

Biodiversity Net Gain Framework – US



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Lightsource bp's Commitment to Sustainability

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Lightsource bp's Commitment to Sustainability

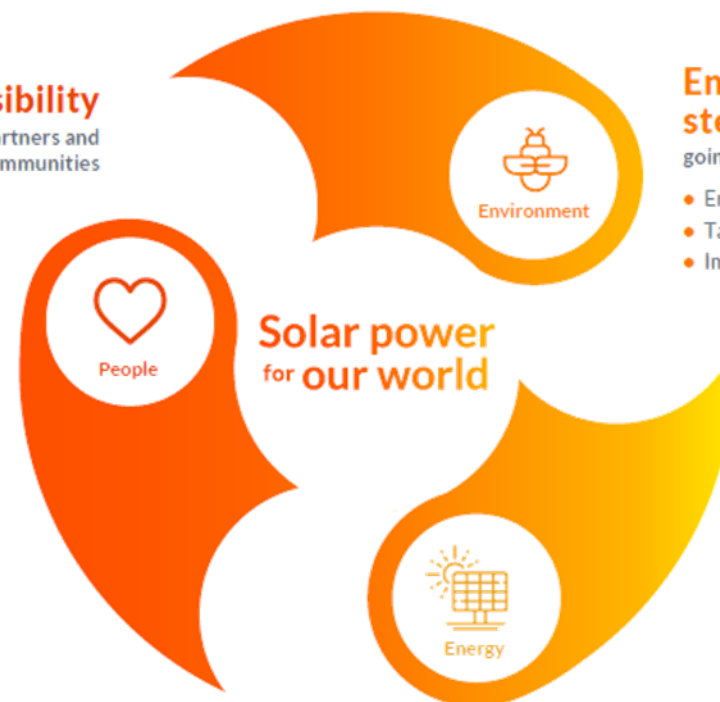
Climate change and biological diversity loss are among the most complex and interwoven challenges our world faces today. Biological diversity (“**biodiversity**”)¹ is the variety of life on Earth and the natural patterns it forms. At Lightsource bp, we are responding to the urgent call to address these issues for a more sustainable future. Along with working to decarbonize the world’s energy landscape to reduce climate change, we are taking action to increase biodiversity by protecting, enhancing, and stewarding lands at our solar farms (facilities or projects).

Our business model is end-to-end, which means we plan, construct, and operate solar projects, giving us an opportunity to be responsible, long-term stewards of the land. Our solar projects will typically be in place for up to 40 years with minimal ongoing disturbances, providing opportunities to incorporate our Responsible Solar approach through implementation of land use best management practices that are complementary to solar energy generation. These may include creating or enhancing pollinator and wildlife habitat, and incorporating agricultural production such as sheep grazing, food crop production, and beekeeping (“**agrivoltaics**”) under and around the solar arrays. These actions increase biodiversity, protect and enhance ecosystems, and benefit local economies and communities.

As part of our Responsible Solar approach, Lightsource bp focuses on three pillars to drive sustainability: **energy**, the **environment**, and **people** (Figure 1). With respect to the environmental pillar, Lightsource bp incorporates social, agricultural, and ecosystem benefits into our land use best management practices.

¹ Key terms are defined in Appendix A.

Social responsibility
for our people, partners and communities



Environmental stewardship
going beyond business as usual

- Enhance ecosystems and biodiversity
- Take science-based climate action
- Improve circularity

Figure 1. Lightsource bp's Responsible Solar Approach

This document contains interactive elements that can be activated with [Adobe Acrobat Reader](#). The elements will not work in a preview or other limited PDF reader. All elements work by moving your mouse pointer over the green text or an image. Some elements can also be clicked for more information.

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Global Approach to Biodiversity Net Gain

Lightsource bp finalized its corporate *Biodiversity Net Gain Framework* (Corporate Framework) in 2023. We developed the Corporate Framework in accordance with the UK Environment Act of 2021, which requires that development projects have a BNG plan to extend or improve natural habitats, leaving wildlife habitats in a measurably better state than they were in before development.² With this goal in mind, and as a part of the Lightsource bp approach to Responsible Solar, we aim to implement solar projects on sites that present opportunities for ecological improvement, which can lead to better ecosystem services for surrounding communities. Our aim is to deliver biodiversity net gain (BNG) on our operational assets, measured 5+ years post-construction. We will use two methods to evaluate BNG – one applied globally and one specific to the United States.

Based on the UK Environment Act's requirement to leave wildlife habitats in a measurably better state, the Corporate Framework uses a net gain in the quality and quantity of natural habitats as the indicator by which BNG is demonstrated. The net gain is measured using Biodiversity Units (BU), which is a habitat-focused method that aims to protect, enhance, and restore habitats that are essential for maintaining biodiversity and ecosystem health throughout the project lifecycle. The number of BUs are calculated based on the classification, distinctiveness, quality, and size of habitats throughout the site. This BNG Framework refers to using BUs to quantify changes in biodiversity at the site as **Method 1**, which will be incorporated into the *Annual Lightsource bp Sustainability Report*.

² [United Kingdom Department of Environment Food & Rural Affairs. 2022. Consultation on Biodiversity Net Gain Regulations and Implementation.](#)



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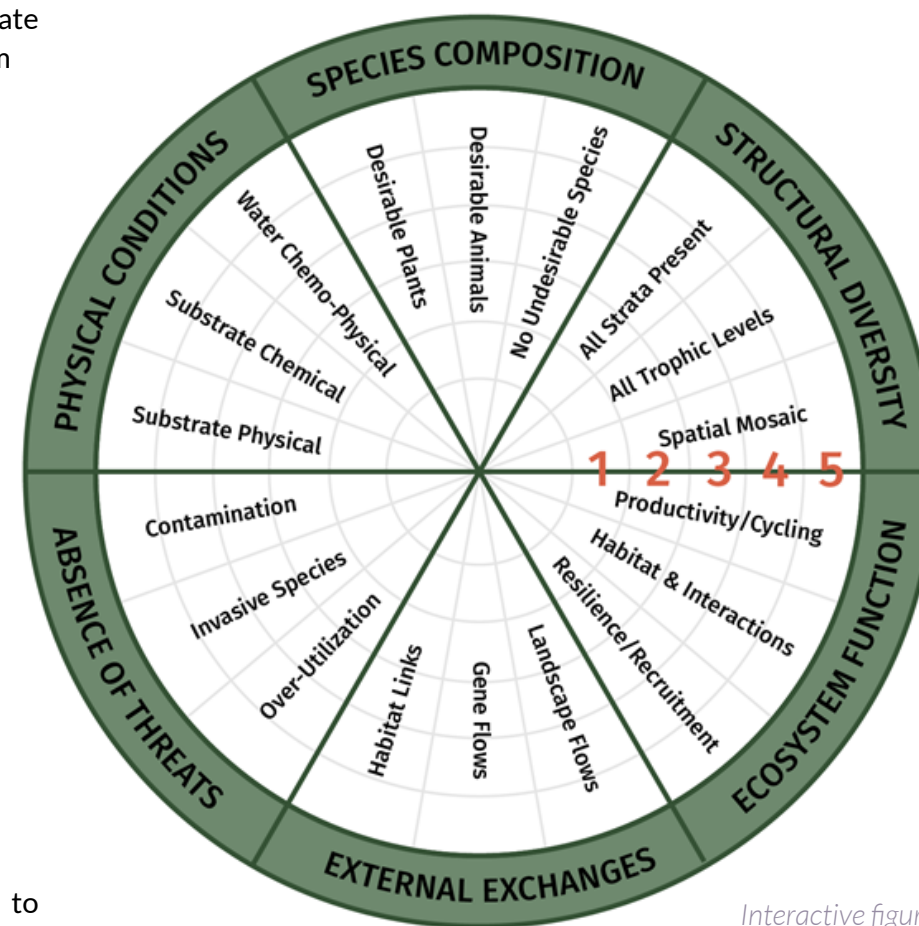
Biodiversity Net Gain Principles



United States Approach to Biodiversity Net Gain

While consistent with the definition and methods of BNG used in the Corporate Framework, this BNG Framework will also illustrate improvements in ecosystem conditions that result from increased biodiversity. This concept aligns with the Ecosystem Thematic Group's 2023 definition of restoration net gain,³ which states that a net gain in overall ecosystem health and associated ecosystem services will include improvements to native biodiversity. To measure progress toward BNG, this BNG Framework is based on a system for measuring changes in ecosystem health (including biodiversity) developed by the **Society for Ecological Restoration (SER)**. SER is an internationally recognized organization that is advancing the science, practice, and policy of ecological restoration to sustain biodiversity, improve resilience, and re-establish an ecologically healthy relationship between nature and culture. The system SER developed gathers long-term data, using flexible and efficient methods that are also repeatable and scalable.

Solar projects measuring BNG in the US will use both Method 1 to quantify changes in BUs and a modified version of the SER system to illustrate changes in ecological health using a five-star scoring system and Ecological Recovery Wheel (Figure 2). Referred to in this BNG Framework as **Method 2**, the Ecological Recovery Wheel provides a flexible way to gauge changes in ecosystem health, the effectiveness of site-specific management strategies, and the way our strategies benefit biodiversity, all while meeting regulatory monitoring requirements and addressing stakeholder concerns related to on-site environmental conditions.



Interactive figure

Figure 2. Ecological Recovery Wheel

³ Ecosystem Restoration Thematic Group (Society for Ecological Restoration, International Union for Conservation of Nature [IUCN], and IUCN's Commission on Ecosystem Management [CEM]). Third Global Forum on Ecological Restoration Achieving Net Gain for Biodiversity and Human Wellbeing: Integrating Ecological Restoration with Other Nature-based Solutions. Accessed April 2023. Available at: [global_forum_preliminary_rep.pdf \(ymaws.com\)](https://www.ymaws.com/global_forum_preliminary_rep.pdf).

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Biodiversity Net Gain and Ecosystem Services

Lightsource bp believes that a holistic approach that considers multiple ecosystem attributes will ultimately lead to the greatest potential value to native biodiversity.

Our BNG goal is to leave the land in measurably better ecological condition than it was prior to project development by focusing on the six attributes of ecosystem health included in the Ecological Recovery Wheel: species composition, structural diversity, ecosystem function, external exchanges, absence of threats, and physical conditions. We believe this holistic approach will ultimately lead to more resilient and diverse ecological conditions that, in turn, will support a wider range of species over the long term. Implementing solar projects on sites that present opportunities for ecological improvements can lead to better ecosystem services and achieving BNG.

High biodiversity strengthens and diversifies the ecosystem conditions that influence ecological processes sustaining life (i.e., “ecosystem services”), including crop pollination, oxygen production, the water cycle, and soil stability and function. Maintaining or increasing biodiversity is essential to supporting the socio-economic systems we rely upon: food supply, health, recreation, resource availability, and economic value (Figure 3).

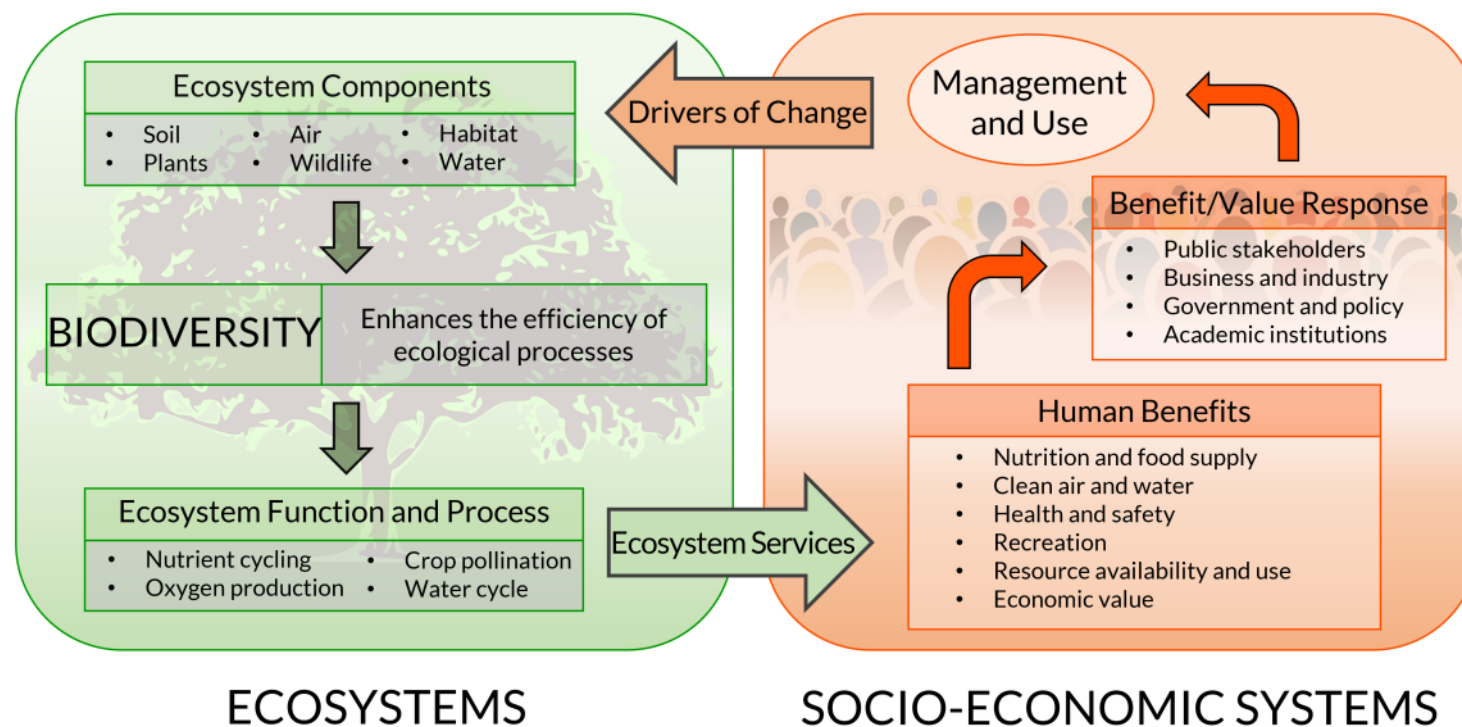


Figure 3. The Links between Biodiversity, Ecosystems, and Socio-Economic Systems

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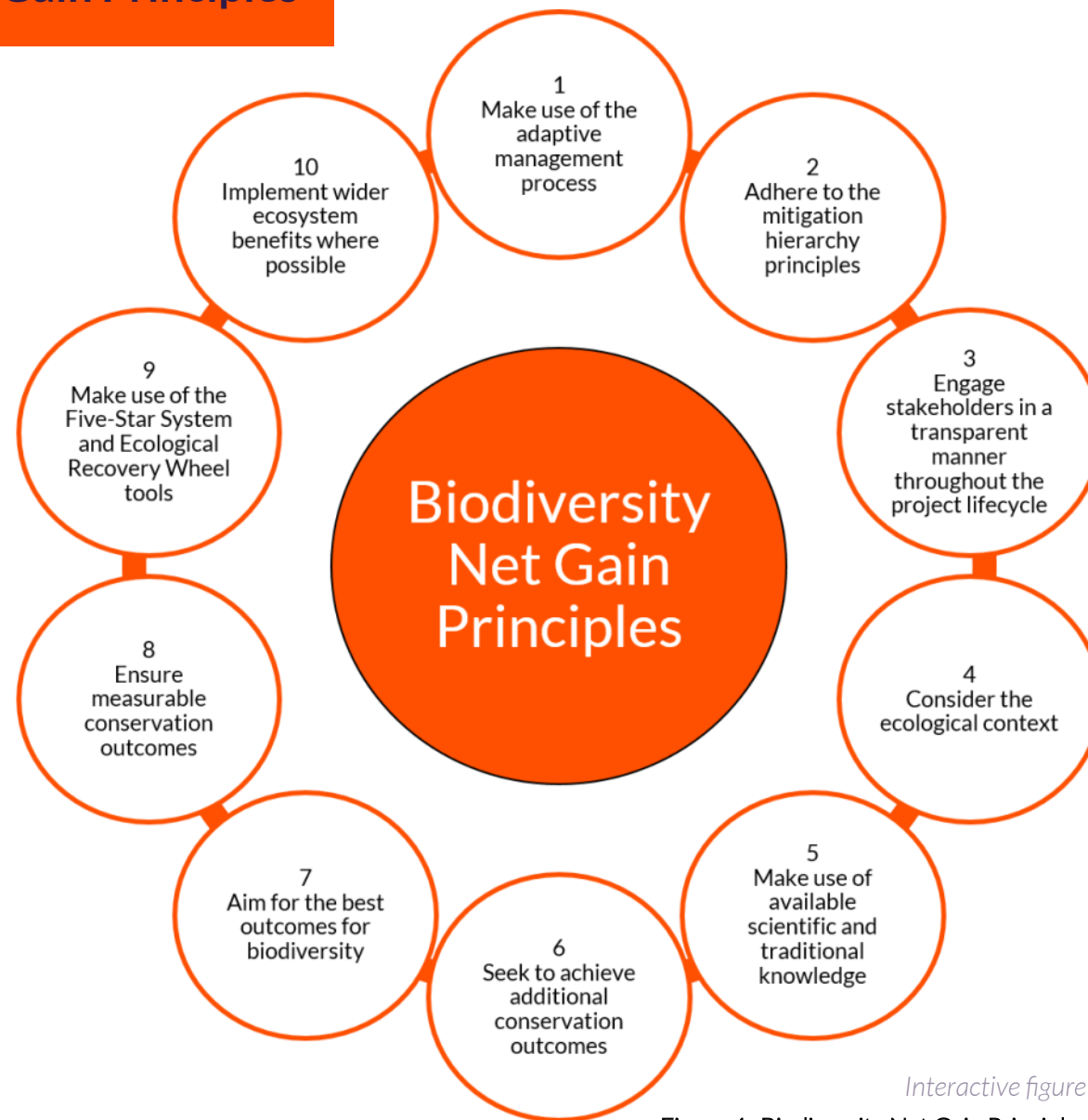
Biodiversity Net Gain Principles



Biodiversity Net Gain Principles

Achieving BNG is a process implemented throughout the project lifecycle. A BNG process means not only achieving net gains in biodiversity but also maintaining those gains. This BNG Framework guides Lightsource bp's strategy for implementing best management practices that support the BNG process across our solar projects, while providing the flexibility to adjust our management strategies based on site-specific needs.

The principles of the Corporate Framework are the core of this BNG Framework, which is tailored to the US regulatory and business setting (Figure 4). By implementing these principles throughout a project lifecycle, we can avoid or limit adverse impacts, ensure effective restoration and habitat creation for each site, maximize the potential for achieving BNG, and establish successful monitoring and reporting procedures. We incorporate these principles into our BNG process—which starts with prioritizing options to avoid, minimize, or offset impacts—using a mitigation hierarchy, incorporating the adaptive management process, and implementing this BNG Framework throughout the project lifecycle.



Interactive figure

Figure 4. Biodiversity Net Gain Principles