

Half or Whole Earth: which would work better for Bornean orangutans?

By Erik Meijaard, 13th October 2022

A new study by 17 orangutan experts from around the globe assessed what would happen to Bornean orangutans in the next decade under different management assumptions. Under current management practices, orangutan populations may decline by c. 27% between now and 2032. Our group of experts also estimated the likely impact from implementing two global conservation proposals more generally: Half Earth and Whole Earth.

Half Earth was an idea proposed by the late E.O. Wilson who envisaged that half of Earth's surface should be protected if humanity wants to prevent further biodiversity losses. Permanent protection of at least half of Borneo's forests in Indonesian Kalimantan and Malaysian Sabah, with effective implementation of conservation management, is predicted to be the best strategy for orangutan protection on Borneo, although it would still result in some orangutan losses.



An orangutan on its way through the forest canopy. Photo: Nardiyono

Half Earth would be comparatively easy to achieve in Borneo and we predict that it would reduce the decline in the orangutan population by 2032 by at least half compared to current management. Whole-Earth, a fundamentally different approach to conservation focused on equitable land management, finance and governance, is foreseen to lead to greater forest loss and killing of orangutans and a 56% population decline within the next 10 years. The good news is that if orangutan killing and habitat loss were stopped, we predict orangutan populations could rebound and reach 148% of their current size by 2122. So, there is hope!

But let's take a step back in time first. Ever since modern humans walked into the orangutan range on the Asian mainland c. 80,000 years ago, the species has been persecuted. From the use of bow and arrow, to blow pipes and, ultimately, shotguns, people have hunted orangutans for millennia. Unsustainable killing played a major role in the orangutan's extinction from southern China, Thailand, Viet Nam, Cambodia, the Malay Peninsula, the island of Java and also various parts of Borneo and Sumatra. People also started to convert the orangutan's forest home into agriculture and plantations, neither of which provide the apes with suitable habitat. With their forest gone, many orangutans died, although some were translocated to other areas.



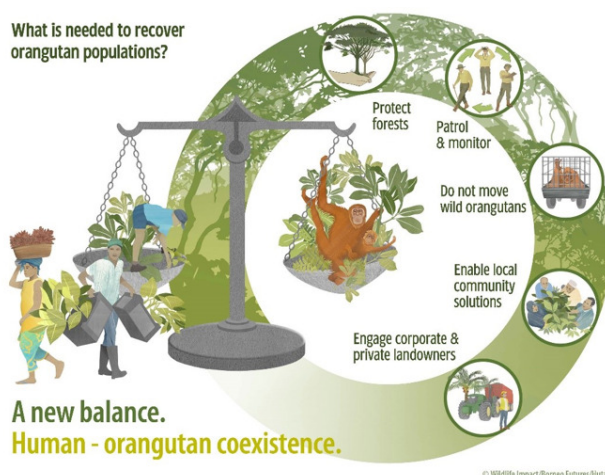
Plantations of oil palm, rubber, Acacia and other trees have expanded rapidly into former orangutan habitat, although this expansion has now slowed down. Photo: Marc Ancrenaz

However among this doom and gloom, there are still glimmers of hope. Indonesian and Malaysian deforestation rates are down, as are expansion rates of oil palm and other crops. How should orangutan conservation proceed from here? What are the best strategies? These are the questions we tried to address by looking at different scenarios.

Continuing the strategies from the past 20 years does not bode well for orangutans. Despite

investing over 1 billion dollars into their conservation between 1999 and 2019, we lost c. 100,000 orangutans: we need to do better. We see opportunities for much improved outcomes by implementing the Half Earth approach in Borneo.

We also tested Whole Earth, a counter-proposal against Half Earth that called for a major overhaul of current political and economic systems, and more equitable conservation strategies based on community rights to manage forests. We predict that rapid implementation of Whole Earth on Borneo would lead to the highest orangutan losses over the next decade. This was because the fundamental changes required under Whole Earth would take much more than 10 years to implement and could leave a power vacuum in the meantime.



Interestingly, our analysis showed that both the Indonesian and Malaysian governments have reached the objective of legally designating half of the land mass as protected in Kalimantan and Sabah, respectively. With 67.1% of Kalimantan's land mass designated as State Forest, Indonesia already exceeds the Half-Earth goal of locking in 50%, if the Indonesian government would commit to retaining these areas as permanently forested and enforcing land protection policies. Malaysian Sabah also exceeds the Half-Earth goal, with 65% of the State remaining forested.

This is all on paper though, and a lot of effective conservation investment and management would be needed to ensure that these orangutan habitats remain permanently forested. To prevent unsustainable killing, effective engagement with rural communities on Borneo is needed. This is where elements of the Whole Earth approach are helpful. We found broad consensus that much more sensitive and equitable engagement with these communities is among the key requirements of facilitating peaceful co-existence between people and orangutans.

We support the implementation of the Half Earth approach in the next decade, while carefully introducing key elements of equity and social change from the Whole Earth approach that would play out over a longer time frame. We favour a more sensitive approach that better aligns with local perceptions and needs and goes beyond education and punishment, such as through the provision of benefits to communities in return for their protective services.



Orangutan baby resting on a tree branch next to its mother. Photo: Marc Ancrenaz

Our group of authors encourages both the Indonesian and Malaysian government to build on their commitments to setting aside at least half the land area of their countries for conservation, while enforcing the policies that ensure forests are conserved and orangutan killing is halted.

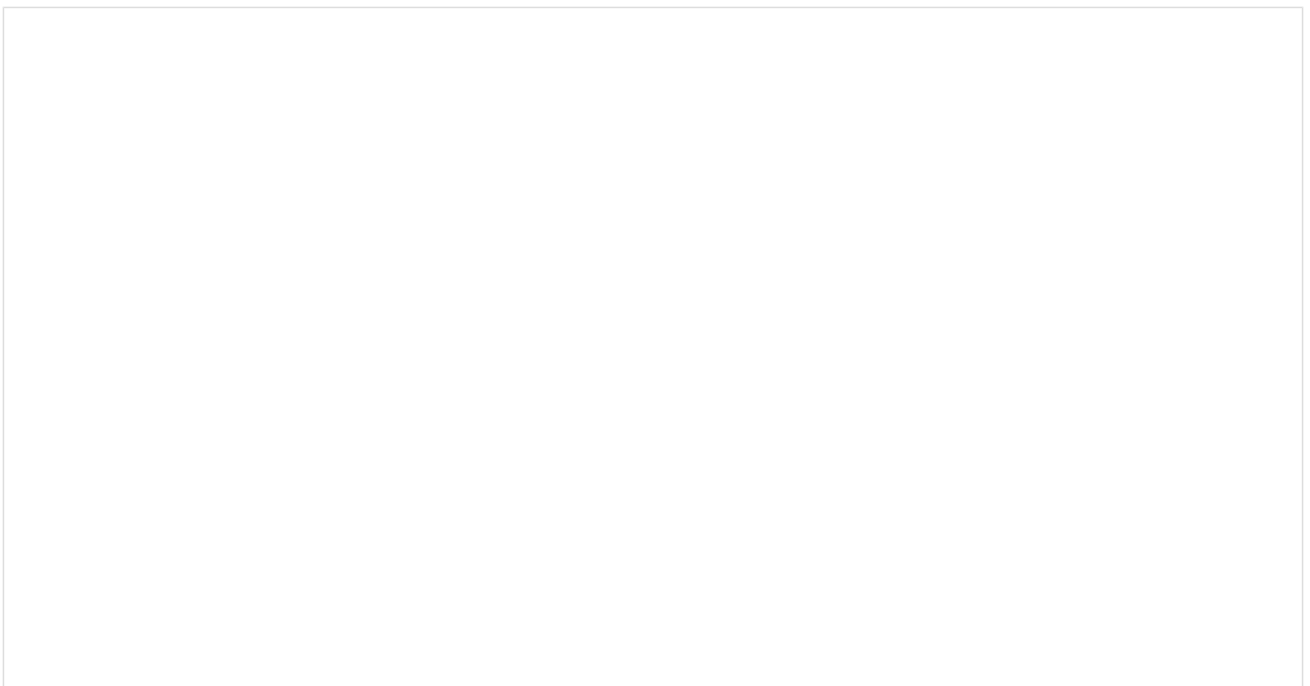
We call on everyone else to improve their support. NGOs and orangutan sanctuaries need to find ways to encourage people and orangutans to live side by side, rather than translocating orangutans away from areas where they are perceived as a nuisance.

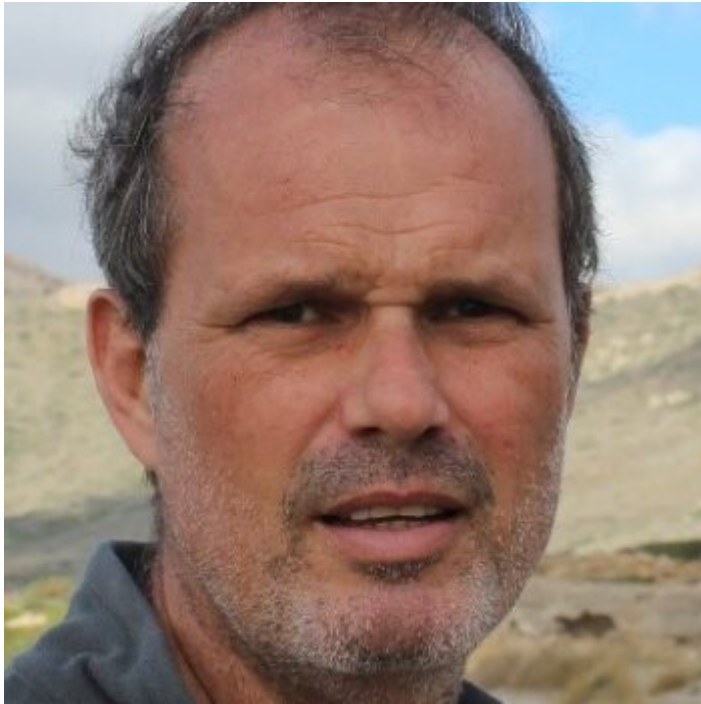
Conservation donors need to direct their funding towards strategies that work best for protecting wild orangutan populations. Communities need to be empowered, but also given responsibility for coexisting with orangutans. Companies—logging, mining or plantations—need to be assisted and made legally responsible for ensuring that the protected orangutan can survive and thrive on the lands they manage. It is not an easy path ahead, but solutions exist that could ensure the long-term survival and even population recovery of the Asian red ape.



Successful orangutan conservation on Borneo require that rural communities find ways to peacefully live alongside wild orangutans. Photo: Erik Meijaard

The article [Restoring the red ape in a Whole- or Half-Earth context](#) is available open access in *Oryx—The International Journal of Conservation*. Publication of this article was sponsored by the SSC-Oryx Partnership Fund.





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