



Activity supported by the
Canada Fund for Local Initiatives
Activité réalisée avec l'appui du
Fonds canadien d'initiatives locales



Renewable Energy & Solar PV Workshop Report

TRAINING FOR TEACHERS

Monday, 31st October, 2016, SITE, 8:30am-2:30PM

Compiled by Magdalena Górska and Michele Martin (Facilitator)

BACKGROUND

The NGO Sustainability for Seychelles (S4S) has been awarded a grant from the Canadian Fund for Local Initiatives (CFLI) to promote hands-on lessons in solar PV in Seychelles' schools, as a support to the national science curriculum. Under the project, each state primary and secondary school will receive a donation of an educational kit for teaching and learning about solar PV in science & technology lessons. The kit includes essential equipment such as a small solar PV panel, a charge controller, battery, motor, necessary wiring, and tools, etc. The project will also involve training for teachers in use of the PV kits, and a national mini-science fair competition to challenge schools to use the kits. On Monday, October 31st, 2016, teachers from primary and secondary schools in Seychelles participated in a workshop to learn more about solar photovoltaic PV technology and how to apply it in the classroom. The training was held at the Seychelles Institute of Teacher Education (SITE). This report provides a summary of the proceeding of the teachers' workshop.

WORKSHOP OBJECTIVES AND AGENDA

The objectives of the teachers' workshop were to:

- To build teachers knowledge and understanding of climate change and renewable energy
- To familiarize participants with the components of the PV kit for schools and how to use them
- To inspire participants to plan lessons using the kits to promote active teaching/learning about renewable energy and solar PV in schools

The agenda for this half day workshop was as follows:

1. Introduction and icebreaker
2. Brief PowerPoint presentation about climate change and renewable energy
3. Group work to learn more about different renewable energy technologies including PV
4. Presentation about solar PV and kits for schools
5. Group work to learn how to using the solar PV kits
6. Brainstorm about possibility of using a solar PV kit at lessons
7. Workshop conclusion and evaluation

A program can be found in Annex 2

WORKSHOP PARTICIPANTS

- The teachers' workshop was attended by 35 teachers, both primary and secondary. The teachers in attendance specialized in science, technology and environment.
- The list of participants can be found in Annex 1

WORKSHOP DESCRIPTION

- The workshop was organised by the NGO Sustainability for Seychelles (S4S) in collaboration with the Ministry of Education. The training was facilitated by Michele Martin (Sustainability for Seychelles) and Magdalena Górska (Intern from Avans University, S4S) with support from Elke Talma (UNDP/GEF Project Coordination Unit of the Ministry of Environment), Tim Kirkpatrick (Climate Caring, a local PV supplier company), Shane Emilie (Ministry of Education) and Cynthia Alexander (Energy and Climate Change, the Seychelles Energy Commission).
- The training was held in the SITE auditorium (venue provided for free), and a free t-shirt, poster, book, as well as the manual of use of the solar PV kit, were given to all of the participating teachers.
- The teachers contributed enthusiastically in the workshop; firstly, they play eco-bingo to ice-break and be more involved in the workshop. The eco-bingo can be seen in Annex 3.
- The training started with a presentation focused on a general introduction to climate change and the different renewable energy technologies that can help Seychelles reduce our greenhouse gases and carbon footprint.
- After the presentation, the teachers took part in a renewable energy activity; they gave an excellent description of the different kinds of renewable energy technologies to their colleagues.
- This was followed by another presentation introducing PV technology for electricity generation.
- S4S has also explained and invited to a mini-science fair competition, challenging schools to use the PV kits to design and build a device or toy that is powered by the sun. The competition deadline is set for mid-February, 2017 and is open to all state and private schools in Seychelles.
- Teachers had the opportunity to familiarize themselves with solar PV technology through a hands-on session working in groups to build a simple device powered by a solar panel. The teachers built lamps, fans, a pulley and even a mini solar car!
- During the brainstorm session, most teachers were enthusiastic about using a PV kit during several classes, including science, TE, geography and wildlife clubs.

WORKSHOP EVALUATION BY PARTICIPANTS

Participants were given a simple evaluation form to complete at the end of the workshop. The following responses were provided by 29 participants who filled in the forms:

1. ONE NEW THING YOU LEARNED IN THE WORKSHOP	3. WHAT DIDN'T YOU LIKE?
<ul style="list-style-type: none"> • About how the solar PV system works (12) • About how to connect a solar PV kit and ideas for the projects (12) • Benefits of solar energy (5) • About ways of saving energy (3) • Learning about importance of renewable energy in our life (2) • Different types of renewable energy (2) • About uses of solar panel (2) • How to maintain solar panels (1) • The use of renewable energy (1) • No response (1) 	<ul style="list-style-type: none"> • No response (18) • The day for the workshop (6) • The demonstration how things can work with solar energy (2) • The practical work (1) • The ideas of other teachers (1) • The location (1)
2. WHAT DID YOU ENJOY ABOUT THE WORKSHOP?	4. HOW CAN YOU APPLY WHAT YOU LEARNED IN YOUR WORK?
<ul style="list-style-type: none"> • Practical session on use a solar PV kit (24) • Presentations (4) • Very interactive (4) • Drinks and lunch provided (2) • Learning about a solar panel (1) • Videos (1) • Sharing different ideas (1) • Well planning the workshop (1) 	<ul style="list-style-type: none"> • During science lessons (10) • During TE lessons (9) • Introduce the use of PV kit to school's wildlife clubs (3) • In projects and activities (2) • To share it with the kids and colleagues (2) • Teaching kids about renewable energy technologies (2) • Try to help reduce fossil fuel consumption (1) • During the mechanisms topic (1) • Show teachers and students how to use the solar panels in everyday life (1)

(note: numbers in parentheses indicate number of participants who gave the same response)

CONCLUSION AND RECOMMENDATIONS

Overall the workshop was a success, the workshop objectives met, and the teacher feedback was positive. The teachers participated actively in the groupwork and indicated their interest in sharing what they learned with students and colleagues. It was agreed that the kits should be sent to schools by about mid-November once the batteries, motors and other materials are in the country. Schools were invited to contact S4S for help with presentations or brainstorming sessions related to renewable energy and PV.

The following recommendations from the teachers should be taken into account for future workshops and follow up:

- The workshop lesson plan, group work sheets and PowerPoint should be made available online, on the S4S website for teachers to use.
- Avoid holding training sessions at half term when teachers are on holiday
- The demonstration with explanation how things work should be more clear.

WORKSHOP PHOTOS



WORKSHOP PARTNERS, IN ADDITION TEACHERS' TRAINING:



Activity supported by the
Canada Fund for Local Initiatives
Activité réalisée avec l'appui du
Fonds canadien d'initiatives locales



ANNEX 1 – Participation List

ANNEX 2 – Agenda

8:30	Welcome & Opening & Icebreaker	S4S/ MoEd
9:00	Introduction to Climate Change & Renewable Energy	Michele
9:20	Activity: Types of Renewable Energy	Michele
9:45	Presentation: Solar PV & Kits for Schools: An Overview	Magda
10:15	Break	
11:00	Group work: Using the solar PV kits	Tim & Magda
12:30	The Solar PV Challenge: A mini science fair	Magda
1:00	Workshop conclusion, evaluation and Lunch	Michele

ANNEX 3 – ECO-BINGO



eco-bingo!

FIND SOMEONE WHO:	NAME
1. Can tell you one easy energy saving tip	
2. Can name one type of RENEWABLE ENERGY	
3. Can tell you one place in Seychelles that uses solar panels for electricity	
4. Has a solar water heater at home or their business	
5. Uses energy saver bulbs at home	
6. Can tell you how PUC generates electricity	