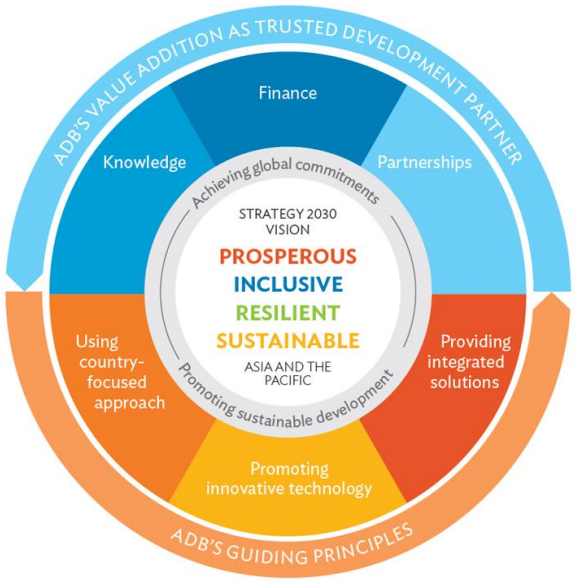
Emerging Areas in Energy Transition

"The role of frontier and disruptive technologies, innovative financing and broader partnerships to help accelerate the energy transition"

Cindy Cisneros Tiangco, Director, Emerging Areas Practice Team – Energy Sector Office, Sectors Group

ADB's Strategy 2030, Energy Sector Vision and the New Operating Model

Figure 5: ADB's Vision, Value Addition, and Guiding Principles



DIFFERENTIATED APPROACHES

- Country focused Approach
- FCAS and SIDS
- Pockets of poverty and fragility

ADB NEW OPERATING MODEL (Four shifts)

- Solutions shift
- Climate Change Shift
- Private Sector Development Shift
- New Ways of Working

- ADB as region's climate bank - $100 billion 2019-2030 with $5 billion for Healthy Oceans and Blue Economies by 2024
- Full Paris Agreement alignment by July 2025;
- FCAS and SIDS Approach 2021, Energy Policy 2021
- AGM 2024: $5 billion in new climate financing for vulnerable communities

Energy Sector Vision and Approach

Supporting Just Low-Carbon Transition in Asia and the Pacific: Confronting Climate Change Challenge

Principle 1	Principle 2	Principle 3	Principle 4	Principle 5
Securing Energy for a Prosperous and Inclusive Asia and the Pacific	Building a Sustainable and Resilient Energy Future	Supporting Institutions, Private Sector Participation, and Good Governance	Promoting Regional Cooperation and Integration	Integrated Cross-Sector Operations to Maximize Development Impact

Areas of Delivery

Decarbonization	Decreasing energy intensity	Digitalization	Decentralization

https://www.adb.org/sites/default/files/publication/892771/strategy-2030-e

The Emerging Areas Team

Pillars of the Energy Emerging Areas Team leadership and support to regional, sector and thematic teams

https://www.adb.org/sites/default/files/publication/892771/strategy-2030-energy-sector-directional-guide-summary.pdf

Emerging Areas Sustainable Solutions to Accelerate the Energy Transition

Streamlining Multi/Cross-Sectoral Interventions with an Integrated Approach

Funding

Sustainable Solutions

- Strategic Alignment
- Technologies (Suitable)
- Business Model (Viable)
- Project Design (Inclusive)

Appropriate Multi/Cross-Sectoral Interventions

Food, Energy, ICT

Transportation, Energy, ICT

Water, Energy, ICT

Food, Water, Environment, Energy, ICT

Food, Water, Transportation, Health, Waste, Environment, Energy, ICT

Health, Environment, Energy, ICT

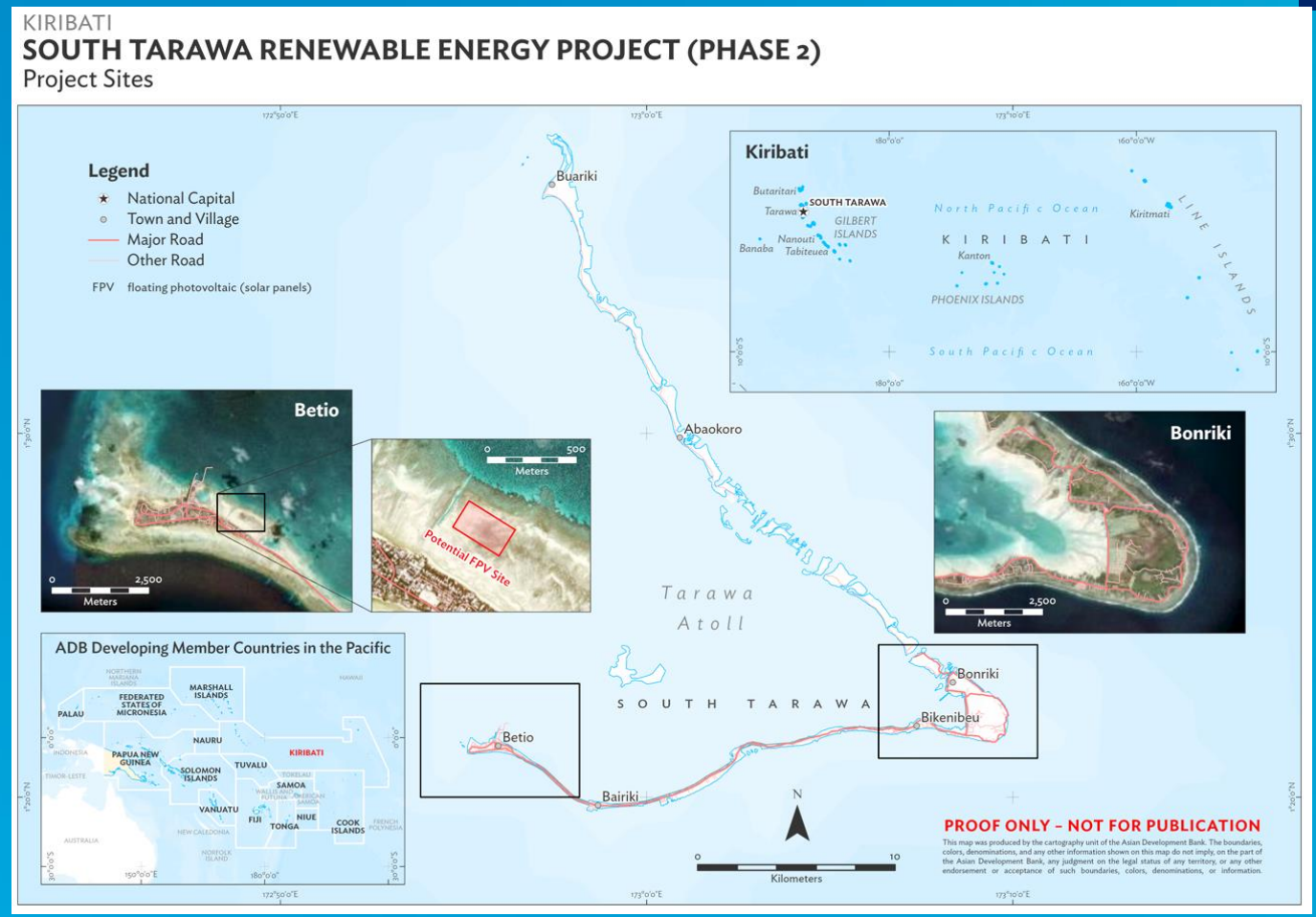
Waste, Energy, ICT

Environment, Energy, ICT

Transportation, Environment, Energy, ICT

Address the Right Vulnerabilities

ADB's first Regional Procurement of ADB's first floating PV plus projects in the Pacific



Interested bidders should register to download the bidding documents using :
https://in-tendhost.co.uk/adbprocurementnetwork/aspx/Tenders/Current

Pre-bid meeting is set on 4 October 2024 at Novotel, Nadi, Fiji at 3-5 pm

Indicative Project Details

	Tuvalu IAREP AF ($8.5 million)	Proposed Kiribati STREP 2 ($24.9 million)
Financing Plan	ADB – $2.0 million GEF – $3.0 million URTF – $2.0 million ITF – $0.8 million GOT – $0.7 million	ADB – $22.4 million ITF – $0.5 million GOK – $2.0 million
FPV plus*	ADB, GEF, URTF	ADB
Capacity building	URTF, ITF	ITF
DBO package	~$4.2 million	~$20.5 million
Approval	8 December 2023	Q4 2024 (expected)
Effectiveness	-	-
Executing Agency	Ministry of Finance and Economic Development	Ministry of Finance and Economic Development
Implementing Agency/Employer	Tuvalu Electricity Corporation	Public Utilities Board
Project completion	2028	2029
Implementation Support	Project Implementation Consultant	Project Implementation Consultant
Project Management Support	Project Management Unit	Project Management Unit
Project preparation and procurement support	TA Consultants	TA Consultants

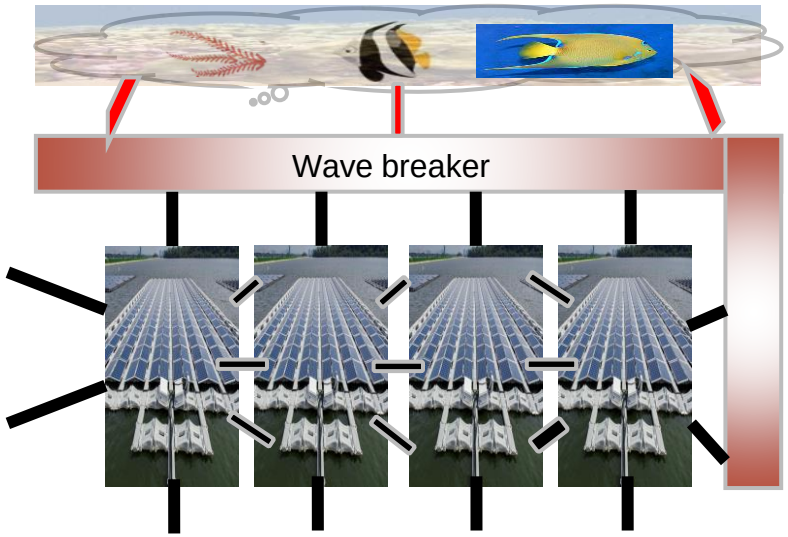
* Plus = including but not limited to productive uses of energy, grid upgrades, transmission system, e-vehicles and charging stations, electric reefs

ADB = Asian Development Bank, AF = Additional Financing, FPV = floating photovoltaic; GEF = Global Environment Facility, GOK = Government of Kiribati, GOT = Government of Tuvalu, IAREP = Increasing Access to Renewable Energy Project, ITF = Ireland Trust Fund; STREP = South Tarawa Renewable Energy Project, TA = technical assistance; URTF = Urban Resilience Trust Fund

Indicative Scope of Projects (STREP includes 33 kV line)

- Floating solar PV including electric vehicles, electric boats for O&M and transport, EV charging stations, etc.
- Wave breaker L-shape with a local solution based on concrete sandbags
- Integrated electric reef regeneration, clay reefs, coastal protection, and community-based climate resilience disaster preparedness

Reef regeneration pilot



Emerging Areas
Knowledge Sharing Series

Emerging Areas Knowledge Sharing Series:
3D Clay Reef Systems - An Innovative Approach to Structural Enhancement and Habitat Rehabilitation

Hanna Kuhfuss, rrreefs

01 October 2024 / 5:00-6:00 PM (Nuku'alofa time)

The presentation will explore the possibility of complex clay reef habitat structures in protecting floating solar installations by reducing wave height while promoting coastal resilience. Clay reef structures foster increase in fish biomass and biodiversity, contributing to healthier marine ecosystems. A key aspect of rrreef's approach is the active engagement and involvement of local communities in the reef building process with the aim of transferring knowledge and technology to enable local reef-builders to continue independently using this method. The collaborative approach ensures long-term sustainability, local empowerment and ownership of the project's success. The synergy between renewable energy solutions and community-driven conservation efforts also presents a holistic approach to coastal development.

Programme

Welcome	
Opening Remarks	***ADB***
Presentation	***Hanna Kuhfuss, rrreefs***
Q & A	
Closing Remarks	***ADB***

The knowledge event is the third of a series organized by the Emerging Areas Team, Energy Sector Office. The Emerging Areas created under ADB's New Operating Model aims to operationalize frontier technologies and integrated solutions, foster and drive innovation in policy and operational issues, catalyze thought leadership and future looking bank wide initiatives for future business, collaborate across departments for innovative solutions, identify and develop knowledge and flagship events, and mobilize cofinancing.

About the Speaker. *Hanna is a marine & freshwater scientist, scientific diver, yoga teacher, and dedicated to environmental protection and sustainable solutions for aquatic ecosystems. Her academic journey includes a Magister Scientiarum (M.Sc.) in Biology, Geology and Meteorology from the University of Freiburg and studies in Marine Sciences at the University of Queensland. She is Co-Founder and Head of Field Operations and Scientific Partnerships at rrreefs, leading efforts in coral reef rehabilitation through innovative 3D-printed clay reef systems. Her expertise include marine mammal conservation and migration studies, climate change impact studies, marine microbiology, habitat reconstruction and international Ocean Plastic and pollution management. Hanna's work is driven by a passion for science-based and socially sustainable environmental protection, rehabilitation, and restoration of ecosystems and a deep commitment to tackling critical habitat loss.*