What do COVID-19 stimulus measures delivered in the Arctic region tell us about the prospects for a nature-based economy?

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Background

In 2020, in the midst of the global pandemic of COVID-19, the WWF Arctic Programme commissioned a study, *COVID-19 Green Stimulus & Jobs in the Arctic,* on the environmental impact of stimulus packages announced by eight Arctic nations.[1] Ten green policy areas were identified for the analysis: green infrastructure investments and nature based solutions (land use), green R&D, new grid and grid innovation, solar photovoltaics (energy), bailouts with green strings attached, energy efficiency retrofits in buildings (industry), green R&D, bailouts with green strings attached (transport), and expanding management and recycling of waste. Their potential was measured by the number of green jobs to be created within each policy area per a million US dollars invested. Out of these areas, nature-based solutions and waste management received the highest score for their green job potential.

[1] These countries were the US, Canada, Iceland, Denmark, Norway, Sweden, Russia and Finland. Only the impact of stimulus packages announced prior to October 31, 2020 was considered.

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Although the research findings showed that in general these COVID-19 recovery packages failed to pave the way for the long-term creation of green jobs in the Arctic, mostly because of the countries' massive spending on fossil fuel-related industries rather than on the efforts to create jobs in green sectors, there was a silver lining.

Sweden was the only country among eight Arctic nations in which the number of green jobs resulting from stimulus packages delivered in its Arctic region outnumbered the jobs created in the polluting and fossil-fuel based sectors. Specifically, the government of Sweden used their Arctic COVID-19 recovery packages to finance nature-based solutions, to endorse the conservation of ecosystems and to support Indigenous communities relying for their livelihood on ecosystem-based services. Between 2021 and 2023, the Swedish government spent USD$ 80 million on the restoration of drained wetlands to decrease the release of greenhouse gas emissions. In addition, some stimulus measures targeted Saami communities and reindeer herders.

From nature-based solutions to a nature-based economy

There is a growing body of literature on nature-based solutions (NBS), viewing them as innovative policy tools targeting simultaneously multiple challenges within different policy areas including employment, environmental health, climate change, and biodiversity crisis (Mayes & Jacobs 2017; Mendes et al 2020). The European Union, a key promoter of these measures, defines NBS as "living solutions inspired by, continuously supported by and using nature, which are designed to address various societal challenges in a resource-efficient and adaptable manner and to simultaneously provide social, economic and environmental benefits" (The EU Commission 2015). Another definition, adopted by the International Union for Conservation of Nature (2016), emphasizes "actions to protect, sustainably manage, and restore natural or modified ecosystems, that addresses societal challenges effectively and adaptively, simultaneously providing human well-being and biodiversity benefits." And yet another definition, widely used in the literature, is offered by Mayes and Jacobs, describing NBS as "any transition to a use of ecosystem services with decreased input of non-renewable natural capital and increased investment in renewable natural processes" (2017, p. 123).

Lately, NBS projects have been viewed as the constituting blocks for a nature-based economy, a model of socio-economic development that has its origins in and draws its main assumptions from ecological economics, a well-established field with a rich, multidisciplinary and diverse research agenda (Costanza 1991; Daly 2005, Rockstrom et al 2009, and many others). Herman Daly, a prominent scholar of ecological economics who worked as senior economist at the World Bank, was among the first scholars who argued that the human economy could no longer take for granted the natural world as a source of infinite growth in economic prosperity. "In the past, the number of fish catch was limited by the number of fishing boats and fishermen. Now, it is limited by the number of fish and their capacity to reproduce" (2005, p. 103). "Because of the exponential economic growth since World War II, we now live in a full world, but we still behave as if it were empty, with ample space and resources for the indefinite future." (p. 100). Yet the economic logic of today's full world, the one that has reached or even exceeded the planetary boundaries, continues Daly, is to invest in natural capital "through restoration ecology, biodiversity conservation, and sustainable use practices" rather than in "building new boats."

Similar to ecological economics, the NBS research and policy agenda challenges the mainstream economic models' perilous assumption that natural resources, renewable and non-renewable, can be used to support infinite economic growth. The examples of NBS projects include reforestation, wetland restoration, restoring coastal areas, investing in ecological agriculture, increasing urban green spaces to serve as community gardens, and many others.

On the governance side, nature-based solutions largely borrow from their precursor, the ecosystem-based management, the decision-making principle of participatory governance and the engagement of stakeholders in the co-design and co-management of these measures. Not surprisingly, NBS projects take a longer time to create, approve and implement as compared to traditional command-and-control policy tools. Three requirements are mentioned for nature-based solutions to succeed in the long-term (Maes and Jacobs 2017). They should: 1) result in a decrease of fossil fuel input per unit of production; 2) be based on synergies between environment and economy; and 3) be labour intensive, as opposed to technology-intensive, by increasing labour input and job creation.

Conclusion and implications for the Arctic

A perfect storm is gathering over Arctic ecosystems, species and communities, brought by powerful economic and political interests that view the Arctic region as the territory, both marine and terrestrial, of unlimited mineral and hydrocarbon riches, commercial fishing and new polar transportation routes. The trend is clear: shipping is increasing, new mining projects are planned, frontiers for mineral extractions are pushed further north,[2] and the deep seabed is eyed for mining exploration and extraction. These challenges are amplified by the fast pace of climate change in the region, which is warming close to four times faster than the global average, creating more pressure for Arctic people and ecosystems.

Nature-based solutions offer a silver lining in the midst of this gathering storm. Their attractiveness is further enhanced by the requirements of the new Kunming-Montreal Global Biodiversity Framework, which all countries, including those in the Arctic, must now implement in order to better protect, conserve and restore nature. Several Arctic countries have committed to expand their repertoire of policy tools, similar to the NBS employed by Sweden, in their respective Arctic regions. For example, in Canada, the federal government has announced a project to clean up plastic waste in the Arctic that will require the establishment of recycling and circular economy initiatives, and the monitoring of plastic pollution in the marine Arctic environment.[3] In Finland, green stimulus measures have supported the restoration of natural sites and initiated green tourism in the Arctic.[4]

[2] The Citronen Mine in Greenland (Citronen Fjord), with the construction planned for 2023, will be the world's northernmost mine, above 80^0 North.

[3] $183.1 million over 5 years, starting in 2022-2023, to Environment and Climate Change Canada, Department of Fisheries and Oceans, Health Canada, Transport Canada, Crown-Indigenous Relations and Northern Affairs Canada, Statistics Canada, and the National Research Council. https://www.rcaanc-cirnac.gc.ca/eng/1562853124135/1562853167783

[4] See WWF, *Left Out in the Cold: Finland,* 2021. https://www.arcticwwf.org/newsroom/reports/left-out-in-the-cold-finland/

A nature-based economy is not about selling natural resources in global commodity markets or using the Arctic as the resource frontier periphery, to sustain and increase global production and consumption levels. Instead, it is about conserving the foundations for the economy to exist in the first place, to support the livelihoods of people living in the rapidly changing Arctic.

Public investments in preserving and restoring ecosystem functions offer the greatest potential to create green jobs while adding long-term value to the services of Arctic marine, coastal and terrestrial ecosystems, for the benefit of local communities and future generations.

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