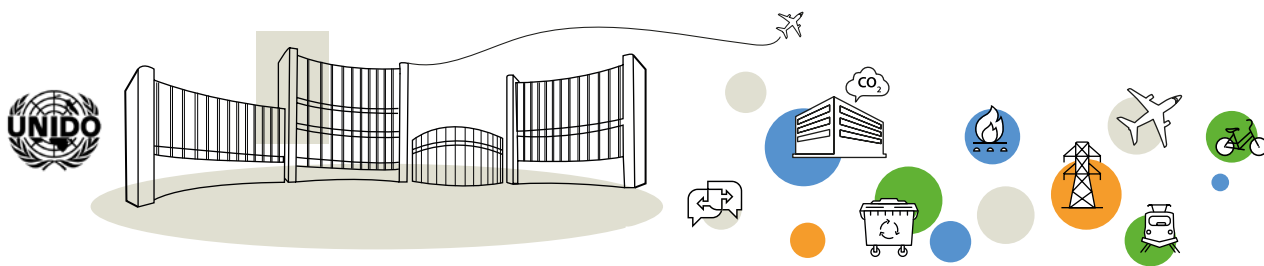


A summary of the Peer Review Report on Corporate Environment Management of UNIDO in 2014 (on the Vienna International Centre)

This summary provides a concise overview of the UNIDO Peer Review Report, containing the key findings and recommendations of the report in order to convey the lessons learned and possible areas for future collaboration by other UN agencies. For more detailed information on the report please contact the EMG Secretariat at EMG@unep.org



The Peer Review Process

The Peer Review Project began in 2012, initiated by the United Nation's Environment Management Group (EMG). The Project aims to review the corporate environmental sustainability profile and performance of international organizations who are Members of the EMG at facility management and operations level including air travel. Peer reviewing refers to one or more EMG Member reviewing fellow Members' facilities and internal operations.

The Process is undertaken by Peer Review Teams comprising technical experts, UN and international organization representatives, and local government authorities. The EMG Secretariat coordinates the process and supports the Peer Review teams. The Process relies solely on data and information which are made available by the reviewed UN entities. Achievements, challenges, good practices and lessons learned are then identified and recommendations are proposed which could be useful for the reviewed entity and to the UN system as a whole.

Facilities' Management of the Vienna International Centre (UNIDO)

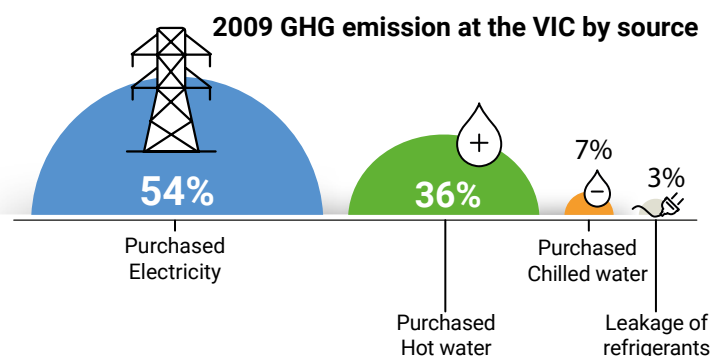
The Vienna International Centre (VIC) is arguably the largest of all UN complexes globally. The building hosts the headquarters of 5 UN entities and the offices of another 11 organisations, with an average of 8,000 occupants per day. IAEA, UNIDO and UNOV take care of the key common services in VIC. Of these, the largest is the Building Management Services (BMS) unit hosted by UNIDO, which is in charge of facility management. BMS operates a Facility Management System, linked to an extensive network of monitoring and control devices, which helps to automate and efficiently operate the various systems and elements of the VIC facility.

Since the inauguration of the VIC in 1979, a number of upgrades have been made across the building. The 1998 – 2013 project to remove asbestos from the building gave the opportunity to make changes to aspects of the building influencing energy performance, e.g. including the renovation and modernisation of elevators, the upgrading of an existing Building Automation System to control lighting, heating, cooling, humidification and ventilation, along with the improvement and replacement of lighting in garages and across the building, among other upgrades.

A Peer Review of BMS (UNIDO)

The Peer Review of BMS (UNIDO) was prepared in 2013 with the participation of The Canton of Geneva, OECD, UN Habitat, UNIDO, UN Environment, UPU, WFP and WMO, who comprised the three Peer Review teams, with support from the EMG Secretariat. BMS (UNIDO) on behalf of VIC, chose the following 4 topics to be reviewed against:

1. Greenhouse gas emissions (GHG) from facilities.
2. Facilities' waste management.
3. Facilities' water management.
4. Staff awareness, involvement and training (including local transport).



Greenhouse Gas Emissions From Facilities



Status

Greenhouse Gas inventories began at VIC in 2009. Since then, VIC's largest source of GHG emissions has been electricity, followed by hot water and chilled water, as seen in the figure below. The main emissions come from using electricity, chilled water, hot water and a negligible amount of natural gas and diesel. Electricity and hot water are purchased from the utility board, with a relatively low carbon content. Hot water is used for space heating and for sanitary purposes.

Many measures have been taken to reduce GHG emissions, as described in this report. UNIDO had also set up a "Climate Team" of five members, reporting to the Organization's Executive Board, tasked with preparing a strategy for making UNIDO climate neutral. Although UNIDO has set a clear objective to reach climate neutrality and has taken numerous emission reduction actions, a comprehensive assessment has not been carried out, and a formal action plan, or a strategy does not yet exist.

Achievements

Reduction in heat loss, elevator energy savings and improvement in lighting:

Several energy demand reduction and efficiency measures have been taken or are planned, which has resulted in better energy performance. In order to reduce heat losses, 90 % of the façade windows were upgraded to thermally insulating double-glazed windows, while for the two conference centres the façade walls are also insulated. In other areas, 85 % of elevators have been upgraded, resulting in energy savings; whilst, daylight sensors have been installed and 37% of the light bulbs have been replaced with more efficient ones. Occupancy sensors for lighting have been piloted in some rooms.

Challenges

Night-time electricity consumption and ventilation:

The peak electrical demand is 6 MW and around a third of it (2 MW) is consumed even when offices are closed, for example during night times. At the same time, fresh air ventilation rates are 2 to 3 times greater than Austrian and international standards which results in energy losses in the building.

BMS does not influence/monitor behaviour:

Within the existing coordinating structures, Building Management Services (BMS) which manages the facility, has no means to influence or monitor the behavior of occupants or their use of resources, as a result some inefficient practices exist; for example, since the central chiller plant does not operate after office hours or weekends, some staff compensate by plugging in electrical heaters, which is an inefficient way to heat space.

Recommendations

A large number of energy demand reduction and efficiency, as well as renewable energy possibilities exist at the Vienna International Centre, which include:

Install higher efficiency equipment and drives:

BMS (UNIDO) may wish to install higher efficiency equipment and drives, which may support the optimisation of existing systems and processes.

Increase energy reduction measures:

BMS (UNIDO) may wish to consider taking measures which reduce energy demand, such as: daylight and natural ventilation, taking advantage of possible changes in room temperature, relative humidity and fresh air quantities.

Improve staff behaviour and system efficiency:

BMS (UNIDO) may wish to consider reducing energy wastage from staff behaviour or various system inefficiencies, this could include reducing the night time electrical load.

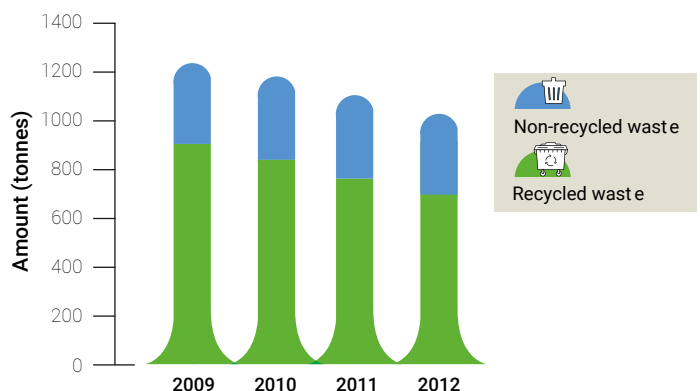
Waste Management At Facilities



Status

VIC generates and properly disposes of 26 kinds of solid, liquid, hazardous and radioactive waste. VIC has successfully developed a waste management policy that is adapted from the Austrian rules and regulations on waste disposal, and based on the standards set out by the European Union. The waste management policy and practice focusses on safe disposal, but has not yet started tackling waste reduction or avoidance in a coordinated manner. Waste management at VIC has become more efficient over the past years. While the amount of employees at VIC has increased over the past years the total amount of waste produced has reduced by 15% since 2009. The ratio of recycled vs. non-recycled waste has remained stable over these years. Below indicates the total amount of recycled and non-recycled waste produced.

Total amount of waste



Achievements

Waste management policy:

BMS (UNIDO) has successfully developed and is implementing a waste management policy. Two BMS employees have been formally trained to act as VIC waste managers, who also plan the day-to-day waste management activities.

Sustainable procurement:

BMS (UNIDO) is interested in implementing sustainable procurement at VIC in order to gain better control over waste generation.

Waste management becoming more efficient:

At the practical level, BMS is well aware of the VIC waste outputs, and has set up a sophisticated waste sorting infrastructure; and BMS implements the handling and disposal of its waste in a structured manner. It also recycles and reuses many of its goods and waste. BMS is effectively monitoring and measuring progress against the waste management policy and in fact waste management at VIC has become more efficient over the past years.

Challenges in 2014

Building Management System is lacking in areas:

Although BMS has set an internal waste management policy and implements it in a coordinated manner, it has not yet identified what are the main strategic priorities and targets for the future. BMS has a good understanding of the VIC waste outputs and has taken a lot of effort in implementing a good waste sorting infrastructure. It also recycles and reuses many of its goods and waste. Although these efforts are important, BMS does not have any control over waste generation and hence cannot systematically focus on reducing (first R in the 3R - concept) the amount of total waste produced at VIC in the first place. Furthermore, there is no single entity procuring for all the organizations in VIC.

Communication and waste awareness:

Challenges are faced in the efforts to communicate and raise awareness about waste management, particularly waste sorting, which have recently fallen short.

Recommendations

3Rs to waste management and sustainable procurement:

BMS (UNIDO) may wish to strengthen the implementation of the 3R (reduce, reuse, recycle) and "urban mining" -concepts, including by developing and implementing a green or sustainable procurement policy for VIC operations and services.

Reporting and management of e-waste:

BMS (UNIDO) may wish to improve the reporting and management of electrical and electronic waste to be fully compliant with the most recent European Union regulations, while also ensuring that the waste is legally and properly disposed of.

Reducing food waste:

UNIDO may wish to focus on reducing the amount of food waste in line with FAO's new study "FAO in its 2011 study on food waste "Global food losses and food waste" and UNEP's global Think. Eat. Save-campaign.

Monitoring waste:

BMS (UNIDO) may wish, although already present, to improve monitoring, especially on waste recycling, for example by checking recycling certificates on a regular basis to ensure traceability, and develop a leak detection programme for above ground storage tanks of liquid materials.

Waste communication:

BMS (UNIDO) may wish to communicate better internally about VIC's waste strategy and results, and externally about the location and types of waste sorting bins to ensure all clients know how to sort waste at VIC.

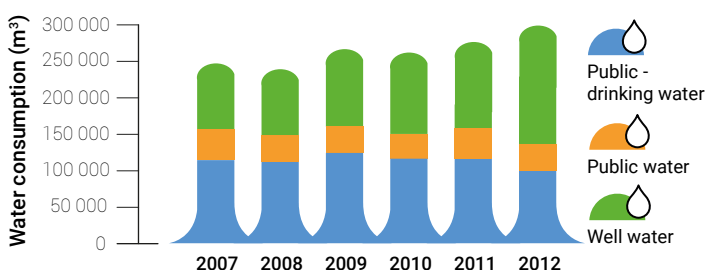
Water management at facilities



Status

The VIC uses water from the city public network, and well water since 1999. Use of public water primarily constitutes drinking water, in the kitchen and for humidification in the HVAC system. Well water is used mainly for topping up the cooling tower circuit in the central chiller plant, in rest rooms and for lawn sprinkling. Per capita annual water consumption in 2012 for personal use was estimated to be at 18 m³ – which is a high rate compared for example to the UK government target of 7.7 m³/person/year. Below indicates the total annual water consumption at VIC, by source.

Annual water consumption of the VIC



Achievements

Water efficiency, treatment and monitoring:

Throughout the VIC complex, efficient and water-saving sanitary water fittings and devices have been installed; whilst there is very good well water treatment and water quality monitoring infrastructure installed in the Utility Transfer Station within the VIC complex.

Challenges

High water consumption:

The annual per capita water consumption of 18 m³ is rather high, and could be related to wastage due to a perception by occupants that well water is free. However, in reality there is a significant cost for well water – especially associated with its treatment.

Water flow into sewage system:

While water coming into the complex is monitored, there is very little awareness of the amount which flows into the central sewage systems; which also incurs a significant cost.

Recommendations in 2014

Improving water management and outflow costs:

BMS (UNIDO) may wish to improve water management, starting with a water balancing study that could identify total inflows, outflows, leakage and wastage in VIC; whilst attention needs to be maintained on what flows out through drains and its cost, and a more detailed study to identify measures to minimise it.

Evaluate and communicate the real price of well water:

BMS (UNIDO) may wish to communicate the cost of providing potable well water. Well water is currently considered as a free resource and wastage as a result is likely. Its real price needs to be evaluated and communicated to staff. Water efficiency in water intensive equipment should be studied, especially in the cooling tower and specific measures have been proposed. By reducing the humidification requirement in the HVAC system, without sacrificing thermal comfort, both water and energy could be saved.



Staff awareness, involvement and training (including local transport)

Status

On average, VIC has around 8,000 occupants per day, of which 5,000 to 6,000 are staff members. Staff issues are managed by individual organizations, though staff have avenues for joint initiatives, especially through a proactive and progressive staff union and through the various social facilities provided within VIC. In order to raise staff awareness, the development of specific pages on the UNIDO intranet to inform staff on actions being taken and to provide them with the opportunity to suggest other ways of achieving climate neutrality, has been proposed. Across different VIC-based international organisations, electronic information systems have been introduced to handle the transmission of circulars, and administrative instructions via email and intranet.

Achievements

Increasing staff awareness:

Most of the VIC-based organizations have taken initiatives on increasing staff awareness and involvement in environmental issues. Some were in alignment with UN-wide initiatives such as the "Greening the Blue Campaign".

Launching campaigns:

BMS in co-operation with other entities, launched the UNSGs cool UN campaign to achieve temperatures "2°C warmer in summer and 2°C cooler in winter", which is now well accepted.

Encouraging telecommuting:

United Nations Office in Vienna (UNOV) has encouraged telecommuting through its voluntary "mobile office" project. Two thirds of staff have signed up voluntarily.

Challenges

Commitments to corporate environmental management:

The many positive actions and achievements made at the VIC complex can be seen as a response to the commitments which have been expressed in various statements by high level officials of the different VIC-based international organisations. These statements and commitments are in favor of UN engagement in corporate environmental management of facilities and operations – however, these elements are not present with the general strategies of these organisations. In addition, these strategies, plans, and programs focus on core business and do not recognize corporate environmental management as a goal, nor of course related staff awareness.

Limited incentives and awareness for environmental-related issues:

There is little basic data and few incentives (from top management, BMS or the staff associations) concerning environmentally-related awareness, involvement and training of the staff and its commuting practices.

Information and training on various matters is lacking:

This information includes on carbon emissions from air travel; reducing the use of elevators; turning off lights, electric and electronic devices when unused; electronic filing; greener procurement; further sorting of waste; healthy food in catering facilities; health benefits from recreational practices), but also information on corporate initiatives (e.g. 'greening of industry' UNIDO conferences and exhibitions globally).

Economic advantages in replace of environmental incentives:

There are some long-standing practices and economic advantages still in place (e.g. incentives for parking and vehicle fuels) – which is not an uncommon practice among international organisations – yet these often undercut any environmental benefit for staff.

Raising awareness and changing staff behaviour:

Overall there is a need to enhance communication among staff, BMS, service providers, VIC-based international organisations and Austrian relevant authorities. For example, while BMS recognizes the importance of staff awareness, involvement and training related to environment sustainability in triggering behavioral changes of the staff, it has no policy related to this issue in place.

Recommendations in 2014

Cheaper staff public transport subscription:

UNIDO may wish to consider the use of environmentally-friendly transport for commuting should be encouraged, through measures such as cheaper staff public transport subscription, increasing parking fees, providing bike parking, and introducing flexitime. In fact, periodic surveys could be conducted on environmental attitudes and behaviors of the VIC staff including on these commuting possibilities.

Incentives to change behaviours:

UNIDO may wish to consider providing incentives for behavioral progress, for example: green awards, visibility given to the visits of external "green champions" and related support from top officials etc. Moreover, communication needs to be improved on corporate environmental management and related staff awareness and involvement.

Removing existing perverse incentives:

UNIDO may wish to consider gradually removing some perverse incentives in close consultation with all stakeholders, especially staff association, such as free or low-priced parking and tax free vehicle fuels etc.