

Achieving Climate Action: How does land matter?

A pilot study of the NDCs of countries from
East Asia & Pacific and South Asia regions

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Acknowledgement of land

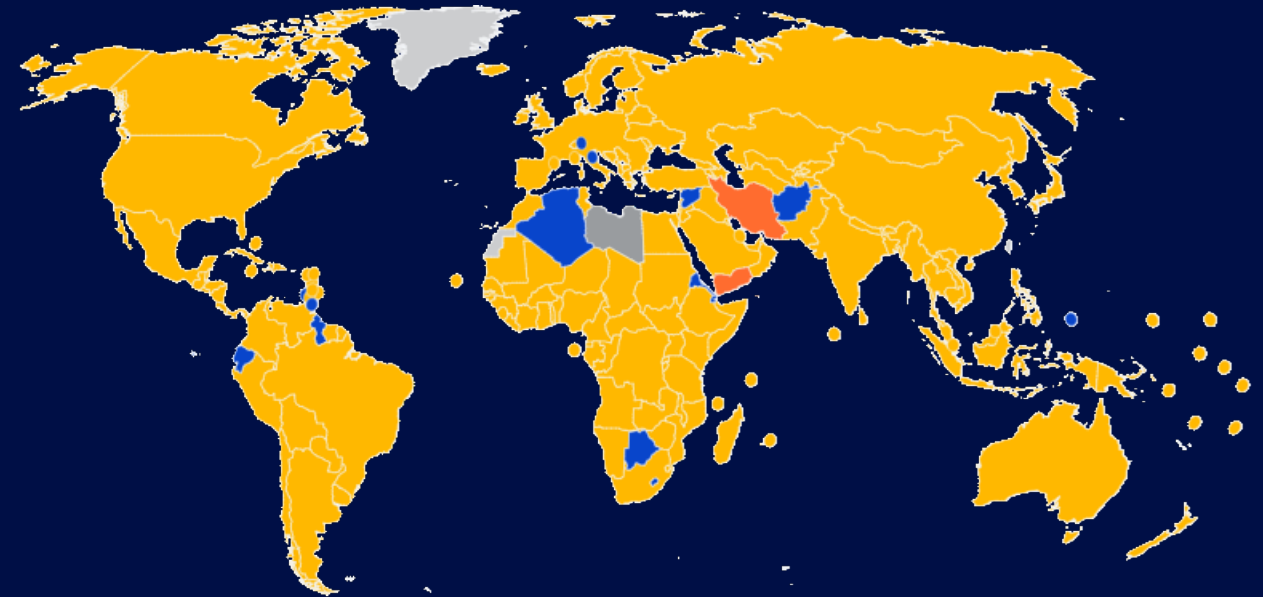
Nationally Determined Contributions (NDCs) in EAP and SAR





Based on Climate Watch data



Nationally Determined Contributions (NDCs) in EAP and SAR

Based on Climate Watch data



-  New/updated NDCs (179 parties)
-  Only First NDC (16 parties)
-  Only INDC (2 parties)
-  No document submitted (1 party)

<https://www.climatewatchdata.org/ndcs-explore>

What is the 'land question' for a world in a climate crisis?

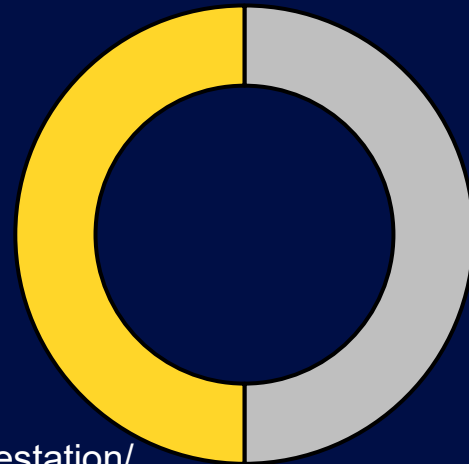
Land and climate action: what do we know so far?

2022/23 Land Gap
report

<https://landgap.org>

1 billion hectares

OR



Reforestation/
Afforestation

Restoration

Amount of land that
pledges assume can be
prioritized for carbon
dioxide removal activities

**Based on 141 countries with quantifiable pledges.*

50% of pledges related
to reforestation and/or
afforestation will need
land use change

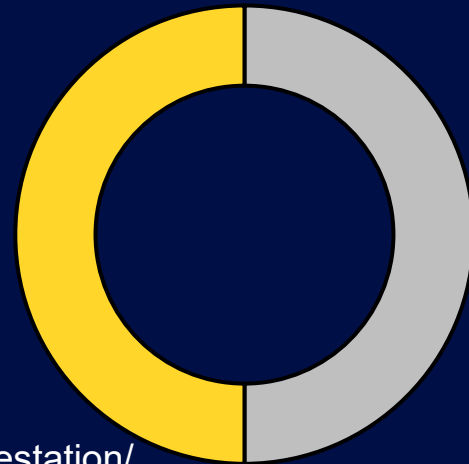
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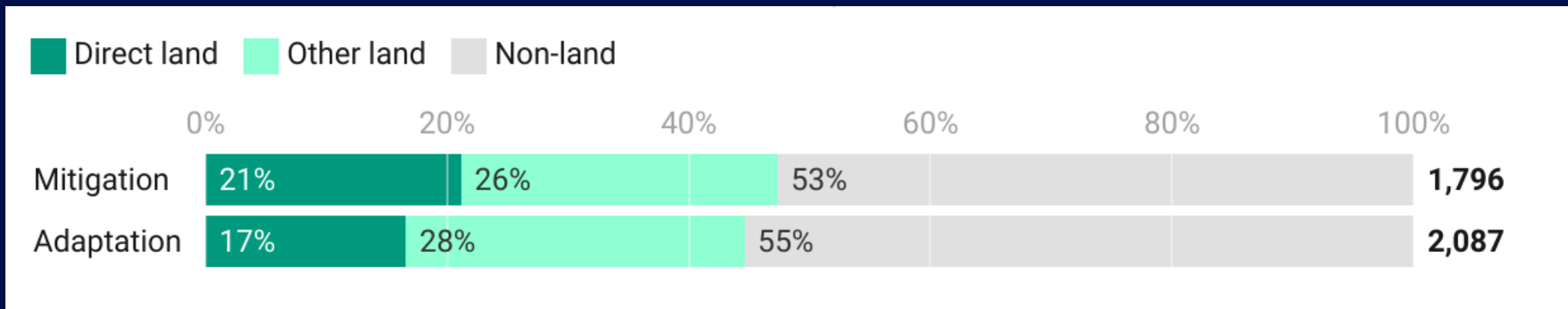
Reforestation/
Afforestation

Restoration

**These land
demands are
unrealistic.**

Land is critical for meeting the Paris Goals

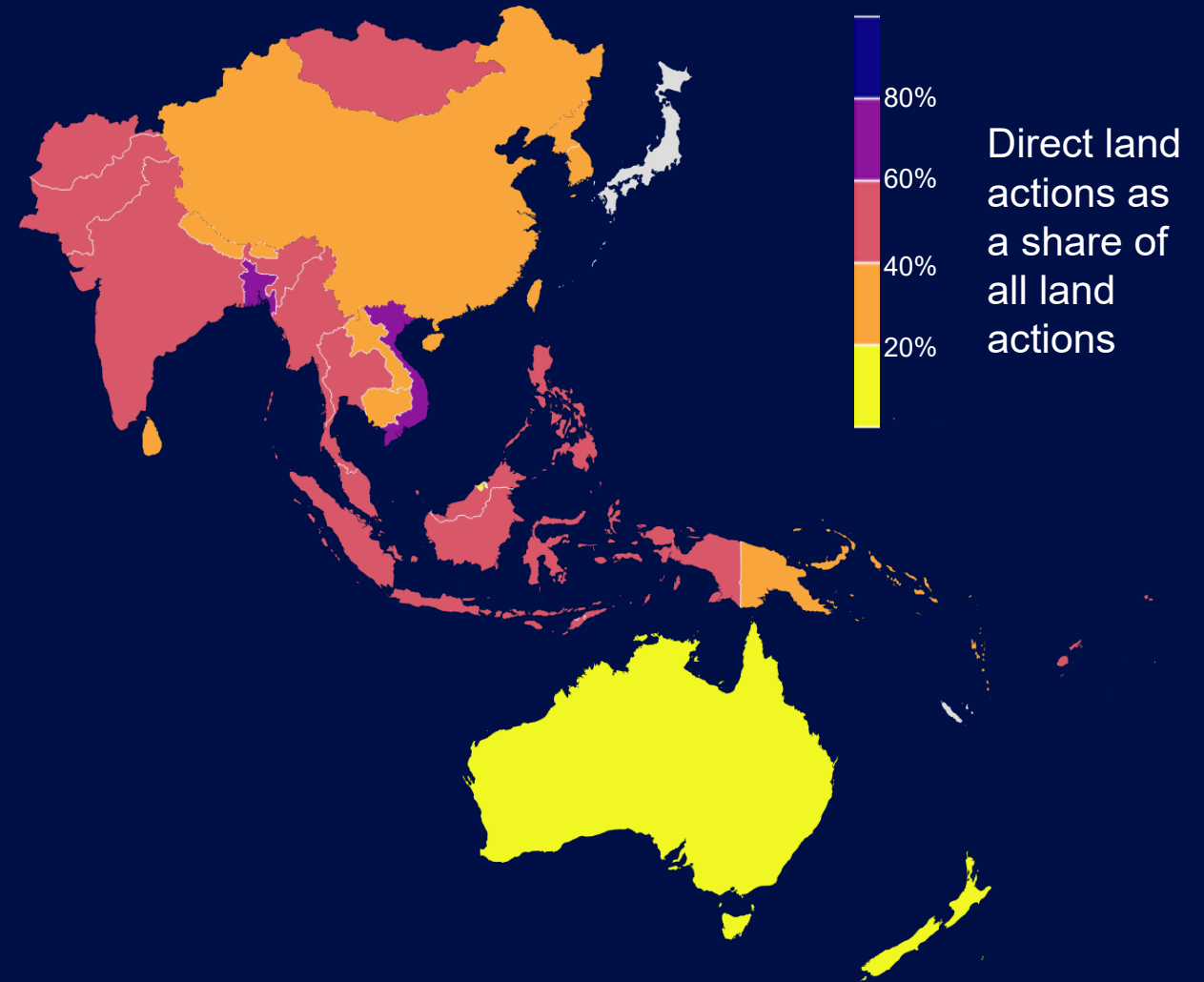
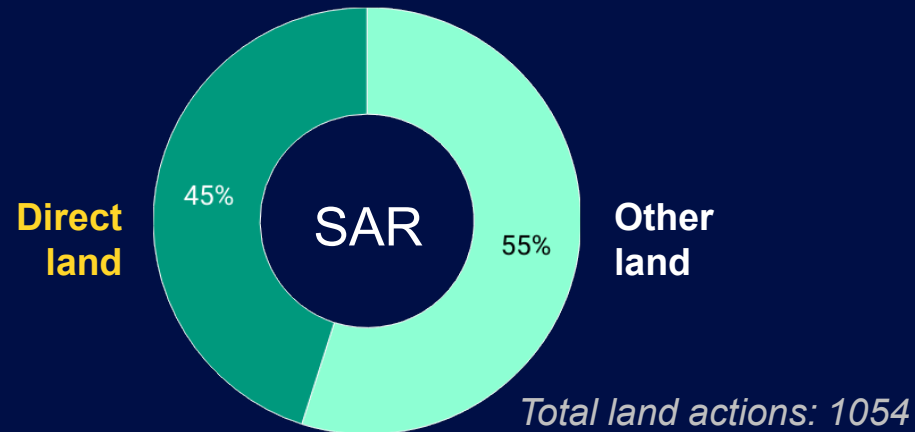
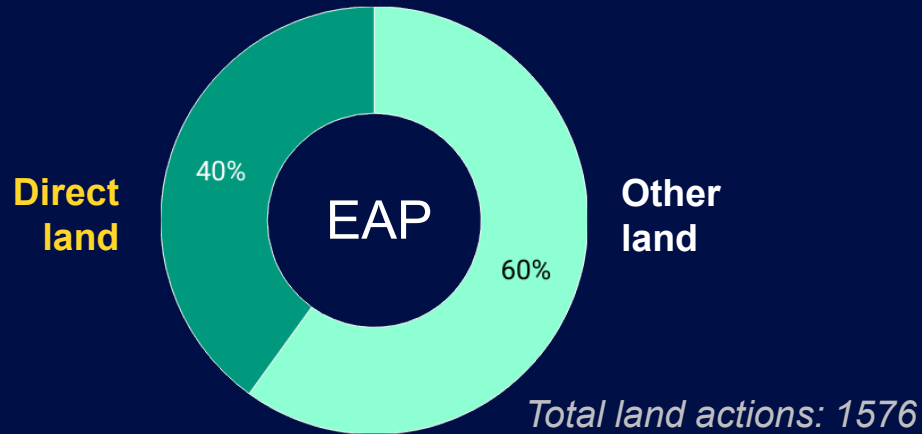
Almost 1 in 2* climate actions relate to land

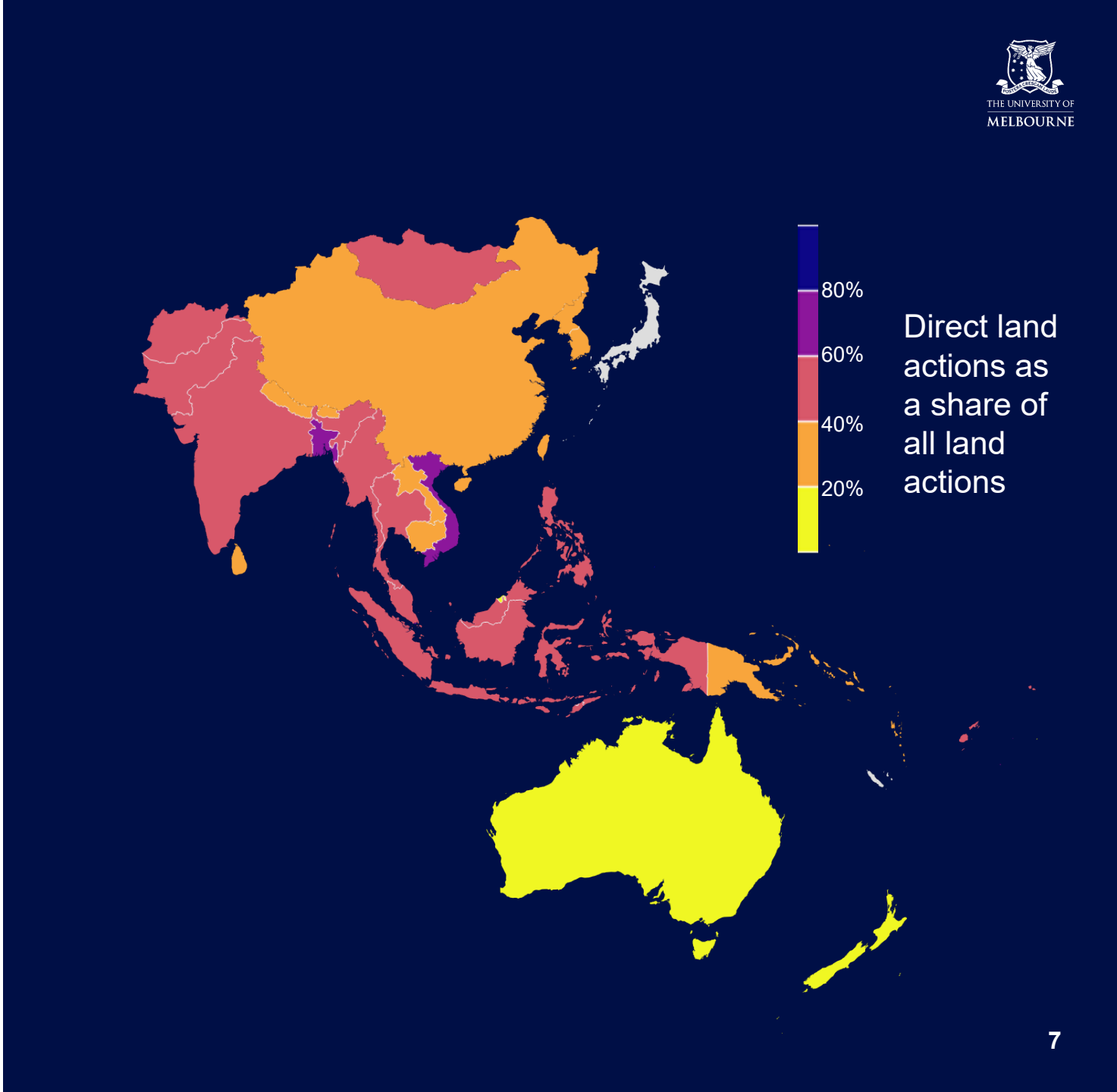
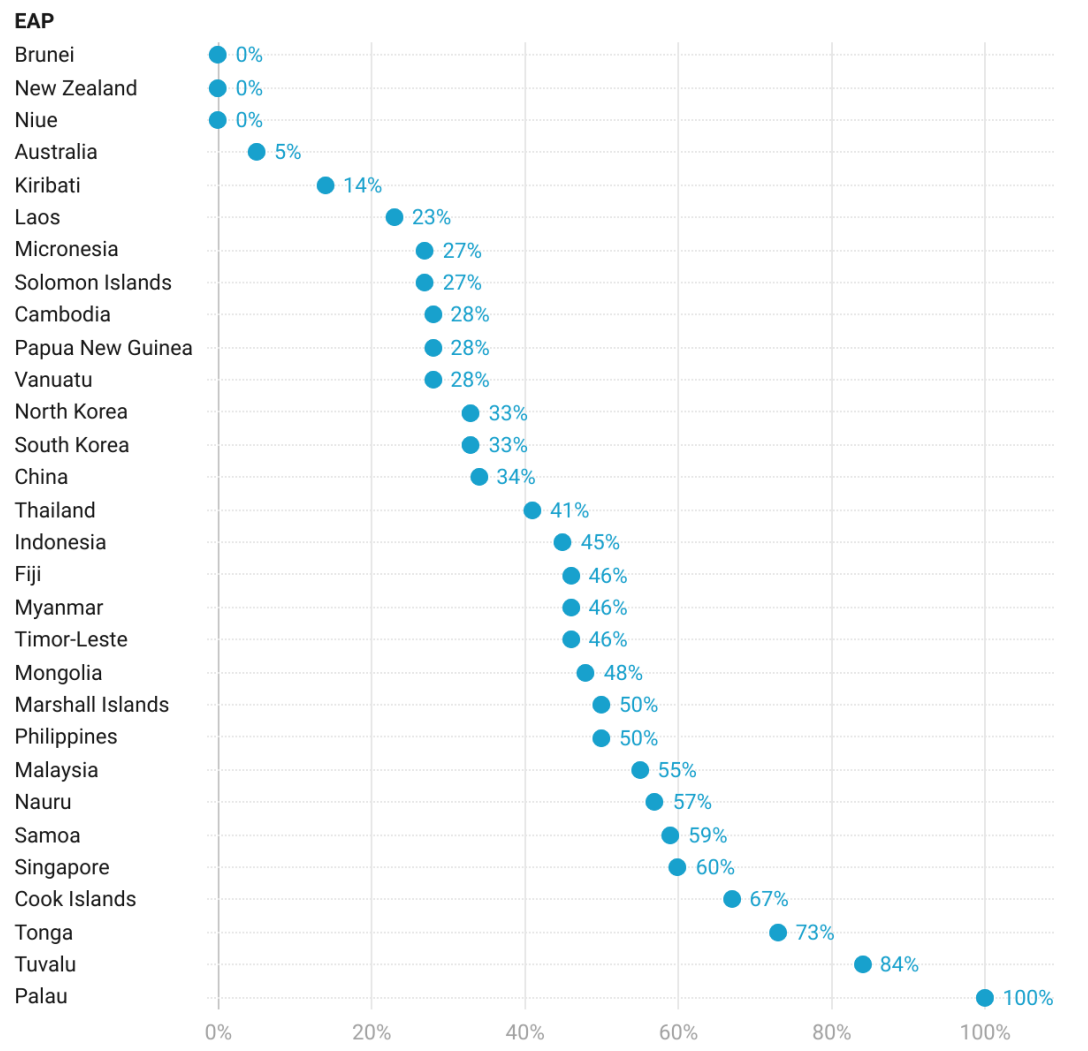
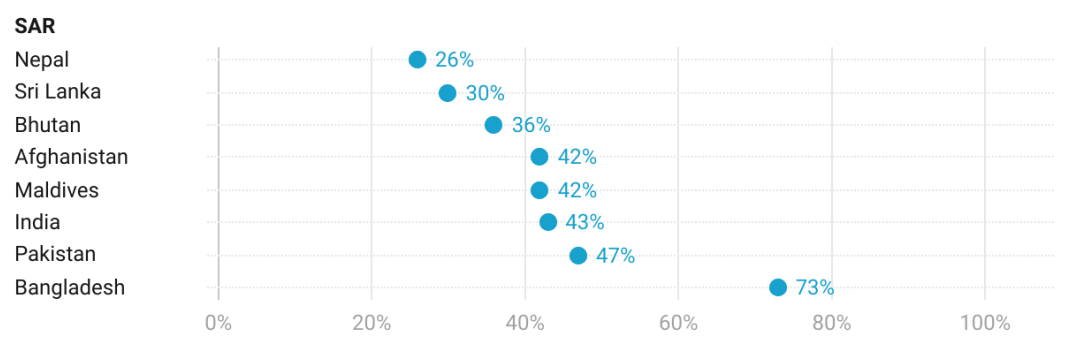


*47% of mitigation actions and 45% of adaptation actions

**Are land ministries providing input
into their country's NDC agenda?**

≥40% of all land-related actions are direct land actions





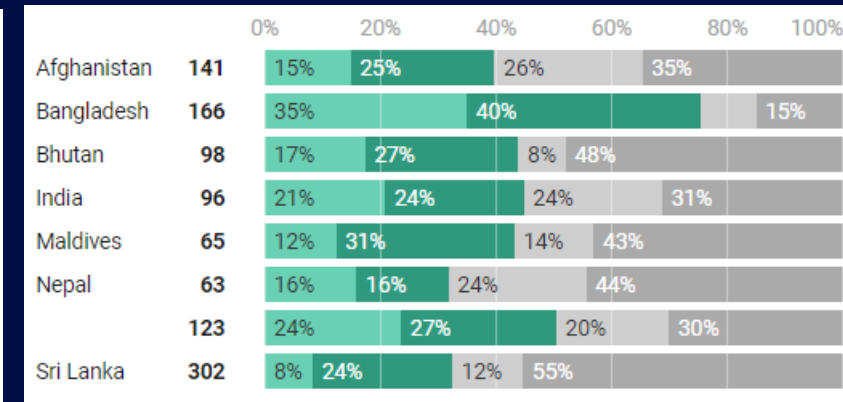
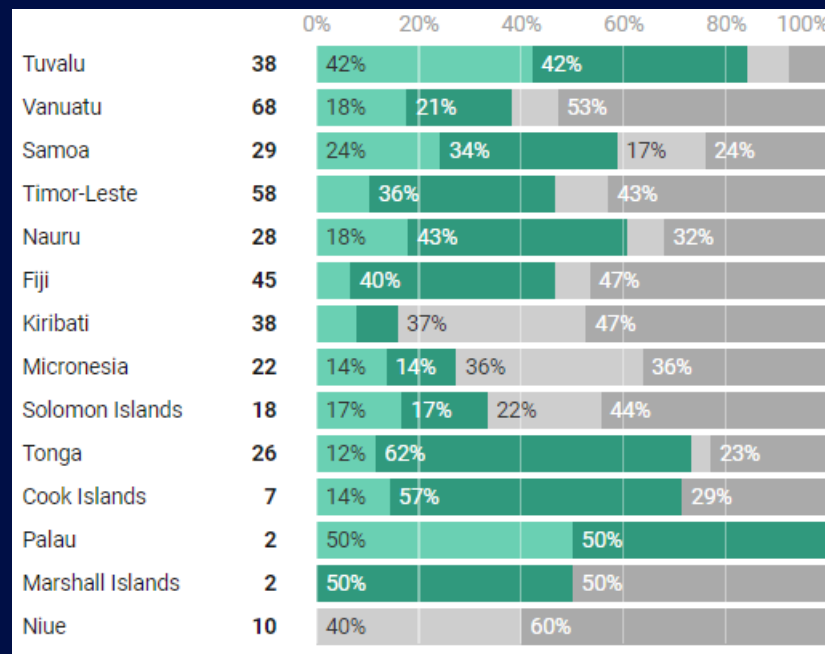
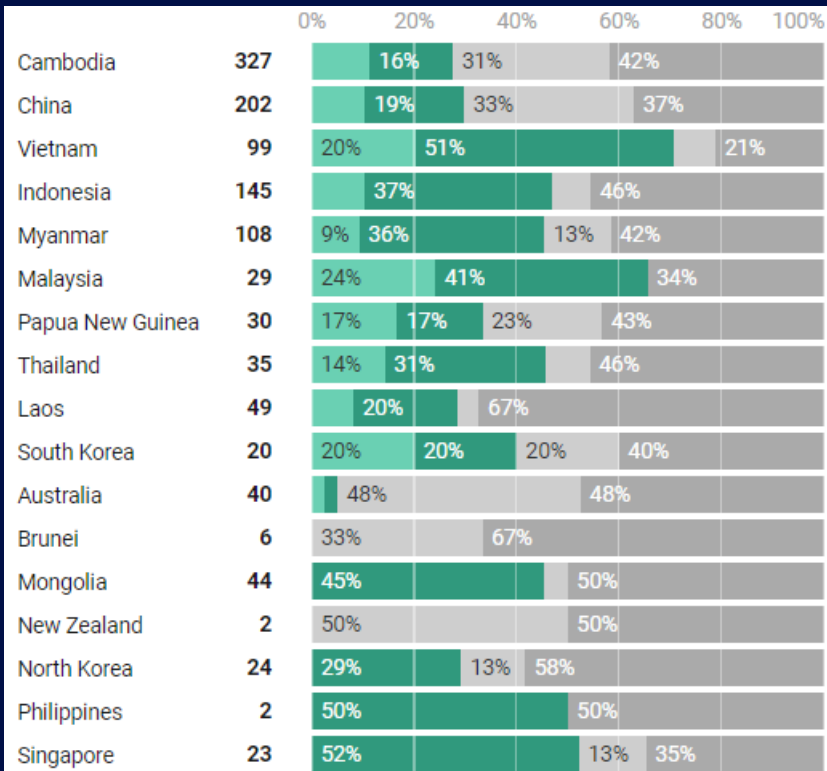
≥40% of all land-related actions are direct land actions



East Asia

Pacific SIDs

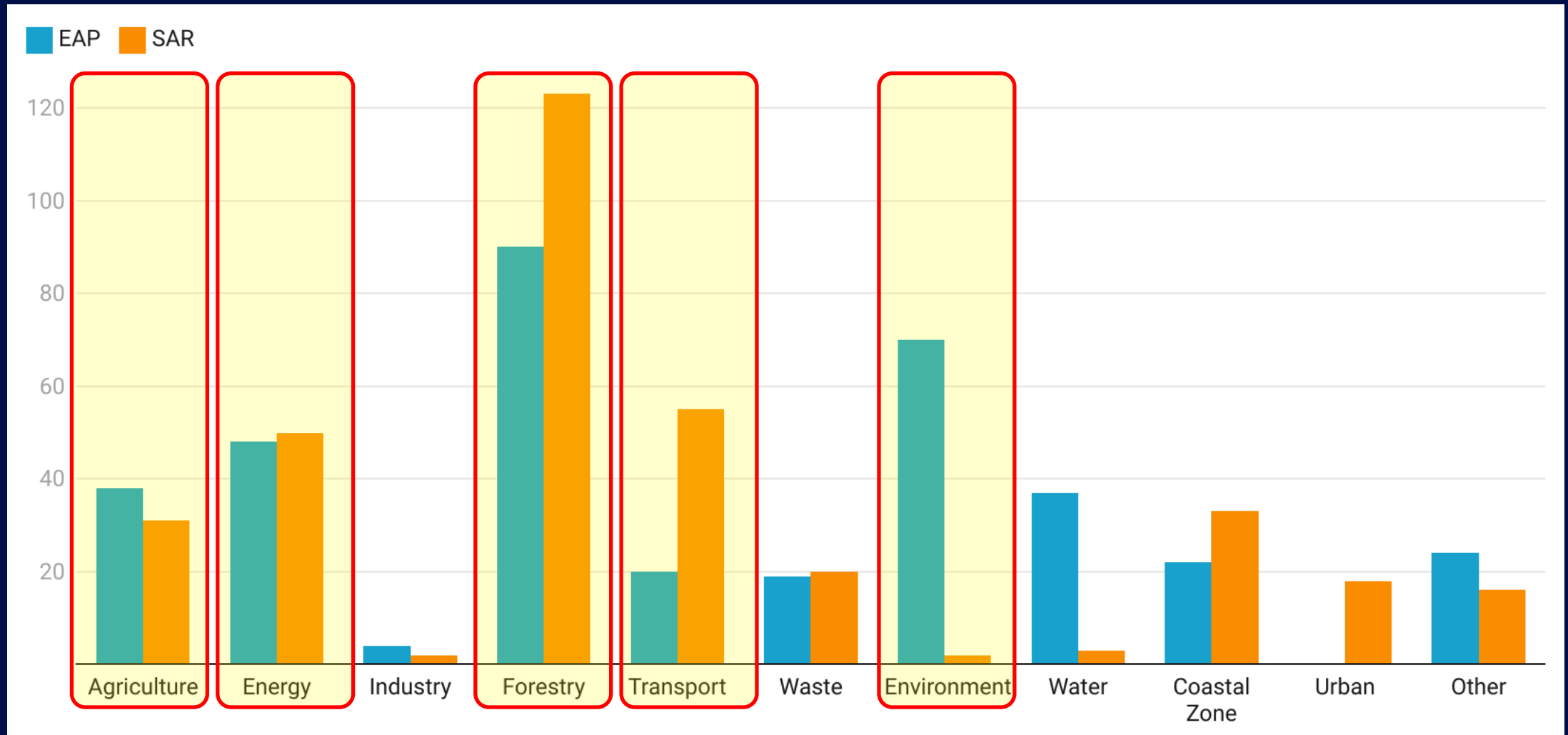
South Asia



>11% of all adaptation actions that are direct land actions are conditional on external support

**Can land ministries support multi-sector
implementation of climate actions?**

75% of actions needing land relate to 5 sectors



	Agriculture	Coastal Zone	Cross-Cutting Area	DRM	Economy-wide	Energy	Environment	LULUCF	Social Devt	Tourism	Transport	Urban	Water
Afghanistan	3		1				3	2	1				4
Bangladesh		1	1	2			1	1			1	1	1
Bhutan	3					1	1	2			1		1
Cambodia	3	2	1				1		1		4	1	3
China	5		2	1	2		1	4				2	1
Cook Islands		2	1										
Fiji		4	1	3	1		3	2				1	
India		1		1									1
Indonesia	1	5	2			4	11	14				1	
Laos	1						1	1				1	2
Malaysia	2	2					1						
Maldives		2					4			1	3		2
Marshall Islands							1						
Mongolia	8		1				2	5					4
Myanmar	2	4	1			1	6	5			1	4	5
Nauru		1					1	2				3	
North Korea		3					1	2					1
Pakistan	1						2						1
Philippines								1					
Samoa		1						2					
Singapore		3	1				2				3	1	2
Sri Lanka	6	8	4				24	3				1	2
Thailand							3	3					
Timor-Leste	1	5	1			1		3					4
Tonga	1	3						9					
Vanuatu			1				1						
Vietnam	5	8	1				2	6				2	6

	Agriculture	Coastal
Afghanistan	3	
Bangladesh		1
Bhutan	3	
Cambodia	3	2
China	5	
Cook Islands		2
Fiji		4
India		1
Indonesia	1	5
Laos	1	
Malaysia	2	2
Maldives		2
Marshall Islands		
Mongolia	8	
Myanmar	2	4
Nauru		1
North Korea		3
Pakistan	1	
Philippines		
Samoa		1
Singapore		3
Sri Lanka	6	8
Thailand		
Timor-Leste	1	5
Tonga	1	3
Vanuatu		
Vietnam	5	8

Malaysia: " Preservation of vulnerable terrestrial and marine ecosystem and expanding protected areas, including fisheries zones within the marine and coastal protection corridors will be given priority." (Agriculture)

Sri Lanka: "Restore, rehabilitate and augment 25 major /medium reservoirs and 300 minor irrigation systems and 200 km length of irrigation canals of Sri Lanka for enhancing climate resilience in the agriculture sector" (Agriculture)

Myanmar: "Increasing private and community-owned mangrove wind and wave breaks" (Coastal)

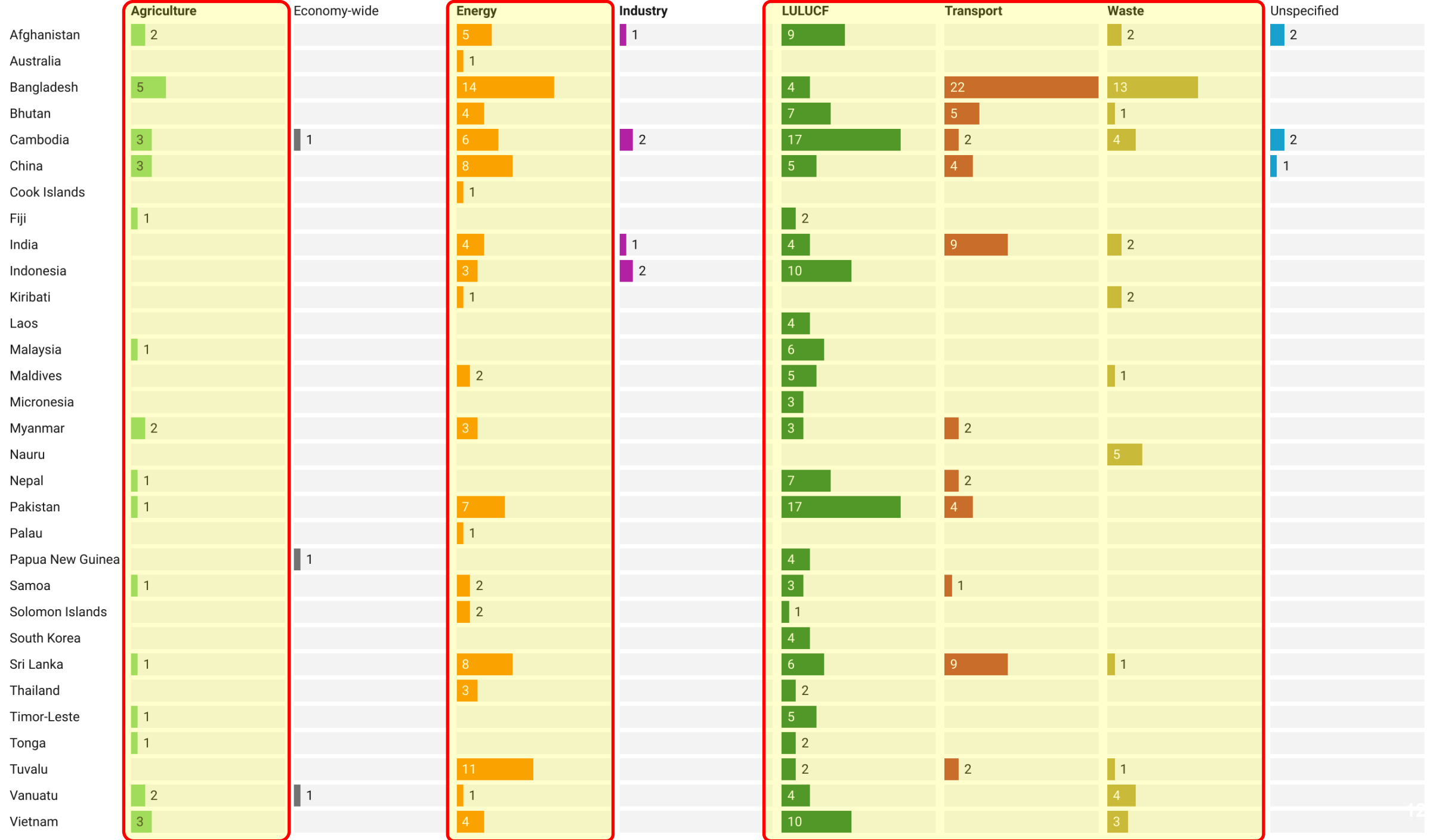
Sri Lanka: "Establish 1000 ha of coastal forests and green belt along the coastal line of the island" (Coastal)

Fiji: To plant 30 million trees by 2035" (LULUCF)

Mongolia: "To construct reservoirs for glacier melt water harvesting; To regulate river streams and flows" (Water)

	Urban	Water
		1
		1
	1	3
	2	1
	1	
		1
	1	2
		2
		4
	4	5
	3	
		1
		1
	1	2
	1	2
		4
	2	6





Myanmar: "Through promotion of tree planting and agroforestry Myanmar will raise the average tree canopy cover across 275,000 ha of its agricultural land with <10% tree canopy cover per hectare" (LULUCF)

Nepal: "Afforest/reforest viable public and private lands, including agroforestry" (LULUCF)

Sri Lanka: "Development of hydro-power base to its maximum potential through new large and small hydro-power plants amounting to around 300 MW" (Energy)

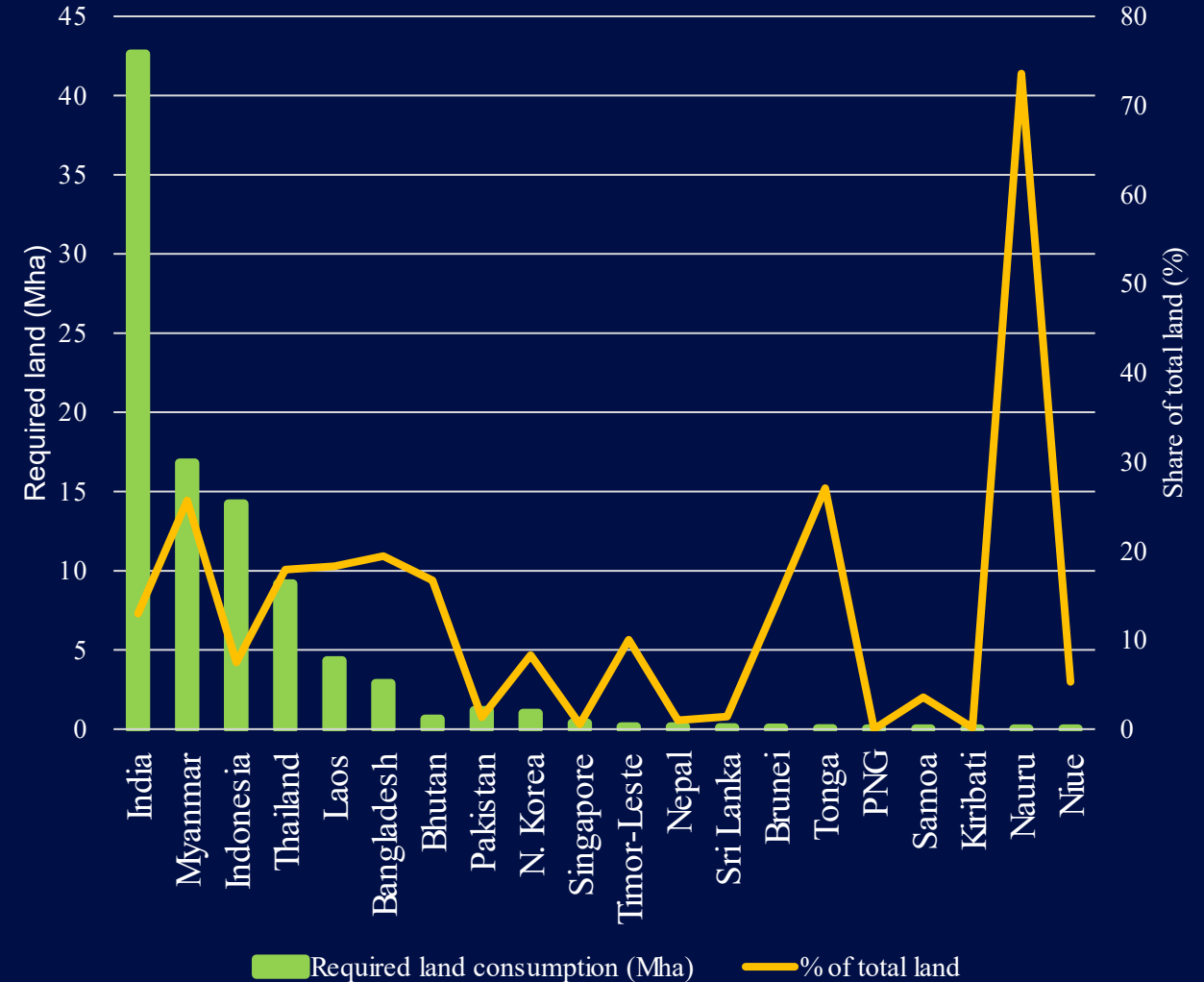
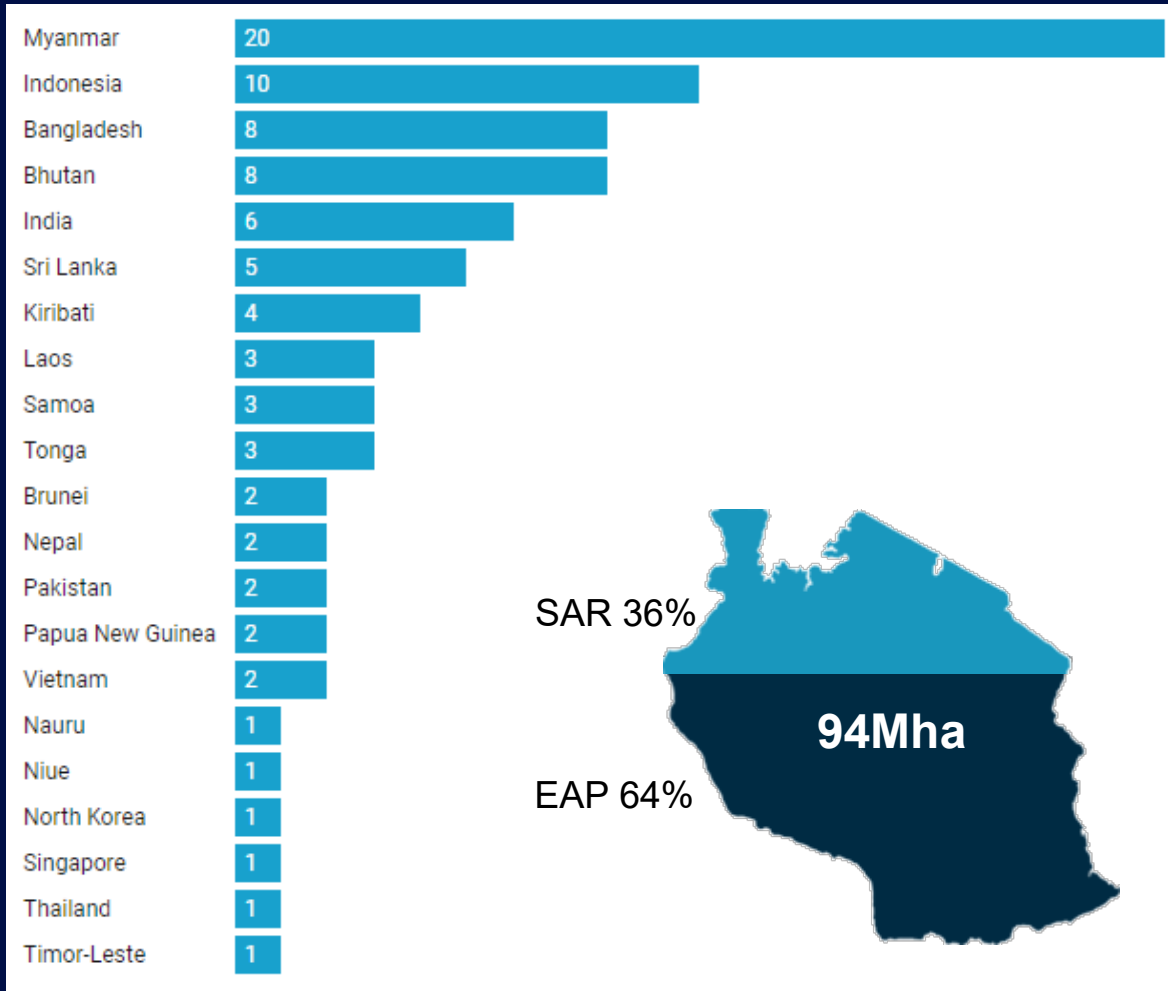
Cambodia: "Establish green belts along major roads" (Transport)

India: "Bharatmala Project which envisions constructing about 5,000 km of road network all along the coastal areas will further provide connectivity to these ports" (Transport)

Vanuatu: "By 2030, Implement Waste to Energy Plant for Municipal Solid Waste (MSW): (a) Waste to Energy Plant for Port Villa; (b) Waste to Energy Plant for Luganville; and (c) Waste to Energy Plant for Lenakel" (Waste)

Is there appropriate capacity?
(e.g., policies, processes, people, data)

The scale of land use change is potentially immense



How and why land matters (especially how we access it)

Importance of Indigenous land rights in Cambodia's actions

Cambodia's Action: “Strengthen management of forest conservation areas, such as protected areas and flooded and mangrove conservation areas - Promote forest land tenure security through forest land classification, zoning, demarcation, and registration” – LULUCF Sector

Cambodia hosts 24 indigenous groups, comprising 3% of the population, with 250,000 to 400,000 individuals.

Indigenous territories cover 25% of Cambodia's land, mainly in forested plateaus and highlands in the northeast.

Strengthened management may restrict Indigenous access to vital forest resources.

Forest land tenure security aims to safeguard Indigenous rights but may lack proper consultation on customary land tenure.



Balancing forest conservation efforts with the protection of Indigenous land rights is crucial

Empowering women in forest management: Nepal's Action

- **Nepal's Action:** "Forests under community-based management will comprise at least 60% of Nepal's forest area; management committees will have 50% women representation and proportional representation of Dalits and Indigenous People in key posts" – LULUCF Sector

Increased Representation

Inclusive Leadership

Capacity Building

Sustainable Development



Impact of global action on cities: transport infrastructure enhancement



Bangladesh's action: "Widening of roads, improving road quality" and "Construct NMT and bicycle lanes" – **Transport Sector**

- Implementing this action enhances urban mobility and reduces emissions.
- Upgraded road quality enhances safety for motorists, cyclists, and pedestrians, reducing accident rates and promoting healthier urban environments.
- Improved infrastructure promotes inclusivity and equity, benefiting residents and businesses.

But what about urban informal settlements?

Key takeaways (and questions)

What we know from NDCs...

1. Land is critical for meeting the Paris Goals
2. $\geq 40\%$ of all land-related actions are direct land actions
3. 75% of actions needing land relate to 5 sectors
4. The scale of land use change is potentially immense.

...and why we should be asking:

- What is the '*land question*' for a world in a climate crisis?
- Are land ministries providing input into their country's NDC agenda?
- Can land ministries support multi-sector implementation?
- Is there appropriate capacity (e.g., policies, processes, people, data)?

Thanks for listening!



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Global Guide for Access to Land for **Climate Action**



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MODERN LAND ADMINISTRATION SYSTEMS

Modernisation of Land Administration Systems and development of 3D cadastres in the contexts of smart cities, indigenous lands and land for climate actions



BUILDING INFORMATION MODELLING (BIM)

Developing multi-dimensional land and building rights, restrictions and responsibilities

BUILDING ENERGY & IOT

Analysis and solutions in building energy management, energy ownership and decarbonisation



URBAN ANALYTICS

Enhancing data science, platforms and tools for urban planning, design, land management and urban analytics



REMOTE SENSING

Image and object recognition from remotely sensed data sources, from land tenure to vehicle and human movement, hierarchical modelling, mapping and optimal data utilisation



DIGITAL TWIN & AI TECHNOLOGIES

Developing leading-edge spatially enabled digital twin solutions and AI analytics to meet business and decision-making requirements.

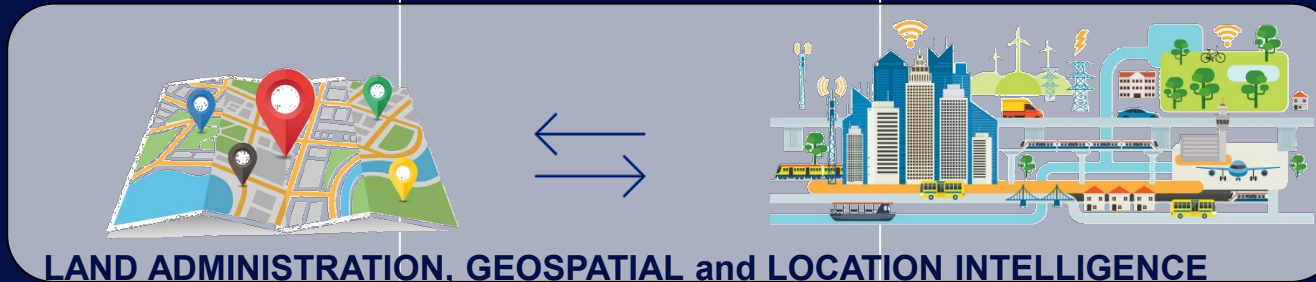
ECOLOGY & LANDSCAPES

Designed experiments and digital twin solutions for climate resilient land and landscapes

DISASTER MANAGEMENT AND CLIMATE RESILIENCE

Developing Spatial Information ecosystems for climate resilient land management and decision support

CSDILA strategic areas of core capability are centred on proven and emerging knowledge and technology relating to land administration, geospatial and location intelligence



R & D capabilities include: Prototype Platforms, Tools and Applications; Modelling and Analytics Frameworks and Strategy and Policy Development, Consulting, Advisory Services and Training



EXECUTIVE TRAINING & CAPACITY BUILDING

Strategic training to embed innovation and geospatial capability in practitioners and executives globally



SUSTAINABLE DEVELOPMENT GOALS (SDGs)

Supporting the development of data infrastructures that implement the SDGs



SDI & DIGITAL INFRASTRUCTURE ENGINEERING

Enhancing governance and digital engineering capabilities in our societies via Spatial Data Infrastructures (SDI)



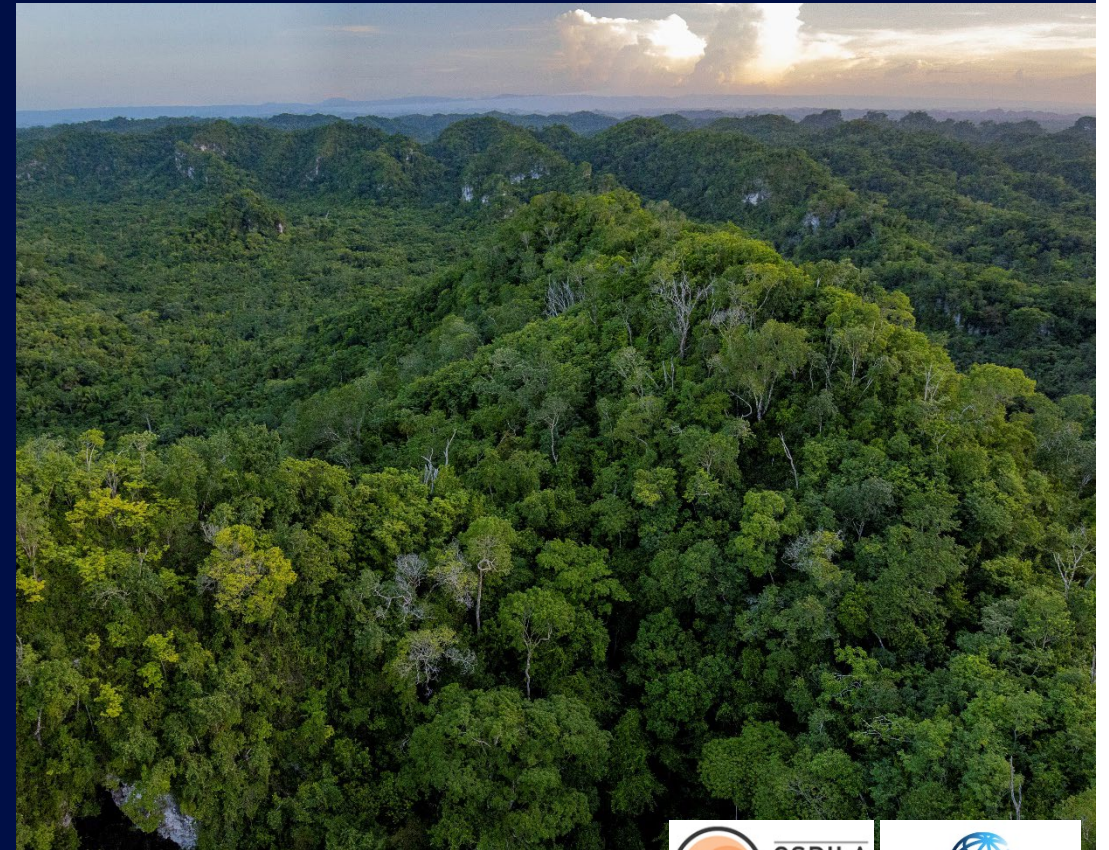
VISALISATION & D-LAB

Cutting edge geospatial data collection, visualisation and analysis including lidar, drone, hologram, VR and AR



Vast tracts of **Land** is needed to achieve Climate Actions pledged in NDCs

- In 2022, *The **Land Gap Report*** (Dooley et al., 2022) showed that the **climate pledges made by countries** rely on **unrealistic amounts of land-based carbon removal**.
- There is a **disconnect between countries' climate pledges and land use considerations**.



The role of **Land** is key

- The limited understanding of **the role land plays** in current climate actions hinders development investments.
- To facilitate effective action, the **complex relationship between land and people** needs to be explored **in the context of climate actions**.



Challenges

Securing land rights and tenure

- Uncertainty over land ownership and use rights can hinder the implementation of sustainable land management practices.

Investment

- Transitioning to more sustainable land use practices often requires significant investment

Capacity building

- Training and support is needed to adopt new practices that are both sustainable and productive.



How do we enable the **access to Land** needed to achieve Climate Actions?

- A **Global Guide** that informs countries which land access pathways they should invest in to implement climate actions will place nations in a better position to develop required infrastructure and achieve climate targets.
- **Land Access Pathways** used to effectively manage access to land include:
 - Land policy
 - Land tenure and rights
 - Land use planning
 - Land administration systems
 - Integrated consultation

Summary of Findings



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Almost 1 in 2 climate actions will require accessing land with these actions related mainly to forestry, energy, transport, environment and agriculture.

Access to Land for Climate Action and Infrastructure

Access to land is fundamental to fulfilling climate promises made under the Paris Agreement

1 in 2 climate actions relate to land

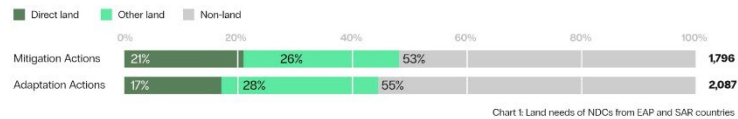
*Based on analysis of East Asia Pacific (EAP) and South Asia Region (SAR) NDCs

Climate Action Land Analysis

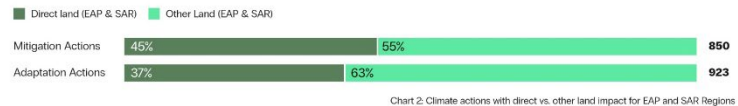
Nationally Determined Contributions (NDCs) are at the heart of the Paris Agreement and the achievement of its goals. NDCs embody climate change mitigation and adaptation actions by each country to reduce national emissions and adapt to the impacts of climate change.

In EAP and SAR countries:

47% of mitigation actions and 45% of adaptation actions require land



45% of these mitigation actions and 37% of these adaptation actions require direct access to land and/or land use change



Further, 73% of the EAP/SAR NDC actions that require direct land and/or land use change relate to the sectors of **Forestry, Energy, Transport, Environment, and Agriculture**

Global Land Gap Report Findings



The Land Gap Report (Dooley et al., 2022) shows that climate pledges made by countries in their NDCs rely on unrealistic amounts of land-based carbon removal. There is a disconnect between countries' climate pledges and land use considerations.

The report also reveals that governments have proposed approximately 1 billion ha (hectares) of land for land-based carbon removal as part of their climate mitigation pledges.

The report concludes that land-based pledges risk delaying climate ambition as many countries have indicated they will rely on sequestration after 2030 or even 2050, to compensate for the absence of near-term climate action.

Land Access Guide to inform climate action implementation

How do we enable the access to land needed to achieve climate actions?

A guide that informs countries which land access pathways they should invest in to implement climate actions will place nations in a better position to develop required infrastructure and achieve climate targets

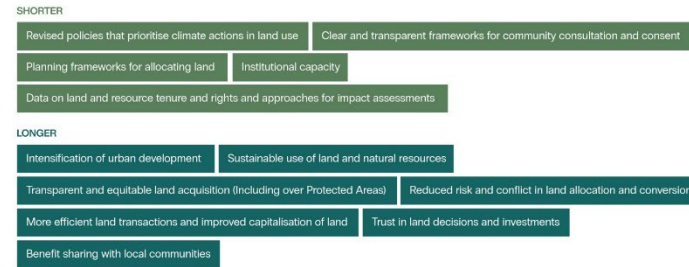
Key sectors with actions that have a direct need for land



Land access pathways



Short to longer-term outcomes



Achievement of climate actions/Paris Goals that is just and equitable

Field verification and community consultations should form an important part of clarifying land tenure and use (in SEA). Before a large infrastructure investment commences, land records should be systematically updated to identify individuals whose property rights, including use and access rights, assets, or livelihoods will be affected.

Who is the guide for?

Members of parties responsible for designing, planning, implementing or assessing climate actions and infrastructure for NDCs in their country





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