

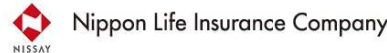
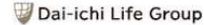


United Nations-convened Net-Zero Asset Owner Alliance

# Net-Zero Asset Owner Alliance Financing Transition – All Members Call

UN-CONVENED **NET-ZERO**  
ASSET OWNER ALLIANCE

November 24<sup>th</sup> 2021



# AGENDA

- I. Vivid Economics presentation – 17 Financing Roadmaps**
- II. Responsible Retirement – GFANZ WS2**
- III. Track Updates and next steps**
  1. Financing Transition Target Setting/Reporting
    - Climate Solution Investment Reporting Principles Booklet – now final
  2. Vehicles/Instrument
    - IETA - follow-up Work Shop planned 2<sup>nd</sup> of December
    - Official Collaboration with Convergence
    - Blended Finance Call to Action to Asset Managers
    - Position Paper “Scaling Blended Finance” – release 29.11.2021
  - Next Steps – Workplan proposal for 2022

Appendix

# VIVID ECONOMICS – FINANCING ROADMAPS

## Cor Marijs, Vivid Economics

**32 trillion**  
of investment is required  
over the next decade



Race to Zero Financing Roadmaps – Vivid Economics  
<https://www.gfanzero.com/netzerofinancing>

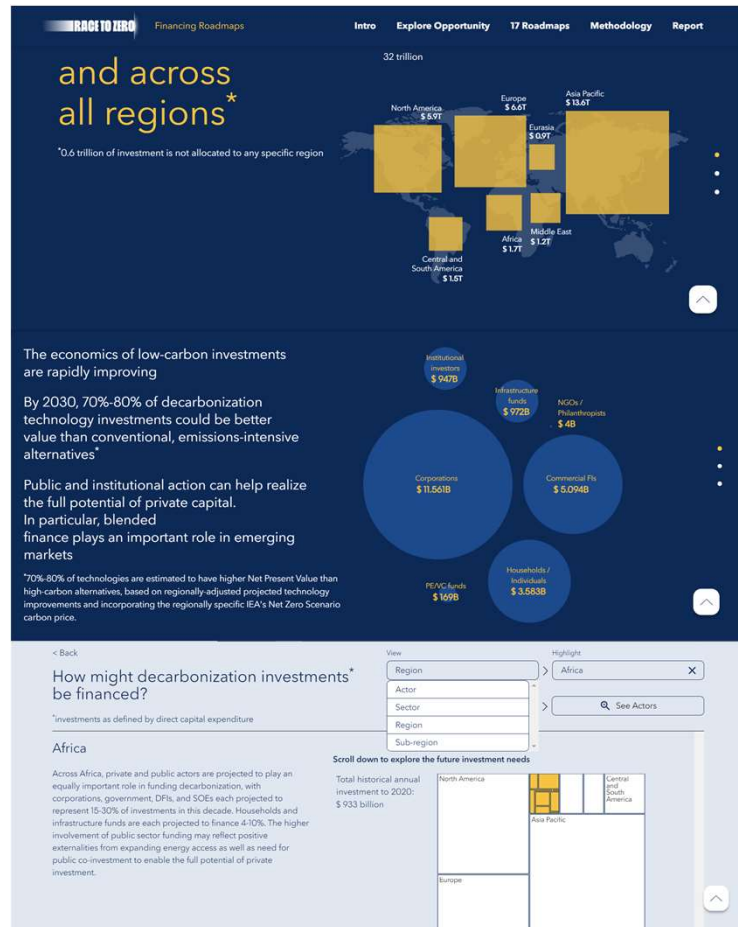


Sort by investment period:

2021-2025 DOWNLOAD DATA

Opportunity	Period	Investment per year
1 - Wind in Europe	2016-2020	\$ 33.8B
	<b>2021-2025</b>	<b>\$ 103.1B</b>
	2026-2030	\$ 139.3B
	2031-2040	\$ 122.5B
Total		\$ 3066.8B
2 - Wind in North America	2016-2020	\$ 24.6B
	<b>2021-2025</b>	<b>\$ 70B</b>
	2026-2030	\$ 92.9B
	2031-2040	\$ 80.4B
Total		\$ 2034.5B
3 - Green steel in Asia Pacific	2016-2020	\$ 9.6B
	<b>2021-2025</b>	<b>\$ 36.3B</b>
	2026-2030	\$ 57B
	2031-2040	\$ 79B
Total		\$ 2142.7B
4 - Electricity storage globally	2016-2020	\$ 4B
	<b>2021-2025</b>	<b>\$ 34B</b>
	2026-2030	\$ 70.5B
	2031-2040	\$ 134.4B
Total		\$ 3242.2B
5 - Off-grid power in Africa	2016-2020	\$ 7.5B
	<b>2021-2025</b>	<b>\$ 28.6B</b>
	2026-2030	\$ 46.4B
	2031-2040	\$ 61.6B
Total		\$ 1511.4B
6 - Biomethane globally	2016-2020	\$ 4.1B
	<b>2021-2025</b>	<b>\$ 21.4B</b>
	2026-2030	\$ 33.8B
	2031-2040	\$ 40.3B
Total		\$ 1068.7B
7 - Electricity networks in Central and South America	2016-2020	\$ 11.2B
	<b>2021-2025</b>	<b>\$ 41.2B</b>
	2026-2030	\$ 61.2B
	2031-2040	\$ 71.2B
Total		\$ 1842.2B
8 - Solar PV in Africa	2016-2020	\$ 10.8B
	<b>2021-2025</b>	<b>\$ 38.2B</b>
	2026-2030	\$ 58.2B
	2031-2040	\$ 68.2B
Total		\$ 1692.2B
9 - Forest, mangrove and peatland restoration in Central and South America	2016-2020	\$ 1.2B
	<b>2021-2025</b>	<b>\$ 4.8B</b>
	2026-2030	\$ 7.2B
	2031-2040	\$ 8.8B
Total		\$ 212.2B

# THE NZFRS PRESENT IN DEPTH ANALYSIS OF WHERE FINANCIAL ACTORS CAN ALLOCATE CAPITAL, GIVEN THE RISK-RETURN PROFILES OF TECHNOLOGIES



**Investment needs** under the IEA's 1.5C scenario allocated to financing actors and instruments

**900+ investment opportunities** across sectors, regions, and sub-regions that can be interactively explored

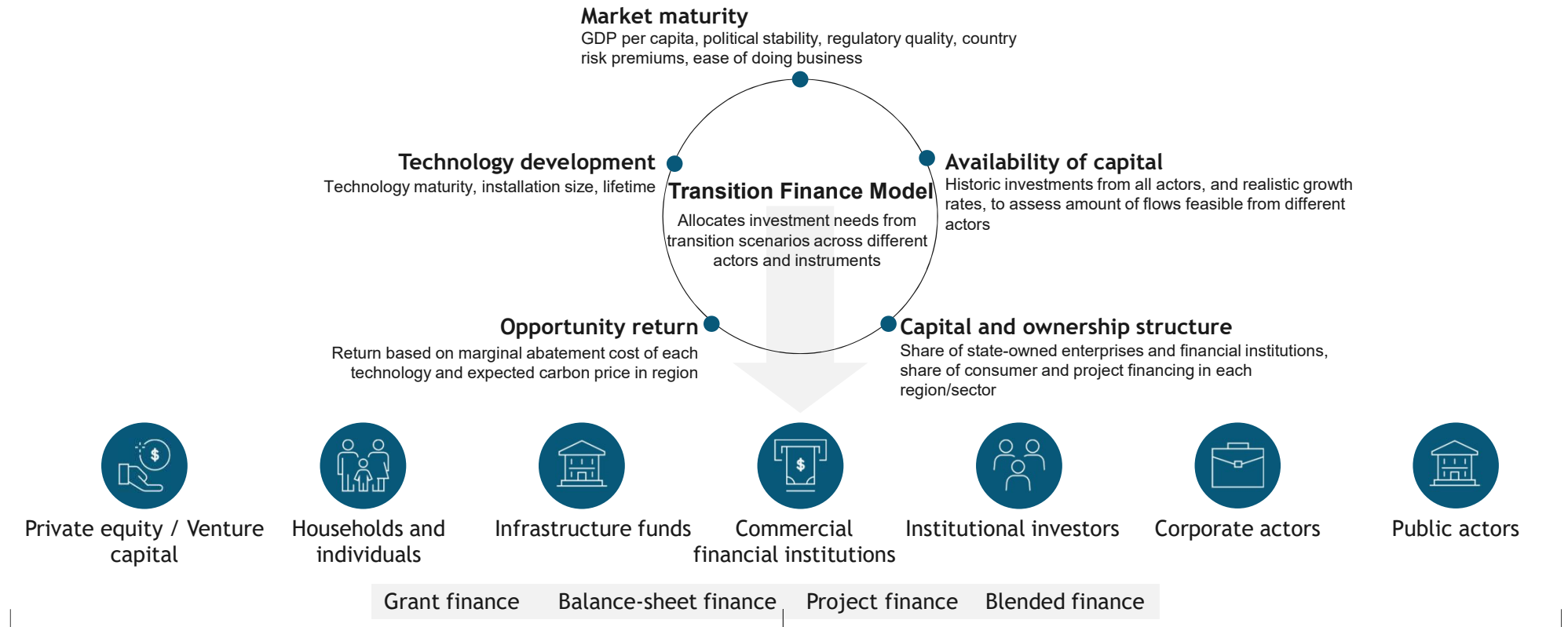
**17 granular roadmaps** providing insight into prioritized technology-region opportunities and analysis on financing instruments and required policy support

Internal

# OUR TRANSITION FINANCE MODEL CAN HELP INVESTORS TARGET TRANSITION INVESTMENT OPPORTUNITIES

The TFM is in development and combines top-down Net Zero scenarios with bottom-up market analysis

The Transition Finance Model can help clients understand which low carbon investment opportunities are most relevant to them, and help benchmark portfolios to understand whether they adequately contribute to meeting the net zero investment challenge



Disaggregated to region, sector, and technology level, in 5 or 10 year intervals up to 2050

# ACCESS TO MORE DETAILED MODEL PRODUCTS WILL BE AVAILABLE FROM 2022

	Immediately	Q1 2022	Q2 2022
Asset	Investment allocation at region-technology level	Risk-return profiles at granular level	Expanded model interaction - flexibility in transition scenarios and investor profiling
Insights	<p><i>What investment opportunities are out there under an ambitious 1.5C scenario?</i></p> <p><i>What region-technology opportunities are most appropriate to us, as a [type of financing actor]?</i></p> <p><i>What opportunities could we already shift our attention to, and what trends could challenge us?</i></p>	<p><i>What regions and countries are most promising, given their market maturity?</i></p> <p><i>What are the risk return profiles of different sectors in different regions?</i></p> <p><i>What indicators can be used to measure market maturity?</i></p>	<p><i>How do changes in transition scenario affect investment opportunities?</i></p> <p><i>What opportunities are most relevant to us, considering our specific profile?</i></p> <p><i>What actions can we ask from the public sector to unlock relevant opportunities and facilitate an attractive transition?</i></p>
Access	One-off purchase	One-off purchase	Subscription

# THE CASE FOR RESPONSIBLE RETIREMENT

UPDATE ON THE RESPONSIBLE RETIREMENT PROJECT, PART OF WS2 OF GFANZ  
SIMPLE PRASAD (ALLIANZ)



# RESPONSIBLE RETIREMENT – GFANZ, WS2 – PROJECT STRUCTURE

- 1 Defining responsible retirement
- 2 Roadblocks to scaling responsible retirement
- 3 Role of financial sector in unlocking responsible retirement

# 1 DEFINING RESPONSIBLE RETIREMENT

- Responsible retirement should be aligned with 1.5C pathway
- In addition, retirement solutions must also :
  - (1) support a just transition for workers and local communities,
  - (2) ensure continuity of service (e.g. electricity) to customers, and
  - (3) be financially viable for asset owners and financiers, *if they are to scale*
- Responsible retirement can include asset decommissioning, remediation, redevelopment, or retrofitting
- Divestment may not necessarily result in reduced emissions – instead, may result in emissions transfer or brown-spinning






## 2 ROADBLOCKS TO SCALING RESPONSIBLE RETIREMENT

- Responsible retirement has gained limited traction, varying by sector
- Frictions exists across stakeholders and vary by retirement type, sector and geography :
  - Local communities : significant economic & social impacts incl. loss of livelihoods, need for re-skilling etc.
  - Asset operators : loss of future cash flows, capital cost of development of low-carbon technologies
  - Financiers : investor perception and self-imposed restrictions
  - Governments / regulators : policy measures, existing political support/subsidies for legacy sectors
  - NGOs / activist communities : conflicting concerns around health, environment and community impacts

### 3 ROLE OF FINANCIAL SECTOR IN UNLOCKING RESPONSIBLE RETIREMENT

- A number of financing mechanisms are currently being used, primarily to redevelop coal to renewables :
  1. Private sector-led : securitization (portfolio or ratepayer-backed), sustainability-linked loans, asset refinancing loan and green bonds
  2. Public sector-led : asset purchase, carbon pricing and grants
- Refining and scaling private sector financing mechanisms can set early examples of responsible retirement
- Blended financing with public sector action can help unlock necessary capital flows







# PRIVATE SECTOR-LED SOLUTIONS

Type	Mechanism	Description	Current applications	Case examples
Securitization	Ratepayer-backed securitization	Asset owner directly raises low-cost debt to retire legacy energy assets, replacing them with low-carbon assets, financed separately. Lower-cost energy from new assets allows for a ratepayer surcharge to repay debt and pass savings on to ratepayers	Coal power	 Consumers Energy securitized the unrecovered debt balance through consumer surcharge on a 550 MW coal plant with plans to retire in 2023
	Portfolio-backed securitization	Asset owner directly raises low-cost debt to retire a legacy asset and develop new assets. Expected revenues from a portfolio of renewables PPAs are securitized to raise debt	Coal power	 XCEL Energy securitized assets for a "steel for fuel" exchange with capital reinvested in wind power
Loan	Sustainability-linked loan (e.g., emissions loan)	Asset owner borrows capital with loan margins linked to asset performance (either emissions reductions or new renewables capacity)	Coal power, hard-to-abate sectors, renewables redevelopment	 Engie collaborated with IDB on financing renewable development with an interest rate concession tied to the decommissioning of a coal plant
	Single-asset refinance	Asset owner borrows capital to pay off all remaining debt and fund redeveloped facility, swapping PPA mandate from old facility to new one	Coal power, renewables redevelopment	 Vistra funded early retirement of 6.8 GW of coal capacity at 7 plants by 2027 or sooner
Bond	Green bond	Asset owner raises 'use of proceeds' bonds to finance specific clean energy projects, with bonds abiding by voluntary frameworks and third party verification to confirm credentials	Hard-to-abate sectors, renewables redevelopment	 Enel has issued three green bonds for a total of €3.5B including funds towards renewable power development

Source: Rocky Mountain Institute, Greentech Media, Bloomberg, Institute for Energy Economics and Financial Analysis, Michigan Public Service Commission, IDB Invest, SPGlobal, Enel, expert Interviews

Source: GFANZ McKinsey project, Sep-Oct, 2021

# PUBLIC SECTOR-LED SOLUTIONS

Type	Mechanism	Description	Current applications	Case examples
<b>Asset purchase</b>	<b>Carbon reduction fund</b>	Third party purchases and manages high-carbon assets on an accelerated retirement timeline, allowing original asset owner to reposition towards low-carbon opportunities	Coal power & mining, oil & gas	 An ADB-led coalition plans to purchase and accelerate retirement of coal plants; previous owners will use sale proceeds to develop renewables
<b>Carbon pricing</b>	<b>Carbon contract for differences</b>	In regulatory environments with price-volatile carbon markets, financiers guarantee a set carbon price to protect developers creating low-carbon technologies from carbon price volatility	Oil & gas, hard-to-abate industries	 Port of Rotterdam Authority is supporting a contract for difference project, Porthos, where it will subsidize to €80/ton of CO <sub>2</sub> for a North Sea CCS project to store captured emissions
	<b>Carbon bonus<sup>2</sup></b>	The inverse of a carbon tax, third party (usually government) offers payments to emitters for verified emissions abatements compared to baseline, through cash, debt forgiveness, or concessional interest rates	All sectors	 A consortium with LafargeHolcim, Total, Oxy Low Carbon Ventures, and Svante cite tax credit 45(Q) as enabling development of large-scale CCS for a cement plant
<b>Energy pricing</b>	<b>Renewable contract for differences</b>	In wholesale power markets, third party guarantees a set energy price for renewable energy developers, insulating developers from energy price volatility and enabling faster renewable deployment	Renewables redevelopment	 Low Carbon Contracts Company (publicly-owned by the UK government) provides renewables developers with a contract for a long-term set electricity price
<b>Grant</b>	<b>Reverse auction</b>	Financier establishes a fund to support a reverse auction, and asset owners submit auction bids with cost to phase out assets	Coal power & mining	 The German federal network agency has run 3 auctions and purchased 8.4 GW of coal capacity for immediate retirement
	<b>R&amp;D-specific funding</b>	Entity provides grant funding specific to researching and developing low-carbon technologies in industry	All sectors	 US Department of Energy provided grant funding to support research for a carbon capture and storage facility attached to a Lafarge Holcim cement plant

1. Currently primarily deployed by public financiers, with some interest from private financiers

2. Voluntary carbon markets, a type of carbon bonus, have been applied by private sector entities. However this would require an emissions ceiling in this context to align with a 1.5°C pathway

Source: Bloomberg, Climate Strategies, Port of Rotterdam Authority, Rocky Mountain Institute, Internal Revenue Service, Low Carbon Contracts Company, Bundesnetzagentur, Department of Energy, expert Interviews

## CONCLUSION & NEXT STEPS

- This work represents an early chapter in making responsible retirement a credible and scaled form of sustainable investment.
- A collaborative engagement process with a broad range of stakeholders is needed to define a clear, system-wide blueprint for action.
- Plan is to reconnect on this topic in the coming weeks to begin the engagement process within GFANZ

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Appendix



# CLIMATE SOLUTION INVESTMENT REPORTING – GUIDANCE BOOKLET



## Climate Solution Investment Reporting Guidance Booklet

UN-CONVENED **NET-ZERO**  
ASSET OWNER ALLIANCE

as of 24<sup>th</sup> of November 2021

Please find the booklet in the invite, email or in the extranet

# IETA – 2<sup>ND</sup> WORKSHOP 2<sup>ND</sup> OF DECEMBER

## IETA / NZAOA ROUNDTABLE ON MARKETS FOR NET ZERO

*Carbon as an Asset Class – Investor & Industry Perspectives*

**Date:** Thursday, December 2

**Time:** 3:30-5:00PM CEST / 2:30-14:00 London / 09:30-1100am New York

You are invited to this 2nd Roundtable, co-hosted by the Net Zero Asset Owners Alliance (NZAOA) and the International Emissions Trading Association (IETA), on 2 December at 15.30-17.00 CET. The closed-door virtual discussion will open with key take-aways for industry and investors from COP26 Glasgow negotiations, followed by the insights on carbon as an asset class. This will feed-in to interactive roundtable discussion and industry/investor insights on the role and relevance of carbon as an asset class in reaching net zero. The personal invitation is non-transferable.

### AGENDA OUTLINE

- Welcome & Roundtable Objectives
- Key Take-Aways from COP26
- Carbon as an Asset Class (Latest Insights on Allowances and Credits)
- Investor and Industry Perspectives: relevance of carbon allowances and voluntary carbon credits in reaching net zero?
- Moderated Roundtable and Open discussion

RSVP or for further info contact  
Eliya Devay ([eliya.devay@un.org](mailto:eliya.devay@un.org))

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# ROUNDTABLE ON CARBON MARKETS FOR NET ZERO

## Agenda

UN-CONVENED NET-ZERO  
ASSET OWNER ALLIANCE



Time	Topic	Speaker	Duration
1530	<b>Introduction &amp; Welcome</b>	Dirk Forrister, President & CEO, IETA	10'
1540	<b>Interview: COP26 Outcomes</b>		
	The main outcomes from COP 26 – what was agreed, what was not, and what does it all mean for the drive to net zero carbon emissions?	[Archie Young, UK Lead Climate Negotiator] (Proposed) interviewed by Dirk Forrister	10''
	Discussion	All	5'
1555	<b>Part 1: Carbon as an Asset Class</b> (Moderator: Elke Pfeiffer, UN Net Zero Asset Owner Alliance)		30'
	Introductory Remarks: 1) Are carbon allowances an asset class for institutional investors or just a short term trading opportunity? 2) Is the investment case only about returns or can allowances also reduce institutional investors' carbon footprints?	Moritz Heiden, Munich Re [IETA Representative: [Thomas Kansy] (TBD)]	5'
	Discussion: Guiding Questions: 1) Are carbon markets investable for institutional investors? 2) What are the risks of engaging in this market? 3) Is this only about returns or is it also about driving climate impact on investment portfolios?	All	25'
1625	<b>Part 2: Roundtable: What is the role of carbon credits in achieving net zero emissions?</b> (Moderator: Katie Sullivan / Brett Orlando, IETA)		30'
	Introductory Remarks: 1) Are carbon credits a complementary instrument to internal abatement? 2) When is this appropriate? Should we value certain types of carbon credits more than others?	John Scott, Head of Sustainability Risk at the Zurich Insurance Group IETA Representative (TBD)	5'
	Guiding Questions: 1) When is it appropriate for companies to use carbon credits on the net zero pathway? 2) What should companies communicate in relation to net zero claims? 3) Is there a difference between using carbon credits as a substitute for internal abatement and compensation for emissions that cannot be abated today? 4) How do we know a high-integrity offset when we see it?	All	25'
1655	<b>Closing Remarks</b>	Kai Remco Fischer, UNEP FI	5'

# OFFICIAL COLLABORATION WITH CONVERGENCE



## Focus Collaboration Activities

- Access for Alliance members to Convergence website (including Matchmaking Platform)
- Facilitate connection between donor community, DFIs, asset managers and asset owners
- Guidance from asset owners on vehicle structures and relevant criteria to mobilize capital
- Connect not fully structured vehicles with donors for concessional capital
- Joint workshops and initiatives supporting scaling and knowledge sharing.

# BLENDED FINANCE CALL TO ACTION: UPDATE

## First round of review

- 5 blended finance vehicles shortlisted and presented to the Alliance members in a workshop on 30 September 2021.
- 2 vehicles rejected due to non-blended finance structure.

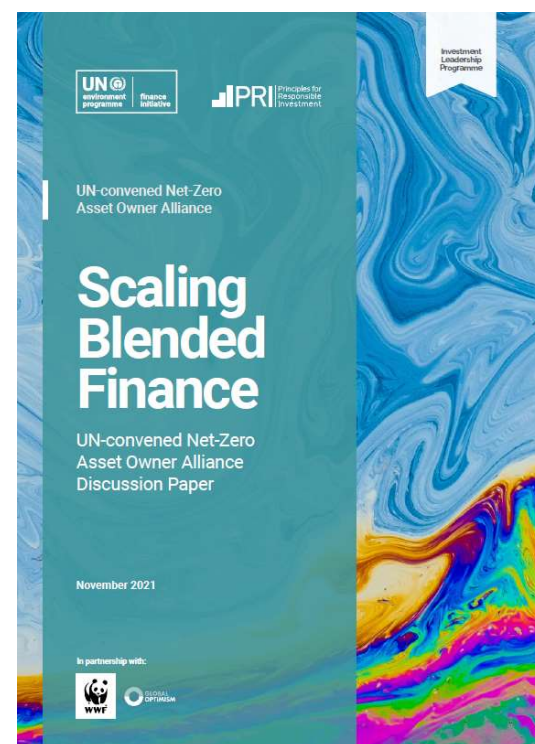
## Second round of review

- 11 submissions i) kept on longlist in 1<sup>st</sup> round of review and / or ii) received subsequently, thereof
  - 3 shortlisted for follow-on calls;
  - 4 kept longlisted;
  - 4 rejected for various reasons (e.g. scalability).
- Currently scheduling follow-on calls with the three shortlisted asset managers.
- Another set of minimum three vehicles to be presented to Alliance members in a workshop planned for Q1 2022.

1 <sup>st</sup> round of review	Shortlisted & presented to Alliance on 30 Sept 2021	EverSource – Green Growth Equity Fund SunFunder – Gigaton Empowerment Fund AllianzGI – Climate Solutions EMs Debt Vehicle Finance in Motion – Net-Zero Pathways Fund BlackRock – Climate Finance Partnership
	Rejected	Capital Innovations – Sustainable Real Assets Fund Forest Investment Associates – t.b.d.
2 <sup>nd</sup> round of review	Shortlisted for follow-on calls	BlueOrchard – Sustainable Assets Fund Meridiam – Urban Resilience Fund Pegasus Capital Advisors – Subnational Climate Fund
	Kept longlisted	Aberdeen – t.b.d. Tikehau – Green Assets Fund New Forests – Tropical Asia Forest Fund 2 Lightsmith – Lightsmith Climate Resilience Partners
	Rejected	Symbiotics – t.b.d. Polestar Capital – Limberg Energy Fund BlueOrchard Finance – InsuResilience Investment Fund II Deetken Impact - Fund III

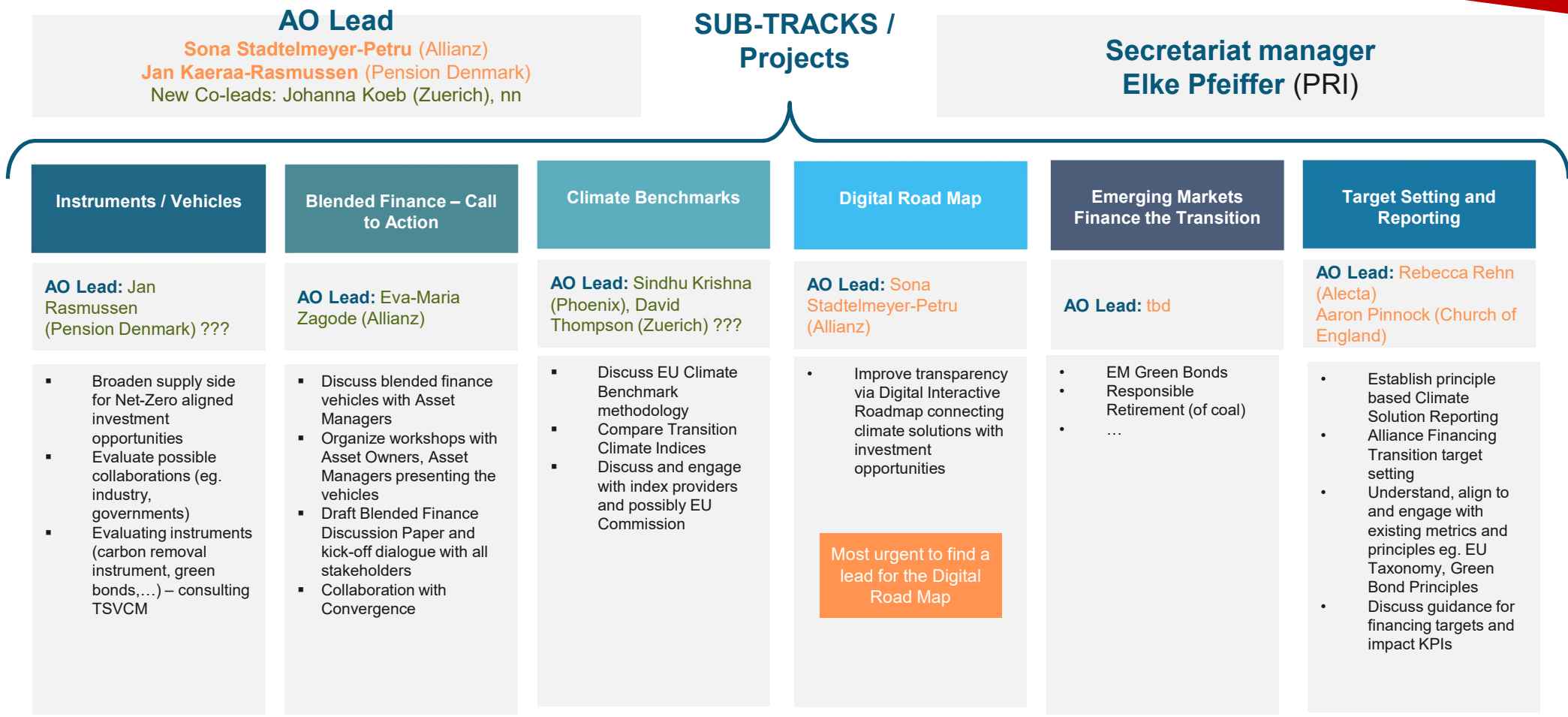
# DISCUSSION PAPER “SCALING BLENDED FINANCE”

- Publication 29<sup>th</sup> of November – please find final discussion paper in the attachment of the call, email or extranet
- *Embargoed until 29<sup>th</sup> of November*, please do not share outside of your organizations



# FINANCING TRANSITION TRACK – STRUCTURE 2022

Draft – for discussion  
 Orange – rotation needed  
 Green – leading (also) in 2022  
 (?)



# APPENDIX



## INFORMATION SHARING - HOUSEKEEPING

- **New file sharing tool:** <https://www.unepfi.org/climate-change/united-nations-convened-net-zero-asset-owner-alliance/alliance-extranet/>
- new password: AOAprivate
  - Strictly confidential – only for Alliance members
  - Only download possible, no uploading