

# **A ROCHA**

## Nature-based Solutions to Climate Change

**A Rocha worldwide family position**

October 2021

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# 1. Executive Summary

**Purpose:** This paper sets out the general position on Nature-based Solutions to climate change (NbS) of the A Rocha worldwide family. NbS is on the agenda of COP26 in Glasgow in November 2021 and we offer this as an input to all national negotiators. It will also be of general application thereafter not just to policy makers but to other sections of society wishing to address the climate and nature crises. This includes churches, para-church organizations, and individual Christians – A Rocha's particular constituency among the public.

**Definition:** Nature-based Solutions are approaches that work with and enhance nature on land and sea, providing benefits for both human wellbeing and biodiversity, to address societal challenges including climate change. Nature-based Solutions to climate change can both avoid greenhouse gas emissions and enhance carbon sinks on land and in the sea as well as build resilience and aid adaptation to climate change for both nature and people.

**Benefits:** NbS therefore offers multiple benefits to people, climate and nature that enhance biodiversity, promote human wellbeing, and support green economic recovery from the COVID pandemic and other shocks. For example, nature stores biological carbon in a diverse array of ecosystems, such as forests, mangroves, and grasslands. NbS that deliver larger and more connected ecosystems, and in better condition, will allow species to move and adapt in response to a changing climate. And NbS can contribute towards all the United Nations Sustainable Development Goals because nature and climate goals underpin production and consumption, which in turn underpin the wellbeing goals.<sup>1</sup>

**Approaches:** We see three main approaches of NbS: protecting intact ecosystems by, for example, ending and avoiding deforestation and reducing degradation of wetlands; restoring degraded ecosystems, such as coral reefs, wetlands, grasslands and forests; and managing grazing, farming and harvesting areas on land and at sea, for example by changing farming practices such as till regimes and livestock densities.

**Risks:** However, NbS are not without risks. These include: diverting attention from the extremely urgent need to cut global greenhouse gas emissions; that projects may be marketed as NbS which have insignificant benefits for either nature or climate and will only be 'greenwash'; and that projects may have perverse and unintended side-effects. For example, large-scale tree planting to sequester carbon could have serious negative impacts upon nature if it replaced native forests and naturally occurring open habitats with non-native forest monocultures.

**Principles:** Based on our understanding of the science, our own experience and our Christian faith, we propose a set of principles to be followed by decision-makers in relation to NbS. These support and encourage the use of NbS as defined by the IUCN (of which A Rocha is a member); the view that governments must be consistently clear that NbS are not a substitute for the rapid phase out of fossil fuels; that NbS for climate action must also deliver for nature; and that NbS for the specific purposes

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1 United Nations Environment Programme (2021). *Making Peace with Nature: A scientific blueprint to tackle the climate, biodiversity and pollution emergencies*. Nairobi. <https://www.unep.org/resources/making-peace-nature>

of combating climate change, are themselves no substitute for a comprehensive international drive to protect the Earth's remaining intact ecosystem.

If carried out in the form above, we believe NbS to climate change would respect key biblical principles including: God's creation of and continuing care for the earth and all that is in it, declaring it 'all very good'; humanity's responsibility to reflect God's image in working and taking care of the earth; Jesus's command to 'Love your neighbour as yourself'; and God's justice and mercy towards the oppressed, marginalized and powerless.

**Proposals for COP:** Our recommendations for governments include: ensuring that NbS are included in Nationally Determined Contributions; agreeing to enact Article 6 of the Paris Agreement to support tightly regulated offset markets; and harmonizing the goals and mechanisms of the climate and biodiversity conventions for NbS.

Civil society has an important role to play, and churches within that. Our recommendations to churches include: sharing their learning across borders and traditions; assessing the capacity of their landholdings to contribute to NbS; and rich-country churches setting ambitious targets to continually reduce carbon emissions and become Carbon Neutral as part of global efforts to reach Net Zero.

## 2. Purpose of this position paper

This paper sets out the general position on Nature-based Solutions to climate change (NbS) of the A Rocha worldwide family. The paper is primarily intended as a contribution to national and international policy development and decision-making by A Rocha organizations engaging with their national representatives in advance of and during the 26th Conference of Parties (COP26) to the United Nations Framework Convention on Climate Change (UNFCCC).

In addition, we hope it will be useful for informing other groups within civil society, including churches and para-church organizations, about the subject of NbS and how they can deploy them appropriately.

The paper is based on our understanding of the relevant science, our practical experience of nature conservation in a context of climate change, and our understanding of the broad political and economic context in late 2021. It is underpinned by our biblical/theological understanding of the responsibility of humans to care for the natural environment and people. It is also underpinned by more than 30 years' experience as a network of how to bring together science and Christian faith to achieve positive outcomes for people and nature.

While it will be of general application in domestic and international policy processes, a final section sets our position towards NbS in relation to the forthcoming COP26 which will take place in Glasgow, UK, in November 2021.

The subject of NbS is of significance to us as a network of Christian conservation organizations for several reasons, including:

- **Co-benefits:** There is growing recognition in scientific circles that conservation and climate mitigation/adaptation have large potential 'co-benefits' – if done well, much of what is good for nature will also be good for the climate, and vice versa. So, we need to understand what 'well' looks like, pursue it intentionally, and recognize the potential pitfalls to avoid.
- **The opportunity of growing public and political awareness:** There is growing public recognition in some countries of a biodiversity loss crisis, as well as a climate crisis. This provides an important opportunity to act faster by finding solutions that work for both. The fact that governmental and intergovernmental fora are also recognizing the linkages – for example, Nature-based Solutions on the agenda for the COP26 climate negotiations – provides further opportunities to ratchet up public and political awareness and commitment to action on nature and climate.
- **Necessity of a community-based approach:** Nature-based Solutions are inherently spatially explicit, meaning that effective implementation of them must engage land managers, owners, and those with resource and land rights. This requires a community-based approach to succeed – something the A Rocha worldwide family is committed to, and to which churches can make an important contribution. Key to this approach must be an adherence to the principles of free, prior and informed consent.

- **The opportunities and risks of greater funding for 'nature':** Government and corporate spending on climate mitigation and adaptation will increasingly be directed to 'natural solutions.' This has the potential to increase funding towards nature conservation but there is also a risk that, in governments' drive to take faster action on climate change, they 'use' nature in a way that abuses or damages other aspects of it.
- **The biblical mandate for action:** As Christians we believe that the Bible, the foundational guide for our faith, gives a clear mandate for humans to care for the environment – from individual species to the whole climate system. So mobilizing the global Christian community to play this role by taking a holistic, integrated approach to climate and nature could make a very significant contribution to the enormous global challenges ahead of avoiding climate catastrophe and mass species extinction.

In light of the above we believe there is an urgent need for a more rounded understanding of Nature-based Solutions to climate change and their potential benefits and risks among governments and civil society, including A Rocha organizations and their audiences. We urge all civil society groups with relevant experience or insight to feed into the national and international debates and policy processes on this subject, to secure the greatest possible co-benefits for climate and nature and to avoid potential pitfalls. To that end, the A Rocha worldwide family wishes to share its expertise and recommendations with governments and the rest of civil society and invites feedback so that we can also learn from others.

## 3. Scientific evidence, opportunities and risks

### 3.1 The evidence and opportunities

Nature-based Solutions are approaches that work with and enhance nature on land and sea, providing benefits for both human wellbeing and biodiversity, to address societal challenges<sup>2,3</sup> including climate change.<sup>4</sup> Nature-based Solutions to climate change can both avoid greenhouse gas emissions and enhance carbon sinks on land and in the sea as well as build resilience and aid adaptation to climate change for both nature and people.

NbS therefore offer multiple benefits to people, climate and nature that enhance biodiversity, promote human wellbeing, and support green economic recovery from the COVID pandemic and other shocks. Another way of saying this is: NbS builds resilience in nature, communities and food systems by mitigating climate change and helping people and ecosystems adapt to more extreme weather.

Nature stores biological carbon in a diverse array of ecosystems, such as forests, mangroves, grasslands, soils, seagrass beds, crops, coral reefs, marine sediments, and wetlands. When these are destroyed or damaged, the carbon dioxide, as well as other potent greenhouse gases such as methane and nitrous oxide, are released into the atmosphere where they contribute to climate change for many decades. When damaged ecosystems regenerate and regrow, they draw carbon out of the atmosphere and re-store it in the ecosystem. NbS can therefore help mitigate climate change by both reducing emissions into the atmosphere by avoiding ecosystem destruction, and by absorbing atmospheric CO<sub>2</sub> when ecosystems are restored.

NbS can also help biodiversity as well as human societies adapt to the impacts of global heating. NbS that deliver larger and more connected ecosystems and in better condition, will allow species to move and adapt in response to a changing climate. NbS can moderate rising heat in urban areas, protect coastal areas from rising sea levels and increasing storm surges, and increase drought resistance of rangelands.

NbS can contribute towards all the United Nations Sustainable Development Goals because nature and climate goals underpin production and consumption, which in turn underpin the wellbeing goals.<sup>5</sup>

Planting of native trees is a well-known form of Nature-based Solution to climate change. However, it is only one of many approaches.<sup>6</sup> Large-scale tree planting may be essential in countries or landscapes where deforestation and overgrazing has

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2 IUCN, 2020. *Global Standard for Nature-based Solutions. A user-friendly framework for the verification, design and scaling up of NbS*. First edition. Gland, Switzerland: IUCN.

3 Nature Based Solutions Initiative: <https://www.naturebasedsolutionsinitiative.org/what-are-nature-based-solutions/> Chausson, A, 2020. *Mapping the effectiveness of nature-based solutions for climate change adaptation*, *Global Change Biology*, 26, 6134–6155.

4 Natural climate solutions can sometimes refer to NbS but may also include actions that are more purely climate focussed without the same benefits to biodiversity or society.

5 United Nations Environment Programme (2021). *Making Peace with Nature: A scientific blueprint to tackle the climate, biodiversity and pollution emergencies*. Nairobi. <https://www.unep.org/resources/making-peace-nature>

6 Griscom, B.W. et al. 2017, Natural climate solutions. *Proceedings of the National Academy of Sciences*, 114, 11645–11650; DOI: 10.1073/pnas.1710465114

removed forests and soil seed banks. However, in countries and landscapes where large-scale deforestation is still occurring, tree planting should not be the priority but rather forest conservation. Tree planting is a much more expensive NbS than ending major forest destruction. Further, not all trees are efficient at storing carbon. Poorly planned afforestation can worsen climate change by planting trees with dark green leaves that absorb more sunlight than, say, lighter coloured grasses or soil.<sup>7, 8</sup> Various governments and NGOs have announced plans to plant hundreds of millions of – or a billion, or even a trillion – trees as a major NbS to address climate and nature crises.<sup>9</sup> However, the priority NbS involving forests and woodlands should firstly be protecting existing forests, then restoring degraded forests and then major tree planting, as proposed by Trillion Trees and 1t.org.<sup>10, 11</sup>

Climate-ready revegetation through tree planting and direct seeding is increasingly critical to enable future vegetation to better cope with the impacts of climate change. This might involve favouring plants which are more tolerant of hotter and drier conditions to establish vegetation that will be more resilient as global heating worsens.

On land, most carbon occurs in soil rather than in trees.<sup>12</sup> The top metre of the world's soils are a vast carbon store. Managing soils is key as erosion causes loss of soil carbon levels and also reduces forest growth.

The potential contributions of NbS for climate are not unlimited. With large scale implementation NbS could possibly sequester 10 billion tonnes of carbon dioxide equivalents each year,<sup>13</sup> and as much as 20 billion tonnes per year amid certain conditions.<sup>14</sup> Given that agriculture, forestry and other land use (AFOLU) is responsible for ~10–12 billion tonnes per year of emissions<sup>15</sup> NbS might only be sufficient to counteract this one sector, let alone emissions from fossil fuels. Nonetheless, NbS can make a substantial contribution, and this highlights how far out of line is the 2.5% of climate mitigation financing that has been directed towards NbS.<sup>16</sup>

There are three main approaches of NbS: protecting, restoring and managing. Each

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7 Kirschbaum, M, et al., 2011. Implications of albedo changes following afforestation on the benefits of forests as carbon sinks. *Biogeosciences*, 8, 3687–3696. doi:10.5194/bg-8-3687-2011

8 Popkin, G, 2019. How much can forests fight climate change? *Nature*, 565, 280–282. doi: <https://doi.org/10.1038/d41586-019-00122-z>

9 Major tree planting initiatives are being implemented, or have been announced, by many nations and NGOs, including China, World Economic Forum, Pakistan, the Sahel, Trillion Tree Campaign and The Nature Conservancy.

10 Trillion Trees is a joint venture between BirdLife International, Wildlife Conservation Society and WWF. It works to protect and restore forests and end deforestation.

11 1t.org is part of the World Economic Forum's efforts to accelerate Nature-based Solutions and was set up to support the UN Decade on Ecosystem Restoration 2021–2030. Its goal is conserving, restoring and growing 1 trillion trees by 2030.

12 IUCN, 2015. *Land Degradation and Climate Change: The multiple benefits of sustainable land management in the drylands*. Issues brief.

13 Griscom, B.W. et al. 2017, Natural climate solutions. *Proceedings of the National Academy of Sciences*, 114, 11645–11650; DOI: 10.1073/pnas.1710465114

14 Girardin, C.A.J., 2021. Nature-based solutions can help cool the planet — if we act now. *Nature*, 593, 191–194.

15 United Nations Climate Change, 2021. Introduction to Land Use. Available for viewing at Introduction to Land Use

16 Griscom, B.W. et al. 2017, Natural climate solutions. *Proceedings of the National Academy of Sciences*, 114, 11645–11650; DOI: 10.1073/pnas.1710465114



of these can reduce emissions into the atmosphere as well as draw CO<sub>2</sub> out of the atmosphere.

**A. Protecting intact ecosystems** by, for example, ending and avoiding deforestation and reducing degradation of wetlands, grasslands and marine and coastal systems will prevent new emissions, allow those systems to draw down more CO<sub>2</sub>, and ensure they can function in adaptation. This can be achieved by establishing protected and conserved areas and addressing the major drivers of degradation such as logging, altered fire regimes, invasive species and infrastructure development.

**B. Restoring degraded ecosystems** can happen cost-effectively by enabling natural regeneration to proceed. The enabling may require active changes to exploitative practices by, for example, preventing bottom trawling, reducing disturbance, or preventing sedimentation. Natural regeneration can be assisted such as by seeding and planting, or engineering to reverse the effects of wetland drainage. More active restoration may be needed of, for example, coral reefs, or other seriously depleted ecosystems.

**C. Manage grazing, farming and harvesting areas on land and at sea** can involve novel and improved practices such as no-till and conservation agriculture, changing equipment to reduce harvesting impacts, and reduced livestock densities.

NbS vary greatly in the contribution they could make and in their cost effectiveness. For example, avoiding deforestation, forest restoration, increasing trees in agricultural landscapes and avoiding damaging and destroying peatlands could make the greatest contributions globally.<sup>17</sup> However, for individual nations these priorities may differ and involve other actions that maximize emissions reductions and which yield greatest benefits for people and nature<sup>18</sup>. Conservation and restoration often entail a significant change in land and sea use, which requires consent from local communities, financial incentives and support from governments.

## 3.2 The risks

### A. Diversion from reducing emissions

The biggest danger to climate change as well as nature loss is diversion or distraction: that some politicians and businesses who were always reluctant to address the need to get our economies off fossil-fuel, will now promote 'Nature-based Solutions' as a magic bullet, to delay other necessary actions they wish to avoid. The single biggest contribution to global heating remains fossil fuel burning. And we have to stop this very fast.

### B. Greenwash

There is a clear risk that some businesses that generate emissions from fossil fuel production and use will attempt to use NbS to distract from their damaging core operation by undertaking projects which simply greenwash the damage done by them.

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<sup>17</sup> Girardin et al., 2021. Nature-based solutions can help cool the planet — if we act now. *Nature*, 593, 191–194.

<sup>18</sup> Roe et al. (In press). Land-based measures to mitigate climate change: potential and feasibility by country. *Global Change Biology*

### C. Offsetting reduces incentive to phase out fossil fuels

A particular threat of diversion and greenwash comes from the use of carbon offsetting schemes in place of emissions reductions. As set out above, NbS must not replace rapid, ambitious action to phase out the burning of fossil fuels and a general reduction of energy demand, especially in countries of the Global North. Some 'offsetting' schemes, where nature in the form of, say, reforestation schemes, is presented as compensating for greenhouse gas emissions elsewhere, could increase greenhouse gas emissions if businesses or countries choose to offset before doing the maximum to cut their actual emissions. Such an 'offsetting first' approach will prolong the fossil fuel era and lead to even more dangerous climate change. A global standard for NbS was adopted in 2020 by the IUCN<sup>19</sup> after extensive worldwide consultation; applying this standard is critical in reducing misuse of supposed offsets which would delay phasing out fossil fuels.

### D. Perverse and negative impacts

Interventions that have been described as Nature-based Solutions for climate change can in fact have negative or perverse impacts upon nature and people when poorly designed and implemented.<sup>20</sup> Such interventions are not NbS as defined by IUCN. The goal should be creating NbS that are positive for climate, biodiversity and people. This means conserving and restoring biodiversity from the scale of the gene to the ecosystem, and working in partnership with local communities while respecting Indigenous and other rights.

For example, large-scale afforestation to sequester carbon that is poorly planned can have serious negative impacts upon nature by replacing native forests and naturally occurring open habitats with non-native forest monocultures. Large-scale production of biofuels, such as ethanol from corn to replace fossil fuel use in cars, can reduce food availability, compete for scarce high value agricultural land, stretch water supplies, and require intensive application of pesticides or herbicides. Similarly, trees harvested for 'Bioenergy with Carbon Capture and Storage' (BECCS) can lead to loss and degradation of natural habitats to provide the required biomass<sup>21</sup> with even worse impacts when native forests are cleared to grow monocultures of fast-growing non-native eucalypts or pines.

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19 IUCN, 2020. *Global Standard for Nature-based Solutions. A user-friendly framework for the verification, design and scaling up of NbS*. First edition. Gland, Switzerland: IUCN.

20 IPBES-IPCC Co-sponsored Workshop: Biodiversity and Climate change. Scientific Outcomes. See page 25.

21 Biomass can include tree trunks, branches, leaves or manufactured wood pellets.

## 4. Principles for implementing Nature-based Solutions

Based on our understanding of the science, our own experience and our Christian faith, and with due humility regarding the limits of human understanding, we propose the following principles should be followed by decision-makers in relation to NbS.

- A. **We support and encourage the use of NbS as defined by the IUCN** to address climate change and habitat and species loss. NbS are an important complement to the rapid phaseout of fossil fuels and an end to large-scale conversion of the world's carbon sinks.
- B. **Governments, however, must be consistently clear that NbS are not a substitute for the rapid phase out of fossil fuels**,<sup>22</sup> but can only complement them to limit Earth's temperature rise as close as possible to 1.5oC under the Paris Agreement.
- C. **NbS should be implemented with the free, prior and informed consent of Indigenous Peoples and local communities** in a way that respects their cultural and ecological rights through ensuring transparency, inclusion and equity;<sup>23</sup> NbS should be developed in a bottom-up way that recognizes local knowledge and customary practices that are beneficial to people, nature and climate, such as low or no-till farming practices.
- D. **NbS for climate action must also deliver for nature** and not just be delivered by nature to ensure NbS are not detrimental to nature and people.
- E. **NbS, therefore, should be designed and implemented to achieve measurable positive outcomes** to the climate and nature as well as providing health, wellbeing and economic opportunities for people.<sup>24,25</sup> They should certainly do no harm to nature.
- F. **NbS for the specific purposes of combating climate change, are themselves no substitute for a comprehensive international drive to protect the Earth's remaining intact ecosystems** and biomes which are of importance for both biodiversity and carbon storage, while also protecting people from climate change impacts.<sup>26</sup> NbS can contribute to this drive and must be pursued in a manner which is consistent with it.

These principles should be embedded in, and assured by, adequate policy, governance and evaluation methods by local, national government and intergovernmental organizations. These should encourage uptake of NbS and adherence to these

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22 Seddon, N, and Smith, A, et al., 2021. Getting the message right on nature-based solutions to climate change. *Global Change Biology*, 27, 1518–1546. <https://doi.org/10.1111/gcb.15513>

23 Ibid.

24 Ibid.

25 Stafford, R, et al., 2021. *Nature-based solutions for climate change in the UK: a report by the British Ecological Society*, London, UK. Available at: [www.britishecologicalsociety.org/nature-based-solutions](http://www.britishecologicalsociety.org/nature-based-solutions)

26 Austin, W, et al, 2021. *Nature-based solutions for climate change, people and biodiversity*. COP26 Universities Network Briefing / April 2021, see p 2.

principles from interconnected local projects through to continental scale initiatives. They should also seek to ensure 'join up' at national and international levels, for maximum global impact in the face of the climate and biodiversity emergencies;<sup>27</sup>

If carried out in the form above, we believe NbS to climate change would respect key biblical principles including:

- The Earth was created by God to be good (Genesis 1:31).
- Humanity does not own the Earth, but rather people were created in God's image to 'work it and take care of it' (Genesis 1:26–28; 2:15; Psalm 24:1–2; Psalm 50:10–12).
- Jesus's command to 'Love your neighbour as yourself' (Mark 12:31) rather than loving money (Matthew 6:24; Hebrews 13:5) and being greedy (Proverbs 1:19; Luke 12:15), or hypocritical (Romans 12:9, Matthew 7:3–5).
- God's saving care and compassion not only for humanity but all creatures and the ecosystems that support them (Genesis 9:8–17; Psalm 104:5–28; Psalm 145:8–9; Job 38–39).
- God's justice and mercy towards the oppressed, marginalized, poor, vulnerable, orphans and powerless (Psalm 146:6–8; Psalm 10: 14–18; Amos 5:12; Zechariah 7:9–10; Micah 6:8; Matthew 25:35–36).
- Restitution should be made for stealing or harming others' property or livelihoods by repaying them at least the value of the damage caused (Exodus 22:1, 3–6; Leviticus:2–5; Luke 19:8).

See Appendix for further reading on the biblical basis for care of the environment.

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<sup>27</sup> Stafford, R, et al., 2021. *Nature-based solutions for climate change in the UK: a report by the British Ecological Society*, London, UK. Available at: [www.britishecologicalsociety.org/nature-based-solutions](http://www.britishecologicalsociety.org/nature-based-solutions)

## 5. Proposals for COP26 and beyond

### 5.1 For governments

#### A. Included in NDCs

Prior to COP26, all governments should ensure that NbS, as defined by IUCN, are included in their Nationally Determined Contributions (NDCs), setting out their voluntary emissions targets and how they intend to achieve them. Countries should explore and include the potential for NbS to contribute to both climate mitigation (cutting emissions) and adaptation (building resilience of people and economies to the impacts of climate change). They should also link what they propose on NbS to national biodiversity plans and commitments made or being developed under the Convention on Biological Diversity, to ensure maximum policy consistency, integration and impact.

#### B. Enact Article 6 of the Paris Agreement to support tightly regulated offset markets

Significantly increasing support and financing for NbS depends upon COP26 agreeing how to make Article 6 of the Paris Agreement operational. Article 6 requires a mechanism ...

*'(a) To promote the mitigation of greenhouse gas emissions while fostering sustainable development; (b) To incentivize and facilitate participation in the mitigation of greenhouse gas emissions by public and private entities authorized by a Party.'*

A tightly regulated compliance offset market could contribute to Article 6 and promote effective NbS.<sup>28</sup> However, offsets should only be permitted once the offsetter, usually a rich nation with large per capita emissions, has clearly demonstrated reductions in fossil fuel use consistent with a 1.5oC outcome. If the market is not tightly regulated, offsets present real risks of global inequality as wealthier nations are enabled to maintain costly economies and lifestyles whilst looking to poorer nations to compensate for these. A verified standard that prevents offsetting by those who have made inadequate progress to reduce fossil fuel emissions could help reduce this risk.

#### C. Harmonize goals and mechanisms of the climate and biodiversity conventions for NbS

NbS can help achieve the goals of both the UN Framework Convention on Climate Change and the Convention on Biological Diversity. The first draft of the CBD Post-2020 Global Biodiversity Framework proposes a target of protecting 30% of land and sea by 2030, and at least 20% of degraded freshwater, marine and terrestrial ecosystems under restoration<sup>29</sup>. NbS goals and mechanisms under the climate and biodiversity COPs should be harmonized to fully embed NbS in both and to avoid confusion and perverse outcomes.

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28 Girardin, C.A.J., 2021. Nature-based solutions can help cool the planet — if we act now. *Nature*, 593, 191–194.

29 United Nations Environment Program, 2020. First Zero Draft Of The Post-2020 Global Biodiversity Framework. Prepared by the Open-ended working group on the post-2020 global biodiversity framework. D. 2030 action targets, (a) Reducing threats to biodiversity 12.a.2.

#### **D. Ensure free, prior and informed consent by Indigenous communities and local communities for NbS**

Free, prior and informed consent (FPIC) must be secured prior to NbS being implemented, otherwise there are risks that projects will have negative and perverse outcomes for Indigenous peoples and local communities. This is a particular risk when NbS are proposed by high-carbon governments and corporations in the Global North seeking emissions offsets to be implemented in the Global South where access to information and good governance may be lacking.

#### **E. Ensure that the potential contributions of NbS are considered in all four goals for COP26 set out by the host government (UK), which are:**

- Secure global net zero by mid-century and keep 1.5 degrees within reach
- Adapt to protect communities and natural habitats
- Mobilize finance
- Work together to tackle climate change

NbS has the potential to make a significant contribution in all areas. It will also need resourcing so agreement should be advanced or reached on how to do that.

#### **F. Promote the potential of NbS to create good quality and sustainable livelihoods**

As the world continues to struggle with COVID and its impact on national economies, and many national populations continue to grow, there is an urgent need to create jobs, whether for young adults entering the job market or for those who have lost them. The need for economies to rapidly exit fossil fuel will also require the creation of alternative employment for those affected by this switch. Along with renewable energy, NbS have considerable potential to create good quality employment, for example in:

- Land regeneration, including reforestation, restoration of wetlands and grasslands, urban greenspace creation and restoration
- Land and biodiversity mapping
- Processing, manufacturing and sale of sustainable products
- Eco tourism
- Local and national governance

There will be a particular need to enable Finance Departments, accustomed to working with economies driven by fossil-fuel, extractive industries, and unsustainable production and consumption, to understand and support NbS as part of a wider strategy to slash carbon emissions rapidly and help countries to adapt to climate change impacts. National leaders attending COP should specifically commit their Finance Departments to acting in support of NbS.

## **5.2 For churches and para-church organizations**

The Christian church, globally, has very significant land assets as well as experience of living sustainably. It also has, in some countries, significant partnerships with private landowners, business and governments, which it could seek to influence. Therefore we call upon churches and church institutions in all countries to:

**A. Share their learning across borders and traditions**, to accelerate and maximize the contribution of church-managed land to addressing climate change and its impacts, and to protecting nature through NbS.

**B. Assess the capacity of their landholdings to contribute to NbS**, and to develop and publish plans for them to do so within two years of COP26, or integrate NbS fully into existing environmental strategies and plans.

**C. We call on churches in rich countries to set ambitious targets to continually reduce carbon emissions and become Carbon Neutral<sup>30</sup>** as part of global efforts to reach Net Zero, including offsetting their unavoidable emissions by supporting churches in poorer countries most affected by climate change.

**D. We call on churches to influence other landholders** to steward their land for nature and address climate change.

**E. We strongly encourage churches to form and join networks** at the national level to learn and support each other in accelerating local churches' response to the climate and biodiversity crises, including implementing NbS locally.

**F. We call on Christian leaders to model actions towards carbon neutrality** in their own lives and challenge individuals and organizations within their sphere of influence to radically reduce dependency on fossil fuels.

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30 'Net Zero' has no officially agreed definition and is more appropriate for use at a global/national level rather than by individual organizations. To be 'Carbon Neutral' an organization must have assessed at least its Scope 1 and 2 emissions, reduced emissions through a target-driven carbon management plan, and offset excess emissions. (See PAS 2060 <https://www.bsigroup.com/en-GB/pas-2060-carbon-neutrality/>).

## Appendix – Reading on the biblical basis for concern for biodiversity

The following publications about Christian concern for the climate and the natural world include many authors who are associated with A Rocha:

A Rocha International, Lausanne and World Evangelical Alliance (2020) *An Evangelical Call to Action on Biodiversity* <https://www.weacreationcare.org/call-to-action-on-biodiversity>

Bookless, Dave (2008) *Planetwise: Dare to Care for God's World*. Nottingham, Inter-Varsity Press.

Lowe, B.S., Lamb, R.L. and Padilla-DeBorst, R. (2021) *Reconciling Conservation and Development in an Era of Global Environmental Change: A Theocentric Approach*. *Christian Relief, Development, and Advocacy* 2(2): 49–64.

Marlow, Hilary (2008) *The Earth Is the Lord's: A Biblical Response to Environmental Issues*. Cambridge: Grove Books

Moo, J. and Moo, D. (2018) *Creation Care: A Biblical Theology of the Natural World*. Zondervan.

Simiyu, S. and Harris, P. (2008) *Caring for Creation: Part of our Gospel Calling*. Cambridge: Grove Books

Sluka, Robert (2021) *Marine plastics*. Cambridge: Grove Books

White, R. S. and Bell, C. (eds.) (2016) *Creation Care and the Gospel: Reconsidering the Mission of the Church*. Hendrickson Publishers.