

# IATL

inclusive active  
innovative learning  
interdisciplinary  
teaching international

SUMMER 2013



# SUSTAINABILITY

A remarkable collaboration has emerged between staff and students from the Students' Union, the Centre for Student Careers and Skills, the Estates Department, IATL and numerous academic departments plus colleagues from our "Allies" at Monash University.

The focus of this new activity is "Education for Sustainability" and a belief that the world's great emergencies can only be addressed if we break down barriers of academic discipline, bring together students and staff from around the globe and explore how our and their everyday experiences relate to macroscopic scientific, social and cultural phenomena and how our academic pursuits can have meaning to us personally.

Herein, Emma Nugent and Muyiwa Oyinlola's pieces highlight Green Steps as a "flagship" for this thinking. David Mond describes a groundbreaking interdisciplinary approach to the study of Climate Change, open to nearly all Warwick undergraduates, and Ria Dunkley and Geoff Rose look more widely across the curriculum of Warwick and Monash Universities.

What is truly inspiring about these initiatives is the belief of the participants that only education can address the pressures on our planet. Let us know if you want to be involved.

**Dr Paul Taylor**  
IATL Director

The Students' Union has worked closely with IATL around the issue of educational sustainability (ESD). This year we won the NUS Green Impact Excellence Gold Award for ESD and greening the curriculum because of our collaboration with IATL. Embedding sustainability into the academic curriculum is important for raising awareness and knowledge of these issues but also for employability skills: we are now looking into how to engage students, possibly Green Steppers, with the curriculum and module creation so that they are directly involved as change agents in the process.

**Anna Chowcat**  
Postgraduate Officer, Students' Union



# MONASH ADOPTS AN EDUCATION FOR SUSTAINABILITY STRATEGIC FRAMEWORK



A tour of the Jock Marshall Reserve on the Clayton Campus was included as part of the Academic Staff Professional Development program on Sustainability.



Professor Edwina Cornish, Monash University's Provost (rear centre), interacted with participants at the Academic Staff Professional Development programme on Sustainability.

It was Sir John Monash, the individual after whom Monash University was named, who advised:

*"Adopt as your fundamental creed that you will equip yourself for life, not solely for your own benefit but for the benefit of the whole community."*

Equipping our graduates to address the grand challenge of sustainability will do more than deliver them a personal benefit by improving their future employment prospects. The whole community will also benefit from the improved environmental, social and economic outcomes that our graduates will strive to deliver when sustainability is embedded in their university experience.

It is perhaps not surprising that Monash has been recognised as Australia's 'greenest' university given the extent to which sustainability considerations already feature in its research, teaching and campus operations. Recently, Monash expanded its commitment to Education for Sustainability (Efs) by endorsing a strategic framework to embed sustainability in all its education programmes.

Drawing on insight from the literature, and the experience gained from initial exploratory projects undertaken at Monash, Efs will be advanced through a combination of strategic and tactical education renewal. Strategic education renewal focuses on whole course and year levels and will be complemented by Tactical education renewal that focuses on individual units (or subjects).

The strategic initiatives will build on a project undertaken to embed sustainability in the first-year Engineering programme. In that project, a series of workshops with internal and external stakeholders identified relevant learning outcomes relating to sustainability. A website was then established to provide online mini-lectures, activities and discussion forums for students. The process engaged academic staff and enabled them to incorporate aspects of sustainability into their units using a blended learning approach. Student surveys found that it produced a statistically significant increase in students' self-reported knowledge of sustainability.

Working through all the education programmes at Monash with the strategic education renewal approach will take time. That's why the tactical education renewal dimension is important in bringing about change in the shorter term. The aim of the tactical level initiative is to engage with the unit co-ordinators to equip, support and empower them to embed sustainability

in the units they teach. The approach builds on the successful academic staff professional development programmes undertaken at a number of North American Universities, emphasising making changes to units, over time, to embed sustainability rather than needing to undertake a major overhaul of a unit over a short period of time.

To support tactical education renewal, a professional development programme for Monash academic staff has been developed to assist them to embed sustainability in units they teach. The program involves a blended series of on-line modules and face-to-face workshops. The program was piloted in 2012 and is now being refined based on feedback from the pilot program participants.

Efs has been an important theme in the activities already conducted under the Monash Warwick Alliance. As described elsewhere in this newsletter, Green Steps, the award winning extracurricular program that delivers practical sustainability skills and experience to students, will be offered for a second time to Warwick students in 2013. That initiative was made possible because of the close collaboration between IATL and the Monash Sustainability Institute (MSI). IATL and MSI are expanding their collaboration and are now working on the development of a business plan for new education initiatives in the sustainability space. The MSI and IATL collaboration will help to deepen the engagement with sustainability that is being made by both alliance partners.

**Geoff Rose**  
**Professor and Convenor, Education for Sustainability**  
**Monash University**



Participants undertook a waste audits as part of the Academic Staff Professional Development programme on Sustainability.





## WARWICK'S GREENER GRADUATES

**In 2012, the Warwick-Monash Alliance introduced Green Steps @ Warwick, a hands-on training and internship programme for Warwick students to develop the skills required to create environmental change in the workplace. Green Steps has been running in Monash since 2000 in a range of universities around Australia, and Warwick is the first university internationally to benefit from this exciting initiative.**

The programme is not just for students who want to work in an environmental change role after they graduate, but also for those who want to affect change and sustainable working practices in whatever career path they follow.

The 12 students who took part in 2012/13 undertook training on campus, delivered by Mark Boulet, the Manager for Education Programmes at Monash, and David Robertson who is a Green Steps graduate himself currently living in the UK.

### **The Green Steps programme aims to provide students with:**

- Skills and knowledge to be effective change agents within organisations;
- Increased confidence and effective approaches to operating in a professional context;
- Experience and opportunities within the environment sector;
- A support network of like-minded individuals passionate about creating change.

### **The on-Campus projects the students undertook included:**

- Development of the Energy Trail  
[http://www2.warwick.ac.uk/insite/carbon/energy\\_trail](http://www2.warwick.ac.uk/insite/carbon/energy_trail) ;
- Student Switch-Off Campaign;
- Auditing recycling facilities in halls of residence;
- Auditing water consumption in halls of residence;
- An environmental assessment of University House.

### **The employer-based internships were based at:**

- Coventry City Council: assessment of the motor fleet carbon footprint;

- LEK Consulting: auditing current green practices in the building and making recommendations for improvements;
- Garden Organic, Ryton: developing information, materials and ideas for the Bee Campaign;
- Notting Hill Housing Association: developing a series of briefing notes to raise awareness among staff;
- Solihull Metropolitan Borough Council: working with the sustainability development team on their Eco-Schools project.

Green Steps@Warwick continues to be successful in 2013/14, with over 75 applications this year for 15 places. The 15 places have been awarded to students from a range of departments from the Social Sciences and Science faculties. This year we are hoping to work in collaboration with IATL, with a view to two of the internships being based in academic departments working on how education for sustainability could be integrated into the curriculum. If you are an academic interested in this idea, please contact us.

The Placement Learning Unit is now working on finding employers to host the 15-day internships over the summer vacation period. For more information please contact us at [placementlearning@warwick.ac.uk](mailto:placementlearning@warwick.ac.uk)

### **Links**

<http://www2.warwick.ac.uk/services/scs/experience/internships/greensteps>

<http://www.monash.edu.au/research/sustainability-institute/green-steps/index.html>

Video: [http://www2.warwick.ac.uk/services/scs/experience/internships/greensteps/green\\_steps\\_interview\\_lores.mp4](http://www2.warwick.ac.uk/services/scs/experience/internships/greensteps/green_steps_interview_lores.mp4)

**Emma Nugent**  
**Placement Learning Manager**  
**Centre for Student Careers and Skills**



# GREEN STEPS

Green Steps is a sustainability education programme that empowers students to become effective 'change agents' by bridging the gap between knowledge acquired at university and the skills required to create environmental change. After gaining technical skills through an MSc in Renewable Energy Engineering, I was motivated to apply for the pilot Green Steps @ Warwick programme because I felt ill-equipped to make the impact I desired, especially in my home country of Nigeria.

The objectives of the Green Steps programme were met through its three-phase delivery of sustainability training, on-campus projects and internships. Twelve interns, students from different countries, disciplines and academic levels, were trained on environmental audits, problem mapping, effective communication and behavioural change. Subsequently we undertook in small teams some on-campus projects which included an energy audit of University House, a water audit in a hall of residence and the Warwick Energy Trail.

Two of us from Warwick held our internships at IATL. We worked with two 'Green Steppers' at Monash University on developing a long-term plan for Green Steps as well as investigating ways of integrating Education for Sustainability into the curriculum across all disciplines in both institutions. During this internship, we reviewed case studies on Education for Sustainability as well as interviewing academics and stakeholders across the university. The internship also offered us the platform of public presentations, key among which were the Monash-Warwick Alliance launch at the Australia High Commission, London, and the 'Education for Sustainability: A Colloquium' event hosted by IATL. Our final report was presented to the Education Working Group of the Monash - Warwick Alliance.

I now feel well equipped to make a positive environmental impact in my future career, and I would say that the Green Steps programme is the best student experience I have had so far.

**Muyiwa Oyinlola**  
2nd Year PhD Student  
School of Engineering





# WHAT CAN UNIVERSITIES DO ABOUT CLIMATE CHANGE?



Human-induced climate change is likely to affect the lives of today's undergraduates, perhaps in dramatic ways. The extent of these changes and their effects is uncertain, and is still the subject of heated debate. Despite the uncertainty, it seems clear that political decisions, international treaties and technological developments made over the next ten years will have measurable and perhaps critical effects on the future and future quality of human life. Do universities have anything to contribute through their undergraduate teaching? The new IATL module "Challenges of Climate Change" (IL006) is premised on the belief that they do.

## Not just rocket science

While the overwhelming consensus among climate scientists is that human activities are giving rise to dangerous changes in the earth's climate, successive climate summits have completely failed to agree on any serious measures to reduce emissions. In effect, climate change has political failure as one of its causes, and a proper understanding requires not just atmospheric physics but also the social sciences. Add to this the likely effects of climate change on the biosphere and on human activity, and it becomes clear that an interdisciplinary approach is needed to equip undergraduates to face its challenges.

Students will be invited to consider these different aspects in a series of lectures by academics from Economics, Law, Life Sciences, Mathematics, Physics, and Politics and International Studies. The hope is that they will emerge better able to participate in the debates of the future, and also, perhaps, to contribute to the development of new responses to the technological challenges posed by a changing climate, and to the political challenges involved in mitigating and, as now seems inevitable, in responding to its effects.

For information on the new module, go to the web-page at [http://www2.warwick.ac.uk/fac/cross\\_fac/iatl/activities/modules/climatechange](http://www2.warwick.ac.uk/fac/cross_fac/iatl/activities/modules/climatechange)

**Dr Andrew Levan (Physics) and Professor David Mond (Maths)**

## THE ENERGY TRAIL



**At the end of 2012, Warwick added a new Energy Trail to its campus following months of work by both staff and students. The trail showcases the environmental research that takes place here and the high efficiency standards of our buildings.**

The trail started life as a project for a group of students taking part in Green Steps – an educational programme designed to help students develop the skills and knowledge they need in order to create a positive environmental change in the wider community.

The students worked to gather environmental information about several sites on campus including the new IIPSI building, the Combined Heating and Power (CHP) plant, the Solar Tracker behind the Maths and Stats building, and many more. They also mocked up what would later become information boards for each of these sites.

University staff then arranged the sites into a trail around campus, complete with a map, and worked to finalise the information board designs and have them installed at all 16 sites. The University finished this before the end of 2012, publishing an online version of the trail to go with it.

Find out more about the Energy Trail, including a map and details of each site: [warwick.ac.uk/energytrail](http://warwick.ac.uk/energytrail)

**Sam Boulby and Joel Cardinal, Estates Office**

# BUILDING BRIDGES FOR EDUCATION FOR SUSTAINABILITY

Since October 2012, I have been researching the development of Education for Sustainability (Efs) at both Warwick and Monash Universities, through the Monash-Warwick Alliance. IATL was inspired by the enthusiasm students had shown for Efs during the piloting of the Green Steps programme, a Monash-based initiative, which will run for a second year at Warwick in 2013. More broadly, a recent HEA study revealed that 80% of students believed sustainability skills would be important for their future careers and a majority thought universities should be responsible for preparing them for that employment.

Nowadays, more and more universities are developing innovative Efs programmes, while the most inspiring take a holistic approach, embedding Efs throughout their institutions. This involves consideration of the existing curriculum, development of new programmes, extra-curricular activities and community and place-based sustainability initiatives run by, for example, the estates department and student societies.

My research revealed a smorgasbord of Efs related activity across the university, in subjects as diverse as Eco-poetics, Environmental Politics, Food Security, Green Chemistry and Engineering, and effective Business practices for sustainability. Across the board, both staff and students were enthusiastic about the development of Efs through the international collaboration with Monash, while many stressed the need for strong long-term leadership and support for such developments.

The time has well and truly come for education to play a key role in creating a sustainable future, as world leaders at the Rio Summit 20 years ago stated was an imperative. The next stage of our project involves the development of Efs curriculum through the Alliance. If you have any ideas for how you'd like to see things develop, or if you would like to participate, please contact me at [r.dunkley@warwick.ac.uk](mailto:r.dunkley@warwick.ac.uk)

**Dr Ria Dunkley**  
Research Fellow, IATL  
Ria's full report 'Building Bridges for Efs' is available on the IATL website.



## STAFF CHANGES AT IATL

At the end of March Dr Susan Brock, one of our two Academic Managers, retired after working with IATL since the department was established and having previously managed the CAPITAL Centre for five years. The team enjoyed a number of events to mark Susan's retirement, and would like to offer their sincere thanks to her for the hard work, dedication and humour she brought to her role. She is already sorely missed.

Susan will be replaced by Caroline Gibson, who until now has been Managing Editor of *Reinvention: an International Journal of Undergraduate Research*. Caroline will remain involved with the journal and its relationship with Monash University in addition to her new Academic Manager duties, and a new Managing Editor is currently being recruited.

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