POLLINATORS ARE CRITICAL FOR THE SDGS AND VICE VERSA

Lois Kinneen, Teodor Metodiev, Hien Ngo, Martijn Thijssen, Deepa Senapathi & Simon G. Potts



wild pollinators







safeguard.biozentrum.uni-wuerzburg.de

KEY MESSAGES

- Pollinators play a critical role in Life on Land (SDG 15) and **Zero Hunger (SDG 2)**. They are also linked to 58 of the 169 SDG targets across 14 of the 17 SDGs.
- Pollinators contribute to at least 7 out of 17 SDGs and 11 out of 17 SDGs directly impact pollinators.
- Pollinators can contribute to other SDGs, beyond SDG 15 and SDG 2, in unexpected ways such as Clean Water & Sanitation (SDG 6) due to the vital ecosystem services they provide, and No Poverty (SDG 1) through their role in diversifying incomes streams and increasing yields.

RECOMMENDATIONS

POLICY

Many SDGs cannot be achieved without good protection and sustainable management of pollinators.

Pollinators, biodiversity and SDG's go hand in hand. So, synergize your policies for them.

Policies for SDG 2, Zero Hunger, must include pollinators as a critical agricultural input which should be sustainably managed to ensure food and nutritional security. Agricultural practises should be made fit for this purpose.

The restoration of most terrestrial ecosystems (SDG 15, Life on Land) depends, at least in part, on the role of pollinators to maintain diverse and healthy plant communities. Related policies should therefore support concrete actions to protect and enhance diverse pollinator assemblages.

Pollinators play an indirect, but important, role contributing to a wide range of SDGs (e.g. 1, 6, 8, 10, 12) and so policymakers should consider the conservation and sustainable management of pollinators when formulating policies to support these SDGs.

LEGEND

Circular bar plot depicting SDGs weighted according to median relevance to society scores. Relationship scores between pollinators and each SDG were assigned by a panel of 17 experts with links to the Post-2020 biodiversity targets represented in the outer ring.

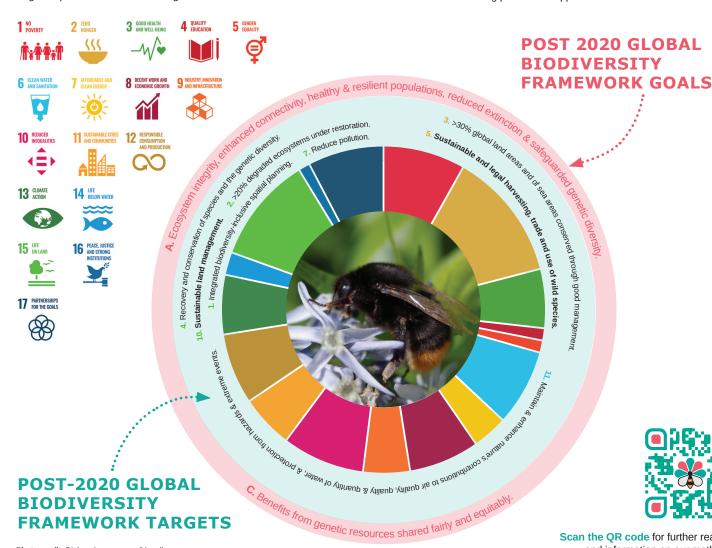


Photo credit: Dinkum I commons.wikimedia.org

Scan the OR code for further reading and information on our methods.





Pollinators are strongly linked to the success of Life on



All 12 targets under Life on Land have consequences for pollinators, and pollinators contribute to 7/12 targets.



Pollinators comprise an importance component of biodiversity and should be considered in order to achieve Targets 15.1, 15.4, 15.5, 15.9.



They also play a crucial role in plant reproduction and as such play a direct role conserving biodiversity and maintaining healthy ecosystems (IPBES 2016) and contributing to **Targets 15.1, 15.2, 15.3, 15.4, 15.5.**

Target 15.1 By 2020, ensure the conservation, restoration and sustainable use of terrestrial and inland freshwater ecosystems and their services, in particular forests, wetlands, mountains, and drylands, in line with obligations under international agreement.

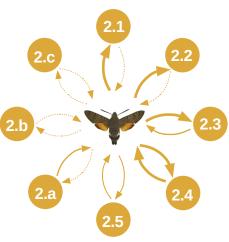
Target 15.2 By 2020, promote the implementation of sustainable management of all types of forests, halt deforestation, restore degraded forests and substantially increase afforestation and reforestation globally.

Target 15.3 By 2030, combat desertification, restore degraded land and soil, including land affected by desertification, drought, and floods, and strive to achieve a land degradation-neutral world.

Target 15.4 By 2030, ensure the conservation of mountain ecosystems, including their biodiversity, to enhance their capacity to provide benefits that are essential for sustainable development.

Target 15.5 Take urgent and significant action to reduce the degradation of natural habitats, halt the loss of biodiversity and, by 2020, protect and prevent the extinction of threatened species.

Target 15.9 By 2020, integrate ecosytem and biodiversity values into national and local planning, development processes, poverty reduction strategies and accounts.



Network map illustrating two-way relationships between pollinators (centre) and SDG targets. Arrows weighted according to median strength of relationship scores.

Legend: ----- (low); ---- (medium); ---- (high).

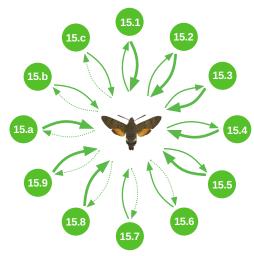
Photo credit: Didier Descouens I commons.wikimedia.org



Pollinators strongly contribute to the success of this target through the maintenance and restoration of healthy plant communities in water-related ecosystems and are directly impacted by progress towards this target as they are an essential component of biodiversity and provide essential ecosystem services which maintain healthy ecosystems.

Target 6.6 By 2020, protect and restore water-related ecosystems, including mountains, forests, wetlands, rivers, aquifers, and lakes.

For more information, please contact Lois Kinneen: I.kinneen@reading.ac.uk



Network map illustrating two-way relationships between pollinators (centre) and SDG targets. Arrows weighted according to median strength of relationship scores.

Legend: ····· (low); ── (medium); ── (high).

Photo credit: Didier Descouens | commons.wikimedia.org



**

Pollinators contribute strongly to 5/8 targets under **Zero Hunger** and are impacted by 6/8 targets.



75% of crops are dependent on animal pollination (Klein *et al.* 2001), including many nutrient-rich food crops (Chaplin-Kramer *et al.* 2019). Pollinators therefore play a crucial role in achieving **Targets 2.1** and **2.2**.



Increase yield (Targets 2.3 and 2.4).



Provide additional income streams (Target 2.3).

Target 2.1 By 2030, end hunger and ensure access by all people, in particular the poor and people in vulnerable situations, including infants to safe, nutritious and sufficient food all year round.

Target 2.2 By 2030, end all forms of malnutrition, including achieving, by 2025, the internationally agreed targets on stunting and wasting in children under 5 years of age, and address the nutritional needs of adolescent girls, pregnant and lactating women and older persons.

Target 2.3 By 2030, double the agricultural productivity and incomes of small scale- food producers, in particular women, indigenous peoples, family farmers, pastoralists and fishers, including through secure and equal access to land, other productive resources and inputs, knowledge, financial services, markets and opportunities for value addition and non-farm employment.

Target 2.4 By 2030, ensure sustainable food production systems and implement resilient agricultural practices that increase productivity and production, that help maintain ecosystems, that strengthen capacity for adaptation to climate change, extreme weather, drought, flooding and other disasters and that progressively improve land and soil quality.







Pollinators can play an important role in alleviating poverty (**Targets 1.1 & 1.2**) through their role in diversification of income streams through beekeeping and the provision of high value crops (Potts *et al.* 2016). Conversely, sustainable management and efficient use of natural resources (**Target 12.2**) must consider pollinators.

Target 1.1 - by 2030, eradicate extreme poverty for all people everywhere, currently measured as people living on less than \$1.25 a day.

Target 1.2 - by 2030, reduce at least by half the proportion of men, women and children of all ages living in poverty in all its dimensions according to national definitions.

Target 12.2 - by 2030, achieve the sustainable management and efficient use of natural resources.

