

ISO Report 2007

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Internet: <http://www.unu.edu/ISO14001>

1 Introduction

The Mission of UNU is to contribute, through research and capacity building, to efforts to resolve the pressing global problems that are the concern of the United Nations, its Peoples and Member States.

Among the UNU-wide network of UNU-Centre and 13 research and training centres and programmes, UNU-Centre in Tokyo and Institute for Advanced Studies (IAS) in Yokohama have been accredited with ISO 14001 since 2001.

Initiatives commenced in 1999 to prepare for establishing UNU's environmental management systems and documenting all required information and procedures. In order to promote increased environmental awareness within the UNU, the University established an environmental policy under the banner "Going for Green", as presented in the right column.

The following report presents the findings of the review of the UNU's environmental performance until 2007. Other information are available on the UNU's ISO14001 website (<http://www.unu.edu/ISO14001>).

UNU Environmental Policy

The United Nations University is committed to the ideals and practices of environmental sustainability and has established four goals for the continual improvement of the University's environmental performance and for the prevention of pollution. We consider that these goals are appropriate to the nature, scale and environmental impacts of the University.

1. Greening Our Work Practices

Comply with all applicable environmental laws and regulations, and with other requirements to which the UNU subscribes; Include environmental considerations in the University's procurement practices; Reuse, reduce and recycle materials and goods purchased; and Save energy and reduce water consumption.

2. Greening Our Work Place

Improve the quality of the working environment within the UNU buildings in Tokyo (internal air quality, drinking water quality, waste, lighting, health and safety, etc.)

3. Contribute to the Global Community

Engage in research, networking, knowledge transfer and capacity building projects contributing to environmental sustainability

4. Contribute to the Local Community

Participate as a responsible neighbour in local initiatives to improve the quality of the environment
Organize events (such as World Environment Day) to raise local awareness of environmental problems

Management and personnel of the UNU are expected to understand how their actions impact on the environment and to take measures to improve both environmental performance and quality so as to minimize the direct and indirect negative impacts of our activities, where ever possible. We will also highlight the positive contribution made by the University to the solution of pressing environmental problems around the world.

The goals set out in this policy statement will be implemented through a comprehensive plan containing objectives and measurable targets and with monitoring, review, self-assessment and analysis of performance against the plan. We will also take corrective action, whenever appropriate, and encourage all personnel to participate in an open dialogue on how best to improve the environmental performance and environmental management system of the University.

2 Environmental Performance

The following provides a summary of the environmental performance of the direct and indirect aspects at the UNU-Centre. Due to the limited data collection schemes, utilities data are of the entire UN House building that also houses other UN agencies as tenants. Data on direct impacts is unavailable for UNU-IAS because of the leasing constraints in the new office facilities in Yokohama.

Over the last few years, there have also been significant changes in the number of employees in the UNU Centre and UNU-IAS and an increase in events at the UNU Centre such as conferences, workshops, seminars, and public lectures that have disseminated UNU's achievements and messages.

2.1 Utilities at the UNU-Centre building

Table 1 and Figure 1 provide a summary of the annual consumption of electricity, gas and water between 1998 and 2007 from the UNU-Centre building. Utilities consumed by all UN tenants are included in the data shown here. In general utilities consumption, over the last biennium 2006-2007 compared to 2004-2005, has reduced for electricity consumption (-5.5%) and significantly decreased for gas consumption (-21.1%), but drastically increased for water consumption (+151%). This sharp increase of water consumption seems to be attributable to increased number of events and heat pumps malfunctioning. The building management contractor ensured no water leak caused this increase. It seems that a lack of precipitation cannot be blamed either, as the precipitation in 2002 was lower than that in 2007 but the consumption in 2007 is 4 times higher than that in 2002 (Figure 2). Although a series of unlucky combinations of precipitation following high water consumption demands by the increased number of event participants could contribute to such high water consumption to some extent, other potential causes still need to be investigated.

Table1. Annual Utilities Consumption at UNU Centre

Year	Electricity <i>kwh</i>	Gas <i>m³</i>	Water <i>m³</i>
1998	1,944,600	138,467	6,423
1999	2,052,144	126,062	8,546
2000	1,908,300	124,634	6,128
2001	1,944,072	129,523	6,685
2002	2,077,995	106,911	6,564
2003	2,103,176	131,582	6,693
2004	2,260,375	183,766	10,290
2005	2,231,703	182,472	8,561
2006	2,149,176	146,178	15,980
2007	2,095,272	142,782	31,411
2006-07 biennium compare d to 2004-05	-5.5%	-21.1%	>+151%

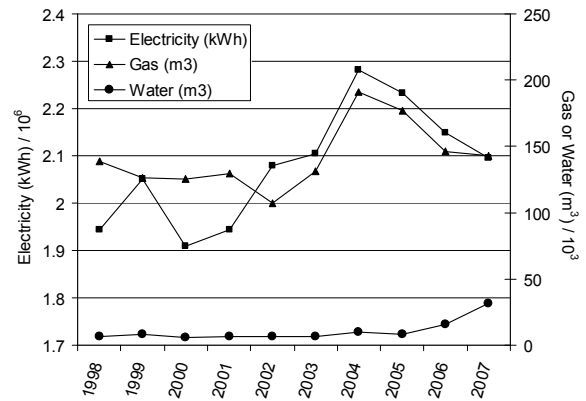


Figure 1. Utility consumption at UNU-Centre

Figure 1 shows the utilities consumption relative to 1998 levels when the UNU first undertook the ISO14001 initiative. Electricity and gas have come down with their peaks in 2004. The number of tenants in the building is expected to increase in these coming months, and the utility consumption needs to be carefully monitored. The conversion to the CO2 emission from these utility consumptions will be discussed in the later section. The utility charges for electricity, gas, and water in 2007 were 35, 10, and 12 million Japanese yen.

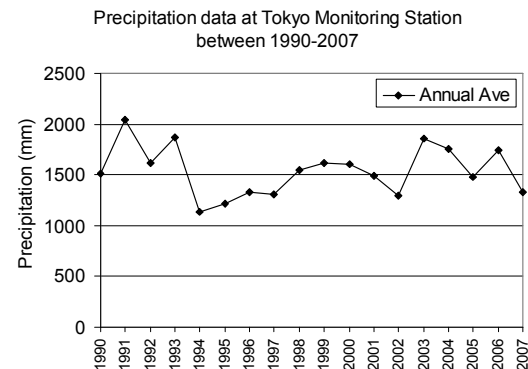


Figure 2. Precipitation data at Tokyo weather monitoring station between 1990-2007.

2.2 Copy paper consumption at UNU-Centre (not including Kuala Lumpur but Tokyo only)

In Japan, the year of 2008 started with very discouraging news that most paper manufacturing companies including five major and others falsified the ratio of used paper in their recycled paper products. It has been confirmed by the copy paper supplier, however, that recycled copy paper used at the UNU-Centre is 100% recycled paper. Figure 3 shows the copy paper consumption at the UNU-Centre in Tokyo. These data do not include papers consumed by UNU-Press, Office of Communication, and other units for brochure and publication purposes. Although the total number of copy paper sheets has reduced in 2006, it came back over 1,400,000, while the virgin copy paper has been reduced down to less than 30% of the total copy paper consumption.

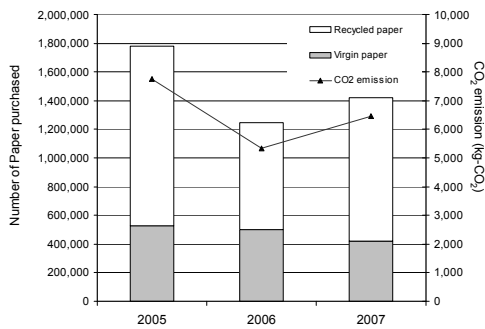


Figure 3. Copy paper consumption at UNU-Centre

A specific unit CO2 emission could vary depending on recycled paper ratio and its process. In this first attempt to convert UNU activities to CO2 emission, a unit CO2 emission of 1.05 kg-CO2/kg is used as reference adopted from available Life Cycle Assessment data provided by the Japan's Ministry of Environment. The unit emission selection needs to be updated whenever possible in the future taking into consideration more accurate information derived from actual recycled paper ratio of the copy paper product purchased by UNU.

2.3 Waste Disposal at the UNU-Centre building

Waste leaving the UNU-Centre building located in Tokyo must be separated into (1) organic & paper trash waste, (2) 4 recyclable paper sub-categories (copy paper, newspaper, magazines, and cardboard), and (3) industrial wastes (glass bottles, cans, and plastic waste). The first and second categories are charged based on the disposed weights (kg) and the last category is charged based on the volume (m³). Each UN agency in the UNU-Centre building is responsible for such waste disposal charges, and the data shown in this section are of the entire building.

Figure 4 shows organic and paper trash waste data in weight and charges. Due to the nature of work offices paper-trash is one of the dominant wastes from the building.

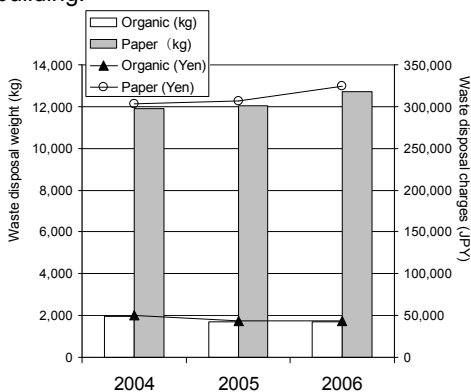


Figure 4. Annual Organic and Paper Trash Disposal from the UNU Centre Building

Figure 5 describes the breakdown of recyclable paper weights and charges. The most dominant category is magazines which include brochures and publications.

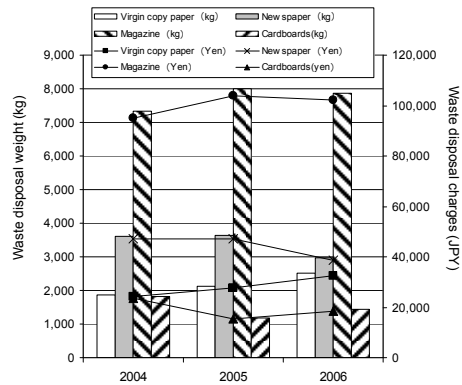


Figure 5. Annual Recyclable Paper Waste Disposal from the UNU Centre Building

Figure 6 shows the industrial waste disposal volumes and charges. This category includes bottles, cans, and plastic waste (such as packages). The major industrial waste is plastic waste which includes disposal containers and packages for food and drinks.

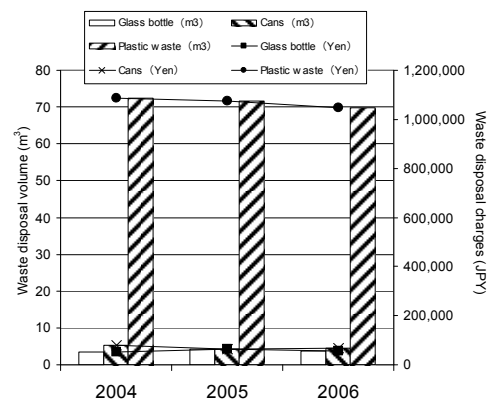


Figure 6. Annual Industrial Waste Disposal from the UNU-Centre building

2.4 Environment related Research and Capacity Building & Outreach to the Local Community

The UNU undertakes research on pressing global environmental problems under the UNU Centre Environment and Sustainable Development Programme (ESD). Furthermore, UNU-IAS implements a multi-thematic research programme exploring practical approaches to the attainment of ecologically sustainable development.

Table 2. Projects at UNU-Centre and IAS

	Centre-ESD	Centre-P&G	IAS
Number of projects			
2005	13	24	8
2006	12	24	9
Project expenditure (USD 000)			
2005	1385	500	1774
2006	1250	290	2645

UNU Media Studio also produced e-course modules on Environmental Impact Assessment and Strategic Environmental Assessment and e-case studies on the Ayuquila River watershed in Mexico and other areas providing two key online open educational resources to be used by key institutional partners for education in environmental and sustainable development programmes.

Table 3. Training courses and workshops at UNU-Centre and IAS

Training Course	Centre-ESD	Centre-P&G	Centre-Cap. Buil.	Centre-Online Learning	IAS
2005	18	0	9	0	2
2006	2	0	8	7	3
Workshop					
2005	9	7	1	0	3
2006	21	8	0	0	5

Further information regarding UNU Centre and UNU- IAS research and capacity building efforts relating to environment and sustainable development are in the Annual Report available at <http://www.unu.edu/publications/annualreports/index.htm>.

The Global Environment Information Centre (GEIC) — a joint initiative of UNU and Japanese Ministry of the Environment — looks at the issue of bringing up-to-date and accurate information related to environment to a wide range of stakeholders, especially non-governmental and non-profit organizations (NGOs and NPOs).

The UNU Centre also serves as a facility for public events with conference facilities including the 360 seat U Thant International Conference Hall and the 110 seat Elizabeth Rose Conference Hall. A number of these events relating to environment and sustainable development related issues. The number of major events held at these facilities have increased over the last biennium (see Figure 7). There were an outstanding number of events (528) in 2006, and that came down to 190, although the number of participants stayed as high as 38,000.

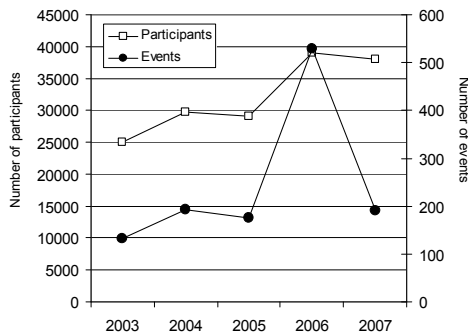


Figure 7. Number of events and total participants at UNU Centre

2.5 Travel

For the first time in the UNU's ISO activities, all travels between 2004-2007 handled by the UNU-Centre administration have been analyzed. The total distances travelled has varied between 5.2 and 6.9 million km. This distance of 6.9 million km is equal to 172 times as long as the earth circumference.

Table 4. UNU-Centre Travel Data

UNU-Center Travel	2004	2005	2006	2007
Dollar Amount	1,939,037	1,898,253	1,582,760	1,774,705
Total Countries Visited	580	557	442	430
Developed Countries	279	220	241	210
Developing Countries	299	338	202	220
Least Developed Countries	14	28	15	11
km	6,920,146	6,789,202	5,712,672	5,204,572
CO ₂ kg	807,759	783,755	661,963	609,512

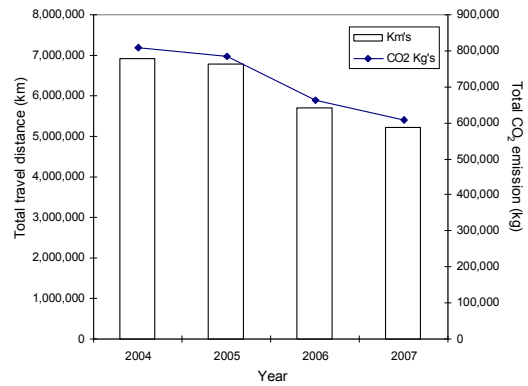


Figure 8. Distances and CO₂ emission from UNU-Centre's Travels (Novak & Okishio 2008)

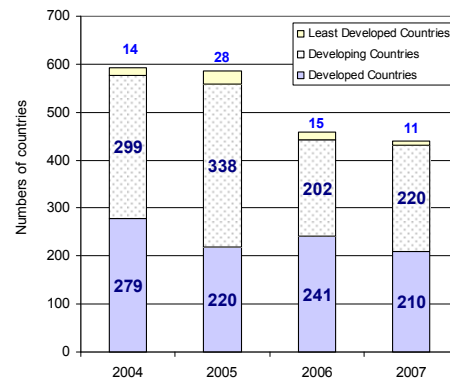


Figure 9. Numbers of visited countries by UNU-Centre Travels (Least Developed Countries, Developing Countries, and Developed Countries) (Novak & Okishio 2008)

2.6 CO₂ Emission in 2006 & 2007

The total CO₂ emission from the UNU Centre's main activities (utilities, copy paper, and travel only) in 2006 & 2007 amounted to 1,544 & 1,474 tons of CO₂. Electricity and travels dominated the emission, 844 and 610 tons, respectively, in 2007. Items that are not covered here are (1) paper consumptions by UNU-Press, Office of Communications, and other project-led activities, (2) domestic and local travels, and (3) any other product consumed and waste disposed of by units in the UNU-Centre building including food and drink packages.

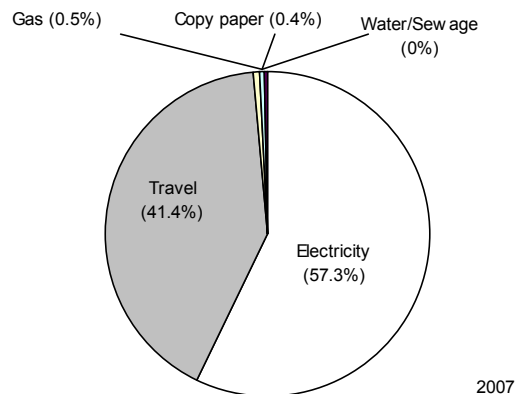


Figure 10. CO₂ emission from the UNU-Centre and UNU Centre building in 2007 (the total CO₂ emission was 1,474 tons in 2007)