



# **2011- 2012 Sustainability Report**

## **Central European University**

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**John Shattuck**, President and Rector of CEU



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Dear Colleagues and Friends,

It is my pleasure to present to you the first ever CEU Sustainability Report. It tells an important story of how sustainability was launched at CEU and also gives the reader a picture of some important aspects regarding sustainability at CEU including energy efficiency, waste management, and environmental awareness. While not comprehensive, this work is the fine achievement of students in the Environmental Politics: Environmental Activism and Communication class that I teach in the Department of Environmental Sciences and Policy. They organized the report content and conducted research including document analysis and qualitative interviews as well as a survey. Despite being a student project centered on learning and confined by credit hours, this report achieved a high level of professionalism, especially given the time limitations and no financial resources. This was largely a student affair involving a great deal of commitment and passion on the part of the students, and solid mentorship and support from staff and faculty. The CEU Sustainability Advisory Committee (CSAC) and the Sustainable Campus Initiative (SCI-student group) were integral to contributing to the substantive contents of the report in form of institutional history, achievements and efforts, and much of the success that has been achieved in working to introduce and implement sustainability measures at CEU.

It should be clear from this report that **sustainability at CEU is us**. It is motivated by committed and passionate people who envision a better world in which environmental protection, social justice and economic viability are mutually nurtured. With this report, we hope that you see and discover your own place in the important effort to make CEU and the world more sustainable.

Yours Sincerely,

Tamara Steger, Chair

CEU Sustainability Advisory Committee (CSAC)





## Executive Summary

As a leading graduate institute, Central European University (CEU) has undertaken a wide array of initiatives to foster the development of a sustainable campus. Such efforts and progress will be accelerated with the campus redevelopment and reconstruction that are on the horizon.

In this report, a combination of research and analysis tools was employed to investigate the sustainability performance of CEU and to explore opportunities for future improvement. A baseline of consumable resources (energy, gas, water, waste, and paper) was established. Additionally, to understand more about community attitudes and behavior, further information was gathered through a survey and a series of field observations. Sustainability certification schemes as well as best practice examples in universities in Europe and the United States were examined. Finally, the report provides a variety of recommendations for CEU to become a model sustainable university and an example for universities worldwide.

The main findings of this report were as follows:

- a) The first staff-driven sustainable initiative in the University started in 1998. In the following years different students and staff members continued to initiate sustainability actions culminating in the establishment of the Sustainable Development Policy, the CEU Sustainability Advisory Committee and the Sustainable Campus Initiative.
- b) Between the years 2006 and 2010, the annual average electricity consumption among all buildings of CEU was 98.21 kWh/m<sup>2</sup> (Baumbach et al. 2011). During this same time period the mean annual electricity consumption per capita was 1.20 MWh (Baumbach et al. 2011). In 2010, the mean energy consumption of all buildings was 87.58 kWh/m<sup>2</sup>, with Nador 9 averaging at 132.09 kWh/m<sup>2</sup> (Baumbach et al. 2011). Energy consumption fluctuates seasonally, peaking during the summer months when air conditioning is at highest demand.
- c) Natural gas is primarily used for heating at CEU and therefore peaks during the winter months. The amount of gas consumed varies yearly due to weather conditions. The average annual use of gas is 422 thousand m<sup>3</sup>. The area and insulation of each building affects the amount of gas they require for heating.
- d) CEU main consumption of water occurs in the restaurants, bathrooms, and drinking fountains. The annual average consumption of water from 2009 to 2011 was 9,321 m<sup>3</sup>. Water consumption peaks during fall and spring semesters, when most of the CEU community is present on campus.
- e) The University campus generates 1858.5 m<sup>3</sup> of waste (excluding selective waste) annually, which has an estimated cost of 7.5 million HUF. In January 2012, CEU recycled one ton of paper, 100 kilograms of plastic, and 40 kilograms of glass.
- f) Since 2008, the default printer setting on student accessible printers is double-sided portrait on grey mode. Regardless of that, a lot of single sided printing occurs in the University, mostly on the behalf of staff and faculty. Starting in 2011, recycled paper is now primarily used with sustainably sourced white paper optional.



- g) The office observations revealed that lights were left on unnecessarily in 70% of the cases. If half of the lights that are turned on unnecessarily are turned off, 240,000 HUF could be saved annually. The results for faucet checks were very positive, with only two cases where the faucet was left open.
- h) The environmental awareness survey showed a generally high level of awareness among respondents with regard to light use and recycling. They also provided useful comments on other aspects, such as awareness-raising campaigns or the location of drinking fountains.

The campus redevelopment project is an excellent opportunity for CEU to implement different initiatives to achieve a more sustainable campus. By incorporating sustainable design and materials in the redevelopment and reconstruction, the financial overhead of maintaining could offset any extra costs in the construction phase. Creating and promoting a sustainable campus will encourage community members to adapt their behavior accordingly and in the future, possibly applying these behaviors in their respective communities.

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## 1. Introduction

In an article entitled “A Sustainable University: What can be the matter?” Dr. Luis Valazquez defines a sustainable university as:

*“A higher education institution, as a whole or as a part, that addresses, involves and promotes, on a regional or a global level, the minimization of environmental, economics, societal, and health negative effects generated in the use of their resources in order to fulfill its main function of teaching, research, outreach & partnership, and stewardship among others as a way to helping society make the transition to sustainable life styles”*  
(Velazquez et al. 2006 ).

By signing the Copernicus Charter in 2005, Central European University (CEU) pledged to strive towards sustainable development in the European higher education community. As the Copernicus Charter states; “[Universities] must therefore commit themselves to an on-going process of informing, educating and mobilizing all the relevant parts of society concerning the consequences of ecological degradation, including its impact on global development and the conditions needed to ensure a sustainable and just world”(Copernicus 2005). As CEU’s first Sustainability Report, this document serves multiple purposes. Firstly, it creates an atmosphere of transparency around the University’s consumption habits and sustainability policy. This shall provide information to campus decision makers as well as the wider campus community. Secondly, it establishes a baseline utilizing available data and therefore a framework for future sustainability reports that will continue to engage the campus community. Thirdly, it provides recommendations on ways to reduce environmental impact and give decision makers the opportunity to make CEU a leader in sustainability.

Each section of the following report contains information recorded during research, as well as recommendations for better practices at CEU. The report begins by presenting the history of sustainability at CEU, and then moves on to examine the consumption figures in the areas of Energy, Water, Waste and Printing. Then to provide a different perspective, campus culture was examined through field observation and a community survey. Finally, the report aims to build on this unique time and opportunity in CEU’s history by providing a variety of recommendations: with redevelopment on the horizon and a relatively high environmental awareness, CEU could become a model sustainable university and an example for universities worldwide.



## 2. Methodology

This report employs a combination of research and analysis methods. One aspect of this information is the objective consumption data provided by the Maintenance Office. This information includes data on the amount of energy, gas, water, and paper the campus consumes yearly, as well as the amount of waste it generates. Additionally, to understand more about community attitudes and practices, further information was gathered through a survey of community members, and a series of field observations in the Faculty Tower. Moreover, interviews with key stakeholders in the development of sustainability programs on campus were conducted. Finally, best practices from other local and overseas universities were considered.

**“Improving the energy efficiency of our campus, decreasing the amount of waste we create, and using natural resources more wisely are important goals for making CEU more environmentally sustainable. Worldwide energy consumption, excessive waste, overuse of natural resources, and air and water pollution caused by these factors are wasting precious resources and creating climate change. All of us at CEU need to help reduce these pressures on the world ecosystem, which will also benefit our community by reducing the cost of heating, lighting and water and reducing the waste that we create. It's important for the University to set a positive example for other institutions and to make a difference in the community in which we live and work.”**

**Peter Johnson, Vice President for Student Services**



### 3. History of Sustainability at CEU

Founded more than two decades ago, CEU has come a long way in establishing itself as a leading graduate institute in Central Europe. Likewise, it has attained major achievements during its journey to be more sustainable, through a combination of staff and student initiatives. This section will review the key milestones of this journey and discuss opportunities to further crystallize these efforts. There are no official records of the development of sustainability in CEU.

#### Late 1990s

Discussion about how CEU could be managed in a more environmentally-friendly manner started around 1998, when John Harbord and Professor Edward Bellinger, the then Head of the Department of Environmental Sciences and Policy, and a few other staff of the department convened to explore a variety of issues such as recycling and reducing electricity consumption of lighting. As it was the first time these issues were being brought up, there was a lack of well-established channels to gather feedback and put ideas into actions. Nonetheless, it signified the first key step to generate interest on campus, which would facilitate the subsequent sustainable development (Harbord pers comm.).

#### 2002

This year saw the beginning of student involvement in sustainability issues on campus. The student-led initiative “Green Step” looked at energy consumption related to the use of lifts in the Faculty Tower. The signs, inviting everyone to take the stairs instead of the lift, can still be seen (Figure 1).



Figure 1: The “Green Steps” initiative 2002 campaign that still remains at the lifts of the Faculty Tower

However, one of the problems of promoting sustainability through student initiatives at a graduate school like CEU is that the student body spends on average only one or two years at the University.

Therefore, the impact of many meaningful initiatives is challenged by the lack of continuity.

## 2006

In 2006 the Committee for Environmental and Social Responsibility was established. It developed a Social Responsibility Charter with the aim of promoting sustainability at CEU. The document was accepted by the CEU Senate as a symbolic statement, though some faculty pointed out that it had no more value than that; indeed, no policy changes followed from this document.

In the same year, the first electricity assessment of CEU was carried out by former students of the Department of Environmental Sciences and Policy. It focused on the electricity consumption of electronic devices on campus (Baumbach et al. 2011).

## 2008

The Sustainable Development Policy (see Appendix 1) was adopted to promote the awareness of and to implement sustainable development in all aspects of CEU's activities.

During this time, more student efforts were also undertaken to promote campus sustainability. For example, some students suggested to the CEU administration to consider hiring an alternative waste collection company. According to the proposal, the new arrangement would have been more financially viable as it involved fewer fees than those charged by the city council. Although in the end the proposal was not realized, it was evident that student involvement in pushing forward sustainable development on campus was becoming more diverse and strategic.

## 2009

A student group named "OIKOS" was established as part of an international network of student groups that promotes environmental issues and sustainability in their universities. However, with the lack of continuity in student participation at CEU the members of OIKOS decided to move the group to Corvinus University. This not only enhanced the stability of such a student-led initiative, but also facilitated collaboration between Hungarian education institutions.

## 2010

Jens Trummer, a faculty member at the Business School, initiated a proposal for a sustainable campus initiative (See Appendix 2) which was then developed into a draft working document summarizing some of the key work areas in sustainability at CEU (Appendix 3.). The proposal was not accepted as such by the administration, but was the first effort to establish a baseline for addressing management and operational issues such as recycling and energy efficiency at CEU.

This year witnessed the institutionalization of sustainability initiatives at CEU. In 2010, Professor Tamara Steger from the Department of Environmental Sciences and Policy and faculty Senate member joined the CEU green campus efforts; and the group decided to propose a new senate committee on sustainability at CEU (Appendix 4). On December 10<sup>th</sup>, Tamara Steger submitted an amendment to the Sustainable Development Policy (See Appendix 1) before the faculty senate. The proposed amendment was supported unanimously, and led to the establishment of the CEU



Sustainability Advisory Committee (CSAC)(Figure 2). CSAC's Declaration is provided in Appendix 7.

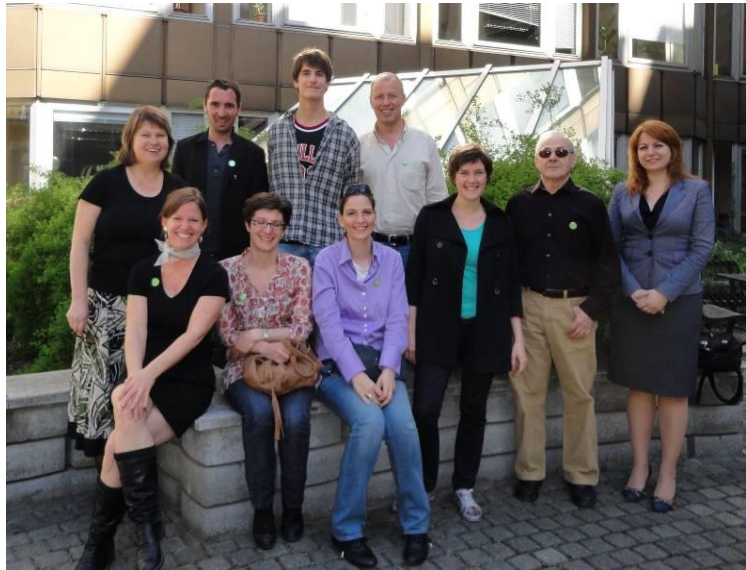


Figure 2: Members of CSAC 2010-2012



Figure 3: SCI initiative from 2010

(CSAC Members: top row from left: Zsuzsa Gabor, Zoltan Kiss, Logan Strenchock and John Harbord; bottom row from left: Tamara Steger, Marie-Pierre Granger, Dora Sarosi, Lea Baumbach, and Peter Hardi)

CSAC was mandated to implement the CEU Sustainable Development Policy (Appendix 1) and to ensure that the University fulfills the commitments it assumed as a signatory to the Copernicus Charter.

The Copernicus Charter is a set of guidelines for sustainable development which built on the Bologna Process for establishing a European Higher Education Area (Copernicus 2005). The process advocates integrating sustainable development in the following aspects:

1. **Integration** of sustainable development into the degree structure (modules)
2. **Integration** of sustainable development into the qualifications framework and learning outcomes
3. **Integration** of sustainable development into quality assurance
4. **Improvement** of the social dimension and the attractiveness of the European Higher Education Area by integration of sustainable development

Also in 2010 the Sustainable Campus Initiative (SCI) was established by students of the Department of Environmental Sciences and Policy. SCI aims to promote sustainability through grass-root



initiatives on the one hand (such as campaigns and workshops), and through the institutionalization of sustainability values throughout the entire hierarchy of the University (Figure 3). SCI created a handbook for students interested in working on sustainability issues at CEU (Appendix

## 2011

In 2011, a number of major achievements were realized. The collaboration between the CSAC and the SCI led to the campus-wide installation of recycling facilities. The SCI also furthered the greening of the Japanese Garden by raising funds from the Walt Disney Company. At the end of the year, CEU adopted the use of recycled paper. For its commitment and achievements, SCI received the CEU Student Engagement Award in 2011.

To conclude, CEU's sustainable development has been made possible by the continuous dedication of faculty, students and staff members. It has gradually evolved into the current structure and has been integrated into the University's policymaking. History has shown that both top management support and bottom-up initiatives by the wider community play a key role in promoting sustainability on campus. While sustainability efforts at CEU have a long history of asserting the need for a sustainability officer, however, there is still a serious need for dedicated full-time staff and/or office to take charge of sustainability issues and facilitate sustainability efforts overall (see Appendix 5). The University could greatly benefit from a professional office that could serve as coordinator creating synergies among the various departments responsible for sustainable development.





## 4. Energy

The aim of this section is to establish the baseline of consumable resources at CEU. To make this report applicable to future management decisions a focus on sources of consumption takes precedence over building efficiency since the campus will be remodeled in the near future. Throughout the year CEU utilizes energy, gas, water, and paper in daily operations. More sustainable use of these inputs or resource use efficiency will directly reduce the financial overhead costs of running the University. CEU currently pre-pays for its yearly energy needs with financial consequences for under/over usage (Kiss pers comm). A more sustainable campus will balance energy consumption as well as lower overall energy use. The Campus Redevelopment Office (CREO), Maintenance Office, and Campus Services Group provided data for these inputs. A review of the 2006 CEU Energy Audit and the 2010 CEU Energy Management Report also yielded relevant data. When data was insufficient to establish a baseline, the process of operations was discussed and recommendations for future solutions provided.

**“The energy consumption is something that we all obviously should be very careful about and that there are ways of conserving energy that are relatively inexpensive: the management of windows, putting skylights in where possible and developing sustainable architecture that helps with energy consumption.”**

**John Shattuck, President and Rector**

### 4.1.Overall Energy Consumption

The overall electricity demand of a building depends primarily on building size, insulation efficiency, office equipment, lighting, air conditioning, elevators, and building occupancy. The infrastructure of a building cannot be changed without incurring considerable financial and time costs. This report wants to make applicable recommendations for CEU to implement prior to the campus redevelopment and therefore divides energy usage by infrastructure limitations and building use.

Between 2006 and 2010 the annual average electricity consumption among all buildings was 98.21 kWh/m<sup>2</sup> (Baumbach et al. 2011). During this same time period the mean annual electricity consumption per capital was 1.20 MWh (Baumbach et al. 2011). The average per person use of energy remained relatively constant throughout the last five years.

The first full year that all energy usage was monitored by the Maintenance Office was in 2011 (Kiss pers comm). Figure 4 shows the monthly energy consumption for all CEU buildings in 2011.



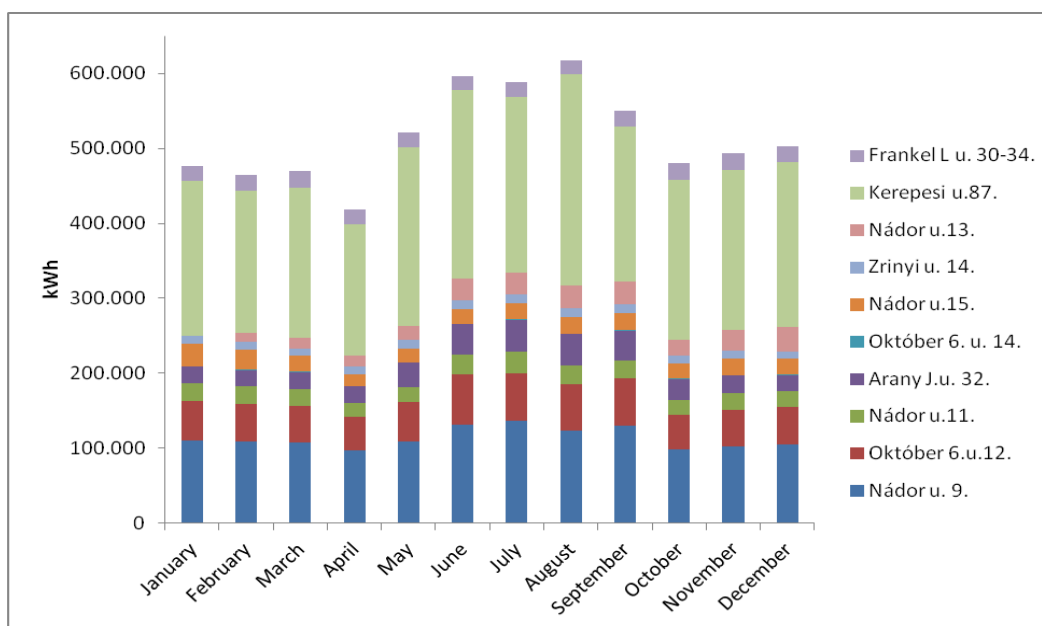


Figure 4: Monthly electricity consumption (kWh) for all CEU buildings in 2011

## 4.2.Infrastructure

CEU owns and operates 28,839 m<sup>2</sup> of building space in its five downtown campus buildings (Table 1). Their age and internal structure vary (Kiss pers comm). This, in turn, affects the insulation properties of each building. Data on the differences of the buildings was not attainable, therefore, only averages of all buildings are used in this report.

The Nador 9 building is the most energy intensive building on CEU's campus. In 2010, the mean energy consumption of all buildings was 87.58 kWh/m<sup>2</sup>, with Nador 9 averaging at 132.09 kWh/m<sup>2</sup> (Baumbach et al. 2011). Nador 9 houses the library and computer laboratories in addition to offices and classrooms, which account for the higher energy demand. Comprising 12 stories, Nador 9 also commands greater use of elevators (Baumbach et al. 2011).

Table 1: The area owned and maintained by the CEU in 2009 to 2011 and the area to be in use after redevelopment in 2015

Building	Total Area (m <sup>2</sup> )	m <sup>2</sup> owned and maintained by CEU in 2009	m <sup>2</sup> owned and maintained by CEU in 2010	m <sup>2</sup> owned and maintained by CEU in 2011	m <sup>2</sup> to be in use after 2015 redevelopment
Nador 9 – Monument building	3487	3487	3487	3487	3487
Nador 9 – Fac.Tower	6152	6152	6152	6152	6152
Nador 11	4864	4864	4864	4864	4864
Nador 13	7063			7063	7063
Nador 15 -existing	3021		3021	3021	3021
Nador 15 - to be built	4000				4000
'Linkage' between Nador 9 and Oktober 6	2422	2422	2422	2422	2422
Zrinyi 14	1830	1830	1830	1830	0
<b>Total</b>		<b>18,755</b>	<b>21,776</b>	<b>28,839</b>	<b>31,009</b>

### 4.3. Building Use

Energy consumption fluctuates seasonally, peaking during the summer months when air conditioning is at highest demand (Figure 5). The five downtown buildings utilize differing types and sizes of air condition units from central cooling to small individual units (Baumbach et al. 2011). The percentage of energy consumed by air-conditioning could not be determined, since specific information on every unit in use and operating times of each unit is not available.

The Maintenance Office programs the temperature range and operating times of the central cooling units (Kiss pers comm). Central air conditioning is more energy efficient for larger spaces but when preprogrammed, it does not take into account daily outdoor temperature variations. Smaller units allow individuals to change temperature settings based on personal preference, which may lead to inefficient use as well.

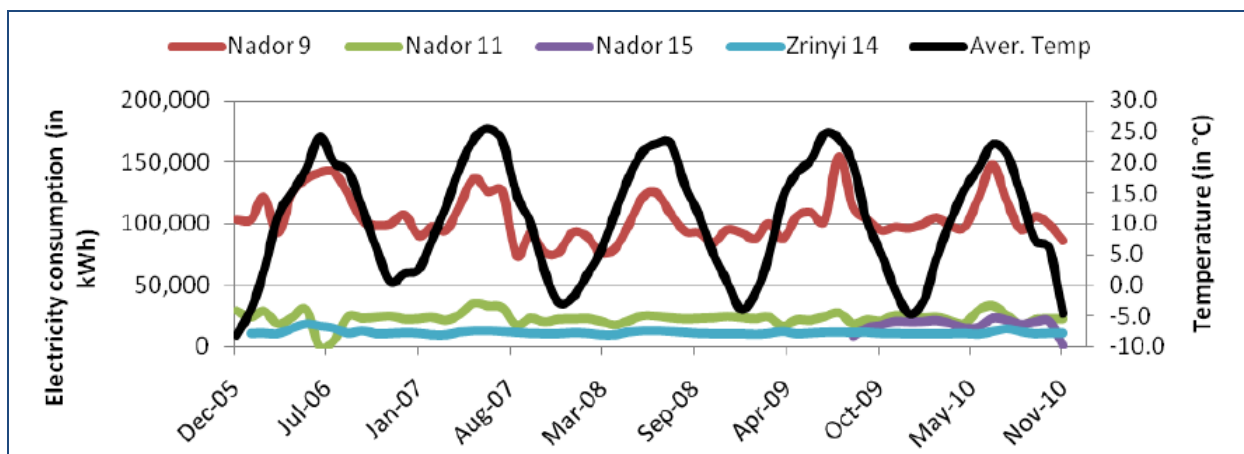


Figure 5: The electricity consumption and temperatures in 2005 to 2010 (Baumbach et al. 2011).

The choice of lighting plays another role in energy consumption. Fluorescent bulbs continue to be phased out in favor of energy-efficient compact fluorescent lamps (Durrant pers comm). To further reduce energy requirements for lighting light-emitting diodes (LED) can be utilized.

Electronic office equipment is an integral part of the University setting and their daily use contributes to the energy demand of CEU. The energy audit of CEU (2006) established that computers use 37%, printers 25%, and monitors 18% of the energy demand for office equipment (Baumbach et al. 2011). User behavior and energy efficiency of the devices play a significant role in energy consumption.



#### **4.4.Recommendations**

The future renovation of CEU's campus will have the largest impact in lowering energy consumption. The design and materials used should be modern and efficient, with the goal of sustainable use. We applaud the selection of the architecture firm with the inclusion of the environmental consultant A-Zero for the redevelopment of CEU's campus. This demonstrates an active choice towards making CEU a sustainable university. A comprehensive inventory of all lighting fixture types and office equipment will identify low-efficiency devices in need of replacement. More importantly, CEU should encourage the community to use energy more responsibly and to minimize the use.

**“We can certainly continue to improve, especially in the area of energy consumption. And I think that the fact that we are consolidating all parts of our university in one set of buildings will really help on this.”**

**John Shattuck, President and Rector**



## 5. Gas

Natural gas is primarily used for heating at CEU and therefore peaks during the winter months (Figure 7). The amount of gas consumed varies yearly due to weather conditions. The minimum room temperature in each building is controlled by the Maintenance Office and manually programmed. Thermostats are located on every floor and in most classrooms allowing users to only increase the heat as desired. If the room is too warm for personal preference the only solution available is to open a window, straining the heating system and accelerating gas consumption.

The average annual use of gas is 422 thousand m<sup>3</sup>. Figure 6 shows the total consumption of gas between 2009 and 2011. The addition of the residence center and business school to the Maintenance Office list of responsibilities in July 2011 accounts for differences between values in Figure 6 and Figure 7.

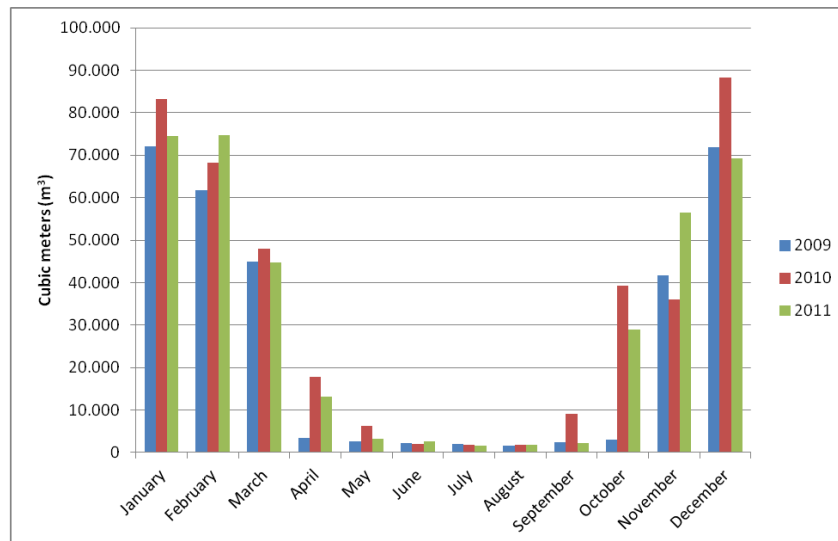


Figure 6: The total gas consumption between 2009 and 2011 (excluding Kerepesi and the Business school)

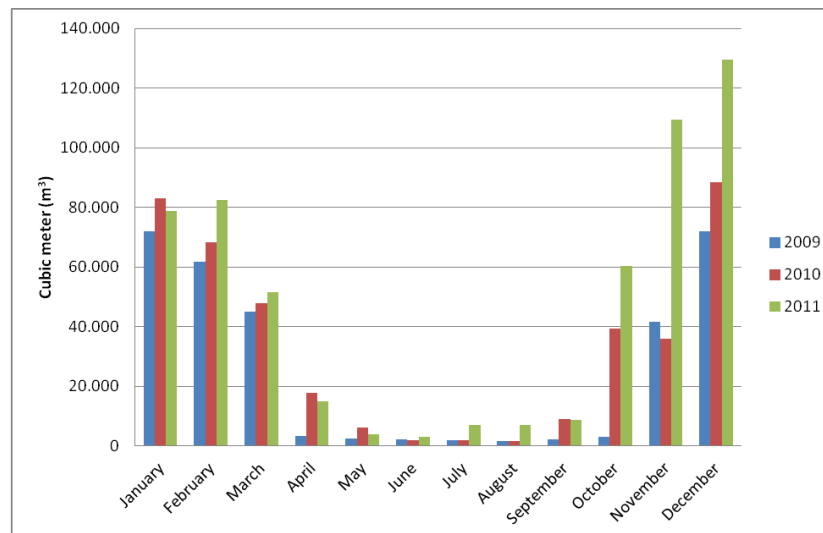


Figure 7: The total gas consumption between 2009 and 2011 (including Kerepesi and the Business school in 2011)

The area of each building factors into the amount of gas each building requires for heating. As Figure 8 illustrates, Nador 9, the largest building at CEU, uses the most gas. Building insulation also affects the amount of gas required to maintain a constant room temperature and the quality of insulation greatly varies between buildings.

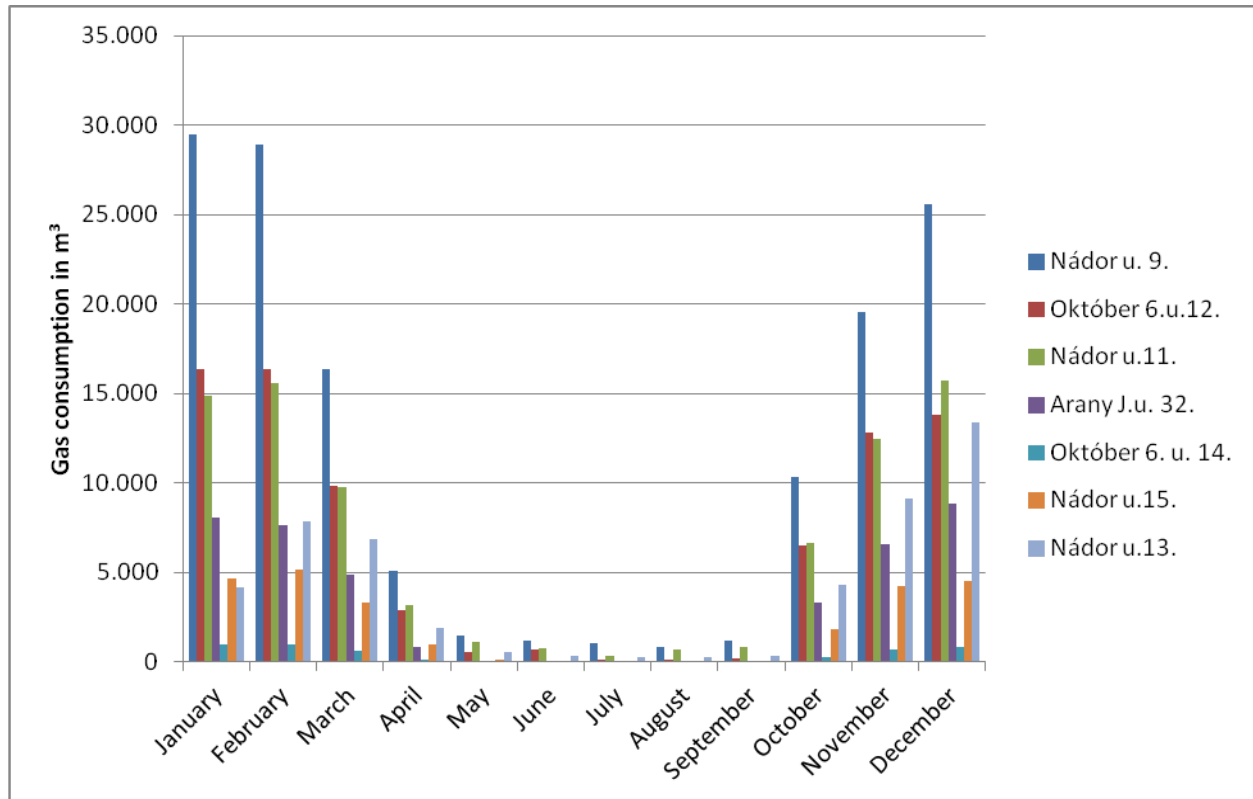


Figure 8: The monthly gas consumption of the different CEU buildings in 2011.

## Recommendations

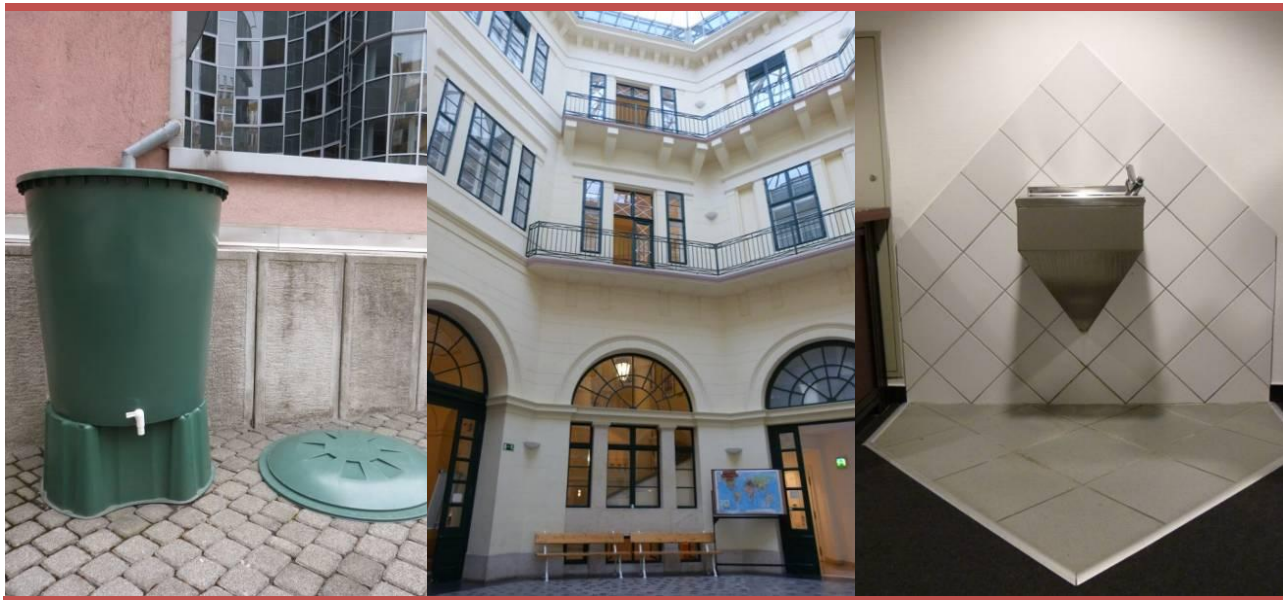
The renovation of CEU should include modern insulation materials and high efficiency windows to dramatically lower the amount of heating required. The swinging doors at the entrance of Nador 9 and the second floor doors leading to the Japanese Garden should be replaced with self-closing doors to reduce heat loss. Room temperature settings during the winter months should be changed daily, depending on the weather, to optimize gas consumption while ensuring maximum comfort to occupants and avoiding the need to open windows for cooling.



## 6. Water Consumption

Water consumption in this report will focus on CEU's downtown Budapest campus, since no data was available for the Kerepesi residence center. Data spanning from 2009 to 2011 was provided by CEU's Maintenance Office. It can be assumed that water consumption at the residence center will be higher than for any single building on campus due to the additional water demand for irrigation and showering.

Receiving its supply of purified water from Fővárosi Vízművek, CEU's main consumption of water occurs in the restaurants, bathrooms, and drinking fountains. However, no data is available to differentiate between these sources. Watering plants is another demand for water, albeit minor. The Japanese Garden located on the second floor of Nador 9 has a rain barrel to collect rainwater for watering the landscape.



The annual average consumption of water from 2009 to 2011 was 9,321 m<sup>3</sup>. This figure only covers Nador 9 and 11, Oktober 6. 12, and Arany Janos 32 because those are the only buildings with complete data. Figure 9 illustrates a monthly breakdown of water use in these five buildings. Water consumption peaks during fall and spring semesters, when most of the CEU community is present on campus, and dips in August and December, when the University partially closes. There was a decline in water use from 2010 to 2011. Figure 10 contains all water data available by building and shows Nador 9 consuming the majority of water on campus. The low consumption of water for Nador 13 cannot be determined at the time of this report and further investigation is required. A potential reason for Nador 9's high water use may be attributed to the basement café and ground floor cafeteria. An increase in Nador 9's water use is predicted for 2012 with the opening of the café on the 10<sup>th</sup> floor.

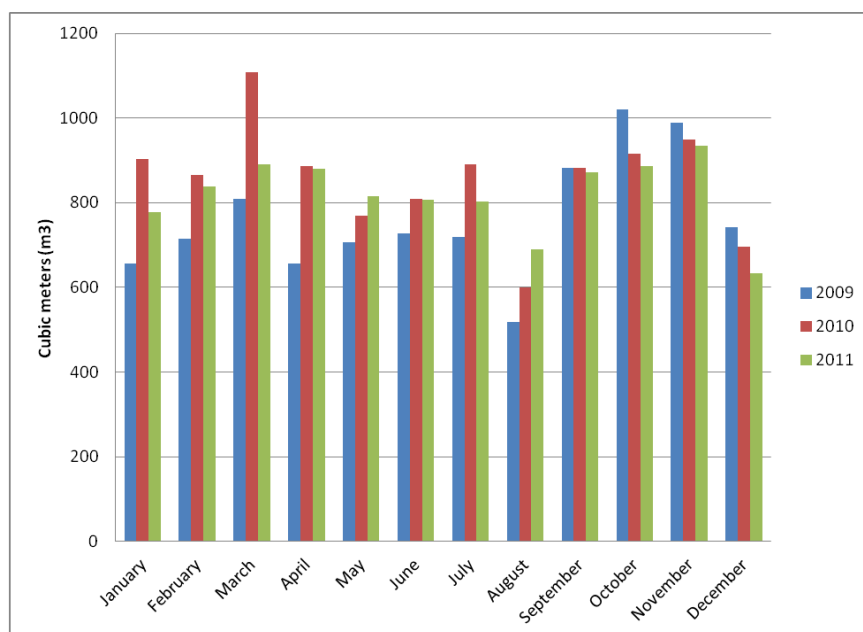


Figure 9: Monthly water use (m³) in 2009 to 2011 (data from Nador 9, Nador 11, Okt.6 u. and Arany J. 32 only)

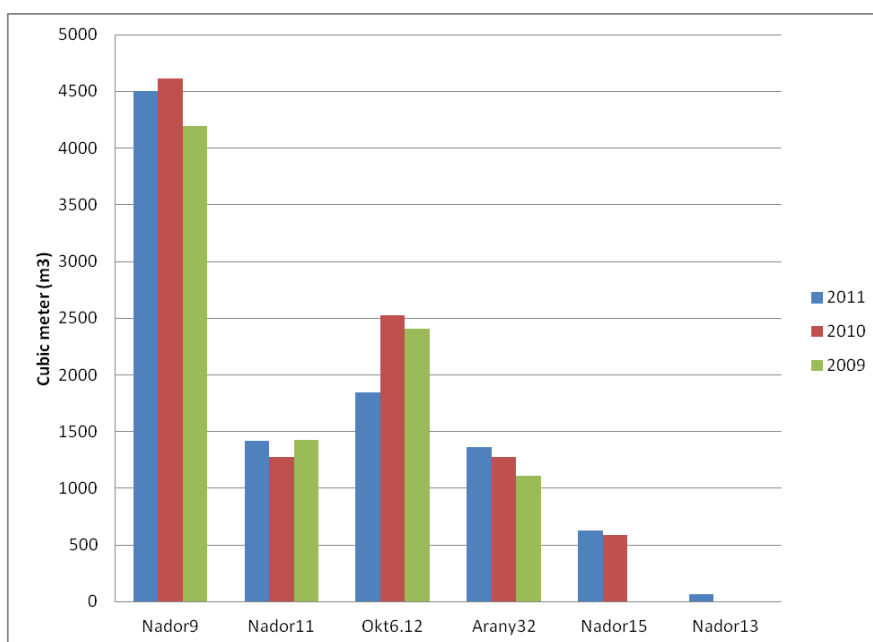


Figure 10: Total water consumption (m³) by building in 2009 to 2011.

An important aspect of water consumption is the selection of bottled water versus tap water. In Table 2 (below), you can see a comparison between CEU tap water in two buildings compared to two other bottled water companies. Table 2a (below) shows both conservative (“Minimum”) and worst-case scenario (“Maximum”) bottled water consumption and costs incurred by CEU on a monthly basis. CEU has an incredible opportunity to reduce waste and improve economic efficiency by reducing bottled water consumption and switching to tap water. Awareness-raising on the quality of CEU tap water and the provision of alternatives (easily accessible, sanitary, and well-functioning water fountains with

gooseneck spouts through which you can fill your own water containers) could reduce CEU's environmental impacts and save money.

**Table 2: Comparative analysis of selected bottled waters and CEU tap water**

	pH	Total hardness (dgh)	Ammonium (NH <sub>4</sub> )	Ammonia (NH <sub>3</sub> )	Nitrite (NO <sub>2</sub> )	Nitrate (NO <sub>3</sub> )	Iron (Fe)	Copper (Cu)	Total Soluble matter TDS (NaCl equivalent)
Limit safe values	6.5-9.5	5-35	0.2 (0.5 *)		0.5	50	0.2	2.0	2500
Naturaqua	7.6	21	0.04	0.0009	0.01	0	0.01	0	302
Szentkirályi	8.2	15	0.4	0.03	0.025	0	0	0	228
CEU Nador 9th	7.6	12.5	0.03	0.0005	0	4	0	0.3	195
CEU Nador 11th	7.5	12	0.03	0.0005	0	3	0.05	0.3	198

NOTE: Treatment is recommended when ammonium levels are between 0.2 and 0.5.

**Table 3a: Cost of bottle water consumption at CEU per month (most conservative and worst-case scenario estimates)**

	Minimum	Maximum	Minimum HUF	Maximum HUF
Cafeterias	312	720	31200	72000
Vending machines	135	135	13500	13500
Department and Faculties	1066	1466	85280	117280
Conferences	840	1880	117600	263200
<b>TOTAL</b>	<b>2233</b>	<b>4081</b>	<b>247580</b>	<b>465980</b>

(Source: Torre, Arturo Eusebio Ortega. 2012. Ways to reduce the consumption of bottled water at CEU: Analysis of the actual situation and recommendations. Masters Thesis. Central European University.)

## Recommendations

In order to identify specific high water consuming activities, the establishment of a comprehensive water monitoring system is crucial. Water meters should be installed as the foundation of the system, with accessibility to real time data for all stakeholders. A central information collection point within an existing department - a full-time sustainability officer, for example - should oversee all water data for the entire University. Rainwater collection options could be explored to reduce consumption of city water. Low-flow toilets, dual-flush toilets, waterless urinals, and water-saving faucets should be installed during the campus renovation.



## 7. Waste

CEU tracks waste coming from campus separately from selective waste and waste from the Residence Center. Waste data was provided by the Student Services Group. The University campus generates 1858.5 m<sup>3</sup> of waste (excluding selective waste) annually at an estimated cost of 7.5 million HUF. Trash collection occurs on a weekly basis. Quantity of waste generated was extrapolated from the size and number of bins and frequency of collection (Table 3). The actual amount of waste generated is not known, however, CEU pays for this volume regardless.

Table 3: CEU waste collection in 2011.

Building	Garbage container size (L)	Bin quantity	Delivery occasion/week	Monthly net fee in HUF
11 Nádor Building	240	5	5 times	98,523
9 Nádor Building (Faculty Tower & Monument Building)	240	12	5 times	236,455
12 Október 6 Building	1100	1	5 times	87,248
32 Arany János Building	240	3	5 times	59,114
14 Zrinyi Building	240	4	3 times	65,905
15 Nádor Building	240	2	4 times	43,937
13 Nádor Building	240	1	6 times	32,953

In 2011, selective waste bins were introduced with the help of the Sustainable Campus Initiative. The user separates glass, paper, and plastic. Recycling bins are currently located at:

- **Nádor 9:** basement, ground, and first floor
- **Nádor 11:** reception area and courtyard
- **Nádor 13:** ground floor lobby
- **Nádor 15:** reception area

In January 2012, CEU recycled one ton of paper, 100 kilograms of plastic, and 40 kilograms of glass from these bins. Recycling bins are also located throughout Kerepesi Residence Center, however, data on quantity, location, and quantity recycled is currently unavailable. There are also battery-recycling facilities on campus.

## Recommendations

Since selective waste is new at CEU, a formal campaign to raise awareness about recycling should be created to boost involvement. In fact, data collected in the environmental awareness survey, which will be discussed in detail in section 9 Culture & Behavior, revealed that the CEU community would appreciate more information regarding the recycling facilities. An increase in selective waste separation will have a positive impact on waste removal costs, which may offset the costs of any additional recycling fees. Data collection for waste and selective waste needs to fall under one department with a goal of lowering all waste. This effort will need to include more recycling bins, awareness, education, and a change in consumable purchases by the University. Further study is needed into the areas of compostable waste, outsourced food vender contracts (regarding consumable containers and overall waste generation) and final disposal destination of waste (landfill/incineration). A review of existing contracts with suppliers is also necessary to development of a long-term sustainable sourcing policy.



## 8. Printing

The printing machines at CEU are outsourced to a private company. Each department has a printer on their respective floor, but all printers can be used with access cards. Students use the printers in the library and the computer labs in Nador 9 and Kerepesi dormitories. The default printer setting on student accessible printers is double sided portrait on grey mode. Starting in 2011, recycled paper is now primarily used by all printers with sustainably sourced white paper available by request.

The majority of printed pages are duplex, since it is the default setting on all printers (see Figure 11). The current printer fleet has been in use since 2008 and all devices are capable of printing double-sided. As seen in Figure 11, the number of single-side printing does not decrease significantly during summer months of July and August, which may suggest that single-sided printing is mainly carried out by staff and faculty.

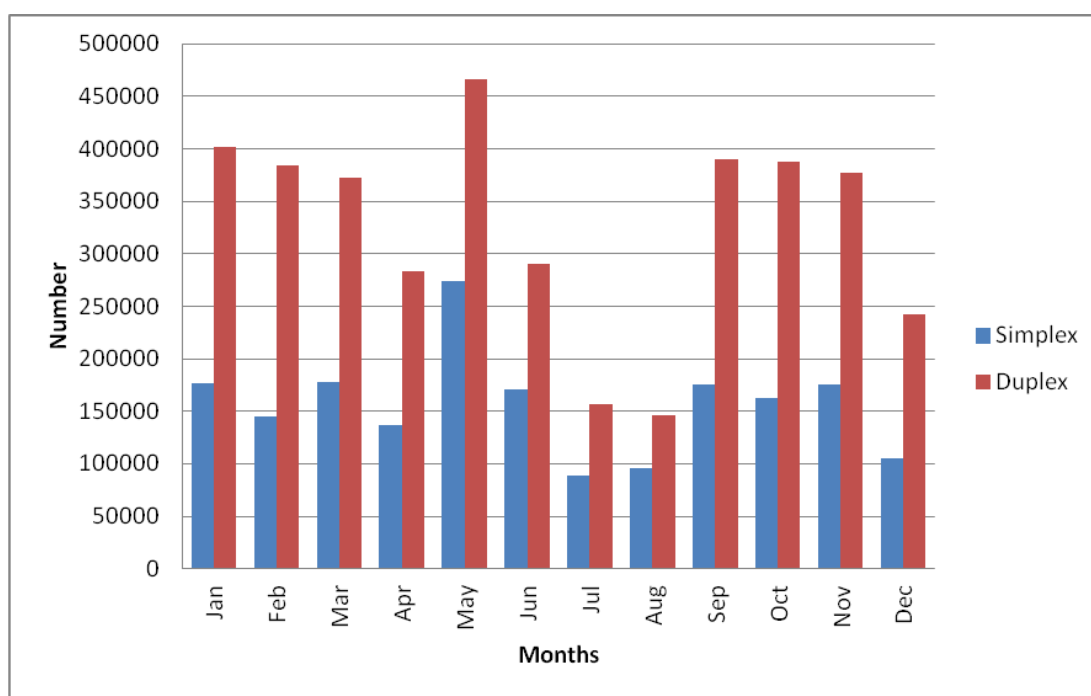


Figure 11: Number of A4 prints in 2011 (black/white and color).

This trend is shown in Figure 12, which illustrates that the percentage of single sided printing is by far highest among the staff and faculty, compared to the MA and PhD students. The reason for higher ratio of single sided printing amongst faculty and staff could be that printed documents could be official letters etc. that require one sided printing. In comparison, students mostly print readers which do not require one-sided printing. Furthermore, when computers in individual offices of staff and faculty are set to one-sided printing, the computer automatically saves that setting. When the setting of the computers in the computer labs is changed to single-sided, the computer resets the settings to double-sided before next use.

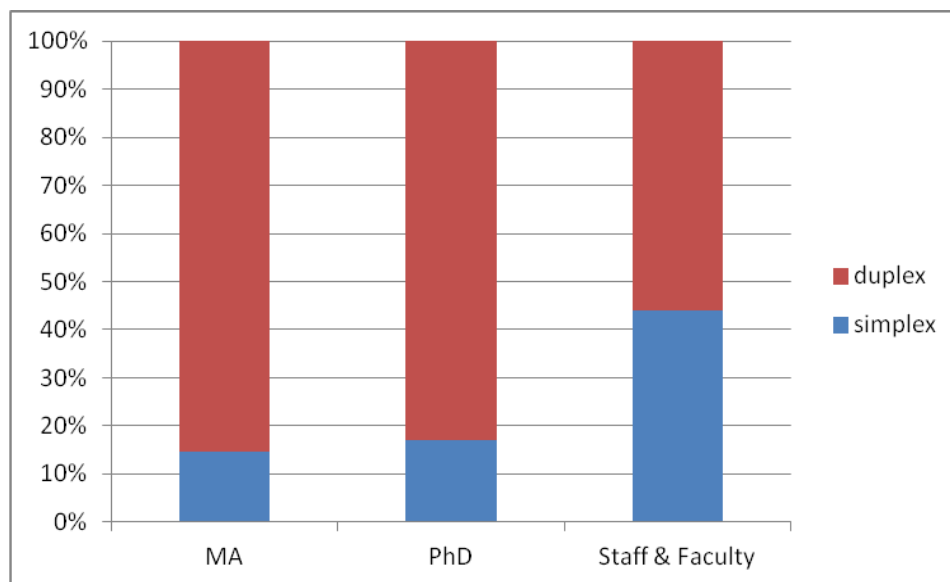


Figure 12: The ratio of single sided and double sided pages for MA students, PhD students, and staff and faculty in 2011.

If current levels of single-sided printing could be reduced by 50%, that would save approximately 470 thousand pages per year, equivalent to a thousand reams of paper or a stack 47 meters high – higher than the Liberty Statue on Gellert Hill. Initiatives focusing on reducing single sided printing are therefore an important part of reducing printing, especially if they focus on informing the staff and faculty of actively choosing printing settings.

CEU spends on average 220 thousand Euros yearly on printing (including the rental fee of the printer fleet, service fee, maintenance, paper, ink etc). Each department has a printing budget which is relatively low compared to other budget groups and is therefore not the focus of economic improvements. Furthermore, within the CEU budget system unused printing budgets cannot be used for other purposes. There is therefore no incentive to decrease printing. The cost of printing could further be reduced by informing the CEU community about environmentally and economically friendly fonts (e.g. Garamond or Century Gothic) that use less ink than standard fonts.

Some measures to reduce the environmental loading and to reduce the budget of printing were taken when the new printer fleet was introduced in 2008. These included the automatic double sided printing settings and programming the “sleep mode” when not in use. However, the most efficient way to reduce the environmental and economic cost of printing is to reduce the pages printed annually.

Printing by student could be reduced by lowering the annual printing quota. The printing quota differs between departments, but is usually around 5000 HUF per student per semester, which equals around 1000 single sided pages (or about 1100 double sided). Decreasing the printing quota would result in less unnecessary printing. Furthermore, departments could provide readers that could be reused so that student did not have to print readers every year.





## 9. Culture & Behavior

One important aspect of campus sustainability is the habitual practices of individuals. In order to assess the current culture at Central European University we took two separate approaches. First, we carried out a series of field observations to understand what the behavioral trend is. Second, we composed an environmental awareness survey evaluating the attitudes of campus students, faculty, and staff. These methods included a number of factors, including electricity and water use and recycling and biking habits. This combined information can help to assess more comprehensively the basic sustainability related practices around campus, exposing opportunities for improvement.

**“Although many of our students come from countries where there is growing public awareness of environmental and resource depletion, other CEU students come from nations where environmental sustainability and energy efficiency are not widely discussed or considered. As an educational institution, it is our responsibility not only to be more sustainable ourselves, but to help educate our students about these issues in the hope that they will return to their home countries and create positive change.”**

**Peter Johnson, Vice President for Student Service**

### 9.1. Field Observation

The actual practices of campus individuals were assessed by performing a number of field observations in the public area on each academic floor of the campus Faculty Tower (Floors 2-9). These checks were completed on weekdays during normal campus operating hours (9:00-16:00). Each check recorded several pieces of information including: common area lights (on or off), taps (on or off), and presence and type(s) of recycling bins (see Appendix 6). The results are shown below.

#### *a) Light Usage:*

Table 4 below shows the percentage of checks where lights were turned off when not in use. The lights in the main hallway, the kitchen, and the restrooms on each floor were recorded as either on or off. In cases where the rooms were in use, a negative response was recorded and these scenarios were grouped with the “off” cases. Additionally, only half of the main restrooms were checked depending on the gender of the student performing the check. Students only went into the restrooms of their own gender, leading to three checks of the main men’s restrooms and five of the main women’s restrooms. In one case the check of the third floor disabled restroom was not able to be performed, limiting the data for this one restroom to seven checks instead of eight. The



percentages for each set of lights can be seen in 4 below. For easy reference, the data is categorized into three colors: green (0-33.3% lights on), yellow (33.4-66.7%) and red (66.8-100%).

**Table 4: Percentage of times when lights were switched on unnecessarily.**

Floor	2	3	4	5	6	7	8	9
Hallway	87.5%	100.0%	100.0%	87.5%	62.5%	100.0%	75.0%	62.5%
Kitchen	12.5%	87.5%	75.0%	12.5%	0.0%	50.0%	75.0%	75.0%
Bathroom	87.5%	87.5%	75.0%	75.0%	33.3%	62.5%	37.5%	62.5%
Bathroom disabled	60.0%	40.0%	80.0%	60.0%	20.0%	20.0%	0.0%	80.0%

In general, this exercise revealed rather negative findings with the majority of light sets left on in at least 70% of checks. Hallway lights were on at least 60% of the time on every floor. Lights in the restrooms were left on unnecessarily, more often than not. Kitchen lights had better results, with three floors leaving the lights off in seven or eight of the eight checks. This data suggests that many members of the CEU community do not turn off lights when leaving rooms and that it is not part of the culture to keep lights off when not using them.

The field observations also reveal that turning off lights on campus indeed goes beyond lowering environmental impact to generating concrete financial savings. For example, given that lights in 57% of the bathrooms in the Faculty Tower were left on during the checks, if half of the lights would be turned off CEU could save around 240,000 HUF annually. While this is only a conservative estimate, the savings can easily be doubled if all of the lights are turned off when not in use. Furthermore, the bathrooms in the Faculty Tower only represent around 0.6% of the total electricity consumption in the whole CEU. Should the lights in unoccupied spaces be turned off everywhere around campus, a significant total savings can be achieved. For instance, research has shown that by installing motion sensor lights, the potential energy savings for restrooms are between 86 and 73% (Richman et al. 1996). The savings, as well as the pay-off period, are dependent upon the installation cost as well as the occupancy patterns of the space in question.

### *b) Taps:*

Another set of information recorded during the floor checks was to see if the taps in the kitchens and bathrooms were left running unnecessarily. 5 records the percentage of time the taps were left on unnecessarily in the main bathroom, the handicapped bathroom and the kitchen on each floor.

**Table 5: Percentage of times tap was turned off**

Floor	2	3	4	5	6	7	8	9
Main Bathroom	100	100	100	100	100	100	100	87.5
Handicap Bathroom	100	100	100	100	100	100	100	100
Kitchen	100	100	100	100	87.5	100	100	100

In general the results for tap checks were very positive, with each tap closed after use in at least seven of eight cases. There were only two cases throughout all eight checks where the tap was left

open. This suggests that the general culture at CEU dictates the closing of taps to avoid wasting water.

### *c) Recycling:*

In addition to checking light and tap closures, checks also identified the presence of recycling on each floor. As this did not change from check to check, the availability of each type of bin is indicated by an “X” in Table 6. The general location of the recycling bins was either in the kitchen or the hallway and this factor is depicted by the columns K and H.

**Table 6: Recycling facility availability**

	2 <sup>nd</sup> Floor		3 <sup>rd</sup> Floor		4 <sup>th</sup> Floor		5 <sup>th</sup> Floor		6 <sup>th</sup> Floor		7 <sup>th</sup> Floor		8 <sup>th</sup> Floor		9 <sup>th</sup> Floor	
	K	H	K	H	K	H	K	H	K	H	K	H	K	H	K	H
<b>Plastic</b>	X	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-
<b>Glass</b>	X	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-
<b>Paper</b>	X	X	X	-	-	X	X	X	X	-	X	-	X	X	-	X

In general, the availability of recycling facilities is sufficient. Paper recycling is available on each floor, and in two different locations on three of eight floors. This shows good progress, especially because paper is widely used in academic settings. Additionally, due to the perceived lack of recycling bins, the community took the initiative to install recycling bins for paper, plastic, and glass in the kitchen on the second floor. CEU, however, would benefit from providing recycling facilities for plastic and glass on each floor. This would cut back on unnecessary waste by providing a convenient space for students, faculty, and staff to recycle.

### *d) Recommendations*

Although the data recorded from the field observations show some good trends in the practices in the Faculty Tower, there is room for improvement. The results for water tap closures were especially positive, showing only two cases where the taps were not closed. Additionally, the community already benefits from the availability of paper recycling on each floor. Although this study examined the practices of community members, there are still changes that the University could make in order to encourage more favorable practices. Some of these changes are relatively easy, while some are more complicated.

Waste management behaviors of the CEU community could be altered easily by providing students and staff with better recycling facilities. This is confirmed by the survey data to be discussed in the following section. By simply providing plastic and glass recycling facilities on each floor, the University could encourage recycling of these materials leading to a decrease in the university landfill impact. Encouraging a change in light usage is harder to achieve. Solutions vary significantly in cost. On the low end of this, the University could develop better signage instructing community members to turn off the lights when leaving rooms. Relevant campus management teams and various departments could also work closer together to lower light use in the hallway by tapping into the



availability of natural light. A bigger investment could include installing motion sensor lights in the restrooms and kitchens. Although this would cost a significant capital investment initially, it would save on electricity costs in the long run.

## 9.2.Environmental Awareness Survey

In addition to evaluating the actual practices of campus members, we also collected and analyzed information on the stated behaviors and perception of students, faculty, and staff relevant to the campus sustainability culture. In order to obtain this information, we composed a survey evaluating the community actions and perceptions on light use patterns, reusable cups, transportation, and recycling. A copy of the survey is attached in Appendix 8 for reference. This survey was distributed both electronically via the student posting board and in person in the Octagon in Nador utca 9. In total, the survey was completed by 133 community members. While the survey was not conducted via random sampling, the data does reflect interesting phenomena and comments from the respondents that deserve further exploration. Independent sample t-tests were conducted where applicable, to determine whether there was a significant difference in the level of awareness between respondents from the Environmental Sciences and Policy Department and other Departments. Details of the statistical tests are listed in Appendix 9 and those with significant results are discussed within this section, namely in terms of bringing one's own mug and drinking bottled water. The composition of the survey participants is shown in Figure 13 and Figure 14 below.

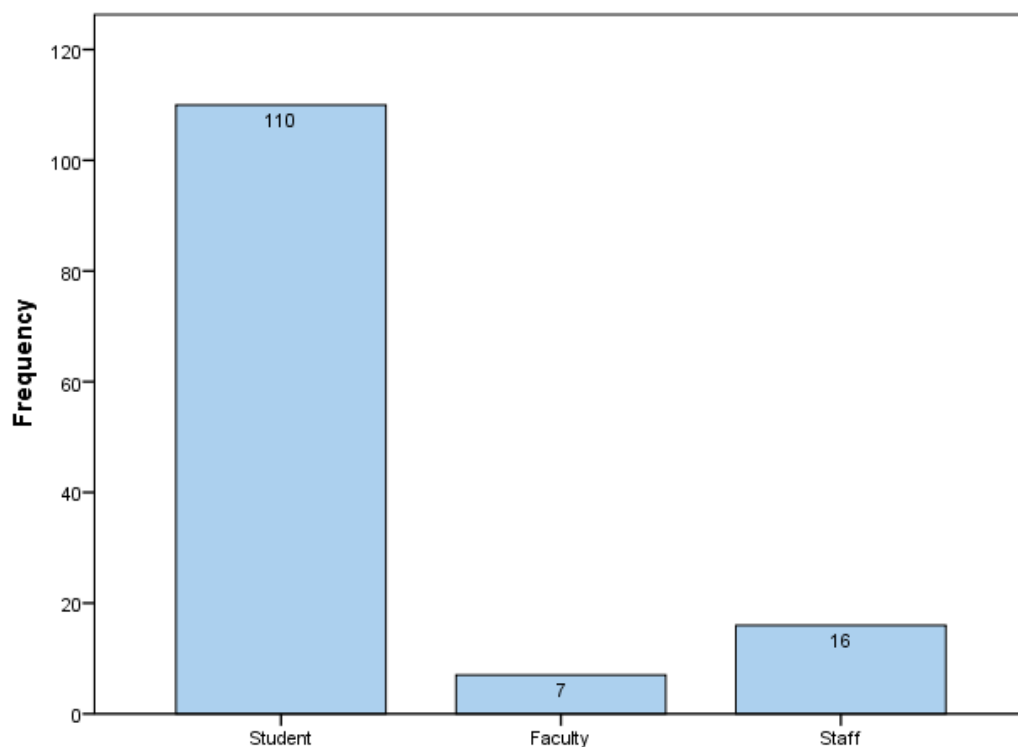


Figure 13: Survey participants by position.

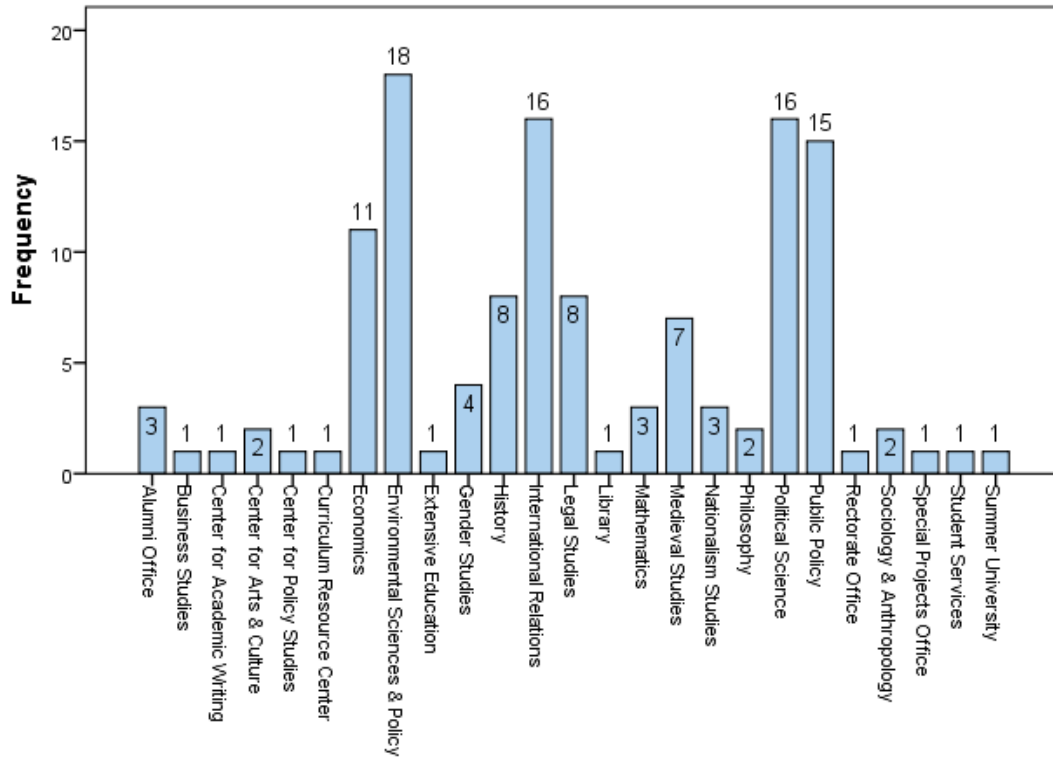


Figure 14: Survey participants by department

#### a) *Lighting:*

Similar to the field observation, the survey also explored the culture behind light usage on campus by asking: “From September 2011 to now, how often do you switch off lights at CEU when not needed, e.g., in the classroom, bathroom?”. The responses are shown in Figure 15.

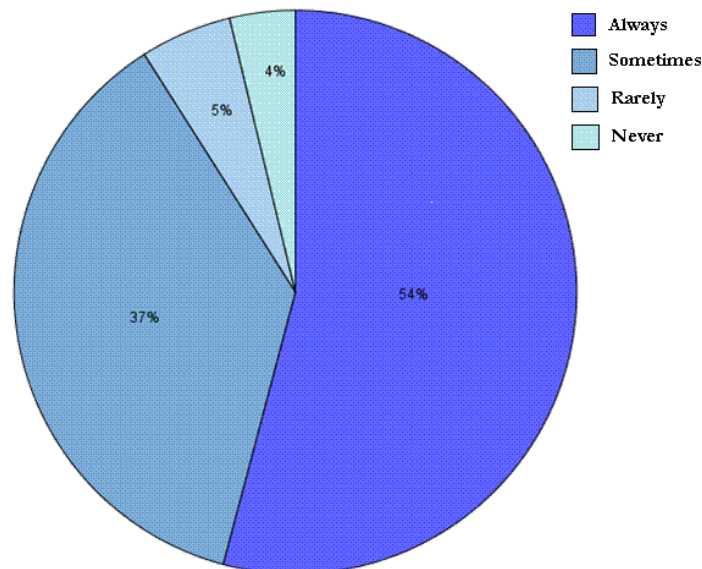
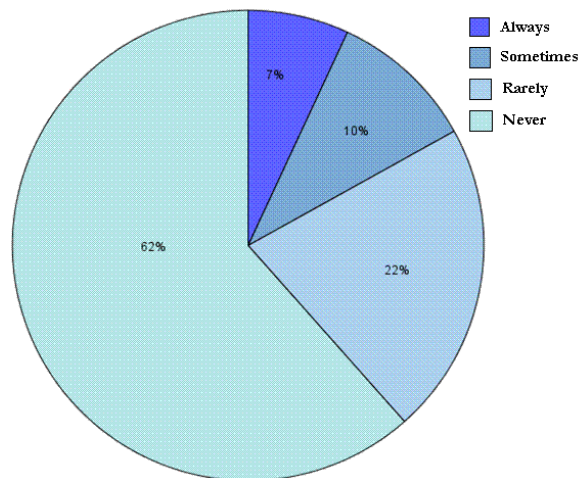


Figure 15: Responses to turning off the lights.

In general, this figure shows positive results where more than half of survey respondents claim to turn off the lights “always”. Additionally, more than 90% turn off the lights at least sometimes. This result suggests a high level of environmental awareness with regard to electricity usage. Most survey participants at least attempted to turn off unused lights. This, however, does not fit with the survey discovered in the office checks where lights in the Faculty Tower were often left on. When asked why respondents did not turn off the lights they were given the options “*habit*”, “*someone may need them later*”, and “*other*” with respondents checking these boxes 24, 31, and 20 times respectively. This suggests that the primary reason community members leave lights on is to make it easier for others to use these rooms later. The “other” responses included that community members had simply forgotten to turn off the lights and that they were put off by certain types of signage requesting that they do. One participant wrote “*I was put off by some very self-righteous campaign used to promote switching them off, and I think the environmental impact is negligible anyway*”. This suggests that in order to encourage community members to turn off the lights, the signage used should be less critical, and perhaps include the energy saving impact of doing so. The CEU community would benefit from understanding the costs associated with the excess electricity consumption and possibly lead to the establishment of more favorable habits.

#### ***b) Reusable Mugs:***

The survey also explored the campus use of drinking containers when purchasing hot beverages on campus. In order to determine the attitudes behind using reusable vs. throwaway hot beverage cups the survey asked: “From September 2011 to now, how often do you bring a mug when buying coffee/tea at CEU?”. The response rates are shown in Figure 16.



**Figure 16: Responses for reusable beverage containers.**

As the diagram shows, over 60% of respondents never bring a reusable mug when purchasing coffee at school. This suggests that utilization of mugs instead of disposable cups has not reached its potential. There are a large number of teas and coffees purchased on or around campus, the waste from which must contribute significantly to the institutions waste impact. In contrast, over 15% responded that they “sometimes” or “always” brought their own cup, showing that there is some progress on this topic.



Question 7 gave respondents the option to explain some of their reasoning behind not using their own mug for hot tea and coffee. Sixty one people responded that they found it inconvenient to carry a mug around, 17 people did not drink tea or coffee, 11 did not want to wash the mug afterwards, seven replied there were no economic incentives and 45 had other responses. Some of these “other” responses noted that they did not purchase coffee-to-go suggesting that they use reusable mugs but in their offices and homes. One respondent also pointed out the lack of compatible infrastructure, especially in the coffee machines on campus. These do not allow users the option of using their own mug and instead default to paper. By improving infrastructure and convenience of reusable mugs such as improving coffee machines, and providing reusable mugs in every department this practice could be improved.

Another interesting topic comes from Question 3 of the survey, which asks: “Please state below any environmental initiatives by CEU that you are aware of.” In this question only one respondent mentioned the economic benefits offered for using your own mug when purchasing coffee at campus cafes. This works in the basement café by saving a small fee for a to-go cup, and in the Dzsem café by earning a free coffee after using your own mug 10 times. By increasing awareness of the economic incentives surrounding reusable mugs, the amount of trash produced by purchased coffees could be decreased.

Furthermore, an independent samples t-test performed by the software SPSS (v. 20) revealed a very significant difference ( $t=3.230$ ,  $df=17.005$ ,  $p<.01$ ) between the mean score of Environmental Sciences and Policy respondents who would bring their own mugs (mean = 2.5, s.d. = 1.211) and that of the other Departments (mean = 1.49, s.d. = .81) (see Appendix 9). In short, the former group of respondents tended to bring their own drinking cups when purchasing beverages on campus, compared to the latter. CEU would benefit greatly if more members of the community are encouraged to use reusable mugs.



### *c) Bottled Water:*

Questions 8 and 9 of the survey continue to evaluate drinking container habits by discussing bottled water use on campus. Respondents were asked: “From September 2011 to now, how often do you drink bottled water?” The response rates are shown in Figure 17.

A surprising 27% of respondents said that they “always” drink bottled water, while 33% drank bottled water “sometimes”. When asked for their reasons in Question 9, 41 respondents noted convenience, 13 noted hygiene, 10 noted higher nutritional value, 36 responded that only bottled water was available and 31 noted other reasons. It is interesting to note that 31 of the 36 respondents who noted that it was the only option available ticked only this option. This is an important consideration for the CEU administration when organizing events. By providing tap water instead of bottled water it could reduce the consumption of glass and plastic packaging by the university community. Other reasons respondents drank more bottled water were because they disliked tap water, or preferred carbonated water to “flat”.

Independent samples t-test demonstrated a very highly significant difference ( $t=3.781$ ,  $df=124$ ,  $p<.001$ ) between the mean score of Environmental Sciences and Policy respondents who drank bottled water (mean = 1.88, s.d. = .957) and that of other Departments (mean = 2.85, s.d. = .960) (see Appendix 9). In other words, the former group of respondents tended not to drink bottled water compared to the latter. Again, the University could raise awareness on the high quality of tap water in Budapest to discourage consumption of bottled water.

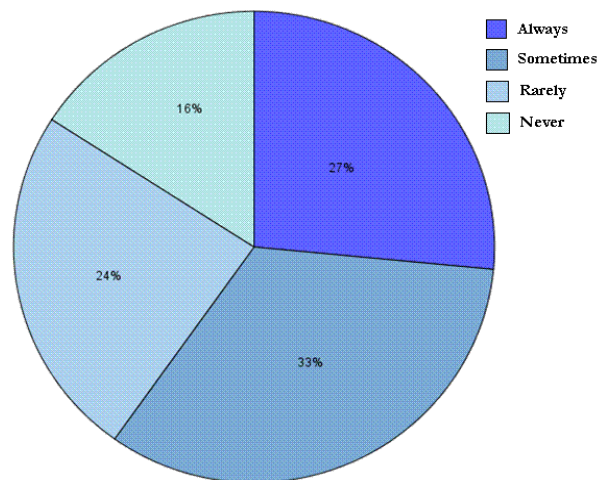


Figure 17: Respondents bottle water consumption.

### *d) Drinking Fountains:*

Questions 10-12 addressed the availability of drinking fountains at CEU, by asking: “Do you think the number of drinking fountains at CEU is sufficient?” The results are represented in Figure 18.

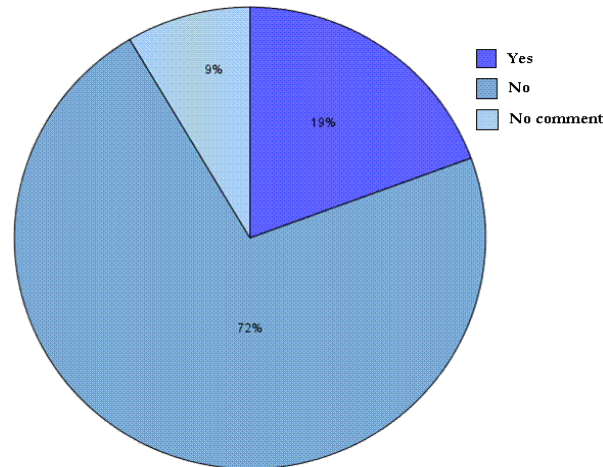


Figure 18: Responses on the availability of drinking fountains.

The vast majority of respondents felt that the number of drinking fountains was not sufficient, with over 70% of respondents holding this opinion. Only 19% of respondents felt that there were enough drinking fountains suggesting that overall campus sustainability could be improved by the addition of more drinking fountains. Question 11 further explored this topic by asking: “Do you think the drinking fountains at CEU are conveniently located?” The results of this question are shown in Figure 19.

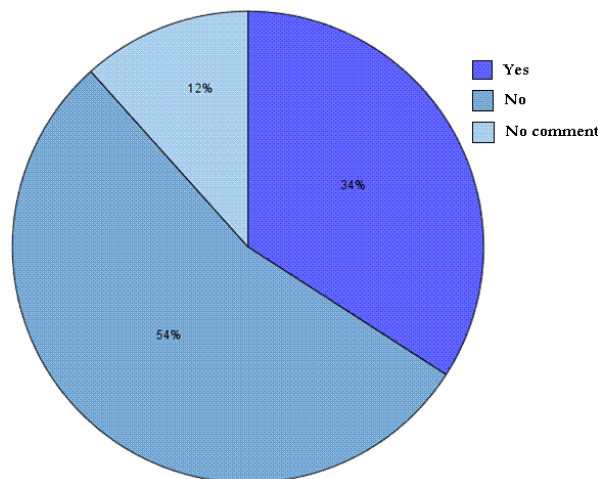


Figure 19: Responses on convenience of drinking fountains.

Once again, the majority of respondents (54%) believed that the drinking fountains were not convenient. Question 12 invited participants to suggest new locations for drinking fountains. The most common suggestions included: the Octagon, Laptop Area, inside the library and on each floor. Others suggested that buildings other than Nador 9 needed drinking fountains. By implementing more drinking fountains on campus, the CEU administration could decrease the waste caused by purchasing bottled water on campus, as well as increase the comfort of the campus community.

#### *e) Recycling:*

In the survey we also explored the availability of recycling at CEU in Questions 13-17. These probed participants to elaborate on their attitudes toward campus recycling. Question 13 asked: “From September 2011 to now, how often do you recycle at CEU buildings?” The results are recorded in Figure 20.

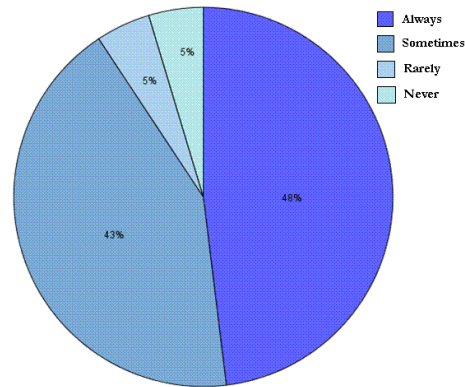


Figure 20: Respondent recycling practices.

Although a large portion of students “always” recycle (48%), or at least “sometimes” recycle (43%) there is still a portion of students who “never” recycle or “rarely” recycle. One possible reason for not recycling could be a lack of conveniently located facilities, so question 14 explored this possibility by asking: “Do you think the recycling bins at CEU are conveniently located?” The responses are recorded in Figure 21.

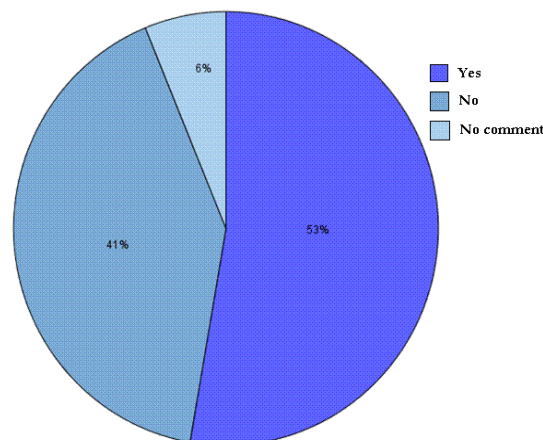


Figure 21: Responses on recycling bin convenience.

Figure 21 shows that 53% of students do find the recycling bins conveniently located. Those respondents who did not find them conveniently located suggested that they be added in every department, and in buildings other than Nador 9. Question 17 explored the effect of recycling bin location on overall recycling practices, as is dictated in Figure 22.

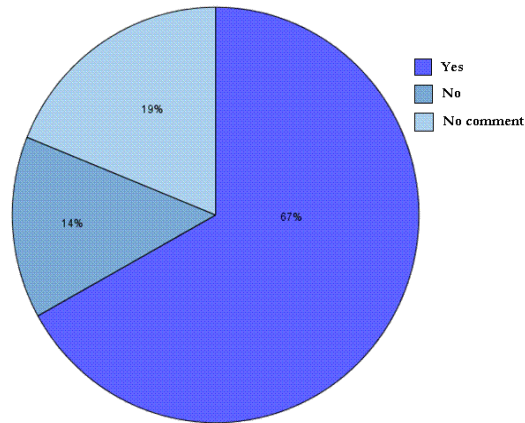


Figure 22: Effect of location on recycling.

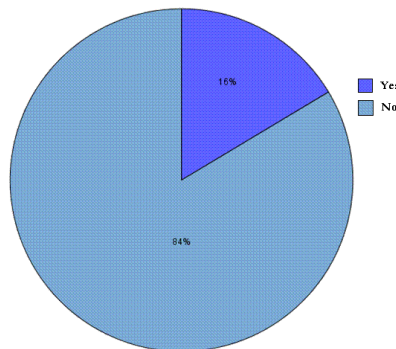
Although many respondents said they thought the location of recycling bins was sufficient, more than half of survey participants said they would recycle more if there were more accessible bins. This result suggests that if the CEU administration were to improve recycling facilities, the overall waste impact of the university would decrease. Additionally, in Question 23, which asks for open feedback, some respondents noted an informational gap in the CEU community concerning recycling behavior. Some respondents were unaware or skeptical of the recycling processes and benefits of waste separation.





#### *f) Bicycling:*

Questions 18-22 addressed the prevalence of bicycle usage on campus. Question 18 questioned whether respondents ever biked to campus. The results are shown in Figure 23.



**Figure 23: Respondents who bicycle to campus.**

This diagram shows that around 16% of students bicycle to campus. Out of these 10 respondents “always” bicycle to campus, and 12 respondents ‘sometimes’ bicycle to campus. Additionally, 1/3 of respondents who answered Question 20 suggested that there are not enough bike racks and tire pumps at CEU, while 11 out of 29 respondents believed that they were not conveniently located. When asked where new bike racks and tire pumps could be located, only 7 participants responded, 6 of which suggested bike racks outside of Nador 9. In general, the prevalence of biking to CEU is relatively low. This could be a result of many trends including a lack of access to bicycles or a prevalence of students who prefer to walk. It is possible that better facilities could increase this number of students who bicycle, but more information is needed to determine the cause of this trend.

#### *g) Other Comments:*

In Question 23 of the survey we asked participants to comment on environmental awareness and initiatives on campus. The broadness of the question led to comments on several different topics, but a few key themes were evident. Many participants commented on community engagement and awareness at CEU. A few participants believed that campus-wide participation was needed and that it was important to engage all members of the community. This could be done by holding more interesting and interactive events as well as publicizing the redevelopment process as this is a good venue for participation. There were also a few comments on the current sustainability campaigns. Specifically, campaigns should be written in a way to avoid coming off as sexist or racist. In some cases this opinion can be viewed on campus where dissenters have written on campaign posters as shown in the figure below. Another concern raised was with unnecessary printing and copying on campus. Alternately, course readers could be printed once, used and then reused in future years. Another concern raised by survey participants was in response to the hot water used in the bathrooms. There are concerns that this unnecessarily wastes energy and makes the water unpleasant to drink. This also emphasizes the lack of available water fountains as participants had to go to the bathroom tap to get drinking water.

## 10. Sustainable Universities

CEU pledged their intention to become a sustainable university by becoming a signatory of the Copernicus Charter. The following section will examine other steps by looking at sustainability certification schemes as well as best practice examples in universities in Europe and the United States.

### 10.1. Certification Schemes

In order to encourage the establishment of green buildings, the United States Green Building Council established the Leadership in Energy and Environmental Design (LEED) certification scheme. The main purpose of this scheme is to “provide building owners and operators with a framework for identifying and implementing practical and measurable green building design, construction, operations and maintenance” (USGBC 2009). The LEED scheme has certified nearly nine billion square feet (836 million square meters) of buildings worldwide (USGBC 2012). LEED certifications focus on the whole-building approach encompassing the following areas of sustainability (USGBC 2012):

- Sustainable Sites
- Water Efficiency
- Energy & Atmosphere
- Materials & Resources
- Indoor Environmental Quality
- Locations & Linkages
- Awareness & Education
- Innovation in Design
- Regional Priority

LEED projects reward points on a 100-point scale, with 10 bonus credits available and utilize third-party verification of projects. The number of points earned determines the level of LEED certification (40+ for certified status, 50+ for silver status, 60+ for gold status, and 80+ for platinum status) (USGBC 2012). LEED also places a special focus on Universities by providing specific recommendation for educational facilities. Working to expand the certification system internationally, LEED has established a series of Alternative Compliance Paths (ACPs) in conjunction with international green building specialists to make the certification feasible for global markets (USGBC 2011). Establishing LEED compliance can be a complicated process, but even without using the LEED system many positive examples can be drawn from it. Other certification systems exist worldwide and in Europe, however these tend to have different focuses. Two examples are the green globe certification for hotels and the EU flower scheme for products. We were not, however, able to find a similar scheme that certifies academic buildings.





## 10.2. Best Practice Examples

The College Sustainability Report Card is another evaluative tool providing in depth sustainability profiles for Universities in the United States and Canada. This program looks at qualities such as climate change and energy, food and recycling, green buildings, student involvement and transportation (CGRC 2011b). It therefore provides benchmarks of best practices among the tertiary education institutes. One of these examples is Pomona College of about 1560 students in Claremont, California, which received the highest grade, an A on its sustainability report card. Pomona requires all new buildings built to be LEED gold certified and has established a grant program overseen by The President's Advisory Committee on Sustainability that funds student run sustainability infrastructure projects (CGRC 2011b). Pomona has also implemented a plan to reduce their greenhouse gas emissions plans by 20% of 2007 levels by the end of 2020. They source all of their produce from local growers and serve only sustainable seafood (CGRC 2011b). They have a full-time sustainable food coordinator and all excess food goes to a homeless shelter. Pomona is a small school with an outstanding sustainability policy and much can be learned from their efforts.

Bowdoin College, a school of around 1700 students in Brunswick, Maine also ranks very well on the Sustainability report card with an overall grade of "A-". Bowdoin has a sustainability master plan, environmental mission statement and climate action plan and employs a full-time sustainability coordinator (CGRC 2011a). Bowdoin aims to be carbon neutral by 2020 by establishing more energy efficient technologies and purchasing carbon offsets. They also encourage alternative transportation efforts and follow LEED guidelines for all new construction and renovations (CGRC 2011a). To encourage student involvement, the college pays four student sustainability reps and boasts six sustainability organizations for students (CGRC 2011a). These are only a few examples of small colleges encouraging sustainable practices.

Several other colleges have managed to create successful sustainability strategies. One example from the United States comes from the University of Richmond, which has established a Green Office program to encourage a positive sustainable office culture. Different offices across the campus can enroll to help the school reach its climate action goals which include a 30% reduction in greenhouse gas emission from 2008 levels by 2020 and full climate neutrality by 2050 (UR YEAR?). This program includes three checklists, which build off each other. By reaching each checklist level, offices will be recognized on the University of Richmond sustainability website as well as their office websites and will be able to include this accomplishment in their email signatures (UR YEAR?). Checklists include actions such as creation of a "green team", reducing energy usage, recycling products, changing temperature settings, and purchasing sustainable materials. Implementation of this type of program costs the university next to nothing, as the departments initiate the activities. CEU already implements a number of these activities by using recycled paper and providing recycling bins. However by creating this sort of program office culture and awareness can be dramatically changed through enlisting the support of various departments to drive bottom-up activities. Additionally, a number of the recommendations included in the University of Richmond checklists would lead to a reduction in consumption ultimately saving the school money.



Although there is no similar report card for European universities, there are a number of positive examples here as well. For example, some Hungarian universities have also begun implementing alternative technologies. One example comes from Szeged University, where they are investing in solar energy by spending 880 million HUF to install solar panels on campus. Supported by European Union funding, this project is expected to produce more than 0.6 MW of electricity (BBJ 2011), bringing the renewable energy usage of the campus up to 7%. Utilizing alternative energy such as solar requires a large initial investment, but can lead to overall savings by reducing the amount a university needs to spend yearly on energy. Leveraging on institutional funding also lowers such capital investment and therefore shortens the pay-back period.

Another place where solar energy is being utilized is at Szent Istvan University in Gödöllő where they have constructed a photovoltaic system, which is connected to the electricity grid of one of the dorm buildings (Energy Klub 2009). This system is set up primarily for educational purposes, but produces 9.6kW of energy. This project was also supported by EU funding and serves educational purposes for the wider community through facility tours (Energy Klub 2009).

**"What I would like to see is a culture where you can see separate recycle bins, lights that are turned off when nobody is there, heating systems that turn themselves down when nobody is in the room, toilets with short flush, hand drying machines that run for only 10 seconds. In short, wherever you go as a student you realize that you are in an environment that was designed to save resources and to be sustainable. And when you leave you take that away with you and you say 'Yes, I want my university, I want my company, I want my country to be like that!'."**

**John Harbord, Head of Academic Writing Department**



## 11. Conclusion

CEU as a prestigious institution can become a leader in sustainability. The University has a Sustainable Development Policy but lacks a comprehensive strategy. Progress has been made towards a sustainable campus and will be accelerated during the campus redevelopment project. This report has outlined areas of importance and established a foundation to assess future growth in this field. Community culture and perspectives have also been detailed to assist in developing future strategies and addressing areas of concern.

The campus redevelopment initiative is an excellent opportunity for CEU to become a regional pioneer in sustainability. By incorporating sustainable design and materials in the redevelopment, the financial overhead of maintaining the campus should offset any extra costs in the construction phase. While this report cannot give concrete numbers of fiscal savings, it is widely accepted that incorporating resource-use efficiency items into the renovation will be cheaper than retrofitting the new campus at a later date. Creating and promoting a sustainable campus will encourage community members to adapt their behavior accordingly.

To identify the current sustainable trends in CEU, surveys and field observations were conducted. From the field observations people excel at turning off water taps and conserving water; however, many do not exert the same level of awareness with turning off lights and conserving electricity. Appropriate signage encouraging sustainable behavior and educating the benefits of such behaviors is an easy low cost solution. While installing motion sensors guarantees compliance, it has a much greater financial investment. Recycling at CEU has progressed phenomenally in the last two years. Location of bins could be improved to increase accessibility and prominence while an increase in bins would improve chances of use by convenience and visibility.

The environmental awareness survey reveals that attitudes among the CEU community towards sustainable practices vary depending upon the task. The majority of people in our sample turn off lights after leaving a room. When people do not turn off lights it is out of courtesy for future users. An educational campaign will decrease this behavior via better understanding of the electrical impacts. A large percentage of people avoid sustainable behavior regarding drinking containers. Changing community attitudes and therefore behavior on these issues will require more effort and time. One suggestion is to make the community aware of the high quality of Budapest municipal water. Economic incentives may help as well as education. Improvements to the drinking fountain culture could also alleviate the tendency to consume bottled water.

While the office culture section is a good start in understanding the CEU community's behavior and mindset with regards to sustainability, it is by no means complete. The environmental awareness survey was not representative of the entire CEU community. The survey needs to be conducted under random sampling guidelines to reflect all of CEU. The field observations of public areas only occurred in the Faculty Tower and should be expanded to all other campus buildings, especially the residence center. To gain greater insight in the environmental behaviors of professors, faculty, and staff a thorough office check for all departments is recommended.





Monitoring of energy, water, and waste is a necessity in achieving sustainability at CEU. One cannot change what one does not know. Over the years as CEU expanded its campus more buildings were added with varying departments overseeing varying aspects of the buildings operations. This led to a lack of complete data for past years. For example, almost no data was available for the Kerepesi residence center. The lack of a central information clearinghouse made locating data for this report extremely difficult. CEU would greatly benefit from giving one department responsibility over all information systems. A central data center would also improve the efficiency of all departments.

Another area the report wanted to explore but could not due to inaccessibility of data was the travel and transportation data of CEU members. CEU prides itself on being an international university with students and faculty from across the globe. Faculty members are encouraged to attend international conferences. CEU has become a renowned learning center by bringing in weekly international lecturers. What is the environmental cost of all this travel? And are there solutions to limit impact using modern technology, such as video conferencing? To answer these questions travel information must first be collected and analyzed.

A sustainability officer with the responsibility of collecting and analyzing all relevant information is necessary to achieve any sustainability goals. This officer could create a comprehensive sustainability strategy and roadmap. Having a sustainability officer brings accountability and responsibility to the sustainable policies of CEU and would fulfill the obligations CEU has assumed by signing the Copernicus Charter. This full-time staff member can also take on the responsibility of an equality officer since both objectives complement each other. As an incentive for creating tangible results, the sustainability officer could be partially paid in bonuses for lowering CEU's maintenance cost via sustainable means. A third-party audit of resource use and efficiency will add legitimacy to CEU's efforts in this regard. This may carry a greater financial burden then hiring a sustainability officer who can utilize and manage the resources already at CEU (Environmental Science and Policy Department). The officer will lessen the burden on all other departments struggling with achieving sustainability goals under the current disjointed system, by consolidating all information and policies in one place and under one accountable person. Having this officer work closely with existing academic departments and their students will give CEU an extra resource in attracting future students by offering the opportunity for real world project experience. This first annual sustainability

report took six students over a month of dedicated work to compile and with its incompleteness demonstrates the necessity of a sustainability officer as well as proves the adequate amount of work for such a position.

To create a dedicated sustainability culture at CEU, the administration must establish and encourage achievable sustainable goals. All community members should be engaged to devise creative and locally appropriate strategies to reduce CEU's environmental footprint. Short, medium and long term targets should be set that translate the Sustainable Development Policy into a real action plan. Progress should be tracked and communicated to the community. The sustainability report should be released on a yearly basis and follow international reporting guidelines such as the Global Reporting Initiatives. Communicating the progress of the campus redevelopment project will foster pride in the community. Feedback on sustainability would encourage more participation. Sustainable development is an ongoing journey that can only be made possible by engaging all stakeholders. Looking ahead, the campus redevelopment project presents an excellent opportunity to not only improve the infrastructure of the University, but also introduce a more sustainable lifestyle for the CEU community.





## 12. Sustainability Resources

- Deloitte Sustainability Reporting Scorecard:  
[http://www.deloitte.com/assets/Dcom-Global/LocalAssets/Documents/DTT\\_ERS\\_FullScorecard\\_032106.pdf](http://www.deloitte.com/assets/Dcom-Global/LocalAssets/Documents/DTT_ERS_FullScorecard_032106.pdf)
- Financing energy efficiency projects with a useful cash flow opportunity calculator:  
[http://www.energystar.gov/index.cfm?c=business.bus\\_financing](http://www.energystar.gov/index.cfm?c=business.bus_financing)
- Resources for higher education and energy use  
[http://www.energystar.gov/index.cfm?c=higher\\_ed.bus\\_highereducation](http://www.energystar.gov/index.cfm?c=higher_ed.bus_highereducation)
- International Institute for Sustainable Development (IISD) BellagioSTAMP – SusTainability Assessment and Measurement Principles:  
<http://www.iisd.org/measure/principles/progress/bellagiostamp/>
- Tools for implementing an energy management strategy:  
[http://www.energystar.gov/index.cfm?c=tools\\_resources.bus\\_energy\\_management\\_tools\\_resources](http://www.energystar.gov/index.cfm?c=tools_resources.bus_energy_management_tools_resources)



## References

Baumbach, L., Ilyashenko, N., Jevsejenko A. and Lamb, L. 2011. CEU Electricity Management 2010-2020: Assessment, analysis and scenario building. Assignment for the class “Sustainable Energy Policy.” 14 April 2011. Budapest: CEU. Unpublished.

Budapest Business Journal (BBJ). 2011. *Szeged university spends HUF 88- mln to install solar panels on campus*. URL: [http://www.bbj.hu/life/szeged-university-spends-huf-880-mln-to-install-solar-panels-on-campus\\_58042](http://www.bbj.hu/life/szeged-university-spends-huf-880-mln-to-install-solar-panels-on-campus_58042). [consulted 15 March, 2012]

College Green Report Card (CGRC). 2011a. *Bowdoin College*. URL: <http://www.greenreportcard.org/report-card-2011/schools/bowdoin-college>. [consulted 17 March, 2012].

\_\_\_\_\_. 2011b. *Pomona College*. URL: <http://www.greenreportcard.org/report-card-2011/schools/pomona-college>. [consulted 17 March, 2012]

Copernicus Campus (Copernicus). 2005. Copernicus-guidelines for sustainable development in the European Higher Education Area.

Department of Environmental Sciences and Policy [EnviSci] 2006: Energy Audit of CEU. Assignment for the class “Sustainable Energy Policy”. May-June 2006. Budapest: CEU. Unpublished.

Durrant, Stuart. 2012. Head of Campus Redevelopment Office (CREO). [Printing data] Unpublished raw data. CEU: Budapest. Received February 2012.

Edeh-Molnar, Regina. Head of campus services group. 2012. [Waste Management] unpublished raw data. CEU: Budapest. Received March 2012.

Energy Klub. 2009. Examples to Follow: Hungary-Gödöllő. URL: [http://energy-bestpractice.eu/eng/magy/main\\_hu\\_godollo.html](http://energy-bestpractice.eu/eng/magy/main_hu_godollo.html). [consulted 17 March, 2012]

Kiss, Zoltan. 2012. Head of maintenance office. [évi gázfogyasztás (Gas consumption), Water consumption, electricity consumption] Unpublished raw data. CEU: Budapest. Received February 2012.

Richman, E. E., A. L. Dittmer, and J. M. Keller. 1996. Field analysis of occupancy sensor operation: Parameters affecting lighting energy savings. *Journal of the Illuminating Engineering Society* 25(1):83-92.

Torre, Arturo Eusebio Ortega. 2012. Ways to reduce the consumption of bottled water at CEU: Analysis of the actual situation and recommendations. Masters Thesis. Department of Environmental Sciences and Policy, Central European University.

U.S. Green Building Council (USGBC). 2009. LEED 2009 for schools new construction and major renovations: ACP documentation guidance for projects outside the U.S.

\_\_\_\_\_. 2011. *What LEED is*. URL: <http://www.usgbc.org/DisplayPage.aspx?CMSPageID=1988>. [consulted 16 March, 2012]

Velazquez, L. Munguia, N., Platt, A., Taddei, J., 2006. A sustainable university: what can be the matter? *Journal of Cleaner Production* 14: 810-819.





## Interviews

Durrant, Stuart and Pazitna, Zofia, Head of Campus Redevelopment Office (CREO) and Assistant to the Head of Campus Redevelopment Office (CREO), interviewed on 17 February 2012 in Budapest.

Harbord, John, Head of the Academic Writing Department, Central European University, interviewed on 29 February 2012 in Budapest.

Johnson, Peter, Vice President for Student Services, Central European University, Email communication on 14 March 2012 in Budapest.

Kiss, Zoltan, Head of maintenance office, Central European University; interviewed on 23 February 2012 in Budapest.

Shattuck, John, President and Rector, Central European University, interviewed on 26 March 2012 in Budapest.



## Appendix 1 – Sustainable Development Policy

### Central European University

### Sustainable Development Policy

Approved by the Senate, January 18, 2008

Amended by the Senate to include the CEU Sustainability Advisory Committee (3.2.1.), December 3, 2010

#### *1. Vision*

The Közép-Európai Egyetem (a university duly organized under the laws of the Republic of Hungary, registered under registration number FI 27861, having its registered at 1051 Budapest, Nádor u.9., hereinafter: the **University**) will promote awareness of and engagement in sustainable development through its learning and teaching, research, community and business engagement activities, and will work towards the principles of sustainable development in all aspects of its own activity. The University aims to become a centre of excellence in building sustainability into research and teaching and learning and will work with local, regional, national and global bodies to help build sustainable learning communities and enhance their well being.

The concept of the University is to promote long-term graduate education in the Central and Eastern European region and to facilitate the intellectual collaboration of European nations. The main goal of the University is to offer programs and research opportunities, which are both equally accredited in Hungary as well as in the United States of America, building on the educational and intellectual traditions of the region and to ensure that students receive the highest level of education, to provide them with the opportunity to excel in the creation of new knowledge in the humanities and social sciences, and to help developing the policy implications of both.

#### *2. Definition and principles*

2.1 Sustainable Development was defined by the World Commission on Environment and Development within the Brundtland Report (1987), „Development which meets the needs of the present without compromising the ability of future generations to meet their own needs.”

2.2 The University’s Sustainable Development Policy is integrated with other University processes and is compliant with the relevant legislation and regulations.



2.3 The Policy is based upon commitment to the following principles:

continual improvement, through setting objectives and targets, continuous monitoring and review;

complying with, and where appropriate exceeding, the applicable legal and other requirements relevant to our operations;

close cooperation with the partner education institutions in New York State and Hungary, and other higher education and scientific institutions and organizations;

prudent use of natural resources and the prevention of all kinds of pollution;

communicating University commitment to sustainable development across the institution and beyond it.

### ***3. General***

3.1. The University, including its ancillary operations, is committed to improving its performance in sustainability in all areas of operations. University will develop appropriate standards for managing sustainability at University. Specific targets, priorities and timetables for achieving these objectives are developed in a consultative process involving faculty, staff and students, as outlined in the procedures of this policy. In the process of meeting the University mandate for teaching and research, efforts focus on the following inter-related areas:

3.1.1. The University contributes to the protection of its environmental life support systems. This means minimizing the pollution of air, water and soil.

3.1.2. The University preserves and enhances the integrity of ecosystems at the University through careful management, and the development and implementation of remediation measures for degraded sites as appropriate.

3.1.3. The University seeks ways to conserve resources and reduce waste. This means developing methods to minimize the energy and material intensity of university activities and reducing waste.

3.1.4. The University encourages recycling in all ways and in all facilities of the University.

3.1.5. The University has information and reporting systems in support of decision making based on sustainable development principles including life cycle, social and environmental costing and accountability to stakeholders.

3.1.6. The University seeks to ensure its long term economic viability through responsible and effective management, the development of a comparative advantage in its educational and research activities, innovative methods to calculate and account for external costs, to identify cost-savings and new sources of revenue and through innovative partnerships with the larger community.



3.1.7. The University works to enhance its capacity to teach, research and practice sustainable development principles, and to increase ecological/social/economic literacy and practices among faculty, staff, students, and the public at large.

3.2. The University implements this policy, mindful of the need to balance ecological, social and economic imperatives, in an open and transparent decision-making process with the involvement of all stakeholders.

3.2.1. The University establishes a standing ‘CEU Sustainability Advisory Committee.’ The CEU Sustainability Advisory Committee advises on strategy and actions towards the achievement of the CEU Sustainable Development Policy and fulfillment of CEU’s commitments as a signatory to the University Charter for Sustainable Development (COPERNICUS).

#### ***4. Monitoring***

Key performance indicators will be identified for the areas identified for action. Schools and departments will be encouraged to measure, and improve their use of all resources, including transport fuels, energy, water and paper. All members of the University will be encouraged to continue contributing ideas and concerns through discussion in their departments and Schools.

#### ***5. Revision of the Policy***

The present Policy shall enter into force after its approval by the Senate of the University. The Policy shall be published by the Rector of the University.

Done in Budapest, January 18, 2008

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Yehuda Elkana

Rector, Chairman of the Senate



## Appendix 2 - Framework Concept: CEU Sustainable Campus

### Framework Concept: Central European University Sustainable Campus

#### 1. What is Sustainability?

**Definition:** “Meeting the needs of the present without compromising the ability of future generations to meet their own needs.”

The World Commission on Environment and Development (**Brundtland Commission**, 1989)

Sustainability management or reporting typically includes the following 3 core components (termed the 3 pillars of sustainability): Environmental, Social and Economic issues.

#### 2. Sustainable Campus

The ‘sustainable campus’ concept describes a strategy to improve the sustainable performance within the University, and increase awareness among employees and students about sustainability and related issues.

It should be noted here that most of the efforts pertaining to a Sustainable Campus typically focus on managing environmental issues.

A successful endeavor to transition to a sustainable or green campus involves four aspects of the university community requiring active coordination and participation:



1. Administration
2. Academic departments (students and faculty)
3. University research effort
4. Local community

This structured approach can help to integrate the efforts of these four aspects of the campus community toward a common goal. It can help form the basis of planning and organizing efforts to accomplish a sustainable campus. Individual and disconnected on-going initiatives can be brought in under the overall green development umbrella.

#### **1. Administration**

The administration has a very significant impact by the business decisions they make concerning new building design, repair and renovation projects, building operations and maintenance, procurement practices, landscaping, recycling at various levels, waste management, custodial services, energy management, transportation, food service and dining operations, and residential operations.

#### **2. Academic Departments**

The educational side is also significant but in different ways. The investment in the education of students on these subjects has a long term benefit. They will eventually become leaders in their community and bring with them the important concepts of sustainability. Service-learning is an important teaching method that allows students to learn required curriculum while applying what they learn to real world problems. This learning model is very well suited to the university environment and is a way to integrate knowledge base with local requirements and applications. This can have an immediate benefit depending on the nature of the service requirement. Further educational opportunities exist with developing courses on sustainable development, informal workshops and training, as well as distance learning.

#### **3. Research**

The research sector of the university has a significant role in terms of its near and long term impacts. There are already on-going projects with ecological habitats and other environmental issues. Areas for research could also include large scale composting, procurement practices, production methods, alternative energy sources, and any number of building design, construction, operations, and maintenance practices.

#### **4. Local Community**

The local community can also provide various levels of resources to assist the sustainability effort and includes alumni, the business community, utility suppliers, transportation providers, vendors, community organizations, and local chapters of professional associations. One of the most effective structures for implementing a green and sustainable campus is the Leadership in Energy and Environmental Design (LEED) program established by the US Green Building Council. The certification process for existing buildings provides a list of projects and standards. The University could establish a goal to develop a plan on



### 3. Advantages for CEU

*“Sustainable Universities research in a way that the bonds with local society are strengthened. [...] Sustainable Universities are organizations generating new knowledge for the benefit of the local society they relate to. This knowledge is mediated to society by the graduates founding new companies or changing old ones”*

*“The Ins and Outs of Sustainable Universities”, H.H. Kleizen, University of Delft (Paper from Conference: Committing Universities to Sustainable Development)*

It is clear that the concept of a sustainable university realizes the CEU's vision of promoting open and responsible societies throughout the world. As an integral component of this society, the CEU needs to set an example and demonstrate responsibility within its own establishment. CEU has already taken an important step in this direction by signing the Copernicus University Charter of Sustainable Development.

The main advantages for integrating such a program are to:

- Realization of CEU's policies and values
- Promote and increase awareness about sustainability and related issues among CEU's stakeholders (students, employees and the larger community)
- Introduce, showcase, lead and promote sustainability in CEE Universities
- Reduce CEU's environmental footprint/impact and improve sustainability within its operations
- Represent an additional tool to attract students and advertise the CEU and its values;
- Strengthen Business School and CEU cooperation
- Complement on-going and future project and research work of the Center for Business and Society and the Center for Climate Change and Energy Efficiency
- Encourage student participation (through the environmental student group Oikos or other independent initiatives).
- Support student's academic work through encouraging case studies, thesis, etc. on programs relating to the sustainable campus concept
- Involve students in the design, prioritization, implementation and monitoring phases, thereby giving them a practical understanding of managing sustainability.

### 4. Opportunity Cost of a Sustainable Campus





The decision of allocating resources towards a Sustainable Campus should include an analysis of the opportunity cost of the investment forgone into environmental research. Although the objective of this paper is neither to provide a detailed cost breakdown of implementing a Sustainable Campus, nor to discuss whether environmental research or the Sustainable Campus have a greater impact on promoting sustainability, a few general arguments in favor of the latter include:

- Students are more likely to be made aware on a day-to-day basis about environmental issues by the Sustainable Campus as their community will be actively encouraged to participate in Campus-wide programs.
- 'Practice what you preach': There is a strong argument in favor of CEU including measures to ensure internal sustainable management when the Institute produces research and provides education relating to environmental issues.

## **5. Components of CEU Sustainable Campus**

Practical applications at other universities provide different examples of how sustainability can be managed and related programs implemented.

A more precise structure shall be decided upon at a later stage. In general it should focus on the following 3 pillars of sustainability: environmental, social and economic issues.

In relation to the sustainable campus concept, the following categorization can represent a starting point for further discussion:

Environment:

1. Energy and resource management
2. Purchasing, Waste Reduction & Recycling

Social:

3. Health & Safety



Environmental and Social:

4. Buildings, Grounds and Hostel
5. Research, Education & Outreach (promotion of CSR among CEU's Corporate Partners)
6. Campus Life (substance abuse, mental health, etc.) and Students Clubs (e.g. Oikos)

## 6. Action Plan

As noted above (Section 2. Sustainable Campus), there are 4 components of the University community that need to participate in a Sustainable Campus program (1. Administration, 2. Academic departments, 3. University research effort, and 4. Local community).

A committee or council is needed in order to share information, understand the issues and concepts, and develop plans for future initiatives. Nearly every department on campus has some role to play. Some universities have established an "Office of Sustainability" to coordinate the many planning initiatives, projects, networking, and monitoring of the program's progress in achieving its goals.

Management: It is envisaged that a Committee or Project Management Unit (PMU) be established jointly by the CEU Business Schools' Center for Business and Society, the CEU's Center for Climate Change and Energy Efficiency and student representatives from each of these Centers. Both Centers have in depth research and project management experience in implementing such a multi-dimensional program.

This PMU will be responsible for:

- Strategy development, implementation and management of Sustainable Campus programs
- Communication and coordination with (1) Administration, (2) Academic departments (students and faculty), (3) University research efforts and (4) the Local Community
- Benchmarking, monitoring and reporting of sustainability indicators

Staffing and Resources: One Project Manager should be allocated to head this PMU and it is envisaged that during the first year his person can be engaged part-time. Depending on the success of Sustainable Campus and following the first year evaluation, this input can be potentially enlarged to a full-time position.



Implementing the Campus Sustainability Program will consist of the following actions:

### 1. Analysis

This phase will consist of the following:

- Audit: Conducting an audit and assessing current administrative structures and procedures, and sustainability related programs in place with the objective of identifying gaps requiring necessary action.
- Stakeholder Process: Identify CEU's main issues and stakeholders relating to sustainability and prioritize among these based on their relative importance and impact on CEU's sustainability.

### 2. Implementation

This phase will consist of:

- The management of Sustainable Campus programs
- Benchmarking, monitoring and reporting of Sustainable Campus programs. This effort will consist of identifying suitable and measurable indicators, writing and publishing an annual report, and launching a website providing resources and communicating programs.



## Appendix 3 - Working Document for a Sustainable Campus at CEU

### Proposal for a Sustainable Campus at CEU

#### 1. Introduction

On January 18, 2010 a meeting was held between Liviu Matei (Chief Operating Officer), John Harbord (Director of Center for Academic Writing) and Jens Trummer (Adjunct Lecturer) to introduce and discuss the Sustainable Campus (SC) Initiative.

The advantages for CEU and its community of implementing an SC are:

- Practical realization of CEU's "Sustainable Development Policy" (see Annex 2 of Appendix 1 below)
- Help implement CEU's mission and values
- Promote and increase awareness and education about sustainability and related issues among CEU's stakeholders (students, employees and the larger community)
- Introduce, showcase, lead and promote sustainability in CEE Universities
- Reduce CEU's environmental footprint/impact and improve sustainability within its operations
- Represent an additional tool to attract students and advertise the CEU and its values;
- Complement on-going and future project and research work of the Center for Business and Society and the Center for Climate Change and Sustainable Energy Policy
- Encourage student participation and improve faculty-student interaction (through the environmental student group Oikos or other independent initiatives).
- Support students' academic work through encouraging case studies, thesis, etc. on programs relating to the sustainable campus concept
- Involve students in the design, prioritization, implementation and monitoring phases, thereby giving them a practical understanding of managing sustainability.

During the afore-mentioned meeting, it was agreed to prepare a proposal with detailed programs outlining:

1. Current practices
2. Proposed recommendations aimed at improving sustainability, and
3. Indicating financial costs and benefits of the proposed SC programs (where possible)



In order to ensure continuity of the SC initiative, this proposal also includes the suggestion of **a part-time or full-time staff to manage the initiatives discussed in this proposal, and who will identify, design, coordinate with different departments and manage/coordinate additional programs.**

## **2. Proposal Components**

The below proposal includes:

1. Current situation, recommendations to improve sustainability and – if possible – estimated financial costs and benefits of specific programs.
2. Rationalization and job description of a part- or full-time staff to manage and coordinate the SC thereby ensuring continuity.

### **2.1. SC Programs**

#### **2.1.1. Education**

During the research for and preparation of the following SC components, the participants learned that various environmentally-sound practices are already in place (these are discussed in detail in this Section 2.1.). Regretfully, none of these programs are being communicated to CEU's stakeholders, thereby foregoing the educational value that would encourage long-term changes of behavioral patterns among the Universities students, staff and faculty.

The following section why and how the SC can encourage and promote sustainability through education was prepared by **John Harbord**:



Arguably the most important thing a university can do to foster sustainable lifestyles is neither recycling nor saving energy nor avoiding waste, but educating students. While recycling and energy saving are virtues in themselves, their impact is greatly diminished if students can ignore them or assume that they are just the responsibility of the institution. The most important task during the year students spend with CEU is to make them feel that the sustainable lifestyle and habits that CEU supports and takes for granted are desirable, normal and things, habits to be taken home and inculcated into their local populations when they return to their countries, that this is 'the way things should be done' by civilized, socially and environmentally aware citizens.

### Current Practices

At present, CEU's performance in this regard is poor. Only paper is recycled, and this in a low-profile way where scruffy cardboard boxes lie around near photocopiers, often unlabelled. Though a good deal of plastics are used (notably in catering) no provision is made for recycling. Other recyclable materials, though they would occur in small amounts, are also not collected, thus an opportunity for educational practice is missed. Though the university performs quite well as regards low-energy lighting, students' attention is not drawn to this fact as it could be by notices to turn out unused lights or by movement sensors that would switch off lights in empty rooms. Catering offers an opportunity to educate (for example, the basement buffet charges for plastic cups, with good reasons) but nothing is made of this, and while environmentally informed dietary choices could be highlighted, it is assumed that beyond religious or personal reasons, choice of food plays no role in society or the environment. In this regard, improvement of the present practices is very easy and relatively low cost.

### Recommendations

The university should use every opportunity to draw to students' attention the choices it has made, as an institution, towards sustainability, raising as much as possible on a daily basis the profile of the environmentally friendly measures proposed in previous sections. Students should enter the university to marvel at how carefully thought-through its sustainability policies in everyday life are, and leave with the resolve to establish similar norms in their own countries.

1. Waste should be recycled in a highly visible, esthetically pleasing manner (the coloured dustbins used by Hungarian state initiatives are an example) with posters informing students as to what types of plastics/metals etc can or cannot be recycled, and perhaps information on how these materials are used in their recycled form.
2. Energy-saving devices should be highlighted as such (for example, students' attention should be drawn visibly to the fact that printers print double-sided to save paper.
3. Individual efforts to save energy (mainly through switching off lights) should be encouraged visually with notices near light switches.



4. Catering services should highlight environmentally sustainable choices (eg. bring your own mug for coffee) in visually appealing ways, and short, one day campaigns (eg. selling organic products on a particular day via catering services) should be promoted.
5. Corridor and possibly classroom lights should be fitted with movement sensors to shut them off when no-one is present – lights that come on by themselves when one enters a dark room are sufficiently a novelty that they will attract attention – this should be followed up with informative notices in relevant places explaining why the university uses this measure.
6. Where hygienic facilities are cleaned with bio-degradable non-harmful cleaning agents, notices should be posted to this effect, just as where hot-air driers are employed these should not only be adjusted to the industry agreed 45 seconds, but labeled pointing out that their non-use where possible is a further energy saving.

These just serve as examples, of which many more can be found.

### 2.1.2. Energy

STILL TO COME

### 2.1.3. Waste Management

Implementing sustainable processes for waste management represents a cornerstone for improving Universities' environmental performance and reducing its impact on society. The following section was prepared by **Jens Trummer**:

Meetings were held between Jens Trummer, CEU Facilities Management (Regina Molnar, Gyorgy Finta and Zoltan Attila Kiss) and environmental waste management company Humusz ([www.humusz.hu](http://www.humusz.hu), Laszlo Perneczky) on March 31<sup>st</sup> and April 7<sup>th</sup> to discuss current practices and to identify areas for improvement.

Although the following analysis indicates current recycling practices, none of these efforts are communicated to the CEU community thereby foregoing the value added of educating students, faculty and staff. Additional areas for improvement are also suggested.





## **Current Practices**

Plastic bottles: At buildings Nador 9 and 11 all empty plastic bottles distributed to staff and faculty (amounting to approximately 500-600/month) are as per instructions deposited daily in the kitchens, collected by the cleaning people and deposited in the basement. Once a sizeable amount has been collected, these are then brought by a CEU driver to recycling.

Drinks in plastic bottles consumed by students are currently not being recycled and this audit concluded that there is a considerable amount of plastic bottles placed daily into regular trash bins throughout both buildings.

Paper: All paper is currently being recycled and collected in boxes adjacent to printers and photocopiers by students, staff and faculty. This paper is then collected by a designated agent approximately once per month who pays on average HUF 4,000 per load (depending on weight).

## **Recommendations**

Although current procedures are in place, several recommendations are made to improve CEU's sustainability:

1. Communicate and educate students, staff and faculty of current and on-going recycling practices through placement of labels & signs, update/upgrade waste collection bins (see below), website, etc.
2. Purchase new waste disposal bins with separate colors for plastic bottles and paper. Paper bins are smaller plastic version whereas bins for plastic bottles need to be fire proof and made of metal with a lid.

## **Cost and Benefit**

Communication/Education: Signs, labels, etc. – not known, minor cost.



Paper collection bins: Pilot: Approximately 20 units @ HUF 500/bin = HUF 10,000 in strategic locations such as outside library, adjacent to photocopiers and printers, etc.

Full scale: Purchase of bins for every office and corridor: Approximately: 500 units @ HUF 500/bin = HUF 250,000.

Plastic collection bins: Special fire-proof bins (made of metal with lids) are required according to the fire hazard code.

Pilot: Approximately 10 units @ HUF 25,000/unit = HUF 250,000 in strategic locations such as outside library, canteens, cafes, meeting points, etc.

Full-scale: Purchase of bins 1 for every corridor including the above: Approximately 100 units @ HUF 25,000/unit = HUF 2,500,000

#### **2.1.4. Catering**

Catering has numerable environmental impacts:

- The quality of the food it procures (organic compared with regular) and where this originates from (regional/domestic compared with imported)
- The energy it consumes (refrigeration, cooking, baking, etc.)
- The waste it produces and how this it disposed of.

The following section was prepared by a Business School undergraduate student **Aigerim Kurmangazina** and **Jens Trummer** and demonstrates a successful interaction between students and faculty. Aigerim's complete write-up was used for an assignment in one of her classes.

Meetings were held between Jens Trummer and Aigerim Kurmangazina with Gabor Rebi who is the manager of CEU Szemester Etterem (hereafter referred to as the Caterer) on Thursday, March 25<sup>th</sup> at 10 AM to discuss current practices and to identify areas for improvement.



Although the following analysis indicates current environmentally sustainable practices, none of these efforts are communicated to the CEU community thereby foregoing the value added of educating students, faculty and staff. Additional areas for improvement are also suggested.

### **Current Practices**

The Caterer belongs to a large catering company that includes 27 separate catering businesses throughout Budapest.. CEU and the Caterer have a contract that stipulates:

- The Caterer can not charge prices higher than HUF 830/meal.
- The Caterer must pay all his utility bills (only water and electricity) averaging HUF 100,000/month and rent averaging HUF 200,000/month.
- The Caterer must provide an option of 3 main courses which include poultry (turkey or chicken), pork (tailored for the Hungarian clientele) and vegetarian.

Due to the Caterer's clientele consisting of the same students for one year, and long-term faculty and staff to cater for, the business is under a continuous pressure to provide quality and popular meals as it can not afford to loose this customer base. The most popular meals consists of fried chicken or pork served with fried potatoes (French fries).

Food Procurement: Due to maximum price limit per meal of HUF 830, the Caterer chooses the cheapest possible ingredients. Due to this relatively low price, the Caterer does not have the option to choose more costly organic options, nor the country of origin. The Caterer also can not procure beef for that price which has a higher environmental impact than other meats.

Storage, Preparation and Cooking: Due to Caterer having to pay the utility bills, he is has a direct incentive to reduce his energy consumption. Although the current equipment is not energy star rated, the Caterer makes conscious efforts to reduce his energy consumption by having his stews, soups and gravies cooked at a nearby facility using natural gas.

Food Disposal: All food is freshly procured jointly at a large market outside Budapest at 3 AM every morning the day prior to consumption. It is then stored at a distribution point and delivered to CEU every morning. Food left-over and used oil are collected and transported to the food distribution center, and are then separately disposed of in an environmentally appropriate manner as stipulated by Hungarian and EU law. The Caterer sells 20 to 40 bottle drinks per week and about 20 coffees served in



plastic or Styrofoam cups per day. Although these are small numbers, there is no recycling facility and empty cups and bottles are disposed off in regular trash.

## **Recommendations**

Although current procedures are in place, several recommendations are made to improve the Caterer's sustainability:

1. Communicate and educate students, staff and faculty of current and on-going recycling practices through placement of labels & signs.
2. Provide recycling in and outside restaurant for plastic bottles and cups (see Waste Management above).
3. It can be considered to amend the contract with CEU providing the option to add additional main dishes consisting of organic food and/or regionally sourced foods at a price above the currently permitted HUF 830. In order to not increase the Caterers risk, this would probably have to be preceded with a survey on whether there is sufficient demand and customers willing to pay a premium price for consuming organic and locally sourced meals.
4. A final option could be to replace the current catering equipment with energy star appliances.

## **Cost and Benefit**

Currently none obtained.

### **2.1.5. Other**

#### **2.1.5.1. Nador 15 Construction and Renovation Works**

CEU Business School are moving into Nador 15, and currently it is proposed that 2 existing floors (4<sup>th</sup> and 5<sup>th</sup>) will be renovated and a 3<sup>rd</sup> floor added underneath the roof.



This presents an ideal opportunity to implement environmentally friendly materials, equipment and systems aiming to improve the overall sustainability, feeling and efficiency of the building.

Practical recommendations are to involve at early stages of the design phase the Hungarian Green Building Council, and to inquire into whether relevant certification could be considered (LEED, etc.)

The educational and promotional value of having a green certified building would be invaluable.

#### **2.1.5.2. Use of Environmentally Friendly Cleaning Materials**

The SC understands that CEU has awarded a contractor to manage the cleaning throughout CEU buildings. A complete list of currently used cleaning materials has been obtained, and it is recommended that certain cleaning materials can be substituted for more eco-friendly alternatives without compromising hygienic standards. This could be done to reduce harmful health effects for both cleaning staff as well as students, faculty and staff.

This could be accompanied by a communication campaign helping to educate students as well as faculty and staff about healthier – and just as effective – alternatives.

#### **2.1.5.3. Vending Machines**

Vending machines at CEU sometimes share food items that need to be cooled with non-refrigerated food products and beverages.

An organized approach with the aim of reducing energy consumption can reduce the requirement for refrigerated vending machines.



As in all aforementioned programs, this initiative would need to be accompanied by a educational leaflets/signs at vending machines to communicate to CEU's stakeholders the energy required to operate vending machines, and the impact these have on the environment.

## **2.2. Recommendation for Part- or Full-time Staff: SC Manager/Coordinator**

To manage and coordinate the above activities it is proposed to hire a part-time or full-time staff. A pilot could be initiated hiring a staff for the short-term only to assess the cost savings obtained through the sustainable practices, and compare these with the benefits accrued from increased awareness and education, marketability and reduced environmental impact.

The SC Manager's tasks could include:

- Communication: Internal information campaign of on-going programs to educate students, faculty and staff about sustainability issues and solutions.
- Communication: External information campaign to inform CEU's stakeholders (potential students, government, etc.) about current sustainability issues and set an example for other Universities in the CEE region (website, inclusion in CEU's brochures leaflets, etc.).
- Waste prevention and reduction
- Overseeing, coordinating and harmonizing recycling at dormitory and CEU buildings
- Energy efficiency related initiatives, improvements and conservation
- Sustainable construction of Nador 15 and future projects
- Paper management
- Product purchase research
- Regulatory compliance audits
- Coordination of student and faculty initiatives (Oikos, Earth Day, etc.)
- Completion of annual environmental audits and CO2 foot print analysis
- Organic and local foods initiative in the catering services



## Appendix 4 – Proposal to Establish Senate Committee on Sustainability

CEU Sustainable Development Campus Initiative\*

Proposal for the formation of a new Senate Committee

Version: August 31, 2010

This is a proposal for the development of a new Senate Committee to facilitate the development and subsequent collaborative institutional framework to further and strengthen CEU's commitment to environmental sustainability and human well-being.

This effort builds on previous work to promote environmental sustainability at CEU, including:

- On January 18, 2008, the CEU Senate approved a Sustainable Development Policy calling for, “continual improvement, through setting objectives and targets, continuous monitoring and review...” (See Appendix I and II). The policy expresses CEU's commitment to minimizing pollution, resource conservation, waste reduction and recycling, and the very important role of teaching, research and practice in sustainable development.
- Faculty, staff, and students have been meeting informally for almost a decade to strengthen commitment CEU's commitment to global sustainability. This work, more recently culminated in a meeting with Liviu Matei, Jens Trummer and John Harbord on January 18, 2010 in which a Sustainable Campus (SC) Initiative was discussed.
- Several other active supporters within the CEU community have been involved.
- A report was drafted stressing several aspects of CEU sustainability including learning, energy efficiency, and waste management (See Appendix III).
- An Energy Audit Report was developed by students in the Dept. of Environmental Sciences and Policy (See Appendix IV).
- Additionally, student efforts have including collaboration with the international student environmental organization, OIKOS, which still maintains a strong interest to support CEU efforts in this direction.

The purpose of this Committee is to funnel these efforts and pre-existing policy into a concrete institutional mechanism for implementation. It is time to make CEU's stand on sustainability a strong visible reality.

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\* This is a preliminary title. A final title is to be determined later as per the recommendations of the proposed Committee and the workshop as outlined herein.





The following steps are proposed:

- 1) A half-day workshop involving key administrative, maintenance, faculty, staff, and student representatives to develop an integrated vision or mission statement with specific objectives and criteria. Most importantly, the workshop should result in an action plan including short and long-term goals and a monitoring and evaluation mechanism.
- 2) Establishment of a standing Senate Committee as a formal democratic based institutional body to facilitate and affirm the results of the workshop as well as to engage related issues.

The Committee should draw on the results of the workshop to determine its specific role, and might include representatives from the following categories:

- Maintenance
  - Administration
  - Faculty, staff and students
  - Management from Student Residence
  - Research Center and/or Research Group representatives
  - Outside expertise
- 3) An environmental assessment of CEU to provide a knowledge base from which to build and strengthen sustainability. To date, some assessments have been conducted including those outlined in a draft Proposal for a Sustainable Campus at CEU and the Energy Audit of CEU by students from the Department of Environmental Sciences and Policy in May-June 2006 (see Appendix III). However, a comprehensive environmental assessment is needed.

This effort will result in several noteworthy benefits, notably:

- increasing outreach and the public profile impact of CEU;
- increasing CEU's contribution to and support for global sustainability and a multitude of EU acquis and various multi-lateral agreements;
- reducing CEU's impact on the environment and public health including greenhouse gas reduction and thus climate change; and
- providing an important learning environment to nurture education on sustainability and sustainability in practice around the world.



## Appendix 5 - Sustainability Officer



**From:** CEU Sustainability Advisory Committee (CSAC)

**To:** Senior Staff Members

**Re:** Human Resources for Sustainability at CEU

**Date:** June 23, 2011

Dear Senior Staff members:

The CEU Sustainability Advisory Committee (CSAC) would like to thank the Senior Staff members of CEU for their growing support for and commitment to sustainability at CEU. We are proud of the achievements made just this year starting with the establishment of CSAC itself, the strong emergence of SCI that received the 20<sup>th</sup> Anniversary Student Engagement Award; the pilot recycling program which will soon be expanded; the attention to increasing sustainability literacy through outreach and coursework; the on-going research engaging sustainability principles; the Japanese Garden improvements; the introduction of a bicycle share program (in-progress); and the promotion of sustainability events. Also, we praise the efforts of CREO to integrate sustainability principles in the redevelopment of CEU, including consideration for certifications such as BREEAM and LEED.

In order to continue to advance sustainability at CEU, we believe that further human resources are needed. We ask the university to consolidate its commitment to sustainability by creating a **Sustainability Officer (SO)** position; and by establishing a **Faculty-led Mechanism for Sustainability in Research and Education**. We have attached several important documents for your consideration as follows:

- Justification for the Allocation of Human Resources to Sustainability at CEU
- Sustainability Officer Job Announcement [PROPOSAL ONLY]
- Sustainability in Academia: Proposal for Faculty-led Mechanism

We appreciate your kind and earnest attention to fulfilling CEU's commitments and responsibilities as designated in the Sustainable Development Policy and the COPERNICUS Charter. On this 20<sup>th</sup> Anniversary, CEU indeed goes forward in playing an increasingly central role in promoting sustainability in the region and all over the world.

Most Sincerely,

Tamara Steger, Chair  
CEU Sustainability Advisory Committee

## Justification for Sustainability Officer at CEU

June 23, 2011

There are several reasons for allocating human resources to this important work: 1) demonstrated support, 2) legitimacy and public image enhancement, 3) increased institutional efficiency, and 4) general economic, environmental and social benefits. We list them here along with relevant excerpts from supporting documentation.

### Demonstrated Support:

January 18, 2010. Previous efforts to promote sustainability on campus organized by John Harbord concluded that sustainability at CEU could only make important progress with the dedication of a full-time position to coordinate and implement sustainability on campus. (See Appendix 1.)

February 2, 2010: CEU campus sustainability advocates were drafting a job description for an environmental resources coordinator. (See Appendix 2.)

November 11, 2010. When the proposal for the amendment to the Sustainable Development Policy to introduce the Sustainability Advisory Committee was presented, Stewart Durrant of CREO asserted that CEU sustainability efforts unquestionably needed a Sustainability Officer. (See Appendix 3.)

November 22, 2010. The Student Union asserted this same need in a position paper adding that an environmental management system was also critical to making progress in sustainability at CEU. (See Appendix 4.)

April 14, 2011. CEU Electricity Management Report 2011 (by Lea Baumbach, Nataliya Ilyashenko, Alexandr Jevsejenko and Lisa Lamb). (See Appendix 5) This report asserts the importance of dedicating human resources (hiring a sustainability officer) to:

improve accessibility of information at CEU regarding electricity consumption,

achieve potential economic savings (estimated at 3.9 to 11.6 million HUF depending on price)

prevent 1,235 tons of CO<sub>2</sub> greenhouse gas emissions,

increase the implementation capacity for securing energy efficiency measures,



improve CEU's image, and

strengthen the credibility of CEU's Dept. of Environmental Sciences and Policy.

April 28, 2011. CSAC Chair, Tamara Steger, affirmed the necessity for additional human resources to further the implementation of sustainability at CEU at the last Academic Forum meeting. (Meeting notes not yet available).

### **Legitimacy and Public Image Enhancement:**

*SO strengthens CEU profile as an innovator in the region, as well as a model for open society and sustainability.*

*SO can garner legitimacy for projects on campus assuring that sustainability criteria are considered.*

*SO can promote best practices and identify award programs.*

### **Increased Institutional Efficiency:**

*Coordinates and improves collaboration regarding outreach, activities, and efforts (CSAC, SCI, CREO, etc.)*

### **Economic Benefits:**

*Reduces overall costs, especially from reduced energy consumption and increased efficiency. For example, an estimated 3.9 to 11.6 million HUF savings in electricity bills alone can be achieved (See CEU Electricity Management Report 2011 by Baumbach et al.)!*

### **Environmental Benefits:**

*Pollution reduction and climate change impacts: Reduce greenhouse gas emissions, e.g., 1,235 tons of CO<sub>2</sub> greenhouse gas emissions regarding electricity consumption at the "Nador Campus" (See CEU Electricity Management Report 2011 by Baumbach et al.).*

*Reduction of resource consumption in general including water, paper, plastics, printer toner, etc. which will also have economic benefits.*

*Reduced burden on landfills through consumption reduction and recycling.*

### **Social Benefits:**

*Can increase and draw attention to meaningful research on sustainability at CEU that can have global implications.*

*Improves the meaningfulness and impact of the learning experience at CEU.*



*Increases collaboration and networking within CEU, between CEU and surrounding community, and global community including Alumni.*

*Provides sustainable space for CEU activities and interactions.*

## Sustainability Officer [DRAFT PROPOSAL ONLY]

June 23, 2011

Central European University, Budapest has a vacancy for the position of Sustainability Officer, starting in September 2011. CEU is a US/EU accredited university that strives to be a regional leader in research and policy, including environmental and public policy. The role of the Sustainability Officer is to guide, manage and coordinate initiatives and commitment to sustainability at CEU. This is an administrative position.

### Responsibilities

#### Coordination, Monitoring, and Reporting

- Initiate, promote, and facilitate the development and implementation of a CEU sustainability strategy and assessment schemes to measure and report on sustainability criteria at CEU. An aspect of this would include attention to health and safety issues.
- Coordinate and advise on resource conservation and reduction programs and waste management, including implementation of new technologies and strategies.
- Work with the Campus Redevelopment Office, facility management, architects, or other consultants during design and planning processes and review plans to integrate sustainability design principles.

#### Education and Academics

- Organize and promote informative and educational campaigns and trainings engaging faculty, staff, and students to integrate sustainability principles.
- In the areas of education and academics, the officer will support faculty-lead and coordinated efforts to review strategic opportunities for integrating sustainability into curricula, cross-departmental collaboration and research.

### Requirements

#### Essential

- Proven commitment to sustainability issues
- Familiarity with the local regulatory/ policy environment
- Knowledge and understanding of built environment and facilities management
- Strong analytical and planning skills
- Effective personnel, training, and facilitation skills
- Ability to work independently, handling and prioritising various projects



- Excellent English oral and written communication skills; Hungarian fluency
- Sound computer skills, including word-processing and statistical software
- Strong work ethic

#### Desirable

- Higher education degree involving environmental studies
- Experience in working in an academic environment, especially CEU specific experience a plus!

### Sustainability in Academics: Research and Curriculum

Recommendation by the CEU Sustainability Advisory Committee:

Faculty-Led Mechanism for Sustainability in Education and Research at CEU

June 23, 2011

CEU is a signatory to the **Copernicus University Charter for Sustainable Development**. CEU thereby affirms its commitment as a higher learning institution to sustainable development and its “duty to propagate environmental literacy and to promote the practice of environmental ethics in society, in accordance with the principles set out in the Magna Charta of European Universities and subsequent university declarations, and along the lines of the UNCED recommendations for environment and development education” as per the Charter.

Putting in place measures to systematically integrate environmental sustainability into the CEU’s management system and infrastructure will continue to be an important statement the university can make to its faculty, students, staff and the outside world. But beyond its performance in the areas of energy efficiency, recycling and other physical measures the university’s main impact on sustainability is through the direction of its research and its success in producing graduates who understand and successfully address sustainability challenges in the world. Action in these areas is a key component of the Charters CEU signed, but tackling them requires a different approach than that followed when addressing sustainability in the university’s operations and management.

In light of these commitments and in recognition of sustainability as a multi-disciplinary issue, ***CSAC recommends exploring the explicit development of a mechanism for identifying the implications of sustainability on research and curriculum development at CEU.*** CSAC recognizes the need for and recommends starting a **dialogue on the possible shape of a faculty-led mechanism for sustainability in education and research.** While leading this effort would go



beyond the mandate and likely competence of a technical level Sustainability Officer, the Officer could support this effort.

Several faculty, research centers, research groups, projects, and publications are already engaging sustainability principles. It is a significant and meaningful part of CEU's research profile, and could benefit further from specific attention and outreach. Additionally, efforts can be explored to enhance further CEU's sustainability literacy. This mechanism can (and should) thus strengthen CEU's sustainability research profile and ensure that CEU graduates are literate in the principles of sustainability and are prepared to engage such issues in whatever career paths they choose.

## Appendix 6 – Field Observation Form

**Location:** Faculty Tower, Floor \_\_\_\_\_

**Date:** \_\_\_\_\_

**Time:** \_\_\_\_\_

**Observer:** \_\_\_\_\_

**Checking:** a) is the light in the hallway switched on unnecessarily?

b) is the light in the kitchen switched on unnecessarily?

c) is the light in the bathroom switched on unnecessarily?

d) is there some system for recycling waste (in the hallway or kitchen)?

e) is the water faucet properly closed in the bathroom?

f) is the water faucet properly closed in the kitchen?

g) other observations?







## Appendix 7 - CSAC Declaration

**Central European University**  
**Sustainability Advisory Committee**

February 25, 2011

**Declaration**

With the 20 year anniversary of Central European University approaching, the time has come for those guiding the academic institution to **fully commit to integrating sustainable development objectives into CEU's mission statement.**

For this pursuit to be productive, effective, and meaningful, a working model taking into account the social, economic, and environmental principles of **sustainable development (SD) must be put into action.** It is of utmost importance that CEU, after having signed a declaration for sustainable development (Copernicus Charter) and formulated a Sustainable Development Policy (2008), **commit adequate time and resources to reach the objectives set forth by these documents** without further delay.

In response to CSAC's mandate to facilitate the implementation of the CEU Sustainable Development Policy and to secure CEU's commitments as a signatory to the Copernicus Charter, we developed the following recommendations:

- a) Introduce a clear process for integrating sustainable development into the curriculum and programs of each department and research center;
- b) Create an effective system for information-sharing and raising awareness regarding the relationship between CEU practices and the objectives of sustainable development;
- c) Always consider the impacts on CEU's sustainability performance when engaging in business or other agreements;
- d) Adopt a procedure for screening the CEU budget based on sustainable development criteria as well as specifically allocate on-going financial resources to sustainable development;
- e) Implement a professional management and impact assessment system regarding sustainable development in operations, facilities and practices; introduce an SD monitoring and reporting process including key performance indicators (also linked to the management and budgeting system), targets, priorities, and timetables;



- f) Build sustainable development implementation capacity, for example, by providing personnel resources and institutional mechanisms to manage all operations necessary to guide CEU towards more sustainable practices;
- g) Give due consideration in drafting long-term development plans to how each choice will impact on the social, environmental and economic standards of the university;
- h) Ensure an environment where students, faculty and staff can work in unison to pursue these goals; and
- i) Initiate the development of a network on sustainability issues beyond the university, taking advantage of collaborative opportunities involving, for example, other universities in Hungary.



## Appendix 8 – Environmental Awareness Survey

### Introduction

We are a group of 6 students from the Department of Environmental Sciences & Policy. As part of our coursework for Environmental Politics, we are in the process of compiling a report to document CEU's performance in sustainability and make recommendations to improve such performance where appropriate. As such, we are conducting a survey in order to:

- Gauge the level of environmental awareness and the stated environmental behavior at CEU, including students, faculty and staff
- Identify campus environmental initiatives validated by the CEU community and areas for improvement

The survey is anonymous and the data collected will only be used for the purpose of consolidation, analysis and representation in relation to the mentioned report. For any enquiry, please contact Janice Sin at Janice\_Sin@student.ceu.hu. Thank you!

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### Part 1: Basic Information

1. Position at CEU: ☐ Student ☐ Faculty ☐ Admin.
2. Department: \_\_\_\_\_

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### Part 2: CEU Environmental Awareness Survey

3. Please state below any environmental initiatives by CEU that you are aware of:

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4. From September 2011 to now, how often do you switch off lights at CEU when not needed, e.g. in classroom, bathroom?  
☐ Always ☐ Sometimes ☐ Rarely ☐ Never (*Jump to no. 6 when answer is "Always"*)
5. Reasons for not switching off the lights when not needed:  
☐ Habit ☐ Someone may need them later ☐ Other(s): \_\_\_\_\_
6. From September 2011 to now, how often do you bring a mug when buying coffee / tea at CEU?  
☐ Always ☐ Sometimes ☐ Rarely ☐ Never (*Jump to no. 8 if answer is "Always"*)



7. Reasons for not bringing your own mug:
- |   |   |
|---|---|
| <input type="checkbox"/> Do not drink coffee / tea              | <input type="checkbox"/> Not convenient to carry a mug around |
| <input type="checkbox"/> Do not want to wash the mug afterwards | <input type="checkbox"/> No economic incentive                |
| <input type="checkbox"/> Other(s): _____                        |   |
8. From September 2011 to now, how often do you drink bottled water?
- ☐ Always      ☐ Sometimes      ☐ Rarely      ☐ Never (Jump to no. 10 if answer is "Never")
9. Why do you drink bottled water?
- |   |   |
|---|---|
| <input type="checkbox"/> Convenience                                  | <input type="checkbox"/> More hygienic                |
| <input type="checkbox"/> Higher nutritional value                     | <input type="checkbox"/> Only bottled water available |
| <input type="checkbox"/> Other(s): _____ (e.g. at events or seminars) |   |
10. Do you think the number of drinking fountains at CEU is sufficient?
- ☐ Yes      ☐ No      ☐ No comment
11. Do you think the drinking fountains at CEU are conveniently located?
- ☐ Yes      ☐ No      ☐ No comment
12. If you were to suggest new locations for drinking fountains, where would they be?
- \_\_\_\_\_
13. From September 2011 to now, how often do you recycle at CEU buildings?
- ☐ Always      ☐ Sometimes      ☐ Rarely      ☐ Never
14. Do you think the number of recycling bins at CEU is sufficient?
- ☐ Yes      ☐ No      ☐ No comment
15. Do you think the recycling bins at CEU are conveniently located?
- ☐ Yes      ☐ No      ☐ No comment
16. If you were to suggest new locations for recycling bins, where would they be?
- \_\_\_\_\_
17. Would you be more inclined to recycle your waste if there are more conveniently located recycling bins?
- ☐ Yes      ☐ No      ☐ No comment
18. Do you bicycle to CEU?
- ☐ Yes      ☐ No (Jump to no. 23 if answer is "No")



19. From September 2011 to now, how often do you bicycle to CEU when weather permitting?  
☐ Always      ☐ Sometimes      ☐ Rarely      ☐ Never

20. Do you think the number of bike racks and tire pumps at CEU are sufficient?  
☐ Yes      ☐ No      ☐ No comment

21. Do you think the bike racks and tire pumps at CEU are conveniently located?  
☐ Yes      ☐ No      ☐ No comment

22. If you were to suggest new locations for bike racks and tire pumps, where would they be?  
\_\_\_\_\_

23. Other comments on environmental awareness and initiatives on campus (*Optional*):  
\_\_\_\_\_  
\_\_\_\_\_

THANK YOU FOR YOUR PARTICIPATION!!!

## Appendix 9 – Independent Samples T-test

The T-Test was conducted by using the software SPSS (excluding missing values listwise).

### Group Statistics

	Departments	N	Mean	Std. Deviation	Std. Error Mean
4. How often do you switch off lights?	Environmental Sciences & Policy	16	3.69	.602	.151
	Other Departments	110	3.40	.744	.071
6. How often do you bring a mug?	Environmental Sciences & Policy	16	2.50	1.211	.303
	Other Departments	110	1.49	.810	.077
8. How often do you drink bottled water?	Environmental Sciences & Policy	16	1.88	.957	.239
	Other Departments	110	2.85	.960	.091
13. How often do you recycle?	Environmental Sciences & Policy	16	3.31	.602	.151
	Other Departments	110	3.33	.803	.077

### Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
4. How often do you switch off lights?	Equal variances assumed	2.051	.155	1.475	124	.143	.288	.195	-.098	.673
	Equal variances not assumed			1.728	22.261	.098	.288	.166	-.057	.632
6. How often do you bring a mug?	Equal variances assumed	10.201	.002	4.343	124	0.000029	1.009	.232	.549	1.469
	Equal variances not assumed			3.230	17.005	.005	1.009	.312	.350	1.668
8. How often do you drink bottled water?	Equal variances assumed	.016	.900	-3.781	124	0.000242	-.970	.257	-1.479	-.462
	Equal variances not assumed			-3.787	19.646	.001	-.970	.256	-1.506	-.435
13. How often do you recycle?	Equal variances assumed	1.210	.273	-.071	124	.944	-.015	.209	-.428	.399
	Equal variances not assumed			-.087	23.540	.931	-.015	.169	-.364	.334





## Appendix 10 - Sustainable Campus Initiative Handbook



### SCI Handbook version 1.0

**Experiences and lessons learned from the first year of activities.**

Contents.

1. What is SCI?
2. Programs and achievements in 2010-2011.
3. Opportunities and recommendations.
4. Funding.
5. Contact list.



## 1. WHAT IS SCI?

The Sustainable Camps Initiative (SCI) is a student-run organization founded in September 2010 by students of the Department of Environmental Sciences and Policy, with the aim to promote sustainability at CEU. Sustainability is a broad term, however our basic idea is to invite the CEU community to adopt more environmentally friendly and conscious, thus sustainable lifestyles. Our ultimate goal is to create a unique and exemplary educational institution in terms of sustainability in the heart of Central Europe.

We plan to achieve this through grass-root initiatives on the one hand (such as campaigns and workshops), and on the other hand through the institutionalization of sustainability values throughout the entire hierarchy of CEU (e.g. by setting up a Sustainability Advisory Committee and a Sustainability Fund).

So far our focus has been on 4 basic issues:

- **Introducing sustainability to the Administration:** we have tried to get the CEU administration to take sustainability really seriously and not just as a nice formal pledge. In fact, even if sustainability is already part of the policy of an institution (as it is the case at CEU), the lack of interest or knowledge of the people responsible for its implementation often results in a poor and superficial implementation of such policies. Therefore we think that it is crucial to sustainability and its positive results at the administration level as well.
- **Greening the Campus:** this relates more to the infrastructure. There are people and universities that use this concept in a broader sense, but in our case we are talking about the physical space in which the university develops its activities. In the case of CEU, there are a lot of greening opportunities (such as the introduction of recycling bins).
- **Raising environmental awareness:** awareness raising campaigns are probably one of the most visible aspects of what we achieved so far. We focused both on the people who work at CEU and the students. Our campaigns were generally mainstreaming a specific issue (e.g. recycling) or were developed as part of a larger event (e.g. 10.10.10).



- **Promoting sustainable lifestyle alternatives:** As a result of awareness raising campaigns, we aim/hope to show that there exist a multitude of ways to being environmentally friendly, and these are often simple steps on an individual scale, but make a real difference on a global scale.

## 2. PROGRAMS AND ACHIEVMENTS IN 2010-2011

### **350.org 10/10/10 “Global Work Day” Party.**

This was our first major event. It consisted of an activism and awareness raising day to get the CEU community thinking about the importance of reducing greenhouse gas emissions. The event was held in honor of 350.org’s “Global Work Day” party which was an international day of climate activism that was also celebrated in Budapest by amongst all the Godollo University Climate Office who was our partner in this event (see contact details below).

From 12 to 2 pm we had the main entrance of the Nador 9 building used as a tabling fair with various activities (such as a recycled wallet manufacturing workshop) and an information desk. We also borrowed the British Council’s symbolic inflatable Baobab tree, to use as a fun participatory activity for the attendees. Organic, home-made and fair trade snacks, and fair trade coffee were also served (the fair trade table was done in cooperation with an NGO called Védegylet (Protect the Future – see contact details below). We offered the coffee to the participants on a donation basis, since lucrative business can’t be run by students within CEU, but it was still a good way to raise some funds for our future projects.

All in all, the event was received with great enthusiasm both by students and staff, and motivated us to carry on further our activities. We also took the opportunity to collect the names and email contacts of those interested in getting involved in SCI (this was our attempt to outreach outside of the Environmental Sciences department. These people were added to a contact list so they got regular updates of meetings, happenings, etc.)

Participants: SCI, HRSI, Védegylet, British Council of Budapest

Video prepared by the CEU media lab:

[http://www.youtube.com/watch?feature=player\\_embedded&v=1mXV8fIDFPA](http://www.youtube.com/watch?feature=player_embedded&v=1mXV8fIDFPA)





### **Visit to Godollo University Climate Office.**

While collaborating with the British Council on our 10/10/10 event, we met Akos Lukacs, Head of the Godollo University Climate Office. A few SCI students went to visit the Office in November 2010 to learn about their programs, how the office was launched, and what are their future plans both within the University and in Hungary. (The notes from this meeting can be found in the SCI documents collection from last year). This relationship with Godollo University Climate Office can be built upon in the future, as we look towards creating the Hungarian network of Sustainable Universities.

Participants: SCI Students, Akos Lukacs





### **SCI Programming and Lecture Events.**

In order to raise awareness about current events related to our own personal research interests, we decided to hold lecture events which were open to the entire campus community. The events took place in our typical classroom, Room 609, and we advertised them electronically, with flyers and word of mouth on campus.

The first lecture focused on global food policy and the perils of industrial agriculture, and the human rights injustices within traditional cacao (chocolate) production in Africa. The lectures were given by Environmental Sciences and Policy students, and held as an open discussion. They were created as part of an Environmental Policy course taken by all Envsci students, thus displaying a case where we attempted to transfer knowledge learned in class to the greater campus community. We attracted a full audience to the lecture, and felt that this series was a very important part of outreach and community education at CEU.

Participants: SCI Students, Faculty, Lecture attendees from CEU community



### **Drafting, Submission, and Acceptance of Sustainability Position Paper.**

The CEU Student Union is the body that represents the ideals of the entire student community at CEU. The decisions made by the Student Union are expected to be reflective of the ideals of the student body. We decided to draft and submit a “position paper” which dictated that CEU students were aware of the University’s previous commitments to the pursuit of sustainability, and that we expected them to keep to their declarations and pursue such efforts in the future, while incorporating the ideals of Sustainable Development into the CEU mission statement.

The paper was drafted by SCI students, and later submitted and approved by the Student Union. The result of this action was an official declaration that CEU students expect the University to respond accordingly to their overlying interest in improvement in the field of sustainability.

Participants: SCI Students, Student Union Members

### **Presentations to the Campus Redevelopment Office (CREO) and University Officials.**

The office which oversees all infrastructural and operational changes within all of the CEU facilities is the Campus Redevelopment Office. After brainstorming ideas for our vision of the future of CEU, we decided to come together and present our thoughts to the officials in charge of managing the transformation of CEU.

This process is especially timely currently, as the University is in a point of transition and expansion, expecting to build an entirely new structure within the next two years. Administration officials, faculty and officials from the redevelopment office observed our



presentation, made relevant questions, and partook in a discussion after taking into account what we displayed. The event was crucial in the establishment of a working relationship with CREO, letting us know that we could have input on the path the university will take in the future.

Participants: SCI students, CREO officials, Env Science Staff, Administrative Officials

### **SCI Participation in the annual CEU Cultural Festival.**

The CEU cultural festival is an annual display of the cultural diversity maintained within the halls of our university. We are very fortunate to have so many bright minds from locations all around the globe, and this festival is truly representative of the cultural wealth we possess at CEU.

This year at the festival, SCI students created and submitted their own “nation” deemed “Ecoterra,” which served as a symbolic educational tool to encourage festival attendees to imagine a land that was an environmental utopia. An “Ecoterra” table within sustainability information was organized, with displays, handout, and even a flag and poster explaining what life would be like in such a land. Festival attendees were filmed, and asked to give their input on how we could make sustainable development progress at our University, and their responses were later combined into a film that was displayed at future SCI events.

Participants: SCI students, CEU student body, faculty, and administration

### **Incorporation of SCI related work into classroom assignments.**

Throughout the year we found it very successful and rewarding to attempt to incorporate some of our SCI related research and work with our classroom assignments within the Env Science Department curriculum. This was often accomplished by contacting professors before the course began, or very early in the course just to see if it was possible to adjust or accommodate suggested projects into an already established plan of topics.

In instances where we could mesh in class/and SCI research together, we found the very hands on projects to be very rewarding as we were able to put to practice in a real world setting the skills and knowledge being presented to us in class. We have made it clear to the professors that cooperated with us that we enjoyed these type of projects very much, and hope they expand options to create such assignments, and have more student input in course requirements in the future.

Participants: SCI/Env Science Students and Faculty





### Summary of Courses which presented this option:

#### *- Environmental Communication Strategies*

Course taught by Tamara Steger. We were able to develop communication strategies to educate our campus community regarding sustainable practices and habits. We used mixed media sources including video, posters, new websites, and social media. The results of these efforts included a new SCI website and logos, the “Sustainable is Sexy” Educational advertisement campaign, the interactive “Sustain-a-map” green business database, and student made mini documentaries featuring students interviewing students and faculty which were later shown during the Earth Day program.

Student Website: [www.sustainableceu.org](http://www.sustainableceu.org)

SCI Facebook Website: <http://www.facebook.com/#!/sustainable.ceu>

#### *- Environmental Assessment and Planning/ and Sustainable Development.*

EAP Course taught by Aleh Cherp, Sustainable Development taught by Laszlo Pinter. The final report for each course allowed students to focus their efforts on topics directly related to the University. A few students decided to complete a full energy assessment of the campus facilities, and were able to use aspects learned in both courses while completing this task. The document was comprehensive enough to qualify as a final assignment within the context of both courses. The assignment concluded with not only a document, but a presentation by the group members to those interested in the topic. This report can be found in the compilation of SCI materials from last school year.

### **Earth Day Awareness Celebration and Launch of CEU’s Pilot Recycling Program.**

This was a culminating event after a year’s worth of environmental outreach and activism on campus. Event included educational activities, free local organic food, participation by faculty and administration, student presentations, and the unveiling of CEU’s first recycling bins and much more. It should be noted that the inception of CEU’s first recycling program took substantial effort that involved many contributions from students, faculty, staff, and administration officials. We hope to expand this pilot program in the future, but in the mean time its continuing success will need to be capitalized on to encourage the investment in expanding the service. The CEU community was also very receptive to the cloth grocery bags,



“Sustainable CEU” t-shirts, and that we had made in honor of this event. A full description of the event can be found at:

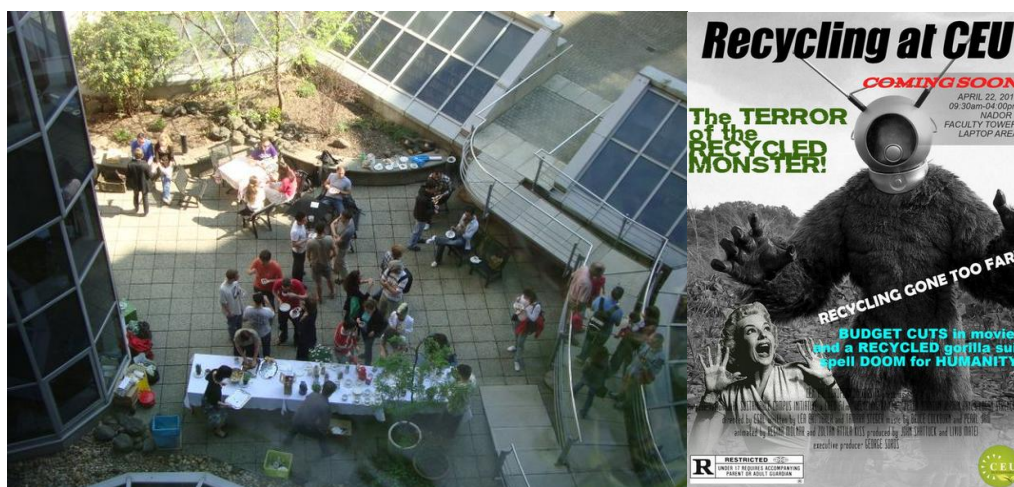
Summary Story:

<http://www.ceu.hu/news/2011-05-02/earth-day-celebration-at-ceu>

<http://www.ceu.hu/video/2011-05-05/ceus-largest-ever-earth-day-celebration>

[http://www.courseforsustainability.org/see-visegrad/news.php?id\\_news=549](http://www.courseforsustainability.org/see-visegrad/news.php?id_news=549)

Participants: Entire CEU community, SCI Students, Env. Science Department, Local NGOs, Cooperating Faculty and Administration



### Japanese Garden Renovation.

Fundraising, Planning, Advertising, and Action: The Japanese Garden is a space on campus that held great potential but was rather neglected in recent years. We decided to approach this problem as a task for the SCI to solve, and with great effort were about to secure a small grant (500 USD) from Youth Service America from the United States. We took the initiative to bring our ideas to the Campus Redevelopment Office (CREO) officials to let them know that we did not forget this space, and that we wanted to do something hands on to fix it.

Over the next few months we worked in unison with CREO to develop a renovation plan for the space, using the grant we acquired and further University funds to support the endeavor. We wanted to have as much input on the plans for the project as possible, encouraging that sustainability be kept in mind (i.e. local plant species, addition of rainwater collectors, possibility to extend gardens and grow herbs, etc.) We advertised the project with a free organic and fair trade breakfast event in the space that was open to the whole CEU campus

community, and attendance was high. We also used the breakfast to advertise the day of work that would take place the following week.

The eventual day of work was also a great success, as students, faculty, staff and community members combined to accomplish all of the work in only half of a day. The final plans did not include all of the aspects of sustainability in which we hoped for, but the symbolic effect of working together for student driven change on campus was something that resonated throughout the university. The garden as it exists today is a much more lively space than before, and the potential it still holds is great.

Participants: SCI students, CEU Faculty and Staff, CREO Department, CEU Administration, Kristen Faurest (Gardener), Disney Youth Service Grant Officials



### **Awarding of 2010-2011 CEU Student Engagement Prize.**

Our year's efforts were acknowledged by the CEU 20th Anniversary Committee in the form of being awarded the Student Engagement Prize. We also were awarded a €2000 fund which could be donated to a cause of our choice, and we decided to reinvest this in the next generation of SCI students, and also back into CEU by making the first donation to a long term

sustainability endowment fund which will hopefully be supported in the same fashion as the other endowment funds at CEU.

Participants: SCI students, 20th Anniversary Committee, Collaborating Administration, Development Office

Web Summary: <http://www.ceu.hu/node/22778>

### 3. OPPORTUNITIES AND SUGGESTIONS

#### **Programming and Awareness Events:**

- Continue fun and interactive outreach events on specially chosen dates
- Create Environmental Speaking Series, or interactive talks, either student/faculty driven, or in cooperation with interested departments; possibly encourage the development of Green Forums, Sustainability in Higher Education Forums, or Forums and speaking events focusing on environmental and sustainable development topics
- Brainstorm creative fund raising events that both encourage people to donate to the sustainability fund while leaving them with something, and teaching them about SD or environmental topics along the way (Contacts: Fundraising and Development Departments, Brian Porter, Alumni and Career Services)

#### **CEU Development Participation**

- Maintain close connection and communication with CREO, take active part in campus expansion and redevelopment planning
- Continue to encourage professors to incorporate hands on, university and Budapest related projects into coursework, encourage and explore the possibility of cross-disciplinary collaboration
- Work to encourage the University to expand faculty recognition of the importance of SD, encourage the University to hold an “educate the educators” session (Contacts: Don Huising)
- Encourage the University to incorporate a sustainability officer into its full time staff
- Maintain close relationship with CEU Sustainability Advisory Committee, participate in meetings and delegation



-Ensure that the Sustainability Fund is established, work in unison with Development Department and independently as the SCI to raise funds

### **SCI Agenda and Expansion**

- Encourage more students from outside of the Environmental Science Department to participate within the SCI (contacts: Jens Trummer)
- Write columns for the CEU Newspaper, advertise, advocate, and act using this new media method; work in the CEU media lab to produce videos for the SCI website (Newspaper contact: Rodrigo Avila Barreiro, Media Lab: Stephen Fee, Blog contact: Amy Brouillette)
- Continue to develop the SCI website and explore the possibilities of social media when advertising events, and linking with students from CEU and other universities; Maintain and update the SustainAmap database (Contacts: SustainAmap help: Victor Lagutov, Guy Hydrick)
- Collaborate more with local NGOs and Green Businesses when planning projects, invite professional in the field of sustainable development to come to CEU (Contacts: All NGOs and Businesses listed, seek help from alumni)
- Develop closer relationships with other universities in Budapest, and in Hungary. Examine the possibility of created a university network, driven by students at each place which can sponsor events and forums together (Contacts: All universities in HU contacts)
- Attempt to initiate a “student pledge” that makes it possible for a portion of student tuition to go towards the sustainability fund, or other green investments on campus (Contacts: Development Department, Student Union)
- Hold environmentally oriented conferences at CEU, green movie series, or speaker series (by guest speakers, or by students) (Contacts: CSAC, Env SCI Faculty, students from other HU Universities)
- Take greater advantage of establishing connection with alumni while still a student, seek expert help, assistance, and guidance while planning and carrying out projects (Contacts: Maryna and Boriana from the Alumni and Career Services Office)
- Keep paying attention to neglected spaces in the University, and imagine how to make them greener or more sustainable, then do what you can with your ideas (Contacts: CSAC, CREO)
- take steps to ensure the success of the University Bike share program (Contacts: CREO, Zoltan Kiss)



## 4. FUNDING

### Resources for Student Groups

This is a general description of on campus resources available for Student Groups. Further descriptions, application forms and relevant information can be found within the SCI Handbook Files

#### *a. Student Activity Fund:*

The Student Activity Fund has been created to support students' activities. Therefore, if you want to organize events for which you need some financial support you should check out the rules of the Student Activity Fund and apply.

Contact: Janka Jozsef [Jozsefj@ceu.hu](mailto:Jozsefj@ceu.hu) (Student Life Office)

#### *b. CEU, Departments, and Research Centers:*

Many events organized by CEU Students are attracting the support of the CEU, CEU Departments and Research Centers. Most of the CEU units have a certain budget for activities, and if your idea is relevant you may be able to convince the respective unit to support the project financially.

Contact: Departmental Coordinators

#### *c. Student Union's Budget:*

The Student Union has as a specific budget line for supporting student groups' activities. The projects will be selected on a rolling bases, and need to be submitted through the SU standardized funding application form.

Contact: [studentunion@ceu.hu](mailto:studentunion@ceu.hu)

#### *d. Sustainable Campus Initiative Mini Grant Fund:*





The group of Sustainable Campus Initiative students from the 2010-2011 academic year were awarded the Student Engagement Prize by the 20th anniversary committee. This award came with a small grant that could be used to support a cause of the awardees' choice, and the SCI chose to set aside a portion of this for the next generation of SCI students. Students interested in applying for these funds must complete a project application and submit it to the CEU Sustainable Advisory Committee, who review the submission in combination with year two SCI members.

Contact: Tamara Steger

#### *e. Small Independent Grant Opportunities*

Numerous small grants are available online to support events that engage young people, and that also encourage community participation. It is suggested to always complete an online search for grants related to your specific project. A few suggested independent grant opportunities can be found in the CEU Sustainability Funding database.

Contact: Tamara Steger

#### *f. Material Resources:*

The Student Union Office is adequately equipped for supporting the work of student clubs. There are several computers and other necessary resources which are useful for running a club. The student clubs receive, upon registration, a CEU e-mail account and a space on the CEU webpage. In case of other specific material needs the Student Services Department should be contacted. HRSI has also been willing to contribute basic office supplies and printing services in the past.



## 6. CONTACT LIST

### SCI Student Members 2010-2012

Listed Below is the contact information of a few of last year's SCI Members who you can feel free to contact at any point with questions regarding, CEU, the MESPOM program, and anything else you may need.

<b>Sara Czunyi, Tanzania</b>	s.czunyi@gmail.com
<b>Linda Horvath, Hungary</b>	horvathlinda@gmail.com
<b>Logan Strenchock, USA</b>	logan.strenchock@mespom.eu
<b>Peter Kiryushin, Russia</b>	pkiryushin@gmail.com
<b>Carlos "Mauricio" Lopez Gomez, Mexico</b>	mauricio.lopezg@gmail.com
<b>Tom Figel, USA</b>	tomfigel@gmail.com
<b>Lea Baumbach, Germany</b>	leabaumbach@gmx.com
<b>Guy Hydrick, USA</b>	hydrickg@gmail.com

\*There were many active more active members of the SCI, these are just a few of those who lent helping hands



## **CEU Department of Environmental Sciences and Policy**

**Tamara Steger** - Professor in Env Science Department, CSAC Member, your go to for all SCI, administration, Budapest sustainability info

[stegert@ceu.hu](mailto:stegert@ceu.hu)

**Aleh Cherp** - Professor in Env Science Department, Aleh has a lot of information to offer regarding sustainability within higher education both within curriculum and practice, and also environmental management in industry, and other SD related topics.

[Aleh.cherp@mespom.eu](mailto:Aleh.cherp@mespom.eu)

**Brandon Anthony** - Professor Env Science Department; willing to offer help and advice regarding SCI related projects

[AnthonyB@ceu.hu](mailto:AnthonyB@ceu.hu)

**Brendan Duprey** - PhD student, Regional Environmental Center Employee, participated and contributed in many SCI events and meetings last year, expressed interest in continuing next year

[Duprey\\_Brendan@ceu-budapest.edu](mailto:Duprey_Brendan@ceu-budapest.edu)

**Guntra Aistara** - Professor Env Science Department, great for advice and help with SCI projects

[AistaraG@ceu.hu](mailto:AistaraG@ceu.hu)

**Victor Lagutov** - Professor within Env Science Department, great knowledge of Geographical Information Systems (GIS), Data Collection, Satellite Imagery etc. but also can help with any "IT" related computer and software programs and issues

[Lagutov@ceu.hu](mailto:Lagutov@ceu.hu)

**Laszlo Pinter** - Professor in Env Science Department, teaches Sustainable Development class, much previous experience working with sustainable development and sustainable development indicators. Works in unison with the International Institute of Sustainable Development in Canada, and many other international organizations conducting sustainability research.

[lpinter@iisd.ca](mailto:lpinter@iisd.ca)



## **CSAC (CEU Sustainability Advisory Committee)**

Website: <http://www.ceu.hu/about/organization/governance/committees/sustainability-advisory-committee>

The CEU Sustainability Advisory Committee (CSAC) advises on strategy and actions towards the achievement of the CEU Sustainable Development Policy and fulfilment of CEU's commitments as a signatory to the University Charter for Sustainable Development (COPERNICUS). More broadly, CSAC seeks to contribute further to the fulfillment of CEU's university mandate under Agenda 21 (UN Programme of Action from Rio, Earth Summit, 1992), UNESCO Decade of Education for Sustainable Development, and the Millennium Development Goals. The CSAC Declaration designates specific commitment to improving CEU's performance in sustainability in education and research, management, operations, and outreach and information exchange

Email Address: [Sustainability@ceu.hu](mailto:Sustainability@ceu.hu)

### **Committee Members:**

Tamara Steger - Chair

Laszlo Pinter - Professor Environmental Science Department

Zsuzanna Gabor - Director Academic Cooperation and Research Office

Marie-Pierre Granger - Public Policy Professor

John Harbord - Director of Center of Academic Writing

Peter Hardi - Director of the Center of Business and Society, CEU Business School

Zoltan Kiss - Facilities Management

Zofia Pazitna - CREO Officer

Peter Komlos - Open Society Institute Employee (OSI)

Lea Baumbach (2010-2011 student representative)

Logan Strenchock (2010-2011 student representative)

Consult CSAC Web Link for further info

## **CREO**

Campus Redevelopment Office: Integral Collaborators for many of the past SCI events, in charge of managing the redevelopment decisions taking place at CEU, main contacts for obtaining many important documents, blue prints, building data that was very helpful in SCI activities and research. Also if there is an SCI project/suggestion/event/renovation plan, you will need to plan, collaborate and cooperate with CREO, and establish communication with



both Zofia and Stuart. You can set up meetings with Stuart by contact Zofia, who also has a wealth of important information.

Contact information:

**Stuart Durrant**

[DurrantS@ceubusiness.org](mailto:DurrantS@ceubusiness.org)

**Zsofia Pazitna**

[pazitnaz@ceu.hu](mailto:pazitnaz@ceu.hu)

**Leda Barta**

[BartaL@ceu.hu](mailto:BartaL@ceu.hu)

## **Administration**

**Peter Johnson** - Vice President of Student Services

Peter was very enthusiastic and helpful when asked to participate in SCI activities. He should be consulted when knowledge is needed regarding matters that affect student life, student services, programs for new and current students, etc.

Email: [JohnsonP@ceu.hu](mailto:JohnsonP@ceu.hu)

## **Human Rights Initiative (HRSI)**

**Alex Krasznay** - Coordinator of the Human Rights Initiative (HRSI), HRSI is a CEU human rights organization that focuses on student and youth involvement and educational programs. HRSI supported and collaborated with SCI for many of our events held in the past year, and they can offer great advice when developing programming. Also, that can help with simple printing tasks and have office materials which can be used to create advertistements, etc. for SCI events.

HRSI website: <http://hrsi.ceu.hu/>

Coordinator Contact: [KrasznayA@ceu.hu](mailto:KrasznayA@ceu.hu)

**Emily Ferrel** - Former HRSI coordinator for the 2010-2011 academic year. Emily was always extremely cooperative and enthusiastic; she really helped us with organization, and finding materials that were necessary to carry out events. She remains a contact with plenty of valuable information.



Email Address: [emilybferrell@gmail.com](mailto:emilybferrell@gmail.com)

### **Alumni Relations/Career Services Contacts:**

**Maryna Yaroshchuk** - Alumni Program Coordinator, Alumni and Career Services Office

Email: [YaroshchukM@ceu.hu](mailto:YaroshchukM@ceu.hu)

**Boriana Alexandrova** - Alumni Communications Coordinator, Alumni & Career Services

Email: [AlexandrovaB@ceu.hu](mailto:AlexandrovaB@ceu.hu)

Both Maryna and Boriana have expressed interest in linking current students with Alumni in fields that are interesting and relevant to individual students. They can link you with Alumni that you may wish to invite to events, forums, talks or presentations, or if you seek professional expertise during an assignment or project, you may wish to find CEU Alumni in helpful positions, and to start this process, contact Maryna or Boriana

### **Development Office and Fundraising Contact:**

**Brian Porter** - Director of Development,

Email: [porterb@ceu.hu](mailto:porterb@ceu.hu)

Brian was very enthusiastic when we approached him with the idea of establishing CEU's first ever long term sustainability fund at CEU. This fund is in the process of being developed right now, but will take administration, faculty, and student cooperation to reach the goals envisioned during its inception. You can contact Brian for fundraising ideas, and also to participate in the fundraising events held by the University.

### **Staff**

**Zoltan Kiss** - Facilities Manager, Building Maintenance Manager for CEU, Zoltan is in charge of most of the building operations here at CEU, and is a very valuable source of information regarding energy usage, waste management, water usage, and matters relating to CEU's procurement processes and environmental footprint. He is also a member of CSAC and has expressed interest in working with the next generation of SCI.

Email: [KissZ@ceu.hu](mailto:KissZ@ceu.hu)



**Regina Molnar** - Regina is our contact for the Waste Management procedures that occur at CEU. Questions regarding cleaning materials, waste collected, recycling practices, etc. should be directed to Regina.

Email: [Molnarr@ceu.hu](mailto:Molnarr@ceu.hu)

## Faculty

**Donald Huising** - Visiting Lecturer and Professor in the Env. Sciences Department, very knowledgeable Sustainable Development “guru.” Has many years experience in the field of sustainable development research within institutes of higher education. He is also an editor for the Journal of Cleaner Production. If you email him ahead of time, he will most likely be willing to conduct a Skype conference with you, where you can ask him questions.

Email: [dhuisingh@utk.edu](mailto:dhuisingh@utk.edu)

**Stephen Fee** - He is in charge of the media center at CEU. He offers introductory movie making classes for students, and also filmed many our events and edited them to make some great youtube ready video clips that were added to the CEU website. If you would like an SCI event to be filmed next year, he is the person you need to get in touch with.

Email: [FeeS@ceu.hu](mailto:FeeS@ceu.hu)

## Student Union

To apply for Funding at the Student Union Website:

<https://studentunion.ceu.hu/get-funding>

New Student Union members will be selected at the beginning of each school year. It is very helpful to become familiar with union member’s and learn a lot about their voting processes regarding student driven initiatives, and also how they distribute funds to support student initiatives. It would be very useful to have a member of the next generation of the SCI attempt to join the 2011-2012 student union.

## Other



**Jens Trummer** - Former Employee/Lecturer at the CEU Business School, has many contacts with Environmental NGOs/Businesses in Budapest, and actions at other Hungarian Universities knows a great deal about CEU administrative process, very willing to work with SCI students on all endeavors.

[jenstrummer@hotmail.com](mailto:jenstrummer@hotmail.com)

**Rodrigo Avila Barreiro** - Editor of CEU Newspaper, Interested in featuring stories about SCI/Sustainability pursuits at CEU, and also will publicize SCI events

[Avila-BarreiroR@ceu.hu](mailto:Avila-BarreiroR@ceu.hu)

### **NGOs/Businesses/Companies**

**Agnes Repka** - Budapest Resident, Vegan/Raw/Organic Food Chef, Specialty Chef who organizes various local food events in Budapest. Great source of information regarding local food projects, NGOs, and organization, vegan/raw food, and also a willing collaborator in SCI related programs and events

[repakonyha@gmail.com](mailto:repakonyha@gmail.com)

**Treehugger Dan** - American expat and local environmental activist/businessman Dan Schwarz runs the chain of “Treehugger Dan’s” used bookstores and fair trade/organic coffee, tea and chocolate cafes in Budapest. He attended most of our events and served coffee on a donation basis. He is very experienced regarding environmental NGOs in Hungary, and you can also email him with questions concerning the in’s and out’s of Budapest.

Email Contact: [info@treehugger.hu](mailto:info@treehugger.hu)

Website: <http://www.treehugger.hu/>

**Messzelato Environmental NGO Budapest** - Environmental NGO from Budapest, features alot of great programming and fun educational workshops that aim to get communities interested in environmental issues. They attended a few of our events and often had a “make and take” type action where people could walk by, make something really fun and unique from reclaimed/recycled materials, and then take it home with them.

Website: <http://www.messzelato.hu/en>



Email Contacts: [egyesulet@messzelato.hu](mailto:egyesulet@messzelato.hu)

Individual Contact: Kati Schnierer, EVS coordinator: [Kati@messzelato.hu](mailto:Kati@messzelato.hu)

**Humusz** - Budapest NGO that focuses on natural resource use and sustainable production and consumption. They do outreach programming that focuses a lot on recycling, composting, and waste avoidance.

Website: <http://www.humusz.hu/>

Email Contact: [humusz@humusz.hu](mailto:humusz@humusz.hu)

**Critical Mass Budapest** - Global organization that focuses on the spread of alternative transportation options, especially rights and safety of bikers and pedestrians. They participated in our events last year, and our students participated in their biking demonstrations, or “Critical Mass” rides in Budapest.

[www.criticalmass.hu/english](http://www.criticalmass.hu/english)

Email Contact: See Tamara Steger for most recent contact info

**Folprint Green Printing Business** - We just found out about this service towards the end of last year so did not visit this business directly, but the company offers green printing services at competitive costs, and this option can be explored if you wish to print flyers, posters, or handout for any events.

Website: <http://www.folprint.hu/> Email Contact: [Fodor.Janos@folprint.hu](mailto:Fodor.Janos@folprint.hu)

**Ecowizer** - Budapest based consultant company that does efficiency audits for organizations and offers advice to help each company/business/location reduce their environmental footprint while improving efficiency.

Website: <http://www.ecowizer.com/> Email Contact: Eyal Zucker: [eyal@ecowizer.com](mailto:eyal@ecowizer.com)

**Kovet** - Hungarian based organization co funded by the EU’s Leonardo da Vinci project that offers faculty training and assistance in offices settings for companies looking make transformations towards operating more efficiently and sustainably.





Website: <http://www.kovet.hu/view/main/108.html>

Kovet “Green Office” Program: <http://www.uj.zoldiroda.hu/>

Lontayné Gulyás Mónika (gulyas@kovet.hu) and Bodroghelyi Csaba (bodroghelyi@kovet.hu)

**EnergiaKlub** - Hungarian based applied communications and climate policy institute that has spent the past 20 years raising the level of environmental awareness in Hungary. Their programming would be great to feature during events held at CEU, and their communication strategies would be very relevant to our work. They offer supplementary education materials that can be used to teach individuals of all ages and knowledge levels about complex environmental topics, especially climate change and energy consumption.

Group Website: <http://energiaklub.hu/en>

Individual Contact: Gyula Toth [tothgyulagabor@gmail.com](mailto:tothgyulagabor@gmail.com)

**Skanska** - Skanska is a property developer in Hungary and their most recent project is a LEED Platinum pre-certified office building in Lehel Ter, very close to Nyugati Railway station in Budapest.

Green House Project Website: <http://skanska.hu/en/Projects/Display-project1/?pid=1254&lang=en-us>

Skanska Home Page: <http://skanska.hu/en/>

Contact Information: Communication and Marketing Specialist, Ildiko Rezmuves [ildiko.rezmuves@skanska.se](mailto:ildiko.rezmuves@skanska.se)

\*\*\*ALSO Make sure to visit locations on the Budapest SustainAmap [http://www.sustainableceu.org/sustainamap\\_budapest.html](http://www.sustainableceu.org/sustainamap_budapest.html) \*\*\*\*

## Universities in Hungary



### *Climate Office at Godollo University*

The Climate Office was opened in March 2009, at Szent István University (SZIE) in collaboration of the British Council Climate Advocates, and the University, supported by the Climate Council of the SZIE. This is the pilot office of the Climate Office Network in Hungary. The office mission statement is to disseminate information about climate change within Hungary.

Website: [http://www.klimairoda.hu/content/klimairoda\\_english.html](http://www.klimairoda.hu/content/klimairoda_english.html)

Email Contact: info@klimairoda.hu , Akos Lukacs [lukacs.akos@gtk.szie.hu](mailto:lukacs.akos@gtk.szie.hu)

### *University of Szeged “Green Commando/Zold Kommando” Student Group*

The University of Szeged in southern Hungary has a student activist group called the Green Commando that is trying to turn their campus into a more pleasant and eco friendly place. It would be a good idea to establish University to University networks in Hungary, and collaborations with the Green Commando may be very successful. The University of Szeged has a “green” convention center, the first of its kind in Hungary. They hope to attract clients who would like to hold certified “Green Conference” events using their facilities. They are active in pursuing Corporate Social Responsibility within a university setting.

This contact has said the University is interested in hosting SCI students from CEU during a Szeged University visit at any time. You have the possibility to go visit the Green Conference Center and link with their student group.

Contact Information: Gyarmati Laszlo [gyarmati.laszlo@tik.u-szeged.hu](mailto:gyarmati.laszlo@tik.u-szeged.hu)

Facebook Website: <http://www.facebook.com/#!/SZTETIK>

Green Conference/Congress Center: <http://www.u-szeged.hu/congresscenter>

### *TITOK Klub (Enthusiastic Students for Protection of Environment and Community)*

Inter-University Student Sustainability Group

Website: <http://kornyklub.iand.info/>

Contact: Istvan Nyogeri [istvanny@gmail.com](mailto:istvanny@gmail.com)



### *Corvinus University*

This contact, Beata, is a Corvinus University student who attended and participated in a few of our events last year. She has expressed interest in collaborating with CEU students to arrange conferences that would take place at either of our Universities. She will be outside of Hungary for the next few months, but is very willing to link you with the student movement at Corvinus.

Contact Person: Beata Orysolya

Email: [imre.beata.orsolya@gmail.com](mailto:imre.beata.orsolya@gmail.com)

### *ELTE University*

ELTE University in Budapest has an active student group lead by Viktoria Mudra. She is very interested in collaborating with CEU students, and others from universities in Hungary.

Contact: Viktoria Mudra

Email: [mudrav@vezer.elte.hu](mailto:mudrav@vezer.elte.hu)

**CEU SUSTAINABLE! 😊**

