



Campus Verde

Report 2015

This report includes the activities by the Campus Verde Initiative, which is constituted mainly by students guided by faculty and personnel from UPRM, but also includes several collaborations with members of the community.

Presented by Dr. Sandra Cruz-Pol, Dr. José Colom – Ustáriz and Prof. Carmen Castañeyra
Campus Verde Coordinator.
June 2015

Table of Contents

I. Mission Statement.....	3
II. Campus Verde Structure	4
III. Green Adventures.....	5
IV. Green Team	6
V. Tree Committee.....	8
VI. Eco Cine: More Leveraging.....	9
VII. Merging: Student Chapters.....	10
VIII. Education and Outreach Activities 2013-14	11
IX. Campus Verde Students.....	23
X. Ride a Bike: Promote Bicycle Transportation.....	24
A. Official Student Organization	
B. Projects	
C. Educational, Recreational And Outreach Activities	
XI. Green Buildings and Sustainability RUM Group.....	25
A. Official Student Organization	
B. Educational, Recreational and Outreach Activities	
XII. UNICEF.....	26
A. Official Student Organization	
B. Educational, Recreational and Outreach Activities	
XIII. AmeriCorps.....	28
A. Project	
B. Educational, Recreational and Outreach Activities	
XIV. Energy Conservation and Efficiency.....	29
A. Solar House into Ecological House.....	30
XV. Nature Activities	32
A. Beach Clean-up Day	
B. Waterfall Clean-up Day	
XVI. Education and Outreach Materials and Training	32
A. Training for students and personnel about Global Warming Solutions.....	35
1. Television and Radio Appearances about Global Warming Solutions	35
2. Texas wants Campus Verde!	35
3. Old San Juan Energy Museum.....	35
Appendix A: Campus Verde Survey Results Comparison 2009- 2014	38
Appendix B: Draft for the new UPRM TREE Policy	53



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, and off-campus community organizations 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_Reporte2015.pdf

In addition we have 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 Sánchez Hidalgo Building, office SH-106. Campus Verde structure includes the Green Team composed of professors and non-teaching employees. And a collaboration with a grant writing team and the Tree Committee where its main mission is to protect campus green areas. The Green Adventures Leaders, coordinate activities like kayaking, surfing and beach cleanups, among others. We collaborate with the recycling office at *Edificio B*. The student groups are Ride a Bike, Unicef, Campus Verde Students (CVS) and Green Buildings and Sustainability (GBS) RUM Group.

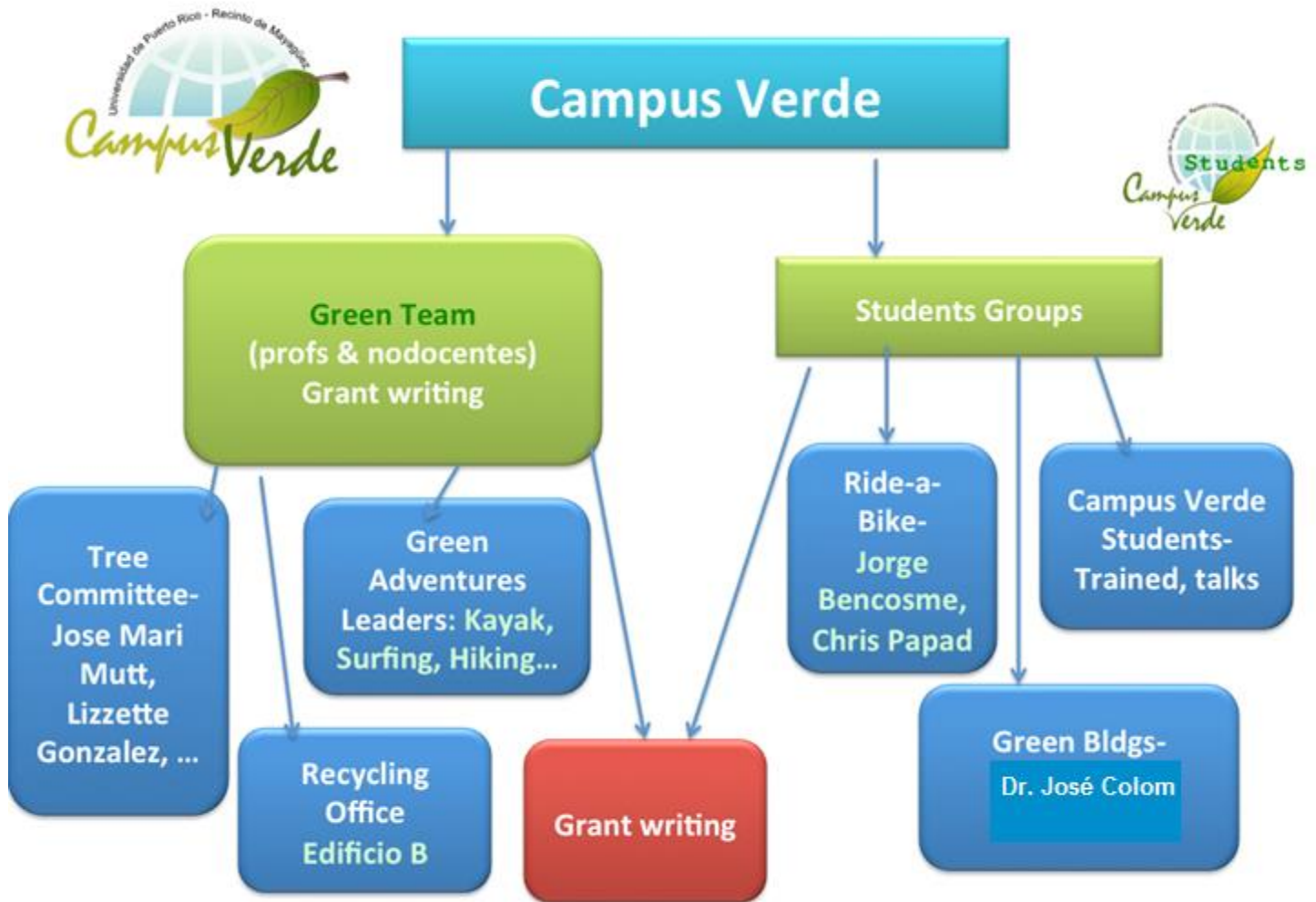


Fig. 1. Campus Verde structure: Green team is composed of UPRM personnel while Students Groups is composed mainly by students with personnel/faculty advisors.

III. Green Adventures

During this past academic year, Campus Verde continued to grow thanks with the Prof. Carmen Castañeyra as Director of CV and Dr. José Colom Ustáriz as Inter Director, Jorge Bencosme as the Co-Director. Dr. Sandra Cruz Pol continues to bring many ideas to the program and collaboration during his working licensing in Science National Foundation. We are also very grateful to the support of Efraín Morales, from the UPRM Computer Information Technology (CTI).

The image shows a screenshot of the Campus Verde webpage. At the top, there is a banner with green foliage and the text "Campus Verde". Below this is a navigation bar for the University of Puerto Rico (UR) with the logo "RUM Recinto Universitario de Mayagüez" and a menu: "mi portal admisiones académico administración estudiantes investigación biblioteca servicios deportes buscar más...". There are also social media icons for Facebook, Twitter, YouTube, and LinkedIn.

GREEN Activities | Student & Leadership Development

✓ **Recommend** You and 82 others recommend this.

Green Activities Eco Cine Kayaks Biking Eventos Pasados UNICEF CV Website Facebook Twitter

Campus Verde is now offering outdoor activities with the main goal to have students visit places of interest in Puerto Rico so that they can increase their appreciation of our beautiful island and the need for conservation practices. The students can select among a variety of activities, including kayaking, snorkeling, hiking, and cycling. Dallas Alston and Jorge Bencosme will coordinate these activities and there will be other leaders for some of the excursions.

Kayaking will primarily take place in La Parguera; the other activities may occur at other locations such as beaches, parks and rivers. For each activity, safety is a primary concern, so there will be no leeway for required equipment for some activities. For instance, helmets must be worn during cycling and life jackets must be worn during kayaking. The leaders will also be giving safety tips during the outings. Clothing requirements will vary, but in general we recommend that you protect yourself with clothing or sun screen during sunny activities. Long pants are recommended for hiking.

Important: We will try to point out activities which are strenuous. In any case, you will be getting a lot of exercise, so you should be in reasonably good condition to attend any of the trips.

Dic. 23 **Membresía Verde**

¿Estás interesado en unirte al movimiento Verde Colegial?

Sacarle provecho profesionalmente y académicamente al junte con el movimiento Verde **Campus Verde Colegial**: visita la naturaleza, toma talleres, adiestramientos, certificados, conferencias, eco-cine, ferias y mucho más.

¡Esta es tu oportunidad!



Fig. 2. The Green Adventures webpage designed by Efraín Morales, 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 have recruited many people to serve as leaders of these green trips whose main purpose is to give the student body an opportunity to appreciate nature. Most activities on this new page are free but some have for a modest (no reimbursable) donation which go 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

Kayaking	Cycling	Surfing	Clean Ups
Rolf-Martin Vieten Jashira Torres Héctor Quiñones Kellyam Valle Josean Torres	Jorge Bencosme	Miguel Canals	Carmen Castañeyra



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 joined the Green Team as collaborator from outside UPRM, Dr. Fernando Abruña, who was previously president and founder of (US Green Building Council) USGBC Caribbean Chapter and professor at UPR-RP. He collaborated on the integration of ecofriendly and architectural ideas in order to present the Solar Eco House as a sustainable housing type

Our intention with the Green Team below, is to leverage with talent from 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. Our Green Team is presented in the next figure. Can be found at:



Dra. Sandra L. Cruz-Pérez
Directora y Fundadora Campus Verde (2007-2014)
 Catálitica Depto. Ingeniería Biónica, Bioenergética
 On leave at NSF - Program Director
 Email: campusverde@uprm.edu
 Oficina: S-604
 Tel: (787) 832-4040 Ext. 3622
 Fax: (787) 831-7564



Dr. José Colón-Ustari
Director Interino Campus Verde
Coordinador Casa Eco Solar (2015)
 Catálitica Depto. Ingeniería Biónica
 UPR- Ruano de Mayaguez, P.R.
 Email: colon@fscu.uprm.edu
 Tel: (787) 832-4040 Ext. 3622, 2440



Dr. Arc. Fernando Abruña, **President** USGBC (U.S. Green Building Council)
Comunicación Verde



Dr. Uriel Ablon
Coordinador Campus Verde Planero al PCUPM Planero and **Green Adventures** Founder
Catálitica Depto. Biología
 Pontifical Catholic University of Puerto Rico in Ponce
 Tel: (787) 526-4043 (before 8 pm) Email: ablon@pcupm.edu



Dr. Carlos Delany-Julia - **Catálitica Dept. Biología UPRM**
Planero de Puerto Rico, Ecología, Ecosistemas, Diversidad Biológica
 Email: carlos.delany@uprm.edu
 Tel: 787-832-4043, Ext. 3417



Dr. Miguel Canals
Green Adventures: Surfing Leader
 Assistant Professor Engineering Science and Materials Department
 Civil Mechanics / Coastal Engineering
Miguel.Canals@uprm.edu



Dra. Luzmila González- **Catálitica Horticultura Ciencias Agrícolas UPRM**
Comité Evaluador de Corte/Poda de Árboles
 Email: luzmila.gonzalez@uprm.edu
 Tel: 787-832-4043, Ext. 2156



Dra. Sally González Miravalles- **Catálitica Ciencias Agrícolas UPRM**
Comité Evaluador de Corte/Poda de Árboles
 Email: sally.gonzalez@uprm.edu
 Tel: 787-832-4043, Ext. 3995
 *Área de Espacios Interiores de Puerto Rico



Carmen González Toro - **Especialista en Ambiente**
Servicio de Extensión Agrícola
 Email: Carmen.Gonzalez@uprm.edu
 Tel: 787-832-4043 Ext. 3013, 3021



Dr. Hipólito O'Neil - **Climatología e Insecticidas Ambientales**
Manual de Agricultura, Plaguicidas
 Ext. Agrícola UPRM
 email: hipolito.ofonil@uprm.edu



Dr. Christopher Papadopoulos, **Cycling and Green Transportation**
 Assistant Professor, Department of Engineering Science & Materials
<http://www.uprm.edu/people/christopher-papadopoulos>
<http://pwebkba.uprm.edu/~papcpe.htm>



Dr. Francisco Meléndez- **Decano de Escuelas, UPRM**
Departamento de Ingeniería Civil
coorganizador de la Asociación Green Buildings
<http://www.uprm.edu/melendez.htm>
 Vozes: (787) 832-4043 Ext. 3469 Email: francisco.melendez@uprm.edu



Dr. Jose Mari Muir, **Entomología**, **Catálitica Depto. Biología UPRM**
Comité Evaluador de Corte/Poda de Árboles
Inventario en línea de árboles en el UPRM
 Email: Jose.Muir@uprm.edu



Dra. Julia Vilanova, **Fisiología, Biología UPRM**
Comité Evaluador de Corte/Poda de Árboles
 Email: JVilanova@yahoo.com
 Coordinadora Alianza Ciudadana para la Educación en Energía Renovable (AC)



Dr. Uriel Pessenti - **Agricultura Orgánica Tropical**
 Depto. Ciencias Agrícolas UPRM
 Email: Uriel.Pessenti@uprm.edu
 Tel: 787-285-3254



Dr. Roberto Fariña Martínez
Director Ofic. Salud y Seguridad Ambiental **Coordinador Programa de**
Mejoramiento de Oficinas
 Tel: (787) 832-4040 Ext. 3996, 3921
 Fax: (787) 285 - 3998



Prof. Carmen Castellanos
Directora (2014-2015)
Computer Graphics Faculty
 Email: CarmenCastellanos@uprm.edu
 Carmen Castellanos@uprm.edu
 Oficina: SH 108
 Tel: (787) 832-4043 ext311



Jorge Benicómi
Co-Director & Green Biking Leader
 Proprietario de Sistemas Biónicos
 Centro de Tecnologías de Información
 Web Development Team
 Oficina: R-101
<http://www.uprm.edu/ci>
 Tel: (787) 832-4040 Ext. 2055, 2072



Yanetza Guzmán **Almendra**
Asistente de Administración I
 Tel: (787) 832-4040 Ext. 5811
 SH 108, Email: YanetzaGuzman@uprm.edu
Yanetza.Guzman@uprm.edu



Dra. Betzabet Rodríguez
Catálitica Asociación Dept. Ingeniería Industrial
 Email: betzabet.rodriguez@uprm.edu



Dr. Eric Aponte **Bioenergía**
 Dept. Ingeniería Eléctrica y en Computación, **Sistemas Fotovoltaicos**
Colaborador Casa Eco Solar
 Email: eraponte@uprm.edu



Dra. Ellen Rizo de Acarín
Directora Plan Coop
Programa de Ingeniería
Colaboradora de Proyecto Eco Casa Solar, **Documento de Ingeniería**
 Tel: (787) 832-4040 Ext. 3623
 Email: erizo@fscu.uprm.edu



Dra. Mariel Viera
Directora del Centro de Investigación y Desarrollo CID-UPRM
Catálitica
 Depto. Química.
mariel.viera@uprm.edu
 (787) 832-4040 Ext. 5260



Brian Morales
Green Adventures Web Creator and Web Administrator
 Centro de Tecnologías de Información
 Web Development Team
 Oficina: R-101
<http://www.uprm.edu/ci>
 Tel: (787) 832-4040 Ext. 5230, 2055, 2079

More collaborators, more ideas. Great future ahead!

Fig. 4. Collage of new Green Team members constituted mostly by UPRM personnel with expertise in areas related to sustainability. We also have our collaborators from outside of UPRM, Dr. Fernando Abruña, previous president of (US Green Building Council) USGBC Caribbean Chapter and Sadhu Govardhan, from www.organicfarm.net. **Contact us at: campusverde@uprm.edu**

V. Tree Committee

Since early in year 2013, our group of experts in topics related to tree interference in a Tree Policy for the first time in 100 years since the foundation of the institution. This policy is being reviewed by the administration since that year. 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. Past years 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, social and environmental well-being. All the movies are announced through our *Eventos Verdes* webpage.

Eco Cine:

-*Swith* (2012)

-*What Plants Talk About*

-*Cine bajo las estrellas* (UNICEF)



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.

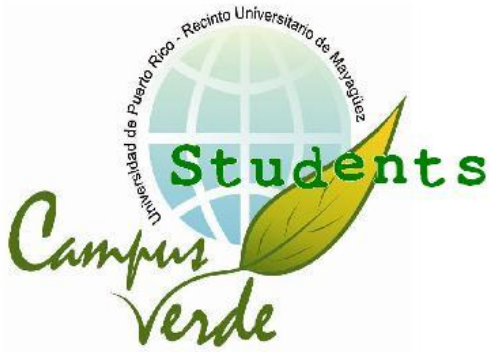
Fig. 6 List of all the movies that have been offered in previous years free of charge and will be shown again during the semester.

VII. 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.

The group of student, the ***Green Buildings & Sustainability RUM Group*** student chapter. This groups has the ***Cool Cities subgroup*** which coordinates talks to schools about sustainability topics. It also helps with the annual coordination of the LEED (Leadership in Energy & Environmental Design) Certification course and with corporate visits to USGBC certified Green Building in Puerto Rico. ***UNICEF*** is 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 **Campus Verde Students** that helps coordinate green activities like talks to schools, beach cleanups and tree planting with other student associations as **PRWEA, IEEE, Tau Beta Pi, BBB, SWE, SHPE**, and others. And **AmeriCorps** as a group of member affiliated to Campus Verde.



<http://campusverde.uprm.edu/estudiantes.html>



<http://campusverde.uprm.edu/greenbuildings.html>



<http://unicef.uprm.edu>



<http://campusverde.uprm.edu/RideaBike.html>



Proyecto CHIPE – Miembros AmeriCorps (Municipio de Mayagüez)

<https://www.facebook.com/pages/Proyecto-CHIFE-AmeriCorps/230655613794938?fref=ts>

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 2014-15

During the academic year of 2014 to 2015, 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 and social activities such as:

- **Day Kayaking at La Parguera** with Jashira on June 7, 2014, with Héctor on July 20 2014 and with Phillip on August 9, 2014, and with Rolf on August 30, 2014. La Parguera offers one of the best preserved coral reef systems and mangrove forests in the Caribbean. You can enjoy and learn about the natural scenic beauty or other water sports such as paddleboard, kayaking, boating, snorkeling and sailing. Photo link: https://photos.google.com/u/1/album/AF1QipPN_WnrnNFjiPASGGRTtxRhgSxqCkC1P7F7L4Gz
- **Green General Assembly** on August 26, 2014 at RUM, S-113. Convene students and staff and faculty to be part of the green movement RUM! Open to ideas and the desires to be a positive contribution to the much-needed Sustainability Planet! Upcoming activities were discussed, tasks assigned committees and the progress report on projects and activities.
- **Eco Cine- *Swith*** (2012) on September 9, 2014. Is a film gone deep into the world's most restricted energy sites, to depoliticize competing power source, make the technical accessible, and discover the truth of our energy future.
- ***Fit pero Horthy*** on September 18, 2014 by Gianfranco Santaliz (Campus Verde Student) in the quest to be fit many people choose to take rigorous exercise routines, adopting diets and or using supplements. Given this reality, a conceptual overview of the relationship of "fitness" and health will be offered. Besides the practical part to be fit but healthy arose. Purpose of the event: Make clear that being in shape or enjoy an excellent sport performance does not necessarily translate into health, and propose practices that help us to achieve to be fit and at the same time improve our health. The talk is of an educational nature. The information contained in it is based on the nutritional recommendations of the United States Department of Agriculture. By itself it is not intended to give medical advice of any kind, either personalized nutritional recommendations.



Fig. 8. Promotion for activity Fit pero Healthy.

- **Paseo urbano en Bicicleta** por Mayagüez on September 20, 2014. Captained by Jorge Bencosme our leader green. Saturday, September 20, 2014. On a urban tour of the town of Mayaguez, visiting the Plaza Paseo Colon and then the coast, through the New Millennium Children's Park and fishing club.

Photos: http://bike.uprm.edu/Ride_a_Bike/Fotos/Paginas/Mayaguez_4.html



Fig. 9. Map drawn for the bike run by the town of Mayaguez and the tour. For more information visit: http://bike.uprm.edu/Ride_a_Bike/Inicio.html

- **Limpieza Internacional de Costas Playa Jobs in Isabela Scuba Dog Society** sponsors the UPRM chapter PR Team- Capitan *Angelica Abreu* <angelica.abreu@upr.edu> Saturday, September 20, 2014 Event Time: 7:30 a.m. **Limpieza Internacional de Costas Playa el Maní in Mayagüez Scuba Dog**– Capitan *Hector Quiñones* <hector.quinones2@upr.edu> form groups for both beach cleanups were a success coastal garbage was collected and accumulate material for recycling.



Fig. 10. Volunteer group International Coastal Cleanup in September 2014. Photo Link at: https://photos.google.com/u/1/album/AF1QipMk_OxHDY96BlaKDIrX7Fk4XAdt7Uq8fXKD26MO

- **Limpieza de Cascada Charco Azul en Patillas**, October 4, 2014. Cleaning waterfall in Southeast town – Patillas. Photo Link: <https://photos.google.com/u/1/album/AF1QipMtznLUxVmmnC1-IV0XIr2ylbc64mET0KnCze-z>
- **LEED GA Review Course** on October 25 and 26, 2014. Campus Verde and Green Buildings & Sustainability (GBS) provides the overview for the LEED Green Associate Certification to an extremely low price compared to outside the enclosure. The students have learned about green and sustainable than today many companies are looking buildings. Also, this review will not only prepared to pass the certification but it helps to apply that knowledge in various green projects in UPRM. During these event 11 students from diverse majors participated. This course introduced the concepts and strategies of green buildings. The instructor also presented the ideas and practices that form the basis for further green building study, in particular the classification systems of the Leadership in Energy and Environmental Design (LEED). Thanks to Zimmetry Environmental and Dresscom for making this possible, and others also. Photo link at: <https://photos.google.com/u/1/album/AF1Qip08D3iUeG2uiG-Y5XwWB4C5gG0l2bWvusc2g03Z>



Fig. 11. LEED Course 2014. Right Onell Gonzalez our excellent resource from Zimmetry Environmental.

- **Trick – or Tick for UNICEF:** Annually, several student associations participate in this week's Trick-or-Treat, helping to raise funds for the cause of UNICEF. They do this through donations decorated tables, sales, photo booths, trick-or-treating in costumes and more. This year, for the 27 to October

31. Certificates of appreciation to the 3 organizations that raise more achieve, and certificates of appreciation were given to all without their participation would not be possible difference year after year manages this activity. (THANK YOU!!!)

- **OPEN HOUSE: UPR Mayaguez Campus- on October 24, 2014:** recruiting events. With the support of our *Rector Dr. John Fernández Van Cleve* and our *director Prof. Carmen Castañeyra* during the open house that the College was made, the Green Campus initiative had its information booth along with the group of AmeriCorps members showing some stereotypes works done on the UPRM- Alzamora Aquaponics' farm.



Fig. 12. Open House at UPR 2014 – Mayagüez Campus with Campus Verde Students and AmeriCorps member.

- **Corrida a Rex Cream in Mayaguez City by Ride a Bike** on October, 29, 2014. We deal with education about the advantages and benefits provided by using the bicycle. Our projects include work on collecting data and creating proposals to intercede for infrastructure to support the use of bicycles in order to positively contribute to the environment, health, the community and the economy.
- **Pasadía Verde:** November 11, 2014 with the idea of fellowship and have a good time nature treasuring headed to Crash Boat Beach in Aguadilla. The Green Campus students spend time beach

where they could fraternize with the other accompanying associations and spend some time relaxing and humorous, while taking care not to leave trash in the area and if possible to guide those who did so. Photo Link at: https://photos.google.com/u/1/album/AF1QipND4VFEP4_hqR34LaKxmyL5t3bKv_5B6ba_C1UX

- **Paseo al Estuario la Boquilla by Ride a Bike Chapter**, November 15, 2014. The Caño Boquilla Mayaguez is a natural system, consisting of mangroves and brackish estuarine swamp forest, a rare coastal ecosystems in Puerto Rico, dominated by the Bloodwood (*Pterocarpus officinalis*), which is the habitat of 29 species of birds, as species of reptiles, amphibians, fish and crustaceans of commercial and recreational value, mollusk and marine mammals. The idea of making a run to this place is also an activity where included the use of bicycles as a means of transportation and we know more about the idea of the conservation and support the eco local tourism in the area.
INFO: <http://www.mayaguezsabeamango.com/historias/historias-final/350-desvelan-secretos-de-la-reserva-natural-en-el-estuario-la-boquilla>
Photo link: <https://drive.google.com/a/upr.edu/folderview?id=0B4R7-GstiYOkfnc3UG43SEpPN1RiM1RpQkpQal9nTmMtYON2ZHoyS2t5VklSVWpxV0JwMUK&usp=sharing&tid=0B4R7-GstiYOkYzkyN29aRWdKa0k>
- **Limpieza de río Barrio El Seco, Mayagüez**, November 15, 2014 cleaning this area is near the Mayaguez Campus where a river flows, the accumulation of waste is much needed by many volunteers to maintain the area without solid waste. Photo links: <https://photos.google.com/u/1/album/AF1QipOoNGmZYUZNIEKaRUgi0xSBITAR9TcC1uGnQX3b>, https://www.facebook.com/campusverde/media_set?set=a.10204978785807731.1073741851.1184157568&type=3
- **Green Project Opportunity – Cool Cities group**, November, 25 de 2014 The Cool Cities Project students groups present their progress, their next steps and how could get involved in the green opportunities as students groups: - Energy Audits, - Green Schools - Recycling Research
A Cool Cities project is an initiative that encourages communities to implement clean energy solutions in order to save money, create green jobs and help control global warming. GBS has adopted Cool Cities for our town, Mayagüez. This requires collaboration between communities, organizations, businesses and local leaders.
 - **Papelotón: Recycling event with GBS student chapter**: on December, 2015. In this event we sought to raise awareness among students about the use of paper and the benefits of the consumption reduction that would have on the environment. Cardboard containers were placed in 15 buildings on the site to collect papers and books during the finals exams season. Our main goal was to impact every department with this event. Out of the 15 buildings, 10 of them retained the containers for the specified period. According to that, this event was 68% satisfactory. GBS developed some recommendations that the administration will consider in order to increase the efficiency of the recycling system at the campus.
- **Kayak Day with Jashira** December 31, 2014 at Isla Magueyes, La Parguera (lat 17° 58.310'N, lon 67° 2.822'W). Magueyes Island has natural exuberance and is the most comprehensive marine research

throughout the Caribbean sea. This is one of the largest islands in the system of keys that made La Parguera and forms the great laboratory of the Department of Marine Sciences of the Mayagüez Campus (RUM).

Photo

link:

https://photos.google.com/u/1/album/AF1QipPN_WnrnNFjiPASGGRTtxRhgSxqCkC1P7F7L4Gz

- **Reforestación Colegial 2015.** The January 23, 2015 was carried out our first reforestation National Wildlife Refuge Laguna Cartagena! locating and mobilizing 4,000 trees College student associations to plant at least 1,000 of them and contribute to the strategic plan of conservation of the refuge. Thanks to the student Efrain Rodriguez Ocasio <efrain.rodriguez@upr.edu> Co-Founder and President and member of campus Verde, College Reforestation and Abdiel Valentin I. Feliciano <Abdiel.valentin@upr.edu> Co-Founder and Vice President, College Reforestation. We are very pleased to have been part of this event along with College Reforestation. Thanks to all student organizations the task of participating in this important event occurred. Month after month the organization will visit a shelter for maintenance of the planted trees. A talk / workshop was provided to establish the organization and rules of how to plant these trees. Photo Link: https://photos.google.com/u/1/album/AF1QipNaSab_-UXVAHuHtoso8PLn5l-Tg4ExeE3DSXs
- **Jane Goodall R&S Chapter visit to UPRM:** Visit on January 30, 2015 Dr. Rick Asselta, from the JG Institute and his group visited UPRM and program schedule for the visit of Dr. Jane Goodall on March 25, 2015 and to see how we can collaborate to create a greener Puerto Rico with the **Jane Goodall** founded **Roots & Shoot** environmental chapters (R & S), first in the U.S. and now across the globe.
- **Ride Day from Mayaguez to Rincón, with Ride a Bike** on February 14, 2015. Bike ride from Mayaguez to the town of Rincon. It is important to share and enjoy touring new places and learning about the natural beauty and landscapes of Puerto Rico in the best way that you can see it is by bike. To encounter out the meet from 8:00 am to leave at 9:00 am in the parking area in front of the gym Blanca F. Angel Espada. During our tour we skirted the coast of Rincon passing several communities and beaches, visiting the lighthouse to get to the beach where located Domes old nuclear plant. Then go by the public square. Back to the starting point to complete. The estimated journey time is 3-4 hours. We ride a comfortable pace avoiding steep slopes. The return was 55 km (round trip) and therefore requires a good physical condition and endurance. Photo link at: <https://drive.google.com/a/upr.edu/folderview?id=0B4R7-GstiYOkY21jMndOS0VJMTQ&usp=sharing&tid=0B4R7-GstiYOkYzkyN29aRWdKa0k>
- **Limpieza de Costa del Barrio El Seco en Mayagüez (Part 2).** February 21, 2015 the Coastal Cleanup held in Mayaguez Barrio Seco was the second on this occasion that takes place, as it is a place where a lot of garbage that ends Yaguez River accumulates. It is an excellent eco system for poultry, fish that live in the mangroves. We teach environmental conservation as one of the most important things for marine and terrestrial ecosystems. Photo link: https://www.facebook.com/campusverde/media_set?set=a.10205767993697435.1073741853.1184157568&type=3

- **Certificación Verde**, March 7, 2015. **Green Seminar Series:** This event was held on Mayaguez campus. During these event 21 students from diverse departments participated. Professor offered these seminars; they specialize in topics such as water management and waste control. Participants were given a notebook and pen, which were made with recycled materials. Also, at the end of the event they were given food. Topics discussed: **Sustainability** by Prof. Robinson Rodriguez (Specialist in rural sociology), **Nutrition** by Marla Delgado y Heriberto Cruz (Nutrition Program students), **Natural Resources** by Elizabeth Velázquez- (DRNA Mayaguez Director), **Energy** by Prof. Cecilio Ortiz (Member of the organizing committee of the National Institute of Energy and sustainability), **Leadership** by Sr. Nelson Pagán (Licensed Professional Counselor), **Hygiene and Cleaning** by Hector Quiñones (Chemistry student). Photo Link at https://photos.google.com/u/1/album/AF1QipPUhxBBwlfIA_9zLpH1SC2PD80LraDD0R9t4aN1
- **Ride Day to Ponce March with Ride a Bike** on March 21, 2015. The run held in Ponce, city located south of PR. They visited important places like La Guancha, Linear, Plaza Delicias, Firehouse, Bakery St. Augustine and Cruceta Del Vigía. Photo link at: <https://drive.google.com/a/upr.edu/folderview?id=0B4R7-GstiYOkNTNLclMtb19nckE&usp=sharing&tid=0B4R7-GstiYOkYzkyN29aRWdKa0k>
- **Green Tour** with GBS to the VA Hospital Mayaguez. This event took place March 24th. Members had the opportunity to see up close renewable energy applied to a common building. Moreover, they acquired knowledge about sustainable technology, from an engineer who worked during the construction of this building.
- **Eco Cine: What Plants talk About** on March 24, 2015. When we think about plants, we don't often associate a term like "behavior" with them, but experimental plant ecologist JC Cahill wants to change that. The University of Alberta professor maintains that plants do behave and lead anything but solitary and sedentary lives. What Plants Talk About, teaches us all that plants are smarter and much more interactive than we thought. Info link: <http://www.pbs.org/wnet/nature/what-plants-talk-about-video-full-episode/8243/>
- **"We can't wait for environmental education" with Dr. Jane Goodall, Presentation:** In our efforts to educate people about environmental care including animal conservation and wildlife living on planet earth. We offer collaboration with the Jane Goodall Institute Roots and Shoot Program Latin America and the Caribbean, and his collaborator Rick & Nelly Asselta. The presentation: **We can't wait for environmental education**, this event took place on March 25, 2015 at the Palace of Sports and Recreation of the City of Mayaguez. This was the first presentation of three consecutive presentations that took place during the same week in PR. Dr. Jane Goodall, world-renowned British scientist, for his groundbreaking work on the behavior of chimpanzees and their efforts in environmental conservation, earned his doctorate at the University of Cambridge in ethology. He has received numerous honors and awards, including being named Messenger of Peace by the United Nations and Dame of the British Empire by Queen Elizabeth II of England. The Jane Goodall Institute (JGI), a global nonprofit purposes established in 1977, motivates and educates how to create a more just and sustainable world. The Roots & Shoots (R & S) program IJG has more than 10,000 chapters

in over 130 countries. Dr. speak in his presentation as R & S can favorably impact environmental education and support humanitarian missions globally. R & S provides educational material, activities and presentations to be implemented in communities and schools aimed at protecting the environment.

The Dr. Goodall agreed to come to the city of Mayaguez on March 25, 2015, if we could make a good demonstration of what we did care about the environment, we said we have the Eco Solar House that is in the process of construction. We accept the challenge and the effort and dedication many as, being made all the construction of ramps, steps, paint finishes on walls and windows, the floor linoleum, solar panels, electric socket is mounted. Thanks to the donation and coordination of Solar Maximum Industries, Master Paint. Physical Plant Engineering and Buildings and Grounds Department. And the collaboration of Ryan Torres Ramos, President Green Buildings Student Organization, UPR Mayaguez, students and volunteer brigade. The presentation at the Palace of Recreation to more than 2,000 people live and online was a great motivator for children, youth, adults, community leaders, school teachers, teachers, academics and public officials. Telling everyone their stories and experiences of research the jungle of Africa where she lived about 20 years studying the behavior of chimpanzees "Over time I gained his trust, which allowed me to start learning about them as individuals. I watched them making and using tools. I saw them using communication gestures like humans. Kissing, hugging, patting one another, pleading with outstretched hand, act arrogantly and throw stones", said Goodall on chimpanzees. "I watched complex social patterns. Dominant males protecting a territory, participate in primitive wars to protect its borders. I also saw examples of compassion and altruism. And I learned about long term relationships, and emotional support among family members. And it was clear to me that there was a clear line to divide humans from other animals", said Goodall. Goodall reports that a major conference was organized in 1986 to discuss the behavior of chimpanzees and conservation. "That's when I realized that the number of chimpanzees in the wild decreased rapidly, destroying their habitat, growth human population and hunting ", known as '*bush meat trade*'. This is the commercial hunting of wild animals to consume them as food." I decided I had to do what he could to help the chimpanzees, and educate the public about the true nature of chimpanzees, and other amazing animals with whom we share, and we share this planet", said Goodall. "In presentation, Dr. Goodall highlighted the importance that we cannot wait any longer, that all we have to do our bit to protect the environment," said on his part Dr. Sandra Cruz Pol, Professor of Electrical Engineering, UPR Mayaguez Campus and founder of Campus Verde.



Fig. 13 Dr. Jane Goodall in Mayaguez PR for presentation: "We can't wait for environmental education".

- Eco Solar House- Open Ceremony and Green Projects Exhibition** After her presentation, she visited the Eco Solar House at the *Research and Development Center (R&D) (or in Spanish - CID)*, and during the opening ceremony she planted a banana plant. In this exhibition house was added the presentation and exhibition of projects for environmental, conservation and sustainability. Students in charge of their projects they explained personally to Dr. Goodall, changes and progress that is being made college and the western schools for environmental conservation. Groups such as *AmeriCorps with their projects as Aquapónicos en Finca Alzamora and, Proyecto Estampas Agro Eco-turísticas de Puerto Rico. Elementary Schools WALKS sciences groups and Casita Montesori of Mayaguez. The Solar Cart (SERRT) and the Solar boat. Cool Cities Group from - Green Buildings with Energy Audicts Project, Recycling Research and Green Schools; Reforestación Colegial (College reforestation); Projects like Herbal role in the conservation of plant species- Department of Biology; Bamboo is a Means for Sustainability and Ecological Stewardship- Department of Engineering; Western Puerto Rico: Sea Turtle Project (UPR-Aguadilla); Community project in Paraiso, Dominican Republic – Department of Biology.*



Fig. 14. Green Projects Exhibition in Open Ceremony of the Eco Solar House with Dr. Jane Goodall.

Special thanks to all those who collaborated and made the development of this great activity with pride and dedication have made possible. The Honorable Mayor Jose Guillermo Rodriguez and municipal administration have given the dollar donation of \$5,000 to the Foundation Dr. Jane Goodall. The donation was made possible by the contribution of UPRM Alumni Foundation. Thanks to everyone who collaborated below:

Hon. José Guillermo Rodríguez, Mayor of Mayagüez

Dr. John Fernández Van Cleve, Rector UPR Mayaguez

Dr. José Colom Ustáriz, Director Campus Green, UPR Mayaguez

Dr. Sandra Cruz-Pol, Director and Founder Green Campus, UPR Mayaguez

Ms. Ellen Rivers of Acarón, Director Coop Plan INGE, UPR Mayaguez

Dra. Betzabé Rodríguez, Department of Industrial Engineering, UPR Mayaguez

Prof. Dimaris Acosta, Department of Biology, UPR Mayaguez

Dr. Erick E. Aponte Bezares, Department of Electrical and Computer Engineering-, UPR Mayaguez

Mr. Jorge Bencosme, Programmer Electronic Systems organizer Live broadcast, UPR Mayaguez

Ms. Maritza Laracuente Campudoni, Rector Activities Coordinator, UPR Mayaguez

Ms. Yamilet Valentín Centeno, President of Foundation Alumni – UPR Mayaguez

Ms. Yamitza Gaztambide Alameda, Administrative Assistant I, Campus Verde Office, UPR Mayaguez

Ryan Torres Ramos, President Green Buildings Student Organization, UPR Mayaguez

Gianfranco Santaliz, President Green Campus student Students Organization, UPR Mayaguez

Jimena Perez Viscasillas, President Student organization Unicef, UPR Mayaguez

Alexander Marrero, Student Engineering, record Coordinator, UPR Mayaguez

Contributors:

Paul J. Rebollo Sosa, Special Assistant to the Rector for Technology Affairs, UPR Mayaguez
Ms. Alida Arrizmendi, Adviser Arts and Culture, Municipality of Mayagüez
Dr. Fernando Gildes, Director CoHemis, UPR Mayagüez Azyadeth Vélez Candelario, Newspapers
Sra. Yamarie Del C. Hernández Bonet, Administrative Officer II / CoHemis Coordinator, UPRM
Mariam L. Rosa, Reporter Press RUM, UPR Mayaguez
Carlos Diaz, Camera Press RUM, UPR Mayaguez
Jose Jimenez, Camera Press RUM, UPR Mayaguez
Wilberto Rios, Newspapers RUM, UPR Mayaguez
Wilberto Canchany Valentine - Technical Services Unit of CTI, UPR Mayaguez
Ing. Máximo Torres Nazario, Chairman Maximo Solar Industries
Ing. Maria Miranda Technical Director Master Paints
Mr. Miguel Vergara General Manager Master Paints

- ✓ Review from Newspapers Primera Hora: <http://www.primerahora.com/noticias/ciencia-ambiente/nota/visitadejanegoodallalaislaatraeasobre2000personas-1073655/>
 - ✓ Review from Newspaper Índice PR: <http://www.indicepr.com/suroeste/noticias/2015/04/02/39261/visita-britanica-en-el-rum/>
 - ✓ Video: <https://www.youtube.com/watch?v=7m7yTmX9MEU>
 - ✓ Photos at: <https://plus.google.com/photos/102625893026119805946/albums/6130715490790973873>
 - ✓ Video Interview with Prensa RUM: <https://www.youtube.com/watch?v=e05pZSAwLOc>
- **Ride day to Cabo Rojo** April 11, 2015. **Ride a Bike** coordinates to enjoy a tour through roads with beautiful scenery and views. The run takes us through next to a nature reserve, bird sanctuary and salt pond - the Salinas and Cabo Rojo Lighthouse, and then return. For those who leave Mayagüez, the meeting time for this run was at 7:00 am to go to Cabo Rojo (carrying bikes by car) at 7:30 am, using carpool if you have hangers (racks) in your car ". The tour started at 8:15 am out of the parking tower for birdwatching on the road 301 in Cabo Rojo Coordinates: 17.956533, -67.199244. Opposite is the Interpretive Center Salinas de Cabo Rojo. The estimated time was 3-4 hours. Taking a relaxed and comfortable pace (walking) away from the steep slopes. Some essential things to run: Having a complete and nutritious breakfast that day. Carrying electrolyte drink as coconut water or Gatorade, etc. and sufficient water. Snacks such as fruit and nutrition bars, light food like sandwiches, etc. Sunblock or sleeveless arms and legs to protect from the sun. Response pipe or rubber patches for bicycle tubes, manual air pump to fill tires. First aid equipment such as bandages, gauze, triple antibiotic, etc. Enough cash for food and refreshments. Wearing a helmet is required. Photo link at: <https://drive.google.com/a/upr.edu/folderview?id=0B4R7-GstiYOkfmx0a3preUtfR0Jzbi1wRVR4dIIIOF9DeU1Kd0Zsa0pDeVpIaHJfd3lwWTQ&usp=sharing&tid=0B4R7-GstiYOkYzkyN29aRWdKa0k>
 - **Visit the Bamboo Farm Agroecológica** on April 12, 2015. Bamboo application of agro ecology at *Finca Tierra Unida*, in San Germán. There with an introductory section - theoretical and practical course held. Conservation is the focus of the farm, agro-ecological and Bamboo defined. Practices in

propagation, care, cultivation and resource management. We traveled the farm and learn about Bamboo -transplant banks and seminar on cultivating seeds. Photo link:
<https://www.facebook.com/photo.php?fbid=10206148237763299&set=pcb.10206148256843776&type=1&theater>

- **Limpieza Playa Buyé in Cabo Rojo** on April 19, 2015, Mu Alpha Phi Sorority, Beta Chapter. Organized and invited to cooperate in cleaning the beach Buyé, from 9:00 am celebrating Earth Day
- **Conferencia: Abundancia Natural y Sustentable** April 30, 2015. The Center for Hemispheric Cooperation in Research and Education in Engineering and Applied Science (CoHemis) held a conference entitled *Natural Wealth and Sustainability*, as a preamble to the First International Conference on Ecological Economics (CONECEC 2015). This took place on Thursday, April 30, 2015 in Room A of the Main Library of the RUM, Time: 10:30 a.m. to 12:30 p.m. pronounced by Franka Fiala, CHt CMT.
- **Reforestación Colegial** on May 2, 2015. As part of our commitment to the environment we have created this event to help and keep the area and the trees planted in January for the first major reforestation event organized by the College Reforestation organization to ensure the success of the work done in the National Refuge Wildlife Laguna Cartagena. (Coordinates: 18.014274, -67.102347)
- **Ride Day from Mayaguez to Playuela Cabo Rojo and back**, on May, 223, 2015. Ride a Bike organized the last activity end of semester. A bike ride of 80 km from Mayaguez to La Playuela in Cabo Rojo and return. Since the distance of 80 km (50 mi) is required to have a good cardiovascular fitness and endurance. This run is geared for intermediate amateur cyclists or those that maintain a steady rate of 18-32 km / h (11-20 m / h). We had a group for those who need motivation, no one was left alone and were together all the time. It is always important to remember to bring essential items and helmet. Photo link at: <https://drive.google.com/a/upr.edu/folderview?id=0B4R7-GstiYOkfnlLVVJTb2Z5Q0FoWEw2ZmZsdzFyYzB6Y2xEWDRLWnpNMm5qT2pSLXZPZEK&usp=sharing&tid=0B4R7-GstiYOkYzkyN29aRWdKa0k>
- **Primer Congreso Internacional de Economía Ecológica y sustentable de Puerto Rico**. Organized by CoHemis. *First International Conference on Ecological Economics* in Puerto Rico: urgent changes in the Ibero-American Context June 24-27, 2015 University of Puerto Rico, Mayaguez Campus at Ramón Figueroa Chapel Amphitheater Mayaguez, Puerto Rico. Themes: Economic and Environmental Poll, Sustainability, Sustainable Welfare measures, Agriculture and Energy, Fishing Sector, Water resources, Public Policy and Environmental Management. Campus Verde participated exposing educational and informational material table.

Period between: August 2014 - December 2014:

Rating Submitted:

1. **Green Rating report from the University of Indonesia, 2014.**

Mayaguez Campus, University of Puerto Rico. The Mayagüez Campus of the University of Puerto Rico participated in November 2014 UI Green Metric World University Ranking 2014 at the University of Indonesia. In its fifth year of green classification efforts of universities to campus sustainability and the environment are compared. Resulting in the place 151 of 362 participating universities with a score of 5,492. It was the only university nationwide that participated in this green metric. The Green Campus program was responsible for completing the questionnaire commissioned by the Rector Dr. John Fernández Van Cleve, achieved by Prof. Carmen Castañeyra for classification in university sustainability and the environment. Understanding sustainability as a process that can sustain itself, as it does, for example economic development without outside help or depletion of existing resources.

Approved Proposals:

1. Proposal "*Community in Harmony Integrating People and Environment (CHIPE)*" By **Ameri Corps, Ms. Carla Ramirez and Mabel Vega Director office of Liaison Office of Community-Based Initiatives Fe from Municipality of Mayaguez** Submitted to AmeriCorps, through the Municipality of Mayagüez, March 2014. Adopted in August 2014 to begin Oct 2014-Setp 2015.

Period January 2015 - summer 2015:

Proposals Submitted:

1. **Proposal the visit and presentation "We can't wait for environmental education with Dr. Jane Goodall in Mayaguez, PR.** January 2015.
2. Present ***Proposal to education, reduction and elimination of plastic bottles, plastic bags and polystyrene use*** within the precincts of Mayaguez- UPR. Proposal convened by the Rector of the University Dr. John Fernández Van Cleve presented to the Junta Universitaria in August 2015. May 12, 2015.

3. **Approved Proposals:**

AmeriCorps 2014-2015: with the Municipality of Mayaguez.

4. **Mini grant submission on: *System reuse greywater*** by Dr. Colom- Ustáriz. Generating Replicable Environmental Education Networks in Puerto Rico (GREEN-PR) mini-grant program administered by the Environmental Finance Center at Syracuse University with support from EPA Environmental Education. A donation was incurred of \$ 5,000 to be used in the House Solar Eco by the Agency Syracuse University Center for Sustainable Community Solutions.
5. **Mini grant submission on: *Education Policy Implementation, Reduction and Elimination selling drinks in bottles Plastic, Polystyrene and Plastic Bags in the Mayagüez Campus of the UPR*** by Jorge Benconsme. Generating Replicable Environmental Education Networks in Puerto Rico (GREEN-PR) mini-grant program administered by the Environmental Finance Center at Syracuse University with support from EPA Environmental Education. Agency: Syracuse University Center for Sustainable Community Solutions. A donation was incurred of \$ 5,000 Source: <http://files.ctctcdn.com/79cf43a2401/b4132ae2-17bc-4d42-8dfa-36b24640bdbf.pdf>

Proposal Approved Donations:

- **Solar System Donation:** Maximo Solar Industries. Solar system for Casa Eco Solar (\$22,000). Contact: <http://www.maximosolar.com/es/>

- **Windmar PV.** Donation of inverter for solar system of Casa Eco Solar. Contact: <http://www.windmarpv.com/>
- **Abbot Donation** for Eco Solar House of \$1,000
- **General Electric and** Boeing Donation of some inverters and transformer of EcoSolar House.
- **Master Paints** Paint for **House EcoSolar -**, paint inside and out type with zero VOC Green Seal, (\$1,200) Contact: Miguel Vergara: MVergara@mastergroup-pr.com
- February visit. Exhibits from the **Energy Museum Exhibition ON OFF** in *Banco Popular* in old San Juan, PR will be donated to UPRM. (still wait for approved) Contact: Carlos Bruno: Carlos.Bruno@popular.com

Travel in PR and meetings:

- **Council on Climate Change (CCC) of Puerto Rico**, Summit, Embassy Hotel, SJ, PR. Friday March 28, 2014. To provide recommendations to the government on mitigation and adaptation. 6 hours.
- Compinche Verde **Meeting** with **Jane Goodall Institute**, Mar 28, at Ponce, PR, 3 hours.
- Compinche Verde **Meeting** with **Jane Goodall Institute**, May 2, at Maunabo, PR, 5 hours.
- Compinche Verde **Meeting** with **Jane Goodall Institute**, June 18, at Isabela PR, 6 hours.
- Meeting with **Prof. Dr. Luisa Jimenez and Awilda Mendez** gets **Green Campus in UPR-Aguadilla. 1hr**
- **Green Team UPRM- Campus Verde Meeting** with **Jane Goodall Institute**, June 30 at UPRM. Photo link: <https://www.facebook.com/photo.php?fbid=10154386942255048&set=t.1184157568&type=3&theater>
- **Green Team UPRM- Campus Verde Meeting** with **Jane Goodall Institute**, January 30 at UPRM – CID room.
- **Travel to search Dr. Goodall**, to Airport Luis Munoz Marin in San Juan, and bring to Mayaguez for your presentation of March 25, 2015.

Workshops and Presentations

1. **WPRA 990AM Radio** Broadcaster: Dr. Cruz-Pol- **Campus Verde**-interviewed **Mr. Miguel Vergara**, manager of **Master Paints** for donation to the **Solar Eco House eco friendly paints** with zero VOC Green Seal stamp and reflective treatment for the roof of the house, and the consequences to health (asthma, allergies, etc.) of harmful gases (VOC) and environment pollution, and **Mr. Carlos Bruno** from the *Banco Popular* Director of display **Power ON OFF** to be donated to the **RUM for EcoSolar House**. June 17, 2014, 1-3pm
2. Programs Radio **"Energy Saving and petrol"** with Toti Figueroa AM 990, Jun 2014 7-9am.
3. Newspaper Interview: April 2015, Diálogo UPR, with the journalist Michelle Estades about Eco Solar House, Dr. Sandra Cruz Pol and Dr. José Colom Ustáriz. Visit: <http://dialogoupr.com/noticia/upr/la-casa-eco-solar-del-rum-merge-con-una-renovada-propuesta/>
4. Prensa RUM Interview: Visit <https://www.youtube.com/watch?v=e05pZSAwLOc>



CAMPUS VERDE - COLEGIO DE MAYAGUEZ
Universidad de Puerto Rico

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 actions. Help coordinate green activities like beach cleanups and tree planting with other student associations as **PRWEA, IEEE, Tau Beta Pi, BBB, SWE, SHPE**. Below is a list of our directive from this year. Info at:

http://www.uprm.edu/p/campusverde/campus_verde_students



2014-2015

- ❖ **Presidente** -Gianfranco Santaliz Rogers
- ❖ **Vice-Presidente** – Angélica Abreu Fontanez
- ❖ **Tesorero** – Luz Guzmán
- ❖ **Secretaria** – Nicole García Reyes
- ❖ **Coordinador de Actividades** – Hector Quiñones Rosaly
- ❖ **Relacionista Público** – Efraín Rodríguez
- ❖ **Vocal** – Isabel Obando
- ❖ **Kayak Green Leaders** (prospects pending): [Rolf-Martin Vieten](#) , [Josean Torres](#), [Rafael Padilla](#), [Héctor Quiñones](#), [Angélica Abreu](#), [Marilyn Pérez](#), [Edgardo Estavillo](#).

Fig. 15: Students positions for the CV Student chapter. Positions for the year 2014-15. Activities are part of Campus Verde Organization.

X. Ride a Bike: Promote Bicycle Transportation

A. Official Student Organization

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



2014 – 2015:

§ **Consejero:** [Jorge Bencosme](#) (Co-Director de Campus Verde)

§ **Presidente:** Emanuelle D. Rodríguez

§ **Vive Presidente:** Christian Adrover

§ **Secretario:** Luis M. Rivera

§ **Tesorero:** Edwin Rivera

§ **Vocales:** Edwin O. Ortiz, Nataly Camacho y Orlando Olivo.

Fig. 16: Students positions for the Ride a Bike Student chapter. Positions for the year 2014-15.

B. Projects:

- **Mission:** To promote the use of bicycles as alternative transportation to reduce traffic congestion, contribute positively to the environment and improve the quality of life of the whole community.
- **Vision:** To work actively in the promotion of cycling and its benefits as a means of alternative transportation in and out of the campus including the community in general.
- **Objectives:**
 - Educate the university community and the general public about the benefits of using bicycles as transportation, recreation and lifestyle.
 - Intercede for infrastructure provided by the university administration and the municipality to facilitate and promote the use of bicycles.

- Recreational Plan for fraternization Member activities.

C. Educational, Recreational and Outreach Activities: 2015

- May 23, 2015: Vuelta Mayagüez – La Playuela, Cabo Rojo. Participantes: 12 Info link: <http://www.uprm.edu/portada/eventosverdes/index.php?a=ev&id=339>
- April 11, 2015: Ruta y Monte Cabo Rojo y Lajas. Participantes: 6 Info link: <http://www.uprm.edu/portada/eventosverdes/index.php?a=ev&id=338>
- March 31, 2015: Vuelta Ocean Park – El Yunke. Participantes: 4
- March 21, 2015: Lineal de Ponce, Plaza y Cruceta del Vigía. Participantes: 6 Info link: <http://www.uprm.edu/portada/eventosverdes/index.php?a=ev&id=337>
- February 02, 2015: Vuelta Mayagüez – Rincón. Participantes: 15 <http://www.uprm.edu/portada/eventosverdes/index.php?a=ev&id=331>
- January 31, 2015: Paseo Lineal de Isabela. Participantes: 6 Info link: <http://www.uprm.edu/portada/eventosverdes/index.php?a=ev&id=330>

XI. Green Buildings and Sustainability RUM Group

A. Official student Organization: With a new name for this year’s students buildings green strive in planning workshops and outreach are aimed at students from middle and high schools, as in the search for alternatives by doing research studies in buildings RUM looking for new ways to energy savings.



2014 - 2015

- ❑ **President:** Ryan M. Torres Ramos
- ❑ **Vice-President:** Carolina Marrero Ralat
- ❑ **Finance Manager:** Benjamín Rivera
- ❑ **Marketing Manager:** Cristina Nazario
- ❑ **Director of External Activities:** Hadasha Cortés
- ❑ **Director of Internal Activities:** Keishla Ríos
- ❑ **Public Relations Coordinator:** Johannie Velázquez

Fig. 17: Students positions for the GBSStudent chapter. Positions for the year 2014-15.

B. Educational, Recreational and Outreach Activities

1. Internal Events: During the Fall Semester 2014 GBS-UPRM held:

2 General Assemblies: August 2014 and January 2015

2 Recruiting events

LEED Green Associate Review Course: October, 2014.

Papelotón: In this event we sought to raise awareness among students about the use of paper and the benefits of the consumption reduction that would have on the environment. Cardboard containers were placed in 15 buildings on the site to collect papers and books during the finals exams season. Our main goal was to impact every department with this event. Out of the 15 buildings, 10 of them retained the containers for the specified period. According to that, this event was 68% satisfactory. GBS developed some recommendations that the administration will consider in order to increase the efficiency of the recycling system at the campus.

2. Projects:

Cool Cities: The Cool Cities Project is one of our biggest opportunities for our members to get exposure in green initiatives since they have hands on experience helping the environment using their respective college disciplines. It is composed of three different student committees, which each one will be explained in further details throughout this section. GBS created several metrics that will record the progress of each committee, semester by semester. Every May and December, an evaluation is made based on the metrics in order to keep moving forward with the groups regarding results and reaching our goals. The metrics are divided in three simple categories: Environmental Impact, Economic Impact and Knowledge Impact.

- **Environmental Impact:** benefits that will make to the planet based on the recommendations that each group makes.

- **Economic Impact:** will record the economic benefits of implementing the recommendations made by each group.

- **Knowledge Impact:** will record the quantity of students that gained some green experience by seminars, trainings and more.

3. Recycling Research Committee: In Puerto Rico approximately 2,376 tons of glass is recycled, while 118,000 tons are produced annually. . Our project aims to create a machine that will make possible to recycle a greater amount of glasses.

4. Energy Audit Committee: During this semester the energy audit group had over 3 conferences in which 15 students were introduced to the project and the metrics used to make it possible. These students will create groups, and they will be assigned to a building in campus to recommend alternative that will help lower the use of electricity and make the use more efficient. The greatest impact of this group was to have participated in Rebuilding the House Eco Solar. The students did volunteer brigade supervised by engineers and project managers inside and later painting using paint Eco Pure Master Paint work and the installation of solar panels. This students are Jossmarlyn Montañez (leader), Nicole Farinacci, Rolando Casado, Francisco Reyes, Eugene Matos, Noel Torres, Elijach Rivera, Cesar González, Jorge Sol de Vila, Kevin Alicea, Ryan Torres (Green leader), Yashiria Saldaña and Andrés Vélez.



Fig. 18: GSB RUM Group works in Eco Solar House 2015 and other activities.

A. UNICEF

Official student Organization:

Association designs its fundraising activities and to Create Awareness of the current situation of poverty across the planet. Helping to eradicate extreme poverty Planet, which has been magnified with Climate Change due to extreme droughts, floods and other events that affect agriculture, life and property. Every contribution makes a difference.



unicef

UPR-Mayagüez

2014-2015

President: Jimena Pérez Viscasillas

Vice-President: Neysha López

Finance Manager: Lizmar Rodriguez

Secretary:

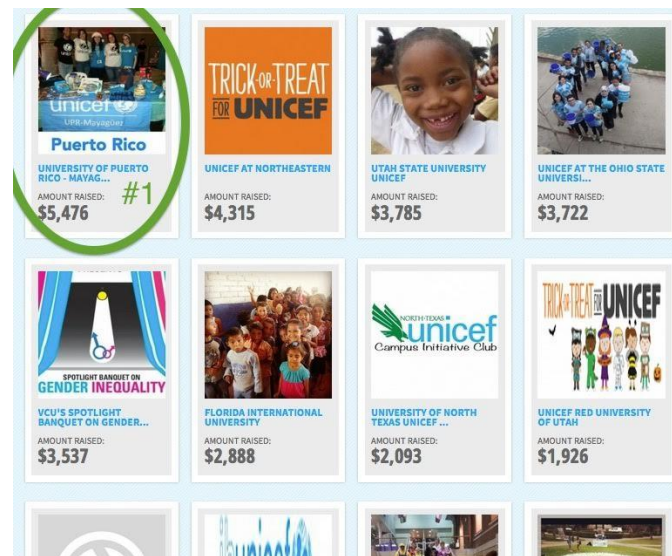
Marketing Manager: Marilyn Pérez

Counselor: Dr. Kolterman, Biology Professor.

B. Educational, Recreational and Outreach Activities:

- Sales (Sweet and Salty Out, Out Brownie, Popcorn Sale)
- Yoga For UNICEF
- Free Hugs T-Shirt Challenge
- Valentine, UNICEF's with (sales and activity Valentine)
- Believe In Zero (awareness activity)
- Teach UNICEF (child education activity in collaboration with ACS)
- Trick or Treat for UNICEF
- Guidance -Asamblea
- Day Of Prepas (orientation table)
- Jane Goodall -Collaboration activity
- Share In Crashboat with green partnerships

>Figure: Unicef UPRM TEAM #1 in money donations.



C. AmeriCorps

A. Project:

Green Campus is also part of the **AmeriCorps** teams and in conjunction with the Municipality of Mayagüez, provides work for 30 people from the community and students RUM. New approved of a budget of \$ 137, 850 for 2014 and 2015 on environmental projects, thanks to the "Oficina de Comisión de Voluntariado y Servicio Comunitario de Puerto Rico". Work includes setting up **Acuaponics** at Alzamora Farm, **Energy Audits** to save energy at UPRM campus buildings and in the municipality of Mayagüez. Educational projects in Sustainability including Recycling and talks to schools. In addition, we lead workshops and energy conservation training, conducted studies of current situation and identified future goals. AmeriCorps Program **C.H.I.P.E.** All for one year. After completing this period is granted an educational scholarship participants. As stipend but no salary, receiving funds does not disqualify you from other federal aid.

As of October 2014, young Michael Pineda, Francisco Reyes and Yashiria Saldaña serve as AmeriCorps members CHIPE project, the Municipality of Mayagüez in partnership with non-profit organizations "Estampas Agro Eco Turísticas" and Campus Verde University of Puerto Rico, Mayaguez Campus; federally funded project under the AmeriCorps program. The same extends to September 30, 2015 (according to the federal fiscal year). The Professor Carmen Castañeyra was the site supervisor in this period.

The main objective of these three members under CHIPE Project is energy audits of public buildings. Already in the first term (October 2013- September 2014) made them an energy audit of the building of Medical Services of UPRM. During this second term the focus of this objective it was the building of the Municipality Mayor House Mayagüez. The audit was conducted between January and June, when young people are in the process of drafting a report detailing the collected data, conclusions and recommendations and then submit it to the relevant staff of the Municipality of Mayagüez.

In addition to this, the AmeriCorps members have participated in various activities of both the AmeriCorps program and Campus Green. Joint activities with Campus Green is beach cleaning, reforestation and construction and empowerment of Eco Solar House. The March 25, 2015, during the opening of the Eco House Solar with Dr. Jane Goodall, was a short presentation of the results of the energy audit of the building of Medical Services.

Among the activities carried out under CHIPE Project are educational lectures to elementary school children from schools WALKS, Rafael Martínez Nadal and Summer Camp of Fine Arts of the Municipality of Mayagüez. His presence with educational tables at fairs like the Children's Fair Mayaguez, Fair Energy Expo at the Isidoro García Park and the celebration of Earth Day on the campus of the Plaza Colon and the UPRM, among others. Among the topics discussed they are: environmental conservation, resource conservation (water and electricity), home gardens, healthy eating, recycling, "DIY Ideas", etc.



Fig. 19: AmeriCorps Members Mayagüez.

XIV. Energy Conservation and Efficiency

Our co-Director, Jorge Bencosme, produced a document with an inventory of the outside lighting 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 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. Eco Solar House:

Eco-Solar House will serve as a platform for research and education to develop new ideas and an opportunity to the community to learn how to live in harmony with our planet. Last **March 25, the first phase of the Eco-Solar House** located on the grounds of CID was opened. The day of inauguration ceremony Dr. Jane Goodall visited the RUM to offer conference after his talk We Can't Wait for Environmental Education and moved to **the EcoSolar House** where she **planted a banana plant as a symbol of its opening**. Dr. Jane Goodall accompanied by the Rector Dr. John Fernandez Van Cleve and Dr. Sandra Cruz Pol, founder of Green College Campus. The house was completed through the efforts of many people including Drs. Erick Aponte, Sandra Cruz Pol, and Jose G. Colom Ustáriz of INEL / ICOM, and Betzabé Rodríguez of ININ. They COOP Plan Director Ellen Acarón, Jorge Bencosme, Maritza Laracuate, Yamitza Gaztambide and joined with the support of leadership, the Dean of Engineering, and the engineering workshop. Several students from Campus Green were working day and night along with faculty and staff to complete this initiative in time.



Whole solar system and installation were donated by **Maximo Solar Industries**: descriptions of material – *Deka Solar Batteries AGM 8a27 DT (12), Charge controllers Xantrex MPPT 60/150 (2), Inverter Xantrex XW 4548 (2), Solar Max Battery Cabinets GSPR1 (3), Structure for 39 panels (1) (Total: \$22,000)*, and eco-friendly paint from **Master Paints**, Mr. Miguel Vergara, manager of *Master Paints* and his company donate (Total in materials \$1,200) to the **Solar Eco House ecofriendly paints** with zero VOC Green Seal stamp and reflective treatment for the roof of the house, and the consequences to health (asthma, allergies, etc.) of harmful gases (VOC) and environment pollution. In the field below the Solar Eco House it was applied a treatment of cedar oil to ward off termites. In addition Borax was applied, except areas that are intended to use for orchards. These are ingredients that naturally repel insects that can damage the wooden house.

General Electric, Abbot, Windmar PV and Boeing thanks to donations made by these companies and for the help received from the University of Puerto Rico, Mayaguez Campus the Solar House today completed Phase 1 of the project. 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. Coordination and collaboration of Dr. Erick Aponte Bezares INGE Electric UPRM and Dr. Jose Colom – Ustáriz as director of the project from INGE Electric UPRM and inter director of Campus Verde. We are grateful to all of them for their support. Visiting hours will be heralding soon. The newest plan can be found at

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

Photos at:

https://photos.google.com/u/1/album/AF1QipPwJJUR6piSBIOEGGrTFFMUNIYP86ZoDmO_V2aF



Fig. 20: Inauguration Day with Dr. Jane Goodall and the committee of Green leader students at the Eco Solar House.



Fig. 21: 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 2015 (bottom). Thank to the sponsors.

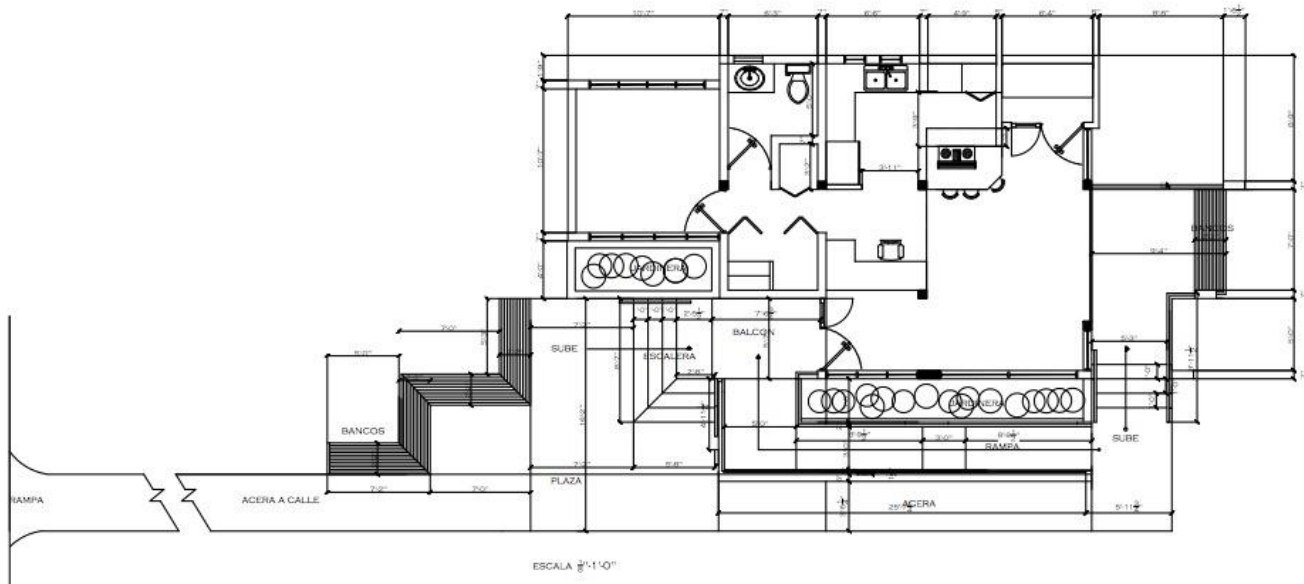


Fig. 22. New layout with handicap ramp and balcony.

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>

XV. Nature Activities

A. Beach Clean-up Day with 2 activities this year in

Barrio el Seco, Mayagüez. Barrio el Maní, Mayaguez. Playa Jobos, Isabela.

B. Waterfall Clean-up Day with 3 activity this year

Charco Azul in Patillas

C. Day Kayaking with 4 activities this year

La Parguera, P. R.

XVI. Education and Outreach Materials and Training

We continue to develop materials for our website including a new pages for cosmetic and green cleaners (<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 no dan asma.

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

...para eliminar [hormigas, piojos, ácaros, mosquitos, pulgas, garratas, termitas y cucarachas en el hogar.](#)

🌿 [Ácido Bórico](#)

🌿 [Bórax](#)

🌿 [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.



Bórax:

Prepara tu insecticida: Mezcla una cucharadita de **bórax** con 2 de azúcar y riega el polvo por donde pasan los insectos y **LEJOS del alcance niños y mascotas!**

- El **bórax** es un **mineral natural** que sale de una piedra blanca y se usa como detergente para lavar ropa y sacar manchas de vajillas y ollas.

¡Además es un excelente insecticida!

El **ácido bórico** se deriva del **bórax** y ambos se consideran seguros para usar en el hogar para el control de **cucarachas, hormigas, pulgas y garrapatas.** Su **fórmula química NO es igual.** Ambos se consiguen en ferreterías como *Home Depot* y en algunos supermercados, farmacias y tiendas por departamento. Puedes usar el borax para rociar en alfombras donde se acuesta tu mascota y usarlo para lavarla. Sin embargo, ambos cambian el PH de la tierra, así que no es bueno que lleguen al terreno que se usa para siembra de hortalizas.



Más de 20 usos del BORAX para la limpieza de hogar y control de plagas [AQUÍ.](#)

Aceite de Cedro: (más info [aquí](#))

(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 salpullido 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. Tan efectivos como el **DEET** pero sin afectar tu salud.
- **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 salpullido 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.
- **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.
- **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.
 - Use una solución de agua, jabón líquido con base vegetal o champú herbal y unas gotas de Aceite puro de palmarosa, "Peppermint" o de eucalipto.
 - Para **gatos y perros**, mezcla 1/2 cda 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.
 - Pase la aspiradora en alfombras donde su perro suele estar y lave con **Borax (ácido bórico)** disuelto en agua tibia. El Borax ayenta las garrapadas, pulgas, piojos y ácaros.



*** Nunca use aceite de cedro, palmerosa o eucalipto para los gatos pues no son comestibles .**



Insecticidas para el Jardín:

10 Funguicidas y Pesticidas Naturales [aquí](#)



Mantén un jardín **libre de insectos** sin echarle venenos químicos como pesticidas que matan insectos buenos, abejas y dañan nuestra salud. Hay muchas soluciones que ofrece la **Agricultura Orgánica**, pero aquí menciono sólo algunas.

*Ver también [Insecticidas de plantas Ecoamistosos \(Entomología\)](#).

Fig. 23 http://www.uprm.edu/p/campusverde/insecticidas_eco-amistosos

“Recetas” para Limpiadores Naturales:

(Económicos, Ecológicos y Efectivos)

Evita usar limpiadores comerciales con cloro, amoníaco, a base de petróleo, “butyl cellosolve”, fosfatos, triclosan, cresol, formaldehído, kerosene, colorantes y fragancias artificiales. [Si dice Fragance, es artificial.] Irritan los pulmones, la piel, los ojos, algunos causan asma, alergias, y se van por el acueducto contaminando la Tierra y causando desórdenes genéticos y cáncer.

Limpiador de Espejos



1 taza vinagre blanco

1 taza agua

½ cda. jabón de fregar eco-amistoso (opcional)

3-8 gotas de aceite esencial favorito como lavanda (opcional)

* Llene botella rociadora y mezcle. No olerá a vinagre cuando se seca. Usar un raspa vidrio (squeegee); te ahorrará tiempo y papel.

Líquido de Fregar para Lavadoras de Plato

¼ taza ácido cítrico

1 ½ taza borax (polvo o cristal, se consigue en ferreterías como Home Depot)

15 gotas de su aceite esencial favorito como almendras (opcional)

Pasta para lavar (Scrub)

2 cdas. Soda de hornear, un poco de sal (opcional)

Un poco de jabón líquido de fregar o jabón de Castilla

Restriegue. Déjelo trabajando unos minutos, y luego enjuague con vinagre blanco. Luego enjuague con agua.

Limpiador de Rociar para Toda-superficie

2 cdas. Borax

Agua caliente

¼ cda. jabón de Castilla

Mezcle primero sólo el borax con el agua caliente. Luego de disuelto añada en jabón. Vierta en botella rociadora. Déjelo trabajar 1-2 minutos y luego restriegue con una esponja.



Limpiador Rociador Anti-hongo y anti-germen

(Anti-mildew, anti-germ, anti-virus spray): *Mi favorito!

¼ cda. aceite de lavanda, (la palabra lavanda viene de 'lavar', debido a sus propiedades de limpieza)

¼ cda. aceite de árbol de té (Tea Tree), (árbol australiano conocido aquí como Cepillo de Botella por la forma de sus flores, en Australia los aborígenes le llaman “melaleuca”)

Fig. 24 http://www.uprm.edu/p/campusverde/limpiadores_eco-amistosos

Campus Verde te invita a :

¡Eco~Vivir!

[Version pdf]

...es **Vivir Verdemente!** Es cambiar nuestros patrones de consumo y buscar alternativas más verdes, éticas y naturales a cada servicio y producto que puedas imaginar. A comprar más sabiamente, consumir menos, desperdiciar menos, pensar acerca de las consecuencias de nuestras compras. A reducir nuestro impacto en el planeta y en nuestros compañeros haciendo decisiones que son mejores para nosotros, mejores para el ambiente y mejores para todos los habitantes del globo.¹

"We have to shift our emphasis from economic efficiency and materialism towards a sustainable quality of life and to healing of our society, of our people and our ecological systems." Janet Holmes à Court (1948 to present), Australian businesswoman.

¡Come orgánico!

¡No comas pesticidas! (ni herbicidas, insecticidas, ni fertilizantes artificiales.)



Hace unos 100 años, todos los alimentos eran orgánicos; sin pesticidas ni fertilizantes químicos.

- Los fertilizantes orgánicos, al no ser tan procesados y ser más naturales, no queman la planta.
- Los pesticidas (plaguicidas) y herbicidas son químicos que contienen muchos tóxicos que afectan el sistema nervioso, y dañan la salud, el terreno, la atmósfera y contaminan cuerpos de agua. Estos químicos se pasan a los frutos y de ahí a comida, cosméticos y a la ropa hecha con plantas que contienen pesticidas. Muchos pesticidas contienen bromuro (Br), el cual es 50 veces más fuerte que el CFC en dañar la capa de ozono, y esto a su vez empeora el calentamiento global de la atmósfera.
- Además, los pesticidas pueden matar abejas y han sido relacionados junto con insecticidas al Síndrome de Colapso de Colmenas (CCS por sus siglas en inglés) lo cual a su vez contribuye a la declinación de polinización de las plantas.
- El insecticida neo-nicotina, ataca el sistema inmunológico, en sistema nervioso, afecta la memoria y desorienta a las abejas.

¡Alimentos Orgánico!

Alternativas eco-amistosas son usar fertilizantes naturales (composta), plaguicidas naturales (como el que se hace con Neem), TerraCycle, el cual se hace con excreta de lombrices, y rotación de siembra, entre otras.

- Evita los monocultivos.
- Haz composta: trae tus bolsas de grama y hojas a la Finca Alzamora en el RUM; ahí se usa para composta, la cual está a la venta, o prepara composta en tu hogar.



<http://www.abarrataldea.org/manual.htm>

<http://www.ideashuertoencasa.com/wp-content/uploads/2013/07/consejos-para-compost-hacer-compost1.jpg>

Fig. 25 <http://www.uprm.edu/p/campusverde/vive-verdemente>

Telas orgánicas:



- El **algodón** consume 1/5 parte del pesticida de todo el planeta! Quiere decir que no debes olvidar lavar la ropa antes de ponértela si está hecha de algodón u otra tela que no sea orgánica. Sin embargo, aún así, estás echando esos químicos por el acueducto, y finalmente terminan contaminando nuestros cuerpos de agua. Han sido asociados al mal de Parkinson.
- Cada vez se consiguen en más y más comercios en Puerto Rico. Lee las etiquetas.
- Los productos **sintéticos**, como el rayón y el poliéster, provienen del **petróleo**, y producen muchas emisiones en el proceso de fabricación.

Telas orgánicas:

Para tu salud y la salud del planeta busca alternativas como:

- **Algodón Orgánico**- es regado por lluvia y fertilizado con composta, sin químicos.
- **Bambú** – es siempre orgánico, crece rápidamente absorbiendo mucho oxígeno. Crece sin ser regado y es naturalmente anti-bacterial.
- **Cáñamo (hemp)**- es orgánico, protege de rayos UV y anti-bacterial. Tampoco necesita de sistema de riego.
- Otras: modal, material reciclado, tencel, jute, seda, soja...



Productos orgánicos para el cuidado de la piel:

Usa productos orgánicos para el cuidado personal:

- Repelente de mosquitos (ver receta natural [aquí](#))
- Lociones
- Jabones
- Champú
- Cosméticos
- Sábanas y frisas

Están disponibles cada vez en más **supermercados, farmacias y tiendas** en todo Puerto Rico. También se pueden encontrar en el Internet.

www.RMBarry.com

- Consigue productos agrícolas orgánicos a buen precio en las plazas agro-ecológicas por todo Puerto Rico, de agricultores locales. Ej. en la plaza de Rincón todos los domingos de 8am - 12m. También se consiguen en algunas tiendas como Sam's Club y Pueblo, Freshmart y el Natural Food Center de la academia adventista, entre otros.
- Los productos Burt's Bees, no sólo están hechos sin petróleo, sino que también están embotellados en envases hechos con plástico 70% reciclado post-consumidor.



*Descubre que ingredientes químicos que debes evitar en los productos [AQUÍ: Guía de Cosméticos Saludables](#)

Productos orgánicos para la limpieza del hogar:

Usa productos de limpieza que no dañen el entorno natural.

- Evita usar **cloro**, **Lysol**, **Lestoil** y otros productos petroquímicos que dañan el ambiente y a la larga nuestra salud y el entorno natural (fauna, flora, cuerpos de agua), causando asma, alergias y otras enfermedades.
- Puedes hacer tus propios productos de limpieza, económicamente y muy efectivos. Ver recetas de productos de Limpieza [aquí](#).



- Estos productos se encuentran en tiendas locales, y en Natural Food Centers como el de la escuela Adventista de Mayaguez, barrio Cuba, por la luz del Sam's Club hacia el este.

* Descubre que ingredientes químicos que debes evitar en los productos de limpieza en el hogar [AQUÍ: Guía de limpiadores saludables](#)

Fig. 26 [http://www.uprm.edu/p/campusverde/vive verdemente](http://www.uprm.edu/p/campusverde/vive_verdemente)

Comiendo para frenar el Calentamiento Global

[versión para imprimir pdf]

Estarás ayudando, no sólo al [planeta](#), sino también a tu salud.



[RECETAS "Eco-amistosas" y Deliciosas](#)

[100 Maneras de Salvar el Ambiente](#)

1. **Consume productos locales:**

Local implica que la transportación hasta tu hogar fue mucho menor, contribuyendo así a menos emisiones de gases de invernadero. Además son productos más frescos y estarás apoyando a agricultores locales. Recuerda que aquí en la Finca Alzamora del RUM consigues miel y otros productos frescos que varían de acuerdo a la estación, como mangó, quenepas, tomates, berenjenas, repollo, melón, pepinillos, pimientos, tilapia, y aguacates a precios módicos.

2. **Evita productos envasados individualmente ("individually wrapped"):**

Son más caros y contribuyen a generar desperdicios de empaque que muy pocas veces se puede reciclar. Compra tamaños grandes y empaqa en envases re-usables individuales, los cuales en algunos casos puedes congelar. Escoge productos con poco empaque y que sea reciclable.

3. **Evita productos enlatados:**

Este tipo de lata no es fácil de reciclar y muchas compañías de reciclaje no las aceptan aún. Además trazos del aluminio de las latas y ollas (de aluminio) van a parar a tus comidas y se acumulan en el cerebro y han sido asociados al mal de *Alzheimer*. Es más económico ablandar granos en ollas de presión (de acero inoxidable o de barro) las cuales puedes congelar por porciones.

4. **Cocina eficientemente:**

Las ollas de presión, por ejemplo, tardan unos 15 minutos tiempo total en [ablandar y guisar](#) habichuelas y otros granos secos previamente dejados en agua unas 5-8 horas, ahorrando así mucha electricidad, dinero y también agua. (Normalmente, tardan 1 hora en ablandar y ½ hora en guisar comparado con 15 minutos!) El horno microondas y estufa de gas también ahorran emisiones.

5. **Consume más productos orgánicos**

Los productos regulares usan fertilizantes que contribuyen al calentamiento global pues contienen óxido nítrico el cual es un agente 310 más fuerte que el CO₂ en atrapar ondas infrarrojas en la atmósfera. Además muchos plaguicidas contienen bromuro el cual contribuye a dañar la capa de ozono y al calentamiento global.

En cuanto a la salud, los productos orgánicos no tienen trazos de estos químicos (fertilizantes, plaguicidas, herbicidas ni fungicidas) los cuales han sido asociados a varias enfermedades, defectos genéticos y reducción de fertilidad (<http://news.bbc.co.uk/2/hi/health/7855323.stm>).

Cada vez se consiguen más de estos productos en todos los comercios a precios cada vez más económicos. Además, hay muchos agricultores locales que están usando prácticas orgánicas; visita las ferias agrícolas orgánicas en la Placita Roosevelt en el área metro (1^{er} y 3^{er} domingo de cada mes) y en Rincón (todos los sábados), ambas en la mañana. [<http://www.localharvest.org/search.jsp?map=1&lat=18.2037938&lon=-67.1452538&scale=38&zip=00680>]

6. **Come menos carne roja o elimínala completamente de tu dieta:**

Según un reporte de las Naciones Unidas del año 2006, "criar animales para consumo genera más gases de invernadero que todos los autos y camiones en el mundo combinado". Esto es así debido a la deforestación necesaria para sembrar los alimentos que consumen estos animales, la cantidad de fertilizantes usados para sembrar los mismos, el agua que usan, y el metano que emiten, entre otros factores. Dato curioso: Dos y medio acres de tierra son suficiente para alimentar a 20 veganos o a 1 consumidor de carne. (*Robbin, Diet for A New America, 1998*)

Además, es más saludable comer menos carne. Está comprobado que la incidencia de [cáncer](#) es menor en países que consumen poca o ninguna carne. Otra alternativa es comer carne de granjas certificadas como 'grass-fed' o 'free-range'.

Fig. 27 http://www.uprm.edu/p/campusverde/recetas_eco-amistosas

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/>

Recetas Eco-Amistosas

Prueba estas sabrosas recetas, todas probadas personalmente por mi antes de ponerlas aquí. La mayoría de las recetas comunes se pueden modificar fácilmente sustituyendo la harina blanca por harina integral (o, integral orgánica), la azúcar blanca por azúcar turbinada, etc. Usa siempre ingredientes naturales, miel 100% natural, vainilla natural, no uses imitaciones pues usualmente están hechas con químicos muy dañinos a la salud.

Para modificar recetas de bizcochos (hechas para harina blanca) puedes añadir un poquito más de polvo de hornear (opcional, a gusto). El arroz integral toma más tiempo en cocinarse, sigue las instrucciones del paquete: yo suelo agregar un poquito más arroz del que dice el paquete para consistencia. Considera comprar una arrocera de barro como Vita-clay(R), el arroz integral queda perfecto siempre y no hay que vigilarlo.

Usa sal de mar, si es posible gruesa, tiene más nutrientes. Usa aceite de oliva en la mayoría de tus recetas. aceite de maní, o aceite orgánico de coco (te ayuda a rebajar). La pasta integral se cocina igual. A continuación presentamos varias recetas "verdes".

¡Buen Provecho!

[Lasaña de carne vegetariana](#)

Ni notarás la diferencia, deliciosa



Tiempo: 45 mins

[Sopa de Lentejas](#)

- Es mencionada en la Biblia y con razón; es sabrosa y super saludable!



Tiempo: 40 mins.



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 years, 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. 29 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 Ochoteco last 25th of June (Invitation by Jessica Otero jotero@cvnetwork.tv from Channel 24 of PR).

She was also interviewed 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.



Fig. 30 Dra. Sandra Cruz Pol in interview at CVBIEN show.

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 informaion 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. We were having the visit of

3. Old San Juan Energy Museum

Our director was invited visit ON/OFF Energy Museum in Old SJ. This visit served to make important contacts to what we can expect in the future and incorporated several of their ideas in or future interactive exhibits in or Eco Solar House. [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 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. Visit on January 30, 2014 Rick Asselta and his group visit us to see how we can collaborate to create a greener Puerto Rico. **Jane Goodall** founded **Roots & Shoot** environmental chapters (R & S), first in the U.S. and now across the globe. Fig. 31

Campus Verde is proudly affiliated to Dr. Jane Goodall's R&S Chapters.



2. 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!

facebook

Correo electrónico o teléfono

Contraseña

Iniciar sesión

No cerrar sesión

[¿Olvidaste tu contraseña?](#)

Dr. Jane Goodall

Campus Verde Colegial
está en Facebook.

Para conectarte con Campus, crea una cuenta en Facebook.

Registrarte

Iniciar sesión



Campus Verde
Colegial

- Research at Universidad de Puerto Rico
Recinto de Mayagüez
- Studied Engineering at University of Puerto Rico
at Mayagüez
- Lives in Mayaguez, Puerto Rico
- From Mayaguez, Puerto Rico
Born on September 14, 1990
- Followed by 673 people

FRIENDS · 3,224



FB page: Campus Verde Colegial

FB group: Campus Verde Estudiantes and Campus Verde @UPRM



@ CampusVerdeUPRM



Visit us at: <http://campusverde.uprm.edu>



Contact us at: campusverde@uprm.edu

Membresía verde y eventos en: ww.uprm.edu/eventosverdes



Únete al
movimiento
Campus Verde
Colegial

CAMPUS VERDE COLEGIAL



Email: campusverde@uprm.edu



Campus Verde Colegial



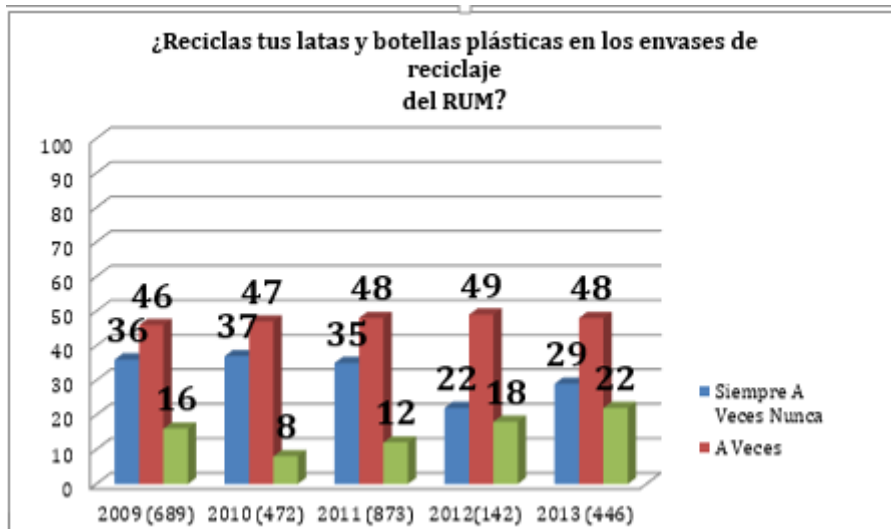
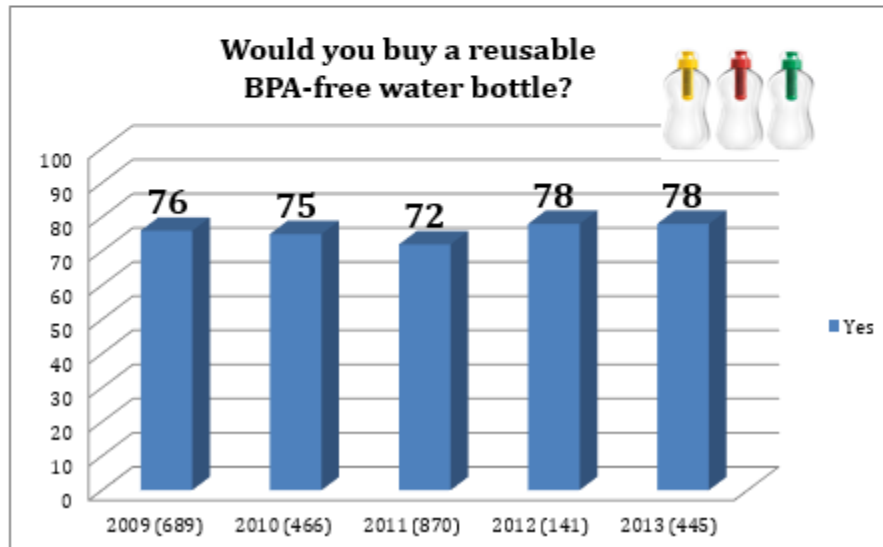
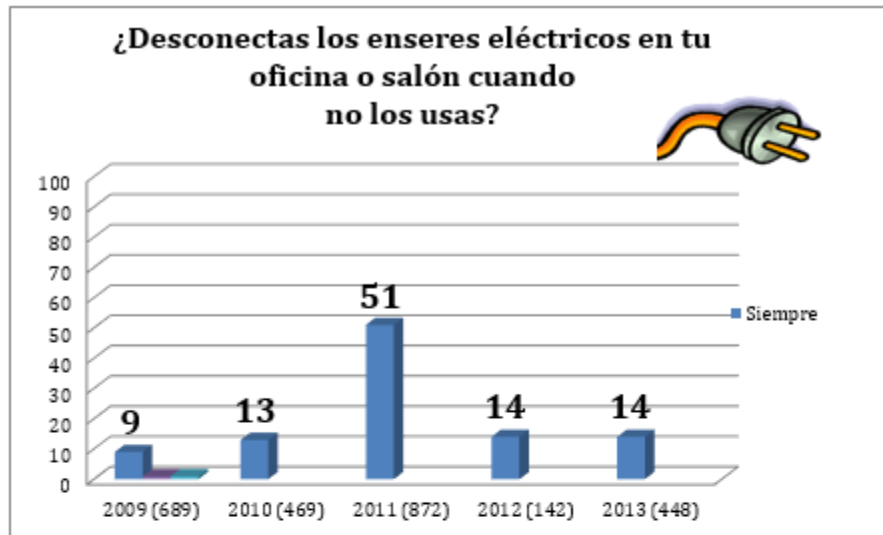
CampusVerdeUPRM



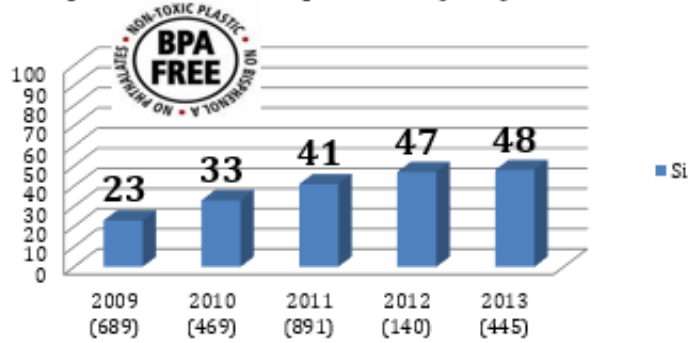
<http://campusverde.uprm.edu>



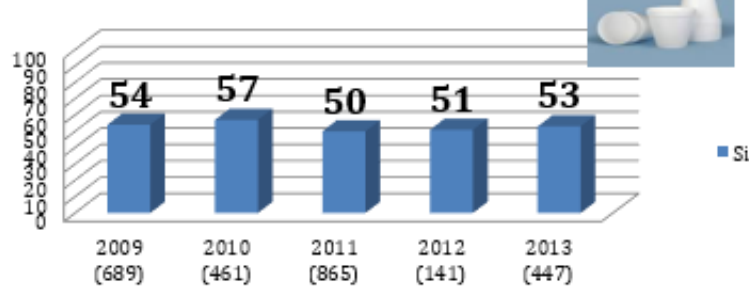
Appendix A: Campus Verde Survey Results Comparison 2009-13



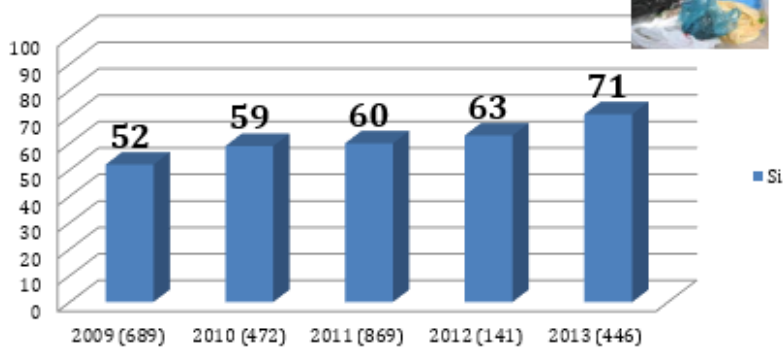
¿Sabías del posible daño a tu salud de las botellas plásticas debido a que contienen Bisphenol-A (BPA)?



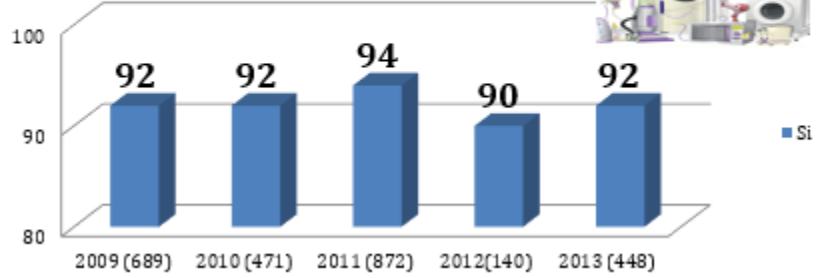
¿Conoces el impacto ambiental que causan los platos de poliestireno (Styrofoam®) al fabricarse en términos de tóxicos atmosféricos...



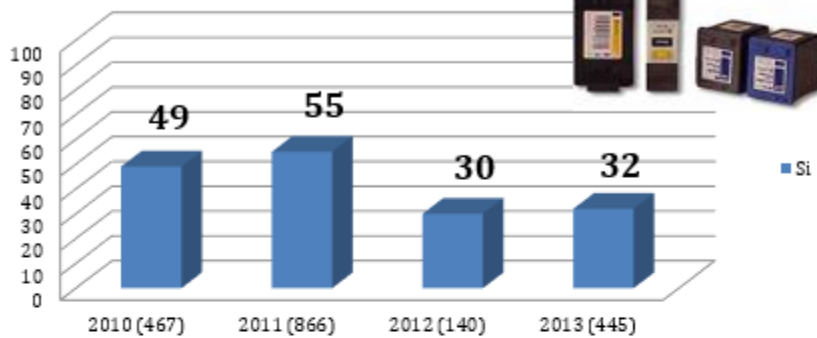
¿Sabías que la mayoría de las bolsas plásticas están hechas de petróleo?



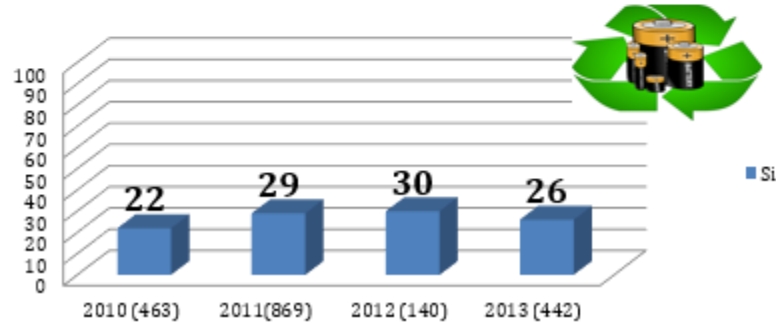
**¿Sabías que los enseres eléctricos siguen
gastando electricidad
estando apagados si permanecen**

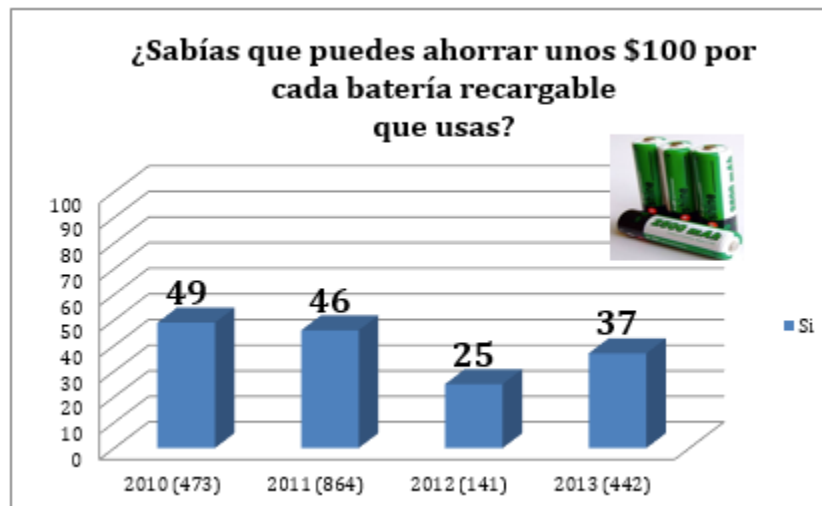
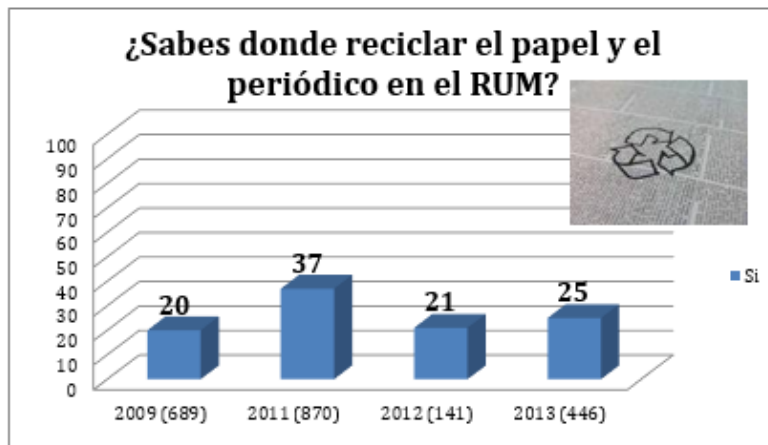
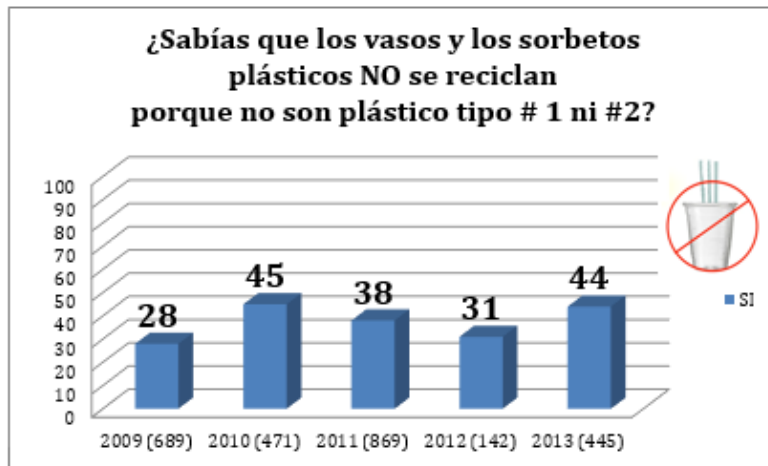


**¿Sabes donde disponer de los cartuchos de
tinta viejos?**

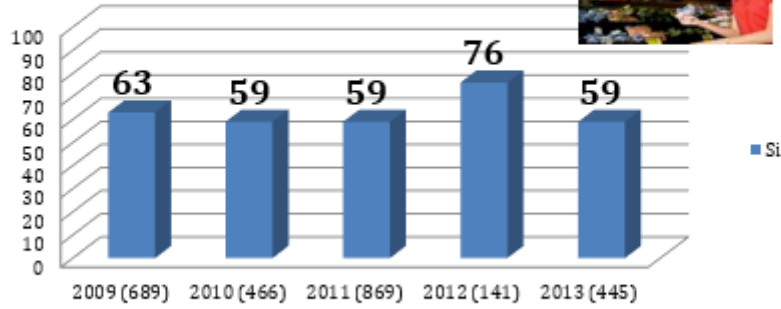


**¿Sabes dónde disponer de las baterías viejas para
evitar
contaminación de las aguas y la naturaleza?**

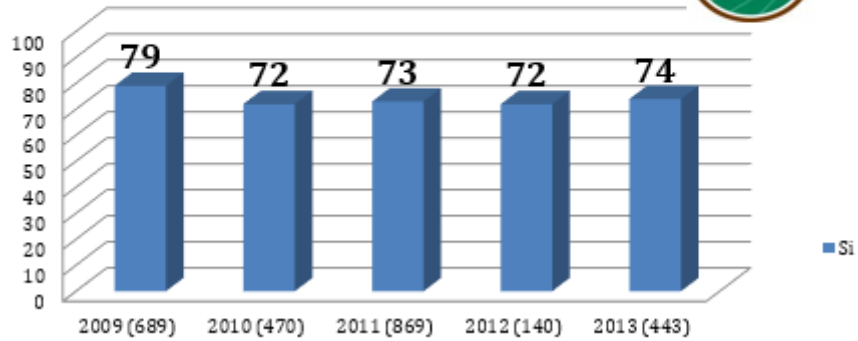




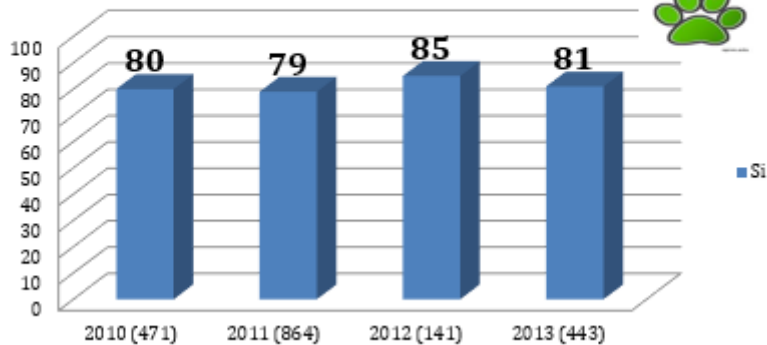
¿Conoces los beneficios a la salud de la comida, ropa y otros productos orgánicos?



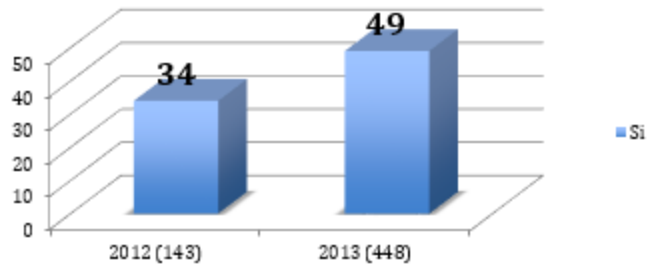
¿Conoces el efecto adverso para el planeta de los productos que no son orgánicos?



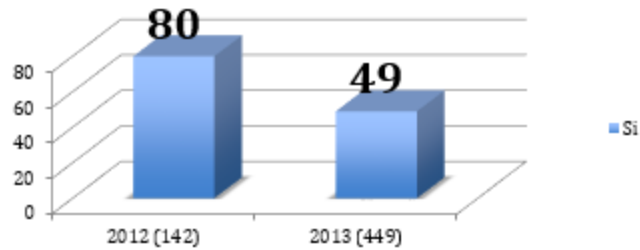
¿Te gustaría que se re-estableciera el uso de vajilla de platos reusables (mejores para la salud) en la Cafetería...



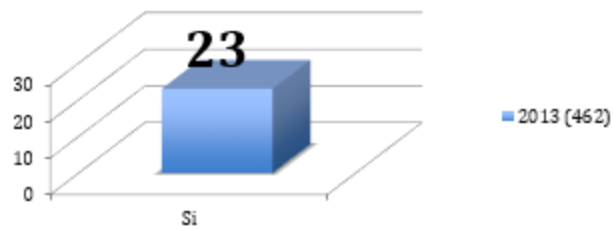
¿Sabías que algunos champús de bebé y productos de higiene y belleza contienen ingredientes conocidos como carcinógenos?

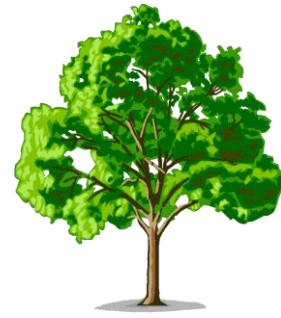


¿Sabías que la mayoría de las baterías son inofensivas o necesarias para una vida saludable?



¿Sabías que algunos alimentos contienen insectos o secreciones de insectos bajo el nombre de "carmine" (color rojo) o "shellac" ?





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.

