

Environment

TOWARDS
A **CIRCULAR**
ECONOMY

The company's operations are carried out following the principle of precaution with a view to minimising the impact of any industrial operation, particularly with regard to the comprehensive management of environmental, climate and water risks, the promotion of the circular economy and conservation of biodiversity.



HIGHLIGHTS IN 2018

- **295 hm³** of water treated in areas with water stress and **17 %** of the water consumed of recycled, tertiary or rainwater origin.
- Reduction of the generation of unrecovered non-hazardous waste by **30 %** compared to 2015 (Base year of ACCIONA's Waste Management Plan).
- **58 %** recovery of the non-hazardous waste generated.
- Completion of the 2018 Analysis of scenarios, risks and opportunities associated with water resources at ACCIONA and assessments and management of water and environmental liability risks at the business level.
- **5** new LCAs added to the company's portfolio.
- Biodiversity footprint methodology developed and executed **12** biodiversity action plans.



MAIN CHALLENGES 2019

- Maintaining water for consumption **6 %** below the value attained in 2017.
- Reduction of **8 %** in the amount of unrecovered non-hazardous waste generated compared to 2015, as set out in the Waste Management Plan.
- **47 %** recovery of the waste generated, progressing in the compliance with the Waste Management Plan for the promotion of the Circular Economy.
- Analysing the 2019 risks and opportunities associated with water resources at ACCIONA.
- Including the life cycle analysis in the company's new projects/centres.
- Neutral biodiversity footprint: No Net Loss or Net Improvement.

Value creation through the environmental variable

ACCIONA's business model is based on designing solutions that facilitate more sustainable development. Among the challenges this poses, over the past few years, the activity has been focusing mainly on the decarbonisation of the energy mix with a view to mitigating climate change, the design, construction and operation of resilient infrastructure and attention given to the challenges posed by water stress in vast regions of the planet. The company's operations are carried out following the principle of precaution with a view to minimising the impact of any industrial operation, particularly with regard to the comprehensive management of environmental, climate and water risks, the reduction and offsetting of emissions, the promotion of the circular economy and conservation of biodiversity.

Environmental protection is outlined in the Code of Conduct and is developed through four action policies that cover the main risks of the operations: Environment Policy, Climate Change Policy, Water Policy and Biodiversity Policy.

As stipulated in the Sustainability Master Plan 2020 (SMP 2020), integrating the environmental variable and applying the environmental policies and principles to operations in ACCIONA's businesses is guaranteed through strategies that are referred to the Board of Directors' Sustainability Committee. As such, we ensure compliance with the goals in the areas of the Environment and Climate Change.

ACCIONA has specially qualified staff in each of the functional, hierarchical and geographical areas. This means that top quality and experience can be employed at all times in pursuing the company's business, always according to the strictest environmental standards. In 2018, a total of 239 people at ACCIONA had specific environmental responsibilities.

Environmental investment and expenditure

38 % of the ACCIONA's overall sales and 69 % of EBITDA have resulted from what the United Nations Environment Programme (UNEP) defines as the 'Green Economy'¹. During 2018, the company's environmental risk prevention and mitigation activity amounted to EUR 3,242 million, of which 2,687 million was devoted to expenses and 555 million to environmental investments.

38 % OF ACCIONA'S OVERALL SALES AND 69 % OF ITS EBITDA WERE BASED ON GREEN ECONOMY BUSINESSES (AS DEFINED BY THE UNEP)

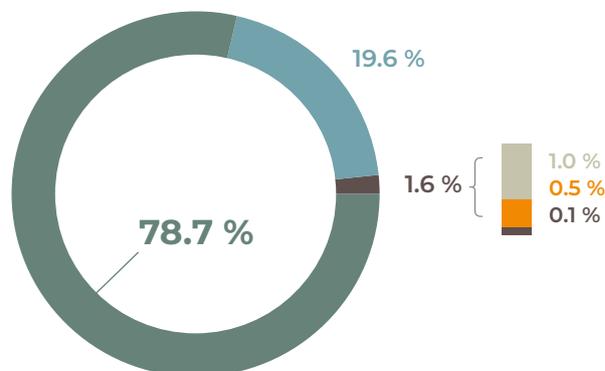
Of the total figure, managing (including preventing, reducing or correcting) the environmental impacts costed EUR 83 million (69 million in expenses and 14 million in investments), while the item for the business development of a mainly environmental component amounted to EUR 3,159 million (EUR 2,618 million in expenses and EUR 541 million in investments). The latter item encompasses primarily strategic activities for the company, such as the generation of renewable energy and comprehensive management of the water cycle, which centre around managing environmental impacts generated by other actors and whose management is part of the business.

¹ More information about the green economy at: https://sustainabledevelopment.un.org/content/documents/126GER_synthesis_en.pdf

BREAKDOWN OF ENVIRONMENTAL ECONOMIC FIGURE BY BUSINESS LINE

- Energy
- Water
- Construction
- Service
- Other*

* 'Other' comprises: Industrial, A. Inmobiliaria, Grupo Bodegas Palacio 1894, Corporate and Concessions.



ACCIONA in 2018 obtained economic² allowances resulting from the reduction of electricity consumption in a group of wastewater treatment plants on the Balearic Islands.

Environmental training

ACCIONA continues to invest in training on environmental issues. In 2018, employees received a total of 5,371 hours of training on issues such as climate change, environmental management systems, waste management and environmental restoration of degraded areas, amongst others.

Division	Training hours
Energy	2,187
Infrastructure	3,152
Other businesses	32
Total	5,371

Environmental best practices and actions

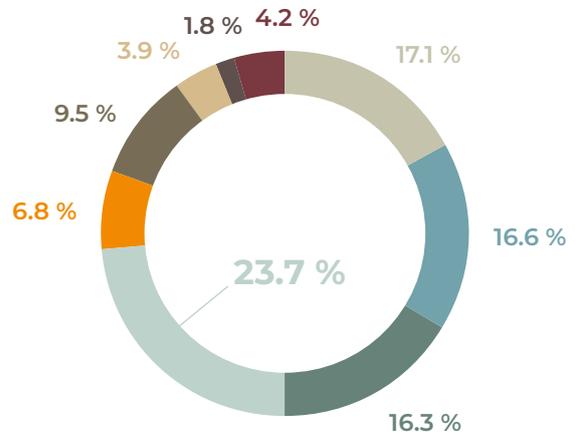
ACCIONA identifies, analyses and evaluates the environmental actions it carries out, and selects those that stand out for their distinctly positive effect on the environment, their innovative nature or their scientific and/or social interest. The aim is to recognise and publicise the most significant events within and outside the organisation so that they can be replicated.

In 2018, the actions identified, analysed and evaluated in the different business lines correspond by 34 % to ACCIONA Construction, 23 % to ACCIONA Service, 17 % to ACCIONA Agua, 13 % to ACCIONA Energy, 4 % to ACCIONA Industrial, 1 % to ACCIONA Concessions and 8 % to other businesses (Grupo Bodegas Palacio 1894 and ACCIONA Inmobiliaria).

² Economic allowances worth EUR 18,000

MAIN FIELDS OF ENVIRONMENTAL ACTIONS ANALYSED

- Biodiversity
- Water
- Energy
- Waste
- Atmosphere
- Resources
- Certifications
- Soil
- Communication



Integrated environmental management

Principles for successful environmental management

ACCIONA's environmental management model, based on the principles of environmental performance improvement, establishes a common framework for action that makes it possible to coordinate the management systems of each of the divisions. This model determines the environmental aspects from a life-cycle perspective, as well as the risks and opportunities to ensure improvement.

ACCIONA's environmental management systems are verified and certified by accredited independent entities. In 2018, the revenue certified as per the ISO 14001 corporate standard reached 90 %.

The model also allows ACCIONA to create systems to identify and measure the company's environmental footprint and establish mechanisms that facilitate the reduction of negative impacts and maximise the positive impacts. The management model is structured around the following elements:

IMPLEMENTATION OF CONTINUOUS IMPROVEMENT TOOLS



ENVIRONMENT

- Identification, evaluation and minimization of environmental conditions that may occur during the development of the company's activities.
- Analysis of environmental risks through a regulated technical procedure that quantifies the risk of an accident that causes environmental damage or a negative environmental effect on ACCIONA's activities.
- Identification and verification of legal requirements through an online tool, which allows for managing compliance with administrative obligations and other commitments acquired in addition to those legally required. The year 2018 ended with 489 sites registered with the tool.
- Operational control of the environmental information of each centre by means of the corporate tool Métrica, which is used to manage the environmental performance of the processes, set goals and define strategies.
- Registration and classification of environmental near-misses³.
- Implementation of tools for continuous improvement, identification and dissemination of lessons learned and good practices.
- Establishment of annual environmental goals in all of the businesses, taking as reference the most significant environmental aspects in the management systems and the SMP.

Evaluation and management of the environmental impact

In 2018, 27 projects under development were the subject of an Environmental Impact Assessment (EIA), 16 of which are being processed by the competent Public Administrations of Brazil, Spain, Chile, Mexico and Panama. Seven projects obtained favourable environmental impact statements (Chile, Mexico, Panama and Poland). The EIAs for these projects have been published in the relevant official journals, as well as in institutional platforms, to channel local participation and receive any possible claims.

On the other hand, ACCIONA also carried out a total of 217 Environmental Monitoring Plans (EMPs) in centres and facilities under construction, operation and/or maintenance.

Furthermore, the company carried out specific environmental monitoring in facilities in 17 countries, with more than 139 complementary environmental studies.

Environmental risk management

The management of environmental risks, integrated into the company's general risk management activities, is incorporated into the *Corporate Environmental Risk Management Standard* and its associated procedures (on Environmental Liability, Climate Change and Water Resources). This standard outlines the process to follow in order to identify, evaluate, prioritise and notify ACCIONA's decision-making bodies of the potential events in relation to the environment that could impact the company and its centres, and, vice versa, the risks generated by its activity that could impact the environment. As such, the procedure set outs action policies and tolerance thresholds that provide a reasonable guarantee of the achievement of objectives. The environmental risk management process includes the evaluation of present and future scenarios, alongside an analysis of the probability of occurrence and consequences for the company and/or for the environment. In 2018, 101 significant risks were identified, for which specific mitigation instruments were developed. Furthermore, and with the aim of tackling risks that have become environmental crises, the company has systematised mechanisms integrated into the *Corporate Crisis Management Standard*.

Sustainable water management

ACCIONA has a specific water policy approved by the Board of Directors' Sustainability Committee, the main aim of which is to contribute to the fundamental human right of having access to drinking water and sanitation, as the United Nations General Assembly recognised in 2010.

³ An environmental near-miss is any incident that does not result in damage to the environment but has the potential to do so. In 2018, the company recorded 652 environmental near-misses, mainly non-significant discharges. 12 incidents have involved spills, with a total volume of 767 m³ of discharges. All cases were resolved by adopting corrective measures.

ACCIONA recognises that water is a limited and irreplaceable natural resource. As such, its water management strategy accounts for the availability of the resource, its quality and the balance of the ecosystems in which it operates.

The water strategies that ACCIONA develops are determined by strict compliance with legislation, responsible and efficient management, establishing specific aims, developing new technologies, integrating water into risk management, extending its principles of the value chain and transparent communication.

Uses of water at ACCIONA

ACCIONA has 4 different uses for water as part of its activities:

- **Water treatments for customers**

They meet a demand by ACCIONA's customers. This water is collected from desalination plants, purification plants or wastewater treatment plants managed by the company, and is treated in order to obtain suitable quality for human consumption or a sufficient level of decontamination as established by law. In 2018, the volume of water treated by ACCIONA amounted to 790 hm³ (295 hm³ in countries with water stress).

- **Water for own consumption**

This refers to water withdrawn for consumption in the company's facilities. This category encompasses freshwater, such as municipal, surface and groundwater, for which the company set a target in 2018 to reduce by 5 % compared to the previous year.

It also includes water withdrawal from sources that do not deplete the available natural reserves, such as rainwater, recycled water from networks and the water reused or recycled on-site. In 2018, 17 % of the total water for consumption at ACCIONA came from one of these three sources.

- **Discharges**

This refers to the residual water for consumption at ACCIONA that has not evaporated or been used in any company activity, and that leave its facilities as specified in the corresponding discharge authorisations. This section includes brine discharges from desalination plants operated by ACCIONA, which make up the largest percentage of its discharges. All of ACCIONA's discharges comply with what is specified in the corresponding discharge authorisations.

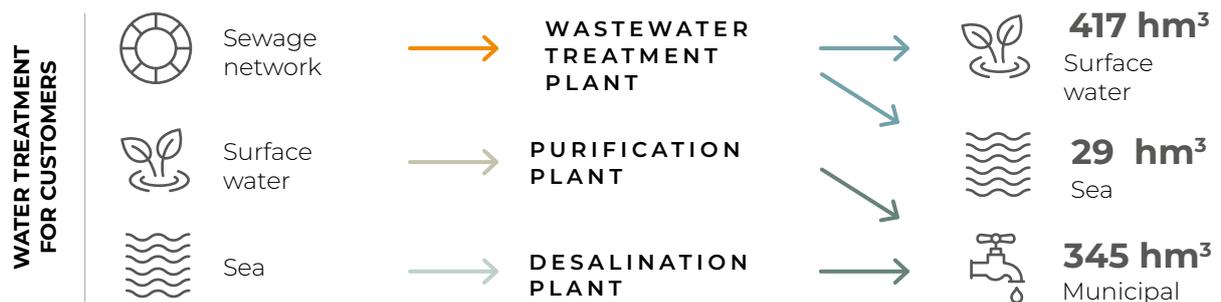
- **Transferred water**

This refers to water that enters and leaves ACCIONA's facilities (hydroelectric plants and a biomass plant) without generating any type of consumption and without suffering any significant alteration to its quality or affecting the ecosystems.

The environmental administration establishes prevention measures to minimise any potential impacts on species in river ecosystems and other bodies of water, as well as respect for the regime of environmental flows and the technical requirements established by the administration itself. The processes that guarantee compliance with the requirements for water withdrawal and discharge are part of the environmental management systems that the company implements, verifies and certifies according to the international standard ISO 14001.

USES OF WATER IN 2018

- Freshwater: Drinking water
- Treated wastewater
- Freshwater: Other
- Wastewater treatment
- Saltwater



**CHANGE IN USES
OF WATER**

**17 % OF THE WATER
CONSUMED IS RECYCLED,
TERTIARY OR RAINWATER**

Uses of water at ACCIONA (total)	2015	2016	2017	2018
WATER TREATMENT FOR CUSTOMERS (M³)				
Production in wastewater treatment plant discharged into surface water	318,830,540	325,332,637	251,550,688	416,580,208
Production in wastewater treatment plant discharged into the sea	71,474,076	33,140,000	27,855,000	28,771,011
Production of drinking water in purification plant	132,963,484	217,740,000	199,310,999	26,456,455
Production of drinking water in desalination plant	111,053,529	196,141,575	296,122,571	318,210,247
Total	634,321,629	772,354,212	774,839,258	790,017,921
WATER FOR OWN CONSUMPTION (M³)				
Water recycled/reused on-site	1,299,528	809,201	221,134	250,859
Water recycled from networks	97,023	70,499	509,153	448,458
Rainwater	25,606	23,802	17,182	13,796
Municipal network drinking water	1,246,160	1,328,093	1,699,584	1,754,917
Surface water	3,348,365	3,330,316	3,660,073	927,457
Groundwater	442,345	445,822	941,973	894,841
Total	6,459,027	6,007,733	7,049,099	4,290,328
DISCHARGES (M³)				
Desalination plant discharges into the sea	133,268,384	255,811,944	392,051,821	479,707,216
Other discharges into the sea	107	34	2,266	45
Discharges into surface water	1,227,866	1,180,543	1,583,137	752,202
Discharges into the sewage network	109,662	105,278	567,985	702,042
Total	134,606,019	257,097,800	394,205,209	481,161,504
TRANSFERRED WATER (M³)				
Surface water turbinated in a hydraulic plant	25,411,397,504	28,096,964,103	20,993,303,451	30,742,510,000
Surface water for open-loop refrigeration	24,272,190	21,319,494	24,310,108	23,658,982
Other	8,785,724	6,731,882	950,217	0
Total	25,444,455,418	28,125,015,480	21,018,563,775	30,766,168,982

**CHANGE IN USES
OF WATER**

Uses of water at ACCIONA (in areas with water stress)	2015	2016	2017	2018
WATER TREATMENT FOR CUSTOMERS (M³)				
Production in wastewater treatment plant discharged into surface water	0	0	0	90,000,000
Production in wastewater treatment plant discharged into the sea	31,080,076	0	0	0
Production of drinking water in purification plant	0	0	0	320,000
Production of drinking water in desalination plant	27,828,864	76,284,434	159,612,002	204,411,609
Total	58,908,940	76,284,434	159,612,002	294,731,609
WATER FOR OWN CONSUMPTION (M³)				
Water recycled/reused on-site	2,601	1,616	1,433	0
Water recycled from networks	13,000	0	0	0
Rainwater	0	35	0	14
Municipal network drinking water	20,775	142,735	188,559	142,250
Surface water	84,887	0	0	0
Groundwater	5	1,756	715	18,188
Total	121,267	146,142	190,707	160,452
DISCHARGES (M³)				
Desalination plant discharges into the sea	33,389,279	115,106,968	233,854,200	343,059,693
Other discharges into the sea	0	0	0	0
Discharges into surface water	1,359	16	6	693
Discharges into the sewage network	1,909	25,774	223,682	283,451
Total	33,392,546	115,132,758	234,077,888	343,343,837
TRANSFERRED WATER (M³)				
Surface water turbined in a hydraulic plant	0	0	0	0
Surface water for open-loop refrigeration	0	0	0	0
Other	0	0	2,308	0
Total	0	0	2,308	0

The increase in the volume of treated water is primarily due to the increase in wastewater purification in new plants in Egypt.

The drop in volume of water for own consumption derives from the deconsolidation of some of the company's thermoelectric generation centres. In this way, the total water for consumption in 2018 was 4,290,328 m³ (39 % less than 2017) and the total freshwater water consumption in 2018 was 3,591,011 m³ (43 % less than in 2017), whilst use of water in ACCIONA buildings was 0.64 m³/m². In addition, for the fourth year running ACCIONA has calculated the water consumption (surface and groundwater) associated with its suppliers, resulting in a little over 5 hm³ for its direct suppliers and 29 hm³ for its entire supply chain.

The generation of discharges has grown, primarily thanks to the increase in the desalination activity.

The volume of transferred water has also increased, since the improvement of the hydrological year generated a greater turbinated flow in hydroelectric plants.

Water-related risks and opportunities

The management of risks associated with water is integrated into the environmental risk management strategy of the company and its businesses, and is carried out through a methodology with which potential events that could have an impact on the company and its centres are identified, assessed and prioritised. This procedure enables policies and tolerance thresholds to be established, which provide a reasonable guarantee of the achievement of objectives. The risks that are assessed are as follows:

- **Physical risks**

Water availability and quality, extreme weather events (such as droughts and flooding), water stress, interannual and seasonal variability of rainfall, among others.

- **Transitional risks**

Tariff changes, withdrawal licences and discharge authorisations or regulation of river basins.

- **Other risks**

Impact on the supply chain, impact on habitats and ecosystems, social conflicts, improved water accessibility and sanitation, etc.

The possible present and future scenarios (short, medium and long term) in which these risks may arise are evaluated in terms of probability of occurrence and consequences for the company (operational, economic and/or reputational). To this end, different variables of exposure are analysed and different tools are used, such as: i) tools to monitor consumption and discharges, ii) identification of consumptions in the supply chain, iii) maps of water risks provided by reference organisations, iv) tools for identifying legal requirements, v) procedures for social impact management, and vi) procedures for environmental management and vii) know-how of the company's qualified personnel.

The main opportunities derived from the company's activity in water resources take tangible form through the ACCIONA Agua division, which nowadays takes its treatment, purification and desalination solutions to areas of the planet beset by large water needs.

The process of managing the risks associated with water is dealt with by each business on an annual basis.

Furthermore, and as part of the water risk management process, ACCIONA performs a top-down analysis of the scenarios, risks and opportunities, whereby the more significant dangers and sources of opportunity are interlinked with the geographic exposure and vulnerability of the company's activities.



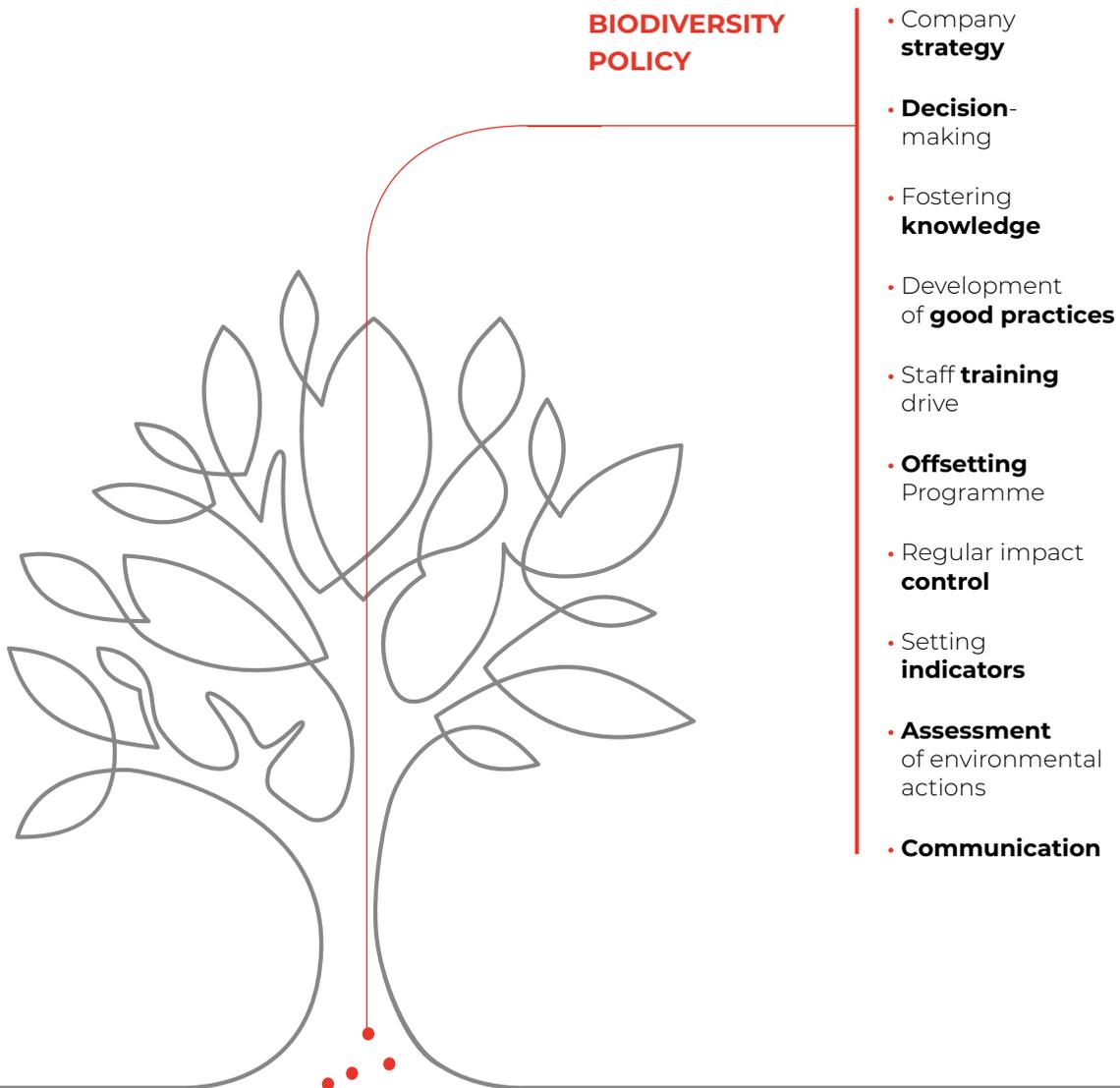
Further information in the 'Water resources management' and 'Treatment of water in water stress regions' sections of the chapter 'ACCIONA Infrastructure's Commitment' and in the section 'Grupo Bodegas Palacio 1894's sustainability performance' in the chapter 'Other Businesses' Commitment'

Environmental protection and biodiversity

In addition to supporting the functioning of life, biological diversity provides services essential for human well-being. Within this context, in the meeting held during the tenth Conference of the Parties in 2010 in Japan, the Convention on Biological Diversity (CBD) approved the Strategic Plan for Biodiversity 2011-2020. The aim of the plan is to inspire large-scale actions for all countries and stakeholders to safeguard biological diversity and the benefits it provides to people over the next decade.

At the recent Biodiversity COP14 summit, an ambitious roadmap was agreed upon for the strategy post-2020. This agreement will be initialled at the COP15 in Beijing in 2020 and will aim to establish a new framework post-2020 in order to avoid losing biodiversity in the planet.

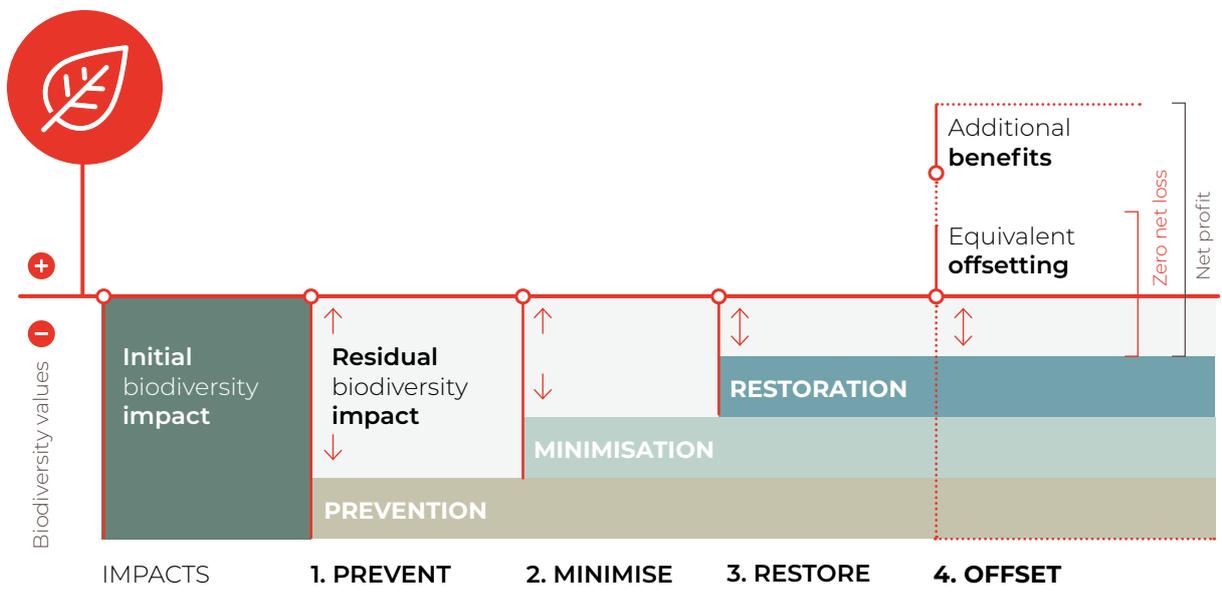
For ACCIONA, the conservation of biodiversity and the responsible use of natural heritage are, as well as an ethical commitment, a necessary condition for global sustainability. Since 2013, the company has had a specific corporate biodiversity policy in place, in which, through different principles, it promotes the valuation and conservation of biodiversity as a necessary means for economic development and social progress.



ACCIONA prioritises the mitigation hierarchy strategy for mitigating impacts on biodiversity, which involves identifying and preventing the potential impacts that may occur, minimising those that could not be avoided, taking restoration actions and, finally, developing actions

that offset these impacts in order to reach a Net Positive Impact. Furthermore, the company creates environmental monitoring plans to monitor and control the measures implemented.

THE MITIGATION HIERARCHY



Source: modified from IUCN 2015

Main action lines

Biodiversity Offsetting and Improvement Programme

As part of ACCIONA's strategy on mitigation hierarchy, it has a consistent programme in the design and execution of voluntary initiatives that go beyond the administrative environmental requirements, and whose aim is to contribute to the *Net Positive Impact on Biodiversity*, as well as to benefit the situation of certain threatened species and/or ecosystems.

CAPTIVE BREEDING AND BEHAVIOURAL STUDY OF EUROPEAN MINK

ACCIONA has collaborated with the Foundation for Research in Ethology and Biodiversity (FIEB in Spanish) in the European Mink Captive Breeding project, a critically endangered species that is considered the most threatened mammal in Europe.

This European project is part of the Captive Breeding Program within the National Species Conservation Strategy, coordinated by the Ministry for the Ecological Transition. The research centre that FIEB has in Toledo (Spain) is the largest captive breeding centre and the one with the highest number of specimens in Spain. The creation of this centre has significantly improved the accommodation capacity of European mink specimens and the captivity standards, which has resulted in 7 offspring born in 2018 under perfect conditions that add to the 22 born since 2015.

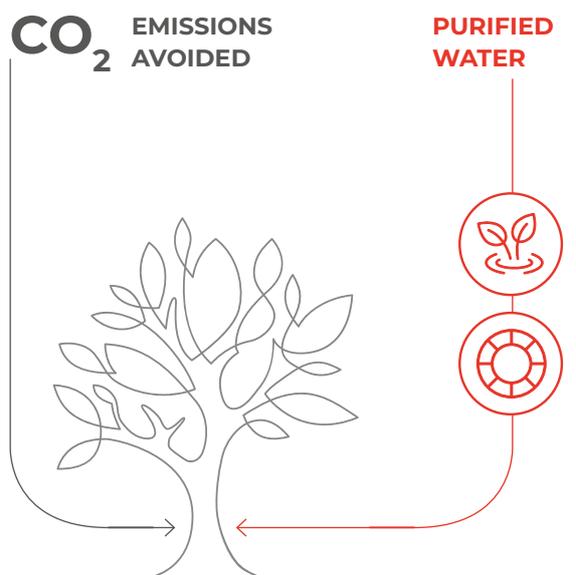
This year, four specimens born in FIEB were released, which have temporarily been given a radio tracking collar that enables us to see how it adapts to life in the wild. Currently, they are colonising different areas of the river Ebro.

This constitutes a success for the continuity of the species and for the improvement of the global genetics of the captive population. It is a project that has an important international impact, since there are only three populations of European mink in the world, and one of them is in Spain.

ACCIONA publishes information on its actions to offset its environmental impact under this programme, as well as the results obtained. Additionally, it communicates best practices in biodiversity linked to the development of the activity of its different businesses. This information is outlined in the report ACCIONA, *Global Commitment to Biodiversity*.

Neutral biodiversity footprint

In the Sustainability Master Plan 2020, ACCIONA has set the Neutral Biodiversity Footprint as a target, which means, a target of No Net Loss of biodiversity and achieve, when possible, a Positive Net Impact. During 2018, it completed the methodological development of measurement and assessment the biodiversity footprint, which includes two internationally recognised tools. This methodology, centred around material aspects, includes various categories of impact, such as toxicity, climate change, water, use and transformation of the earth and acidification, among others. As a result of applying these guidelines, and thanks to the hundreds of hm³ of wastewater treated and the millions of tonnes of CO₂ avoided by the company's facilities, a positive overall result on ACCIONA's biodiversity footprint was obtained, equivalent to restoring a degraded with a surface area of over 300 km².



POSITIVE BIODIVERSITY FOOTPRINT

Equivalent to restoring a degraded space with a surface area of over 300 km²

Indicators of biodiversity performance

ACCIONA controls and monitors facilities that are adjacent to or located in protected areas and non-protected areas of great value for biodiversity.

LOCATION OF FACILITIES IN PROTECTED AREAS AND UNPROTECTED AREAS OF GREAT VALUE FOR BIODIVERSITY IN 2018

Business line	Location with respect to the protected area	Surface area (ha)	Protected areas
ACCIONA ENERGY			
Spain			
• Wind farms and power lines	Internal	376	SCI, SPA, IBA, BR
• Wind farms and power lines	Partially internal	90	SCI, SPA, NatP
• Hydroelectric power plants	Internal	142	SCI, SPA, SAC, NatP, BR
Portugal			
• Photovoltaic	Partially internal	114	ZPE
Mexico			
• Wind farms	Adjacent	118	RM
Australia			
• Wind farms	Partially internal	1 facility	NPAV
India			
• Wind farms	Internal	4 facilities	NPAV
ACCIONA AGUA			
Spain			
• Treatment plants and associated services	Internal	19.5	SPA, RP, NatP, RAMSAR, PPO
• Treatment plants and associated services	Partially internal	1.5	SPA
• Treatment plants and associated services	Adjacent	12 facilities	SCI, SPA, ZEC, PN, NatP, Ramsar, NR
Portugal			
• Processing facilities	Internal	2	NatP
Brazil			
• Processing facilities	Internal	14	PPA
Panama			
• Construction work	Partially internal	0.11	ASP
Chile			
• Processing facilities	Partially internal	15	PL

Continues >

Business line	Location with respect to the protected area	Surface area (ha)	Protected areas
ACCIONA CONSTRUCTION			
Spain			
• Infrastructure	Internal	25	ZEC, SPA, SIC
• Infrastructure	Partially internal	446	SPA, SIC
• Infrastructure	Adjacent	2 works	SPA, SIC
Australia and New Zealand			
• Linear infrastructure	Internal and Partially internal	2 works	CPA, MA
Portugal			
• Hydraulic works	Adjacent	1 works	PL
Brazil			
• Linear infrastructure	Adjacent	1 works	NP
OTHER BUSINESSES			
Spain			
• Environmental cleaning and maintenance services	Internal	6 services	SCI, SPA, NatP, MB
• Infrastructure and services	Partially internal	2	SAC, NR

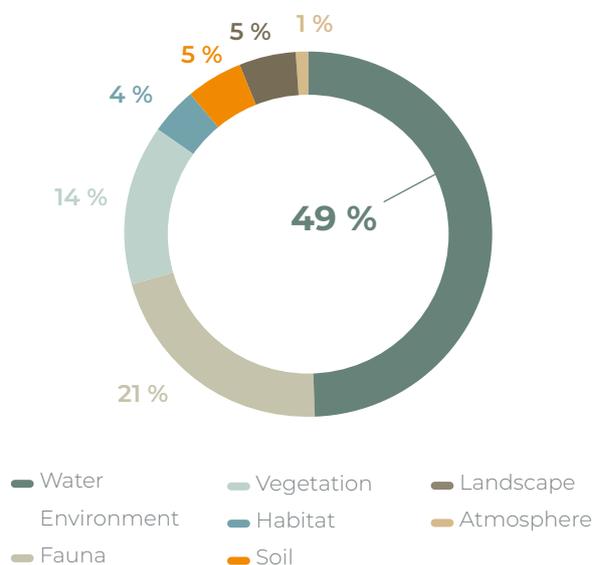
Note: SCI: Site of Community Importance; SPA: Special Protection Area for birds; IBA: Important Areas for the Conservation of Birds and Biodiversity, SAC: Special Conservation Area, NP: National Park, NatP: Natural Park; RP: Regional Park, BR: Biosphere Reserve; PL: Protected Landscape, ZPE: Special Protection Zone, MR: Migratory Route, NA: Natural Protected Area of National Interest, MA: Mangrove, CPA: Coastal Protected Areas, MB: micro-botanical reserve, NPAV: Unprotected areas of high biodiversity value, PPO: Posidonia oceanica meadow, ASP: Wild Protected Areas, APP: Área de Preservação Permanente, NR: Natural Reserve.

Identification and assessment of the most significant impacts

ACCIONA identifies and assesses the most significant impacts of the facilities located in protected areas and non-protected areas of great value for biodiversity.

In 2018, the most significant impacts were identified in the water environment (49 %), fauna (21 %) and vegetation (14 %), and to a lesser extent on soil, landscape, habitat and atmosphere.

NATURE OF IMPACTS



This assessment took into account the species affected, the surface area of the facility within the protected area, the duration of the impacts, and whether they were reversible or irreversible.

Protected species

ACCIONA identifies the species affected by its facilities included on the Red List prepared by the International Union for Conservation of Nature (IUCN) or included in national catalogues.

The following table shows the number of species and their category of protection according to the Red List of the IUCN. Furthermore, it takes into account the species that are not included in this list but are protected by national catalogues.

PROTECTED SPECIES AFFECTED BY ACCIONA'S FACILITIES

IUCN Red List protection category	No. of species	
CR	Critically endangered	0
EN	Endangered	2
VU	Vulnerable	5
NT	Near threatened	5
LC	Least concern	51
Other national catalogues		13
Total		76

Restoration and protection of habitats

ACCIONA's projects consider the protection and restoration of those areas that could be affected by its works or facilities. As such, these projects involve work to protect and restore habitats, such as replanting, maintenance of forests and planting of affected areas.

Throughout 2018, the company protected and restored 14.56 hectares in the areas surrounding its projects and, in almost all cases, the success of the measures applied was verified by independent external professionals. Furthermore, the Service business has carried out the environmental restoration, cleaning and maintenance of hundreds of hectares of high environmental value.

As a result of these habitat restoration and protection actions, as well as other work in landscape integration or plantations in degraded areas or those lacking in vegetation, over the past year, a total of 407,932 plantations were carried out.

Water bodies affected significantly by water withdrawal or discharges

In ACCIONA, it is necessary to withdraw and discharge water for the development of certain activities: for example, the production of renewable electric power in hydroelectric power plants, where the water, after passing through the power plant, is reincorporated into the riverbed without any alteration in its composition; also the supply of drinking water through drinking water treatment plants (DWTP) and seawater desalination facilities (SDF); finally, the execution of works.

Therefore, the company uses prevention measures that help minimise any potential impacts on species that may be present in river ecosystems, and that also assure the regime of environmental flows and the technical requirements established by the competent administration.



Further information in the 'Environmental management and Biodiversity' section of the chapters 'ACCIONA Energy's Commitment' and 'ACCIONA Infrastructure's Commitment'

ENVIRONMENTAL SANCTIONS AND FINES

During 2018, a total of EUR 82,463.40 was paid for nine environmental sanctions and fines. Two sanctions exceeded EUR 5,000: one from ACCIONA Construction, which amounted to EUR 9,450, and another corresponding to ACCIONA Energy for EUR 60,102. Furthermore, a total of EUR 29,908 was paid in compensations.

Circular economy: sustainable resource use and waste management

As part of the SMP 2020, ACCIONA is moving towards a circular economy programme, incorporating in its activity methodologies, processes, technologies and good practices that help minimise the use of natural resources and the generation of waste.

ACCIONA has adopted the commitment to promote the transition to a circular economy through its backing to the Pact for a Circular Economy of the Spanish Ministry for the Ecological Transition.

The company includes key elements of the circular economy in its activities, such as:

- **Minimisation and recovery of waste**

The company continues to achieve the objectives established in its *Waste Management Plan 2016-2020*. Furthermore, it contributes to the recovery of waste by building waste-to-energy plants and the recovery of sludge in waste plants.

- **Optimisation of the use of materials and using sustainable materials**

The *Analysis on the consumption of material resources at ACCIONA and its focus on the circular economy*, carried out in 2018, sets out and promotes internal good practices. It covers measures already implemented such as:

- Using recycled materials such as reused aggregates;
- Using renewable materials such as FSC-certified wood and biomass;
- The efficient use of resources with the best available technologies;
- Using advanced materials such as composites, which minimise the amount of material used.

- **Shared resources platforms**

ACCIONA launched a service in 2018 for shared electric motorbikes in Madrid.

- **Digitalisation of construction**

Digitalisation is a key catalyst for circular opportunities in construction⁴. ACCIONA is working on technologies such as *building information modelling*, automation of machinery and 3D printing.

- **Maintenance of infrastructure resilience for extended use**, whether of own assets like wind turbines or of concessions.

ACCIONA believes that life cycle analysis (LCA) is an important tool in the transition towards a circular economy. It is a standardised methodology that is applied to assess the environmental impact of a process, product or service during its entire life. ACCIONA has a portfolio of 58 LCAs and 6 environmental product declarations (EPD) from the energy and infrastructure sectors, 5 of which are new in 2018, such as the Mt Gellibrand wind farm or the lining panels developed in the KRAKEN project.

Waste management plan 2016-2020

The Plan was born under a worldwide regulatory framework still under development in the circular economy field. It covers the most representative types of waste in ACCIONA and aims to establish a general strategy in the waste policy for the promotion of the circular economy model.

The overall targets sought by the Plan are as follows:

- Reduction of 10 % by 2020 in the amount of unrecovered non-hazardous waste (intended for landfill) generated in 2015 (base year of the Waste Management Plan). In 2018, the target figure was a 6 % reduction.
- Reduction of 10 % by 2020 in the amount of hazardous waste compared to 2015. In 2018, the target figure was a 6 % reduction.
- The recovery by 2020 of 50 % of the total waste generated. In 2018, the target figure was a 44 % recovery.

Furthermore, the Plan includes recovery targets with different degrees of ambition for the following types of waste: soil, debris, dehydrated treated sludge, slag, ash and plant remains.

Also, a goal of reducing the generation of contaminated soil by 10 % by 2020 (base year 2015).

⁴ *The Circular Economy. A Powerful Force for Climate Mitigation, Material Economics, 2018*

⁵ *At the date of preparation of the 2018 Directors' Report, three LCAs were recorded*

In 2018, the company generated a total of 8,633 tonnes of hazardous waste (13 % less than in the base year, 2015) and 9,602,772 tonnes of non-hazardous waste, of which 4,053,423 were sent to landfill (30 % less than in 2015) and 5,549,349 tonnes were recovered (reuse, recycling or other means). This last figure constitutes 58 % of the

non-hazardous waste generation (8 % above the target for 2020 of the Waste Management Plan). It is worth highlighting, for instance, the reuse of 100 % of the slag and ash legally recoverable generated at the company's biomass plants (which was the target for this type of waste).

EVOLUTION OF WASTE GENERATION AND MANAGEMENT

	2015	2016	2017	2018
Non-hazardous waste (tonnes)	8,909,870	12,590,645	12,118,376	9,602,772
Non-hazardous waste for landfill (tonnes)	5,776,464	7,894,919	6,923,817	4,053,423
% Landfill non-hazardous waste	65 %	63 %	57 %	42 %
Non-hazardous waste recovered (tonnes)	3,133,406	4,695,726	5,194,559	5,549,349
% Recovery non-hazardous waste	35 %	37 %	43 %	58 %
Hazardous waste (tonnes)	9,889	13,279	21,104	8,633

Consumption of resources focused on the circular economy

EVOLUTION OF RESOURCE CONSUMPTION

	2015	2016	2017	2018
TOTAL resources (tonnes)	7,954,691	12,318,290	8,940,928	17,403,599
Recycled or renewable resources* (tonnes)	1,392,542	1,614,318	1,763,063	5,065,995
Recycled or renewable resources* (%)	18 %	13 %	20 %	29 %

*Recycled or renewable: biomass, certified wood (FSC or similar), land, aggregates and recycled steel



Further information in the section 'Circular Economy: Sustainable use of resources and waste management' in the chapter 'ACCIONA Infrastructure's Commitment'

The following model shows, similarly to the Circular Economy *circularity gap* graphic⁶, the flows of materials at ACCIONA in 2018. The percentage of recycled resources used by ACCIONA is greater than the global average of 9 %, according to the aforementioned report, and more than the European average of 12 %. As for waste, the targets set in the 2016-2020 Waste Management Plan are being met.

⁶ The Circularity Gap Report 2019, page 29: <https://www.circularity-gap.world/>

**FLOWS OF MATERIALS
AT ACCIONA IN 2018**

MANAGEMENT OF MATERIAL RESOURCES

17.4 Mt
TOTAL USE OF
RESOURCES

12.3 Mt
EXTRACTED
MATERIALS

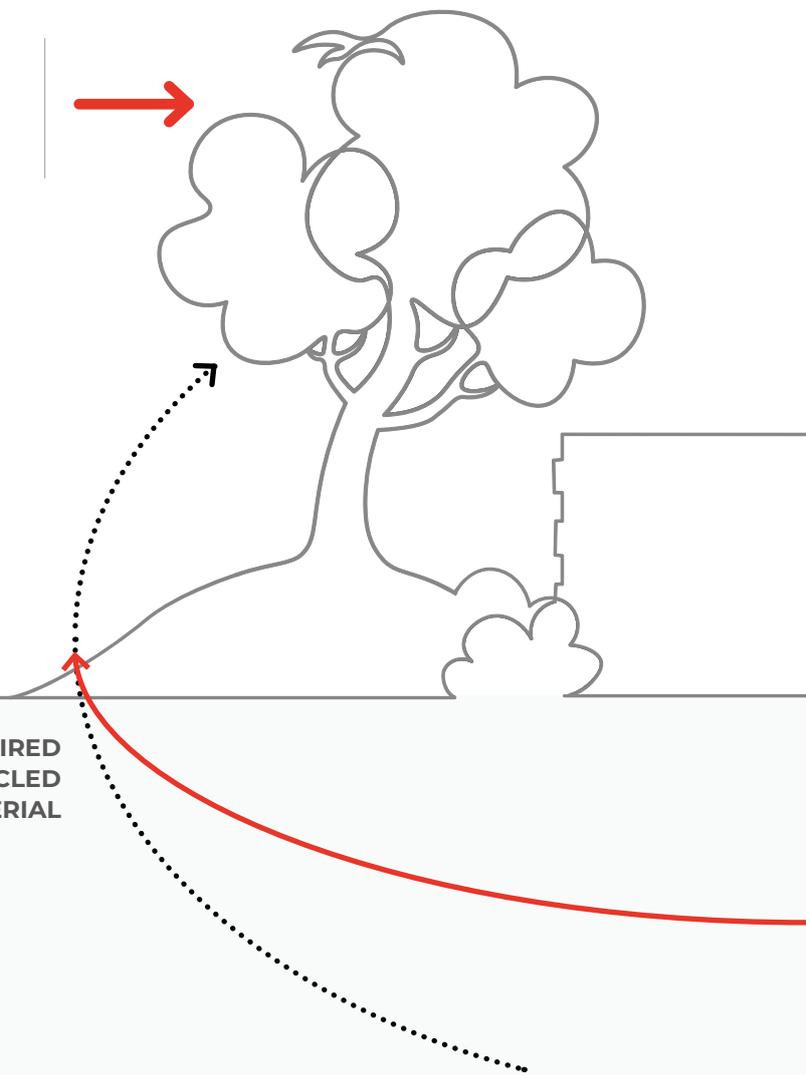
29 %

**RECYCLED
RESOURCES**

MATERIALS FROM
RECYCLING

5.1 Mt

**SUPPLIER-ACQUIRED
RECYCLED
MATERIAL**



WASTE MANAGEMENT

