

# Protection of soil, subsoil and groundwater

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Enel is committed to the continuous application of the most advanced technologies available and best practices in order to minimize the possible environmental impacts deriving from its activities, using international standards as a benchmark even where the required environmental protection is less stringent. Among the areas of prevention, the highest level of attention is paid to the protection, monitoring and remediation of soil, subsoil and groundwater in the areas where plants and generation and service facilities are present in all Countries.

The protection of the environment matrices guides every phase of each asset's life, from design choices to construction, operation and end-of-life management. Both active and passive protection and safety measures will be used in the project phase to prevent and, in any case, minimize the risk of uncontrolled or accidental contact of potentially polluting substances (such as fuels, reagents, liquid and waste flows) with soils and subterranean waters. During plant operations, every process undergoes compliance controls as well as ongoing upgrades as required by the Environmental Management Systems to prevent and minimize the risks of any potential environmental contamination. At the same time, control plans are executed to monitor the condition of the previous environmental matrices. In the event of an accident, for example the accidental spillage of polluting substances, the timely application of the Stop Work and Emergency Management Policies makes it possible to prevent or minimize the risk of environmental impacts, rigorously complying with the provisions and the legal obligations of the various countries. For the end-of-life management of power plants, once they have been made safe and prior to them being dismantled and the area reassigned for new development projects, Enel proceeds to verify further the environmental quality of the soil, subsoil and groundwater in the areas where the plant is located, according to the authorized provisions and legal requirements of the various countries. In the event of potential contamination phenomena, characterization of the environmental matrices in the areas potentially affected and, if necessary, implementation of

safety measures and subsequent remediation, are executed according to intervention plans shared with the competent authorities and by resorting to specialist, qualified companies that are able to promptly restore the level of quality suitable for the intended use of the area (industrial, commercial, residential etc.). Particular focus is on power plants falling within large industrial hubs. In order to mitigate further the risk connected to the detention and consequent potential uncontrolled release of substances that can have an impact on the environment, numerous projects have commenced for their progressive substitution, for example, verifications under way on the use of vegetable (hence biodegradable) oil, replacing the traditional dielectric oil of mineral origin.

Within the context of the energy transition launched by Enel, particular importance is given to projects for converting decommissioned plants, with the aim of hosting new renewable generation and energy storage plants, in order to reuse the industrial areas, some common parts of the plant, and the main infrastructures. In this way it is possible to reduce the environmental impacts deriving from demolition and new construction activities, as well as the consequent social and economic impacts on the surrounding communities and stakeholders. In order to optimize the management of plant decommissioning projects, in 2021 Enel adopted dedicated Guidelines ("Environmental issues management in power plants decommissioning"), with the purpose of guaranteeing a standardized approach to identifying, preventing and managing environmental aspects related to the decommissioning of power plants. These Guidelines provide global guidance on applying best management practices in relation to all environmental aspects, including soil and groundwater management.

With a view to continuous improvement and minimizing the possible environmental impacts deriving from decommissioning activities, at the end of 2022 a further set of Guidelines was also issued ("Sustainable Repurposing Model") in order to ensure the increasingly sustainable end-of-life management of plants (see the dedicated box below).

## Habitat restoration to protect native species

The area affected by the environmental restoration project was previously used to store combustion ash from the “Eugenio Montale” thermoelectric plant in La Spezia, Italy. Starting from 2020, following a project authorized by the competent bodies, a waterproof top cover (cap) was created for the two reservoirs on the site, aimed at making them permanently safe while also guaranteeing landscape restoration by planting and grassing the area. The capping activity, completed in July 2022, was carried out in conjunction with a habitat restoration project aimed at restoring and maintaining biodiversity in the area, which is considered “core”, due to the presence of *Rana dalmatina*

frogs (a protected species included in the IUCN National Red List).

The habitat restoration project envisaged the recreation of a semi-open humid environment (azonal *Phragmites australis* reed bed habitat) fed by a channel that conveys runoff surface water from the reservoir caps, in addition to planting native arboreal and herbaceous essences characteristic of submerged wetlands and humid and perhumid environments. This habitat, in addition to providing a safe place during the reproduction period for a species in need of protection such as *Rana dalmatina*, also plays an irreplaceable ecological role by providing a place of rest, shelter and food for numerous other animal species.

For further details, please refer to the chapter “Our commitment to a just transition: leaving no one behind”.



## Sustainable Repurposing Model

The sustainable repurposing model aims to promote the standardized adoption of sustainable practices during all end-of-life disposal activities of plants and assets. The aim is to create synergies with the future redevelopment of the sites, while maximizing the positive environmental and social impacts of the entire process.

To achieve and monitor these objectives, a set of guidelines, a catalog of sustainable practices and specific KPIs have been created. In order to launch and promote the model, some pilot projects on decommissioned plants have been launched in Chile, Spain and Italy. The contin-

uous monitoring, through KPIs, of environmental performance on important aspects such as the reduction of atmospheric emissions, the recovery and recycling of materials and waste, the efficient use of water and the improvement of soil and biodiversity will allow us to continue on our path towards an increasingly efficient energy transition. The proposed model includes, in particular, the identification and application of sustainable principles and practices related to the management of the environmental matrices of soil and groundwater, such as the restoration of reclaimed areas in compliance with the morphological, vegetative and landscape characteristics of the surrounding area, as well as the creation of habitats aimed at promoting biodiversity and ecosystem services.