

Biodiversity as a framework for the transition of production modes

by Elisabeth Lerchs 07/06/22

World Protected Species Day was an opportunity to reflect on the link between the economy, industry and biodiversity in Réunion.



This reflection makes sense because current production and consumption models are the main culprits in the decline of biodiversity.¹ It is therefore necessary to study and implement solutions to reduce the impact of businesses and industries on the environment and more particularly on biodiversity.

The circular economy aims to reduce this pressure by rethinking the linear management of resources using multiple tools and concepts such as the [economy of functionality](#), [eco-design](#), [industrial symbiosis](#) and the [Lansink ladder](#), which prioritises the order of reuse of waste.²

This framework is probably more favourable to the conservation of life. However, rather than simply inferring or assuming the benefits of the transition from a linear to a circular economy, specific tools and frameworks for biodiversity conservation and protection should be incorporated to truly address the ongoing sixth mass extinction of life.³

¹ Harold Levrel, Emmanuelle Baudry, Paul Leadley, Christian Mougin, Elsa Bonnaud, et al. The threats to biodiversity. Enjeux de la transition écologique, EDP Sciences, 38p, 2021, 978-2-7598-2662-9. [ffhal-03479058e](https://doi.org/10.1016/j.scitotenv.2019.06.449)

² Velenturf, A. P., Archer, S. A., Gomes, H. I., Christgen, B., Lag-Brotons, A. J., & Purnell, P. (2019). Circular economy and the matter of integrated resources. Science of The Total Environment, 689, 964. <https://doi.org/10.1016/j.scitotenv.2019.06.449>

³ Buchmann-Duck, J., & Beazley, K. F. (2020). An urgent call for circular economy advocates to acknowledge its limitations in conserving biodiversity. Science of The Total Environment, 727, 138602. <https://doi.org/10.1016/j.scitotenv.2020.138602>

Avenues of action in this direction were presented by Bee Run, SEOR and Globice during a "Economy & Biodiversity" workshop organised by MEDEF on 11/05/22 at the Aquarium of La Réunion.

The first stakeholder installs and maintains beehives in companies. This project integrates several action levers with the aim of having a positive impact on the environment. Firstly, it raises the awareness of the company's entourage and members by involving them in the preservation of bees and of living organisms in general through their direct proximity to the bees and the beekeepers who look after them, but also by looking after them and observing their evolution over the seasons.

Secondly, Bee Run aims to preserve bees by managing a species endemic to Reunion, in a way that is adapted to the island's ecosystems. The hives also play a sentinel role in order to detect as quickly as possible any new diseases or factors of decline in the bees that may have arrived on the island, in order to stop their spread as soon as possible. The island's insularity has made it possible to avoid the introduction of certain threats that are harmful to bees.



The territorial network created thanks to all the beehives installed on the territory is also intended to develop biomonitoring tools. Indeed, bees are sentinels for the bees themselves but also for the environment on which they depend and with which they interact. These interactions will make it possible to create indicators that could prove invaluable for research and decision-making in terms of policies or actions to be implemented for management that respects the environment, bees and biodiversity.⁴

We could also imagine that these little sentinels could help rethink production and consumption methods by putting their conservation and well-being at the centre of concerns and therefore of the environment. And on the other hand, by highlighting the benefits of a more reasoned management of production and consumption methods on all living organisms thanks to biomonitoring.

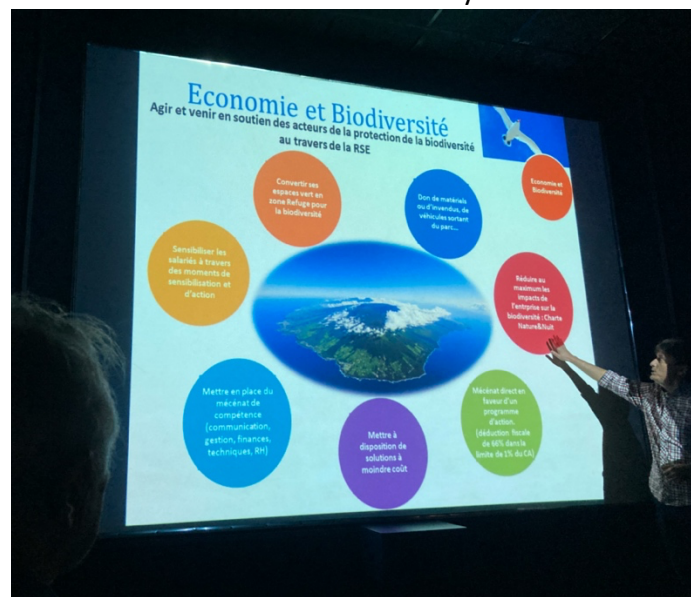
Another actor involved in projects combining trade or industry and biodiversity conservation is the SEOR. The Société d'Études Ornithologiques de la Réunion works in close collaboration with companies and industrialists to minimise their impact on birds by implementing actions aimed at developing or safeguarding certain populations.

⁴ Bee Run, & Dupeyre, C. (2022, May 11). *Bees and pollinators: Understanding the decline - Committing to stop it* [Poster session]. MEDEF Economy & Biodiversity Workshop, Saint-Gilles, La Réunion.



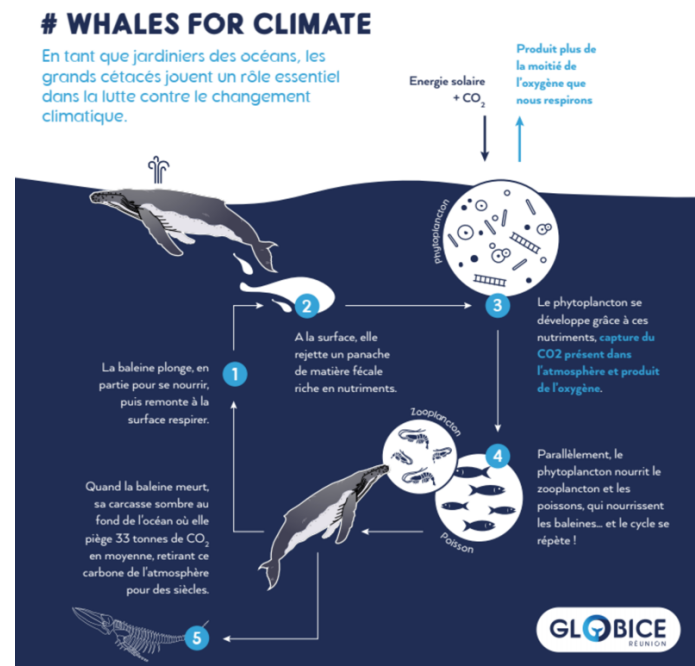
For example, it collaborated in the development of a project to install scarecrows on power cables or high-voltage lines installed by EDF to limit the risk of collision with nocturnal birds such as petrels that travel at night between the ocean and nesting sites, or diurnal birds such as pawpaws that sometimes get caught in power lines.

SEOR is also developing other projects combining biodiversity conservation and industry, which may be the subject of a future article. It also proposed a number of ways in which businesses and industries can act and support the protection of biodiversity. She emphasised, among other things, the importance of raising awareness of the challenges of safeguarding biodiversity and conserving green spaces as refuge areas and the sponsorship of skills, practices, actions and solutions in favour of biodiversity.⁵



⁵ SEOR, Couzi, F. X., & Leger, C. (2022, May 11). Presentation of the SEOR MEDEF Economy & Biodiversity Workshop Reunion Aquarium - 11 May 2022 [Poster session]. MEDEF Economy & Biodiversity Workshop, Saint-Gilles, La Réunion.

Globice is studying cetaceans in Reunion in order to find the best ways to ensure their protection and conservation. It presented several of the anthropogenic pressures responsible for the decline of certain cetacean species, most of which are due to current production and consumption patterns. Among them were chemical pollution of water bodies, accidental catches and destruction of habitats, but also plastic pollution and macro-waste or more indirectly maritime traffic or climate change.



In order to enable industry to take its share of responsibility for the decline of species due to these pressures, Globice proposes, among other things, to support them financially in order to offset their carbon footprint while conserving biodiversity. Great whales are true carbon sinks, since they have a capacity to store nearly 33 tonnes of CO₂ during their lifetime. It should also be noted that efforts to conserve whales go hand in hand with maintaining their ecosystem, which also generates life and allows for carbon sequestration. This practice is not yet recognised as an eligible offset method on the carbon market due to legislative difficulties.

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This type of mechanism is a first step towards reducing the impact of businesses on biodiversity. These avenues and initiatives could eventually lead to the full integration of biodiversity conservation and protection into the activities of businesses and industrial actors and lead to the creation of a paradigm that brings emotion and the missing impetus for joint action to meet the socio-environmental challenges. It is common knowledge that the production system is deleterious to our planet, but it could be transformative to focus on biodiversity rather than, for example, climate change in order to mobilise the people behind business and industry to rethink their production methods.

⁶ Globice, & Gancille, J. M. (2022, May 11). Study and conservation of cetaceans in Reunion Island [Poster session]. MEDEF Economy and Biodiversity Workshop, Saint-Gilles, La Réunion.