

IRENA INNOVATION WEEK **2025**

The way forward: Structural change and innovation

13 June 2025 | 13:30-15:30

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Reporting back



Innovation in infrastructure for tripling renewables

James Walker

Team-lead Renewable Gases
IRENA



Renewable-based solutions for sustainable development

Arina Anisie

Analyst Renewable Energy Innovation
IRENA

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Scene Setting



Diala Hawila

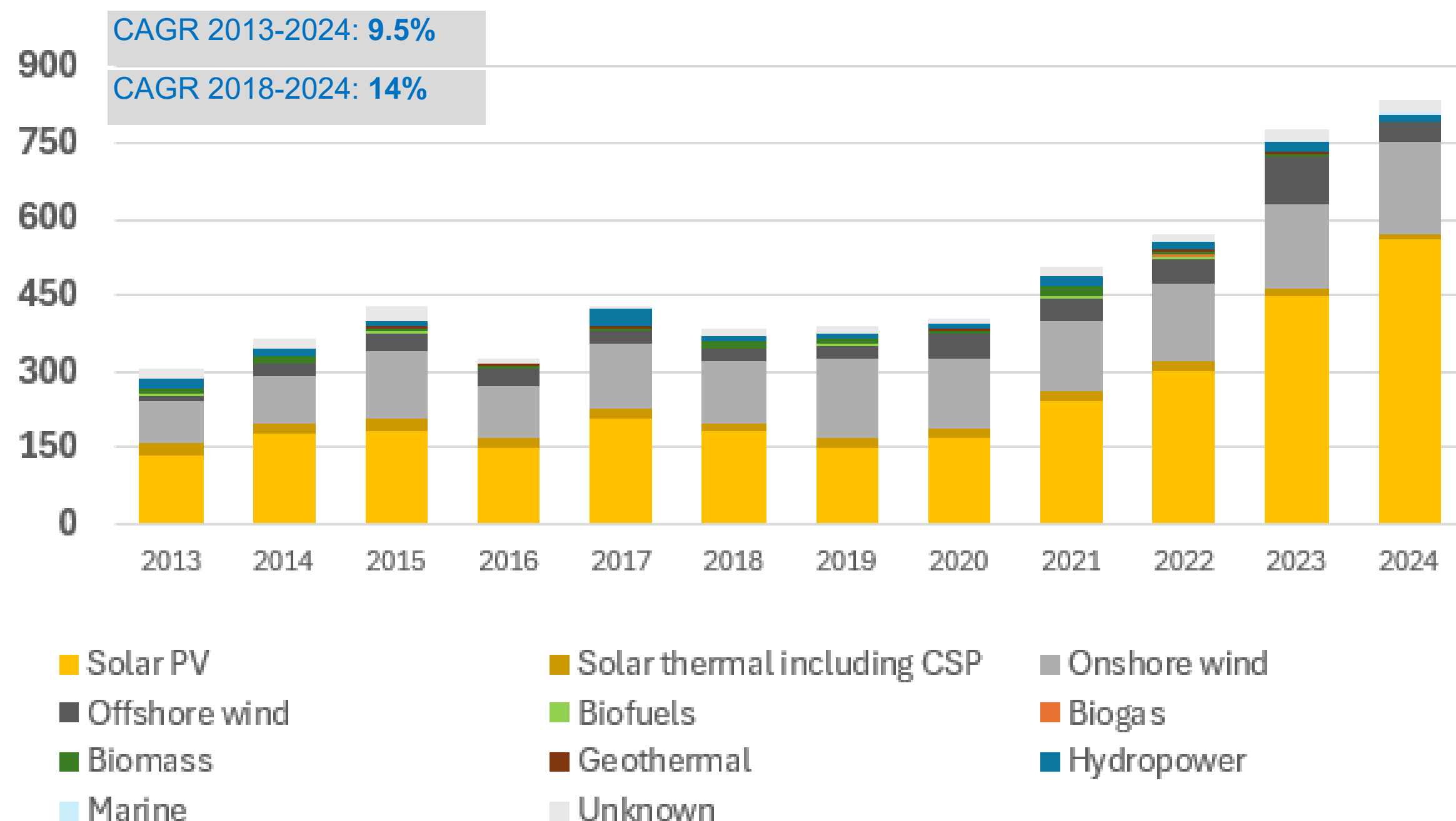
Programme Officer Policy Advice
IRENA

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Global investments in renewables continue to grow

Globally annual investments in renewables have shown continued growth, increasing 14% per year in 2018-2024

Global annual financial investment in RE, by technology, 2013-2024, USD \$billion, deflated

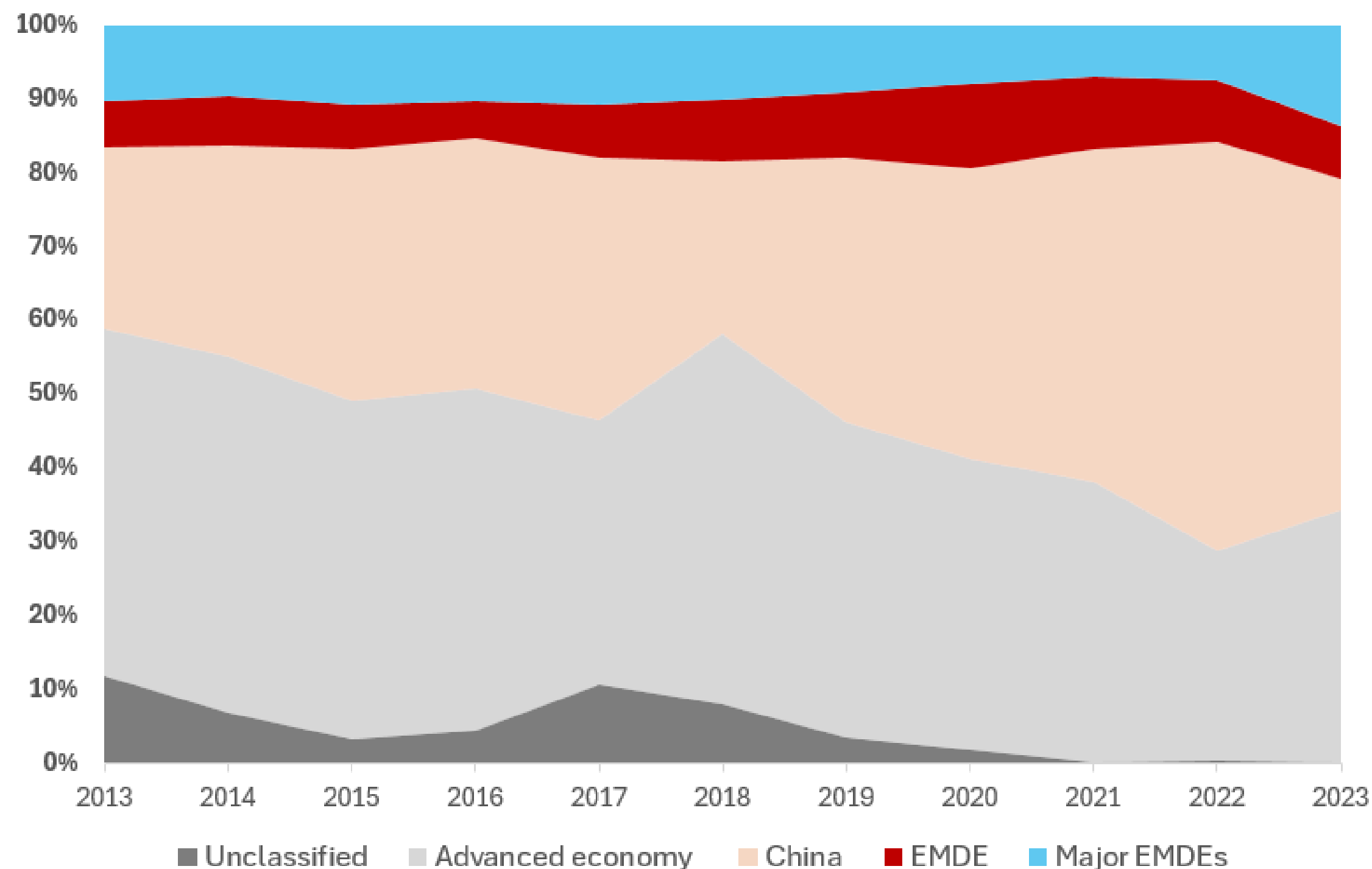


- Annual investment in renewable energy has grown steadily since 2018, despite global disruptions (pandemic, inflation, and geopolitical tensions)
- Investments estimated at **USD 834 billion in 2024**
- **Solar PV consistently accounts for the largest share of investment**

But they remain concentrated in some countries and regions

Investment flows concentrated heavily toward advanced economies and China, leaving EMDEs behind

Share of global renewable energy investment by economic region, 2013-2023



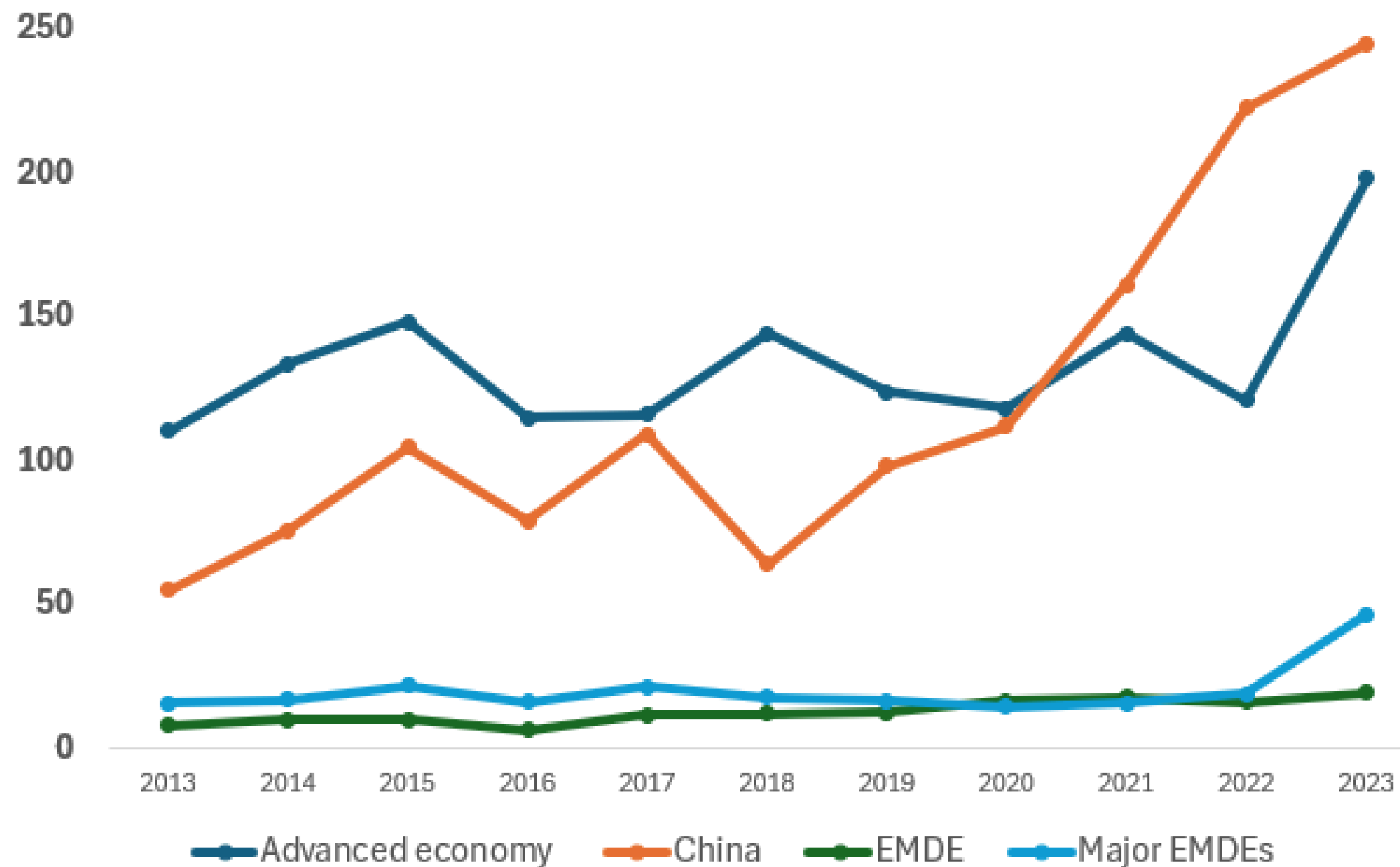
- **Half of the world's population** – living in more than 150 economies outside Brazil, China and India, and representing one-third of global GDP – **receive just 10% of the world's energy transition investments**
- **Africa has received less than 1% of global energy transition financing in recent years**, highlighting the stark geographic disparity in capital flows

Major EMDEs include India, Brazil, Mexico, Türkiye, Indonesia, Saudi Arabia, Argentina and South Africa

Investments per capita show the gaps are widening

These disparities in investments have been increasing

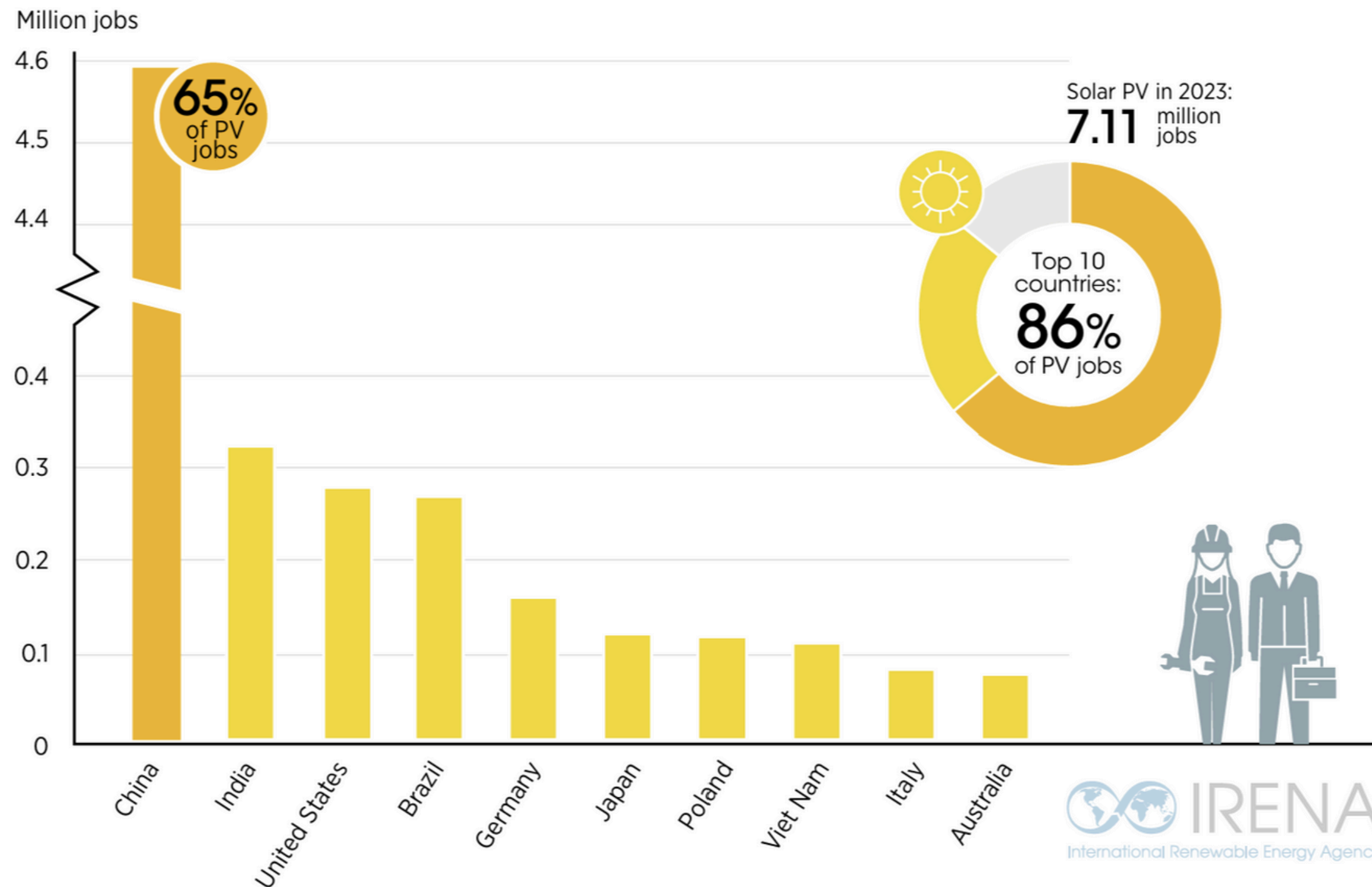
Renewable Energy Investment per Capita (USD) over 2013-2023



- These disparities in investments have been increasing
- Advanced economies attracted **18 times more investment per capita over 2020-2023** than the 154 EMDEs (excl. China), up from **14 times** between 2016-2019

Investments in supply chains - crucial for minimizing reliance on imports and maximizing socio-economic benefits - are also increasingly concentrated

Solar photovoltaic employment in 2023: Top ten countries



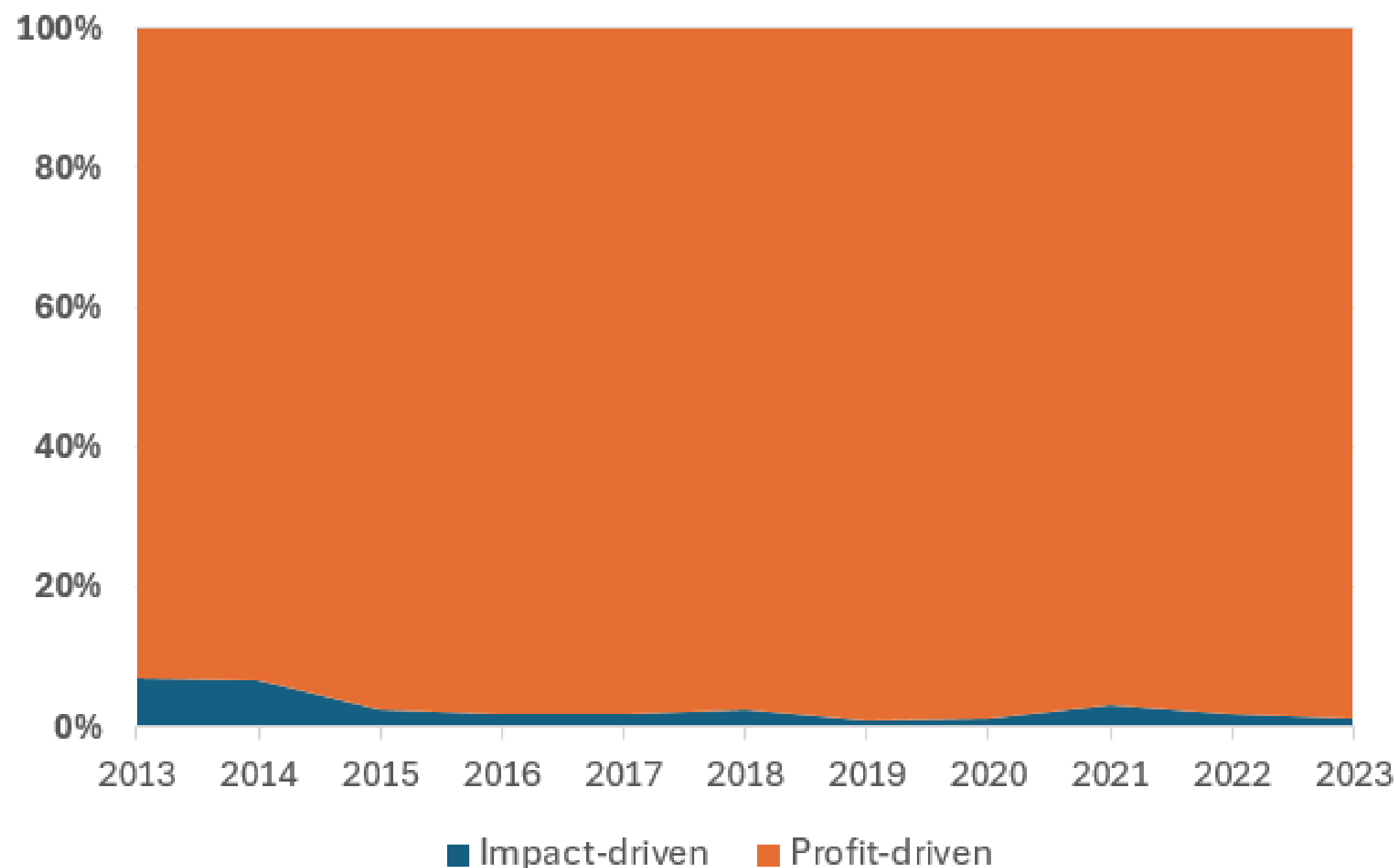
- **China accounted for 88% of global investments in the solar PV supply chain between 2018 and 2023**
- **The United States and Europe accounted for 2% each**
- **The remainder was shared between Southeast Asian economies (4%), India (1%), while the rest of the world accounted for just 3%**

Source: IRENA and ILO, 2024

Profit-driven investments do not flow to high-risk environments

Profit-driven capital has consistently dominated renewable energy finance, with impact capital accounted for a marginal portion

Share of Impact-driven and Profit-driven Capital in Renewable Energy Investment, 2013–2023

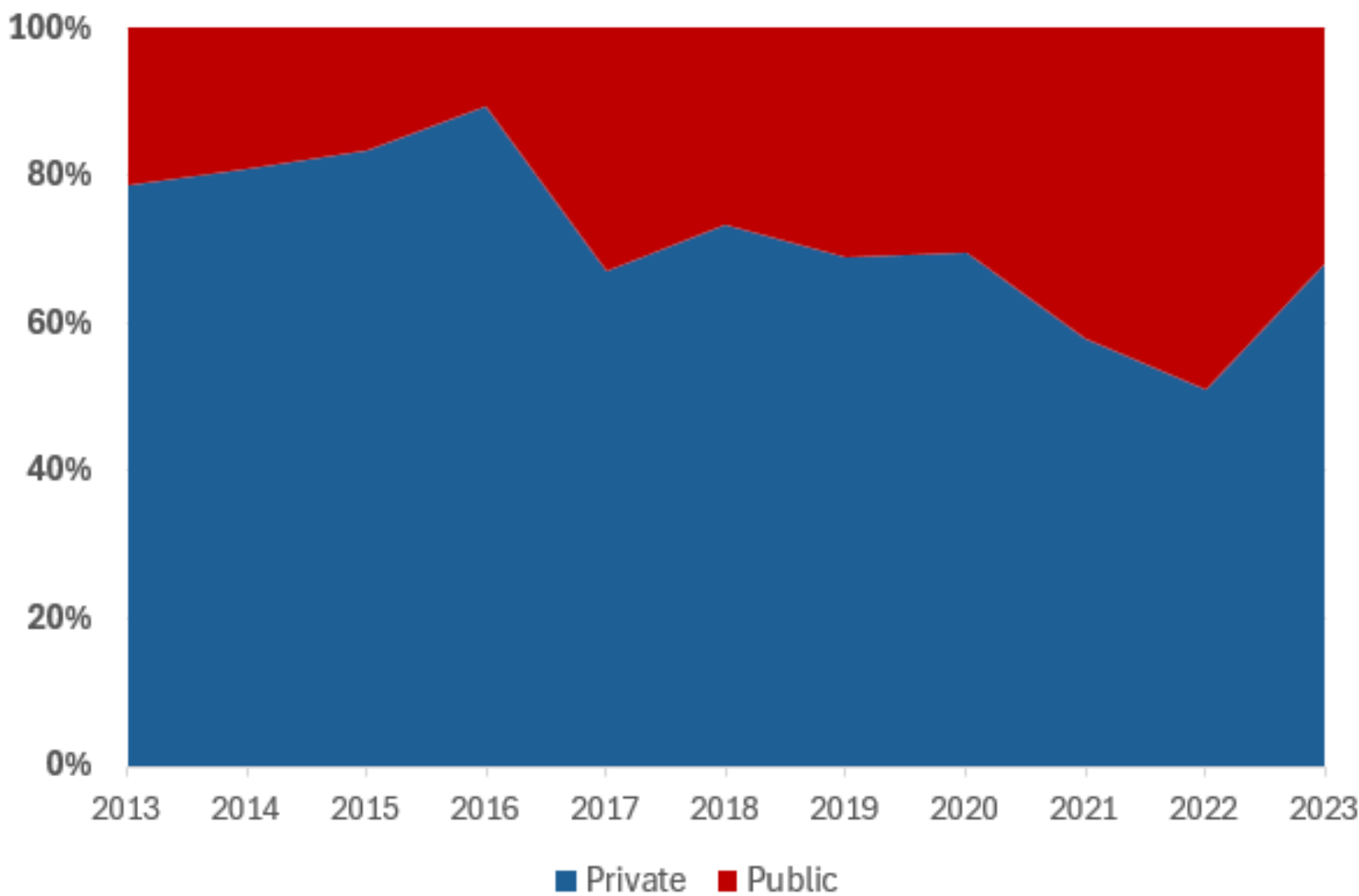


- We have been advocating for the use of public resources to leverage private investment through mechanisms like risk mitigation
- Since **private capital** is driven by risk-adjusted financial returns, it **cannot adequately finance transformative investment**, particularly when social risks and externalities are not appropriately priced.

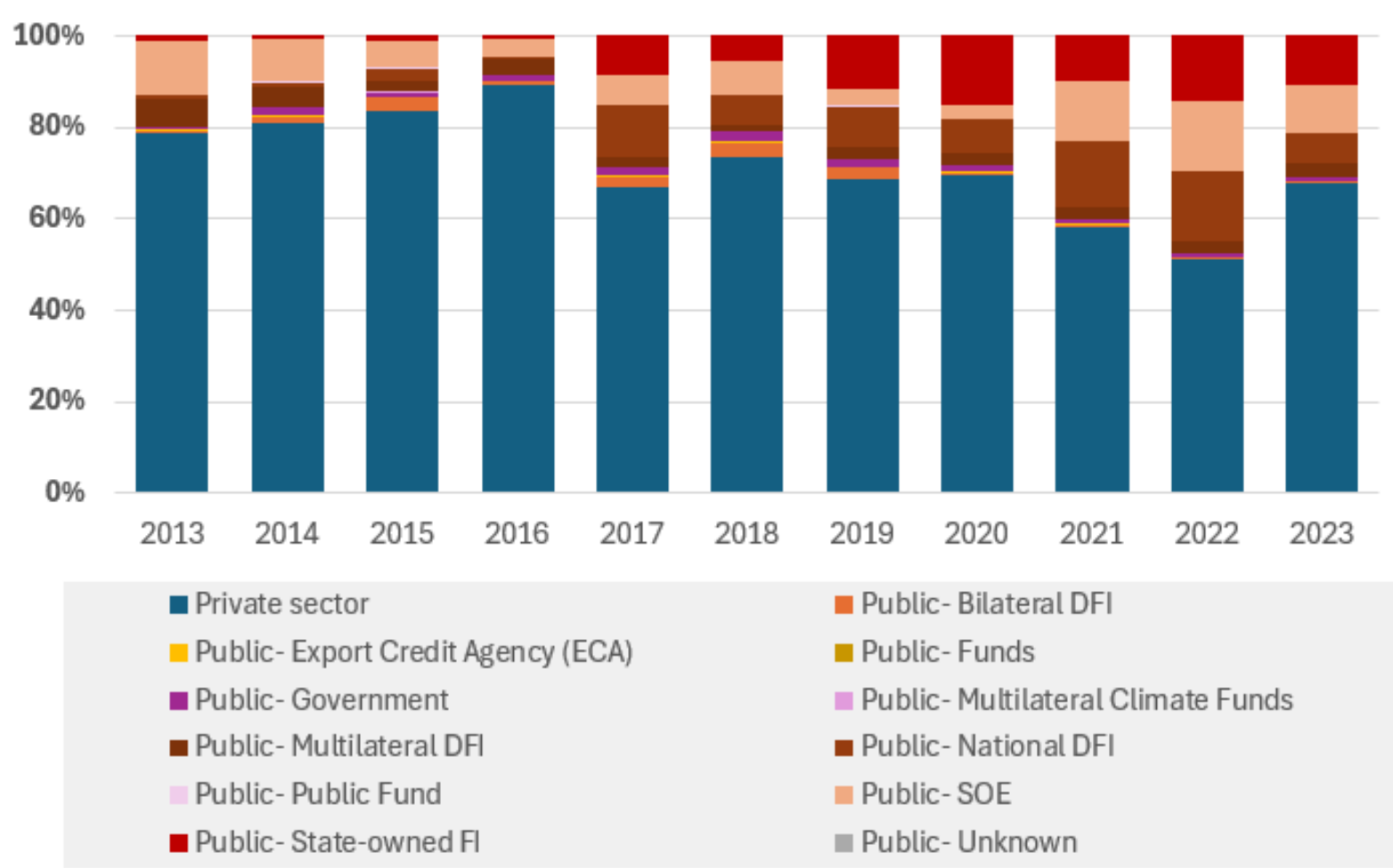
Public capital is increasingly behaving as risk averse private capital, with aligned cost of capital and requirements for risk mitigation

From 2017, public actors have increasingly participated in profit-driven capital flows, signaling deeper market-oriented participation

Sources of profit-driven capital in renewable energy investment



Sources of profit-driven capital in renewable energy investment



Structural change needed to unlock potential



- Parallel narrative to how renewables should be financed
- Analyse renewable energy finance as part of a whole system (finance and fiscal policy, industrial policy, skills and education policy)
- Include investments in supply chains in the story
- Keep energy at the center of socioeconomic development

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Panel discussion

Moderator



Felicia Jackson

Shaken Not Burned



Fadhel Kaboub

Denison University &
Global Institute for
Sustainable Prosperity



Yacob Mulugetta

University College
London



Beatrice Coda

European
Commission DG
RTD



Pedro Ivo Ferraz da Silva

Ministry of Foreign
Affairs of Brazil



Zeeshan Ashfaq

Renewables First
Pakistan

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Audience Q&A

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Just Energy Transitions: Building Together for the Generations to Come



Ana Ramrez Tovar

IRENA Youth Delegation &
Sustainable Director
RIOT Green Hydrogen and BLUMERGY

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Energy With Roots: Powering Indigenous Futures

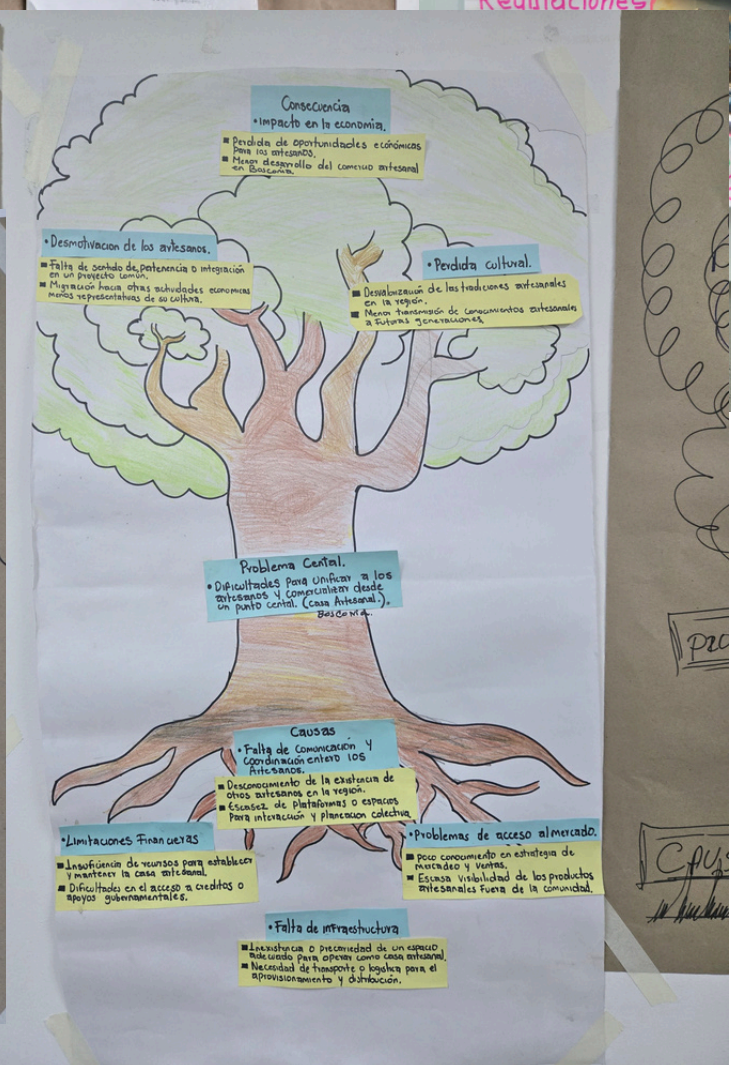
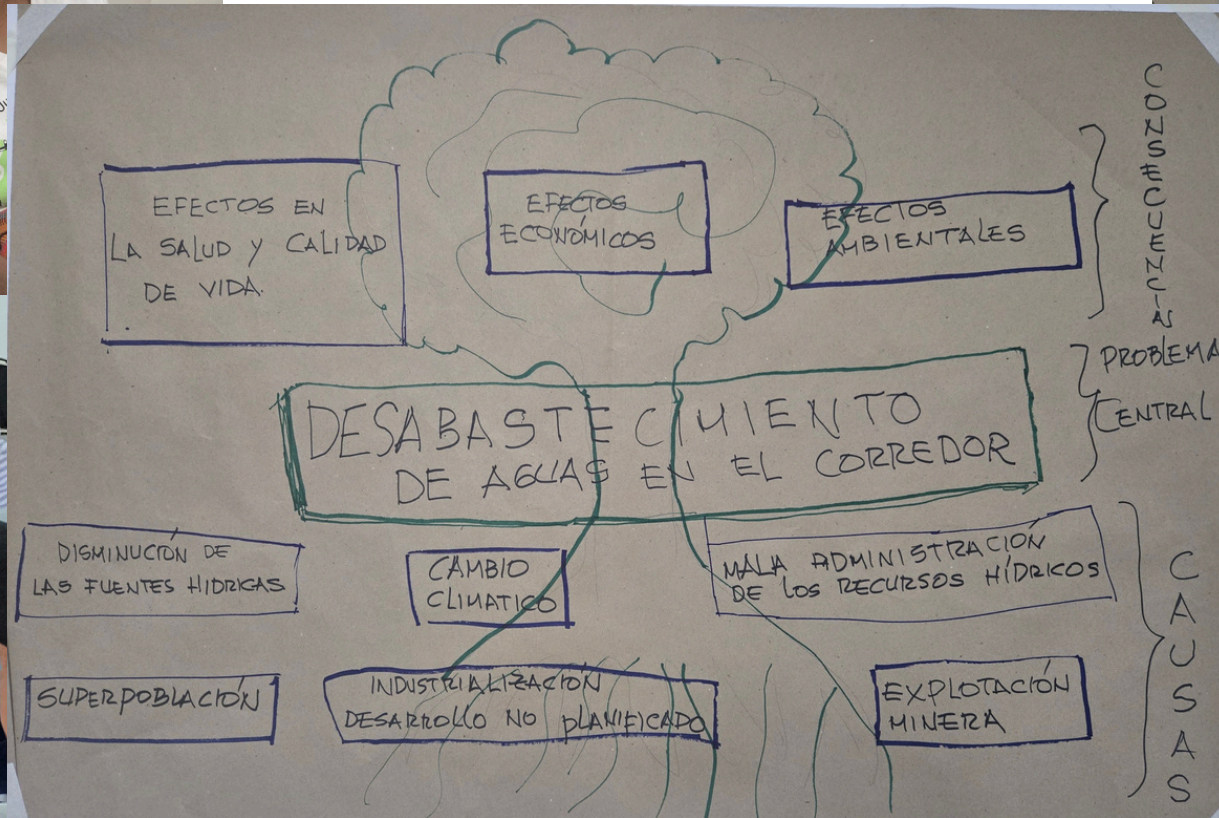


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From Kitchens to Crops: Energy That Nourishes

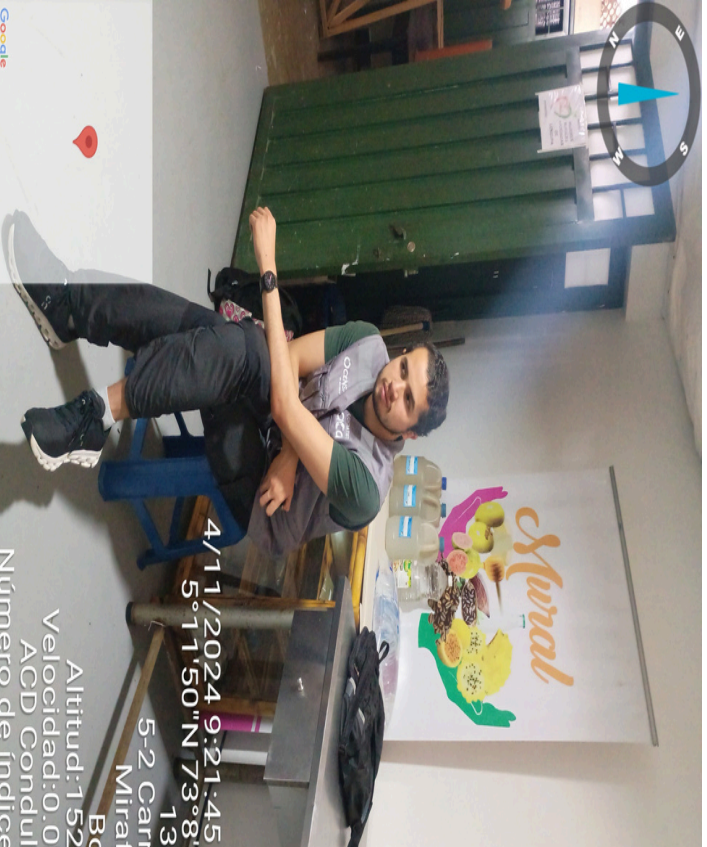
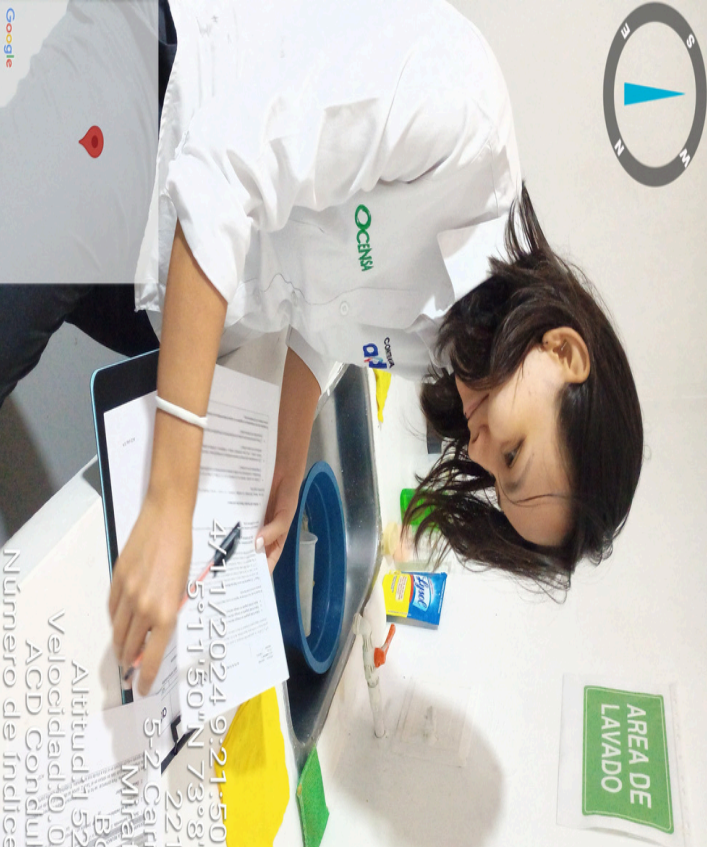


Voices from the Mine: Transition With Justice



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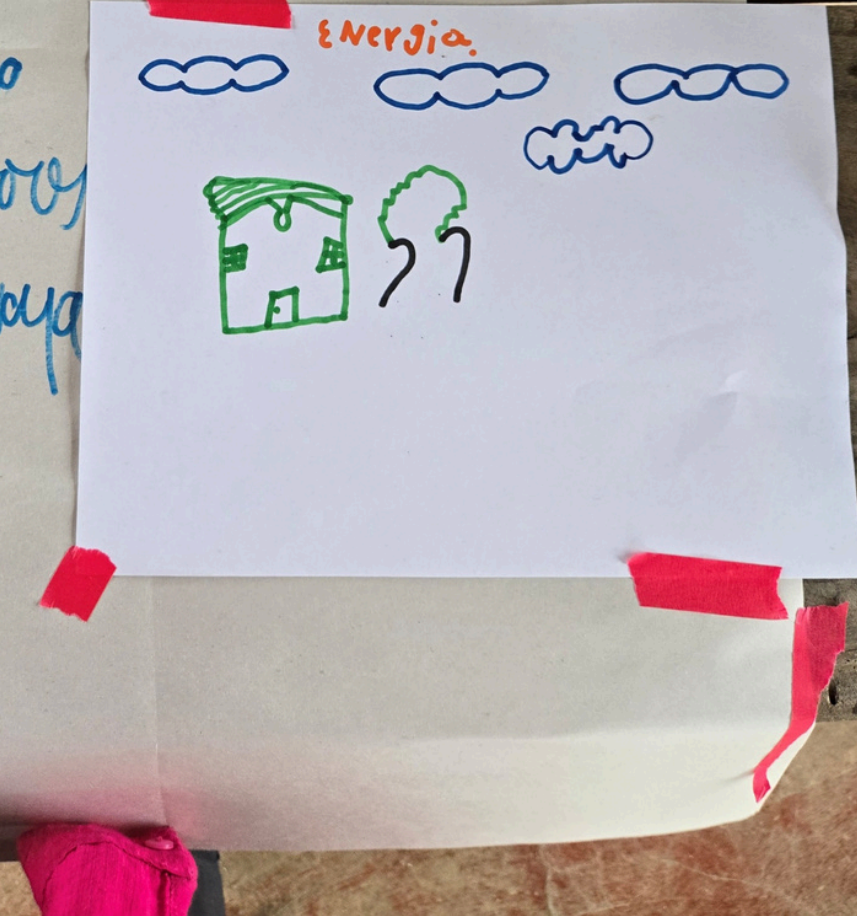
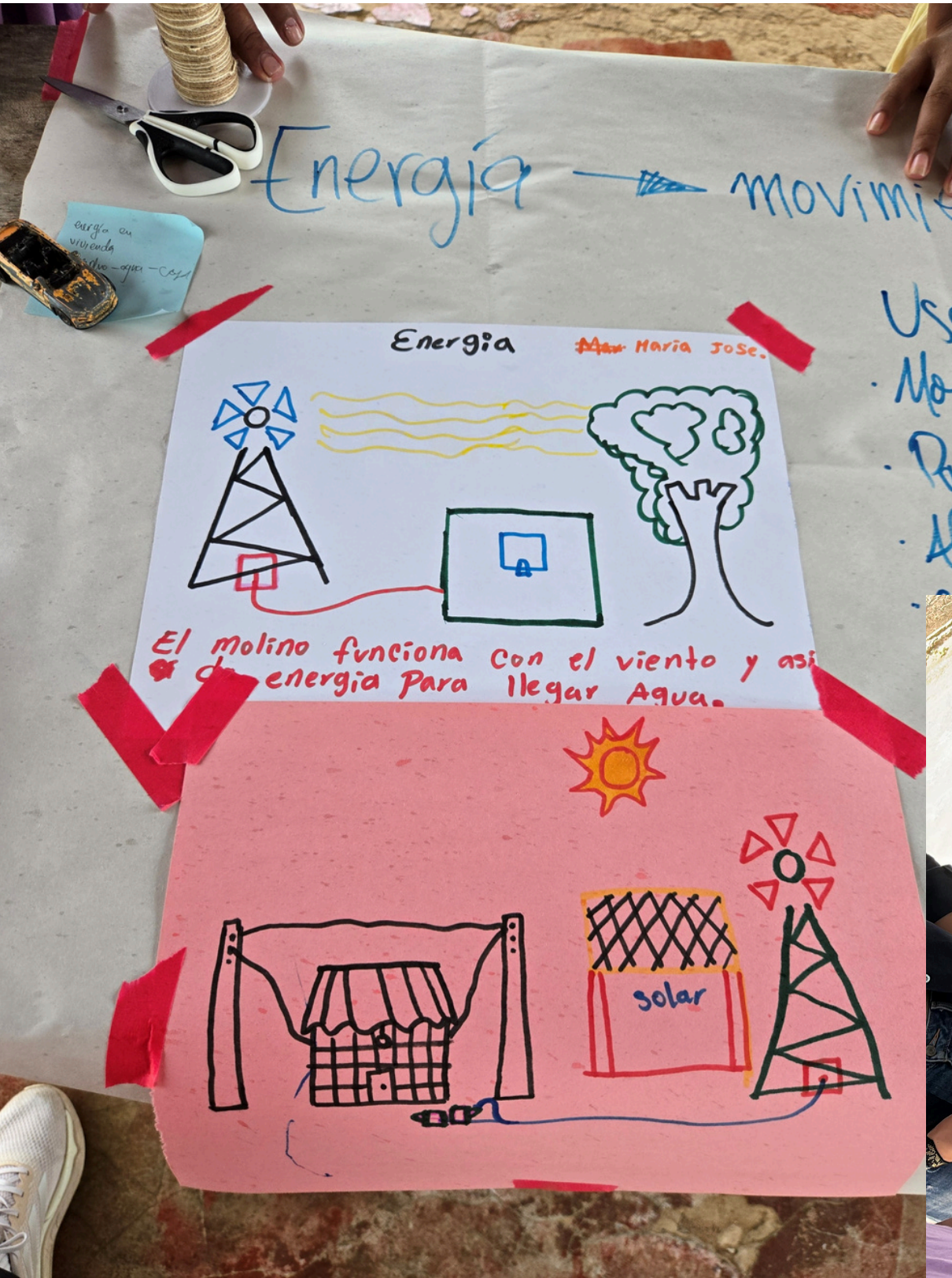
Co-Designing Solutions: Energy from the Ground Up



Planes de Vida Energéticos: Building Futures Together



Ideas in Motion: Drafting the Energy Future



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Thank you!

Ana María Ramírez Tovar

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Innovation Week Closing Remarks



Gauri Singh

Deputy Director
IRENA

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Renewables and Digitalisation for a Sustainable Energy Future

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