

Designing and delivering carbon and biodiversity credit schemes to benefit MPA managers, indigenous peoples and local communities



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Outline of webinar

- **Defining credits and credit schemes: carbon and biodiversity markets**
- **Credit schemes and the marine environment**
- **Integrating credit schemes into MPA management**
 - **ownership and tenure rights**
 - **equity and justice in distribution of benefits to local communities**
 - **facilitating long-term benefits to management**

Defining credits and credit schemes: carbon markets

‘Carbon credit’ – 1 tonne of CO₂ equivalent emissions that can be bought and sold

Carbon credits are traded in the ‘*compliance market*’ through emission trading schemes in order to meet national commitments (NDICs) as part of Paris Agreement

Carbon credits can also be traded in the ‘*voluntary carbon market*’ where companies voluntarily seek to offset their carbon emissions

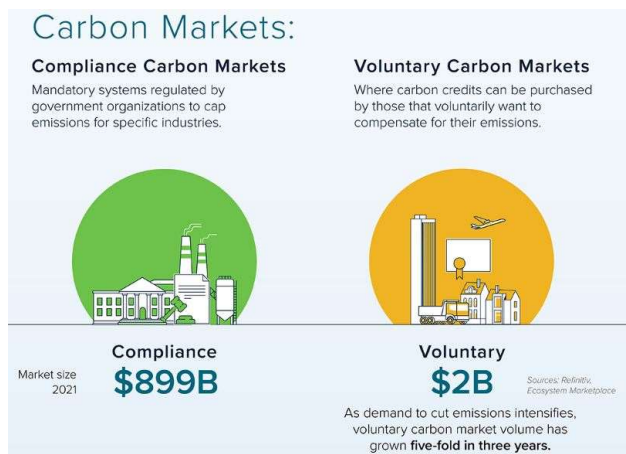
- more correctly termed ‘carbon offsets’

Motives will vary but increasing pressure on companies to account for their environmental impact

- Science-based Targets for Nature (SBTN) and Task Force for Nature Disclosure (TNFD) place increasing emphasis on corporates taking responsibility for emissions

Defining credits and credit schemes: carbon markets

Compliance market far outweighs voluntary market, but latter is increasing rapidly



Voluntary carbon market: credits generated through either

- **emissions avoidance**: enhanced protection of sinks to sequester carbon from atmosphere
- **emissions removal**: create new sinks to sequester more carbon from atmosphere

Defining credits and credit schemes: biodiversity markets

Biodiversity credits: logical progression from carbon trading

- quantify and monetize biodiversity conservation and/or restoration to facilitate progress towards corporate 'nature-positive' objectives and international goals (Convention on Biological Diversity 30x30)

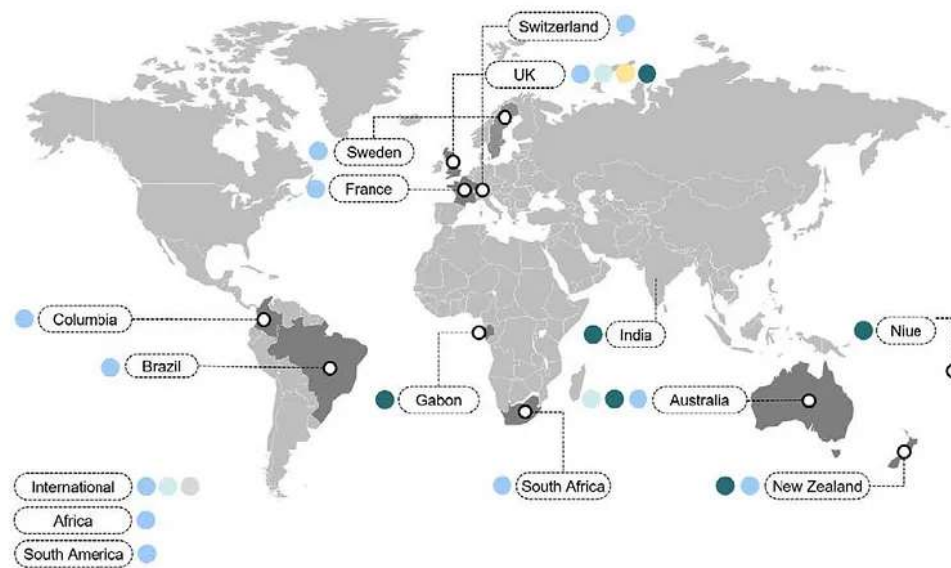
	Biodiversity Credits	Carbon Credits
Goal	Biodiversity preservation & restoration	Carbon sequestration & emission avoidance
Unit of Measurement	<ul style="list-style-type: none">• Species• Habitat• Ecosystem integrity	tCO2e
Purpose of Use	Mostly contributions	Mostly offsetting
Community Focus	Higher	Lower
Locality	Higher	Lower
Tradability	Lower	Higher
Liquidity	Lower	Higher
MRV	More comprehensive	Less comprehensive
Implementation Costs	Higher	Lower

Main points of difference

- 1) Unit of measurement: many alternatives for biodiversity – unlikely to develop single universally accepted metric
- 2) Tradability: differing methodologies and more emphasis on 'retiring' credits to ensure long term gain in biodiversity
- 3) Focus: greater emphasis on smaller scale projects

Defining credits and credit schemes: carbon and biodiversity markets

FIGURE 3: SCAN OF VOLUNTARY BIODIVERSITY CREDIT SCHEMES AND INITIATIVES GLOBALLY²⁴



Credits can be ‘stacked’ , ‘bundled’ or ‘stapled’

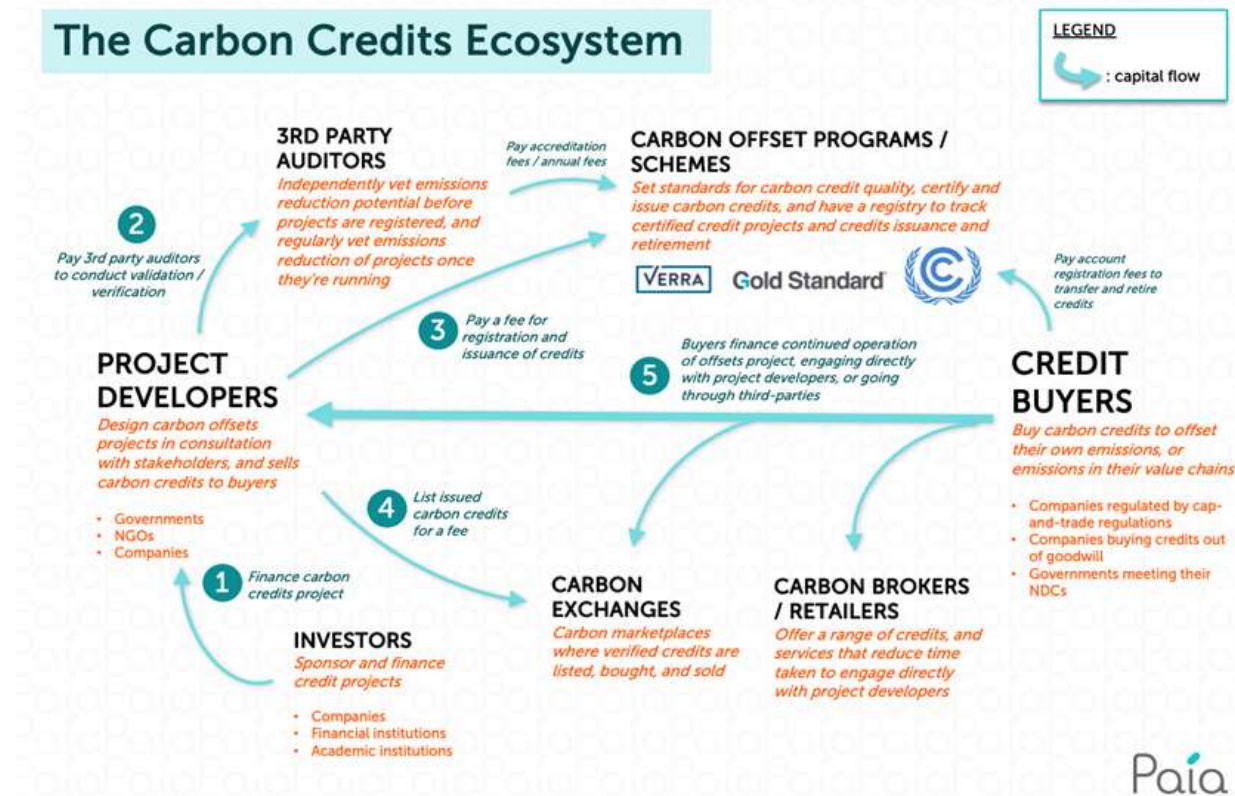
- stacking: credits are sold separately (risk double counting)
- bundled: credits are sold as one - enable investment where low carbon storage but high biodiversity (eg coral reefs)
- stapled: carbon credits sold as ‘nature positive’

‘Nature-based solutions’ used to describe both carbon and biodiversity credit schemes

- reflects interlinked global problems of climate change and biodiversity loss

Defining credits and credit schemes: carbon and biodiversity markets

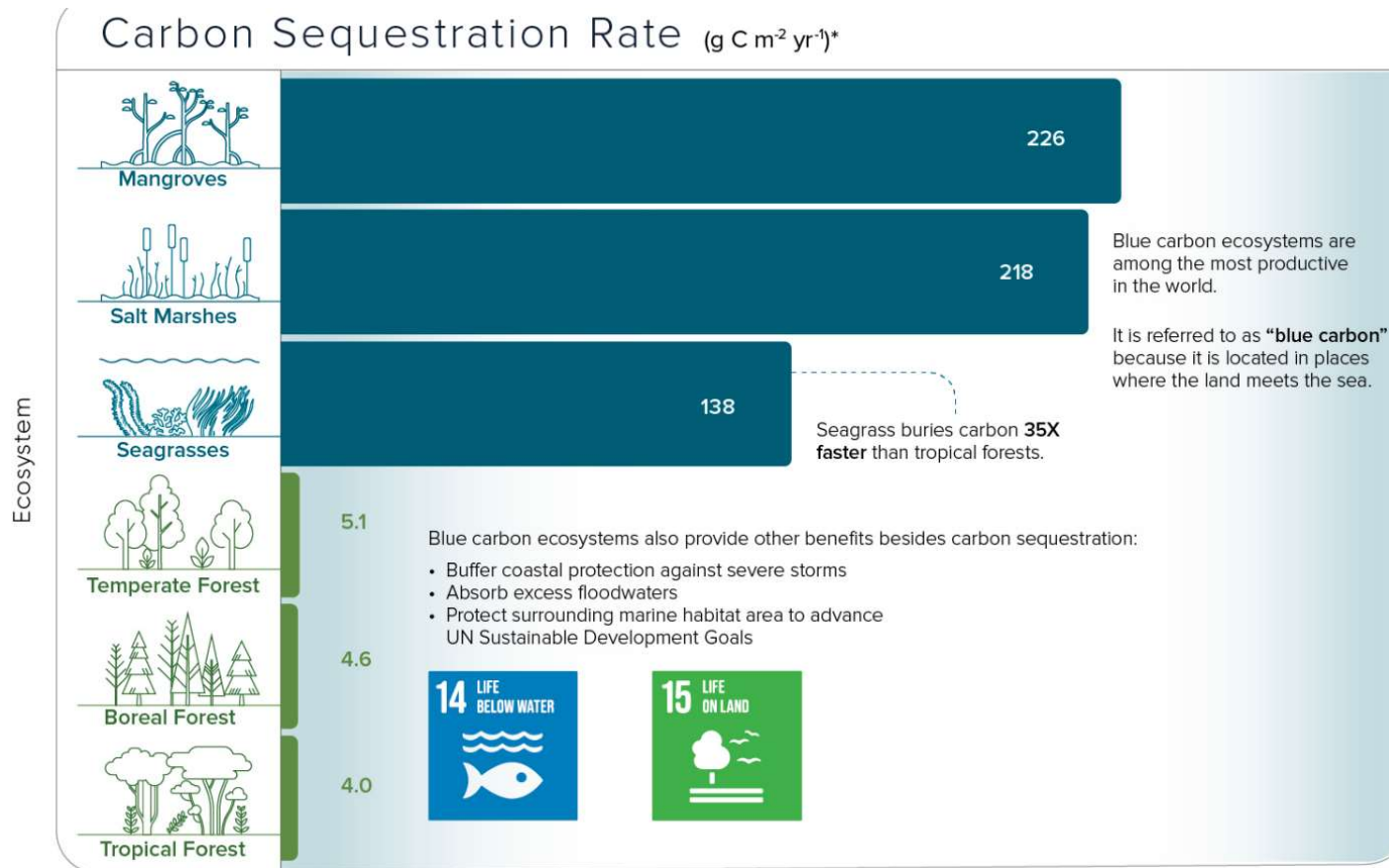
Wide range of new and emerging actors and processes in 'voluntary nature markets'



Source: <https://paiiconsulting.com.sg/carbon-offsets-and-credits-explained/>

Credit schemes and the marine environment

Potential for application to marine ecosystems



High burial rate: majority of carbon is stored subsurface rather than in biomass

Kelp / seaweed: uncertain storage rates but significant contribution due rapid growth

Carbon storage potential coupled with significance in maintaining coastal and nearshore biodiversity

Significant additional co-benefits: ecosystem services provided by marine ecosystems

- food security, hazard protection, recreation and tourism, cultural services, sediment and water quality....

Credit schemes and the marine environment

No data at global scale covering all MPAs, but UNESCO survey of 50 marine World Heritage Sites:

- seagrass, tidal marshes and mangroves
- total carbon storage: 15% of global blue carbon, equivalent to 10% global GHG emissions in 2018
- Great Barrier Reef (37% WHS total), Everglades (29% WHS total), Sundarbans (8% WHS total)

Opportunity for MPAs to generate long term sustainable finance streams through sales of carbon and biodiversity credits

- estimated demand for high quality blue carbon credits approx. \$10 billion, but currently only 11 blue carbon schemes operating worldwide
- credit schemes can operate in pristine and degraded MPAs: emissions avoidance (enhanced protection) in pristine; emissions removal (restoration and rehabilitation) in degraded environments

Integrating credit schemes into MPA management

1 Ownership and tenure rights

Carbon and biodiversity credit sales generate money, therefore who should receive these benefits?

- where resources are under private ownership, individuals' rights to benefits are relatively clear
- where resources are under collective ownership, rights to benefits can be identified
- where resources are under State ownership, concessions to individuals, communities or private sector allow benefits to be allocated and shared

However, ownership and tenure of intertidal and subtidal environments is often unclear and contested

- individual claims to ownership: may or may not have legal status
- Indigenous rights and claims to ownership (individual or collective): may or may not have legal status
- management organisation (MPA authority): may co-exist or conflict with other claims
- state (local, state or national): claims may overlap internally or conflict with others

Integrating credit schemes into MPA management

1 Ownership and tenure rights

Agreements are needed relating to

- ownership of carbon and biodiversity rights
- transfer of rights to enable credit scheme to operate

Subtidal environments (coral reefs, seagrass, kelp forests)

- leasing of rights from State similar to procedures followed in offshore oil and gas exploration

Intertidal environments (marshes, seagrass, mangroves)

- more complex procedures required, reflective of existing user claims – particularly Indigenous groups

State government attitudes and legislation may hinder process, particularly if State asserts authority over credit schemes (eg meeting Paris Agreement / CBD targets)

Integrating credit schemes into MPA management

1 Ownership and tenure rights

Role of MPA managers can be crucial

- facilitate processes of resolving ownership and tenure claims
- help identify priority areas for potential credit schemes
- act as broker between IPLCs (Indigenous peoples and local communities), external project developers and State authorities
- facilitate longer term monitoring and evaluation of scheme

Integrating credit schemes into MPA management

2 Equity and justice in distribution of benefits to local communities

Credit price varies according to methods used...

- Wallacea Trust: one biodiversity credit = 1% increase in measured biodiversity $\text{ha}^{-1} \text{yr}^{-1}$ = \$5
- many other credit schemes operate variable credit price

Differing credit schemes have varying criteria relating to allocation of benefits to local communities

- where information available, ranges from 50-90% of value of credit sales in biodiversity markets
- some place additional requirements on 'selling-on' of credits

Integrating credit schemes into MPA management

2 Equity and justice in distribution of benefits to local communities

Benefits from carbon and biodiversity credit sales can be *monetary* (cash, credit, vouchers, tax benefits) or *in-kind* (eg essential services, health, education, infrastructure investment etc)

Benefits can be *individual* or *collective*, usually reflecting resource ownership and tenure

Benefits can be delivered upfront, throughout project or on completion

Importance of designing appropriate structures for benefit delivery

- potential for funds to reach broad cross-section within communities (and, equally, potential for misallocation and misuse of funds)
- potential for benefits to reach MPAs where few alternative sources of finance for communities or park management

Integrating credit schemes into MPA management

2 Equity and justice in distribution of benefits to local communities

Equity and justice have multiple dimensions eg

- distributive: principles underlying allocation of benefits (eg merit or need)
- procedural: ensuring equitable participation in decision-making processes

Whilst ensuring equity and justice will reflect the local context, fundamental principles such as FPIC (full, prior and informed consent) are expected to apply in all circumstances

MPA managers have relevant knowledge and experience in working with resident communities in resource management

Carbon and biodiversity credit schemes involve new relationships, principally with private sector partners, which will require sensitive approaches to participation and close attention to local perceptions of equity and justice

- ‘fair benefits standard’

Integrating credit schemes into MPA management

3 Facilitating long-term benefits to management

Carbon and biodiversity credit schemes operate over long timescales: 25-30 years minimum, with regular (3-5 year) progress monitoring to check scheme is delivering expected outcomes.

Generation and sale of credits therefore occurs regularly over life of project, creating a frequent and (relatively) predictable source of income

Income generation in MPAs often episodic, unpredictable and subject to external influences (government grants, ecotourism, alternative livelihoods)

- credit schemes provide basis for longer term investment and financing strategies to address environmental issues and facilitate community development

Regular monitoring requirements present new opportunities for employment, including marginalised groups within communities, if managed correctly

Conclusions

Carbon and biodiversity credits are integral to marine spatial planning and MPAs (foundational principle 1)

All forecasts point to continued demand, particularly for blue carbon, biodiversity credits and 'high integrity' credits

MPAs offer institutional framework whereby IPLCs can deal with external investors and project developers, leading to sustained flow of benefits to communities and management

What is needed for this to happen?

- New regulations further incentivising corporates to invest in biodiversity alongside carbon credits
- Innovation and goodwill to clarify contested claims over rights
- Effective external auditing to ensure credit schemes are built around equity and justice for rights holders, specifically IPLCs



Thank you for listening!

Any questions or comments?

