Commitments Performance

We Choose Earth

Commitments Performance

In strengthening its commitments to Biodiversity, EDP has joined the initiatives undertaken by **BCSD – Portugal** (Act4Nature) and by **CEBDS – Conselho Empresarial Brasileiro para o Desenvolvimento Sustentável** (Brazilian Business Commitment to Biodiversity).

For more information see pages 31 and 32, respectively, of the Biodiversity Report 2020-2022.

Act4Nature

Individual EDP Commitments

Individual SMART* Commitments	Monitoring Indicators	Start | End date	Status of implementation as of December 2021/results	Status of implementation as of December 2022/results
Draw up internal guide on No Net Loss (NNL) biodiversity for the entire EDP Group	% Achieved, Internal Publication	2020-2022	In progress	Not performed Redefining the commitment due to the change in ambition from NNL to Net Gain, with changes in approach and action directed towards implementation of biodiversity management plans and nature-based solutions
Launch an NNL training programme	No. of employees covered	2022-2023	Not started	Not started Redefining the commitment due to the change in ambition from NNL to Net Gain, with changes in approach and action directed towards implementation of biodiversity management plans and nature-based solutions
Achieve a level (NNL) of biodiversity in all new projects with significant residual impacts	% new NNL projects	2022-2030	In progress	In progress Redefining the commitment due to the change in ambition from NNL to Net Gain, with changes in approach and action directed towards implementation of biodiversity management plans and nature-based solutions. (keep target, Net Gain ambition)
Assess and value the EDP Group's environmental assets	% Achieved; Internal Publication	2020-2023	Not started	Not started Redefinition of the commitment and target due to the new indicators and metrics being worked on globally, which are expected to stabilise by the end of 2023 and beginning of 2024 (TNFD, SBTN, GRI, and others).

* SMART : Specific - measurable - achievable - realistic - time-bound

Individual SMART* Commitments	Monitoring Indicators	Start | End date	Status of implementation as of December 2021/results	Status of implementation as of December 2022/results
Assess the effects of mortality risk reduction measures (by electrocution and collision) on the dynamics of threatened avifauna populations on electricity distribution lines.	Scientific publication	2020-2021	Two scientific papers produced, one in review for publication and one in preparation for submission in 2022: Individual variability of responses to power lines on a long-lived territorial raptor. *Individual-based modelling of population responses to electric power line mortality in a lon-lived raptor* Note: see references on page 9	Finished
Create electrocution and collision risk charts for the 6 main threatened bird species in Mainland Portugal	No. of letters	2020-2021	The risk charts for collision and electrocution of the 6 main bird species threats were prepared under the Avifauna Protocol VIII (2019-2021), namely: - Thirteen risk charts were validated for the threatened species bonelli's eagle, black vulture, imperial eagle, golden eagle and Egyptian vulture; - Eleven risk maps were produced and validated for the black vulture, imperial eagle and bustard species.	Finished
Achieve the target of 700 km (**) of improvement of existing electricity distribution lines established in areas of high mortality risk for threatened bird-life	Km of line corrected	2020-2021	At the end of 2021, the target was achieved and exceeded with approximately 798.82 km (cumulative) of existing electricity distribution lines corrected with bird protection measures.	Finished

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Individual SMART* Commitments	Monitoring Indicators	Start | End date	Status of implementation as of December 2021/results	Status of implementation as of December 2022/results
Study on sedimentation in EDP's Douro system reservoirs	% Achieved, Internal Publication.	2020-2024	In progress Study to be developed in two phases: The 1st phase comprises studying the Torrão and Carrapatelo reservoirs. It will run for 16 months, starting in September 2021. First progress report due mid-2022, referring to: the general tasks of the study (data collection and literature review) and characterisation of the Torrão reservoir and the National Douro, first estimate of sediment production in the Torrão; a map showing the particle size distribution of the sediments in the Carrapatelo and Torrão reservoirs, resulting from the particle size analysis to be carried out at the Sedimentology Laboratory of the LNEG. The 2nd phase comprises the study of the remaining reservoirs, starting with a bathymetric survey of the Torrão reservoir, and the collection of sediment samples from the Carrapatelo and Torrão reservoirs.	In progress Carrying out Sedimentation Studies in some of the Douro reservoirs in order to assess their possible impact on reducing the solid load in the coastal sediment drift, namely: Study and characterisation of the Torrão reservoir, with an estimate of sediment production by numerical modelling, with an equal modelling study being carried out for the national Douro; From this map with the particle size distribution of the sediments of the Carrapatelo and Torrão reservoirs, digital terrain models of these two reservoirs were developed, associated with the data obtained through the existing hydrographic surveys of Carrapatelo and performed for Torrão in 2021.

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Individual SMART* Commitments	Monitoring Indicators	Start | End date	Status of implementation as of December 2021/results	Status of implementation as of December 2022/results
Public availability of biodiversity data obtained in the context of environmental impact assessment and monitoring studies and environmental compensation.	Biodiversity data published on the GBIF* platform (objective: 750,000 pieces of data published)	2020-2021	published 87 datasets with 1,769,000 records. Data that has been frequently used by the scientific community. To date (17-12-2021), thousands of *downloads* have occurred, with citations of the data in 118 scientific publications **. * GBIF - *Global Biodiversity Information Facility*: EDP - Energias de Portugal (gbif.org) ** Data cited in 118 publications: *Journal article* (98); *Generic* (3); *Preprint* (18); *Book section* (2) *Report* (2); *Web page* (1) and *Thesis* (3).	Finished
Establishment of partnerships through the EDP Invited Chair to increase scientific knowledge about the environmental compensation and impacts of EDP's projects	Scientific publications Academic Theses	2020-2021	**Three scientific articles** produced and published, with the following titles: *Crowding after sudden habitat loss affects demography and social structure in a bat population. Journal of Animal Ecology.* *Spatial modelling of temporal dynamics in stream fish communities under anthropogenic change.* *Combining geostatistical and biotic interaction model to predict amphibian refuges under crayfish invasion across dendritic stream networks.* Note: see references on page 9 **Four academic theses** promoted, with the following titles: *Ecological impacts of changing riverine habitats on terrestrial species.* *Behavioural and ecological determinants of large carnivore persistence in human-dominated landscapes: the case of wolves in northwest Iberia.* *Combining phylogeny, systematics and ecology to advance the conservation of freshwater mussels (Bivalvia: Unionida).* *Modelling biodiversity patterns and processes to support conservation in stream networks.* Note: see references on page 9	Finished

* SMART : Specific - measurable - achievable - realistic - time-bound

Individual SMART* Commitments	Monitoring Indicators	Start | End date	Status of implementation as of December 2021/results	Status of implementation as of December 2022/results
Establishment of partnerships through the EDP Invited Chair to develop and test new biodiversity monitoring methodologies	Scientific publications Academic Theses	2020-2021	**Scientific articles** produced and published, with the following titles: Speeding up the detection of invasive aquatic species using environmental DNA and nanopore sequencing. *Setting the stage for new ecological indicator species: a holistic case study on the Iberian dolphin freshwater mussel (Unio delphinus Spengler, 1793).* Assessing changes in stream macroinvertebrate communities across ecological gradients using morphological versus DNA metabarcoding approaches. Modelling technical and biological biases in macroinvertebrate community assessment from bulk preservative using multiple metabarcoding markers. Efficient assessment of nocturnal flying insect communities by combining automatic light traps and DNA metabarcoding. Simultaneous equations modelling of communities with interacting species networks. Note: see references on page 10 **An academic thesis**, with the following title: Towards Next-generation Biodiversity Monitoring: Improving Freshwater Quality Assessment using DNA Metabarcoding. Note: see references on page 10	Finished

* SMART : Specific - measurable - achievable - realistic - time-bound

Individual SMART* Commitments	Monitoring Indicators	Start | End date	Status of implementation as of December 2021/results	Status of implementation as of December 2022/results
Support long term research activities in the Baixo Sabor LTER Site (https://deims.org/45722713-80e3-4387-a47b-82c97a6ef62b)	Scientific publications Academic Theses Publication of biodiversity datasets and environmental parameters on the DEIMS platform (https://deims.org/)	2020-2021	**Six scientific papers** produced and published, with the following titles: *Crowding after sudden habitat loss affects demography and social structure in a bat population.* *Combining DNA metabarcoding and ecological networks to inform conservation biocontrol by small vertebrate predators.* *Spatial modelling of temporal dynamics in stream fish communities under anthropogenic change.* *Combining geostatistical and biotic interaction model to predict amphibian refuges under crayfish invasion across dendritic stream networks.* *Bats use topography and nocturnal updrafts to fly high and fast.* *From pastures to forests: Changes in Mediterranean wild bee communities after rural land abandonment.* Note: see references on pages 10-11 **Four academic theses**, with the following titles: *Recovery of Mediterranean forests under farmland abandonment: regeneration processes, management strategies, and implications for the delivery of ecosystem services* (in progress) *Ecological impacts of changing riverine habitats on terrestrial species A case study with bats in a semi-arid region.* *Advancing metabarcoding techniques for the study of trophic interactions and ecosystem services in small vertebrates* (Winner of the Portuguese Ecological Society PhD Thesis Award 2021). Modelling biodiversity patterns and processes to support conservation in stream networks. Note: see references in annex. **Thirty-four datasets, totalling 1,800,000 occurrences.** Note: see references from page 11	Finished

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Products: Publications, Articles and Theses

Individual Commitments	Publications | Articles | Thesis
Assess the effects of mortality risk reduction measures (by electrocution and collision) on the dynamics of threatened avifauna populations on electricity distribution lines.	**Articles** • Marques, A. T., Palma, L., Lourenço, R., Cangarato, R., Leitão, A., Mascarenhas, M., Tavares, J. T., Tomé, R., Moreira, F., Beja, P. (Submetido). Individual variability of responses to power lines on a long-lived territorial raptor. Under Review in Ecology and Evolution. • Marques, A. T., Pita, R., ..., Palma, L., Moreira, F., Beja, P. (In Preparation) Individual-based modelling of population responses to electric power line mortality in a lon-lived raptor. To be submitted in 2022.
Establishment of partnerships through the EDP Chair to increase scientific knowledge about the environmental impacts and compensation of EDP projects	**Articles** • Amorim, F., Pita, R., Mata, V. A., Beja, P., & Rebelo, H. (2022). Crowding after sudden habitat loss affects demography and social structure in a bat population. *Journal of Animal Ecology*. • Mota-Ferreira, M., Filipe, A. F., Filomena Magalhães, M., Carona, S., & Beja, P. (2021). Spatial modelling of temporal dynamics in stream fish communities under anthropogenic change. *Diversity and Distributions*, *27*(2), 313-326. • Mota-Ferreira, M., & Beja, P. (2020). Combining geostatistical and biotic interaction model to predict amphibian refuges under crayfish invasion across dendritic stream networks. *Diversity and Distributions*, *26*(6), 699-714. **Thesis** • Francisco Nicolau Loureiro de Amorim (2020). Ecological impacts of changing riverine habitats on terrestrial species A case study with bats in a semi-arid region. Programa Doutoral em Biodiversidade Genética e Evolução, Universidade do Porto. Coorientação com o Doutor Hugo Rebelo (CIBIO – Centro de Investigação em Biodiversidade e Recursos Genéticos). Bolsa do Programa Doutoral em Biodiversidade, Genética e Evolução. • Helena Isabel Rio Maior Palma de Oliveira (2020). Behavioural and ecological determinants of large carnivore persistence in human-dominated landscapes: the case of wolves in northwest Iberia. Programa Doutoral em Biodiversidade Genética e Evolução, Universidade do Porto. Coorientação com o Doutor Francisco Álvares (CIBIO – Centro de Investigação em Biodiversidade e Recursos Genéticos). • Manuel Peixoto de Magalhães Lopes Lima (2020). Combining phylogeny, systematics and ecology to advance the conservation of freshwater mussels (Bivalvia: Unionida). Programa Doutoral em Biodiversidade Genética e Evolução, Universidade do Porto. Coorientação com a Doutora Ana Filipa Filipe (CIBIO – Centro de Investigação em Biodiversidade e Recursos Genéticos). Bolsa da Fundação para a Ciência e Tecnologia (SFRH/BD/115728/2016). • Mário Rui Mota Ferreira (2021) Modelling biodiversity patterns and processes to support conservation in stream networks. Programa Doutoral em Biodiversidade Genética e Evolução, Universidade do Porto. Bolsa da Fundação para a Ciência e Tecnologia (SFRH/BD/95202/2013).

Individual Commitments	Publications | Articles | Thesis
Establishment of partnerships through the EDP Chair to develop and test new methodologies for monitoring biodiversity.	**Articles** • Egeter, B., Veríssimo, J., Lopes-Lima, M., Chaves, C., Pinto, J., Riccardi, N., ... & Fonseca, N. A. (2020). Speeding up the detection of invasive aquatic species using environmental DNA and nanopore sequencing. *bioRxiv*. • Lopes-Lima, M., Hinzmann, M., Varandas, S., Froufe, E., Reis, J., Moreira, C., ... & Teixeira, A. (2020). Setting the stage for new ecological indicator species: a holistic case study on the Iberian dolphin freshwater mussel Unio delphinus Spengler, 1793. *Ecological Indicators*, *111*, 105987. • Martins, F. M., Feio, M. J., Porto, M., Filipe, A. F., Bonin, A., Serra, S. R., ... & Beja, P. (2021). Assessing changes in stream macroinvertebrate communities across ecological gradients using morphological versus DNA metabarcoding approaches. *Science of The Total Environment*, *797*, 149030. • Martins, F. M., Porto, M., Feio, M. J., Egeter, B., Bonin, A., Serra, S. R., ... & Beja, P. (2021). Modelling technical and biological biases in macroinvertebrate community assessment from bulk preservative using multiple metabarcoding markers. *Molecular Ecology*, *30*(13), 3221-3238. • Mata, V. A., Ferreira, S., Campos, R. M., da Silva, L. P., Veríssimo, J., Corley, M. F., & Beja, P. (2021). Efficient assessment of nocturnal flying insect communities by combining automatic light traps and DNA metabarcoding. *Environmental DNA*, *3*(2), 398-408. • Porto, M., & Beja, P. (2021). Simultaneous equations modelling of communities with interacting species networks. *bioRxiv*. **Thesis** • Filipa Matos Silva Martins (2021). Towards Next-generation Biodiversity Monitoring: Improving Freshwater Quality Assessment using DNA Metabarcoding. Programa Doutoral em Biodiversidade Genética e Evolução, Universidade do Porto. Coorientação com o Professor Doutor Paulo Célio Alves (Universidade do Porto) e o Doutor Simon Jarman (CIBIO – Centro de Investigação em Biodiversidade e Recursos Genéticos). Bolsa da Fundação para a Ciência e Tecnologia (SFRH/BD/104703/2014).
Apoio às atividades de investigação de longo termo no Sítio LTER do Baixo Sabor (https://deims.org/45722713-80e3-4387-a47b-82c97a6ef62b)	**Articles** • Amorim, F., Pita, R., Mata, V. A., Beja, P., & Rebelo, H. (2022). Crowding after sudden habitat loss affects demography and social structure in a bat population. *Journal of Animal Ecology*. • Mata, V. A., da Silva, L. P., Veríssimo, J., Horta, P., Raposeira, H., McCracken, G. F., ... & Beja, P. (2021). Combining DNA metabarcoding and ecological networks to inform conservation biocontrol by small vertebrate predators. *Ecological Applications*, *31*(8), e02457. • Mota-Ferreira, M., Filipe, A. F., Filomena Magalhães, M., Carona, S., & Beja, P. (2021). Spatial modelling of temporal dynamics in stream fish communities under anthropogenic change. *Diversity and Distributions*, *27*(2), 313-326. • Mota-Ferreira, M., & Beja, P. (2020). Combining geostatistical and biotic interaction model to predict amphibian refuges under crayfish invasion across dendritic stream networks. *Diversity and Distributions*, *26*(6), 699-714. • O'Mara, M. T., Amorim, F., Scacco, M., McCracken, G. F., Safi, K., Mata, V., ... & Dechmann, D. K. (2021). Bats use topography and nocturnal updrafts to fly high and fast. *Current biology*, *31*(6), 1311-1316. • Penado, A., Rebelo, H., Goulson, D., Wood, T.J., Porto, M., Rotheray, E.L. et al. (2022) From pastures to forests: Changes in Mediterranean wild bee communities after rural land abandonment. *Insect Conservation and Diversity*, 1– 12. Available from: https://doi.org/10.1111/icad.12562 **Thesis** • Ana Teresa Pinto (Em curso) Recovery of Mediterranean forests under farmland abandonment: regeneration processes, management strategies, and implications for the delivery of ecosystem services. Programa Doutoral em Biodiversidade Genética e Evolução, Universidade do Porto. Coorientação com o Professor Doutor João Honrado (Universidade do Porto). Bolsa da Fundação para a Ciência e Tecnologia (SFRH/BD/84241/2012). • Francisco Nicolau Loureiro de Amorim (2020). Ecological impacts of changing riverine habitats on terrestrial species A case study with bats in a semi-arid region. Programa Doutoral em Biodiversidade Genética e Evolução, Universidade do Porto. Coorientação com o Doutor Hugo Rebelo (CIBIO – Centro de Investigação em Biodiversidade e Recursos Genéticos). Bolsa do Programa Doutoral em Biodiversidade, Genética e Evolução. • Vanessa Cristina Alves Mata (2020). Advancing metabarcoding techniques for the study of trophic interactions and ecosystem services in small vertebrates. Programa Doutoral em Biodiversidade Genética e Evolução, Universidade do Porto. Coorientação com o Doutor Hugo Rebelo (CIBIO – Centro de Investigação em

Individual Commitments	Publications | Articles | Thesis
	Biodiversidade e Recursos Genéticos) e o Professor Doutor GaryMcCracken (University of Tennessee, USA). Bolsa do Programa Doutoral em Biodiversidade, Genética e Evolução. Vencedora do Prémio de Teses de Doutoramento 2021 da Sociedade Portuguesa de Ecologia. • Mário Rui Mota Ferreira (2021) Modelling biodiversity patterns and processes to support conservation in stream networks. Programa Doutoral em Biodiversidade Genética e Evolução, Universidade do Porto. Bolsa da Fundação para a Ciência e Tecnologia (SFRH/BD/95202/2013). **Datasets** • Beja P, Motta-Ferreira M, Filpe A F, Carona S, Henrique P, Severino R, Ivone S, Henrique S, Prata D, Lopes J, Guilherme J, Barradas J, Cereja R, Pace G, Rosa I, Pinto M, Agudelo W, Buzzo G, Sá F, Quaglietta L, Pereira N, Múrias T (2021). LTER Baixo Sabor: Long term monitoring of freshwater fish - Sabor watershed [2012 - 2020]. Version 1.3. CIBIO (Research Center in Biodiversity and Genetic Resources) Portugal. Sampling event dataset https://doi.org/10.15468/pep8ma accessed via GBIF.org on 2022-01-17. • Mota P, Silva D, Santos M, Múrias T (2021). EDP Baixo Sabor: Construction and Reservoir Filling Phases — Vascular Flora and Habitats: species from prioritary conservation habitats - [2010-2014]. EDP - Energias de Portugal. Sampling event dataset https://doi.org/10.15468/f9755y accessed via GBIF.org on 2022-01-17. • Paulo M, Vingada J V, Rodrigues P, Garrido N, Pinto N, Duro V, Oliveira F, Múrias T (2019). EDP Baixo Sabor: Acoustic Bat Monitoring — Construction and Reservoir Filling Phases [2008-2014]. EDP - Energias de Portugal. Sampling event dataset https://doi.org/10.15468/whkymv accessed via GBIF.org on 2022-01-17. • Mota P, Gomes C, Zina H A, Araújo P M, Oliveira C A, Marques S M, Mendes J D, Múrias T (2020). EDP Baixo Sabor: Land Birds - Construction and Reservoir Filling Phases (Sabor river valley) [2010-2014]. EDP - Energias de Portugal. Sampling event dataset https://doi.org/10.15468/rzg9pc accessed via GBIF.org on 2022-01-17. • Mota P, Silva D, Santos M, Múrias T (2021). EDP Baixo Sabor: Construction and Reservoir Filling Phases — Vascular Flora and Habitats: species of conservation concern (RELAPE) - [2010-2014]. EDP - Energias de Portugal. Sampling event dataset https://doi.org/10.15468/d8r8ck accessed via GBIF.org on 2022-01-17. • Mota P, Vingada J V, Rodrigues P, Garrido N, Pinto N, Duro V, Oliveira F, Rebelo H, Amorim F, Mata V, Múrias T (2020). EDP Baixo Sabor: Bat Roosts - Ecological Monitoring Program (PME) (2008-2014). EDP - Energias de Portugal. Sampling event dataset https://doi.org/10.15468/gugh5u accessed via GBIF.org on 2022-01-17. • Mota P, Gomes C, Zina H, Araújo P M, Oliveira C A, Marques S M, Mendes J D, Múrias T (2021). EDP Baixo Sabor: Aquatic and Riparian Birds - Construction and Reservoir Filling Phases [2010-2014]. Version 1.1. EDP - Energias de Portugal. Sampling event dataset https://doi.org/10.15468/rlay4n accessed via GBIF.org on 2022-01-17. • Mota P, Gomes C, Zina H A, Araújo P M, Oliveira C A, Marques S M, Mendes J D, Múrias T (2020). EDP Baixo Sabor: Land Birds - Construction and Reservoir Filling Phases: stream weirs in the Sabor tributaries [2010-2014]. EDP - Energias de Portugal. Sampling event dataset https://doi.org/10.15468/2p246m accessed via GBIF.org on 2022-01-17. • Mota P, Gomes C, Zina H A, Araújo P M, Oliveira C A, Marques S M, Mendes J D, Múrias T (2020). EDP Baixo Sabor: Land Birds - Construction and Reservoir Filling Phases: Maçãs and Angueira river valleys [2010-2014]. EDP - Energias de Portugal. Sampling event dataset https://doi.org/10.15468/5qyfeu accessed via GBIF.org on 2022-01-17. • Mota P, Gomes C, Zina H A, Araújo P M, Oliveira C A, Marques S M, Mendes J D, Múrias T (2020). EDP Baixo Sabor: Land Birds - Construction and Reservoir Filling Phases: complementary work sites [2010-2014]. EDP - Energias de Portugal. Sampling event dataset https://doi.org/10.15468/y8ebjt accessed via GBIF.org on 2022-01-17. • Mota P, Gomes C, Zina H, Araújo P M, Oliveira C A, Marques S M, Mendes J D, Múrias T (2021). EDP Baixo Sabor: Birds - Construction and Reservoir Filling Phases - Vilariça Stream (MC1) [2013-2014]. Version 1.2. EDP - Energias de Portugal. Sampling event dataset https://doi.org/10.15468/btyfya accessed via GBIF.org on 2022-01-17. • Mota P, Gonçalves F, Castro B, Pereira M, Santos J I, Múrias T (2021). EDP Baixo Sabor: Phytobenthos — Ecological Monitoring Program [2012]. EDP - Energias de Portugal. Sampling event dataset https://doi.org/10.15468/26mbeu accessed via GBIF.org on 2022-01-17. • Mota P, Vingada J V, Ferreira J, Diogo H M, Morgado R G, Rodrigues P, Garrido N, Eira C I, Pinto N, Marques C, Múrias T (2020). EDP Baixo Sabor: Construction and Reservoir Filling Phases - Iberian Wolf (Canis lupus) [Sign surveys] [2010-2014]. Version 1.2. EDP - Energias de Portugal. Sampling event dataset https://doi.org/10.15468/zsqtsy accessed via GBIF.org on 2022-01-17. • Mota P, Vingada J V, Ferreira J, Diogo H M, Morgado R G, Rodrigues P, Garrido N, Eira C I, Pinto N, Marques C, Múrias T (2020). EDP Baixo Sabor: Construction and Reservoir Filling Phases — Natural Wolf Prey (Wild Boar) [2010-2014]. Version 1.1. EDP - Energias de Portugal. Sampling event dataset https://doi.org/10.15468/5aush8 accessed via GBIF.org on 2022-01-17.

Individual Commitments	Publications | Articles | Thesis
	• Mota P, Gomes C, Zina H A, Araújo P M, Oliveira C A, Marques S M, Mendes J D, Múrias T (2020). EDP Baixo Sabor: Construction and Reservoir Filling Phases - Cliff-nesting species: Breeding sites [2010-2014]. EDP - Energias de Portugal. Sampling event dataset https://doi.org/10.15468/4aqk8t accessed via GBIF.org on 2022-01-17. • Mota P, Vingada J V, Ferreira J, Diogo H M, Morgado R G, Rodrigues P, Garrido N, Eira C I, Pinto N, Marques C, Múrias T (2020). EDP Baixo Sabor: Construction and Reservoir Filling Phases – Wolf, (Canis lupus) Wild Boar (Sus scrofa) and Roe Deer (Capreolus capreolus) [camera-trapping] - [2011-2014]. Version 1.1. EDP - Energias de Portugal. Sampling event dataset https://doi.org/10.15468/qhbaoj accessed via GBIF.org on 2022-01-17. • Mota P, Gomes C, Zina H A, Araújo P M, Oliveira C A, Marques S M, Mendes J D, Múrias T (2020). EDP Baixo Sabor: Construction and Reservoir Filling Phases – Kingfisher (Alcedo atthis and Dipper (Cinclus cinclus) - [2010-2014]. EDP - Energias de Portugal. Sampling event dataset https://doi.org/10.15468/q1s8nt accessed via GBIF.org on 2022-01-17. • Mota P, Gomes C, Zina H A, Araújo P M, Oliveira C A, Marques S M, Mendes J D, Múrias T (2020). EDP Baixo Sabor: Construction and Reservoir Filling Phases: Cliff-nesting Birds, priority conservation species: Complementary Observations - [2010-2014]. Version 1.1. EDP - Energias de Portugal. Sampling event dataset https://doi.org/10.15468/c7hzis accessed via GBIF.org on 2022-01-17. • Mota P, Vingada J V, Ferreira J, Neto H M, Morgado R G, Silva J, Múrias T (2020). EDP Baixo Sabor: Construction and Reservoir Filling Phases – Otter [2010-2014]. EDP - Energias de Portugal. Sampling event dataset https://doi.org/10.15468/6qbgut accessed via GBIF.org on 2022-01-17. • Mota P, Gomes C, Zina H, Araújo P M, Oliveira C A, Marques S M, Mendes J D, Múrias T (2020). 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Individual Commitments	Publications | Articles | Thesis
	• Mota P, Vingada J V, Ferreira J, Diogo H M, Morgado R G, Silva J, Múrias T (2021). EDP Baixo Sabor: Construction and Reservoir Filling Phases - Otter: camera-trapping - [2010-2013]. Version 1.3. EDP - Energias de Portugal. Sampling event dataset https://doi.org/10.15468/volo76 accessed via GBIF.org on 2022-01-17. • Mota P, Vingada J V, Ferreira J, Diogo H M, Morgado R G, Rodrigues P, Garrido N, Eira C I, Pinto N, Marques C, Múrias T (2020). EDP Baixo Sabor: Construction and Reservoir Filling Phases - Iberian Wolf [howling surveys] - [2010-2014]. EDP - Energias de Portugal. Sampling event dataset https://doi.org/10.15468/71vmfa accessed via GBIF.org on 2022-01-17. • Marques dos Santos M, Múrias T (2021). EDP Baixo Sabor: Construction Phase – Vascular Flora and Habitats in the Work Fronts: species and habitats of conservation concern - [2010-2014]. EDP - Energias de Portugal. Sampling event dataset https://doi.org/10.15468/fhg4j6 accessed via GBIF.org on 2022-01-17. • Mota P, Moreira da Silva D, Marques dos Santos M, Múrias T (2021). EDP Baixo Sabor: Construction Phase – Invasive Species (work fronts) [2010-2014]. EDP - Energias de Portugal. Sampling event dataset https://doi.org/10.15468/4k2ybf accessed via GBIF.org on 2022-01-17.

Brazilian Business Commitment to Biodiversity

Individual EDP Brasil Commitments

Goals	Purpose/Status
Goal 1- Increase employee participation and disseminate knowledge in the value chain Goal 3- Strategy based on mitigating impacts, innovation, education, research and development, volunteer work and community involvement	**Status:** **Environmental awareness and community involvement:** • Educational content about River and Ocean Preservation for more than 30 municipal schools in 8 different states, reaching more than 12,000 students in primary and secondary schools. • Planting and donation of seedlings of different species, in all the energy distribution and generation units. The initiative contemplated educational actions and compensatory activities in the generation areas. • Training for EDP employees on environmental issues, focusing on topics such as Circular Economy and Eco-efficiency. • Celebration of World Energy Day with an initiative in partnership with the Km Solidário app, in which employees "donated" their kilometres of physical activity performed, accounted for by the NGO app, for conversion into donations within the app. As an incentive, on reaching 1,000 kilometres, a new volunteer programme would plant 1,000 native tree seedlings in partnership with the Ecological Research Institute - IPÊ. The goal initially proposed was surpassed, reaching about 2,000 kilometres accounted for, and in November 2022, EDP volunteer employees carried out the planting of the 1,000 seedlings of native species in Nazaré Paulista. In addition to the actual planting action, the volunteers were able to learn about ecological concepts of vegetation restoration, the importance of permanent preservation areas and biodiversity from the Institute's technical team. **In the value chain:** • In the ESG evaluation of suppliers through the Supplier Performance Index – SPI, among other aspects, the index assesses the suppliers' biodiversity management practices, when applicable to their business, taking into account the information and evidence provided in response to the SPI form.

* SMART : Specific - measurable - achievable - realistic - time-bound

Goals	Purpose/Status
Goal 2- Valuation tools and analysis of business dependencies and impacts	A biodiversity R&D project on "Environmental Valuation and Impact and Dependency Analysis for the Electricity Sector" is being developed with the main objective of developing an integrated methodology to measure and value the Impacts and Dependencies of ecosystem services (ES) related to its business activities. The objective is to conclude, until 2025, an economic valuation of biodiversity to foster the ecological ceiling of the main aspects that directly impact EDP Brasil. **Status:** • The project "Environmental Valuation and Impact and Dependency Analysis for the Electric Sector" was developed in partnership with the University of São Paulo – USP and the Instituto Tecnológico de Aeronáutica – ITA. • The process was internalised at EDP Br through the implementation of the biodiversity procedure, which is applied by the business units and clarifies the importance of the valuation of externalities and dependencies, brings the description of the ecosystem services studied for the company's activities (Distribution/ Transmission, Thermal Generation and Hydroelectric Generation), besides informing about the application of the study and the forecast for its update, since the methodology must be revised according to the portfolio managed by the company.
"Zero plastics" programme	**Status:** In 2021 we will remove disposable plastic cups from the administrative offices in São Paulo, São José dos Campos, Goiânia, Porto Alegre and Vitória. The employees of these units received bottles for water and cups for coffee. Visitors, meanwhile, must now pick up paper cups at reception for use during their time in the office. Reinforcing the commitment with the reduction of the use of single-use plastics and enabling the adherence by employees not leased in the administrative headquarters, mugs made of coconut fibre and recycled plastic were distributed to own and third-party employees of EDP Distribuição Espírito Santo and São Paulo units. Also, by the end of 2022, all employees in the business units received non-disposable metal water bottles.
Goal 4- Hierarchy of mitigation in all group activities Status:	The Guide for Biodiversity Management and Ecosystem Services was prepared and published in the company's regulatory system.

* SMART : Specific - measurable - achievable - realistic - time-bound