



Singita Serengeti – One Planet Living Annual Review

October 2021

Bioregional

Contents

1.	Message from Graham Ledger, Singita Grumeti Reserves Managing Director	3
2.	Message from Ben Gill, Technical Manager of One Planet Communities	4
3.	Summary of progress	5
3.1.	Bioregional recommendations	6
4.	Singita Serengeti	7
4.1.	The Grumeti Fund	7
4.2.	Locations and departments	7
5.	The One Planet Action Plan.....	8
6.	Carbon footprint	8
7.	Review of progress against the One Planet Action Plan.....	9
7.1.	Health and happiness	9
7.2.	Equity and local economy.....	10
7.3.	Culture and community	11
7.4.	Land and nature	12
7.5.	Sustainable water	13
7.6.	Local and sustainable food	14
7.7.	Travel and transport.....	15
7.8.	Materials and products.....	17
7.9.	Zero waste.....	19
7.10.	Zero carbon energy.....	20

1. Message from Graham Ledger, Singita Grumeti Reserves Managing Director

2020 was certainly a watershed year for Grumeti, as it was for the whole world. At the beginning of the year, we were looking forward to what was forecast to be our most successful year since opening in 2003. Occupancies were expected to be their highest yet and the associated revenues, which are fully reinvested into Tanzania, would have allowed us to further extend our conservation, community and sustainability initiatives.

Of course, all of that came to a halt in March 2020 and, rather than preparing for a bumper high season, we closed the lodges and mothballed much of the operation in response to lockdowns and widespread travel restrictions. Five months without guests led to significant spending constraints, which meant we were unable to progress many of the planned capital expenditure projects, including some linked to our One Planet Living targets. We had to re-strategise immediately, shifting our focus for the year.

We introduced measures across the property to safeguard and protect our staff and focused our outreach efforts – working together with the local authorities – on providing education about COVID-19 to local communities. Health and happiness became our key focus area for the year and various skills development and physical training programmes were well received by staff. With the exception of a limited early retirement programme, the incredible and unwavering support of our investors allowed us to retain our full payroll, albeit on reduced salaries. I am incredibly proud of the loyalty and commitment shown by our teams during what has undoubtedly been the most difficult period in Grumeti's history.

At the start of the pandemic, we were already well underway with the complete redesign and rebuild of Sabora Tented Camp. We took the decision to continue with this project, thanks to the support and commitment of our investors, and a highlight of this project was the use of FSC-certified timber across the build.

Travel and other restrictions prevented us from moving forward with the next phase of the Black Rhino Reestablishment Project however we were thrilled with the birth of a calf to one of the eastern black rhinos introduced to the property in 2019.

Looking back over the past five years, the team can be proud of many of its achievements:

- 22% reduction in generator diesel consumption between 2016 and 2020
- 80% reduction in generator hours between 2016 and 2020
- 21% reduction in vehicle diesel consumption between 2017 and 2020
- 31% reduction in water consumption between 2014 and 2020

One Planet Living continues to provide us with a user-friendly framework against which we can strategically plan and execute activities to be certain that our business operates in the most sustainable way possible. With the lodges open again, we are hopeful that the tourism industry will soon stabilise, and that traveller confidence will return, allowing our operations to normalise and for us to refocus our One Planet Living targets and continue with our sustainability journey.

Throughout the chaos of the past year, the beauty outside our office windows continues to remind us of the privilege of living and working in one of the world's most remarkable places – perhaps more so than ever whilst the world was turned upside down. We remain fully committed to running our operations in the most environmentally sustainable manner possible. Our teams are energised and eager to continue Grumeti's sustainability journey and we look forward to continuing our working relationship with Bioregional to target those areas in which there is still room for improvement.

2. Message from Ben Gill, Technical Manager of One Planet Communities

Singita Grumeti had to manage a huge number of shocks and fluctuations due to the Covid pandemic in 2020, highlighted by the 70% reduction in tourism nights. It is therefore testament to the work that has been done in embedding sustainability into the operations that although some initiatives were understandably put on hold, others continued to move forward – for example, improved monitoring in food waste generation and cargo transport.

The enforced closing of the tourism operations also provided an interesting insight into the 'baseline' consumption of Singita Grumeti when there are no guests in camp. The reduction in building energy, water and land transport emissions were 20%, 20% and 10% respectively – highlighting the minor impact that guest numbers have on total consumption. Conversely, when comparing Lodge performance, the lightweight camps are more responsive to guest numbers and therefore more flexible and economic to run.

2021 is likely to be a transition year as organisations try and find the new equilibrium in a post-pandemic world, and it is critical that sustainability goals and objectives are integrated into this. For Singita Grumeti, this should involve capitalising on the new approaches and behaviours that have become normal during the pandemic, such as remote site visits and meetings, and ensure they become part of the 'new normal'. This will most likely involve updating the One Planet Living strategy to fully integrate this with the vision and strategy of both the Grumeti Fund vision and Singita.

Singita Grumeti has been pioneering an integrated tourism and conservation model that has helped to diversify its revenue stream. This innovative approach has been tested to the full during the pandemic and has shown to be robust enough to withstand the unprecedented upheaval. What is more, it has continued to make progress in implementing its sustainability plan in such testing times – albeit at a reduced pace – which is a highly impressive achievement. As Singita Grumeti adapts to the new equilibrium, we look forward to seeing it push sustainability plans forward with renewed vigour.

3. Summary of progress

Progress against the targets (or updated versions of them) set out in the 2013 One Planet Action Plan for Singita Serengeti are laid out in the sections below.

Since 2013, there has been clear progress in the majority of the One Planet Living® principles, though reducing greenhouse gas emissions from transport and buildings has remained challenging. 2020 was obviously a unique and challenging year due to the disruption from Covid-19 and the closure of the tourism offer for a significant section of the year, nonetheless progress continues to be made:

- Plans for a solar farm at Sasakwa Hill & Makundusi have been developed and are actively being pursued, this would have a significant positive impact on carbon emissions.
- Singita continues to excel in the areas of water and waste management and is demonstrating best practice in both these areas.
- Through its partner the Grumeti Fund, the destination continues to play a vital role in preserving a globally iconic ecosystem and supporting its neighbouring communities.
- The enforced restrictions of Covid have driven innovation to reduce consultant flights and offer opportunities to change behaviour to address onsite transport emissions.

KEY

	Substantially or entirely completed, or a high degree of certainty over deliverability
	On track for a long-term target
	Substantially incomplete, behind schedule or doubt over delivery

One Planet Principle	2020 goal compared to baseline year in brackets	Progress / activities
Health and happiness	Improvement in health statistics	Monitoring in place
	Improvement in local education levels	180 scholarships 7 Scholars in School of Cooking
Equity and local economy	50% of salary expenditure to be on local staff	53% staff local
	Local staff in junior management	16 roles (increase of 1)
	100 new jobs, > 60% for local residents (2011)	Drop due to Covid – remains above 2011 levels
Culture and community	10% of guests take Community Visit	5% taking a tour
	One Planet Living information centres	In place
	Local communities adopting sustainable livelihoods	Entrepreneurship schemes
Land and nature	Establish management effectiveness programme	No loss of major species
	Trends in animal numbers (2011)	~ 52 kg/ha
	Reduce impact of alien species	Ongoing
Sustainable water	Reduce leakage to < 5%	Around 10%
	Reduce borehole extraction by 50% (2013)	At least a 30% reduction ignoring Covid driven reduction
Local and sustainable food	3 new local food lines	Ongoing
	All fish sustainable	Continue to monitor to ensure this

	Improvement in the balance of the staff diet	Revamped menu reinvigoration of Meat Free Monday as Wellness Wednesdays
Travel and transport	50% non Grumeti Construction vehicle fuel reduction (2011) (25% through logistics)	20% reduction due to Covid
	Grumeti Construction land transport emissions stabilised and effectively managed	Fluctuations depend on work
	10% reduction in air cargo emissions (2013)	75% reduction
	50% of guests offsetting or using a low-carbon air carrier	Being addressed at a Singita company level
Materials and products	Import reductions	Ongoing
	Land rehabilitation	Ongoing
	Sustainable construction	Still a heavy reliance on cement – though Sabora refurbishment was lightweight.
Zero waste	90% plastic waste reduction (2013)	No plastic bottle water purchased
	10% other waste reduction (2014)	70% reduction on 2019
	Overall 90% recycling rate	Close to 100% recycling
Zero carbon energy	Reduce building energy use 30% (2011)	20% reduction on 2019 due to Covid
	100% renewable energy (2011)	Meeting 10% of building demand

3.1. Bioregional recommendations

A large part of 2020 was spent dealing with the Covid crisis, which reduced the progress that could be made in other areas and delayed the reviewing and updating of the One Planet Living plan. As tourism operations start to open up again, key areas of focus for the remainder of the year should include:

- A review and refresh of the Outcomes – outlining what Singita Grumeti wishes to achieve in the long-term and aligning the goals of Singita, the Grumeti Fund and the bespoke challenges of Singita Grumeti.
- Zero carbon energy – ensure that the proposal for renewable energy at Makundusi is delivered.
- Travel and transport – using what has been learnt through the Covid pandemic to manage transport onsite more effectively and introduce policies to encourage a more responsible approach to vehicle use.
- Continuing the excellent focus on supporting female employment through empowering local women to apply for the positions offered.

These are areas that should be prioritised in the coming months.

4. Singita Serengeti

Singita is a company which operates 15 tourism lodges and camps across Africa. Preserving large areas of wilderness for future generations while benefitting local communities lies at the heart of its business. Singita Serengeti is based in northern Tanzania next to the Serengeti National Park, renowned for its annual migration of over 1.5 million wildebeest and 250,000 zebra. Here, it works closely with the Grumeti Fund, which is its non-profit conservation partner, adopting a model that integrates community, conservation, and hospitality. The goal is that the hospitality offering will support the philanthropic donations to provide a secure and ongoing funding stream for the community and conservation initiatives.

Singita Serengeti is one of the largest organisations in the region, employing over 800 staff with more than 90 guest beds. About 70,000 people live in the 21 villages bordering the protected area and the total population of the neighbouring districts is approximately 585,000.

4.1. The Grumeti Fund

The Grumeti Fund was formed in 2003 to carry out conservation and community development work on the 140,000-hectare concession of land once used for game hunting. Grumeti Fund works in partnership with Tanzanian government institutions to manage these concession lands and enhance the conservation activities in the ecosystem. It also works in partnership with local communities to support development initiatives in the 21 villages along its border. The Grumeti Fund has historically been 100% donor funded, relying on the generosity of individuals to finance its programmes. The Hillside Lodge programme (see below) and the expansion of the tourism operation aim to assist in the diversification of the funding streams.

The Grumeti Fund is organised into six departments:

1. Conservation Management
2. Anti-Poaching and Law Enforcement
3. Community Outreach
4. Research and Monitoring
5. Relationships
6. Special Projects

For more information contact info@grumetifund.org and visit www.grumetifund.org

4.2. Locations and departments

Singita Serengeti includes:

1. The main lodges and camps: Sasakwa Lodge, Faru Faru, Sabora Tented Camp, Mara River Camp, Explore Mobile Camp, Serengeti House
2. 'Back of house' areas: Sabayaya and Lawatu on Sasakwa Hill, Makundusi Village

The Hillside Lodges comprise a group of like-minded individuals, committed to Singita's 100-year purpose to preserve large areas of African wilderness for future generations. Hillside Lodge partners contribute to the conservation costs on an annual basis and invest in a lodge on the property (this can be private or part of the Singita rental pool). All the lodges are constructed and operated in line with Singita's commitment to sustainability and One Planet Living principles.

Data is generally broken down into these areas, though Sasakwa data often covers all of Sasakwa Hill – both back of house areas and Singita Sasakwa Lodge which is occupied by guests.

5. The One Planet Action Plan

The [One Planet Action Plan developed in 2012/13](#) laid out a vision for how Singita Serengeti would become a One Planet Community, setting targets to define that vision, and outlining the key strategies that would be implemented by 2020. The Annual Reviews of previous years show how the foundations have been put in place and track the progress in achieving these 2020 targets. This Annual Review focuses on the activities in 2020 and reports the data for the complete calendar year 2020.

Key successes in 2020 include:

- Significant reduction in all waste including food waste, with all food waste going to composting or use as animal food, leading to a 95% recycling rate
- Opening of the RISE education building to develop and support local research initiatives
- Low impact refurbishment of Sabora camp.

6. Carbon footprint

The carbon footprint analysis includes:

- Onsite fuel use: generator fuel, vehicle fuel, liquid petroleum gas and kerosene
- Electricity purchased from the grid
- Flights: business flights and flights for ex-pat staff leave.

Comparing the performance of the year 2020 to other years is clearly not that instructive given the disruption caused by Covid-19, which led to a 70% reduction in the number of guests visiting Singita Serengeti. Broadly there has been a reduction of carbon emissions in all areas, with a 25% reduction overall (**Error! Reference source not found.**).

As guest nights only account for around less than 2% of the total bed nights at Singita Grumeti, it is not surprising that carbon emissions did not fall to the same degree as the number of guests. It is a little more surprising that the emissions of the main tourist lodges; Sasakwa, Faru Faru and Sabora Plains, only fell by between 30% and 15%. This highlights just how inelastic the demand of the tourism operations are with respect to guest numbers.

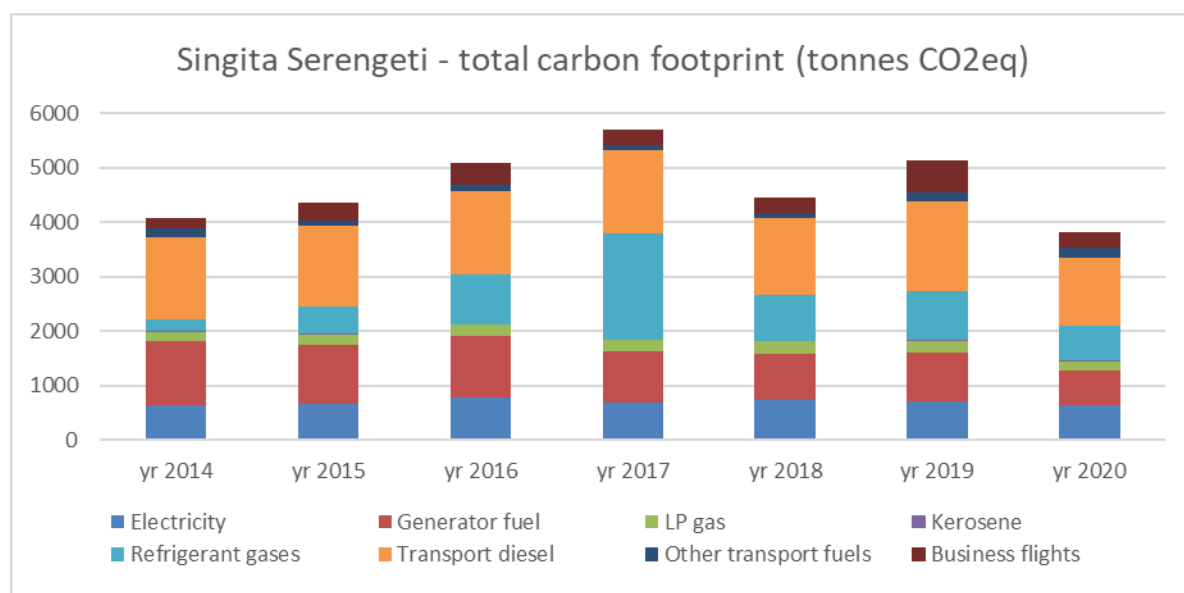


Figure 1: Combined measures carbon footprint of the main activities at Singita Serengeti, 2014-20 (tonnes of CO₂eq)

Significant investment has been made to reduce the carbon emissions at Singita Serengeti, and yet emissions have only stabilised. It is understood that the potential for installing large-scale renewable energy on Sasakwa Hill & Makundusi continues to progress, but concerted efforts to reduce transport emissions are also required.

Singita Serengeti has made incredible progress in the last eight years in many areas. However, the time for significant improvement in the crucial areas of transport and building energy consumption is now long overdue.

7. Review of progress against the One Planet Action Plan

This section reviews the progress against the targets set out in the 2013 One Planet Action Plan using a simple traffic light system. Some of the targets are revised here and the rationale for this is provided.

	Substantially or entirely completed, or a high degree of certainty over deliverability
	On track for a long term target
	Substantially incomplete, behind schedule or doubt over delivery

It also provides:

- A graphical overview of progress and commentary, where relevant
- Summary of key activities delivered and planned (more information on many of these can be found on the [Grumeti Fund](#) site)
- Comment on progress and performance.

7.1. Health and happiness

	2020 target	Baseline	2020 performance
HH1	Improvement in key health statistics of local staff	Unknown, 2017: monitoring system in place	Monitoring system in place – 10% reduction in malaria cases
HH2	Improvement in local education levels	2012: Five sponsored students continued from school to college 2017: 110 scholarships 2019: 162	180 Scholarships

7.1.1. Key activities and successes in 2020

Health and happiness initiatives were obviously dominated by the response to the global pandemic in 2020, with a focus on supporting health and recognition of international events.

Sporting initiatives:

- Increase in 5 km Park runs, 'Walk and Roll First Friday', yoga and other physical activities provided.
- Premier soccer league was hosted for all the soccer players on the property.
- The Sasakwa Tennis Championship kicked off with a staggering 104 games played amongst staff over an eight-week period.
- A 10 km run was hosted for all staff to participate in the Comrades Virtual Marathon.

- Rhino run: Events were held in Grumeti, Arusha, Cape Town & Durban with over 100 participants across the property. Three gas stoves were donated by a guest and handed over to the top three athletes.
- Health & Wellness campaign kicked off in September with numerous sporting events: Fitness Challenges, Weekly 5 km Park runs (September and October), soccer event.

Health and awareness initiatives:

- Breast Cancer Awareness event.
- International Women's Day was celebrated with an event for all female staff with drinks and snacks, dancing, and a short presentation on how to discuss challenging issues.
- International Day of Happiness was celebrated with a video shared of numerous staff describing what makes them happy.
- Trivia night for all management staff.
- World Malaria Day was celebrated with a song recorded by Sickbay staff and shared with everyone.

Covid-specific initiatives:

- Programme of engagement and empathetic listening for staff.
- Used Singita's companywide initiatives to minimise the mental health impacts of Covid through the new health and wellbeing initiative (see Singita Annual Review).

Despite the challenges, the Grumeti Fund continued its excellent educational work in the community, with 180 scholarships awarded and 39 of them graduating.

7.1.2. Summary

Covid-19 curtailed many of the planned events, but the team rapidly put in place many new initiatives to support the needs of the staff onsite.

7.2. Equity and local economy

	2020 target	Baseline	2020 performance
Eq1	50% of salary expenditure to be on local staff	2011: 73% Tanzania, 45% local district (approx.) 2018: 53% local, 3% ex-pat	Annual average: 53% staff local, 5% ex-pat
Eq2	Selected local staff to be trained to fill junior management roles	2013: approx. three 2018: 11 staff 2019: 15 staff	16 local staff Grade 7 or higher
Eq3	Creation of 100 new jobs of which more than 60% will be for local residents	Tanzanian staff 2011: 659 (62% from the local district), 2013: 745, 2018: 830, 2019: 850	Annual average: 790 Tanzanian staff (56% local)

7.2.1. Key activities and successes in 2020

The prolonged closure of the tourism component of Singita Serengeti led to the necessary reduction of staff members onsite. Therefore the numbers quoted in the table are given as an annual average. The number of staff employed onsite has fallen by 8% on annual average but was 15% lower at the end of the year compared to the start. This has been through a programme of voluntary redundancies where possible, though there were some retrenchments. Singita Serengeti has importantly managed to retain the local senior staff.

There has been significant success in recruiting and developing local staff. For example:

- The co-director of the Grumeti Fund is Tanzanian.
- The new communications and fundraising manager at Grumeti Fund is also a Tanzanian.
- One of the chefs, who joined the company to work in the gardens, trained through the Singita Community Culinary School and is now a senior chef.

In terms of gender equity, the analysis results continued to be used to drive recruitment of female staff prior to the recruitment freeze. The ratio of staff gender is measured and reported by department, and the ratio of female employment has increased by two percentage points since 2018. Additionally, the RISE project has a focus on creating opportunities for women.

Additional benefits to the local economy include:

- Singita Community Culinary School at Grumeti continues to train eight local people a year to become chefs. This was put on hold due to Covid, but the training has since restarted. Pre-Covid, six of the previous trainees were temporarily employed at Singita with a view to offering at least three of them permanent positions. These positions are on hold at the current time.
- The Grumeti Horticultural and Marketing Co-op Society (GHOMACOS), a local growers' cooperative, generated around \$250,000 in revenue for its more than 70 members. A less than 20% drop is impressive given the impact of Covid on tourism.
- Initiation of a Design and Building Catalogue to highlight goods and materials that are available locally and to maximise their use in construction and refurbishments.
- Local workers were used in the making of all Sabora tents.

The Grumeti Fund's Enterprise Development Programme continues to build the entrepreneurial capacity of the local community. Despite the pandemic, seven entrepreneurs were guided by phone and six graduated.

For more information see the [Grumeti Fund](#) website.

7.2.1. Plans for 2021

As the tourism operation returns to its previous level, more staff will need to be recruited. This presents an opportunity to increase local and female employment. As the local culture does not encourage female employment, a programme is being put together to encourage and empower local women to apply for jobs. The target is to achieve 60% female recruitment, with the exception of anti-poaching and security (10% target).

7.2.2. Summary

2020 was shaping up to be Singita Grumeti's best year for tourism, until the global pandemic hit. The enforced shut down of tourism led to significant job losses but pay reductions were structured to minimise the impact on those who could least afford it. On a positive note the ongoing maintenance of the tourism infrastructure and conservation work ensured that local procurement was not hit to the same degree, with only a 29% reduction in sourcing of local food.

7.3. Culture and community

	2020 target	Baseline	2020 performance
--	--------------------	-----------------	-------------------------

CC1	10% of guests taking a community tour	2013: 5% registered (actual figure higher) 2017: 8%	50 community visits (5% of guests)
CC2	Creation of One Planet information centres for guests and staff to promote a culture of sustainability	2011: Environmental Education Centre (EEC) operating fully for local school children	Ongoing staff training
CC3	Local communities adopt sustainable livelihoods – (three new village communal lands managed sustainably by 2017)	N/A	Continued support for entrepreneurs in beekeeping, poultry farming and vegetable growing

7.3.1. Key activities and successes in 2020

Community tours and events have suffered due to the pandemic, though the onsite One Planet Living events continued with 41 events held. The new One Planet Living Coordinator set up enhanced engagement and communication, including interviews and a video newsletter. Cultural events included:

- Staff members taking a day to assist in cleaning and fixing the Sasakwa vegetable garden in June.
- Swahili nights every Tuesday evening with Swahili cuisine.
- The Sasakwa Tennis Ladder created a fantastic vibe and staff engagement.

Although schools were closed between March and July, the environmental education centre still managed to greet 384 students and 24 teachers – achieving 80% of its target.

The Grumeti Fund also supported the local community during the Covid crisis donating over 1000 masks, 440 litres of disinfectant and 38 thermal scanners to local villages.

7.3.2. Summary

2020 was a year that tested the resilience of many organisations and the steps taken to embed a culture of sustainability and wellness at Singita Serengeti appear to have helped in the response to the crisis. The existing programme of regular events linked to One Planet Living was able to continue in a different format and helped support the staff mental and physical wellbeing.

With staff returning, it will be important to ensure that this is used as a springboard to encourage further behaviour change that supports planetary and physical health such as choosing more sustainable transport modes, minimising meat consumption and other eco-lifestyle choices.

7.4. Land and nature

	2020 targets	Baseline	2020 performance
LN1	Establish a management effectiveness monitoring programme and maintain a high effectiveness score	2011: no specific programme in place	
LN2	Trends in animal numbers demonstrate a healthy and resilient ecosystem	2011: 40 kg/Ha of resident herbivore biomass (25 in 2005) 50 kg/ha in 2016	~ 52 kg/ha – notably the buffalo population

			continues to increase
LN3	Reduce the impact of invasive alien species to predetermined levels	Programme in place, Area cleared: 2017: 511 ha 2008: 1000 ha	2,500 ha cleared

7.4.1. Key activities and successes in 2020

The arrival of the nine eastern black rhinos from South Africa in 2019 is a huge success story and creates the opportunity for the growth of a new rhino population. Nonetheless, the rhino significantly increases the risk profile of the operations, requiring further dedicated personnel and equipment. 2020 saw the rhinos settle into their new home and their release into the Rhino Protection Zone. Additionally, ongoing support has been given to Zaituni, the abandoned baby black rhino calf, which the Tanzanian National Park has asked Grumeti Fund to raise.

Further operational developments included:

- Completion and initiation of an applied research centre.
- Introduction of a light aircraft for aerial surveillance and monitoring.
- Completion of a boundary road in the Ikorongo to protect the edge of the Reserve.
- Building of spray booths for vehicle spraying to minimise air pollution.

Throughout the year, there were over 150 arrests of poachers and no loss of elephant or rhino.

For more information, see the [Grumeti Fund](#) website and 2020 Impact report.

7.4.2. Summary

Covid-19 has caused a collapse in global tourism – a critical source of funds for many conservation projects and local communities. This has led to a reported increase in poaching as governments struggle to pay security staff and local communities try to survive. Given this context, the incredible work of the Grumeti Fund in protecting the world-renowned ecosystem only increases in importance.

7.5. Sustainable water

	2020 target	Baseline	2020 performance
SW1	Reduce losses through leakage to less than 5%	Faru Faru leakage is 6.7%	Leaks remain around 10%
SW2	Reduce extraction of water from boreholes by 50%	2013: monthly average: 11,750m ³ (underestimate) 2016: 11,150 m ³ , 2019: 8,200 m ³	Average 7,300m ³

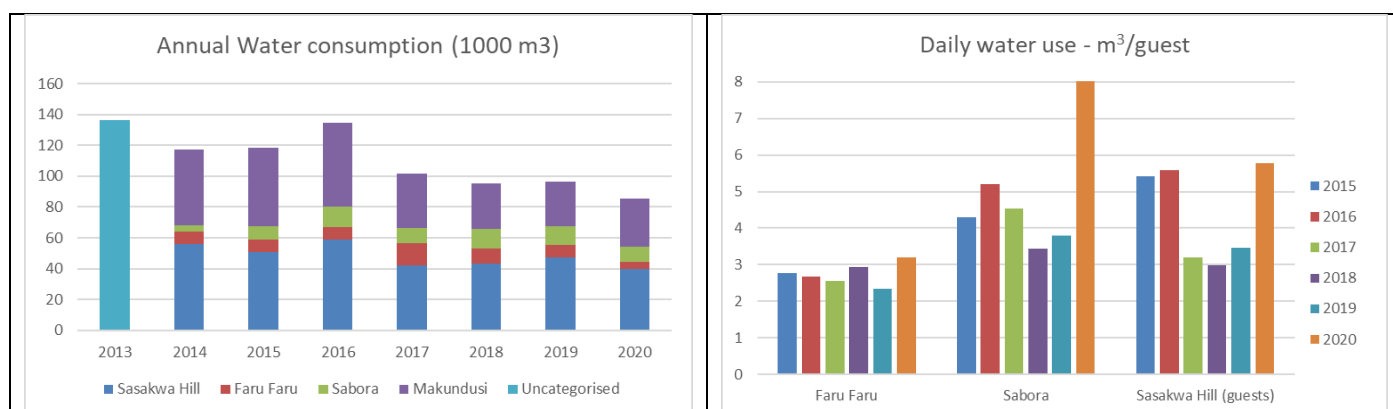


Figure 2: Graphs of total annual water use and per guest-night water use

While total water consumption fell by over 10%, this is primarily related to the reduction in guests, with water consumption in the Makundusi staff village actually increasing by nearly 10%. Comparing the lodges, it is interesting to note that per guest consumption at Faru Faru increased by 35%. However, at Sasakwa Lodge it was closer to 70% and total water use fell 45% and 35% respectively, suggesting that there is a higher baseline consumption at Sasakwa than at Faru Faru. As Sabora was closed for refurbishment, the guest numbers were down 80% but water use was relatively unchanged, as the refurbishment required water for workers and construction.

7.5.1. Key activities and successes in 2020

- Ongoing maintenance and improvement in performance of water treatment units at Faru Faru and Sabora Plains.
- Water meters are incorporated into any new development projects – this is closely monitored by the Environmental Committee.
- Baboon 'non-friendly' taps are being replaced constantly to reduce water waste from baboons opening taps.
- Felister, the Maintenance administrator, initiated inspirational 'daily messages' to the water report to encourage staff to conserve water.

7.5.2. Summary

The relatively small reduction in water use across the site, and specifically at Sasakwa Lodge, highlights how water demand is not particularly closely correlated with guest occupancy. Water management has improved hugely since 2013, but the high level of consumption of unoccupied tourist lodges shows that further opportunities for reducing consumption must exist.

7.6. Local and sustainable food

	2020 target	Baseline	2020 performance
LSF1	Three new local food lines a year	2012: 40% from local ward (<25km), 2013: almost 100% from region (<250km)	Held up by Covid
LSF2	All fish to be sustainably farmed or harvested	2013: no red list	Continue to monitor to ensure this
LSF3	Progressive improvement in the balance of the staff diet	2011: food prepared to meet cultural norms	Revamp of menu

7.6.1. Key activities and successes in 2020

With the extension of 'Meat Free Monday' to all lodges, the menu was revamped to reduce emphasis on carbohydrates. The initiative was rebranded as 'Wellness Wednesday' to tie in with vegetable delivery and allow more time for preparation:

- A further improved menu in January 2020 was overseen by a vegetarian chef who was able to further train local chefs.
- Improved communication of nutritional value.
- At least two meat-free breakfasts on top of Wellness Wednesdays.

Through the enterprise development program, a small honey project was established which produced close to 200kg of honey.

Ongoing activities included the removal of any products that contain palm oil from all guest and staff kitchens.

7.6.2. Summary

When taking a five-year perspective, huge progress has been made in offering more sustainable and healthy choices to staff. Yet we know animal husbandry is a major cause of land-use change with a negative impact on conservation. This is a particularly critical issue locally which should be used as a communication tool to engage with staff.

7.7. Travel and transport

	2020 target ¹	Baseline	2020 performance
ST1	50% reduction in all non Grumeti Construction (GC) land transport emissions – 25% through logistics efficiency	2011: total 408,900 litres (l) Non-GC: 2013: 354,850l 2019: 322,000l	254,500 litres 20% drop, but all due to reduction in tourism consumption. Non-tourism consumption unchanged
ST2	GC land transport emissions stabilised and effectively managed	2013: 44,612 l 2017: 174,000 l 2018: 130,000 l 2019: 186,500 l	142,000 litres – fluctuation dependent on activities
ST3	10% reduction in local air cargo emissions	2013: 71,650l 2019: 47,000l	12,000 litres – 75% reduction
ST4	50% of guests offsetting or using a low-carbon air carrier	2011: no monitoring of this	Issue to be addressed at Singita Group level, Grumeti Air offsets flights

While there was a 20% reduction in fuel use across the project, this is entirely due to a 50% reduction in tourism-related fuel consumption, highlighting the need to continue looking at opportunities to address transport at a project level. There are some very understandable reasons why transport fuel will not have fallen in line with the number of visitors, or increased in some areas:

- The black rhino population needs dedicated security, increasing the number of vehicles in use. These are smaller Suzuki Jimmy's with a lower fuel consumption but a higher maintenance demand. This does demonstrate a willingness to trial the use of smaller vehicles that are more appropriate to the task.
- Fewer guests and therefore fewer game drives reduces the 'passive surveillance' onsite putting an increased burden on the anti-poaching unit.
- Lower guest numbers mean that there are fewer guests per vehicle and increases the need for additional vehicles to be circulating to spot game for guests. This explains the 50% increase in fuel use per guest night.

¹ This targets have been adjusted from the original targets established in the One Planet Action Plan due to the broad and variable work undertaken by Grumeti Construction, including many services, such as road building, normally delivered by the national government. For further information see the previous Annual Review

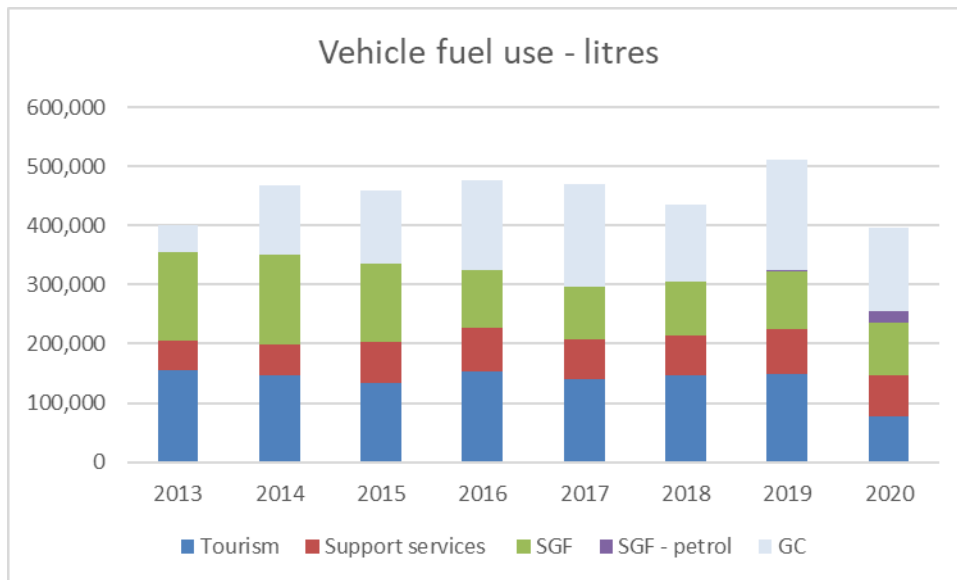


Figure 3: Vehicle fuel use (litres of fuel)

In terms of other transport-related emissions:

- As would be expected, there was a 75% reduction in cargo flights, highlighting the direct correlation with flight cargo trips and guest numbers.
- The number of cargo truck deliveries has also been tracked for the first time, with each trip consuming an estimated 320 litres of fuel. This came to a total of over 100 tCO₂eq for the period March-December – double the cargo flight emissions for 2019.
- The number of cargo flights was directly related to the number of guests, the cargo trucks less so. This suggests that the cargo truck supplies meet the core requirements of the operations, whereas the cargo flights are serving the needs of the guest, creating an opportunity to reduce cargo flights by reviewing what is being bought in by plane.
- Much of the design review and sign off of the Sabora Plains renovation was undertaken by video call, reducing the need for consultant flights. This should become standard practice where possible.
- Staff flights fell by 50% as would be expected due to the Covid pandemic. Local domestic flights account for nearly 75% of the emissions, with international flights the remainder.

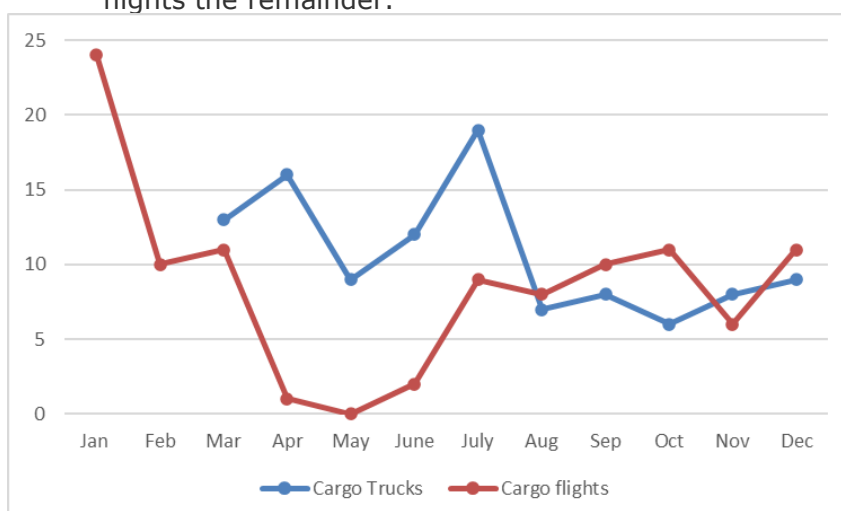


Figure 4: Cargo deliveries by plane and truck

There are a number of opportunities to reduce vehicle numbers and use, for example:

- Change the culture of staff access to vehicles, particularly in the light of the need to reduce costs post Covid-19.
- Monitoring of personal use of vehicles, particularly by guides.
- Introducing communal transport options.
- Trialling the use of electric vehicles such as an electric game viewer, but also electric motorbikes, polarises and even bikes.

7.7.1. Key activities and successes in 2020

Specific initiatives included:

- Staff are using WhatsApp to organise car sharing.
- Improved vehicle fleet management by ongoing removal of old vehicles.
- Research into converting a diesel game viewer to electric.
- Promotion of the five high-end bicycles from a local supplier in Arusha supporting local female employment and encouraging cycling onsite
- Hosted the first 'Walk & Roll First Friday' to encourage people to walk or cycle to and from work, where safe and possible.

7.7.2. Plans for 2021

Opportunities under investigation include:

- Procedures to control the use of guiding vehicles being used for non-guiding purposes.
- Trialling an electric game viewer.
- Ongoing research into opportunities to reduce the number of vehicles on the Hill, for example by:
 - Reducing the number of positions that are provided with a vehicle.
 - Use of apps to enable improved vehicle sharing.

7.7.3. Summary

Globally, the change in work patterns underwent an enormous change in 2020 with the shift to home working. There are elements of this that can be replicated at Grumeti to reduce the need to travel, such as:

- Video calls for one-on-one meetings to prevent the need to drive,
- E-signing of documents so people do not need to drive to Lawatu.

These may seem like minor changes but building a culture where the default response is not 'drive to ...' will be critical to reducing transport emissions. The change in travel patterns globally has been seismic and this needs to be embraced at Singita Serengeti.

Transport fuel use is a massive challenge at Singita Serengeti, and while there have been improvements, they remain somewhat piecemeal. There are opportunities for further reductions, and these need to be actively pursued and made a priority by senior management.

7.8. Materials and products

	2020 target	Baseline	2020 performance
SM1	Imports reduced – three new local/sustainable non-food products a year	Not applicable	Review of locally available materials
SM2	Rehabilitation of quarries and murram pits (excavation sites for road maintenance)	2012: none 2013: rehabilitation of 6 pits in process	Best practice in rehabilitation continues

SM3	Prioritising sustainable construction materials	2011: no LEED rated materials, no FSC timber	Sabora renovation was a lightweight construction
-----	---	--	--

7.8.1. Key activities and successes in 2020

A standard procedure has been put in place for the review of all major construction projects. This builds on the review undertaken by the Environmental Committee prior to construction and incorporates post-completion monitoring and reporting. Work also started on the development of a local sourcing catalogue.

A complete rebuild of Sabora Plains was undertaken, and the lightweight construction minimised the use of cement, though it did require a significant quantity of steel. The total embodied carbon of the construction was in the range of 250 tCO₂eq, of which the steel accounted for over 50%. When comparing the embodied energy of the rebuild to other tourism renovation and construction projects at Singita Grumeti, several key issues are noticeable:

- The embodied energy per bed space is low, with the total renovation having a lower embodied energy than the construction of the two-person hillside lodge.
- The steel structure of the tents significantly pushed up the embodied energy and was higher than for other renovations.
- The lightweight tented construction significantly reduces the use of cement and associated embodied energy.

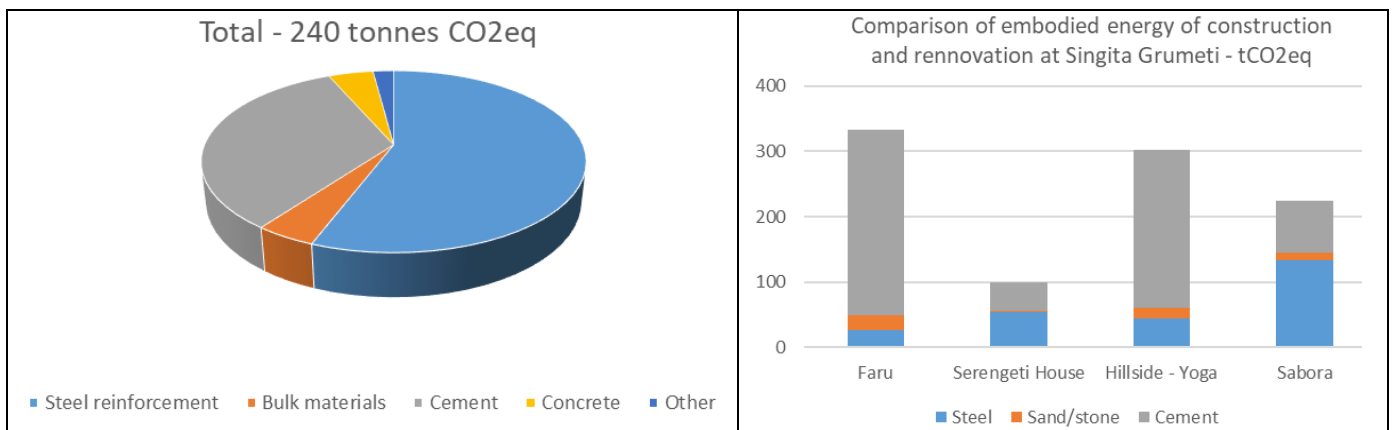


Figure 5: Estimate of the embodied carbon of the key materials used in the Sabora Plains refurbishment and comparison with other refurbishments

One of the key objectives of construction at Singita Serengeti is to maximise the use of local resources. The slate roofs are an excellent example of this, providing work for the local community. On the other hand, the slates do need regular maintenance and renewal, with the negative impact of mining and transport of a heavy material – therefore it may be worthwhile to investigate alternative materials.

7.8.2. Summary

The RISE building completed in 2019 set a new standard for construction, by eliminating the need for cooling and incorporating the use of more sustainable materials, such as timber frame and earth insulation. This has been followed up by the lightweight retrofit of Sabora Plains – again helping to reduce the use of cement. These techniques can be extended to other construction projects on the site to both reduce energy demand and cement use.

7.9. Zero waste

	2020 Target	Baseline	Estimated 2020 performance
ZW1	90% reduction in plastic waste (from 2013/4)	2014: Average 775kg/month 2013: 84,000 litres of plastic bottle water purchased. 2019: 1,200	No bottled water purchased
ZW2	10% reduction in other (non-plastic) waste (from 2014)	2014: 3600kg plus 12,250kg food waste per month 2017: 4600kg plus 10800kg, 2019: 6000kg	1800kg waste, 3500kg food waste. 70% and 45% reduction on 2019 respectively
ZW3	>90% recycling rate	2014: 65% of non-organic (4,150kg/month)	Close to all possible material is recycled

Singita Serengeti continues to innovate in reducing waste and increasing recycling, with 95% of waste being sent for recycling. The main materials sent for recycling are:

- Glass which is sent to [Shanga](#), a local enterprise making goods from recycled materials, or stored if there is insufficient demand.
- Broken glass, crushed and used as sand in construction.
- Cooking oil, also sent to Shanga for use as a fuel.
- Hard and soft plastic (such as plastic water bottles) as well as cement bags, sent to Dunia Designs for making recycled furniture.
- Cardboard boxes which are reused.
- Metals, collected by a local entrepreneur for recycling.
- Office paper which is sent to Shanga for reuse in crafts when there is a demand or burnt in the incinerator if not.
- Shredded paper, reused as a packaging material.
- Food waste, two thirds of which is composted while the remainder is collected by local farmers for animal feed. The food pit is no longer used for waste disposal.

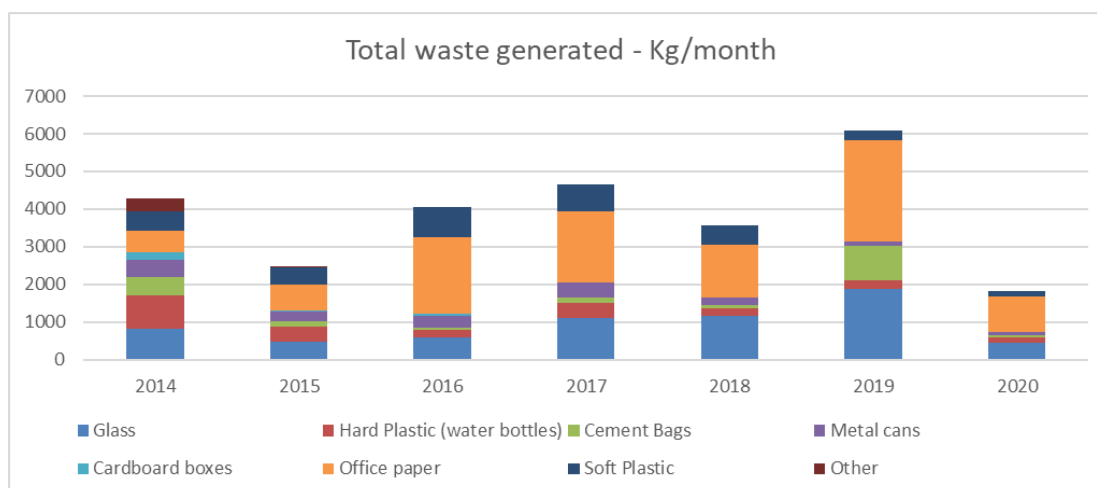


Figure 6: Average monthly waste generated



Figure 7: Average monthly food waste generated total (t) and per person (100g)

While it is expected that waste generation would fall in 2020, the 70% reduction is surprisingly high, given that guest bednights make up a few percent of the total bednights. Likewise, the 45% of reduction in food waste far outstrips the reduction in onsite headcount. These are impressive improvements, and it will be interesting to see if they are maintained with the reopening of the tourism component of the operations.

Other observations are that:

- The food waste is relatively evenly split between waste from food preparation and food waste from the plate (leftovers, uneaten portions). Obviously, the latter should be the main area of focus in reducing waste.
- In 2020, twice as much food waste was composted compared to 2019, leading to a two-thirds to one-third split between composting and community farms.

7.9.1. Key activities and successes in 2020

- Continuing on the journey of eliminating single-use plastics, a reconnaissance visit was made to Arusha for plastic alternatives used in the kitchen with some potential suppliers found.
- Measuring of food waste has been divided into two categories: food preparation waste and plate waste. This provides a better understanding of where waste arises.

7.9.2. Summary

It is very encouraging to see the continued improvement in waste management at Singita Serengeti, specifically the reduction in waste generated including food waste. It will be important to ensure that these improvements are maintained as the guests return in 2021. Challenges remain, such as finding solutions for batteries and CFL light bulbs for example, but Singita Serengeti continues to make excellent progress in waste management.

7.10. Zero carbon energy

	2020 target	Baselines	2020 performance
--	-------------	-----------	------------------

ZCE1	Reduce building energy use by 30% from 2011 (Target: 4500 MWh)	2011: 6,428 MWh 2019: 6,400 MWh	5,000 approx, Approx. 20% reduction on 2019
ZCE2	100% renewable energy	2011/2013: minimal % of electricity supply 2019: 540 MWh	540 MWh – 10% of building energy.

As shown in Figure 8, total building emissions have been relatively stable with a 20% drop in 2020. This is despite the increasing use of generators as the grid becomes ever more unreliable. This is another driver for developing a solar solution onsite.

It is also useful to compare the changes in per guest consumption at Sasakwa Lodge and Faru Faru:

- At Sasakwa, the building emissions fell by 30% and per guest emissions building emissions nearly doubled.
- At Faru, the building emissions fell by over 50% and per guest emissions increased by just 33%.

This highlights another benefit of the more lightweight camps – they can be more responsive to guest numbers as they require less ongoing management and maintenance. An extreme case being the Explore camps, which can simply be packed up when unoccupied.

The renovation at Sabora did increase the physical footprint of the guest tents and has led, anecdotally, to an increase in the running time of the generators. If this is shown to be the case, it will be important to increase the solar capacity at the camp. It also highlights the need to ensure that renovation reduces, rather than increases, energy demand.

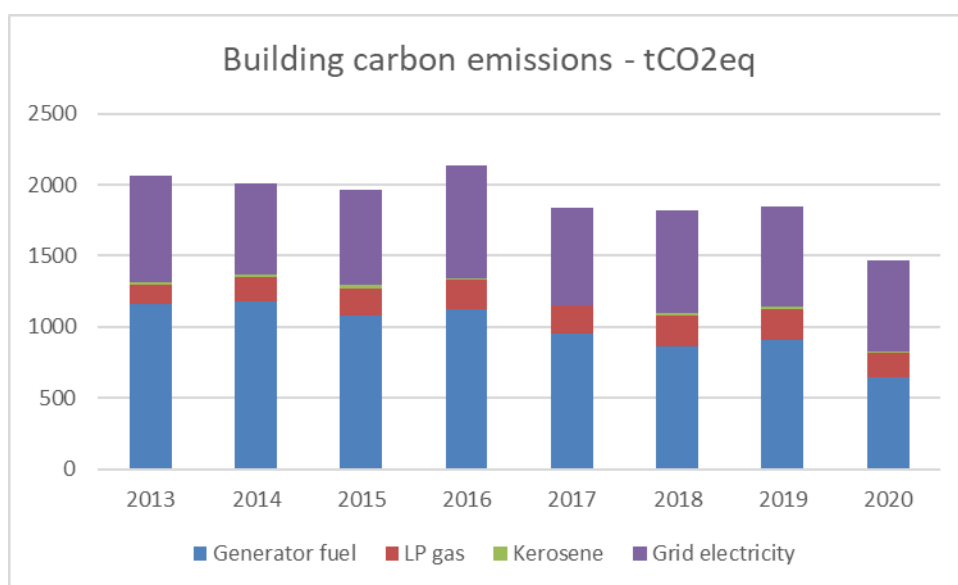


Figure 8: Total building energy consumption (MWh) for 2013-2020

Refrigerant gases fell by 30% but still accounted for nearly 650 tCO2eq, over 15% of the total carbon emissions and equivalent to electricity or generators. With many of the centralised air conditioning units reaching the end of their life expectancy, this issue needs to be watched closely and should form a part of the decision-making process about what to replace them with. This highlights the need to carefully select technologies that are appropriate to the location. While refrigerant gases can be extracted from A/C

systems and reused, this is not possible in the Serengeti and therefore any refrigerant gases brought to Singita will ultimately end up in the atmosphere.

7.10.1. Key activities and successes in 2020

A detailed renewable energy strategy for Sasakwa Hill & Makundusi was developed and was close to being commissioned prior to the Covid crisis. This forced a delay, but the proposal was picked up again in late 2020 and progress made. There was a small solar PV installation on the new Grumeti Fund hangar at the airstrip.

In response to the challenge of reducing refrigerant gases, a new policy has been developed whereby all office aircons will be replaced with roof fans at the end of their life (except for key meeting rooms).

7.10.2. Plans for 2021

The key focus in 2021 will be the implementation of a solar strategy for Sasakwa Hill & Makundusi. Further initiatives to be pursued include:

- Identifying an efficient option to replace the back of house cooling system at Sasakwa Lodge.
- Ongoing replacement of old electric equipment with more efficient alternatives, especially large format laundry dryers.
- A new policy requiring all energy equipment be approved by the One Planet Coordinator to ensure the replacement is necessary and is the most efficient version available.
- Each lodge to establish and report on energy goals.

7.10.3. Summary

The two key areas in terms of reducing carbon emissions are refrigerant gases and building energy consumption at Sasakwa Hill. There has been considerable progress in the development of a renewable energy strategy for the Hill, which the team are optimistic about delivering. Refrigerant gas use, on the other hand, is yet to be addressed in detail and must be incorporated into all plans for replacement of cooling systems.

8. Plans for 2021

One Planet Principle	Plans for 2021
Health and happiness	Continue to support and push forward health-related events and initiatives
Equity and local economy	Recruit as tourism levels return, with a focus on increasing female recruitment
	Ongoing initiatives to support local employment, training, and local sourcing.
Culture and community	Continuation of integration of One Planet Living into employment contracts
Land and nature	Ongoing conservation and animal protection work
Sustainable water	Ongoing strategies to reduce water use Water treatment for Sasakwa Hill
Local and sustainable food	Continue the improvement in the balance of the staff diet

Travel and transport	Electric vehicle trail Institutionalising initiatives started during Covid – e.g. zoom meetings to eliminate driving
Materials and products	Cement reduction strategies
Zero waste	The journey to a plastic-free site will be continued by reviewing the post-pandemic supply capabilities of companies
Zero carbon energy	Implement renewable energy strategy for solar PV at Sasakwa Hill