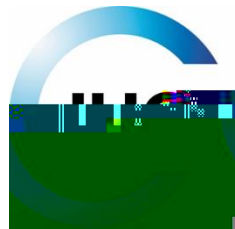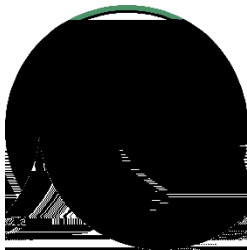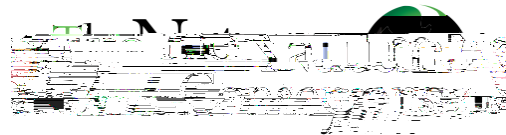# Joint Submission to the Talanoa Dialogue

Natural Climate Solutions

The Nature Conservancy (TNC), Conservation International (CI), International Union for Conservation of Nature (IUCN), National Wildlife Federation (NWF), Forest Trends, Blue Ventures, Center for Carbon Removal (CCR), and Wildlife Conservation Society (WCS)

The science supporting natural climate solutions

A recently published study in the Proceedings of the National Academy of Sciences (PNAS), "Natural climate solutions," calculates the scientific and economic potential for terrestrial and coastal ecosystems –

Further more, what makes natural climate solutions compelling is that they can deliver storage and sequestration benefits, while also supporting adaptation to climate change by helping ensure ecosystems, economies and communities are more resilient to unavoidable climate impacts. Moreover, these nature-based interventions also offer other environmental and social co-benefits, such as improved soil quality, cleaner air and water, higher coastal resilience and biodiversity conservation.

It is important to stress and reiterate that the mitigation potential of these ecosystems is one important avenue to achieve the Paris Agreement goals; they should not be seen as a substitute for

Agricultural Lands and Grasslands : Avoided Grasslands Conversion, Biochar, Cropland Nutrient Management, Conservation Agriculture, Integration of Trees in Croplands, Improved Rice Cultivation, Optimal Grazing Intensity, Planting Legumes in Pastures, Improved Animal Feed, Animal Management

These biomes include a diversity of land uses, including areas of protection, conservation, productive lands (e.g. agriculture, forestry), and restoration. Below we explore in more detail some examples of how these pathways could be used to help Parties identify opportunities provided by natural climate solutions to enhance their next NDC.

Forests: The forest-based natural climate solutions involve reforestation, avoided forest conversion and forest management pathways. The mitigation potential for the reforestation pathway is shown below.[7] The hues indicate mean density of additional mitigation potential (maximum mitigation with safeguards per country or region divided by ice-free land area). Green hues indicate density of sequestration potential, and the numbers in bold indicate total $TgCO_2e$ yr^{-1} for the countries with the largest mitigation potential.

Figure 2: Distribution of mitigation opportunity for the Reforestation pathway
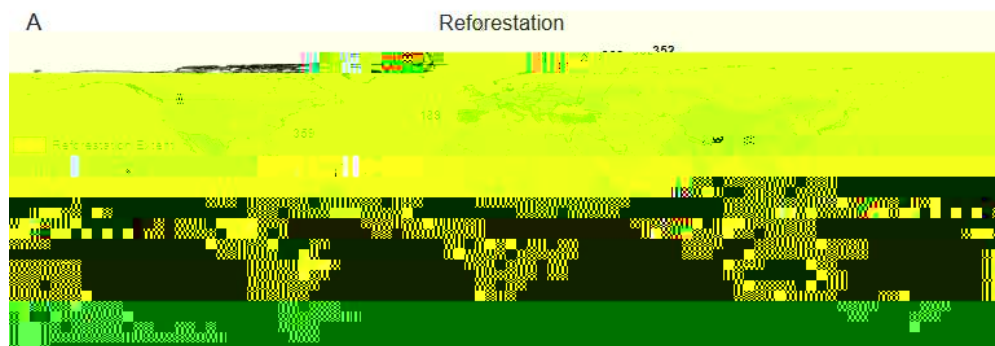
Numbers assigned to countries indicate total $TgCO_2e$ yr^{-1}

Wetlands: 'Coastal blue carbon' refers to the carbon sequestered in the soil and biomass of saltmarshes, seagrass meadows and mangrove forests. Conserving and restoring these valuable environments can significantly contribute to carbon mitigation , improve localised shoreline resilience to the impacts of climate change - including ocean acidification, as well as secure people's livelihoods. 151 countries have at least one blue carbon ecosystem (mangrove forest, saltmarsh, and/or seagrass meadow); according to a 2016 analysis of coastal carbon ecosystems in NDCs,[8] only 28 countries' NDCs reference coastal carbon ecosystems for mitigation. For example,

[7] Griscom, B., et al. (Oct 2017) Natural Climate Solutions. *Proceedings of the National Academy of Sciences*. USA. Vol. 114, 11645 11650. (doi:10.1073/pnas.1710465114)
[8] Herr, D. and Landis, E. (2016) Coastal blue carbon ecosystems. Opportunities for Nationally Determined Contributions. Policy Brief Gland, Switzerland: IUCN and Washington, DC, USA: TNC

the mitigation potential for the mangroves in the avoided coastal wetlandspathway is shown below. In addition to coastal carbon ecosystems, peatlands make up 3% of the world's lands but store twice the amount of carbon **as contained** the world's forest biomass.

Figure 3: Distribution of mitigation opportunity for the mangrove component
of avoided coastal wetlands pathway

Agricultural Lands and Grasslands: The agricultural lands and grasslands pathways offer one-

Examples of collaboration to scale up action

To fully answer "How do we get there," we recognize the important need to combine the science of natural climate solutions with the power of collective action and partnerships. Collaboration between civil society organizations, together with

Example of lessons learned from existing experience

This submission will highlight two case studes that detail the lessons learned based on experience and progress so far in addressing the potential of natural climate solutions.

Case Study #1:

Zero Deforestation by 2030 in Mexico's Yucatan Peninsula

Case Study #2 :