



DEPARTMENT OF ENVIRONMENT
CAYMAN ISLANDS GOVERNMENT

SDU News

Sustainable Development Unit Newsletter

Issue 6 — Sustainability & Environmental Management



This issue we look at environmental management and its contribution to sustainable development, with a focus on what we are doing at the DOE. We also take a look at what the Cayman Islands Youth think about sustainability and how Alphasoft are doing their bit for the environment.

DOE Green Team Takes Off

As part of the CEPTS project, the DOE kicked off its Environmental Management System with the launch of its Environmental Policy and action plans steered by the Departmental Green Team on July 22nd.

The Green Team will be overseeing the environmental management system (EMS) at the Department and communicating the action plans and standard operating procedures that have been put together to staff. The goal is to lessen our impact on the environment by reducing energy use, water use, solid waste generation, the use of toxic and hazardous chemicals and any air and water pollution produced from DOE's operations. The Green Team has created a database for tracking electricity, fuel and water consumption, paper use and chemical use to monitor the impact of the environmental management system on these aspects. The DOE already had a lot of environmentally responsible practices in place around the office, which have become part of the standard operating procedures and will be reinforced as such. In addition to these existing practices, the Department is adopting new, environmentally responsible practices such as turning off equipment and computers when not in use. Some actions from our action plans include the implementation of energy audit recommendations from the Public Works Department, as well as large scale rainwater capture and environmentally responsible product procurement.

At the launch the Green Team gave a presentation on the EMS and its goals endorsed by the wider Department. The Department of Tourism's Green Team also shared experiences to date in setting their EMS in motion. To kick off at DOE, a reusable mug and cup were given to each staff member, signs were placed in various locations reminding people to turn off lights and appliances if they were the last to leave and stickers were placed at workstations as reminders to turn off computers, screens and power strips at the end of the day. The next big goal for the Green Team is to develop a good communication strategy with which to relay the new procedures and progress made to everyone in the Department, and to set a timeline for the completion of certain action items this fiscal year and over the next few years.



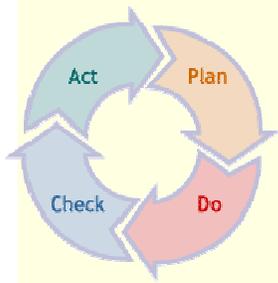
The DOE Green Team with the reusable cups and mugs given out to staff at the launch, from left to right, Maggie Buchanan, Admin & Finance Manager, Scott Slaybaugh, Deputy Director, Operations, Gina Ebanks-Petrie, Director, Joni Kirkconnell, Senior Sustainable Development Officer, Paul Lawrence, Operations Manager, Tim Austin, Deputy Director, Research & Assessment, Sophie Halford, Sustainable Development Officer, Lisa-Ann Hurlston-McKenzie, Manager, Sustainable Development. Photo courtesy of Cornelia Olivier, GIS



The reusable cups, which will be used instead of disposables day-to-day in the office and at Department functions. Photo courtesy of Cornelia Olivier, GIS

In Depth: Environmental Management Systems

An Environmental Management System is a **framework** through which an organisation's **environmental performance** can be **monitored, improved and controlled**. Steps for creating an EMS can be summarized as follows:



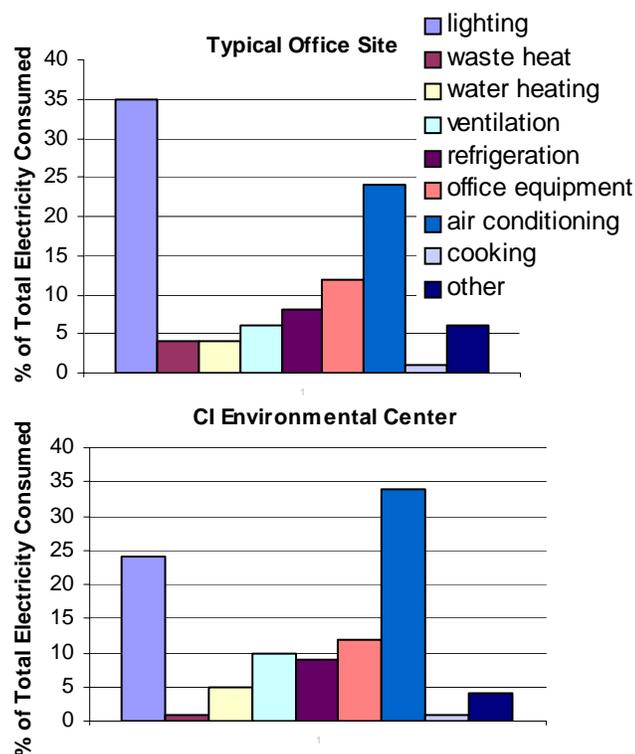
Representation of the environmental management process for continual improvement

- 1) Decide upon the organization's **environmental goals** and set these down in the form of an **Environmental Policy**, which has the buy-in from those at the top.
- 2) **Put together a team** who will be responsible for EMS planning and implementation.
- 3) **Assess operations** to identify what **aspects** could be impacting the environment in a negative way, and **gather data** on the use of resources within the organization - this can then be used for future monitoring purposes.
- 4) Set **objectives and targets** to address the impacts identified, and **formulate action plans** for meeting each. This usually involves **more efficient use of resources**, such as water and energy, the **reduction of waste generation** and the **minimization** of other environmental impacts identified. **Responsibilities and deadlines** should also be assigned which helps identify the **who, how, and when** of implementation.
- 5) Put together a **good communication strategy** to aid implementation and get the whole organization on board.
- 6) **Monitor progress**, e.g. through tracking utility bills - this is key to the **evaluation and review** of the EMS, and also helps to motivate staff. This leads to **continual improvement**, which means the EMS can be enhanced year on year to **better an organization's environmental performance**.

The Results Are In.....

Analysis of the data collected by the Public Works Dept. (PWD) for the Energy and Water Audit of the Cayman Islands Environment Center (CIEC) has been completed, and has produced some interesting results energy-wise. Using energy management software, PWD analysed energy use in the CIEC building and discovered that the proportion of electricity used for **lighting is 10% less than an average office** in the Cayman Islands. An average office will often have magnetic ballasts for the lights and use inefficient T-12 fluorescent lights, whereas CIEC has been kitted out with **electronic ballasts**, which waste less electricity, and more efficient **T-8 fluorescent tube lights**.

The proportion of electricity used for the **A/C is around 10% higher than an average office**, however. Mr. Stephen Brown explained that the amount of electricity used for the A/C could be easily **cut by around 25%** by installing **more sophisticated programmable thermostats**, which would pay for themselves in less than a year and lead to savings of approximately **\$10,400/yr**. There were also problems found with the **dehumidification system** and the rather **liberal use of flex ducting** in the A/C system has been impeding the efficient delivery of cooled air across the building. If all shortfalls are addressed, then electricity consumption for the A/C could potentially be **cut by 30-35%**, possibly more, due to the combined benefits of **better air distribution and humidity levels**, and better management of when the **A/C system is in use**. PWD also found that electricity used for **ventilation was higher** than expected, which can easily be solved by **adjusting the fan hoods** used in the labs at the CIEC to lower speed settings. This will cost nothing, and should lead to savings of **\$1,200/yr**. Although lighting was found to be generally efficient in the building, PWD did have some suggestions for further reducing the amount of electricity used in this area.



The above graphs show the proportion of total electricity consumed at a site, attributed by category of building system, for a typical office site and the CIEC site.

Replacing the current exit lights with LED lights would reduce associated operating costs by 20% and maintenance costs by 60%, leading to estimated savings of **\$3,500/yr**. Many areas of the building are also **over-illuminated**, and light bulbs could be **removed** in some areas without compromising the quality of lighting. The DOE plans to implement these recommendations as far as possible and is in discussions with the CIEC landlord—PWD's hard work has not only **highlighted problems we were unaware of**, but has also given us **numbers** with the solutions, and the **savings** we could be making at CIEC through proper energy management are substantial!

Sustainability: Our Challenge. Our Future.

August 12th is celebrated as International Youth Day by the UN and this year's theme was "Sustainability: Our Challenge. Our Future." As the development choices we make now will arguably have the greatest impact on the younger generation, the SDU in partnership with the Youth Services Unit tried to find out what young people in the Cayman Islands had to say about the topic of Sustainable Development.

Q. You may have heard the term "Sustainable Development" a lot lately in newspaper articles, radio advertisements and on television. What do you think "Sustainable Development" means? I think Sustainable Development means using resources in a way that meets people's needs today while making sure that future generations can also use them. *Eric B.*

I think that Sustainable Development is development which achieves the needs of a population while preserving the resources for future generations. *Cindy B.*

Q. Do you think that sustainable development is necessary for the Cayman Islands? If yes, why? Yes, I believe sustainable development is needed in the Cayman Islands because we are a very small country so there needs to be some way of developing without destroying everything. *Brad E.*

It is very necessary for not just the Cayman Islands but every nation because without developing sustainably we may end up using too much of the resources and causing permanent damage. In the Cayman Islands tourism could cause damage to the environment if developed too quickly and also leave little room left for the younger generations to have their input into developing the industry. *Karthika V.*

Q. In what ways are the Cayman Islands following sustainable development practices? Preserving landmasses through The National Trust and others, hosting beach and road clean-ups, advertising the importance of a healthy development and going green. *Moses E.*

Not really sure that we are following sustainable development practices. It seems like if you have enough money then you can do whatever you want to. *Jamaal T.*

Q. In what ways can we improve sustainable development practices in the Cayman Islands?

Buy the Go Green products also using Propane - they meet the needs of people and also at the same time preserve the environment. *Reanna H.*

Improving on the preservation of wildlife, limiting the amount of cars, homes and motor vehicle a person can own. *Moses E.*

Make it a public affair in a sense that everyone should be involved, not just developers. The entire community should be educated on the matter and there should be a week dedicated to it, just like there is an Earth Week. Sustainable development is a joint effort; no single man or government can carry the weight alone. *Karthika V.*

Q. If you could save one thing in Cayman for future generations, what would it be? Our sea life and clear seas. *Ned M.*

Honestly, I'm not certain but it would most likely be something to do with culture because day by day Cayman's culture continues to fade. *Moses E.*

Green spaces in town. I think it would be a shame to have just buildings and roads. *Jamaal T.*

Q. Why should we bother to protect our environment? Because we depend on our environment for jobs and life. *Ned*
Because we should want the Islands to be around and in good conditions now and for future generations to come. *Reanna H.*

Because as Christians we should be good stewards of the resources God has entrusted to us. *Cindy B.*

Because if we don't protect it now it won't be there for us in the future. *Brad E.*

Q. Do you think your actions make a difference in determining the future of the Cayman Islands? Explain. Yes because although it may not be much it is still more than nothing. *Ned M.*

Yes, because I care about the Islands and I want to do everything that I can to help the environment, so I do believe my actions make a difference. *Reanna H.*

No, I don't. If the politicians don't want to protect it, it won't get protected. And I'm not a politician. *Eric B.*

Graphic from Bioregional.com

Did you know... Air Conditioning can contribute as much as 50-70% of your total electricity bill, depending on hours of usage, maintenance and operating efficiency (CUC, Air Conditioning Energy Smart Leaflet, www.cuc-cayman.com)



Business Bite — “Toning” things around at Alphasoft

Alphasoft has been collecting used ink toner cartridges and shipping them to the U.S. for recycling since 2008, after they decided they wanted to try and avert at least one waste stream from ending up in the George Town landfill. Alphasoft pick s up the empty ink toner cartridges for free from businesses that are willing to set aside and store them. More specifically, they collect HP LaserJet toner cartridges, and succeeded in filling their first container full with around 4,200 of these in June 2009. These were subsequently sent to Miami, where they were collected for recycling by HP USA. Toner cartridges are made from high grade plastic and metal, with a small percentage of rubber, paper, foam and toner. According to Alphasoft, 97% of these materials can be recycled or reused for the creation of new products, such as auto parts and printers, as opposed to leaving these materials to the landfill. Anyone who uses the HP LaserJet cartridges can participate - if you know they are used in your office, why not start collecting them? All you need to do is to



Vicki Wheaton from Alphasoft and Harry Bush with the first container load of cartridges, shipped to the US in June 2009 *Caymanian Compass*

place a bin or box to one side for collection and storage and then contact Alphasoft at recycling@alphasoft.com.ky or 949-8251 once it is full, and they will come and collect – for free! More information and answers to frequently asked questions is also available at <http://www.alphasoft.com.ky/contents/view/33>.

You Have the Power

October was Energy Awareness Month in the US, and this year the theme was “A Sustainable Energy Future - ; Putting all the Pieces Together” . The campaign aims to show that **no matter how large the problem may appear, we are all part of the solution.** Every day, each of us can make **decisions that can stimulate sustainability,** for example by saving energy through replacing an inefficient light bulb with an efficient one or turning the A/C temperature up a degree—“**You have the Power!**”. When we **put all these pieces together,** we can create a **sustainable energy future** http://www1.eere.energy.gov/femp/services/energy_aware.html. To help get the message across the SDU created an **Energy Saving Checklist** specifically for the Cayman Islands, to give people a few more ideas on saving energy here. This can be downloaded from <http://www.doe.ky/wp-content/uploads/2009/10/ci-energy-saving-checklist.pdf> . This was promoted in the October 5th installment of CITN’s Environment Break—follow the link www.cayman27.com.ky/news/item/2821 to see Sheena Hurlstone and Sophie Halford talk through some **examples of energy saving actions** from the checklist and their **benefits.**



Overseas Territories Corner

Anguilla goes for low energy, sustainable port development.

The Anguilla National Energy Committee is taking a serious look at energy independence with the proposal for the Corito “Zero – Energy” Development Zone. This zone has been proposed as part of a new port development, and also includes the airport, major roads and the landfill. 100% of the required energy will be produced on site from a wind farm and solar energy. Included within the site are a commercial waterfront zone, island waste management area (including recycling facilities, a waste-to-energy plant and a soil building area), an industrial zone, new housing using sustainable building design, a mixed use zone, air transport zone and existing residential zones. See <http://anguillareo.hpage.com/>

