



Campus Verde

Report 2013

This report includes the activities by the Campus Verde Initiative, which is constituted mainly by students guided by faculty and personnel from UPRM.

Presented by Dr. Sandra Cruz-Pol,
Campus Verde Coordinator.
June 2013

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Campus Verde (CV or in English “Green Campus”) is an initiative founded in the fall of 2007 at University of Puerto Rico – Mayagüez Campus. It’s coordinated by Dr. Sandra Cruz-Pol with participation from students, faculty and campus personnel who strive to raise awareness of the prevailing importance of living in harmony with the planet in order to reduce our impact to the ecosystem and reduce global warming emission and climate change. CV coordinates activities and efforts directed toward education and the implementation of projects in eco-friendly and sustainable issues. We work with collaboration with various student organizations, campus departments and offices. (Campus Verde also has its own student organization called Campus Verde Students). We provide annual training to dozens of students/faculty, so they can continue to offer lectures and workshops to the community both here or wherever they go to work. Thus we reach thousands of people annually all over the island and beyond, including people from Colombia, Argentina and Mexico who have indicated that we use our resources downloadable freely from our web.

Examples of our education and outreach activities are annual Symposia with experts from multiple disciplines such as renewable energy, organic farming, biofuels, remote sensing of the atmosphere, e-waste, green transportation, political aspects of climate change, green architecture, green economics, among others. In addition we organize information booths at fairs, climate change forums, eco-films, eco-fair, educational campaigns, and parades during Earth week. We use online surveys, and pre/post-tests to assess impact of our activities. We also provide presentations to schools and conventions all over the island, reaching over 5,000 people per year through conferences and visits. See more information and photos in our annual report. http://campusverde.uprm.edu/CampusVerde_Reporte.pdf

In addition we organized activities such as tree planting, beach cleanups, eco-eating fairs, recycling day, waterfalls cleanups, and bicycle marathons, exhibitions with friendly products, among others.

In terms of implementation, we meet regularly with the administration to introduce eco-friendly alternative transportation, energy conservation and efficiency measures, etc. which result in substantial cost savings and lower emissions of greenhouse gases and toxic to the environment. In terms of prevention, we have an eco- health and numerous activities to raise awareness about the positive impact of a healthy diet, not smoking, use of bicycles, use of ecofriendly cleaning products and personal care products, and how all also benefits the planet. We develop and provide free materials online such as posters, fact sheets and presentations. <http://campusverde.uprm.edu>

I. Mission Statement

Campus Verde strives to integrate environmental knowledge into all relevant disciplines; improve environmental studies course offerings; provide opportunities for students to study campus and local environmental problems; conduct environmental audits of its practices; promote environmentally responsible purchasing policies; reduce campus waste; maximize energy efficiency; make environmental sustainability a top priority in land-use, transportation, and building planning; establish a student environmental center; and support students who seek environmentally responsible careers.

II. Campus Verde Structure

Located at the Research and Development Center (CID by its Spanish acronym). Campus Verde structure includes the Green Team composed by professors and non-docent employees. And a collaboration of a grant writing team and the Tree Committee where his major mission is the campus urban forest. The Green Adventures Leaders, taking activities like kayaking, surfing and hiking among others. The recycling office at *Edificio B*. And the students group as Ride a Bike, Campus Verde Students and Green Buildings and Sustainability RUM Group.

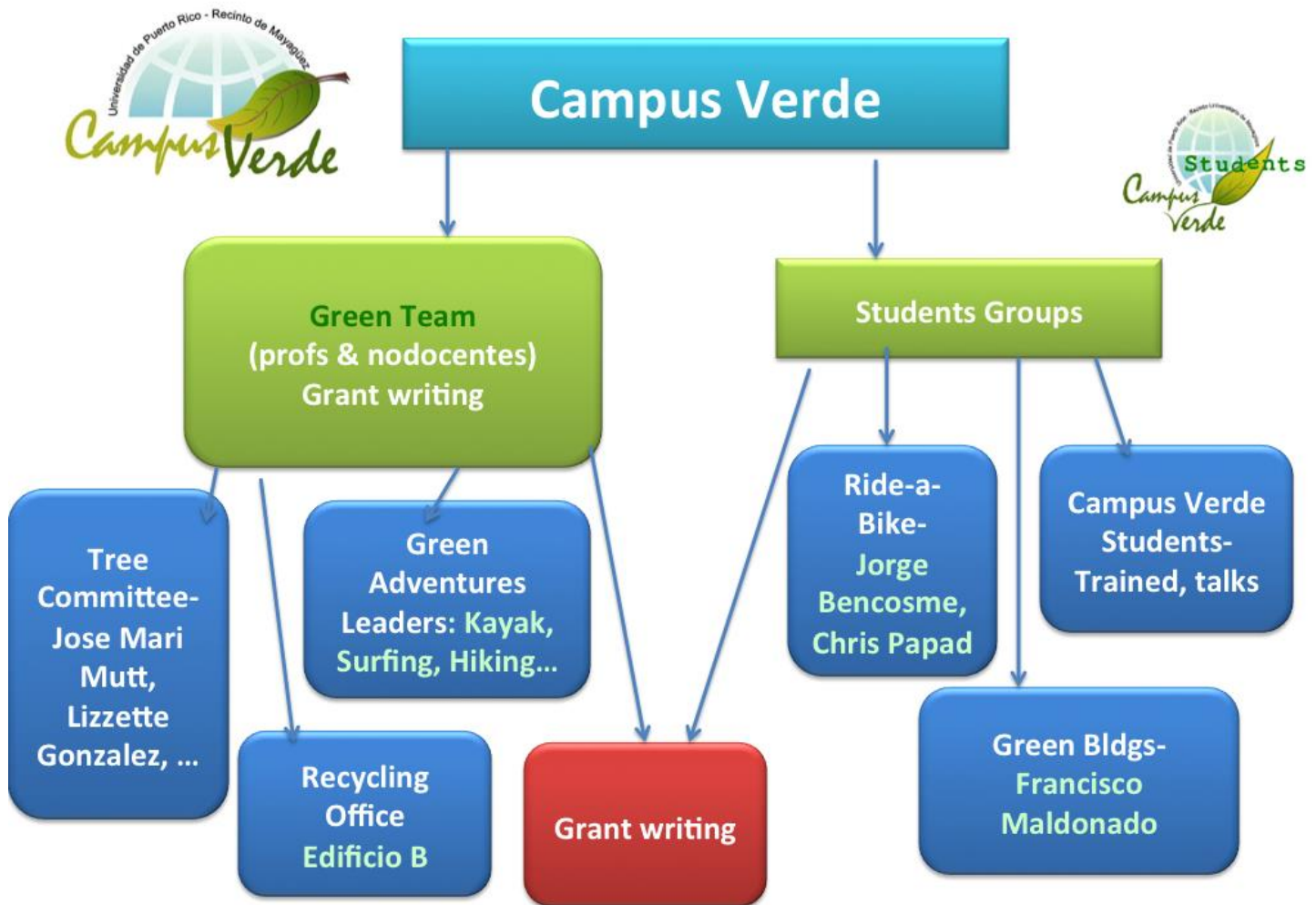


Fig. 1. Campus Verde structure: Green team is composed of UPRM personnel while Students Groups is composed mainly by students with personnel/faculty advisors.

III. Green Adventures

During this past academic year, Campus Verde continues to grow thanks by the collaboration of Jorge Bencosme as the Co-Director of the initiative and continues supporting and contributing to our efforts. Dr. Alston, our previous Co Director, left to Pontifical Catholic University in Ponce but continues to bring many ideas to the program, We are also very grateful for the support of Efraín Morales, from the UPRM Computer Information Technology (CTI).



Fig. 2. New Green Adventures webpage designed by Efrain Morales and Dr. Dallas Alston can be found by clicking *Próximos Eventos* on Campus Verde web (<http://campusverde.uprm.edu>), or directly at <http://www.uprm.edu/eventosverdes>. This is where students register to all sort of eco-events.

We are recruited many people to serve as leaders of these green trips whose main purpose was to give the student an opportunity to appreciate nature. Most activities on this new page were free but some asked for a small (no reimbursable) donation which went directly to CV account and serve to pay for new equipment or replacement of lost or old equipment, materials, snacks for some activities and the like.

Nature Adventure Leaders

Hiking	Kayaking	Cycling	Surfing
Carlos García José Pepe Figueroa Rufino Rosa Dallas Alston	Rolf-martin Vieten Jashira Torres Hector Quiñones Kellyam Valle Josean Torres Dallas Alston	Jorge Bencosme Dallas Alston	Miguel Canals

Fig. 3 Leaders for the several types of new Green Adventure trips offered by Campus Verde through our new web *Eventos Verdes*.

IV. Green Team

The Green Team with expertise in several areas related to sustainability, including UPRM personnel and faculty with expertise in renewable energy, organic agriculture, etymology and organic pesticides, green chemistry, climate change outreach, organic apiculture, biodiversity, and sustainable construction, among others. A very prestigious green architect join the Green Team as collaborator from outside of UPRM, i.e. Dr. Fernando Abruña, who was previously president of (US Green Building Council) USGBC Caribbean Chapter and professor at UPR-RP.

Our intention is to leverage on the human resources already found within UPRM by asking each Green Team member to organize 1 or 2 activities per year within their field that can benefit our academic community and even our general community since some of our activities are realized on the town commons (Plaza Colón de Mayagüez).

Our Green Team is presented in the next figure. It can be found at <http://campusverde.uprm.edu/contact.html>.

New Hemos Crecido!

Recursos y Colaboradores: TENTATIVO (*aun no han sido confirmados todos)

 <p>Dr. Sandra L. Cruz-Pol, Directora Catedrática Depto. Ingeniería Eléctrica, Electromagnética Aplicada Email: CampusVerde@uprm.edu Oficina: SA-205 Tel: (787) 832-4040 x2444 x3821 x5839 Fax: (787) 831-7564</p>	 <p>Dr. Dallas Alston Co-Director and Green Adventures Leader Catedrático Ciencias Marinas Email: Dallas.A@uprm.edu Tel.: (787) 832-4040 ext. 3223 (787) 265-3838 (787) 265-3838 Fax: (787) 265-5408</p>	 <p>Roberto Torres Martínez Coordinador Programa de Reciclaje Edificio B Of. 117, PO BOX 9050 Mayagüez, Puerto Rico 00681-9050 http://www.uprm.edu/decadmi/sal Tel. (787) 832-4040 x 3506, 3221 Fax: (787) 265 - 3886</p>	 <p>Dr. Arq. Fernando Abruña, Presidente USGBC (U.S. Green Building Council) del Caribe Comunidades Verdes Email: Tel:</p>
 <p>Jorge Bencomo Co-Director & Green Biking Leader Programador de Sistemas Electrónicos Centro de Tecnologías de Información Web Development Team Oficina: M-101 http://www.uprm.edu/cti Tel. (787) 832-4040 ext. 2055, 2009</p>	 <p>Efrain Morales Green Adventures Web Creator and Web Administrator Centro de Tecnologías de Información Web Development Team Oficina: M-101 http://www.uprm.edu/cti Tel. (787) 832-4040 ext. 2055, 2009</p>		 <p>Dr. Carlos Delanoy - Catedrático Dept Biología UPRM Pájaros de Puerto Rico Email: Tel:</p>
 <p>Dr. Miguel Canals Green Adventures: Surfing Leader Assistant Professor Engineering Science and Materials Department Fluid Mechanics / Coastal Engineering Miguel.Canals@uprm.edu</p>	 <p>Dr. Francisco Maldonado Green Buildings Advisor Professor Civil Engineering http://cem.uprm.edu/maldonado.htm Voice: (787) 832-4040 ext. 3499 email Francisco.maldonado@uprm.edu</p>		 <p>Dra. Lizzette Gonzalez - Catedrática Horticultura Ciencias Agrícolas UPRM Comité Evaluador de Corte/Poda de Árboles Email: Tel:</p>
			 <p>Dra. Sally Gonzalez - Catedrática Ciencias Agrícolas UPRM Comité Evaluador de Corte/Poda de Árboles Email: Tel:</p>
			 <p>Carmen Gonzalez - Especialista en Ambiente Servicio de Extensión Agrícola Email: Tel:</p>
			 <p>Dr. Jose Mari Mutt, Entomología, Catedrático Depto. Biología, UPRM Comité Evaluador de Corte/Poda de Árboles Inventario en línea de árboles en el RUM</p>
			 <p>Dra. Julia Mignucci, Fitopatología, Biología, UPRM Comité Evaluador de Corte/Poda de Árboles JMignucci@yahoo.com</p>
			 <p>Dr. Daniel Pesante - Apicultura Orgánica Tropical, Depto. Ciencias Agrícolas UPRM Email: Tel:</p>
			 <p>Dra. Marisol Vera - Green Chemistry, Catedrática Depto. Química UPRM Email: Tel:</p>

Fig. 4. Collage of new Green Team members constituted mostly by UPRM personnel with expertise in areas related to sustainability. We also have our collaborator from outside of UPRM, Dr. Fernando Abruña, previous president of (US Green Building Council) USGBC Caribbean Chapter.

V. Tree Committee

Since last year (2012), we gathered a group of experts in topics related to tree interference in construction and developed a Tree Policy for the first time in 100 years since the foundation of the institution. This policy is being reviewed by the administration. The idea is that the committee be consulted before the cutting of any tree within the campus.

The team is constituted (ad-honorem) by Jose Mari-Mutt, author of UPRM trees online inventory and vast knowledge about endemic trees of Puerto Rico and the Caribbean, Dr. Sally González and Dr. Lizzette González, experts in horticulture, Dr. Julia Mignucci, expert in phytopathology and Dr. Francisco Maldonado, expert in sustainable construction.

New Comité Poda/Corte Árboles @ RUM

- **Dr. Jose Mari Mutt**
- **Dr. Sally Gonzalez**
- **Dr. Lizzette Gonzalez**
- **Dr. Julia Mignucci**
- **Dr. Francisco Maldonado**



Fig. 5. Members of the new Tree Cutting/Trimming Committee at UPRM

This group mainly communicates via emails but have visited some of the trees as needed. A tree Cutting/Trimming Policy was written and reviewed by the team with the help of Dr. Sandra Cruz-Pol and Jorge Bencosme. In the past the Tree Committee helped save a tree of around 50 years old, which was about to be cut since its leaves bothers some other buildings and a water fountain. The university administration will coordinate with the student associations regular planting trees and palms in proper places for the practice. This committee will advise on Tree species selection to ensure that there is later planted varieties that can cause problems for their impact on persons or property. For this reason the members of the academic community wishing to plant trees or palms must request permission from the Director of Fields and Roads Department and receive prior to planting. The trees and palms planted without permission will be removed if in the opinion of the committee trees have been placed in an inappropriate place for the species or a place that has been assigned to another use. This year Campus Verde alerted of the illegal cutting of 8-10 trees at the R&D center parking lot. The cutting stopped in time to save some trees and the Natural Resources Department of PR was alerted as well as the director of the R&D Center.

VI. Eco Cine: More Leveraging

Campus Verde has previously offered many documental movies with topics related to sustainability. We have the participation of UPRM Filmo-tech through Arlene Freimont, and the General Library Audiovisuals office through Eric Muñoz, and they agreed to collaborate with us by offering their resources to present a weekly movie from their collection or ours, that has related topics. See figure below.

All the movies are announced through our *Eventos Verdes* webpage.

Eco Cine: Weekly Movie at SH 205, Free

- The Cove
- Who killed the Electric Car?
- Food Inc.
- The Dark side of Chocolate
- HOME
- Crude Impact
- Dirt the Movie
- Gasland
- Capitalism: A love story
- The Collapse
- A Crude Awakening
- Not my Life
- Walmart, the High cost of low Price
- The Lorax
- Healthy Homes: Assessing your Indoor
- Making Stuff Cleaner
- Mujer real VS. la Mujer de los medios
- Blue Glod: Water wars
- Alternative Agriculture: Food for life
- An inconvenient Truth
- Kilowatts Ours
- The Story of Stuff, Electronics, Cosmetics and much MORE!



We have selected the series from films which will provide you with information for living harmoniously with the planet. However, we cannot control the content of all of the films and we are not trying to be activists; rather we think that you can be part of the solution with everyone becoming aware of the present and planning for the future. Thus, we would want to work within the political system to educate, not alienate. We can make a difference with one individual, within one home, within one community; it does make a difference. Let's try to make the as many drastic changes during the next 100 years as we made during the last 100 years, but in a more rational and sustainable mode.

Fig. 6 List of all the movies that have been offered in previous years free of charge and will be shown again during the semester.

VII. Merging: More Student Chapters

Campus Verde has previously served as an umbrella for green activities from other student associations and chapters. We have Ride-a-Bike, a group that promotes biking as a means of clean and healthy transportation and lead by Jorge Bencosme. We promote their activities through all of our means including social networks like Facebook and Twitter.

Last year we incorporated an additional group of student, the USGBC UPRM student chapter, which changed name this year to Green Buildings and Sustainability. *Unicef was also officially integrated to our student organizations even though it doesn't have an annual fee. This group deals with the mitigation of extreme poverty which has been augmented due to climate change.* Our UNICEF Team finished 3rd among 85 university teams in collecting donations for children. In addition, Campus Verde has a student chapter, called CV Students, and we help coordinate green activities like beach cleanups and tree planting with other student associations as PRWEA, IEEE, TauBetaPi, BBB, SWE, SHPE, and others.



Fig 7. Student chapter affiliated under Campus Verde, in addition to our collaboration with green activities of other student's chapters and our Campus Verde Students.

VIII. Education and Outreach Activities 2012-13

During the academic year of 2012 to 2013, Campus Verde coordinated dozens of activities reaching hundreds of students and general public. In our webpage, a photo album depicts most of our activities. We participated in several environmental activities such as:

- **Visit Puerto Rico Forests and Parks:** at *Charco Azul*, on June 5, 2012. Which is about a 1/2 mile walk through the only trail that is maintained. Excellent experience exploring forest trails to a beautiful lake.
- **Know Your Body through Exercise,** on June 12, 2012. Part of this initiative is to determine in the interest in increasing and maintaining the individual fitness levels and promoting a life-long interest in maintaining the body relatively fit. The general theme will be to learn how to utilize the equipment and to have fun while you exercise by utilizing proper techniques for each set of equipment.
- **Day Kayaking at La Parguera,** on July 18, 2012. The exploration of water bodies (including the ocean) is a team (canoes, kayaks, paddles, life), where each participant must have a sense of discipline and cooperation. Photo link:

<https://plus.google.com/photos/102771810526877231463/albums/5805891581350283793?banner=pwa>



- **Energy Conference**, on August 7, 2012. Presenting Green Energy Business – The Solar challenge a bio development training center. By Dr. Efrain O'Neill. Photo link:
<https://plus.google.com/photos/102771810526877231463/albums/5950634605324513857?banner=pwa>

Corporate visit Tour, on August 8, 2012. Visit company energy efficiency Carolina (Glenn International) Introduction of energy efficiency projects completed and operational in Glenn



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- **Limpieza Internacional de Playas**, on August 15, 2012: cleaning the beaches of Isabela, Golondrinas. Photo Link:
<https://plus.google.com/photos/102771810526877231463/albums/5790619793257312433?banner=pwa>



- **Webinar: Improving Citizen Access**, on August 25, 2012. Government Lack of access to governmental information has had significant negative consequences for both the environment and human health. This forum will identify and advocate for ways to improve access to governmental scientific information, bringing diverse stakeholders together to consider barriers to access and current efforts to overcome them.
- **Articles on Local Magazines:** Sandra Cruz-Pol, Verde Magazine Current, "Efficiency and Conservation at Home", August 2012
- **Forum for Energy Efficiency and Renewable Energy**, September 16, 2012. To discuss the opportunities in job creation related to the management of the current energy crisis, the Center for Business and Economic Development (CNDE) and the Center for Hemispheric Cooperation in Research and Education in Engineering and Applied Science (CoHemis) of Mayagüez Campus (RUM) joined forces to present the forum energy efficiency and renewable energy: Opportunities for economic and business development. This educational event brought together experts from academia and industry.
- **LEED GA Review Course** Certified in Green Building Concepts. October 20, 2012
LEED= Leadership in Energy and Environmental Design. Photo Link:
<https://plus.google.com/photos/102771810526877231463/albums/5801394895933267089?banner=pwa>



- **Plastic awareness**, on October 25, 2012. Demonstrating the knowledge we have on the subject of recycling. Quiz and the tips can locate at this link:
<http://campusverde.uprm.edu/consejosVerdes/ConsejoVerde5.htm>
- Workshops and Presentations
- **Talk at Workshop SEED**. On October 20, 2012. Schools making a sustainability plan school, Liceo Aguadillano,
- **Day Kayaking with Rolf**, *La Parguera*, on November 5, 2012. Exploring nature from the clear water early in the morning. At *Parguera, Lajas* we can discover and see the wildlife at its closest splendor.
- **Bici-Marcha- Bike-Walking**: for Health and Planet Earth ... pedal or walk it, on November 27, 2012. To form part of a bike ride up and supporting alternatives to preserve the Earth and stay active promoting a healthy lifestyle. Photo link:
<https://plus.google.com/photos/102771810526877231463/albums/5815540189426703969?banner=pwa>
- **Training in sustainability**: Campus Verde, on December 1, 2012. Focus on learn of many topics related to sustainability, to get ready to deliver lectures on the following topics:

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1. *Consequences of Global Warming: Climate Change*
 2. *Solutions at Home*
 3. *Renewable Energy*
 4. *Transportation with low emissions of greenhouse gases*
 5. *Principles of Organic Farming*
 6. *Diet 'Green': effect of what we eat in the emission of gases (GHG) and use of resources*
 7. *Recycling, Reduce the important and Reuse before recycling*
 8. *Eco Friendly Insecticides*
 9. *Green Cleaning Products carcinogens in common*
 10. *Smoking and the environment*
 11. *Effective Oral Presentations*



- **Articles on Local Magazines:** Sandra Cruz-Pol, Verde Magazine Current, *"Did you know that the emails you expend energy?"* December 2012 <http://www.corrienteverde.com>
- **Surfing Adventures** on February 2, 2013. The event consists of a brief talk about the areas. Ecology and dynamics of waves, followed by surfing classes in the *Marias Beach Rincon, PR*.
- **Gender Sustainability** on March 6, 2013. *Gender Sustainability: Sustainable Not for any society*, that 51% of residents do not have equal access to their development in all areas. This affects the economy and scientific advances that benefit all, among others. A documentary about the difference between real women and presented by the media, then we will have a short active security. **Sponsors:** Alpha Delta Kappa (ADK), Assoc Féminas in Mechanical Engineering (AFIM), Society of Women in Engineering (SWE) Sigma Delta Nu Sorority (ΣΔΝ), IEEE Women in Engineering (WiE) and Campus Verde Students (CV Std.)

Photo link:

<https://plus.google.com/photos/102771810526877231463/albums/5852572936945061809?banner=pwa>

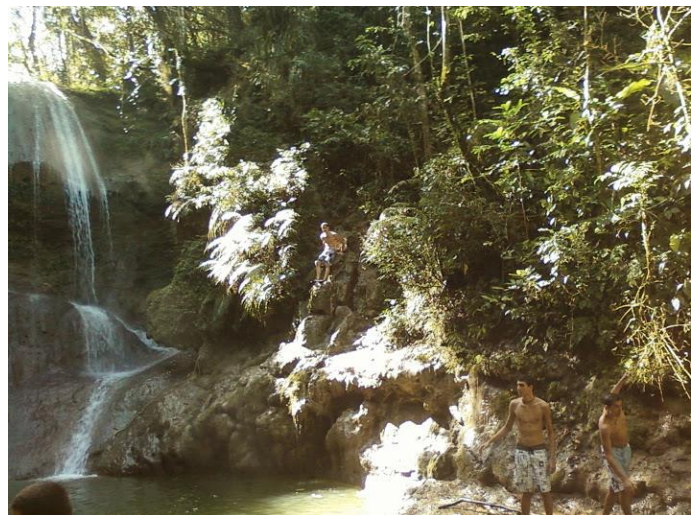


- The **4th Symposium on Agro-ecology: "University and Community Initiatives"**, on March 30, 2013. *Agro-ecology* is emerging as modern alternative production and social justice to the urgency of the development of proposals in search of food sovereignty of countries. Various community initiatives around the island have already taken the first steps in this direction. We intend to share the experiences of various agro-ecological initiatives around the island to serve as models of alternative agricultural development. Agro-ecology Symposium of AEA is a space for discussion, learning and promoting the field of Agricultural Sciences, indispensable for the development of agriculture and food security in Puerto Rico. Event Link: <http://www.uprm.edu/portada/eventosverdes/index.php?a=ev&id=202>

- The **Earth Hour** on March 23, 2013. Turn off the lights 60 minutes for the planet in Vieques, PR. This event was coordinated entirely by students with the municipality of *Vieques*. It was a great effort and it included music and awareness activities. Mainly the *Green Buildings* and *CV Students* chapters participated in the coordination. **Photo link:** <https://plus.google.com/photos/102771810526877231463/albums/5911319276434426961?banner=pwa>



- **Cleaning / Day Trip in Gozalandia**, on April 6, 2013. One of the most beautiful waterfalls in all Puerto Rico, in *San Sebastian, PR*, staff and student organizations help organize and carry out these activities. We have visited this waterfall several years in a row, and fortunately every year we find less and less trash in it! **Photo link:** <https://plus.google.com/photos/102771810526877231463/albums/5790611728768872065?banner=pwa>
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Proposals Submitted:

- Proposal "**Casa Ecológica**" to restore the 2005 Solar House, under Legislature, February 2013
- Proposal "**Community in Harmony Integrating People and Environment (WARBLER)**", Sandra Cruz Pol, Dr. Ana Navarro, Dr. Julia Mignucci, Ms. Carla Ramirez, Put to AmeriCorps, through the Municipality of Mayaguez, March 2013, \$ 320,000 subject
IEEE IGARSS 2013, Australia,

Approved Proposals:

- **Rectory UPRM** \$ 22,000 for restoration of Solar2005 House, if the **House Ecological RUM**
- \$ 5,000 for **Abbott** and environmental activities for the Solar House

Articles on Local Magazines:

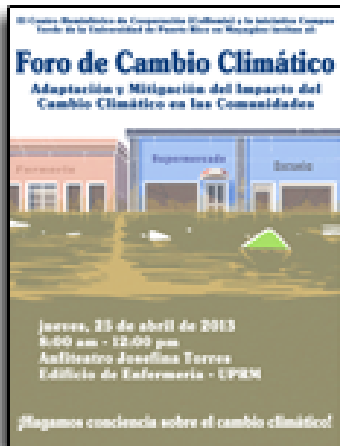
- **Green Power Magazine**, "**Plastics Recycling: Common Errors:**" Sandra Cruz-Pol Apr. 2013;
<http://www.corrienteverde.com/>
- **Vision Newspaper: The fallacy of Antibacterial Products**, Sandra Cruz-Pol, Jun 22-Jul 3, 2013

- **Earth Week 2013** from April 22, 2013 to April 27, 2013, Featured awareness activities and social and cultural well-being like Cycling in Las Salinas de Cabo Rojo, Bottles Mountain Leader Coordinator: USGCB UPRM, Talking with TACU or TreatRUM. Information tables. Green Area between Central, General and Library. Salsa Night: (Class FREE and then social) Bici-Expo Movie- Do the Math Coordinator Squad: Ride- a- Bike, Initiation CV Students Place: for members exclusive daily fee and prior reservation. Beach Clean Caño Reserva Boquilla place in Mayaguez (We provide food, gloves and plastic bags). Forum Adaptation and Mitigation of Climate Change Communities CoHemis in the Nursing Amphitheatre. The 2nd Festival Eco Amistoso Caño Boquilla, Steering Committee: Natural Resources, Municipality of Mayagüez, NRCS, CV and Sea Grant. Electronics Recycling Appliances, ADS. It take place in the next Gym Espada RUM as in previous years. Old Drug Incorporated. Incorporated prescription unused or expired medications by DEA agent. Mayaguez in the Band Shell Palace Cabo Rojo Artisan Square Sports Complex Rebeca Colberg. **Photo link:** *Festival Eco Amistoso Reserva Natural La Boquilla*

<https://plus.google.com/photos/102771810526877231463/albums/5871234820202839057>



- **Climate Change Forum:** Adaptation and Mitigation of the impact on communities, on April 25, 2013. Campus Verde in collaboration with the program **Cohemis**. The main message is that Puerto Rico is very vulnerable to the impacts of climate change and particularly our coastal communities are suffering the effect of the increase in sea level. This is not a problem of the future, but a challenge to this. And this forum wanted to highlight the importance of the Puerto Rican society must understand that the only alternative to climate change adaptation and mitigation. Event link and photos: <http://cohemis.uprm.edu/clima2013/>
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Workshops and Presentations

- **Workshop** tours Fairs Agro Eco-Educativa Solar, *Agro-ecological Experimental School* Laura Mercado, Rosario Village in San German, PR. May 3, 2013, 10:30 am-1pm
 - **Panelist Forum on Climate Change "Adaptation and Mitigation of Climate Change Impact in Communities"**, April 25, 2013, at the Amphitheatre Josefina Torres, Nursing Building, and
 - **A Talk for Americorps: Community in Harmony Integrating People and Environment.** 9am-1pm
 - **Chat** invited by CIAPR Prof. B. Llores in Mayagüez, May 20, 2013 about **Energy Saving** 6-9pm, College of Engineering, Mayagüez, serving 3 hours of hours of continuing education for members of CIAPR.
 - **Radio Program: Caborrojeños for Health and the Environment in "Chavito en mente"** Program, invited by Cesar Reyes Zamora creyeszamora@gmail.com to discuss **Saving Measures Pro Environment**, May 7, 2013, 9am.
 - **A Talk: Live Green: Puerto Rican Minds in Action** (MPA) Program Seizure and Retention of Agents of Change (PARACHUTE) Harvard-MIT emerged Puerto Rican Caucus. Old San Juan, 7-9pm at Plaza del Totem, July 27, 2013
 - **Recording Videos to Caborrojeños for Health and the Environment: Insecticides and eco-friendly household cleaners, Saving Measures, Water Bottles, eco-Health, Sustainable Women**, May 20, June 4 and July 8, 2013 Products, ~ 7 - 9pm (7 hours total)
 - **Radio Programs "Chavito en mente" to Caborrojeños for Health and the Environment:** Topics: **Insecticides eco-friendly, Saving Measures, Water Bottles, eco-Health**, June 18th 9-10am
 - **Programmes of Radio "Chavito en mente" to Caborrojeños for Health and the Environment: Diet for Curbing Global Warming according to recent studies, eco-Health**, Jul 2, 2013 9-10 am.
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Fig. 8 Photo Album depicting some of Campus Verde activities. More photos and activities:
campusverde.uprm.edu/album.html



**CAMPUS VERDE -
COLEGIO DE MAYAGUEZ**

IX. Campus Verde Students

As mentioned above CV counts with a student chapter. This group of students is a very active and dynamic group that brings ideas and action to CV. Below is a list of our directive from this and next year.



2012-2013

Presidente -Angélica Abreu Fontánez

Vicepresidente -Héctor Quiñones

Finanzas - Reina Marrero

Coordinador de Eventos -Héctor Quiñones

Recruiting (Promotion) - Kellyam Valle

Kayak Leaders (prospects pending): Rolf-Martin Vieten ,Josean Torres, Rafael Padilla, Héctor Quiñones, Angélica Abreu, Marilyn Pérez, Edgardo Estavillo.

Fig.9 Students positions for the CV Student chapter. Note the new positions for the year 2012-13.

X. Reduce, Reuse and Recycle

A. *Bottle Mountain Recycling during Campus Activities*

From March 31 to April 4, 2013 was the Agricultural Science Faculty Fair “**5 Días con Nuestra Tierra**” (Five days with our Earth). During this week a recycling program was implemented at the fair’s grounds. We placed the recycling containers around the fair, collected the recycling and put them in the recycling center and made announcements by the stage microphone about the importance and the right way to recycle.

XI. Promote Bicycle Transportation

A. Official Student Organization

Ride a Bike is an official Student Association in Campus. Inscription documents has been submitted to the Dean of Students and the organization's directive is as follow:

Bici-Marcha: November, 27, 2012



President - David R Soto Padín

Vice president - Darsy Smith

Secretary- Kathleen Del Mar
Ramos

Treasurer - Eduardo Morales

Advisor - Jorge Bencosme

Vocal - Rafael Padilla

Vocal - Nelson Burgos

Vocal - Juan Burgos

B. Projects

One of our students, the president of Ride a Bike, is working hard with their advisor, Jorge Bencosme, professors from Civil Engineering Department, and *Edificios y Terrenos* in implementing a plan for facilitating bicycles riding and improving safety within the campus. They have installed new hangers for bicycles and labeled new spaces that serve as parking for bicycles near buildings. The project emphasized support and motivate students by providing new facilities and letting them know that the RUM is also committed to serve and protect our future.

We give emphasis to sustainable transport world class bikes to raise awareness and encourage people to use bicycles as alternative transportation, avoiding the use of fuel and gas emissions caused by motor vehicles.

The original proposal:

http://bike.uprm.edu/Ride_a_Bike/Blog/Entradas/2012/10/22_Infraestructura_Ciclista_del_Recinto_Universitario_de_Mayaguez.html

C. Educational, Recreational and Outreach Activities

The July 31, 2012, as part of the Orientation activities for new students the concept of eco-taxis was demonstrated. This exhibition and demonstration was held to educate on the importance of promoting and developing sustainable transport among future generations

- **Event Link:** http://bike.uprm.edu/Ride_a_Bike/Fotos/Paginas/eco_taxi.html
- Photos:



As a preamble to the world Car *free day* urban walk was held in Mayagüez departing from the front of the Fitness Angel F. Espada, through the Linear Park, Plaza Colón and through the village until you reach the Coastal Park, then returning to the starting point. The travel time was one hour.

- **Event Link and photos:**
http://bike.uprm.edu/Ride_a_Bike/Fotos/Paginas/Mayaguez_2.html

On Sunday, September 23, 2012 was held for the fifth time the Ponce Cycle Day along with the closing of the Festival of the New Quenepa Ecological Park. Ride a Bike joined this successful event that promotes the planning and development of cities and sustainable transport where all can enjoy public spaces to have a better quality of life and social cohesion. In the event route will enjoy various activities.

- **Event Link and photos:**
http://bike.uprm.edu/Ride_a_Bike/Fotos/Paginas/Ponce_2.html#grid

Thursday, November 27, 2012 by the main avenues of the Mayagüez Campus bike and marching. For the health and Planet Earth ... pedaling or walking the Tour ... Leaving the front of the Administration

Building Companies cycling and walking down the Marias Avenue, Palm Avenue, Laurel Avenue and ending at the main entrance of the Student Center, on the side of the roundabout, opposite the large tree of ceiba.

- **Event Link and photos:**

http://bike.uprm.edu/Ride_a_Bike/Fotos/Paginas/bicimarcha.html



City tour Rincon the Sunday, December 2, 2012 from 8:30 am to 12:00 noon leaving the lookout Añasco on Highway 115. The walk consisted of a tour of several communities and beaches, including Lighthouse and Domes Beach located where the old central core. Also stopped at the public square to visit the organic market. The distance was 26 km.

- **Event link and photos:**

http://bike.uprm.edu/Ride_a_Bike/Fotos/Paginas/Rincon_3.html

Urban Walk Wednesday, February 13, 2013. On a tour of the town of Mayagüez, visiting the Plaza Colón and then El Litoral, through the New Millennium Children's Park and the fishing club. He watched a beautiful sunset on the pier.

- **Event Link and photos:**

<http://bike.uprm.edu/Ride a Bike/Fotos/Paginas/Litoral 1.html>



Bike ride on Wednesday, January 30, 2013 for a tour El Caño La Boquilla, an estuary and nature reserve located in the neighborhood of El Maní, Mayagüez. Passing through the neighborhood El Maní, on Highway 64 until you reach the bridge over the reservation Caño La Boquilla.

- **Event Link and photos:**

<http://bike.uprm.edu/Ride a Bike/Fotos/Paginas/Boquilla 2.html>

Bicycle tour the Interpretive Center Salinas de Cabo Rojo Sunday, April 21, 2013. Leaving the parking tower for bird watching at kilometer 11 of the highway 301. Enjoyed beautiful landscapes and views, through a nature reserve, bird sanctuary and saltwater lagoon.

- **Event link and photos:**

<http://bike.uprm.edu/Ride a Bike/Fotos/Paginas/Bahia Salinas 2.html>

Urban Ride Wednesday, March 6, 2013. Leaving the first floor of the Student Center RUM, crossing the Marias Avenue, coming to Terrace Finca Alzamora by urbanization for 3108 follow the road using the bike lane. The tour also included a walk along the Coastline.

- **Event Link and photos:**

<http://bike.uprm.edu/Ride a Bike/Fotos/Paginas/Mayaguez 3.html>



XII. Energy Conservation and Efficiency

Our co-Director, Jorge Bencosme, produced a document with an inventory of the outside lightning around campus to show all the lights that remind on due to photo control failures or not been controlled automatically by a photo control or timer.

This document was recently updated and can be viewed and downloaded at [http://campusverde.uprm.edu/ReporteAhorro\\$LuminariasRUM.pdf](http://campusverde.uprm.edu/ReporteAhorro$LuminariasRUM.pdf)

In the document is referenced the section of Energy Conservation, part of the Energetic Plan of the institution in which compares the cost analysis of replacing the existing outdoor lighting for a more energy efficient one, and the time it will take to recover the investment with the savings in energy bill.

It was proposed that:

- The administration should consider the option of replacing outdoor lighting with new luminaries that can be deemed when full light output is not needed.
- Consider turning off some outdoor lighting were security is not a concern or the light does not need to be on all night.
- Energy consumption should be metered in all buildings. This data should be public as we are a public institution and will encourage to pursue energy efficiency and been an example to others.
- Equipment such as air conditioner should have the option to be remotely controlled or turned off when there is no occupancy of the building or office. Office and hall lights should be controlled by occupancy sensors.
- Entrance, halls and outdoor lighting operation in the buildings can be improved and made more efficient by automated controls such as photo controls, motion / occupancy sensing and remote controlled circuits.
- Start projects for generating renewable energy in campus and pass that clean energy to the electric grid to be locally used and reduce the carbon footprint.
- In the long term, develop the campus electricity grid to be a smart grid.

A. Solar House into Ecological House

Our Dean of Engineering agreed to support the restoration of an old Solar Decathlon house from 2005 that has lost all walls to termites, and convert it into an Ecological house. Our last chancellor had approved funding for buying the new materials needed, but the construction was halted. We have work on it but at this time all efforts to use and display the Eco Solar home have been unsuccessful. New projects and new proposals are underway, because we need our Eco Solar home we will not give up on getting all that is needed to meet our goals.

We have had the support of the Technical Team lead by Luis Karry from the Engineering Dean, with the lead by the Associate Dean Dr. William Hernandez. The UPRM architect has devoted his time to design modifications to the EcoSolar House so that it has a handicap ramp around the balcony and terrace. We have met several times with all of them and with the Administration Dean at the Chancellors Office and with the office of OIIP, including Eng. Nancy Mendez, lead by Dr. Noel Artiles at the time. We are grateful to all of them for their support.

The newest plan can be found at

http://campusverde.uprm.edu/solarEcoCasacambio4-18-13-2-Plano_Model.pdf

Casa Solar → Casa Ecológica



**Centro Interactivo de Visitas
y
Oficina Campus Verde RUM**



Fig. 10: These photos show the state of the old solar decathlon house by the beginning of 2012 (left), the state as of June 2012 (center) and the present state as of June 2013 (bottom). The final product should look similar to figure on bottom right.

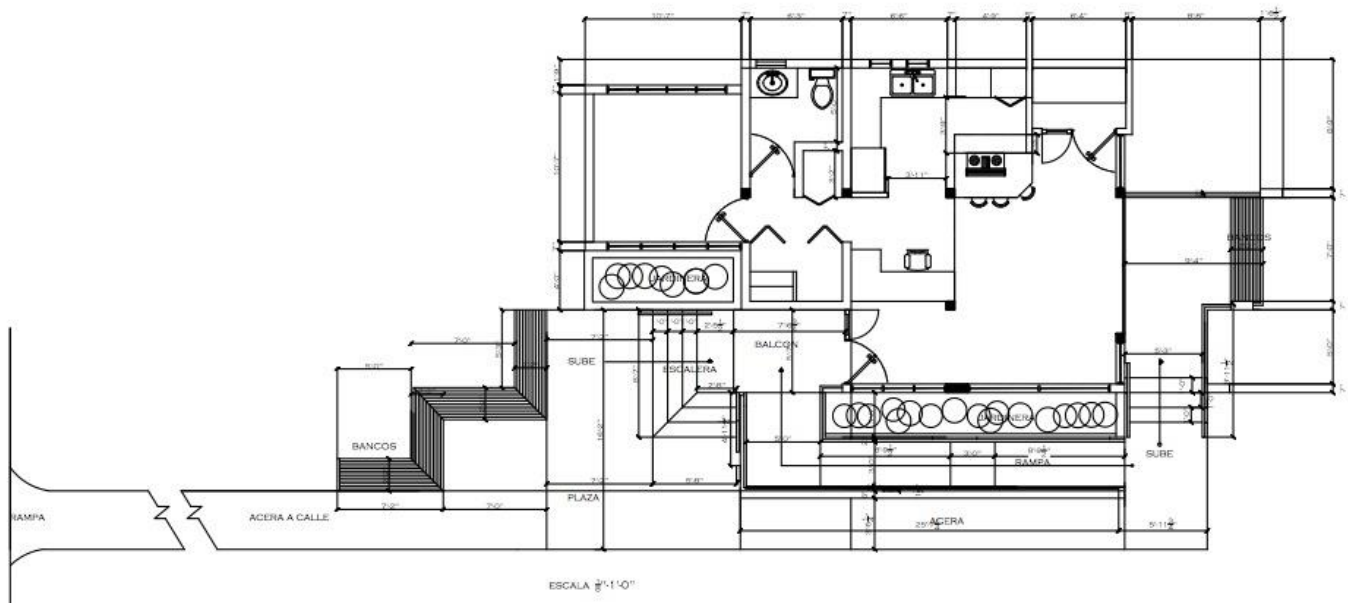


Fig. 11, New layout with handicap ramp and balcony.

We are submitting proposals to the government of Puerto Rico and to several private corporations to support this new sustainability showcase. A Copy of the proposal can be found online at:

<http://campusverde.uprm.edu/Proposal-GreenCampus UPRM Eco House.pdf>

XIII. Nature Activities

A. Beach Clean-up Day

Playa Golondrinas in Isabela

A beach cleanup was performed at Playa Golondrinas in Isabela during the *International Coast Cleanup Day* in September 15, 2012. Another cleanup is already scheduled for this fall (April 6, 2013). In addition, at least 2 UPRM students are taking the Scuba Dogs training to become Beach cleanup captains. As of today only our director is a captain.

B. Waterfall Clean-up Day

Gozalandia Waterfalls Cleanup Day

This past spring, our group coordinated this cleanup event for two of the three waterfall system called Gozalandia in the town of San Sebastián. We had 22 students participating. We collected 15 large garbage bags including 5 of recyclable materials. See photos at our album webpage.

I. Education and Outreach Materials and Training

We continue to develop materials for our website including a new page only for Women (<http://campusverde.uprm.edu/album.html>), another about the link between healthy people and healthy planet (<http://campusverde.uprm.edu/ecosalud.html>) and we continue to add our pages with additional food eco-friendly recipes, homemade insecticides recipes, and much more. Like this examples:

Insecticidas Eco-Amigables: baratos, natural y que no dan asma

...para eliminar hormigas, piojos, ácaros, mosquitos, termitas y cucarachas en el hogar.

Insecticidas **Naturales** sin tóxicos que causen asma, irritación y alergias. Son muy económicos y efectivos. Versión pdf

🌿 Bórax 🌿 Ácido Bórico

🌿 Aceite de Cedro (Repelente de Mosquitos)

🌿 Insecticidas para el Jardín- para controlar plagas en plantas y huertos caseros



Ácido Bórico

Disuelve 1 cucharadita (5mL) de polvo de ácido bórico y 10 cucharaditas de azúcar en 2 tazas de agua (500mL); moja bolitas de algodón y colócalas por donde pasan los insectos, como dentro de los gabinetes del baño o detrás de la estufa, y también **LEJOS del alcance de niños y mascotas.**

El ácido bórico deshidrata los insectos lentamente y ellos no se dan cuenta, de manera que los **insectos NO crean inmunidad o resistencia al veneno.**

Además el ácido bórico se puede usar como antiséptico para heridas leves, y para el acné pues es anti-bacterial natural. Tiene usos medicinales para tratar hongos, por ejemplo, y por eso se usa en las soluciones para lavar ojos y lentes de contacto. Además se usa para tratar madera contra las termitas.

Rocíe este polvo en las alfombras para matar PULGAS, PIOJOS y sus huevos. No se puede ingerir pues es **TÓXICO** y algunas personas son sensitivas en la piel a este detergente.



Aceite de Cedro (y otros aceites esenciales) una botellita de 1 onza cuesta entre \$4 a \$6 y rinde muchísimo. También venden cantidades mayores para proteger dentro y fuera del hogar, ver [aquí](#).

Repelente de Mosquitos: Disuelve 10-15 gotitas de aceite de cedro (cedarwood oil) en 1/2 taza de agua, 1/3 taza de alcohol y 1/4 taza aceite vegetal como almendras u oliva, dentro de una botella rociadora. Le da un olor a madera que no le gusta a los insectos. Es seguro para niños y mascotas, pero no rocíe en los ojos ni cerca de la boca. Sirve para aliviar salpido de piel (rash). Puedes añadir unas gotitas **adicionales aceite de menta** (peppermint), lavanda, limoncillo y/o eucalipto para aumentar la gama de insectos que repele además de los mosquitos.

Ácaros en la cama: Rocíe la misma solución de repelente en la cama. Deje que se seque, olerá a madera durante unos días. Puede añadir gotitas de aceite puro de menta o lavanda que también son anti-gérmenes y tienen una suave fragancia. El cedro mata los ácaros que causan picor en la noche que se alimentan con fragmentos de piel que sueltan los humanos en los mates. Es bueno limpiar el colchón con vacuum frecuentemente. Sirve para aliviar salpido de piel (rash).

Piojos: Use la misma solución de repelente de mosquitos. Mata larvas, y huevos de piojos. No causa irritación, asma ni alergias, pues no es tóxico a los humanos. Se puede añadir al champú y al acondicionador.



Pulgas y Garrapatas: Pon unas cuantas gotitas (no más) de esta mezcla en el collar de tu perro.

Mezcla bien 2 cucharaditas de aceite vegetal (el de almendras contiene sulfuro el cual ayuda más aún) con 10 a 25 gotas de aceite palmerosa (Rose Geranium essential oil) o de cedro, limoncillo, eucalipto, romero o mezcla de varios. **Para los gatos no se debe usar aceite de palmerosa o cedro ya que los gatos se lamen y estos aceites no son comestibles.** Para los gatos usa los otros aceites.

Para **gatos y perros**, mezcla 1/2 cdta de vinagre de manzana, y/o turmeric y 1/2 diente de ajo majado (no más) en la comida...esto hará que la sangre tenga mal olor y ayente a las pulgas y garrapatas. También puede untar aceites esenciales diluidos en aceite de oliva, siempre y cuando el aceite sea comestible ya que los gatos se lamen. Puede usar aceite de romero, limon, clavos. * **Nunca use aceite de cedro, palmerosa o eucalipto para los gatos**



pues no son comestibles.

Termitas: Disuelva 1 cucharadita gotitas de aceite de cedro en 1/2 taza aceite de limoncillo u otro aceite, y rocíe o aplique con brocha en la madera para protegerla de las termitas.



Climate Impact of what we eat

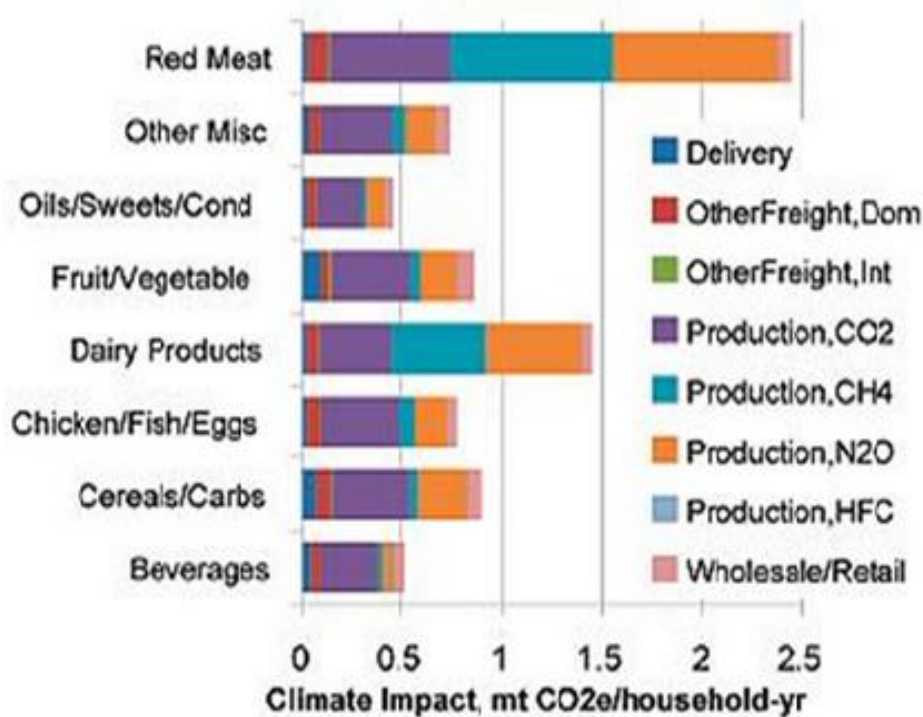


Figura. 1. Cantidad de emisiones de gases de invernadero al producir carne, vegetales, cereales y otros debido a la producción de dióxido de carbono, metano, óxidos nitrosos, transportación, etc. Fuente: <http://www.terrapass.com/blog/posts/cutting-the-carbon-from-your-diet>

Reduce los plaguicidas que ingieres:

Lista de productos con **POCOS** plaguicidas aunque no sea orgánicos

[*Recuerda quitar la cáscara antes de consumir, en el caso de las zanahoria raspa su superficie a menos que sean orgánicas.]

Guineos	Aguacates	Frambuesas (Rasberries)
Chinas	Piña	Kiwis
Toronjas	Cebollas	Guisantes (green peas)
Papaya	Mangó	Brécol
Melones (Canteloupe)	Moras (Blackberries)	Repollo
Sandía (melón de agua)		Espárragos

Lista de productos que **MÁS** contienen plaguicidas a menos que sean orgánicos

Manzanas y Peras	Apio (celery)	Papas
Uvas Importadas	Pimientos verdes	Lechuga
Fresas y Cerezas	Productos lácteos	Espinaca
Melocotones, Nectarines		

Según el [Environmental Working Group](http://www.thedailygreen.com/healthy-eating/) y <http://www.thedailygreen.com/healthy-eating/>

A. Training for students and personnel about Global Warming Solutions

We continue offering the training given to students where they learn about Climate Change and its solutions in which the students are then tested and certified to give conferences, therefore spreading education. The past year, students visit several schools all over PR offering advice and talks. One of the 'adopted' schools has participated in beach cleanups with us and established a recycling program in their school. The student leader at the school, Adriana Caban, which was advised by our student Maraida Balaguer and Luz Laboy, received a Presidential awards. See picture below.



Fig. Adriana Cabán, a student from a local high school which was advised by our program and given several talks by our CV trained students; Luz and Maraida, and joined us in one of our beach cleanups with her school.

1. Television and Radio Appearances about Global Warming Solutions

Our Director was interviewed in a local TV show called CVBIEN with Carlos Ochotecho last 25th of June (Invitation by Jessica Otero jotero@cvnetwork.tv from Channel 24 of PR).

She was also intervied in Foro Colegial and talked about the Green Campus initiative and about tips on how to conserve electric energy, water, and how to lower our ecological footprint.



2. Campus Verde goes international!

Campus Verde has been affiliated to the Jane Goodall's Roots & Shoots chapters since 2012. In addition Marcela Zuluaga from NBC -Telemundo at Dallas [817 654 6584] contacted us on March 2012 to ask for our authorization to use CVC information on their web. It was granted. So we are expanding our reach!

Previously we were contacted by people in Mexico and Argentina to use our web, and from the state of Florida to ask permission to use our website materials.

3. Old San Juan Energy Museum

Our director was invited to record a video for the new ON/OFF Energy Museum in Old SJ. This visit served to make important contacts to what we can expect in the future and they incorporated several of our ideas on their interactive exhibits. [Contactos: Dinorah Bonilla

<dinorah@muuaaa.com> , Celina Nogueras Cuevas nogueras.celina@gmail.com y Dr. Fernando Abruña]

Additional alliances and dissemination

In our effort to reach beyond the university limits, we have formed the following three alliances and dissemination strategies:



1. We have just started an official collaboration with **Dr. Jane Goodall's Roots and Shoots (R&S)** environmental program, so our program is officially affiliated to them! This was as a result of our talks with Dr. Rick Asselta, Puerto Rico's R&S representative. We assisted to Dr. Jane Goodall Green Campus Talk in San Juan this month and presented a brief summary of our accomplishments. From this we expect to reach a larger audience and also learn from their activities.



2. In collaboration with Sustainable Environment for Quality of Life of North Carolina, we translated the page "100 ways to save the environment" into Spanish. The page can be visited at: <http://campusverde.uprm.edu/100maneras.htm>

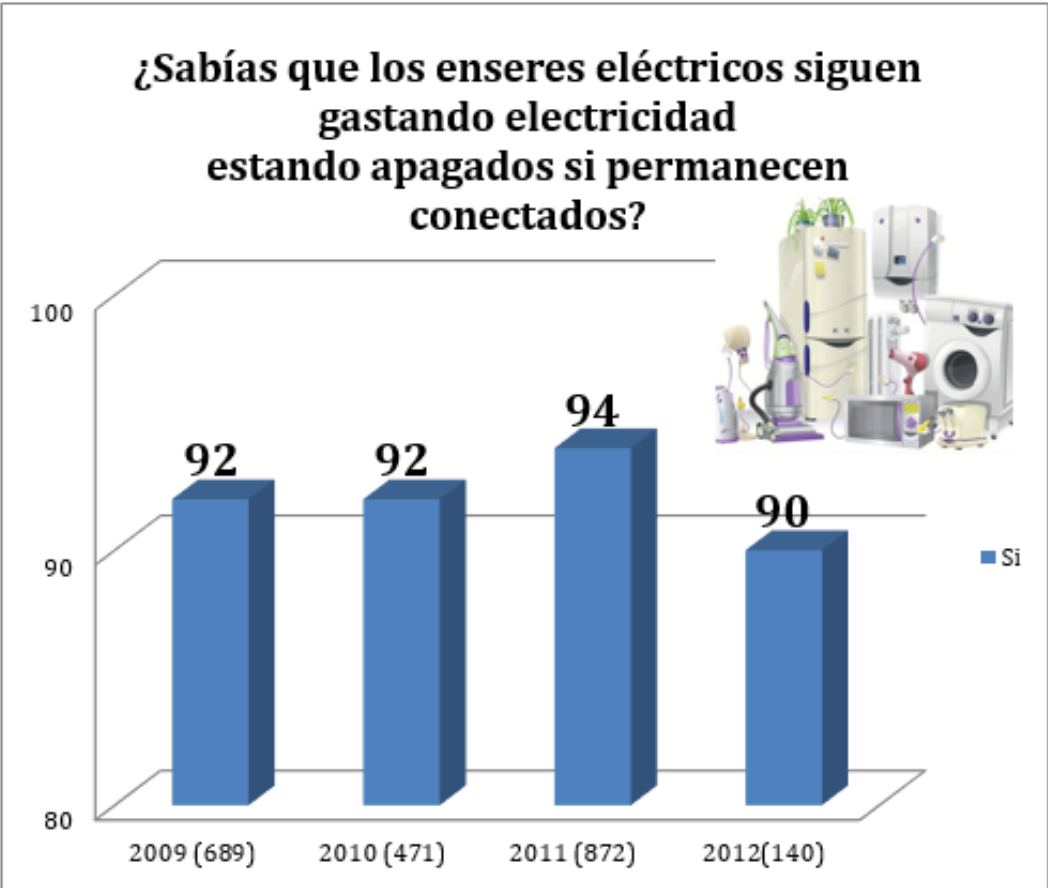
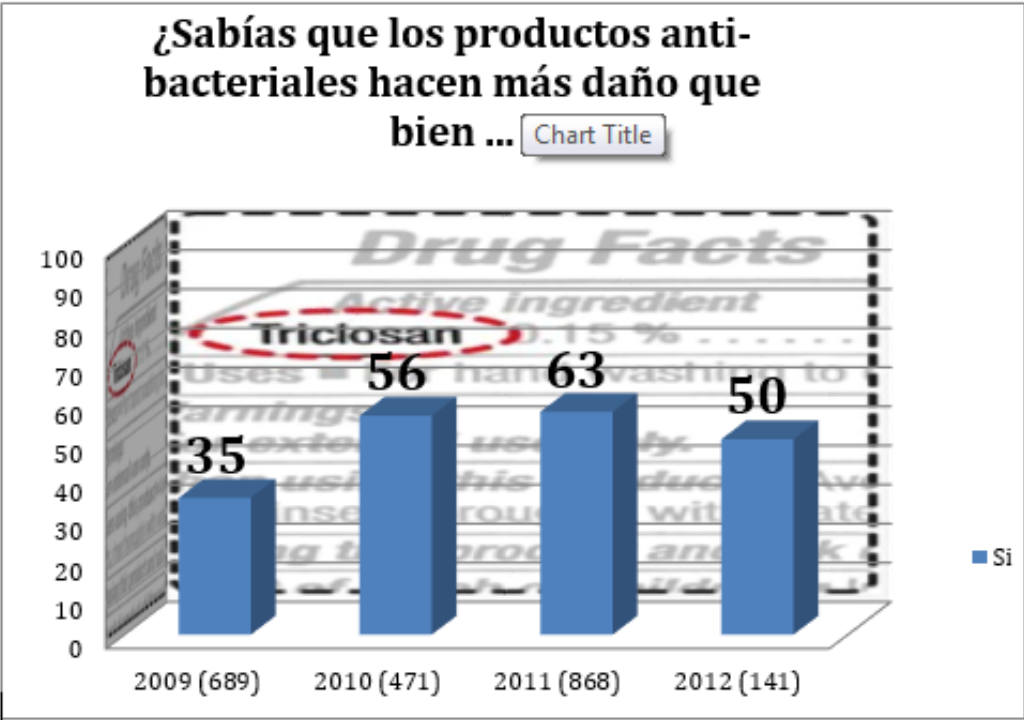
3. We have our Twitter account linked to a global group in Facebook called *Campus Verde Colegial* so that we can reach people outside the academia with tips on how to save money and help the environment. We've had people from as far as Argentina complementing the group messages!



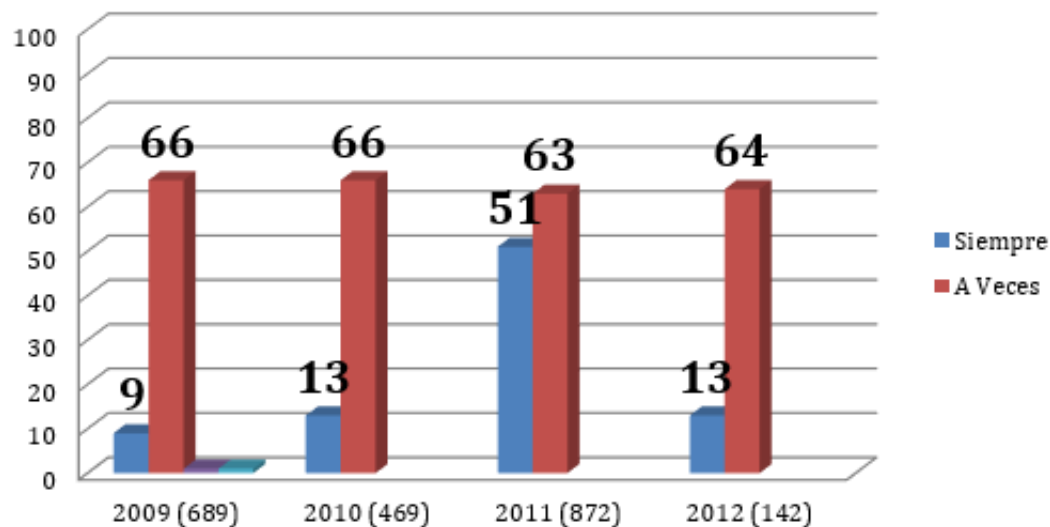
@ CampusVerdeUPRM



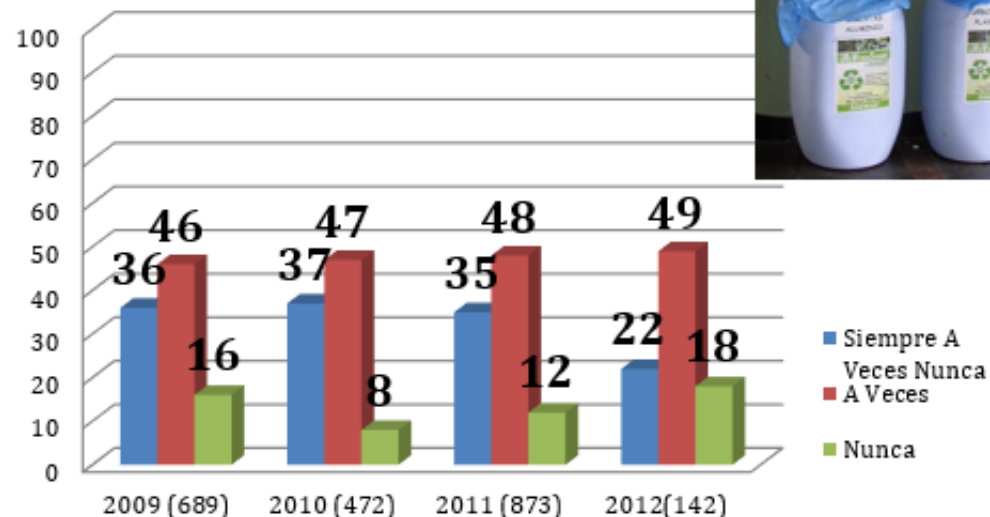
Appendix A: Campus Verde Survey Results Comparison 2009-12



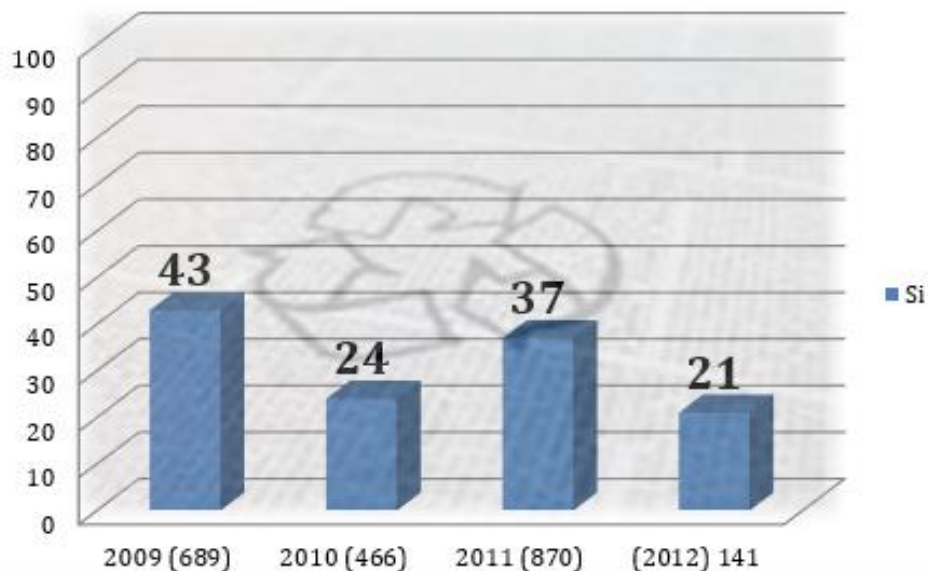
¿Desconectas los enseres eléctricos en tu oficina o salón cuando no los usas?



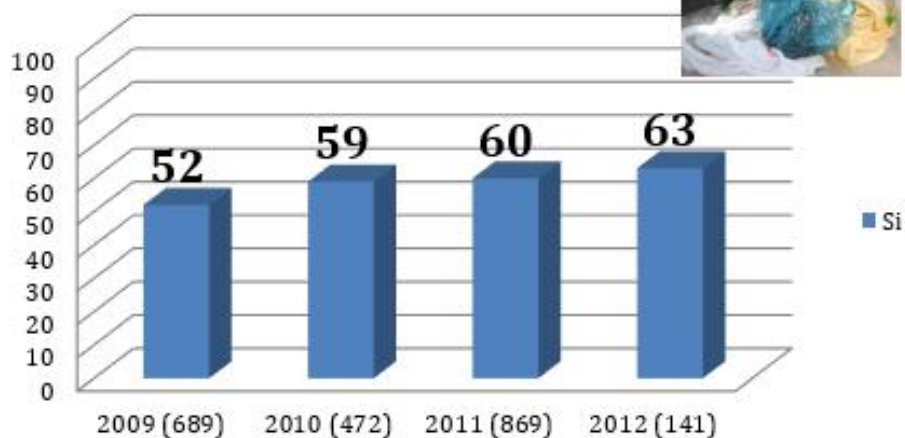
¿Reciclas tus latas y botellas plásticas en los envases de reciclaje del RUM?



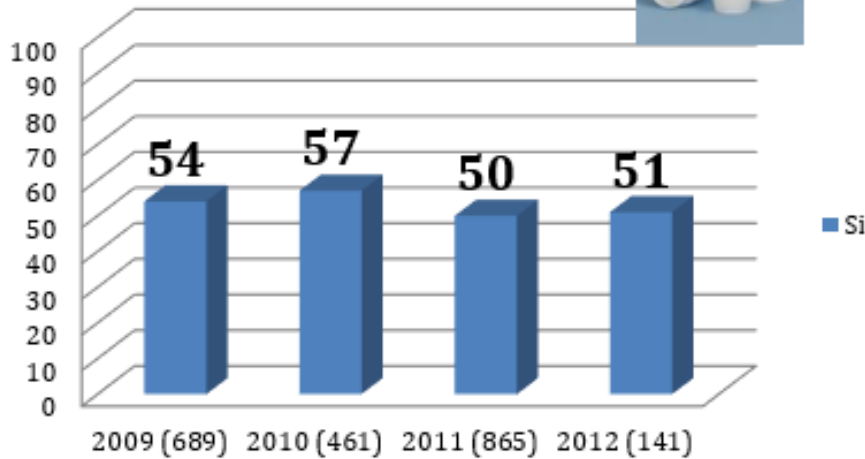
**¿Sabías que en el RUM se reciclan y
recopilan también periódicos y papel
blanco?**



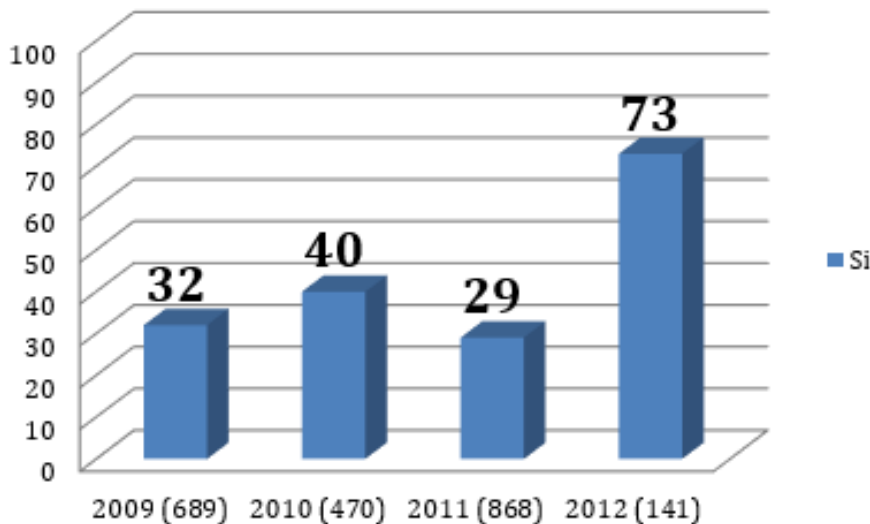
**¿Sabías que la mayoría de las
bolsas plásticas están hechas de
petróleo?**



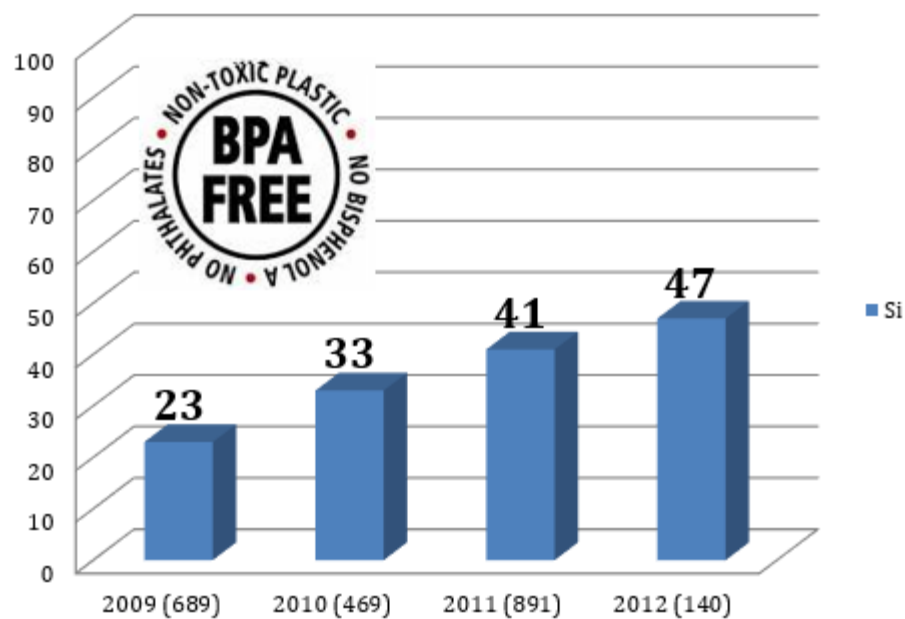
¿Conoces el impacto ambiental que causan los platos de poliestireno (Styrofoam®) al fabricarse en términos de tóxicos atmosféricos...



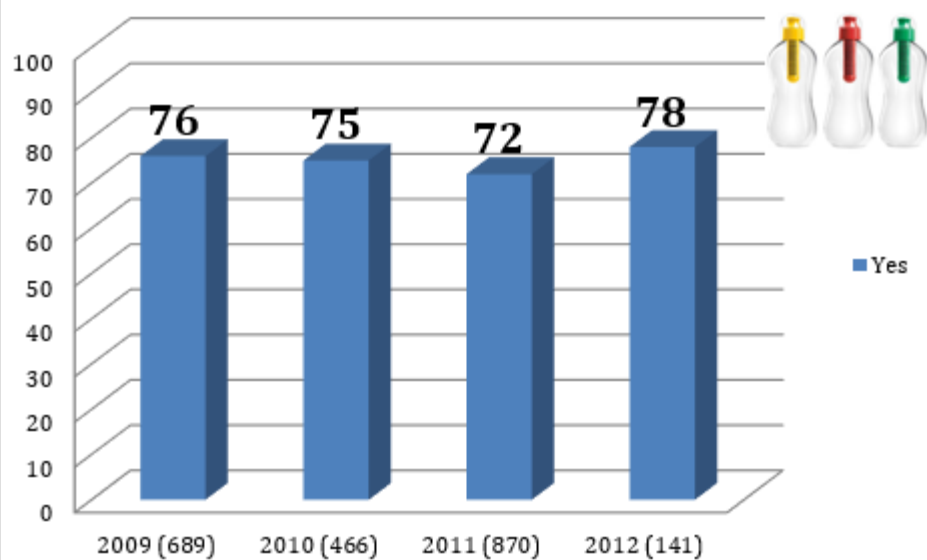
¿Sabías que el plato Styrofoam® con tapa tiene 3 veces más impacto ambiental que el plato llano?



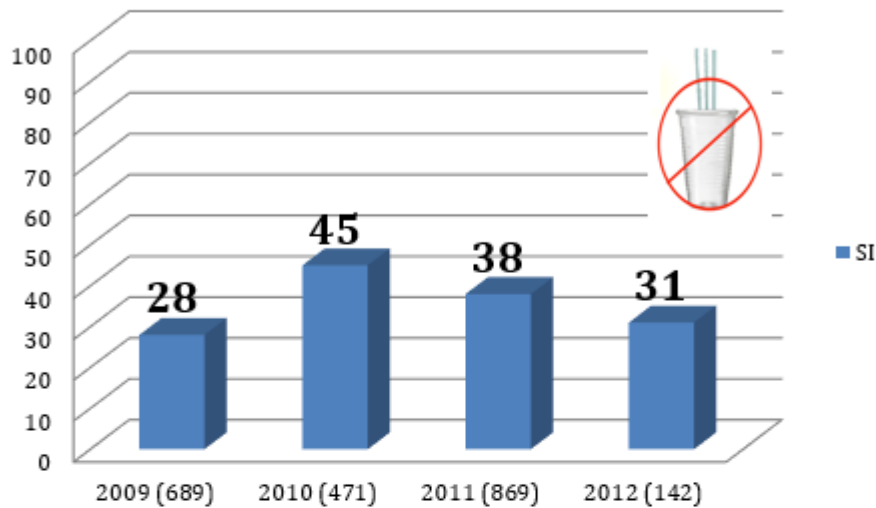
**¿Sabías del posible daño a tu salud de las
botellas plásticas debido
a que contienen Bisphenol-A (BPA)?**



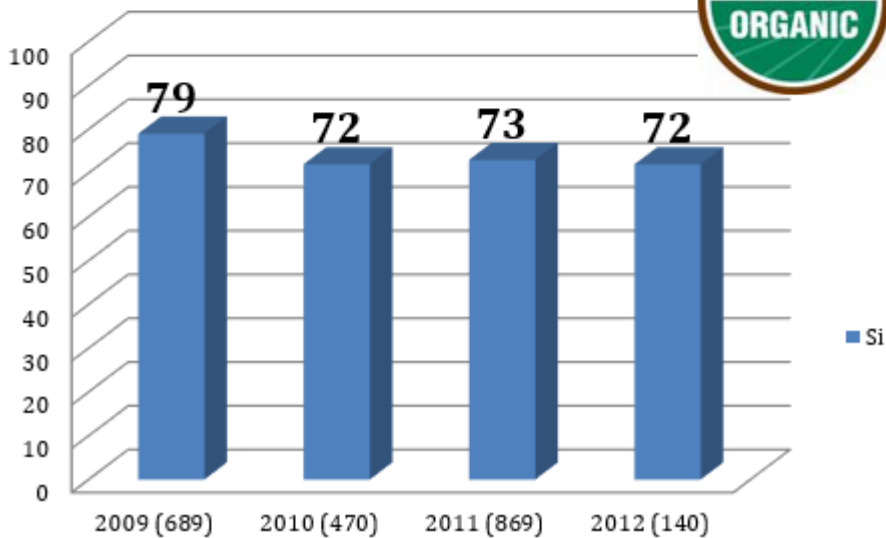
**Would you buy a reusable BPA-free
water bottle ?**



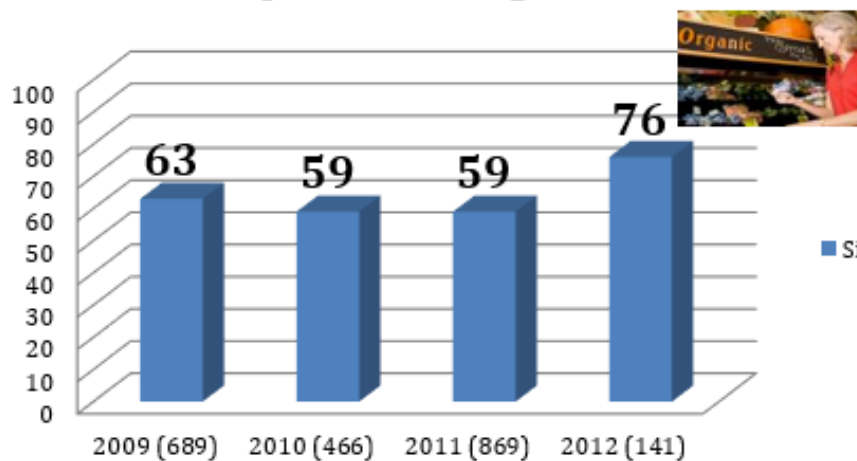
**¿Sabías que los vasos y los sorbetos
plásticos NO se reciclan
porque no son plástico tipo # 1 ni #2?**



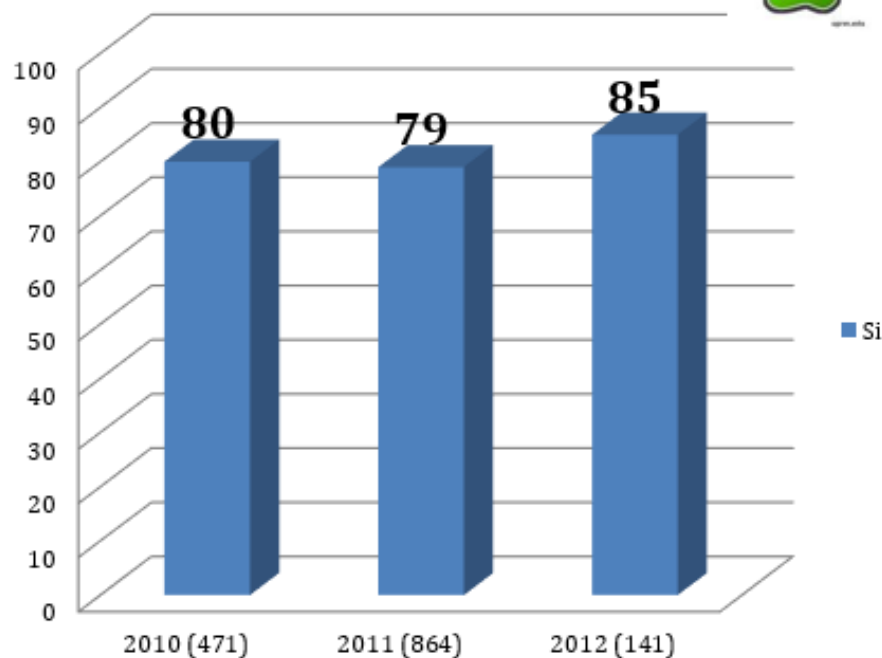
**¿Conoces el efecto adverso para el
planeta de los productos que no
son orgánicos?**



¿Conoces los beneficios a la salud de la comida, ropa y otros productos orgánicos?

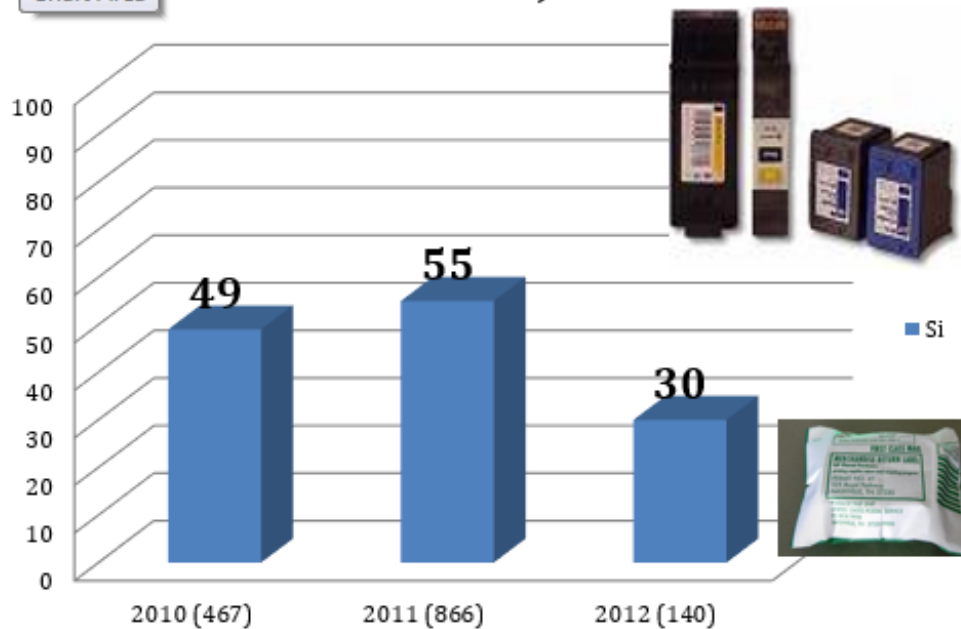


¿Te gustaría que se re-estableciera el uso de vajilla de platos reusables (mejores para la salud) e Cafeteria...

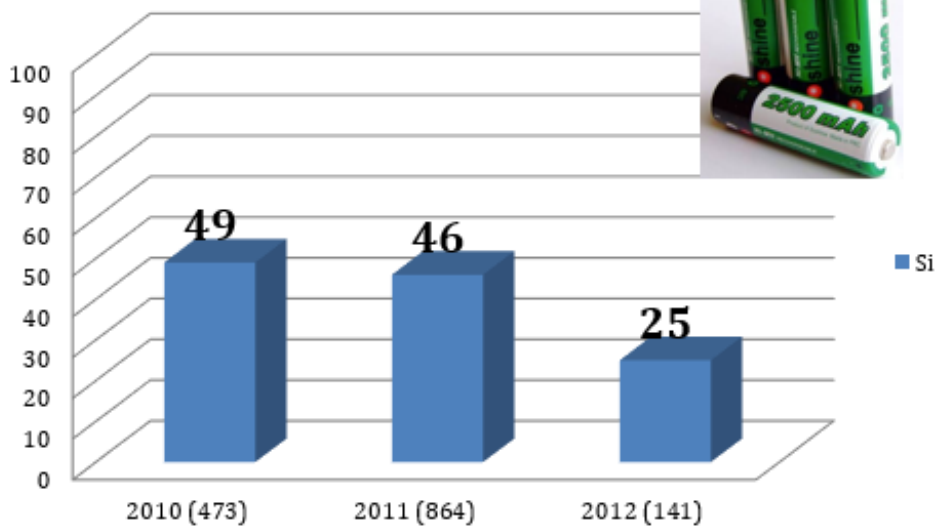


¿Sabes donde disponer de los cartuchos de tinta viejos?

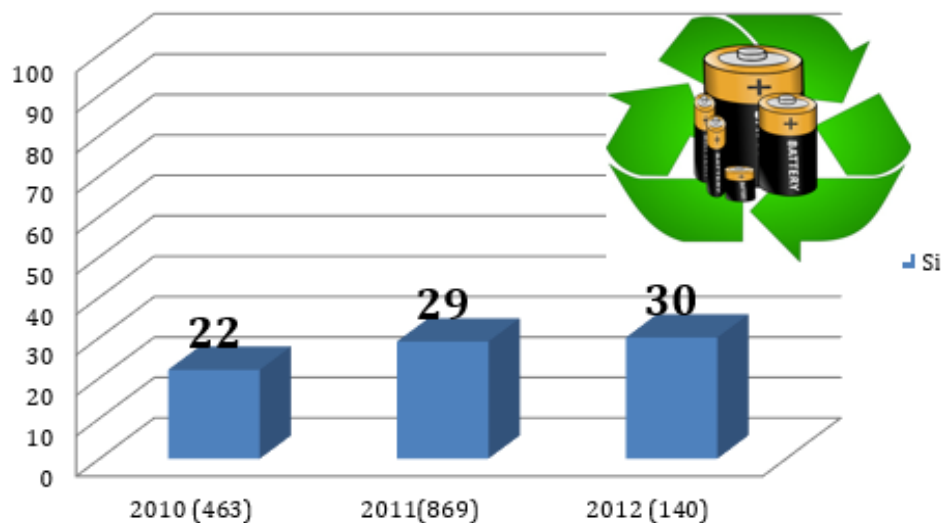
Chart Area



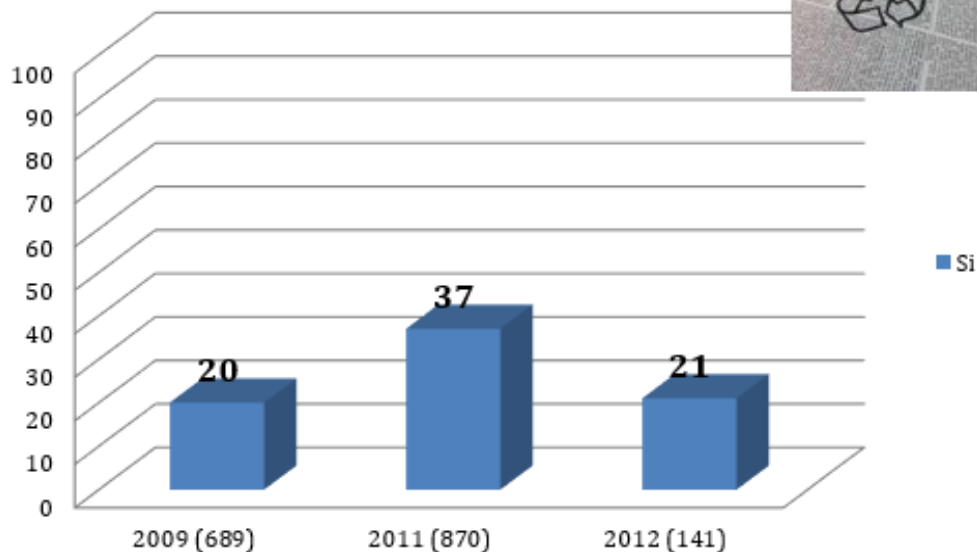
¿Sabías que puedes ahorrar unos \$100 por cada batería recargable que usas?



**¿Sabes dónde disponer de las baterías viejas
para evitar
contaminación de las aguas y la naturaleza?**



¿Sabes donde reciclar el papel y el periódico en el RUM?





Política Institucional para la Conservación de los árboles y las palmas del Recinto Universitario de Mayagüez

Introducción

Gracias a la iniciativa de los miembros de la comunidad académica que a través de las décadas han sembrado plantas, y a la dedicación del personal encargado de cuidarlas, el Recinto Universitario de Mayagüez es hoy un atractivo jardín botánico donde crecen doscientas especies de árboles y palmas. Esta flora no sólo embellece el recinto, sino que con su sombra refresca los edificios. También atrae aves que hacen más placentera la estadía de empleados y visitantes. No menos importante, nuestra flora sirve de laboratorio para varios cursos.

Muchas universidades otorgan una alta prioridad a la conservación de su flora. Con el cuidado adecuado, nuestros árboles y palmas continuarán embelleciendo el recinto y beneficiando a futuras generaciones de estudiantes, profesores, administradores y visitantes.

Comité de Árboles

Se establece mediante esta política un Comité de Árboles compuesto por **tres profesores** nombrados por el rector, el decano de administración o su representante y **un miembro del Departamento de Campos y Carreteras** nombrado por el director de esa dependencia. Los miembros servirán por tres años, al cabo de los cuales podrán ser nominados para otro término similar. El comité establecerá las normas para su funcionamiento y evaluará cada solicitud de poda sustancial o corte en un plazo no mayor de tres semanas luego de ser notificados sobre la intención de realizar dicho trabajo. El comité evaluará cada solicitud teniendo como una de sus prioridades más altas la conservación de los ejemplares y la protección de los miembros de la comunidad académica y de la propiedad pública y privada. El Director de Planta Física y su personal están para “implantar y ejecutar” las medidas a tono con la Política Ambiental de la UPR, de la leyes que administra Recursos Naturales y de la política interna que se apruebe para el manejo preventivo de la flora del RUM. Adjunto ver copia de la *Política de Manejo de Áreas Verdes de la UPR* Comité de Arboles del RUM es el que debe tener la decisión final sobre el trabajo a realizarse.

Mantenimiento de los árboles y las palmas

El Departamento de Campos y Carreteras establecerá un plan para la remoción anual de plantas epífitas y parásitas que por su abundancia reducen la salud y buena apariencia de los árboles. El Comité de Árboles identificará estas plantas para que sólo se remuevan las que ocasionan daño. Esta actividad evitará que el árbol se debilite o muera y tenga que ser removido. Durante el mantenimiento

rutinario de los alrededores, el personal de mantenimiento tendrá especial precaución con el uso de cortadoras de hilo (**trimmers**) que pueden remover la corteza y matar ejemplares jóvenes.

Mitigación por la remoción de ejemplares

La remoción ocasional de un árbol o una palma por razones justificadas será mitigada mediante la siembra de diez ejemplares similares cerca o en otro lugar del recinto. Si no es posible conseguir la misma especie o si ésta es común en el recinto, el comité recomendará otras especies adecuadas para los lugares donde serán sembradas. Este proceso de mitigación puede **aprovecharse para aumentar la diversidad** de especies que crecen en el recinto.

Siembra de ejemplares

La administración universitaria coordinará con las asociaciones estudiantiles la siembra periódica de árboles y palmas en lugares propios para dicha práctica. El Comité de Árboles asesorará en la selección de especies para asegurar que no se siembren variedades que más tarde puedan causar problemas por su impacto sobre personas o propiedad. Por esta misma razón los miembros de la comunidad académica que deseen sembrar árboles o palmas deberán solicitar permiso al Director del Departamento de Campos y Carreteras y recibirlo antes de realizar la siembra. Los árboles y las palmas sembradas sin permiso podrán ser removidas si a juicio del Comité de Árboles han sido colocadas en un lugar inapropiado para la especie o en un lugar que ha sido destinado a otro uso.

Cultura de conservación

Para que esta política sea exitosa es necesario crear conciencia en la comunidad académica sobre la importancia que tienen los árboles y las palmas, además de los arbustos y otras plantas que crecen en el recinto. Con este propósito, el Comité de Árboles, la administración universitaria y las asociaciones estudiantiles coordinarán **actividades que eduquen e integren** la comunidad a este esfuerzo.

