&BEYOND

CARE OF THE

Land

GOALS

1. Reduce our direct carbon footprint by 8%
2. Sustainable use of water
3. Zero plastic water bottles

Care of the Land

The end of our 2020 financial year is a time to pause for reflection as we look back to when we set our Care of the Land goals in 2017.

While we have achieved, and in many instances, surpassed most of our goals, the shortfalls have provided us with valuable learnings to take forward.

With specific reference to our roll out of renewable energy sources at our generator-based lodges, our momentum has slowed a little due to the financial impact of COVID-19, but we remain committed to a phased implementation of renewable energy sources across our lodge operations.

Our significant investment at &Beyond Ngorongoro Crater Lodge to join the TANESCO hydro-power thermal grid has resulted in 85% of this lodge's energy requirements now running off renewable energy sources and a 728 000 kg CO_2 per year reduction in our Tanzanian carbon footprint.

At &Beyond Sossusvlei Desert Lodge, each of the 12 guest suites are equipped with solar-powered hot water, air conditioning, room freezers, a grey-water recycling system and rain-water harvesting tank. The solar-driven Hydraloop system is enabling the recycling of 100 000 litres of grey water a month.

The accuracy of our data at 98.9% was exceptionally high; this is very reassuring as it means that our modelling of projects, establishing new targets and other forecasting will be based on a sound and reliable dataset.

Our audit scores are still impressive, with a group average of 88%. We have also re-designed our impact audit to align with the international objectives of the Global Sustainability Development Goals.

Some aspects of waste management are still a challenge, even though we have eliminated over 740 000 plastic water bottles per year across our operation. The recycling of other waste in some countries falls short due to the lack of secondary recycling industries in those areas. In view of this, our next step is to support the development of these industries, initially focusing on Tanzania and Zanzibar.

Our scaled targets as we move into our next decade of impact are both ambitious and exciting; to meet these, we will need to draw on the successes and learnings of the last few years and build on this strong foundation.

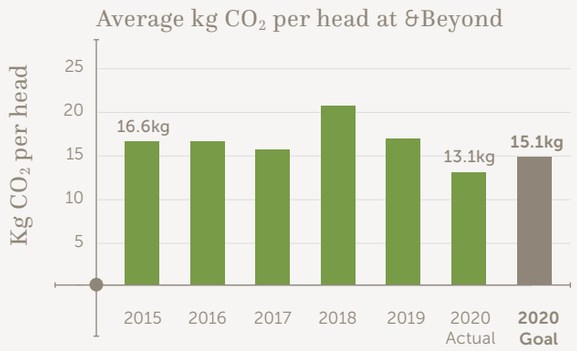
> **To operate with minimum impact: this is the core principle at the root of our unwavering commitment to Care of the Land.”**

Jonathan Braack
GROUP SUSTAINABILITY MANAGER

GOAL 1

Reduce our direct carbon footprint by 8%

Measured by calculating the average annual carbon kilogram (kg) per head within our operations throughout the year

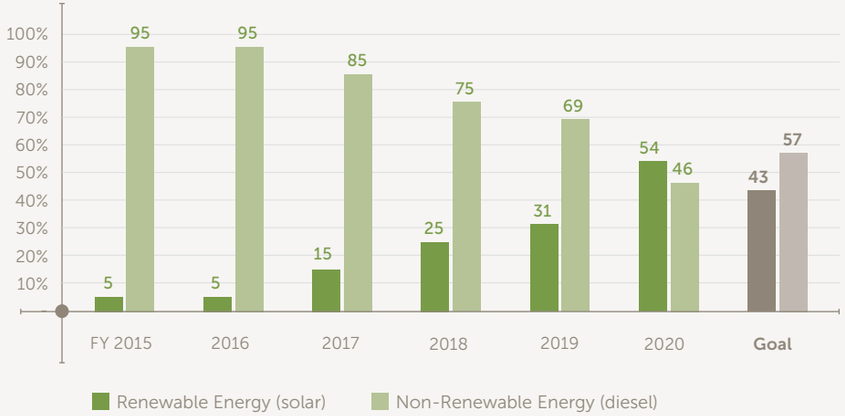


As a group, &Beyond has reduced its average CO_2 by **3.5 kg** per head since 2015

1.1 REDUCE RELIANCE ON NON-RENEWABLE ENERGY

Ratio of 43% renewable to 57% non-renewable energy at all generator-based lodges

Renewable to non-renewable energy ratio:
Based on roll-out of solar plants at generator-based lodges



Aa Top Terms

Non-renewable energy: a limited energy source that will eventually run out, for example fossil fuels such as coal, gas and crude oil (diesel and fuel). Significant carbon dioxide is produced from the burning of coal and gas

Renewable energy: an abundant energy source like the sun and wind. Solar power plants produce zero carbon emissions after installation

Direct carbon footprint: those carbon emissions that we have immediate and complete control over

Hybrid solar power plants: solar-diesel systems that combine solar and generator power sources

GOAL 1

Achieved a ratio of 54% renewable to 46% non-renewable energy ratio in FY 2020.”

Learnings

Our group carbon usage per head calculations are skewed when there is no occupancy due to renovations, but consumption continues for building or refurbishing purposes.

All items requiring power need to be in place so as to have accurate data on energy consumption prior to installing renewable energy systems.

A significant investment of capital is required to implement high-cost hybrid systems; however, once implemented, this outlay is offset by the marked reduction in generator fuel costs.

The phased introduction of the hybrid solar power plants at our generator-based lodges in Botswana and Namibia has been instrumental in our drive to reduce our direct carbon footprint.

The employment and training of local artisans in new builds and refurbishments is a shared-value opportunity providing apprenticeship possibilities and skills development.

GOAL 1

Our solar-energy partners

NEW SOUTHERN ENERGY (NSE)

In 2017, following an extended period of close consultation with New Southern Energy (NSE), a leading South African full-service solar energy company, our phased installation of solar hybrid power plants started.

The decision was made to begin with our lodges situated in the environmentally-sensitive ecosystem of Botswana's pristine Okavango Delta, UNESCO's 1 000th World Heritage Site.

> **NSE's customised micro-grid solutions have proved to be the ideal option for the remote locations of our Botswana and Namibian generator-based lodges, converting each site to run predominantly off renewable energy.**

The many benefits of this integrated energy solution include:

- Reliable, economic and effective way of reducing our direct carbon footprint
- Reduction in the dependence on fossil fuels (i.e. diesel usage)
- Reduction of: generator run-time, generator services and parts required, associated diesel transport costs and risks; carbon emissions caused by generators and transport trucks and generator noise pollution
- Increased energy independence
- Reduced environmental risks from the transport of fuel into a sensitive natural habitat
- Reduced logistical and operational costs

WHAT ARE THE COMPONENTS AND HOW DOES IT PERFORM?

The following detail is drawn from the system in operation at &Beyond Xaranna Okavango Delta Camp:

- The working components include solar panels (122.4 kWp); 4 solar inverters (Fronius, @27 Kw); a Tesla Powerpack battery (100KvA/190 kWh lithium ion); micro-grid controller (MGC) and 2 generators (@ 125 kVa)
- Reduction in generator run-time by 19 hours per day
- The MGC intelligently coordinates the input and output of the energy generation and storage components to meet the lodge's energy requirements. The required power is directed to the lodge, with excess energy redirected to the Tesla battery storage bank
- An average of 450 kWh is produced per day, reducing the camp's carbon footprint by 4 500 000 kg a year
- The system is sized to supply more than 80% of the lodge's energy requirements from renewable energy, with no compromising of our high guest service levels
- No concrete was used in the construction of the plant and the entire system can be relocated or removed with no permanent impact to the land

TESLA POWERPACK

This battery energy storage system comprises stacked "banks" of lithium-ion battery pods and provides remarkable cost and energy savings. In addition to its ability to operate in high temperatures, 100% of each battery's charge can be accessed compared to the 50% accessibility of a lead-acid battery, and the life-span of these lithium-ion batteries is warranted for 10 years of daily cycles (i.e. 3 650 cycles versus only 1 500 cycles for the lead alternatives).

Aa Top Terms

Solar hybrid: power systems that combine solar power from a photovoltaic system with another energy source

Solar photovoltaic (PV) system: solar cells, also called PV cells, convert sunlight into energy (i.e. convert photons of sunlight into volts of electricity = photovoltaic)

Solar / PV inverter: an electronic device that converts photovoltaic energy into a an energy source with a frequency compatible with a commercial or off-grid (e.g. generator) system

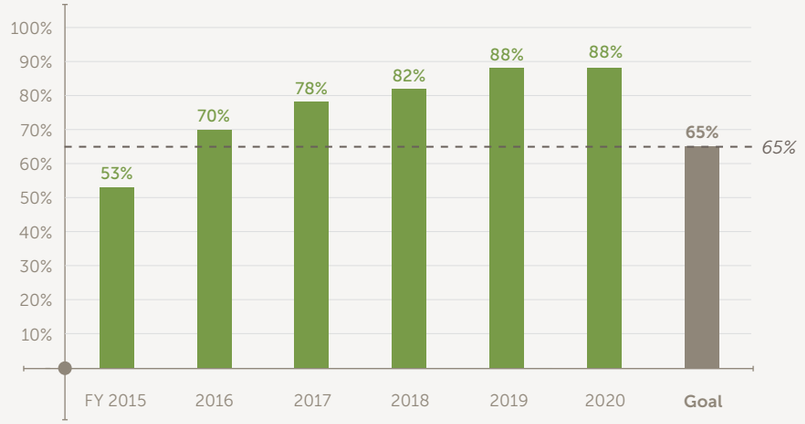
GOAL 1

We exceeded our goal by **23%** for our 2020 group average sustainability audit score

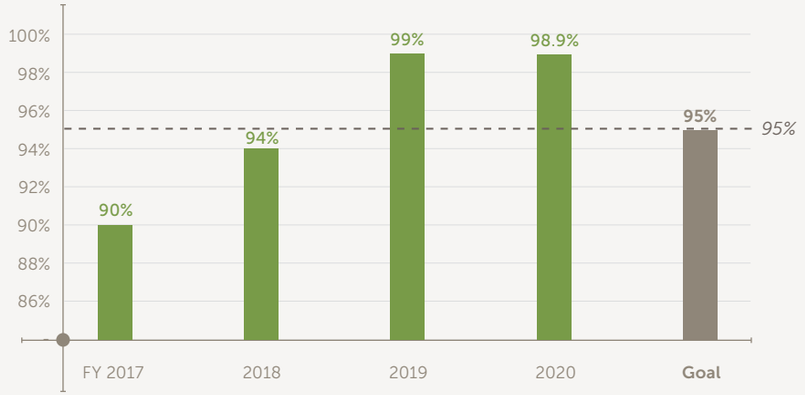
1.2 SET UP A DISCIPLINE OF MEASUREMENT

- 100% of our lodges are audited with a minimum group average audit score of 65%
- Average group stats accuracy score of 95%

Group average sustainability audit scores



Average group stats accuracy



1.3 BUILDING FOR EFFICIENCY

100% of all new builds will have been signed off against a sustainability checklist by the Group Sustainability Manager

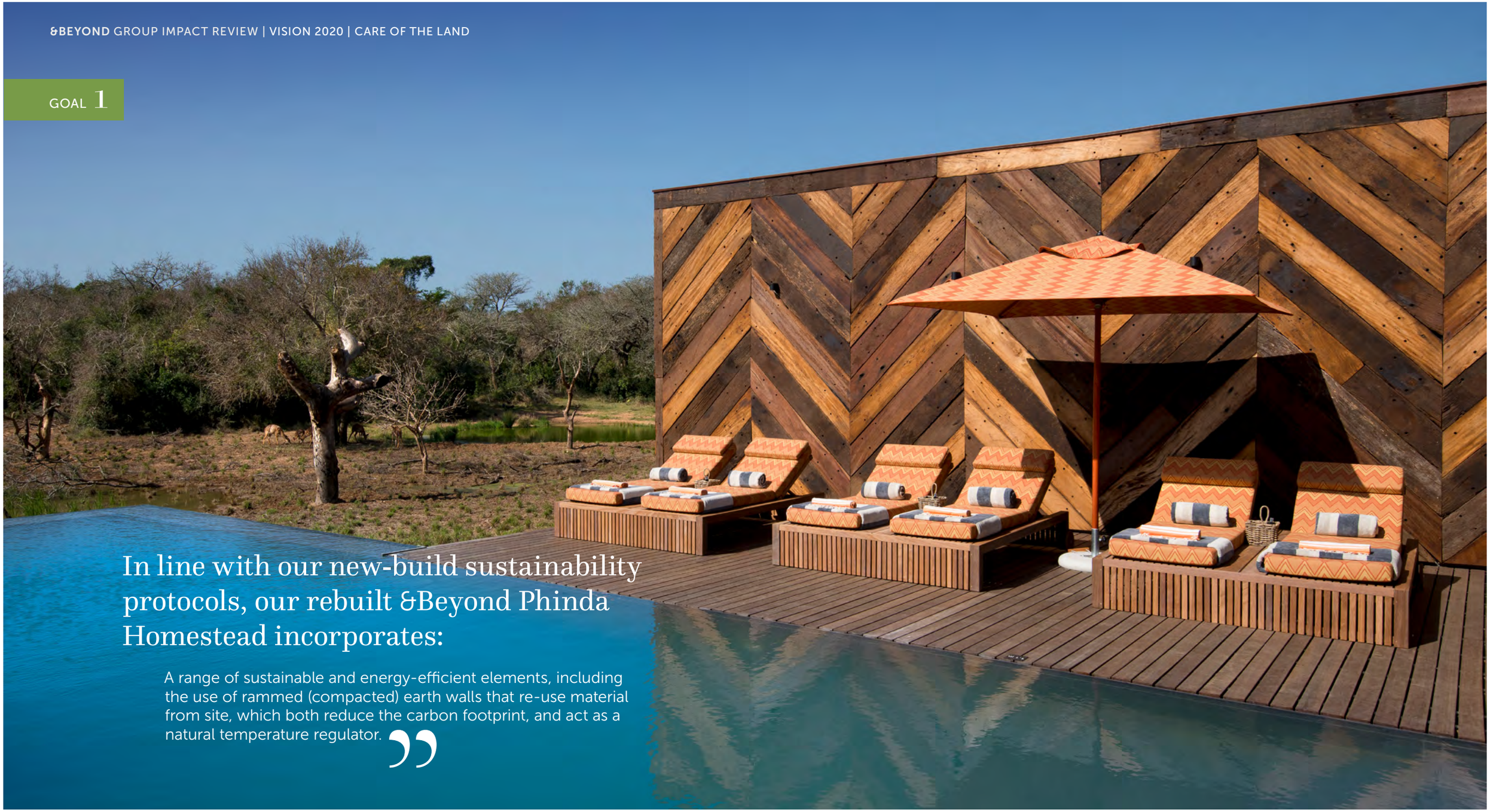
Aa

Top Terms

Sustainability audit: a rigorous internal audit per lodge that is aligned to the United Nations Sustainable Development Goals (SDG) where applicable, together with criteria specific to our Care of the Land, Wildlife and People initiatives

> A culture of measurements drives awareness and positive behavioural changes.”

GOAL 1



In line with our new-build sustainability protocols, our rebuilt &Beyond Phinda Homestead incorporates:

A range of sustainable and energy-efficient elements, including the use of rammed (compacted) earth walls that re-use material from site, which both reduce the carbon footprint, and act as a natural temperature regulator.

GOAL 2

Sustainable use of water

While we acknowledge that our business is built on luxury travel, we are committed to the use of renewable resources that extend not only to the use of energy, but also to water.

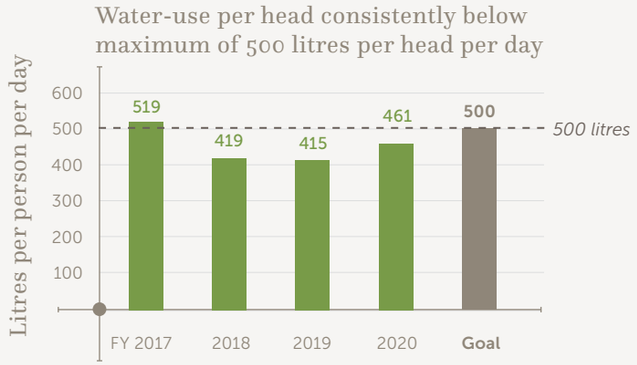
Group water usage consistently below maximum of

500 *l*

per head per day

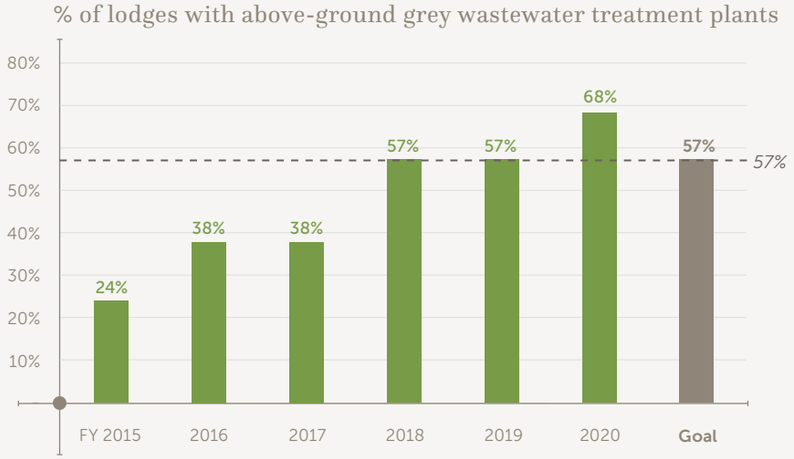
2.1 REDUCING WATER USE FROM SOURCE

Maximum group water usage per head = 500 l



2.2 INCREASE RE-USE AND EFFECTIVE WATER MANAGEMENT

57% of all lodges to be installed with above-ground (grey) wastewater treatment plants



Top Terms

Grey wastewater: All used water generated from sinks, showers, baths, washing machines or dishwashers; excludes wastewater from toilets

GOAL 2

Learnings

With the active monitoring of water usage and analysis of data in place, we have seen a marked increase in staff awareness, bringing the consumption average down significantly year on year.

We have seen increased consumption in Botswana, where part of the water purification process includes an additional self-flushing step due to the high tannin content of the water, together with the necessity to keep the banks of solar panels clean.

Our learnings from Botswana have translated into a Hydraloop grey-water treatment system, which has been installed in each guest suite at &Beyond Sossusvlei Desert Lodge. The recycled water is used for irrigation and to clean the solar panel banks of each guest suite.

Where occupancies are low to zero, for example during the COVID-19 period, the water-use calculations are skewed. A minimum usage is needed to maintain the lodge even in the absence of guests.

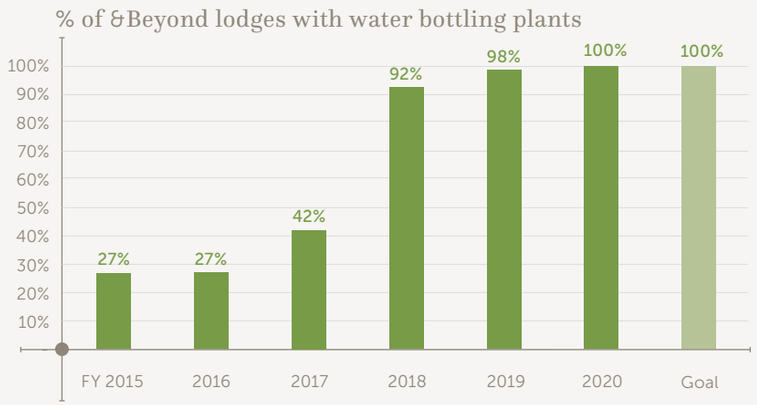
GOAL 3

Zero plastic water bottles

Alongside the installation of water bottling plants at our &Beyond lodges, there was a parallel reduction in our front-of-house plastic bottle usage from 27% in 2015 to 99% reduction in FY 2020.

3.1 INSTALLATION OF BOTTLING PLANTS AT 100% OF &BEYOND LODGES

Reduce our plastic water bottle usage by 90%



An annual reduction of 740 000 plastic water bottles across our group operation since 2019.”

3.2 MAKING USE OF REGIONAL RECYCLING INITIATIVES

Waste measurement and management at all our &Beyond lodges is a recurring and important element of our annual impact audits.

REDUCING ALL WASTE

In Botswana we have a focus on reducing all waste, not just plastic, wherever possible. Over the past three years we have saved over 16 tons of cardboard packaging by introducing a new ‘cool freight’ solution in collaboration with MackAir. Specially designed reusable containers are used to transport perishables to the camps, thereby reducing single-use cardboard and other packaging, and decreasing the need for waste removal trucks in the Delta.

2020

ACHIEVEMENTS

0	Plastic straws
88	% group average audit score
98.9	% data accuracy
100	% &Beyond lodges with on-site water bottling plants
100 000	Litres water recycled per month, &Beyond Sossusvlei Desert Lodge
728 000	Kg carbon per year reduction, &Beyond Ngorongoro Crater Lodge
740 000	Plastic water bottle reduction across our group operation