

WATER CONSERVATION & MANAGEMENT

Through a combination of onboard initiatives and progressive technologies, our ships are consistently improving their water production rates while working to decrease consumption and environmental impact.

SAIL  SUSTAIN

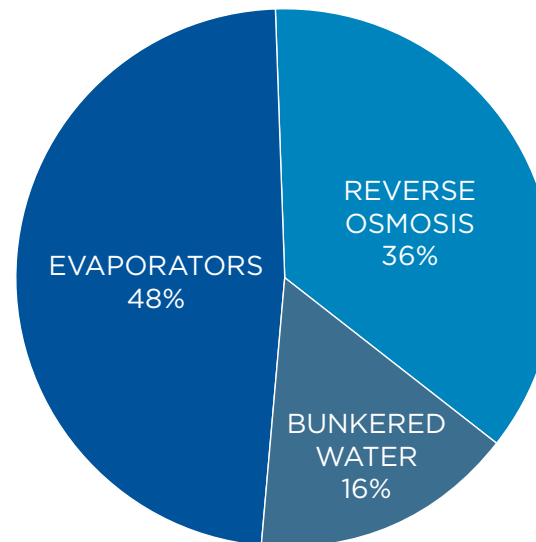
ONBOARD PRODUCTION

Ship water is primarily used by our guests and crew in their staterooms for showers, bathtubs and sinks but is also used for galleys, laundry, pools, whirlpools, spas and cleaning public spaces.

We have focused our efforts on increasing water production on board with sophisticated plants that use seawater as the source, which reduces the need for the bunkering of fresh water. This is particularly important in countries where fresh water is limited and best reserved for local populations. Over the past two years, our ships have produced more than 80 percent of their water on board.

Each ship has a tailored Shipboard Energy Efficiency Management Plan (SEEMP) to improve their energy efficiency and water conservation. By reducing overall onboard energy consumption, the ship can reduce its global carbon emissions. Our energy efficiency initiatives include installing water flow reducers (sink taps, shower heads and galley sink taps), increasing or upgrading onboard RO plants and plans to install water meters to measure water consumption.

2017 REPORTED WATER PRODUCTION



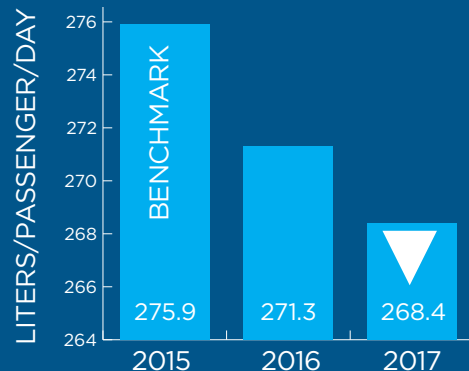
Reverse Osmosis (RO) produces fresh and technical water from seawater using high-pressure pumps and sophisticated water filters and treatment components. RO plant production can range from 250 M³ to 825 M³, based on the size and capacity of the plant.

We currently have 40 RO plants and are consistently evaluating further installations on our vessels.

Evaporators produce fresh water from seawater utilizing heat sources such as Exhaust Gas Boilers, Oil Fire Boilers or Wasted Heat recovered from the main engine high-temperature cooling system.

Bunkered Water is potable water acquired in port for use on board.

2.7% DECREASE*
IN **WATER CONSUMPTION**
FROM 2015 TO 2017



*Due to a change in methodology for fleet reporting of passengers, the reported values differ from 2016 reporting.



800 METRIC TONS

BOILER FUEL SAVED IN 2017
FOLLOWING NORWEGIAN SUN'S
2016 REVERSE OSMOSIS
PLANT INSTALLATION.

10% INCREASE
IN **REVERSE OSMOSIS** WATER
PRODUCTION FROM 2016 TO 2017.

2016	2017
2.1+ MILLION LITERS	2.3+ MILLION LITERS