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Anil Agarwal Environment Training Institute

GSP Changemaker Schools

August 21-22, 2019

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DAV INTERNATIONAL SCHOOL, AMRITSAR, PUNJAB

GSP Audit	2017	2018
Improvement graph		
AIR: Window Floor ratio	27 per cent	32 per cent (Increased window size and design in the new class rooms)
Mobility: Non Polluting Mode	School community was using polluting modes of transport	42 per cent students now cycle to school and/ or commute by E rickshaws; 57 per cent commute by sustainable motorized transport
ENERGY	103658 MJ; No solar	45810 MJ; 50 per cent reduction in bill amount 21 Solar powered street lights, 50 per cent replacement by efficient appliances (500 tubelights reduced; 74 hot cases of 4000W replaced by 2000W; 12 LED and CFL lights removed; Strict monitoring and time reduction of running time of the electric appliances - 15000 units saved; new classrooms had better day light)
FOOD	Packaged food and bottled drinks distribution	Stopped distributing packaged food Only traditional food like Dhokla, Poha, Butter milk and Nimbu pani available at school, for teachers and staff No distribution of UPPF during school events; All children get home food; Fruit break made mandatory

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GSP Audit	2017	2018
Land	20 per cent green area	40 per cent green area - plantation in parking area, new plantation in vacant land, botanical garden developed which has 40 plant species
Water	Per capita per day (PCPD) consumption 26 L	PCPD reduced to 15 L, installation of water saving sprinklers and dual flush systems
RWH - area harvested	20 per cent	90 per cent Both storage and recharge 7 new recharge pits introduced, ground water level increased, has filter unit and system is cleaned twice every year
Wastewater treatment	White waste water treated	70 per cent water sourced from waste water, efficiency of DWWTS increased by adding the microbial and settling chambers as per CSE model
Waste segregation at source	Total collection points: 293	Total collection points: 550 156 new two bin systems and three bin systems added
Waste	Compost 90 kg E waste disposal	Increased to 98 kg (due to increase in green area) E waste given to the authorized dealer, agreement with the dealer; C&D waste used in in-house construction saving INR 2 Lacs

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- **DAV International School, Amritsar, Punjab**, was one of the top schools in GSP 2018. They moved from yellow to **Green** category through adoption of following practices
- **Increased window size and retrofitted new designs** that increased Window-to-Floor ratio to 32 per cent from 27 per cent in 2017
- **42 per cent** started using **non-polluting modes of transport (NPT) like e-rickshaws and walking** from earlier (none in 2017) and **57** per cent commute by **sustainable motorized transport**
- 50 per cent reduction in bill amount was witnessed from 103658 MJ to 45810 MJ due to **installation of 21 Solar powered street lights**, 50 per cent replacement of old appliances by efficient ones (i.e **500** tube lights reduced, **74** hot cases of **4000** W replaced by 2000W, **12** extra LED and CFLs removed, Strict monitoring and time reduction of running time of the electric appliances - **15000 units saved**, new classrooms - **better day light**)
- **Stopped** distributing packaged food; Only **traditional foods** like Dhokla, Poha, Butter milk and Nimbu pani available at school, for teachers and staff

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- **No distribution of UPPF during school events and children get home food**; **Fruit break** made mandatory in **DAV International School, Amritsar, Punjab**
- Green cover increased by 20 per cent due to **plantation in parking area, new plantation in vacant land, botanical garden developed which has 40 plant species**
- After taking note from performance report in GSP Audit 2016, the school aimed to reduce their PCPD to 15 L and achieved it through **installation of water saving sprinklers and dual flush systems** by GSP Audit 2018
- School introduced **7 new recharge pits introduced** which resulted in increase in ground water levels, along with that having **a proper filter unit and system cleaned every year** also added to their good water management practices
- **70 per cent water sourced from waste water**, the efficiency of **DWWTS** increased by **adding the microbial and settling chambers as per CSE model**
- In Waste section, the total collection points increased from 290 to 550 through **introduction of 156 new two and three bin systems**
- Lastly, the compost generated monthly increased from **90 to 98 kg (due to increase in green area)**
- While E waste was now **disposed of properly to an authorized dealer with whom an agreement was made**; **C&D waste** was also **used for in-house construction thus saving INR 2 Lacs**

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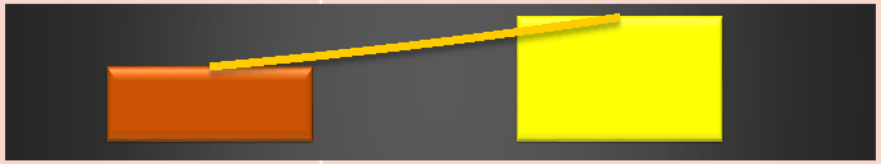
S.B.O.A. PUBLIC SCHOOL, KOCHI, KERALA

GSP Audit	2017	2018
Improvement graph		
Air - Mobility	SMV: 59 NPT: 23 Pvt: 18	SMV: 52 per cent; NPT per cent: 36 per cent; Pvt: 12 per cent Decrease in diesel consumption from 1912 L to 1497 L by cutting down additional school trips, rerouting and adding efficient buses
Food	Yes	Only traditional foods like steamed rice balls, Vada served; Stopped maida based/junk foods; no distribution of UPPF
Land		Better green cover owing better soil health (started RWH – recharge) – more than 50 per cent of the area green
RWH - area harvested	Absent in 2017	Started RWH this year with 50 underground recharge pits with filter system installed; increase in ground water observed along with lowering of soil salinity
Waste segregation at source	One bin system in school	Started with two bin system - 14
Composting	Absent in 2017	Composting started in 2018, 100 kgs per month

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S.B.O.A. PUBLIC SCHOOL, KOCHI, KERALA

- **SBOA Public School, Kochi, Kerala** improved from Orange to **Yellow** category from 2017 to **2018**.
- **The remarkable changes/new green practices they brought in the span of one year** made them one of the changemaker schools in GSP Audit 2018
- Although the per cent of sustainable motorized vehicles (SMV) decreased by 7 per cent there was a 6 percent decrease in private vehicles and a 13 per cent increase in non-polluting modes of transport (NPT) from 2017 to 2018 in the school
- The change was due to **decrease in diesel consumption from 1912 L to 1497 L by cutting down additional school trips, rerouting and adding efficient buses**
- Only **traditional foods like steamed rice balls, Vada served is available** in the school canteen. **Stopped maida based/junk foods**; no distribution of UPPF
- Better green cover **owing better soil health (started RWH – recharge)** – more than 50 per cent of the area green
- **Started RWH this year** with **50 underground recharge pits with filter system installed**; increase in ground water observed along with lowering of soil salinity
- **Moved from one bin system to two bin system (14 as of 2018)**
- **Started with composting in 2018, 100 kgs per month**

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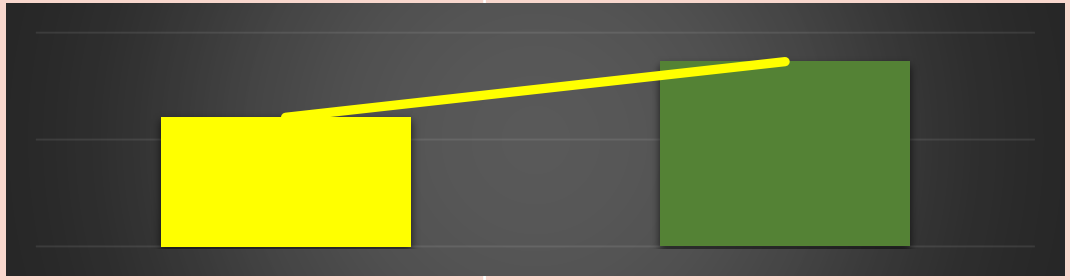
Delhi Public School, Patna, Bihar

GSP Audit	2016	2017
Improvement graph		
Mobility: SMV	86 per cent	97 per cent
Air Quality Monitoring system		Portable system, that students have been taught to use
Food	Yes	Stopped distribution of packaged food; Suggested menu included in the almanac
Land- Green area	43 per cent	51 per cent

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Delhi Public School, Patna, Bihar

GSP Audit	2016	2017
RWH- area harvested	20 %; Storage only	70 %; storage + recharge; cleaned twice a year
Recharge	-	Trenches + filter unit constructed for RW recharge
Measuring the depth of the water table	-	Water level data pre and Post monsoon monitored
Composting	Composting helps generate compost of 50 kgs	Vermi composting helps generate around 133 kgs of compost
E waste	-	Authorised dealer – Karo Sambhav (NGO)

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Delhi Public School, Patna, Bihar

- **Delhi Public School, Patna, Bihar**, was awarded as one of the changemakers school in 2017
- It went from Yellow to **Green** category by changing their mobility practices through increased use of **sustainable motorized vehicles (SMV)** like public bus, school bus from 86 to 97 per cent
- Additionally, school also **used a portable air quality monitoring system in** campus to teach students about Air Pollution and Health impacts
- In terms of food, the school **stopped distributing packaged foods** and included the suggested menu in the almanac
- While **the green cover** of the school **increased from by 8 per cent within an year**
- **The storage capacity of Rain Water Harvesting system increased from 20 to 70 %;** additionally **recharge was also started. System was cleaned twice a year**

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Delhi Public School, Patna, Bihar

- **Delhi Public School, Patna, Bihar** created trenches and filter unit for Rain water recharge
- This allowed them to monitor water level data pre and post monsoon
- The **compost generated** from the school's composting pit also **increased from 50 kgs to 133 kgs**
- Lastly, the school also started **to manage its E-waste generation** by **collaborating with Karo Sambhav an authorized e-waste dealer** which systematically disposes of e-waste

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Thank You