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15th December 2018

**Population Matters' response to Notification 2018-063: Invitation for views on the preparation, scope, and content of the post-2020 global biodiversity framework**

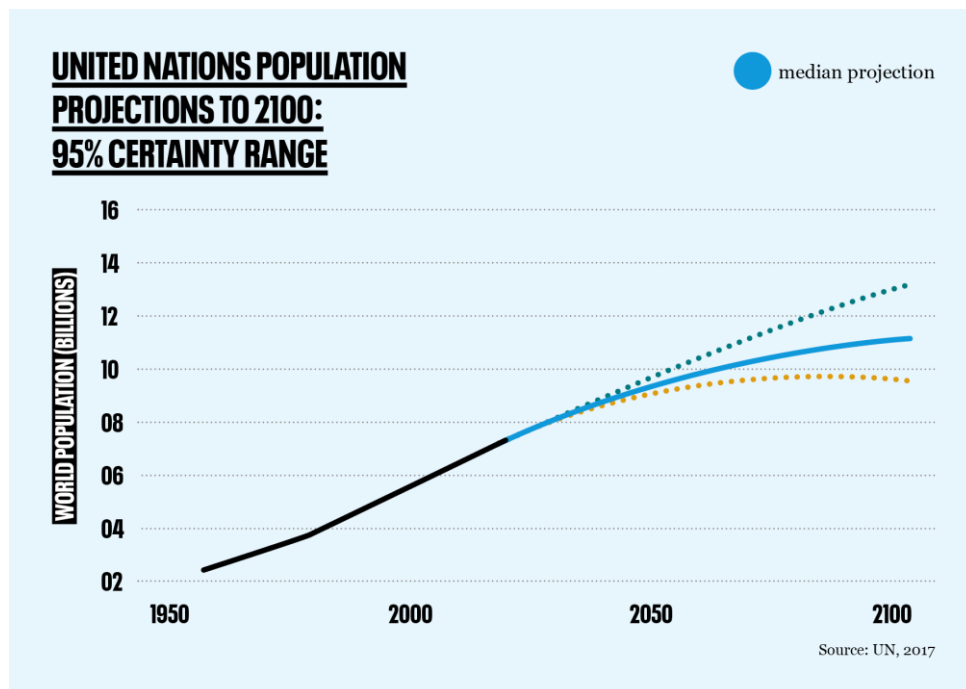
Dear Executive Secretary Palmer,

We are grateful for the opportunity to contribute to the call for recommendations on the post-2020 global framework on biodiversity as a civil society organisation:

**Population Matters would like to bring awareness of the impact that population dynamics, and population growth in particular, have on biodiversity, and to call for the recognition and inclusion of the issue of human population in the post-2020 global framework on biodiversity.**

**Population Data and the Scientific Community's Call for Action**

According to the UN Population Division, population will continue growing throughout the 21st century, with an extra billion people being added to the world every 12 to 15 years. Unless positive action is taken to manage population growth, the UN's median population project foresees a 50% increase in population to more than 11 billion people in the 22nd century.<sup>1</sup>



<sup>1</sup> United Nations Department of Economic and Social Affairs, Population Division (2011) Population Facts, *World Population Prospects: Main Results* No. 2011/2 from: [http://www.un.org/en/development/desa/population/publications/pdf/popfacts/PopFacts\\_2011-2.pdf](http://www.un.org/en/development/desa/population/publications/pdf/popfacts/PopFacts_2011-2.pdf); see also United Nations Department of Economic and Social Affairs, Population Division Technical Paper No. 2011/3 *Seven Billion and Growing: The Role of Population Policy in Achieving Sustainability*, from: [http://www.un.org/en/development/desa/population/publications/pdf/technical/TP2011-3\\_SevenBillionandGrowing.pdf](http://www.un.org/en/development/desa/population/publications/pdf/technical/TP2011-3_SevenBillionandGrowing.pdf)

Over 20,000 scientists from 184 countries have endorsed the **2017 World Scientists' Warning (WSW)**, highlighting the importance of population growth as a major factor affecting biodiversity loss and affirming that: *"by failing to adequately limit population growth, reassess the role of an economy rooted in growth, reduce greenhouse gases, incentivise renewable energy, protect habitat, restore ecosystems, curb pollution, halt defaunation, and constrain invasive alien species, humanity is not taking the urgent steps needed to safeguard our imperilled biosphere"*.

More specifically, the current WSW stresses how the scientists' original warning in 1992 (when world population was 2 billion fewer) 'pleaded' for action on population growth and states that: *"it is time to re-examine and change our individual behaviours, including limiting our own reproduction (ideally to replacement level at most)"*. The WSW also affirms that, *'soon it will be too late to shift course away from our failing trajectory, and time is running out. We must recognise, in our day-to-day lives and in our governing institutions, that Earth with all its life is our only home'*.<sup>2</sup>

Biologists confirm that *'The Sixth Mass Extinction'*, a permanent loss of multiple species caused human activity rather than by natural phenomena, is already underway and that the pressures on our planet's biodiversity, renewable resources, habitats and species can only multiply as population and consumption increase.<sup>3</sup>

As per research published in the July 2017 **Proceedings of US National Academy of Sciences**: which reviewed data on 27,600 terrestrial vertebrate species, with a more detailed analysis of 177 mammal species.

The study concluded that there was an extremely, *"high degree of population decay in vertebrates"*, higher than previous estimates – including even in common *'species of low concern'*. The researchers describe this as, *'a biological annihilation'* [which] *'means a sixth mass extinction...underway and more severe than previously feared.'* The researchers identify the drivers of this *'biological annihilation'* as follows: *"The likelihood of this rapid defaunation lies in the proximate causes of population extinctions: habitat conversion, climate disruption, overexploitation, toxification, species invasions, disease, and (potentially) large-scale nuclear war—all tied to one another in complex patterns and usually reinforcing each other's impacts. Much less frequently mentioned are, however, the ultimate drivers of those immediate causes of biotic destruction, namely, human overpopulation and continued population growth, and overconsumption, especially by the rich."*<sup>4</sup>

A 58% fall in vertebrate populations has been recorded between 1970 and 2012 (over which period the human population doubled) with a projected decline of 67% by 2020. Scientists estimate that the current rate of species extinction is at least 100 times greater than it would be without human influences (some estimates put the rate at 1,000 or even 10,000 times).

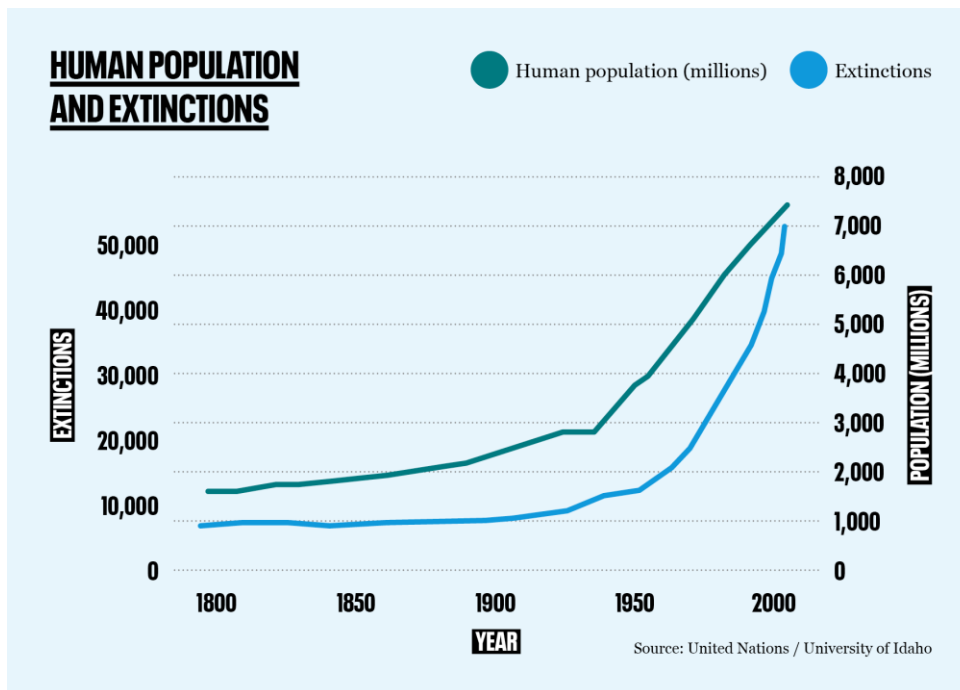
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<sup>2</sup> Ripple et al. and signatories from 180 countries (2017) *World Scientists' Warning to Humanity: A Second Notice*, from: <https://academic.oup.com/bioscience/article/67/12/1026/4605229>

<sup>3</sup> Population Matters, *Welcome to the Anthropocene*, from: <https://populationmatters.org/resources/welcome-anthropocene-briefing>

<sup>4</sup> Gerardo Ceballos, Paul R. Ehrlich, and Rodolfo Dirzo (2017) *Biological annihilation via the ongoing sixth mass extinction signalled by vertebrate population losses and declines*, from: <https://www.pnas.org/content/114/30/E6089>

Findings confirmed, indeed shown to be a slight underestimate, in the latest **Living Planet Report 2018 (LPR 2018)**, published in October 2018 which estimates that humanity has wiped out 60% of the world's vertebrate wildlife between 1970 and 2014. *LPR 2018* states that only one quarter of land on Earth is “*substantively*” free of the impacts of human activities and that this is projected to decline to just one-tenth by 2050.<sup>5</sup>



### Why population dynamics matter to biodiversity

As noted in the Living Planet Report 2018, the five main threats and direct pressures on biodiversity causing current rates and patterns of biodiversity loss are commonly associated with human-induced pressures, including:

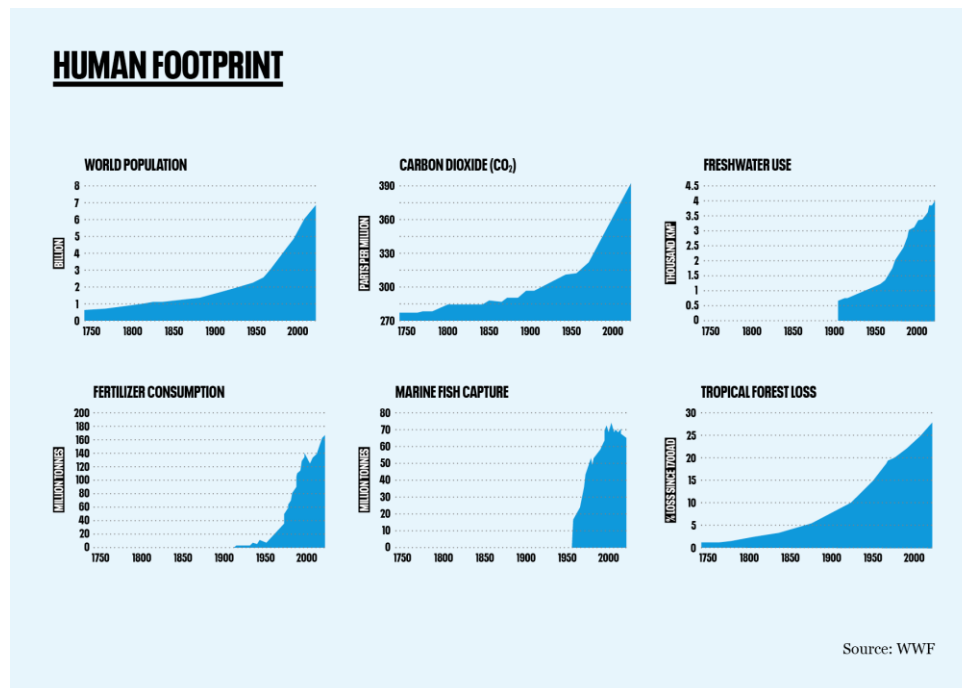
- Habitat loss, alternation and fragmentation, through conversion of land for agriculture and industrial or urban land use, including deforestation, wetland drainage and coral reef destruction
- Over-exploitation of wild species populations; the unsustainable harvesting of animals and plants for food, materials, or medicine, including over-hunting, over-fishing and logging
- Pollution, including excessive use of pesticides and fertilisers and urban and industrial waste
- Human induced-climate change, shifting geographical ranges and for example causing increasing coral bleaching
- Invasive species, introduced deliberately or unintentionally as a result of human activity, resulting in competition with native species and emerging diseases.

<sup>5</sup> WWF (2018) *Living Planet Report - 2018: Aiming Higher*, Grooten, M. and Almond, from: [https://www.wwf.org.uk/sites/default/files/2018-10/wwfintl\\_livingplanet\\_full.pdf](https://www.wwf.org.uk/sites/default/files/2018-10/wwfintl_livingplanet_full.pdf)

These identified direct pressures are derived from human demands for food, energy, materials and land for urban areas and infrastructure. But the resulting human impact on the environment is determined by the number of consumers (population size), per capita consumption, and the efficiency with which natural resources are converted into goods and services.

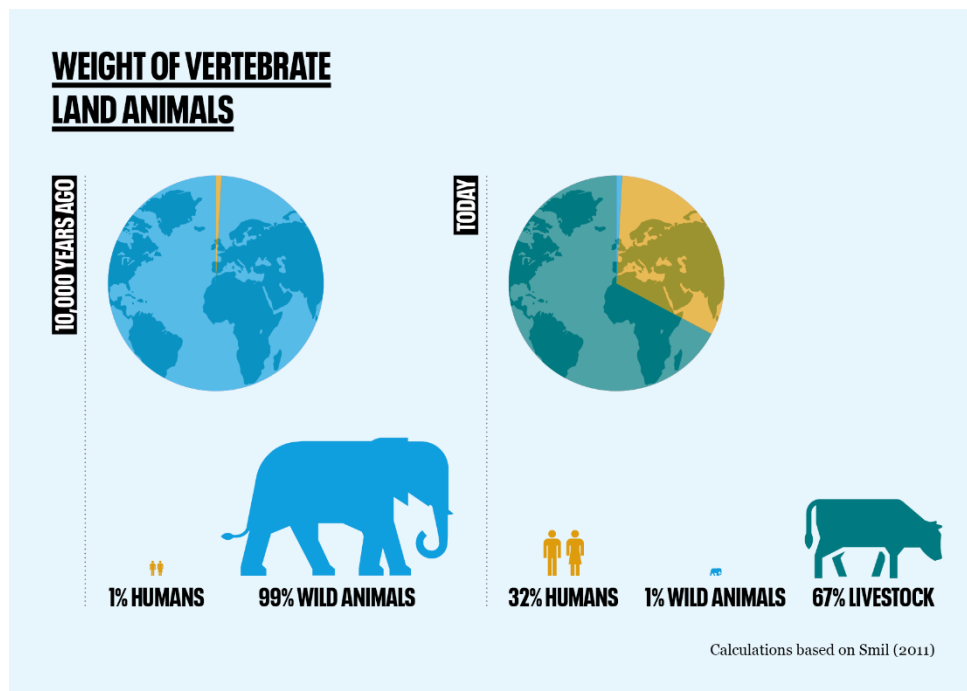
Despite the acknowledgement of the impact of overconsumption on the environment, population growth is often neglected and undermentioned in international agendas both in relation to development and environmental protection. The UN estimates that as a result of population growth by 2050, we will require 70% more food. Similarly, the International Energy Agency calculates that the global demand for energy will increase by 30% by 2040. Based on this evidence, overconsumption and overpopulation are inherently intertwined, and therefore must be addressed simultaneously and be regarded with equal caliber.<sup>6</sup>

Population dynamics, especially population growth, are therefore the underlying causes of biodiversity loss, and particularly significant in exacerbating the immediately observed drivers of biodiversity loss.<sup>7</sup>



<sup>6</sup> Population & Sustainability Network (2012) *Population Dynamics and Biodiversity: A PSN Briefing Paper*, from: <http://populationandsustainability.org/wp-content/uploads/2014/10/Population-Dynamics-and-Biodiversity-Briefing.pdf>

<sup>7</sup> Population Action International (2011) *Why Population Matters to Biodiversity*, from [https://pai.org/wp-content/uploads/2012/02/PAI-1293-BIODIVERSITY\\_compressed.pdf](https://pai.org/wp-content/uploads/2012/02/PAI-1293-BIODIVERSITY_compressed.pdf)



### Population size and growth

Population growth is a major factor determining the scale of humanity's use of natural resources. Along with increasing per capita consumption, human population growth is driving degradation and destruction of natural ecosystems and loss of biodiversity.

Population growth combined with climate change is placing many countries and their environments under severe stress – for example, the UN projects that the Sahel region will experience population growth from 125 million people across the region currently to over 650 million by 2100; over the same period average temperatures are set to rise by 5 degrees Celsius or more.<sup>8</sup>

**Yet, there is no mention or consideration of population dynamics in the Aichi Targets, and the Agenda 2030 and SDGs do not explicitly mention population growth.**

This is an illogical and inaccurate oversight. As the world's population grows, so does demand for food, water, land, timber and fossil fuels which places great pressures on ecosystems and drives biodiversity loss. Population growth has a significantly higher impact in areas of the world with the highest biodiversity, posing a considerable threat to these species-rich regions.<sup>9</sup>

<sup>8</sup> Population Division. (2017). *World Population Prospects - Population Division*. [online] Available at: <https://population.un.org/wpp/> [Accessed 31 Dec. 2018].

<sup>9</sup> Population & Sustainability Network (2012) *Population Dynamics and Biodiversity: A PSN Briefing Paper*, from: <http://populationandsustainability.org/wp-content/uploads/2014/10/Population-Dynamics-and-Biodiversity-Briefing.pdf>

### Population density

There is a strong correlation between increasing population density and declining biodiversity, as growing numbers of people place increasing demands and strains on the natural resource base. Due to high population density, biologically-rich areas of the world are now being characterised by high extinction rates, high rates of deforestation of tropical forests, and abundance of invasive species. This reality poses a threat not only due to the associated increases in land transformation and introduction of exotic species, but also because the size of protected conservation areas tends to be smaller.

### Urbanisation

Over the last century, rapid urbanisation followed by mass construction of housing and infrastructure, including water, energy and waste disposal, have accelerated biodiversity loss in a number of ways. Urban sprawl has led to habitat disappearance, with over half of the world's population currently living in urban areas. Increased consumption resulting from urbanisation leads to a higher demand for food and energy, thereby magnifying the pressure on ecosystems.<sup>10</sup>

### Migration

According to a new Gallup poll, more than 750m people want to live in another country permanently – more people than before 2015 and the humanitarian crises of the Syrian conflict etc.<sup>11</sup>

Migration to small, fragile areas with high biodiversity poses risks to the long-term health and vitality of ecosystems, and is recognised as a critical concern for conservation worldwide. The movement of people which is expected to take place as a result of climate change will inevitably drive biodiversity loss in the future. In order to ease pressures on biodiversity, urgent policies to slow population growth and reduce the drivers of forced and involuntary migration, whilst respecting human rights, are required.

Population Matters supports the aspirations of the **Global Compact for Safe and Orderly Migration**, which commits to creating: *“conducive political, economic, social and environmental conditions for people to lead peaceful, productive and sustainable lives in their own country and to fulfil their personal aspirations, while ensuring that desperation and deteriorating environments do not compel them to seek a livelihood elsewhere through irregular migration.”*<sup>12</sup>

**In summary, we believe that population dynamics, and particularly the importance of slowing population growth, must be incorporated into the upcoming biodiversity framework's goals if it is to achieve its aims – and also be incorporated into the revised Aichi targets and any future, new targets.**

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<sup>10</sup> Edet et al. (2014) *Impact of Overpopulation on the Biological Diversity Conservation in Boki Local Government Area of Cross River State, Nigeria* American Journal of Environmental Engineering 4(5): 94-98, from: <http://article.sapub.org/pdf/10.5923.j.ajee.20140405.02.pdf>

<sup>11</sup> Gallup. Neli Esipova, Anita Pugliese and Julie Ray (2018) *More Than 750 Million Worldwide Would Migrate If They Could*, from: <https://news.gallup.com/poll/245255/750-million-worldwide-migrate.aspx>

<sup>12</sup> Global Compact for Migration (2018) *Global Compact for Safe, Orderly and Regular Migration*, from: <https://www.un.org/pga/72/wp-content/uploads/sites/51/2018/07/migration.pdf>

Until all the factors negatively impacting biodiversity loss are addressed, existing efforts aimed at tackling the conventionally identified pressures on biodiversity will have limited impact.

**Population Matters urges that alongside the already proposed initiatives such as:**

- Maintaining the 2050 Vision
- Updating the Aichi Targets and/or replacing them with new ones
- Maintaining and enhancing the provisions on means for implementation
- Maintaining and enhancing the provisions on review of implementation
- Including the Biosafety Protocol within the scope of the Plan
- Enhancing the relevance of the Plan to other biodiversity-related conventions
- Enhancing the links with the 2030 Agenda for Sustainable Development and SDGs, and other major global agendas such as the Paris Agreement on Climate Change and the UN Convention to Combat Desertification

**The post-2020 framework on biodiversity must also:**

- Stress the importance of all indirect drivers/intermediate factors that exacerbate the pressures caused by direct drivers of biodiversity loss
- Recognise the negative impact that population dynamics, especially population growth, have on biodiversity and overconsumption
- Consider the option of establishing a protocol on population.

Thank you for the opportunity to give our input to the post-2020 global biodiversity framework.

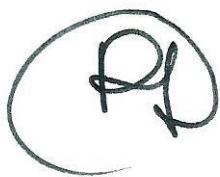
We support the objectives of the Convention on Biodiversity: but it is time to move beyond 'business as usual' and to make bold commitments and impactful decisions for the future of our planet.

As our Patron Sir David Attenborough\* (key speaker at COP24) has stated with admirable economy of words:

***"All our environmental problems become easier to solve with fewer people, and harder – and ultimately impossible – to solve with ever more people"***

Please feel free to follow-up with any requests for clarification or further information.

Yours sincerely

A handwritten signature in black ink, consisting of a large, stylized 'R' followed by a smaller, more complex set of letters, all enclosed within a circular flourish.

Robin Maynard, Director





**For a sustainable future**

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\*As well as Sir David Attenborough, Population Matters is fortunate to have a number of highly regarded biologists, conservationists and environmental campaigners amongst its Patrons:

**Sir David Attenborough**  
**Gordon Buchanan**  
**Professor Sir Partha Dasgupta**  
**Professor Paul Ehrlich**  
**Dame Jane Goodall DBE Professor**  
**John Guillebaud Susan Hampshire**  
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