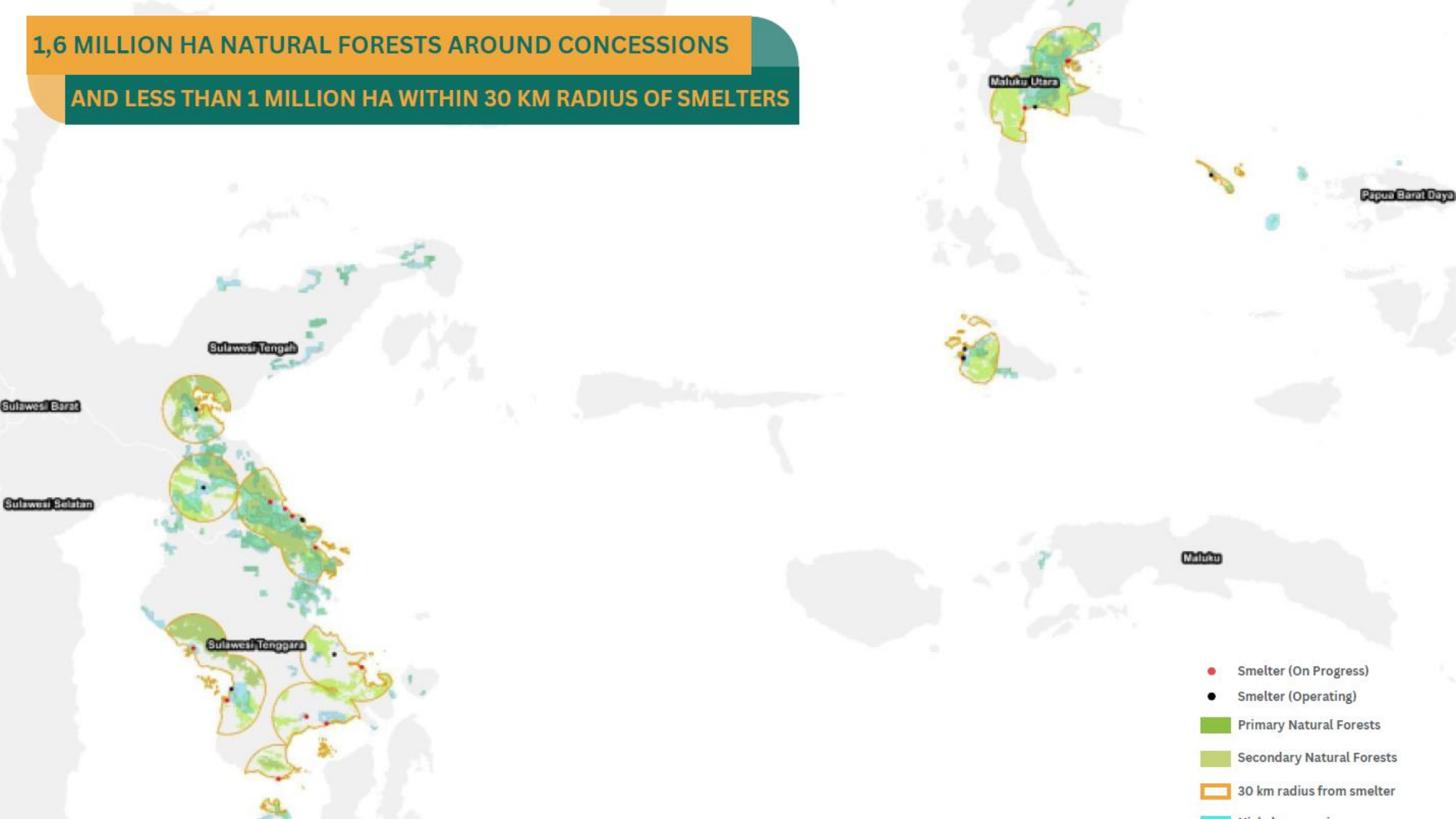
Small Islands: Nickel Reserve

Manoram Island, Raja Ampat (West Papua), FWI, 2023PT Anugrah Surya Pratama (Wanxiang Group)

Nickel mining in Halmahera Island, Indonesia. Photo: FWI 2023

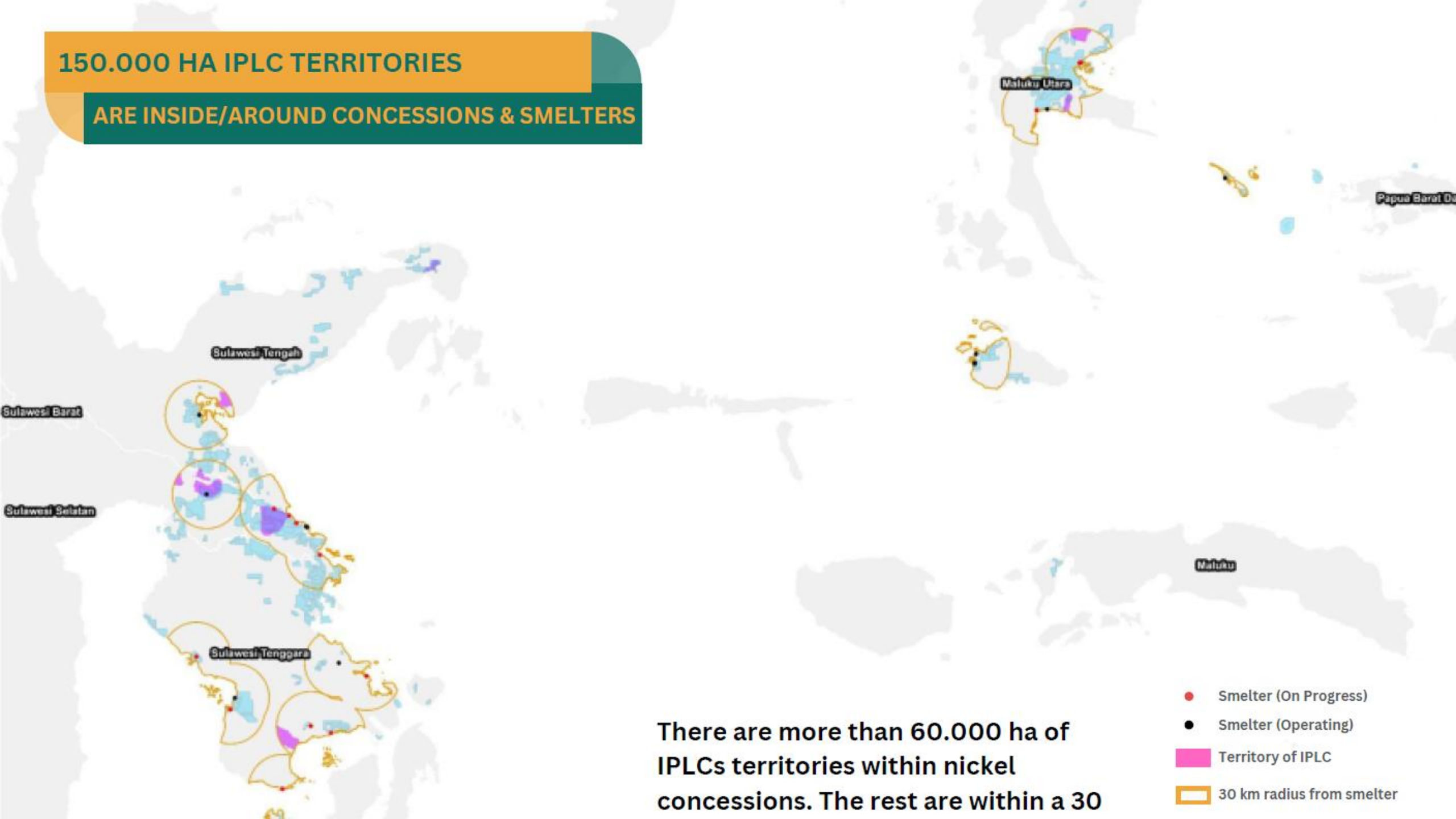
1,6 MILLION HA NATURAL FORESTS AROUND CONCESSIONS

AND LESS THAN 1 MILLION HA WITHIN 30 KM RADIUS OF SMELTERS



150.000 HA IPLC TERRITORIES

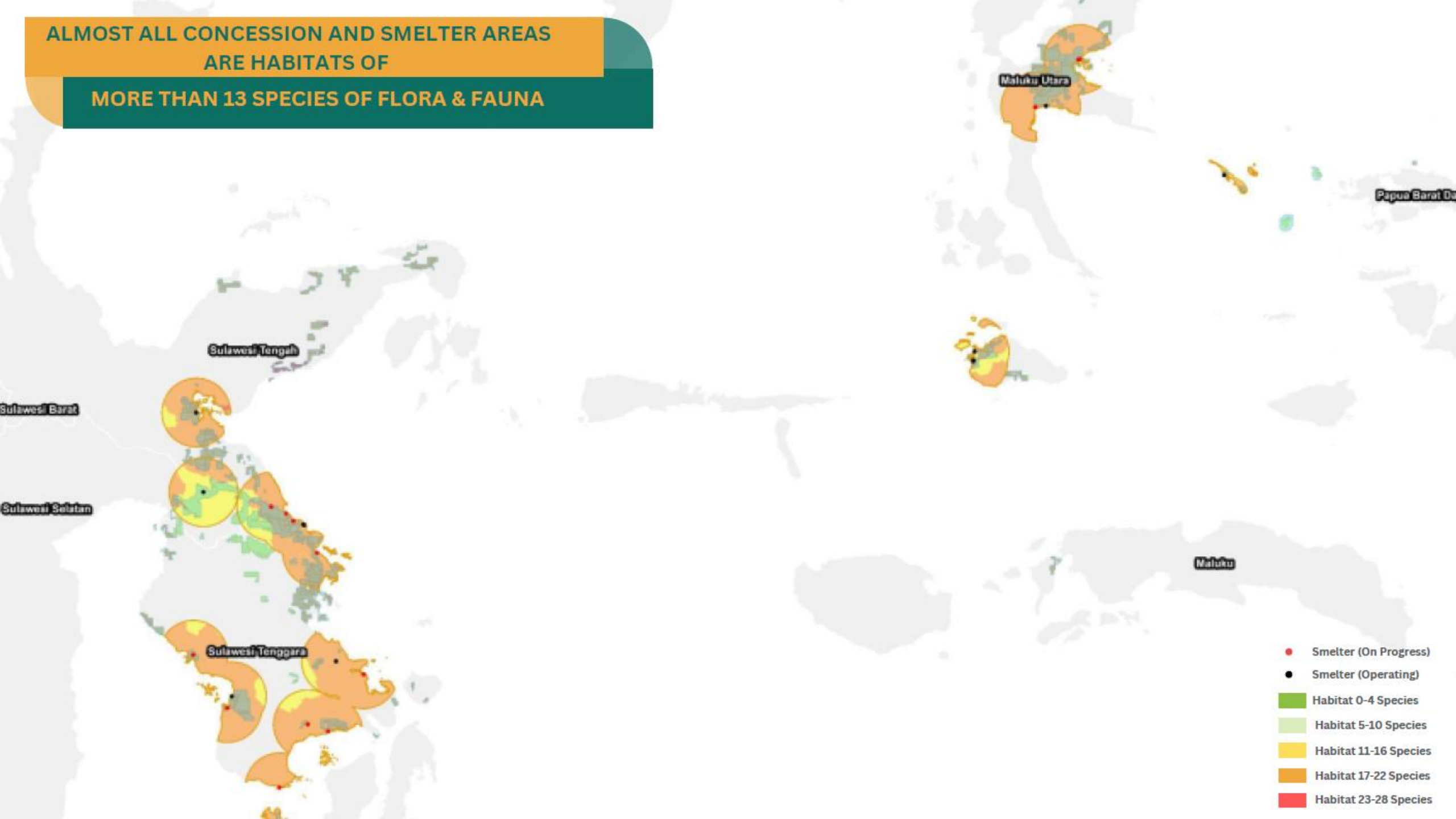
ARE INSIDE/AROUND CONCESSIONS & SMELTERS



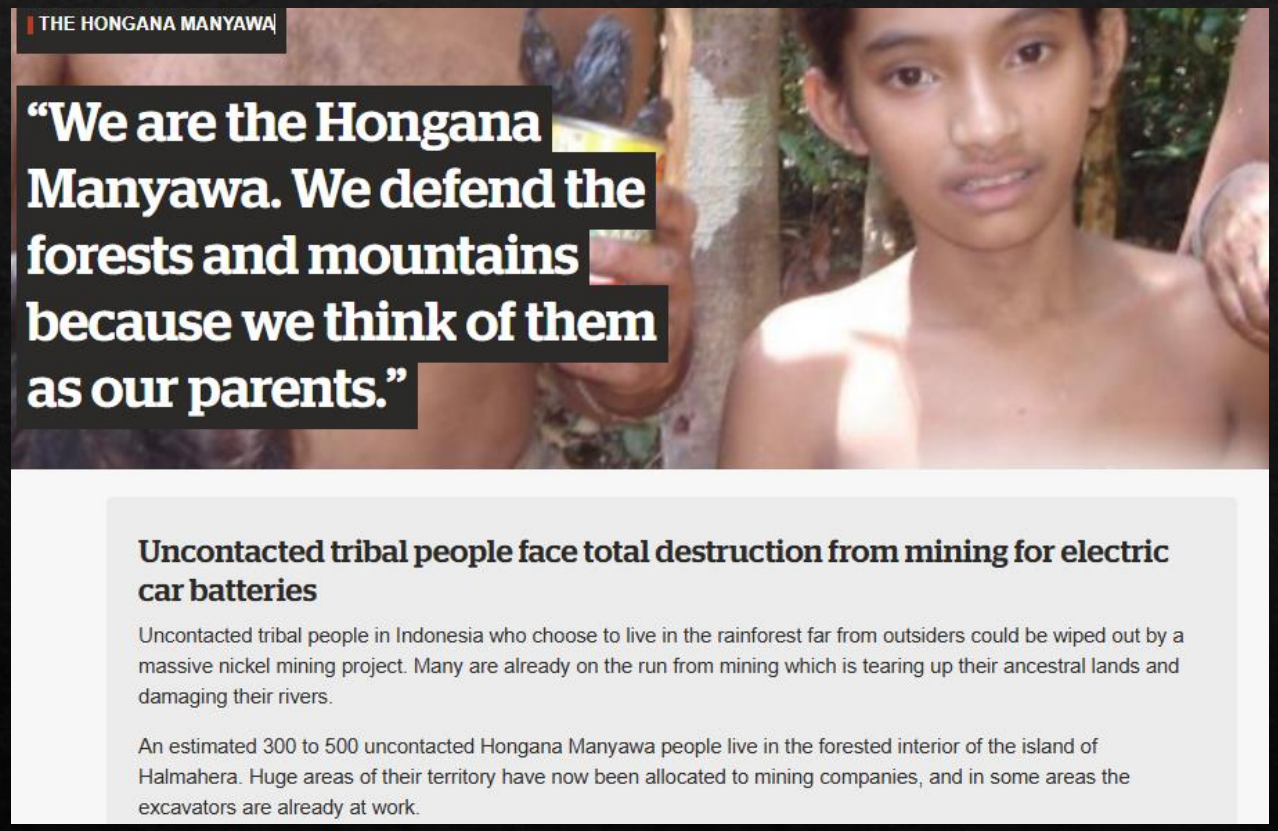
There are more than 60.000 ha of IPLCs territories within nickel concessions. The rest are within a 30

ALMOST ALL CONCESSION AND SMELTER AREAS ARE HABITATS OF

MORE THAN 13 SPECIES OF FLORA & FAUNA



Risks for Investors



- Environmental and Social Risks:
  - Nickel mining threatens rights of IP and LCs
  - Deforestation and biodiversity loss in key mining regions (Indonesia: Sulawesi, North Maluku).
  - High carbon emissions due to coal-powered nickel smelters.
- Investor Concerns:
  - Reports of pollution, deforestation, and conflicts with local communities in Indonesia’s nickel sector.
  - Risk of non-compliance with international ESG standards and reputational damage.
  - Create risks of operational delays, legal battles, and reputational damage.

COP 16

- Biodiversity credits
- Article 8J: Parties ‘agreed to establish a new permanent subsidiary body
- Colombia government: started Responsible Mining Declaration – COP 30
- TARGET 18: Reduce Harmful Incentives by at Least $500 Billion per Year, and Scale Up Positive Incentives for Biodiversity

COP16
COLOMBIA
Paz con la Naturaleza

Agenda

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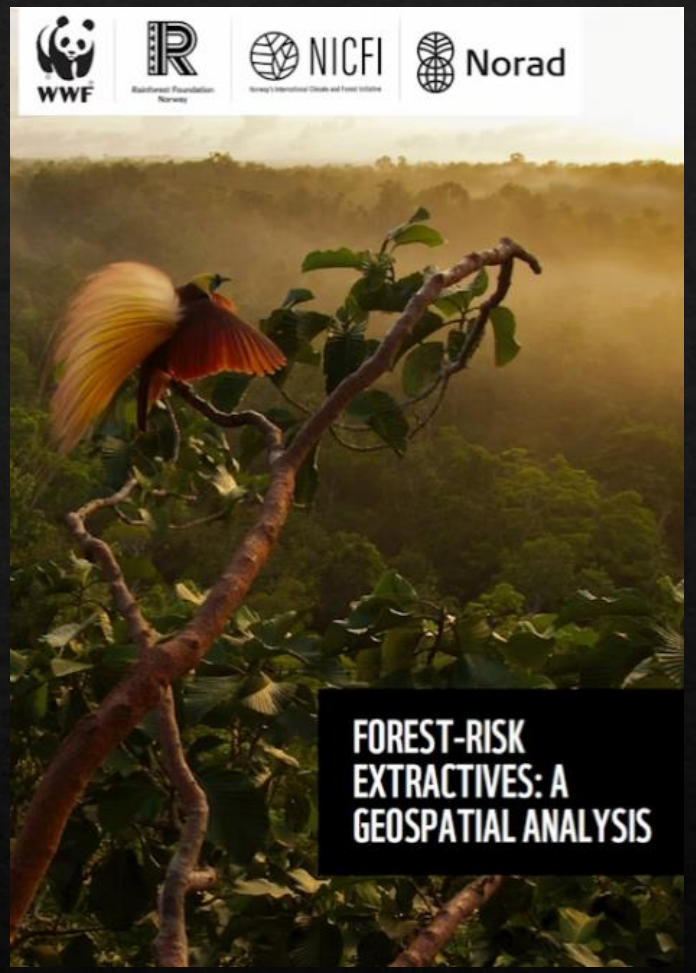
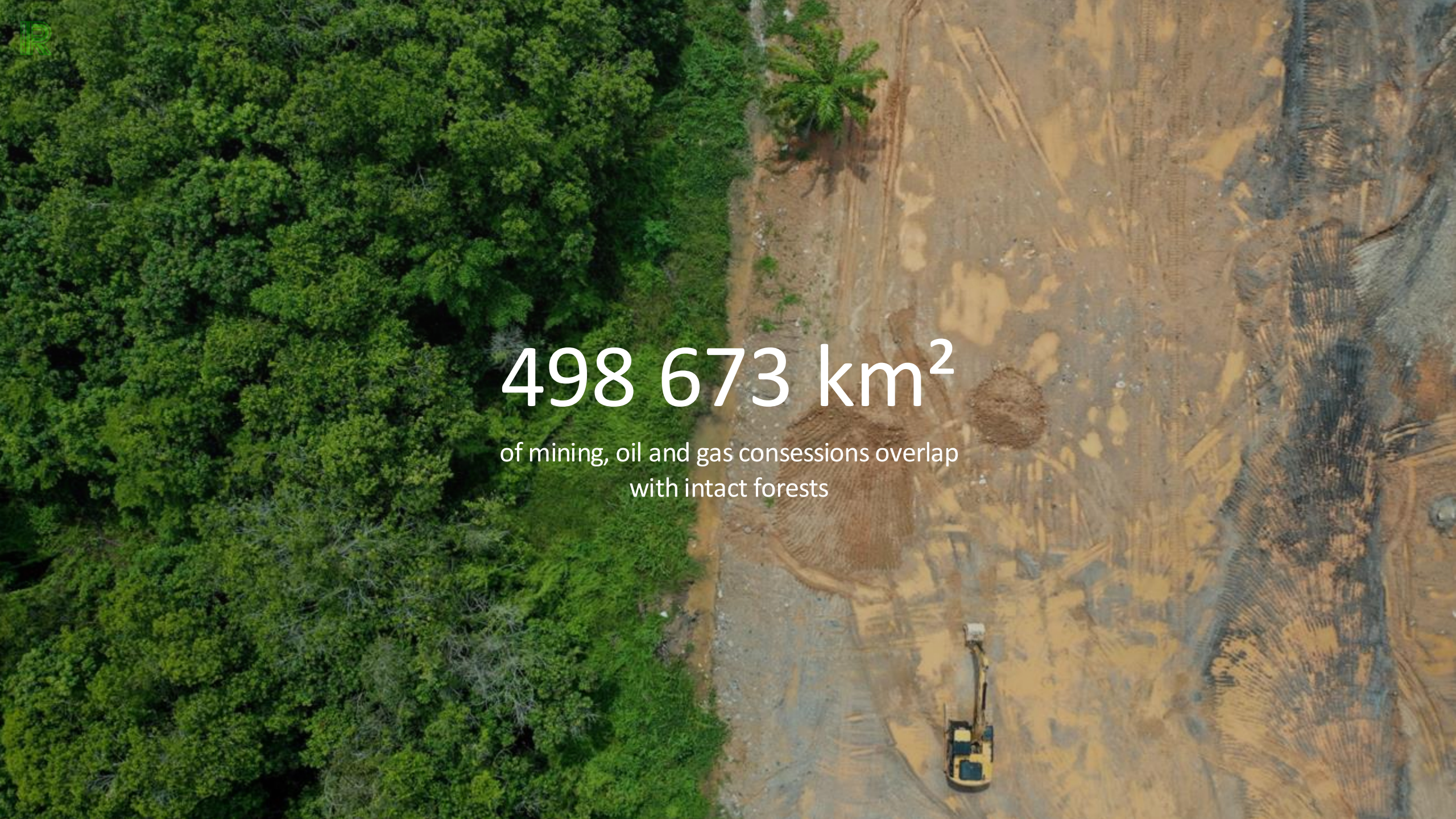
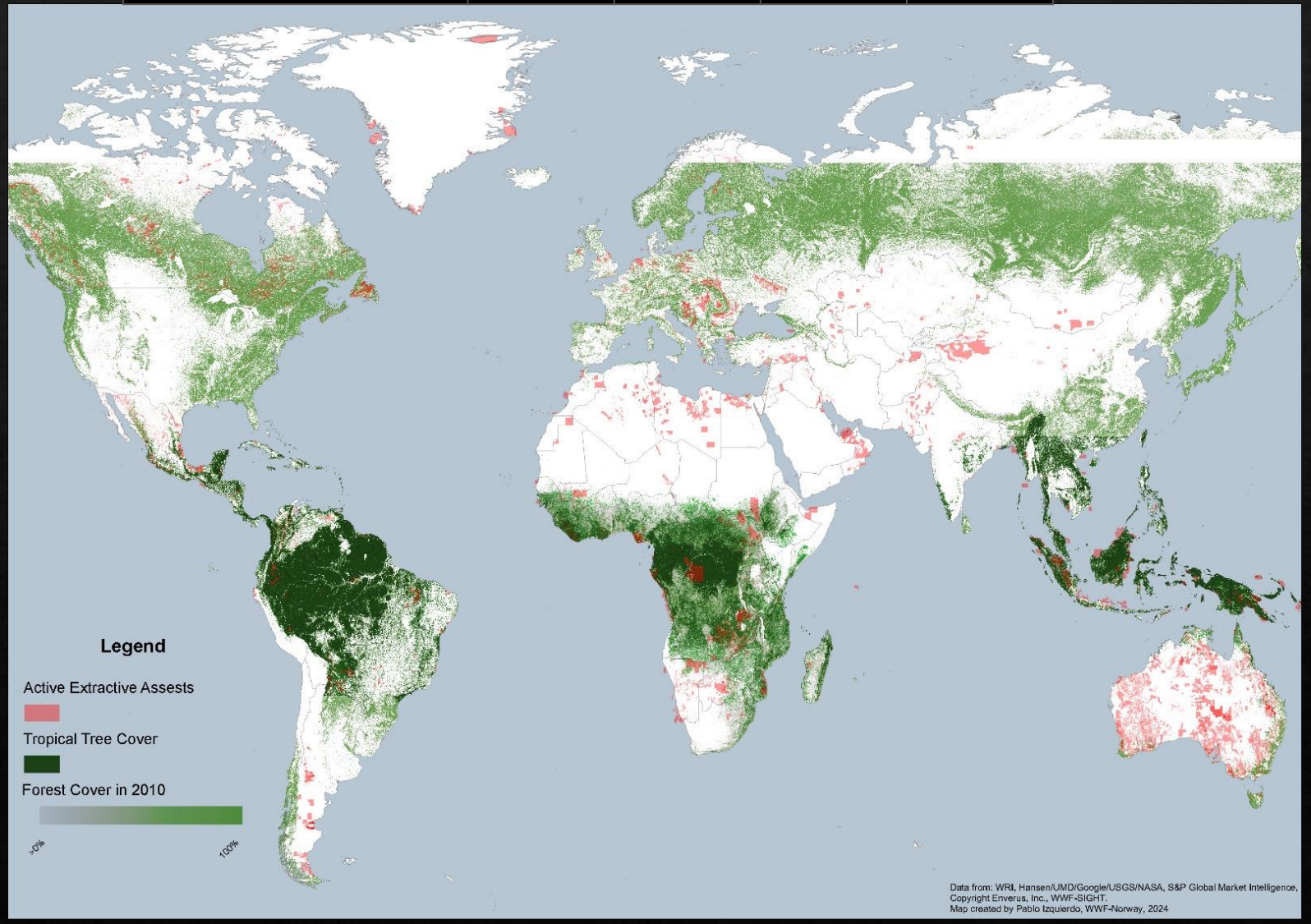

WWF
NICFI
Norad
FOREST-RISK
EXTRACTIVES: A
GEOSPATIAL ANALYSIS


498 673 km²
of mining, oil and gas consessions overlap
with intact forests


Companies are on the front lines driving
biodiversity and forests loss


Actionable data can improve financial institution engagements and prevent deforestation and key biodiversity

	Mining Projects	Mining Concessions	Oil and Gas Wells	Oil and Gas Concessions
Total Number of 'Active' Assets	15,304	1,246,819	405,044	19,250
Total Area of 'Active' Assets (Sq. Km)	48,078	6,648,694	1,272,483	13,210,003



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Opportunities for Responsible Investors

- **Push for Sustainability:**
  - Growing demand for responsible nickel in EV battery supply chain.
  - Support initiatives like IRMA and Responsible Critical Minerals Initiative (RCI/CCCMC) China.
  - Prioritize Free, Prior, and Informed Consent (FPIC) and the protection of Indigenous Peoples' rights.
  - Engagement with producer countries: influence decision makers
- **Global Standards and Regulation:**
  - EU Battery Regulation (Battery Passport)
  - Automakers demand higher environmental and social standards.
  - Time-bound commitments for deforestation-free nickel supply chains.
- **Collaborative Investor Initiatives:**
  - RFN-VBDO: First collaborative initiative for responsible nickel supply chains
  - Geoss

Role for Investors

- **Engagement for Change**: power to influence companies to adopt more responsible mining practices, by reducing environmental impact, such as deforestation, protect biodiversity and respecting Indigenous Peoples rights and their livelihood.
- **Actionable Steps:** Push for stronger supply chain transparency, traceability, accountability, third party audit, active monitoring of mining operations in sensitive areas (geospatial mapping). Further to **set-up no-go zone areas.**
- **Win-win for investors and the environment:** Risk reduction in investment portfolios of larger systemic risks by focusing on long-term resilience over short-term profits.

THANK YOU

jasmine@rainforest.no

The vision for zero emission mobility

LOUWMAN

Mobility for life

Louwman Group

- Founded in 1923
- Toyota distributor since 1964
- Suzuki distributor in both NL and SE
- National retail partner of BYD
- Retail network of 80 outlets in NL and CZ
- And beyond automotive:

  100% owner of Landport batteries
  100% owner of Welzorg
  100% owner of Bike Friend (Fietsvoordeelshop)

Sold over 2,7 Million cars
Became Royal Louwman Group in 2023

LOUWMAN

Mobility for life

Louwman is with Toyota for 60 years

Past: Import cars and selling to retailers

Present: Mobility provider

Toyota: Ever better mobility for all

Louwman: **Mobility for life**

LOUWMAN

Mobility for life

The Louwman vision for zero-emission mobility

Step 1: Eliminate unnecessary mobility: waste

- Hybrid working: less transportation required.
- Vans: do you need al the equipment all the time?

The Louwman vision for zero-emission mobility

Step 2: Find alternatives for cars and Vans

- Replace a car with a micromobility solution
- Replace a van with cargo bike

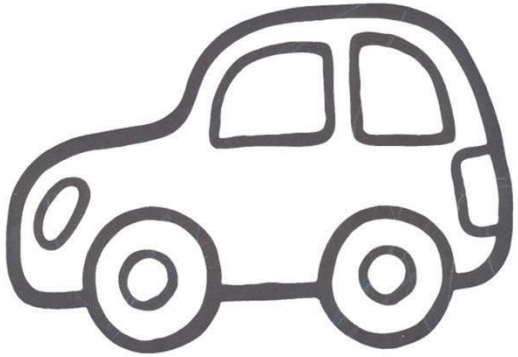
The Louwman vision for zero-emission mobility

Step 3: Electrify mobility…

… but how?

How to electrify mobility

- What’s the availability of raw materials?



- What’s the availability of energy?

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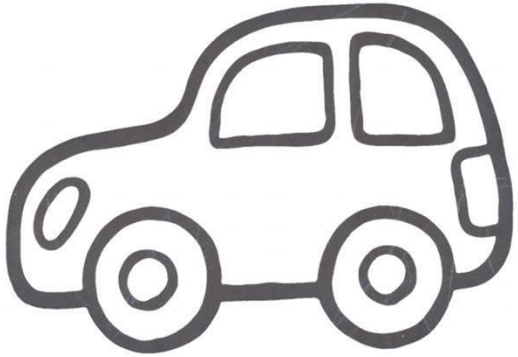
Mobility for life

Act responsibly with raw materials



- Think well to wheel, not tank to wheel.
- Batteries are not fossil free.
- Smaller batteries are better.
- If we produce 100% BEV cars, only 35% of the population can have one. (with a 60kWh battery)

Act responsibly with raw materials

1. Hybrid Electric car 1kWh battery drives 60-80% ZE
2. Battery Electric car 60-110kWh battery drives 100% ZE
3. Hydrogen Electric car 1,2kWh battery drives 100% ZE

LOUWMAN

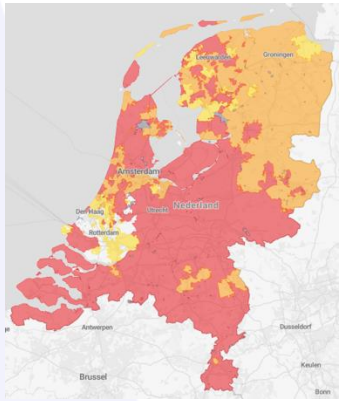
Mobility for life

Find the right balance in energy sources

What energy sources do we have available to ensure reliable mobility?

Solar and Wind Energy

- No sun and wind: no mobility
- Too much sun and wind: grid congestion



Import green energy from overseas.

- between 50-60% of green energy will be sourced overseas
- Import energy as hydrogen

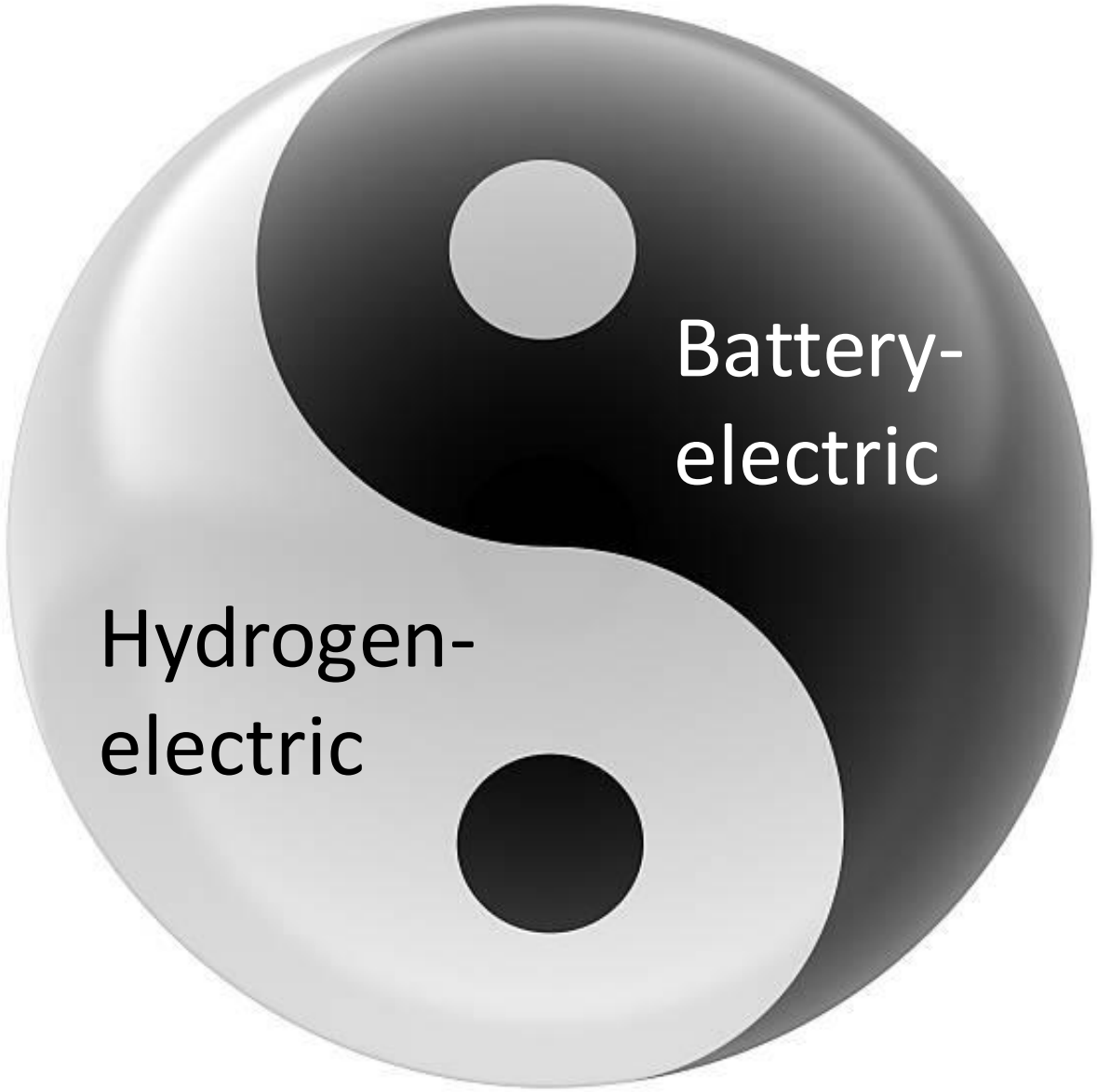
Alongside hybrid, two options of electric mobility

Battery Electric (BEV)

- Most efficient tank to wheel
- 60-110kWh battery packs
- Long time charging
- Electricity grid congestion
- Best option for city car

Hydrogen Electric (FCEV)

- More efficient well to wheel
- Just 1,2kWh small battery
- 3-5 minutes refueling
- Uses gas pipelines
- Best option long distance and multi-cycle cars + Trucks



LOUWMAN

Mobility for life

Product mix

Battery electric

Hydrogen electric

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Mobility is much more then cars and bikes

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Mobility for life

Louwman Energy

Let's introduce ourselves

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Mobility for life

50

days until the first zero-emission zones come into effect

LOUWMAN

Mobility for life

LOUWMAN

Mobility for life

More and more SME entrepreneurs are coming to Louwman Bedrijfswagens with the question whether this will be their last diesel. What will the future bring them?

There are thousands of SMEs with a fleet of 5 to 100 commercial vans.

Some of them want or need to electrify, but they don't know where to start.

That's why we started **Louwman Energy**.

LOUWMAN

Energy

Advice

Vehicles

Charging

Energy

Storage

LOUWMAN

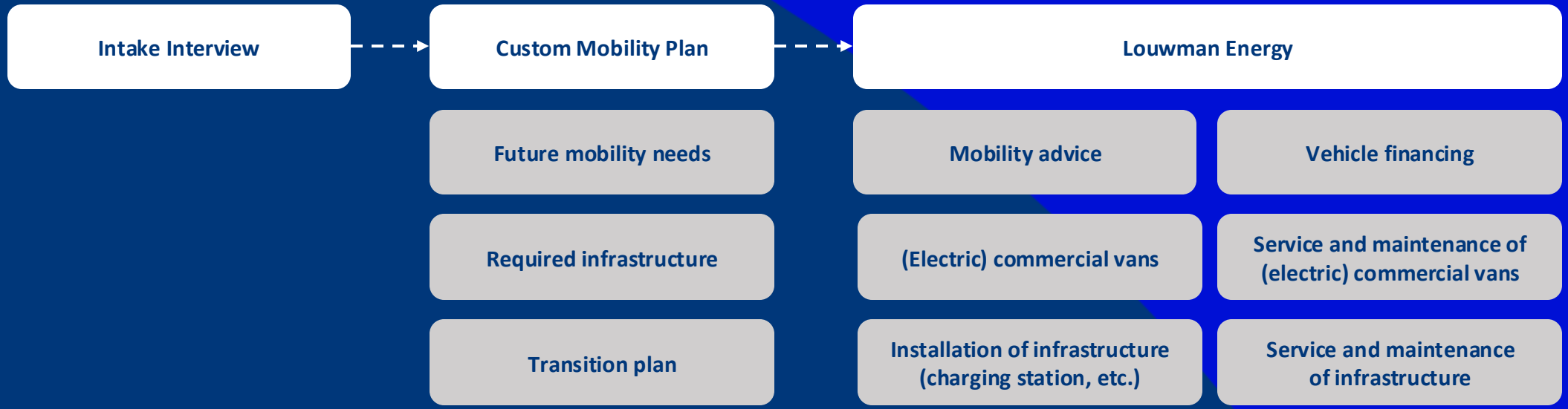
Mobility for life

Louwman Energy

One-stop-shop

Mobility for life

We are going to help you. How are you going to set up your new mobility and what do you need for that?
With a custom mobility plan, you can get started yourself, but of course we can also help you.



Sounds good?

This is how we continue

- In a conversation, we map out the future mobility needs
- With an on-site inspection, we map out the current location facilities
- We make a custom mobility plan so that you know exactly what you need to get started with.

€ 6.995

Together, we are redefining the future of mobility.

With battery-electric and hydrogen-electric technology leading the charge,
we are not just imagining a zero-emission world—we are building it.
Step by step, drive by drive.

Join us in making this mission a reality.

LOUWMAN

Mobility for life

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