The role of nature in addressing the intertwined climate, biodiversity, health and sustainable development crises

Virginia Young Great Eastern Ranges and Gondwana Link





We are witnessing an accelerating downwards spiral for life on Earth

- Feedback loops between biodiversity loss and the decline of ecosystem integrity, increasing greenhouse gas emissions, and damage to ecosystem services amplify the crises confronting human well-being and development, including the growing risks of zoonotic disease escaping natural ecosystems and damaging human health.
- Reversing this spiral begins with preventing further harm to natural (and mixed agroecological) ecosystems
- The next steps require focus on improving and restoring ecosystem integrity and stability at a landscape scale



Linkages between past damage to ecosystems and climate change are illustrated by the severity of the 2019/20 bushfires in Australia.

www.bushfirefacts.org

https://ger.org.au/ger event/bushfire-facts-live/







Key Findings

- The role of climate change is clear –fire weather and fuel dryness rather than fuel load were key contributing factors to the 2019/20 fires.
- Fire risk and fire severity is greater in young (10-30) year old forests) than in long unlogged and old forests.
- Prescribed burns have a limited role to play in preventing fire in severe, extreme and catastrophic weather conditions.



Bridging policy and practice silos to encourage holistic, synergistic action



2018 CBD COP14/5

- Recognised that, just as climate change amplifies the stresses already impacting natural systems, climate change has been and will continue to be exacerbated by biodiversity loss and ecosystem decline
- Expressed deep concern that "escalating destruction, degradation and fragmentation of ecosystems would reduce the capacity of ecosystems to store carbon and lead to increases in greenhouse gas emissions, reduce the resilience and stability of ecosystems, and make the climate change crisis ever more challenging,"



2018 Review of SDG Goal 15 - Life on Land

The Review noted that:

"The monitoring framework of SDG 15 does not capture essential elements related to quality that are crucial for more meaningful results, pointing to the need for additional indicators in areas such as forest intactness, management effectiveness of protected areas, and meaningful integration of biodiversity into other processes. No indicator exists yet to measure the integration of ecosystem and biodiversity values into national planning..."



2019 UNFCC

- UNFCCC COP 25 decision on ambition 1/CP.25
- para 15: "Underlines the essential contribution of nature to addressing climate change and its impacts and the need to address biodiversity loss and climate change in an integrated manner."

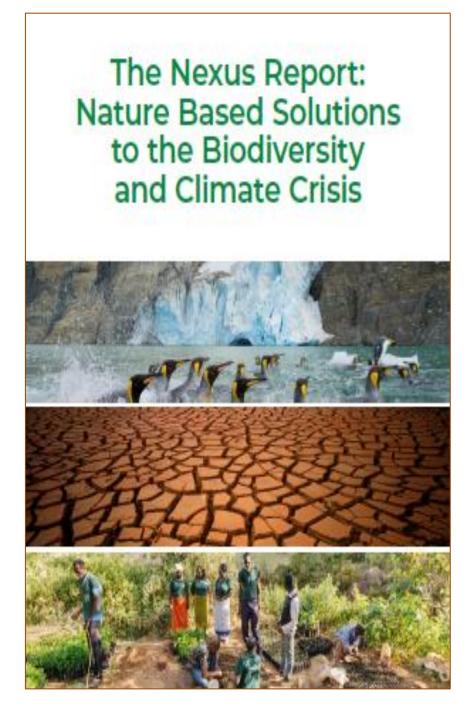


COP25

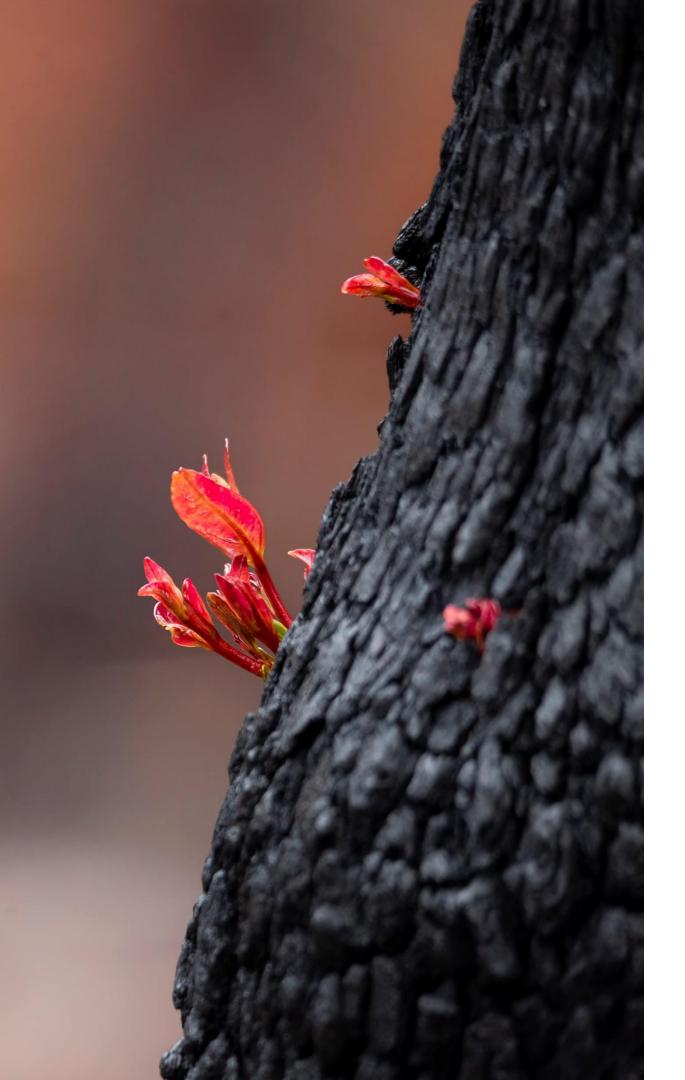
2020 The Nexus Report

- Describes the problems and solutions
- The loss of biodiversity reduces the resilience of both planet and people & narrows our response options for defeating climate change
- Too often, biodiversity & climate change are dealt with in isolation by governments, intergovernmental processes, and other key actors and stakeholders
- Explains why ecosystem integrity (and biodiversity that underpins it) is the linchpin for securing our future.





Authors: Charles Victor Barber, World Resources Institute Rachael Petersen, Earthrise Services Virginia Young, Australian Rainforest Conservation Society Brendan Mackey, Griffith University Cyril Kormos, Wild Heritage



June 2021 The first ever joint IPBES/IPCC workshop

"Biodiversity loss and climate change are both driven by human economic activities and mutually re-enforce each other."

"Neither will be successfully resolved unless both are tackled together."



Are Nature-based Solutions the answer?

- NbS should be an important new way to help solve the climate and biodiversity crises.
- In theory NbS provide a bridge between the silos of the Rio Conventions and those that shape domestic policy and action.
- Whether NbS lives up to the promise of delivering integrated climate and biodiversity outcomes and supports climate resilient sustainable development and community well being, depends on how it is defined and whether current pitfalls can be avoided.





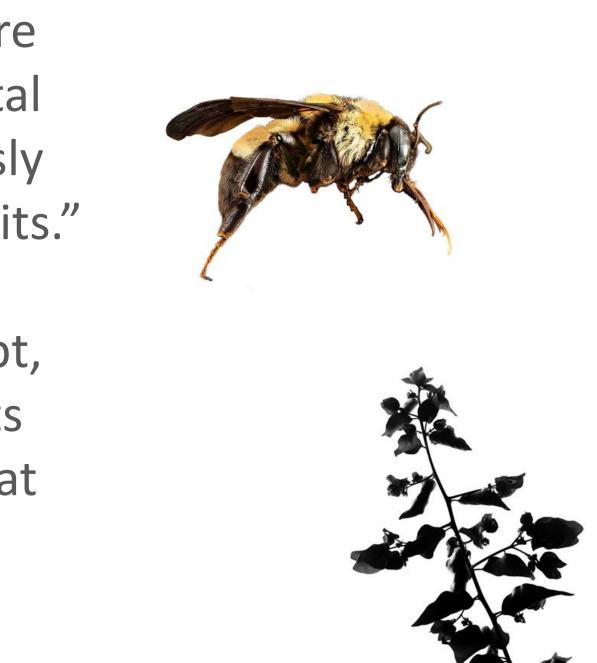
A Robust Definition of NbS?

IUCN definition of NbS 2016

"Actions to protect, sustainably manage, and restore natural or modified ecosystems that address societal challenges effectively and adaptively, simultaneously providing human well being and biodiversity benefits."

In 2020 IUCN noted that NbS is 'an evolving concept, requiring greater clarity with respect to its concepts and elements for acceptance and implementation at scale'.





Opposition to NbS in the CBD

The CBD 'Ecosystem Approach'

"The ecosystem approach is a strategy for the integrated management of land, water and living resources that promotes conservation and sustainable use in an equitable way. Helping to balance the three objectives of the Convention. It is based on the application of appropriate scientific methodologies focused on levels of biological organization which encompass the essential processes, functions and interactions among organisms and their environment. It recognizes that humans, with their cultural diversity, are an integral component of ecosystems."





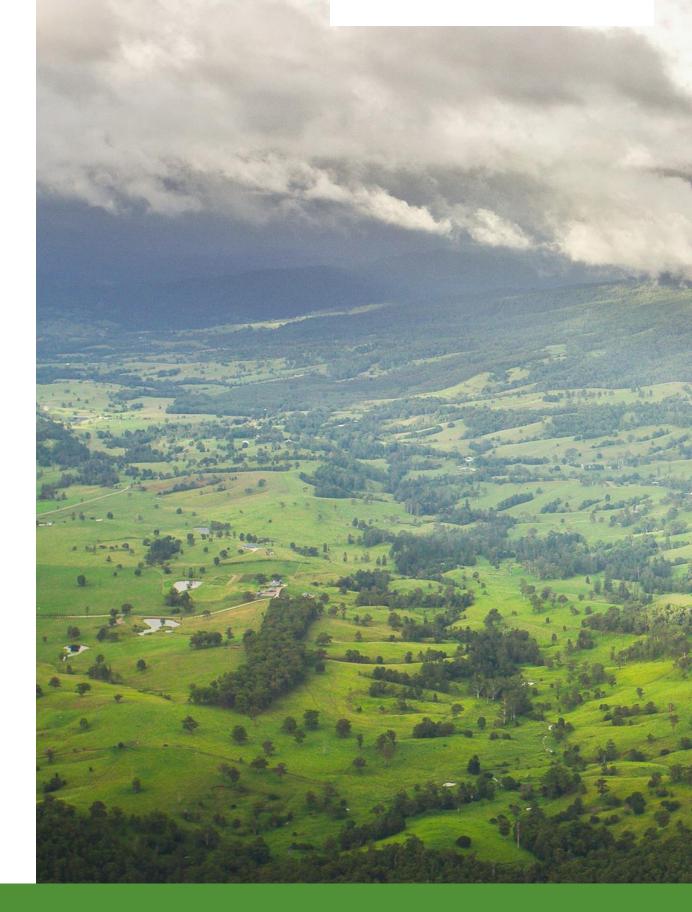


NbS for climate change ?

NbS are claimed to have the potential to provide up to 30% of the solution to climate change. **BUT the term is**:

- In danger of being interpreted by the UNFCCC
 & IPCC to mean any action based on nature;
- Encouraging increased offsetting of fossil fuel emissions; and
- failing to understand or promote the important role of most conservation strategies





Challenge for Climate Policy

The need to recognise and value the functional role of biodiversity in maintaining ecosystem integrity;

AND

The essential role of ecosystem integrity for achieving long term and relatively stable climate, biodiversity and sustainable development goals.







UNFCCC Goal of Net Zero by 2050

Under current accounting rules this goal facilitates offsetting fossil fuel emissions in land and forests and offsetting damage and loss to primary and other natural forests through planting new trees.

Ideally, fungibility between bio carbon and geo carbon should end and new approaches focused on protecting and restoring relatively stable long lived ecosystem carbon stocks developed.





- The potential impact of conservation approaches in helping to tackle climate change is poorly understood by climate decision makers.
- Climate Focus on annual 'net increases' in sequestration obscures the far greater importance of maintaining and enhancing relatively stable long term carbon stocks.
- The superior climate mitigation benefits of multifaceted connectivity programmes are poorly understood.



NET ZERO: A dangerous concept?

- Limiting warming to 1.5 degrees requires deep emissions cuts in all sectors. NbS is being promoted as a way to offset fossil fuel emissions and delay the deep cuts in emissions needed across all sectors.
- Care needs to be taken by the conservation sector to promote NbS for its own direct climate and biodiversity benefits.





What role should connectivity conservation play?

- Grounded in community involvement and action but relevant to policy at all levels.
- Fosters action at many different scales.
- Enables organisations, communities, landholders, and governments at all levels to contribute to large scale transformational change



THE GREAT EASTERN RANGES

Promoting integrated climate and biodiversity action through connectivity conservation:

- Integrated climate and biodiversity action through Connectivity Conservation, delivers robust climate mitigation, adaptation and biodiversity outcomes.
- Protecting and restoring ecosystem integrity at all scales helps achieve longevity and stability.
- Buffering and reconnecting natural ecosystems and improving agroecological practices through landscape scale initiatives is a low risk/high benefit strategy.



Protecting irreplaceable natural assets

- Existing carbon dense ecosystems, including primary and other natural forests, wetlands, riparian zones and near shore marine ecosystems are irreplaceable by 2030 or 2050 for their biodiversity, and climate mitigation and adaptation value.
- While restoration is needed to ameliorate past damage and loss, its impact will be severely constrained if damage and loss continues unabated.
- Connectivity Conservation can and does improve the integrity, resilience and stability of existing high carbon, high biodiversity natural areas. A key strategy for protecting our future





Funding priorities for synergistic NbS:

- Improve conservation management and protection of carbon dense, biodiversity rich ecosystems.
- Support key biodiversity and climate goals through a 'green' and 'just' recovery to Covid 19.
- Provide economic incentives and avoid perverse subsidies.
- Invest in human capital
- Use spatial planning to harmonise nature protection and sustainable development





Funding NbS: The Connectivity investment Case

- Achieve multiple benefits at all scales.
- Higher long term social and economic return/lowest risk investment





Ensuring NbS delivers on its promise means:

- Achieving and showcasing multiple benefits for communities, livelihoods, climate and nature
- Educating decision makers and investors on the benefits of integrated action and shortcomings of one-dimensional approaches.
- Ensuring restoration actions are positive for biodiversity and ecosystem integrity.





