A GSP Solar 30 workshop for teachers from Himachal Pradesh

UNDERSTANDING AND USING RENEWABLE ENERGY IN A CLIMATE-STRESSED WORLD

OCTOBER 9-11, 2022

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ENERGY EFFICIENCY IN CLASSROOMS
ENERGY IS EVERYWHERE!

From the gadget in our hands that uses some of the rarest minerals to the thing we are taking down our notes with...
Why Talk About Energy Efficiency?

- Economic benefits
- Awareness and impact in local environment
- Global impact
Sustainable Development Goals
Energy and Climate Change

- More than 60% of India’s energy demands are met by **fossil fuels**
- 40% of global CO$_2$ emissions that heat up the Earth are from **power industry**
- In turn, **warmer temperatures increase energy demand** and consumption goes high
- 23% of global anthropogenic CO$_2$ emissions come from **transportation**
- **Burning of gasoline and diesel** releases particulate matter and greenhouse gases that cause air pollution AND warm the planet
CLIMATE CHANGE

Half the national curricula worldwide don’t mention climate change, most teachers unsure of explaining subject: UNESCO

Thirty six per cent of the respondents did not include environmental themes in any teachers’ training

Finding #1

ALTHOUGH 92 PER CENT OF THE ANALYSED POLICY AND CURRICULUM DOCUMENTS INCLUDED AT LEAST ONE REFERENCE TO ENVIRONMENTAL THEMES, THE DEPTH OF INCLUSION WAS VERY LOW ON AVERAGE.

Finding #2

THERE WAS MUCH GREATER FOCUS ON ‘ENVIRONMENT’ THAN ON ‘CLIMATE CHANGE’ OR ‘BIODIVERSITY’, WITH 83 PER CENT OF THE DOCUMENTS ANALYSED MENTIONING ‘ENVIRONMENT’ AT LEAST ONCE AND 69 PER CENT MENTIONING ‘SUSTAINABILITY’; WHEREAS ‘CLIMATE CHANGE’ AND ‘BIODIVERSITY’ WERE MENTIONED IN ONLY 47 PER CENT AND 19 PER CENT OF DOCUMENTS RESPECTIVELY.

Finding #3

NATIONAL CURRICULUM FRAMEWORKS HAVE SUBSTANTIALLY MORE REFERENCES TO ENVIRONMENT-RELATED TOPICS THAN EDUCATION SECTOR PLANS.
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Finding #8

Over a third of survey respondents indicated no inclusion of environment-related content in teacher training programmes.

Finding #9

There is higher inclusion of environmental activities in upper secondary education (in contrast to primary and lower secondary education), apart from nature-based instruction and gardening, which were viewed as prevalent in lower grade levels, amongst the surveyed education stakeholders.

Finding #10

The subjects viewed as most likely to include environment-related content were biology, science, and geography; the perception of inclusion in all subjects was quite low.
Becoming Energy Efficient: Practices

- Use natural light as far as possible
- Replace incandescent and even CFL lighting with LEDs
- Use BEE star-rated appliances
- Carpool
- Take public transport
- Turn off appliances when not in use
Becoming Energy Efficient: Practices

- Ensure vehicle fitness
- Walk or ride bicycle as far as possible
- Invest in solar lights and other solar-powered equipment
- Eat locally-sourced food
Becoming Energy Efficient: Classroom Lessons

- Measure, change, improve, measure
  [https://www.lifestylecalculator.com/unfccc](https://www.lifestylecalculator.com/unfccc)
  [https://www.footprintcalculator.org/home/en](https://www.footprintcalculator.org/home/en)

- Learning tools: electricity bill

- Extending textbook lessons to the field

- Hands-on learning for students: resource material, RE projects