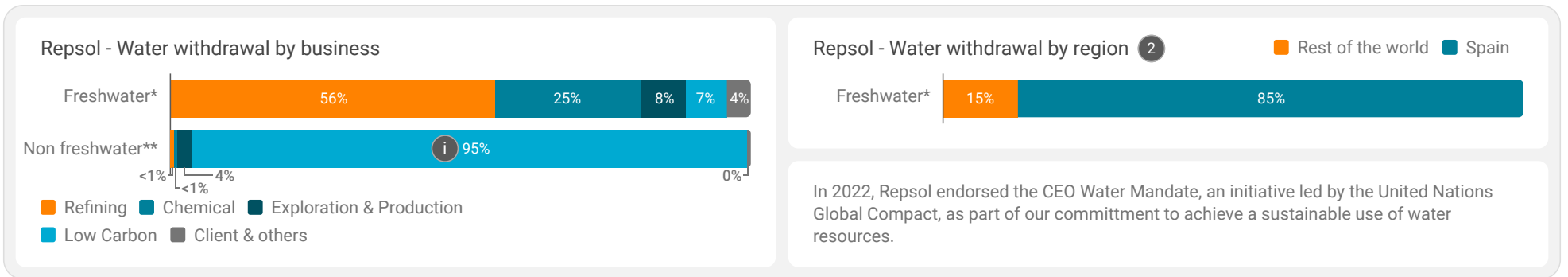


2022

Water and effluents management



Legend

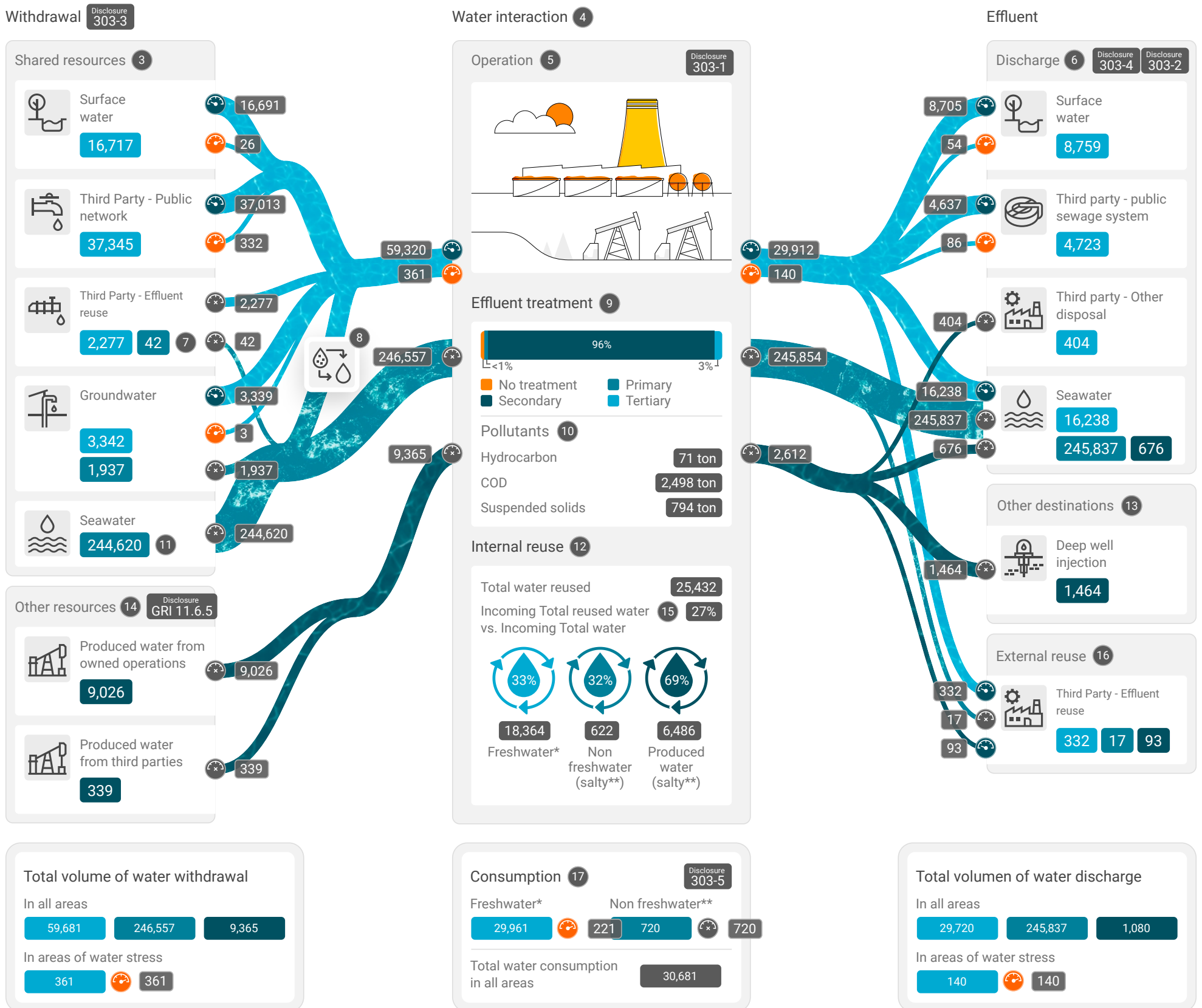
- Non-water stressed areas
- Areas of water stress
- Water stress not applicable
- Freshwater*
- Non freshwater (salty**)
- Produced water (salty**)

* Freshwater: Total Dissolved Solids <= 1000 mg/l

** Non freshwater: Total Dissolved Solids > 1000 mg/l

Water volume data in thousand m3.

Water withdrawal (GRI 303-3), discharged (GRI 303-4) and consumed (GRI 303-5) information related to the local water stress situation, based on Aqueduct Water Risk Atlas results.



1 Non-fresh water withdrawal - Low Carbon Generation

Low Carbon Generation withdraws the largest volume of non-fresh water (89%) in Repsol. This amount of water is, in turn, the largest volume of water withdrawn in the Company and takes place at the Combined Cycle Thermal Generation power plant in Bahía de Algeciras.

The water withdrawn from the ocean is used in the open-circuit cooling processes (once-through cooling) and is subsequently returned to the same environment in optimum physicochemical conditions.

2 Distribution of water withdrawal by region

Repsol's approach in its interaction with water as a shared resource prioritizes actions to minimize the withdrawal and reuse of freshwater.

85% of Repsol's freshwater withdrawal takes place in Spain, where the ratio of water withdrawal by sector of activity is 67% in the agricultural sector, 19% in the industrial and energy sector and 14% in the urban sector (Source: www.pwc.es).

3 Interaction with water as a shared resource [GRI 303-1 a]

Repsol plans its water needs at the locations where it operates considering the sensitivity of this shared resource and in a particularly cautious manner in those places where there is water scarcity risk.

Identification and minimization of water-related impacts (GRI 303-1 b)

The main potential impacts derive from the reduction of water availability or its quality in the environment are related to water withdrawal, water consumption in production processes and quality control in discharges.

Repsol identifies and minimizes its potential impacts on water through the use of specific tools, such as:

- Environmental, social and health impact studies.
- Analysis of impacts and dependencies following the READS methodology.
- Product life cycle analysis.
- Water footprint studies.
- Water risk analysis of the facilities through the Repsol Water Tool (RWT).
- Application of minimum internal criteria in relation to the quality of water discharged.

4 Interaction with water as a shared resource [GRI 303-1(a)]; Collaborative approach to water management [GRI 303-1(c)]

Although water covers more than two-thirds of the planet's surface, the UNEP considers that less than 1% corresponds to freshwater accessible to ecosystems and human activity. This is why Repsol considers the protection of this resource as a priority and promotes 100% integrated management of water resources, adopting a participatory approach that involves all water users, planners and government agencies at all levels.

This collaborative approach with all stakeholders leads to more effective water management strategies in preventing risks and mitigating impacts at the watershed level.

Examples include:

- Participation in working groups at the sectoral level (IPIECA, CONCAWE, AOP, CEFIC or FEIQUE).
- Establishment of permanent dialogue channels between society and business (public advisory panels of industrial facilities).
- Multidisciplinary coordination at the operational level (Operational Excellence Group for water management among industrial facilities).

5 Responsible operation and management of impacts (GRI 303-1-a)

The main use of water withdrawn at Repsol is for cooling. In addition, it is used to produce steam or to incorporate it into different industrial processes, drilling activities and, to a lesser extent, to supply sanitation networks, fire-fighting networks and cleaning services.

Repsol is committed to the sustainable management of water resources, encouraging the search for new solutions to optimize water use, guaranteeing the reduction of freshwater withdrawal and promoting measures to increase reuse, both internally and externally, as well as the preservation of the quality of the receiving environment, as stated in its Environmental Policy.

6 Management of water discharge-retailed impacts [GRI 303-2.a]

Repsol considers the effluent discharge as the controlled discharge of effluents into the environment.

The Company has established minimum quality criteria to identify the substances that shall be controlled, limiting their quantity in the discharges in conformity with the requirements set by the local applicable regulations as included in the facilities' authorisations for discharge.

The criteria to set these limits also include the requirements established by the European Directives for Water Framework and Industrial Emissions, as well as specific sector standards such as the best advanced technologies (BREFs) and the international reference standards or guidelines from IOGP, IPIECA or EPA.

Repsol monitors systematically the compliance of the minimum discharged water quality criteria and reports the results to the competent authorities.

7 Reuse of third-party effluents

Repsol uses the effluents from third parties as an alternative source of freshwater supply, conditioning them through appropriate treatment for reuse in its production processes.

An example of this good practice is the case of the Tarragona Industrial Complex, which reuses water from the urban wastewater treatment plants of Tarragona and Vilaseca municipalities, thus reducing water withdrawal from primary sources, such as the Ebro River or the Gaià reservoir.

8 Desalination of water

Part of the water withdrawn from the ocean and saline aquifers is desalinated to generate freshwater, thus reducing the pressure on this essential resource and the risks derived from its dependence, while at the same time generating a positive impact on the environment where we operate. An example of this good practice is the La Pampilla Refinery in Peru, which is located in a region with high water stress.

9 Management of water discharge-retailed impacts [GRI 203-2, GRI 303-4]

Effluents from Repsol operations are treated to maximize their potential for reuse or to minimize their environmental impact potential when discharged, ensuring compliance with the quality requirements and enabling its reintroduction into the natural water cycle.

To do so, different types of effluent treatment are implemented (primary, secondary or tertiary), as the figures shown reflect.

10 Priority substances of concern for which discharges are treated [GRI 303-4.d, GRI 11.6.5]

The priority substances of concern in the discharges from Repsol facilities are: hydrocarbons, suspended solids and oxidizable organic matter (COD).

In 2022 the load of hydrocarbon discharged within the effluents was reduced by 55%. This reduction was due mainly to disinvestment in E&P assets in Malaysia, which in 2022 contributed to 35% (25 ton) to the total load of hydrocarbons of the Company.

11 Ocean water withdrawal

The water withdrawn from the ocean (non-freshwater) represents 77% of the total water withdrawn by the Company.

98% of this water is used in open-circuit cooling processes (once-through cooling), and is subsequently returned to the ocean in optimum physicochemical conditions, as in the case of the CCGT Bahía de Algeciras power plant.

12 Internal water reuse

Repsol promotes optimization and circularity in the use of water throughout all its facilities aiming to reduce its withdrawal from the environment and therefore to reduce its dependency from this shared natural resource and also minimizing the potential environmental impacts in its operational areas.

In 2022 19Mm₃ of water (fresh and non-freshwater) were reused internally.

In addition, the E&P Business Division reused 6.6 Mm₃ of produced water by reinjecting it into the basins to maintain its pressure and improve the oil recovery rate in a closed water loop.

13 Other destinations - Deep well injection

The produced water sourcing from the basins as a by-product of the oil & gas extraction is partially reinjected into deep geological formations for its final disposal in a way such it poses no environmental impact.

14 Other resources - Produced water

Produced water is the water that is mixed with hydrocarbons in the reservoirs and is extracted together with the crude oil and gas during the production stage.

Produced water is saline and is not available for ecosystems and other users, so it is not considered a shared resource.

Repsol reuses most of this water (70%) in various production processes and manages this wastewater by eliminating (deep injection) or minimizing its environmental impact during its final disposal.

15 Internal Reuse Index (IRI)

From 2015 to 2022 Repsol increased the volume of water reused internally in 117%.

In 2022 the water reused internally raised to 27% of the total water entering the operations, excluding from the account the water withdrawn for once-through cooling processes.

$IRI = \frac{[\text{Reused water from internal and external sources}]}{[\text{Reused water from internal and external sources} + \text{Water withdrawn from the environment}]}$

16 External water effluents reuse

Repsol maintains open dialog channels downstream of its value chain, facilitating for other organizations to reuse our effluents to create a positive impact on the environment.

17 Water consumption [GRI 303-5]

Water consumption is calculated as the difference of water withdrawn from the environment and water returned to the environment in a way that can be utilized by other users.