

2019

GREEN HOUSE GAS ACCOUNTING REPORT

An annual sustainability report for FY18 - 19



Auroville Consulting



Templates and processes used to capture geo-referencing for spending and GHG accounting have been integrated in our accounting system and progress is being monitored on an annual basis. Templates are available for use on request.

Contact accounts@aurovilleconsulting.com for more details

CONTENTS

- Background..... 1
- GHG accounting..... 2
 - 1. Operational emissions..... 3
 - 2. Indirect emissions through purchase of office space..... 4
 - Carbon sequestration through tree planting..... 5
- Geo-referencing payments..... 6
- Annexure..... 7



BACKGROUND

In the financial year 2018-19, like the last year, Auroville Consulting undertook two accounting-related initiatives in its drive towards being more ecologically sustainable:

- Green-house gas emission (GHGe) accounting of the unit's operations
- Geo-referencing all payments or tracking payments by geographically-defined areas

The objectives are to:

- Assess and reduce our environmental footprint; and offset the unavoidable emissions by tree-planting
- Execute about 80% of the unit's payments to vendors inside Auroville in order to reduce transport-related emissions

GHG ACCOUNTING

The emission of greenhouse gases (e.g. carbon dioxide and methane) by the burning of fossil fuels has been linked to the warming of our planet. It is imperative to calculate, monitor, reduce and offset our GHG emissions in order to reverse climate change.

Like the previous four years, in FY18-19, Auroville Consulting undertook the calculation of its greenhouse gas emissions. This year, the accounting of total emissions was divided in two:

1. Total operational emissions and
2. Indirect infrastructure emissions through the acquisition of a new office space at Kalpana

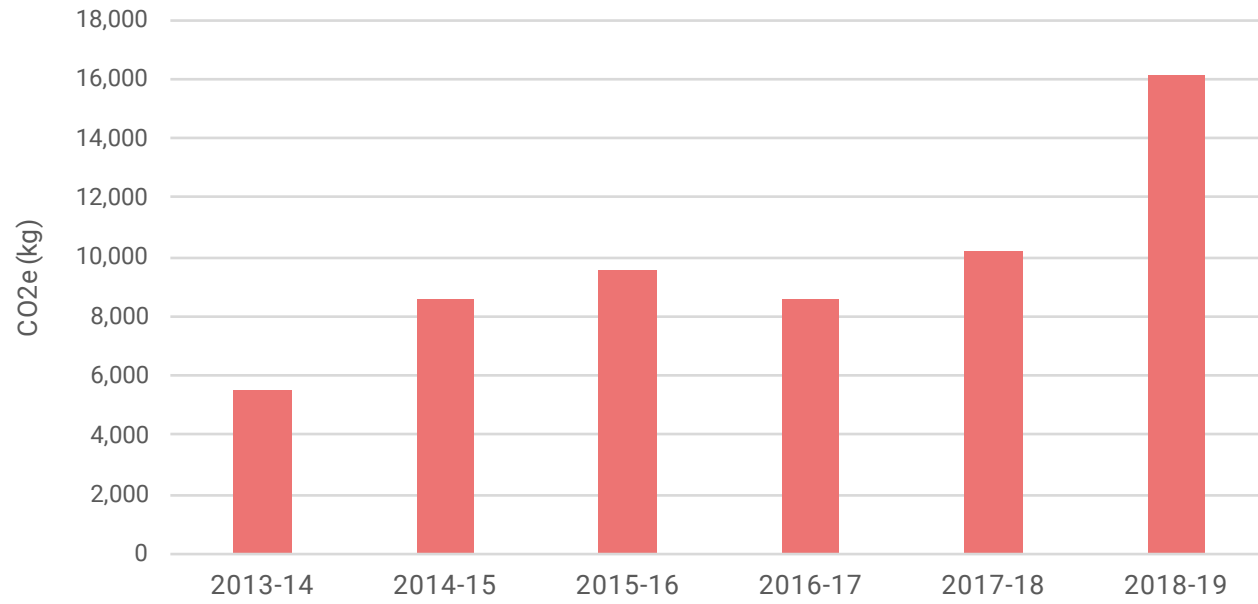
1. Operational emissions

The GHG emissions or its carbon dioxide equivalent (CO₂e) for FY18-19 is estimated at 16,104.43 kg. Over the years, we've increased our consumption of energy through renewable sources; therefore emissions from energy from the grid diminished substantially. However, the total emissions have seen an annual increase as a result of an increase in the total number of full-time employees and with it an increase in linked emissions such as water consumption and transport. At the same time, the emissions per person has also increased; we think it is a result of an increase in the scope and quantum of projects, which, as a consequence, has also led to an increase in emissions.

The main areas for reducing our carbon footprint are transportation and water consumption. We intend to explore ways on reducing them both in the coming year.

The graph below indicates the GHG emission over the last six financial years. A detailed breakup of the GHG by category is given in Annexure.

Annual Comparison of Total GHG Emissions



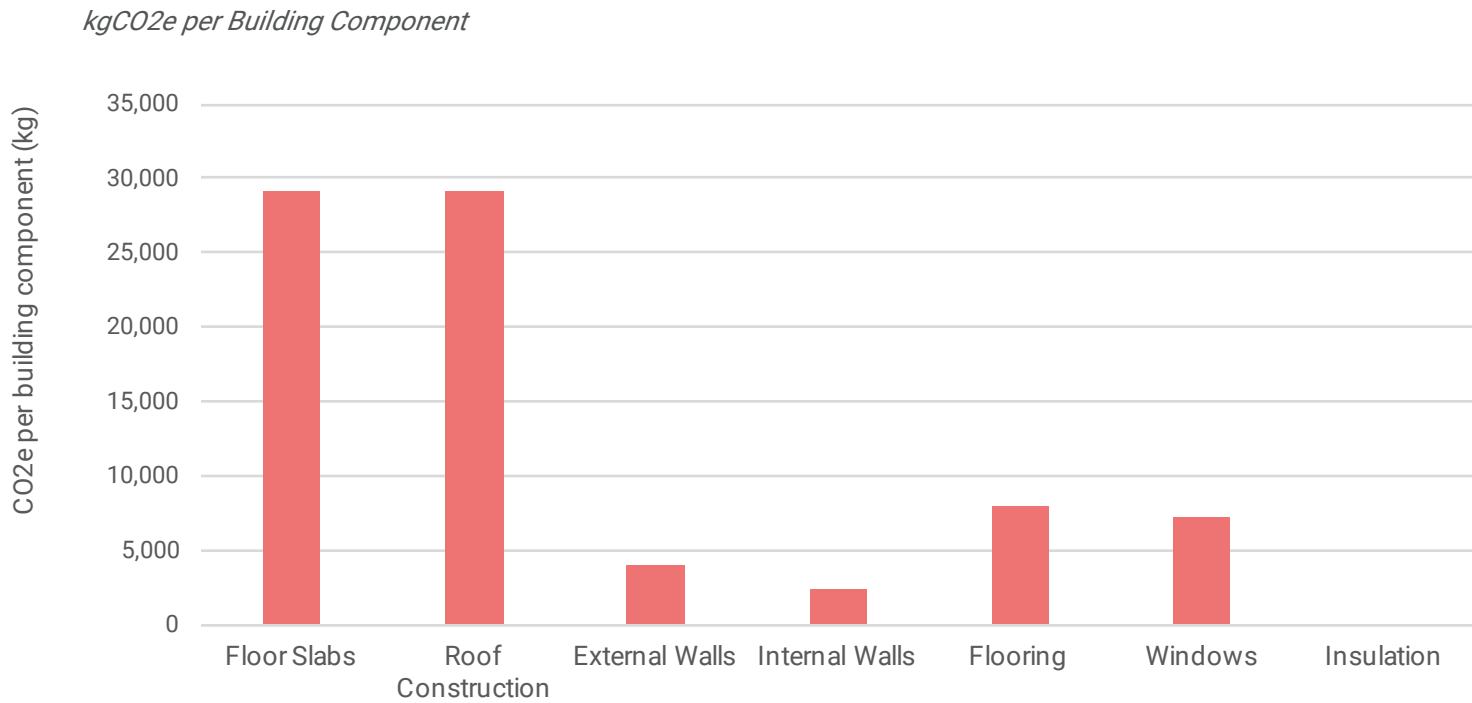
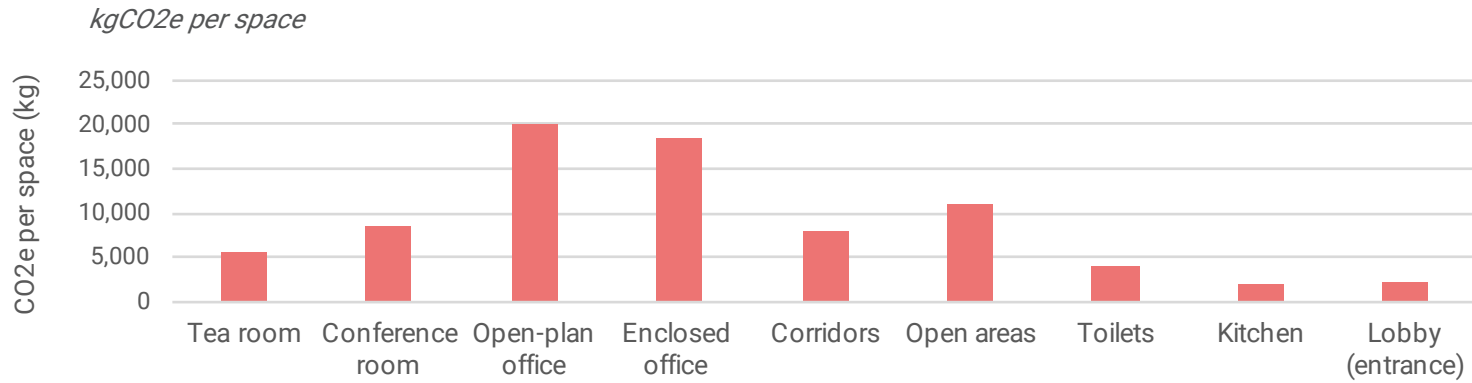
2. Indirect emissions through purchase of office space

In January 2019, Auroville Consulting moved in to a new office space in Kalpana community. Since this is a singular event and since average buildings are expected to have a life of at least 40 years, we decided to calculate its emissions separately and offset it over a period of 20 years.

The graphs on the next page show the break up emissions as per the space type and building component respectively, totalling 79,789.87 kg CO₂e.

Office space at Kalpana Housing, Auroville





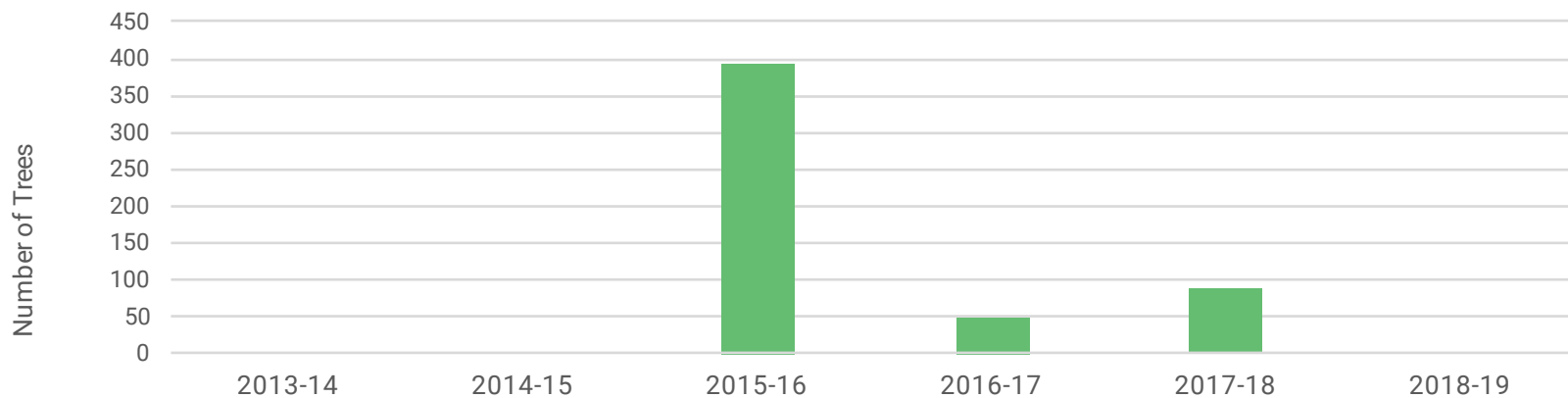
Carbon sequestration through tree planting

Auroville Consulting planted a total of 532 trees since 2015. Over their 20-year lifespan, they are expected to offset 1,98,968 kg CO₂. Since 2013, the year we began accounting for our emissions, the total amount of CO₂ emitted (including 16,104.43 kg from FY18-19) is 58,590.65 kg CO₂e. Hence we have a carbon credit of 1,40,377.65 kg CO₂e. As a consequence, additional trees need not be planted to offset the operational emissions for FY18-19.

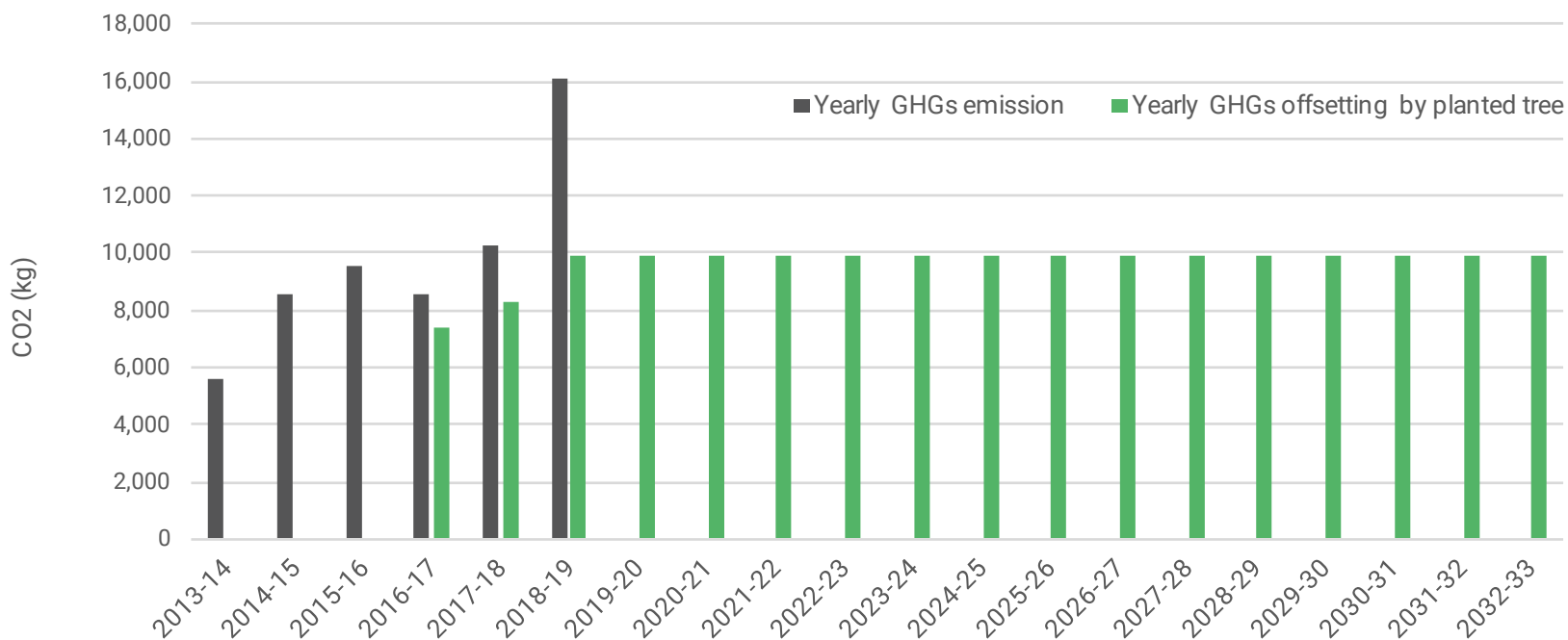
Even though we have a carbon credit, we're considering offsetting the emissions incurred as a result of building our new office space. The emissions total 79,789.87 kg CO₂e. One tree on average sequesters 22 kg of CO₂ per year. Over its 20-year lifetime, it can sequester 440 kg CO₂. Assuming that 80% of saplings survive, the total number of trees needed to offset the office space emissions are 227. A donation will be given to the Auroville Forest Group, who will plant on our behalf.

Summary	
Total number of trees planted	532
Total CO ₂ sequestered over the 20-year lifespan of the planted trees (in kg)	198,968
Total CO ₂ emissions since 2013 (in kg)	58,591
Total carbon credit	140,377
Total trees to be planted for FY18-19 operational emissions	-
Total trees to be planted for office space	227

Number of trees planted



Comparison between CO2 emitted and offset



GEO-REFERENCING PAYMENTS

The geo-referencing exercise tracks payments made by geography. Payments made closer to home help stimulate the local economy and reduce the transport-linked carbon dioxide (CO2) emissions while acquiring products or services. Auroville units also try their utmost to manufacture products organically and waste less, which is an additional reason to buy from inside the township – such purchase practices ensure that upstream emissions are also kept in check.

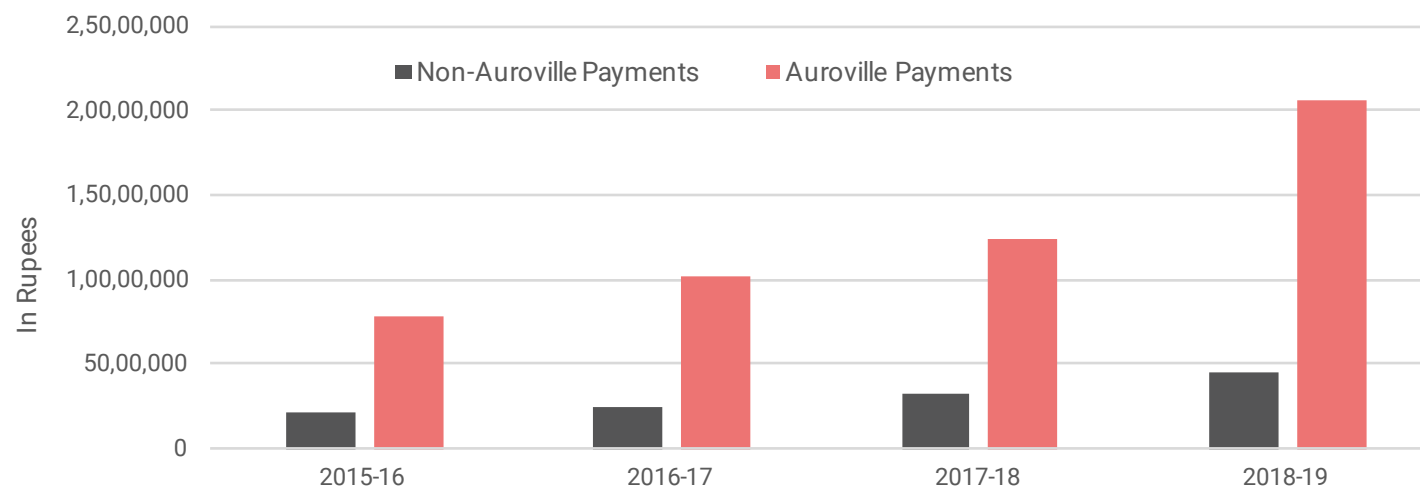
The total expenditure in FY18-19 for Auroville Consulting was INR 2.05 crore, out of which 81.8% was spent inside Auroville. The primary expenses were connected to 1) the training programs that we organise, which include accommodation, venue, transportation, food and facilitator fees, and 2) the unit’s human resource expenses.

The table below gives an overview of our spending by geography through the years - the non-Auroville payments include those made in Pondicherry, Tamil Nadu and in the biosphere.

Geo-referencing of Expenses

	2015-16		2016-17		2017-18		2018-19	
	INR	%	INR	%	INR	%	INR	%
Auroville Payments	7,834,251	79	10,202,924	81	12,319,322	79	20,522,200	82
Non-Auroville Payments	2,063,980	21	2,464,357	19	3,316,081	21	4,580,925	18
Total	9,898,231	100	12,667,281	100	15,635,402	100	25,103,125	100

Geo-referencing of expenses



The biggest cost centres for payments made inside Auroville are towards human resources, transport and accommodation. The biggest cost centres for spending outside of Auroville are taxes to Government of India, accommodation outside Auroville when guesthouses are not available, business-related travel and equipment cost for our irrigation project.

Auroville Consulting aspires to keep the spending in Auroville at 80% or more. The areas of intervention are transport and accommodation. The former is often unavoidable although an effort is made to conduct most meetings through voice/video calls or use e-transport, and the latter is subject to the building of additional guesthouses by Aurovilians or the Centre for Green Practices by Auroville Consulting

ANNEXURE

GHG accounting by category and year

GHG emission are accounted in three categories:

- Scope 1 (direct emission)
- Scope 2 (indirect emission)
- Scope 3 (emission by activities)

GHG emissions consist of six gases: Carbon dioxide (CO₂), Methane (CH₄), Nitrous Oxide (N₂O), Hydrofluorocarbon (HFCs), Perfluorocarbons (PFCs) and Sulphur Hexafluoride (SF₆)

Number of full-time all-year-long team members	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19
	8	14	15	25	21	25

Categories	Item	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19
Stationary Combustion	Kilos of LPG / natural gas (cooking fuel)	0	13	14	13	12	12
	Total (CO₂e)	0	20	21	20	18	24

Categories	Item	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19
Energy	kWh consumed from grid	750	750	894	400	698	584
	Total (CO₂e)	615	615	733	328	573	479

Categories	Item	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19
Water	Number of litres water consumed	81,110	121,665	397,242	398,800	341,810	396,340
	Total (CO2e)	79	119	387	389	333	386
Transportation	Kms driven on two-wheelers	0	0	0	0	27,421	51,578
	Kms driven in four wheelers	9,801	24,831	23,010	29,745	22,462	29,711
	Kms driven on two-wheelers electric vehicles	0	0	0		2,640	2,321
	Kms driven on four-wheelers electric vehicles	0	0	0	0	0	0
	Kms driven by auto rickshaw	0	0	0	0	50	0
	Kms ridden in bus	940	416	500	0	470	0
	Kms ridden on rail	2,158	0	-	0	10	0
	Kms on international flight	10,300	6,500	13,840	3,520	4,820	0
	Kms on domestic flight	6,710	12,321	7,762	11,470	2,646	23,662
	Total (CO2e)	4,666	7,468	7,891	7,724	8,964	14,850
Materials Soft Goods	Kilos of mixed cardboard and paper	7	3	8	37	73	26
	Kilos of plastics		2	1	9	0	0
	Kilos of small electrical items	5	12	38	2	1	0
	Kilos of metal cans and foil					0	0
	Kilos of books	14	17	175	129	87	69
	No of ink cartridges	1	5	2	5	2	3
	Total (CO2e)	30	53	244	36	154	92
Materials Durable Goods	Kilos of large electrical items	0	0	0	0	12	0
	Kilos of fridges/freezers	0	0	0	0	0	0
	Total (CO2e)	0	0	0	0	6	0
Food	Kilos of veg meal	1,692	3,156	2,986	570	1,896	1,923
	Total (CO2e)	164	306	290	55	184	187
Infrastructure	Tons of construction material	0	0	0	0	0	0
	Total (CO2e)	0	0	4	0	0	0

TOTAL

Financial Year Total (CO2e)	5,553	8,580	9,570	8,551	10,232	16,104
Total number of trees planted	0	0	395	50	87	0

A Unit of Auroville Foundation
Kalpana, Crown Road, Irumbai Post, Auroville 605101 Tamil Nadu, India
info@aurovilleconsulting.com +91 (0413) 2622 571 www.aurovilleconsulting.com