Greening SAIs

INTOSAI
Working Group
on Environmental
Auditing

The Audit Board of The Republic of Indonesia

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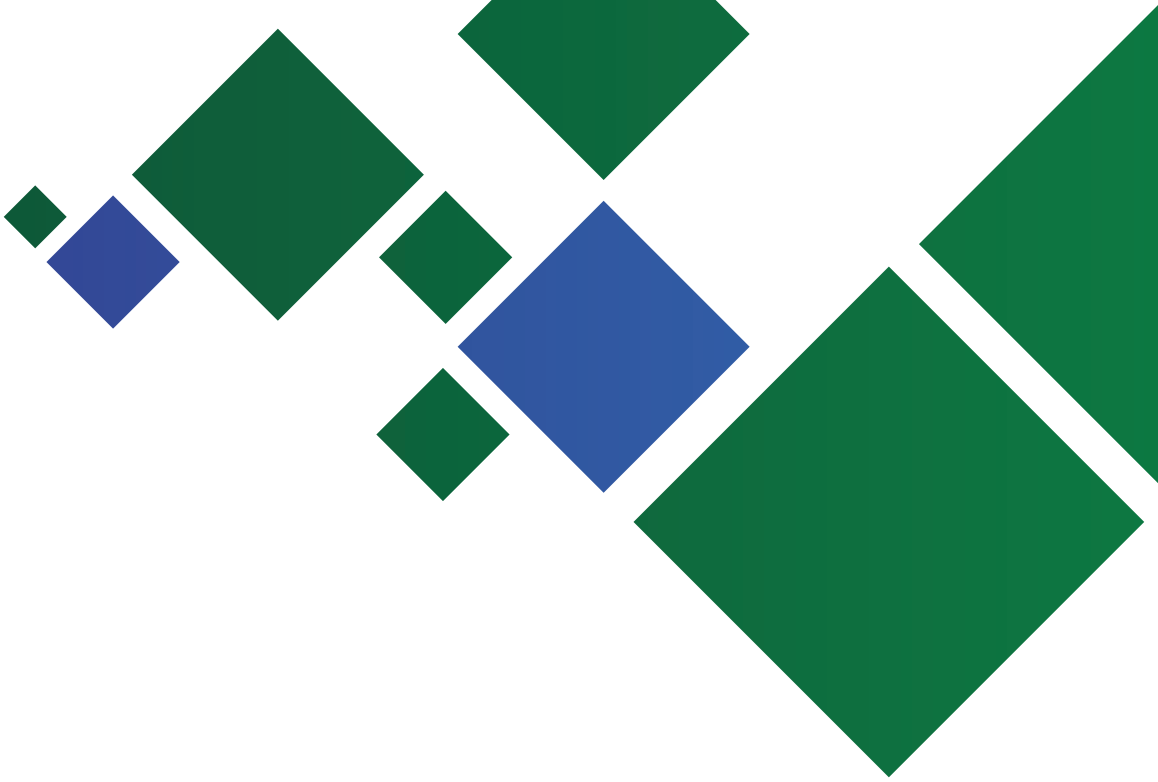
ISBN 978-979-15853-7-8



This publication was prepared by the INTOSAI Working Group on Environmental Auditing (WGEA). The WGEA aims to improve the use of audit mandate and audit instruments in the field of environmental protection policies, by both members of the Working Group and non-member Supreme Audit Institutions (SAIs). The WGEA has the mandate to

- Assists supreme audit institutions (SAIs) in acquiring a better understanding of the specific issues involved in environmental auditing;
- Facilitates exchange of information and experience among SAIs; and
- Publishes guidelines and other informative material for their use.

October 2016

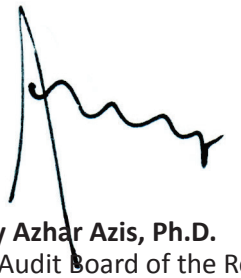
Foreword

As climate change and rising emissions seem to threaten the future of our planet, it has become incumbent on all of us to increase our efforts in tackling these threats. Our responsibility as SAIs in this area is even greater than other organizations and offices. As environment auditors, not only do we need to demonstrate our commitment towards sustainability issues and towards the environment, but we also need to be greener than other organisations/offices before we judge them through our audits. Greening SAIs is to be seen in the context of the move towards more sustainable and resource efficient practices worldwide, including offices and organizations.

Any paper on Greening SAIs could have 2 distinct thrusts: (i) encouraging SAIs to carry out more audits of environment and sustainable development issues (ii) encouraging SAIs to be environmentally responsible, resource efficient and minimize pollution of the environment. This paper excludes from its scope the process to encourage SAIs to undertake more audits of environment and sustainable development issues. Due to variability in mandates and practices regarding environment auditing and existence of guidance/literature in this area, this part has been kept out of the scope of the paper. The ambit of this paper only extends to providing an overview of what SAIs can introduce in their offices to become more sustainable and environmentally responsible. This paper also includes a checklist to assess SAIs efforts in this area and to enumerate practices incorporated by various SAIs in this area. This paper can thus serve as a blueprint for SAIs in reducing their carbon emissions and in decreasing ecological footprint.

This research project was led initially by Nameeta Prasad and later by Sunil Dadhe along with Jahangir Inamdar of SAI India. A subgroup consisting of the SAIs of Burkina Faso, Chad, Namibia, Poland, Senegal and Swaziland provided invaluable ideas, comments and supports during the course of the project. INTOSAI's WGEA Steering Committee provided constructive feedbacks. SAIs from more than 60 countries contributed to the steps for greening in their SAI, challenges faced and certification.

We would like to thank all these individuals and institutions for their contributions to this important topic.



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Executive Summary

GREENING OF SUPREME AUDIT INSTITUTIONS

Supreme Audit Institutions (SAIs) being Environment Auditors need to demonstrate their commitment towards the environment by initiating efforts to be greener. SAIs by adopting green practices, can set an example and strive for being a model organization which would also enhance SAI's credibility in citizens' perception.

There is a motivation to go green for SAIs as it would reduce operational costs by reduced consumption, reuse and recycling of resources. It would enhance public image of SAIs and lead to attraction and retention of staff.

SAIs, for greening their organisations, can take policy level initiatives at a broader, conceptual level while operational initiatives to be undertaken by members can translate policy level initiatives into action. SAIs at policy level may have documented environmental policy and a clear environmental action plan coherent with other corporate / strategic plans and initiatives.

SAIs can demonstrate efficient use of resources, reduction of waste through adoption of Environment Management System (EMS) and can enhance the trust of their stakeholders. Awareness generation among staff and strong internal as well as external communication is a must for the success of the greening initiative.

SAIs can increase energy efficiency through efficient climate control which accounts for 40 per cent of the energy use and other

small steps like purchase of energy efficient appliances, avoiding unnecessary electricity consumption, etc. The procurement could be done by giving consideration to its origin, resource efficiency and recyclability.

SAIs may reduce their overall resource consumption in the form of paper, water, etc. and reduce generation of waste. Events like conferences may be designed, organized and implemented in a way that minimizes negative environmental impacts by conserving and restoring resources. SAIs may address emissions from transport sector through a sustainable mobility/transport policy like incentives for public transport, parking privileges for car-pooling, etc.

SAIs may adopt global best practices in absence of national regulations and start with activities with low funding requirements. The initiatives should be implemented and the momentum through active support of staff and top management should be maintained.

For greening to be successful, there has to be a shift in behavioural management towards more environmentally sustainable work. It is important to develop management policies whereby a 'green' attitude is transferred into 'green' behaviour and such behaviour becomes a social norm.

Chapter 1
Introduction

1.1 IMPACTS ON ENVIRONMENT

Climate change and environment degradation are fundamental threats to sustainable economic development and the fight against poverty. It is an established fact that without bold action, the warming planet threatens to put prosperity out of reach of millions and roll back decades of development. Recent experiences are a stark reminder that no country – rich or poor – is immune from the impacts of climate-related disasters today. As the social and political agenda moves towards crucial issues such as climate change and environmental sustainability, all organizations including SAIs need to work towards goal of reducing their environmental impact.

1.2 IMPROVING RESOURCE EFFICIENCY

The United Nations Economic and Social Commission for Asia and the Pacific defines eco-efficiency as a key element for promoting fundamental changes in the way societies produce and consume resources, and thus for measuring progress in green growth. As a practical tool, the concept focuses on practices of resource-use, attaining economic and environmental progress through more efficient uses of resources and lower pollution. Thus, eco-efficiency is a more general expression of the concept of resource efficiency – minimizing the resources used in producing a unit of

output – and resource productivity – the efficiency of economic activities in generating added value from the use of resources. It also incorporates the reduction of waste. If all organizations of a country, including SAIs were to move towards greening their activities, countries and societies would increase resource efficiency, leading to sustainable development.

1.3 GREENING ORGANIZATIONS

Companies, offices and organizations have to play a proactive role in preventing and solving environmental problems. Worldwide, 40% of raw materials and resources are consumed by offices[1]. To reduce this impact, one of the most efficient ways is "greening" the offices, that is, to create an environmentally and human-friendly place to work.

Green office is an office that is committed to the principles of environmental sustainability in its operations, strives to use renewable resources, and tries to minimize the negative environmental impact of its activities. In an industrial plant or in an office, the general goals of an environmentally responsible management are the same: to make the most efficient use of resources, sustainable consumption, to minimize contamination, chemical and otherwise of the environment and reducing carbon footprint. Steps to green organizations can guide activities and initiatives that reduce negative environmental impacts that result from business operations. In general, these activities will reduce waste, conserve water and save energy.

1.4 GREENING SAIS

Whether in our homes or in our offices, we need to act in environmentally responsible manner and be resource efficient. In the context of SAIs, Greening SAIs would mean encouraging initiatives/activities/processes to reduce resource use, lessen pollution of the environment and reduce carbon footprint of the SAI. The goal is to create a healthy environment, conserve energy and reduce impairment of the environment.

This would also mean encouraging SAIs, where not limited by mandate, to carry out more audits of sustainable development issues. This would help national governments improve processes and programs to conserve and protect the environment. This issue is especially important to SAIs as they are increasingly auditing environment and sustainable development issues and in this context, as organizations, SAIs should also be seen to be consciously acting in an environmentally responsible manner. The

1 European Green Office Hand Book - http://www.eugreenoffice.eu/handbook

auditing role of SAIs also places an obligation on SAIs to be green and act as role models as far possible, before SAIs recommend agencies/governments to go green.

Right now, there are no specific laws, legislations and practices directing SAIs to undertake activities which fall within the realm of "greening". However, SAIs fall within the broader ambit of government offices/ organizations; hence they may be subject to rules, regulations, and policies governing other government offices/ agencies. Also, the range of activities subsumed under greening may vary in scope and enforcement/ regulation across countries. Further, many countries may not have in place policy, legislation or program to enforce greening activities. However, this should not be a reason not to act in effectively greening the SAI. By adopting green practices, SAIs can demonstrate that they lead by example and strive for being a model organization. This would also enhance SAI's credibility in citizens' perception.

1.5 MOTIVATION TO GO GREEN

There are some very good reasons for making SAI offices energy-efficient and environmentally sustainable work environments. Most people are beginning to realize that the goods and services on which we rely come with an ecological impact – and that we cannot continue purely extractive practices indefinitely; else we will simply run out of "resources". Additionally, by being eco-conscious numerous benefits can be generated for the SAI.

Reduce costs by consuming less. When we do more with less consumption, we reduce overhead costs and improve the bottom line.

Reduce costs by reusing materials and goods. When we use things more than once, we reduce the amount of new materials office has to buy, which saves money and improves bottom line.

Reduce costs by recycling. Disposing of "waste" is expensive. As countries running out of landfill spaces, the cost of disposal is likely to increase. Recycling materials reduce disposal costs and keep it out of the landfill.

Enhance SAI public image. Stakeholders are looking for socially and environmentally responsible behavior from organizations. Offices with greening programs will have an advantage of positive perception.

Attract and retain staff. Increasingly talented people want to work for organizations that are committed to reducing their ecological footprint.

1.6 PURPOSE OF THIS PAPER

Sitting in an office environment, it is hard to visualize how our activities are impacting the environment. Issues, such as air pollution, global climate change, deforestation, landfill, water availability, biodiversity, chemical pollution, eutrophication and soil erosion seem very distant and unrelated to the activities we undertake at work. It is now recognized that climate change and carbon management are critical issues that should be addressed through innovation and collaboration. We all make decisions every day that contribute to these environmental problems and we all have a responsibility to ensure that our everyday decisions and operations contribute as little as possible to these broader environmental issues. It is thus evident that environmental practices and especially greening activities are imperative to sustainability of the office environment.

As the social and political agenda moves towards crucial issues such as climate change and environmental sustainability, governments all over the world are putting into place policies and expectations that will lead all of them towards the goal of reducing their environmental impact. Greening activities are an important part of this movement towards goals of reduction of environment impacts.

The main objective of this research project is to explore methods and practices for greening SAIs worldwide. This paper in Chapter 2 seeks to set out steps which can be followed with regard to sustainable environment practices in greening our SAIs. It is anticipated that this paper will help those SAIs who want to take concrete steps in this area. This paper recognizes, in Chapter 3, the challenges and barriers in the process of greening SAIs. It will serve also as a platform to share practices adopted worldwide by various SAIs to enhance greening features. As environment auditors, we also need to demonstrate our commitment towards protection of the environment, hence this project paper will also serve as a blueprint for action by SAIs in this area.

1.7 MEASURING ENVIRONMENTAL IMPACT OF SAIS

A good measure to assess environment impact of a person/ organization is to calculate their **carbon footprint**. Carbon footprint is defined as the total amount of greenhouse gases produced to directly and indirectly support human activities, usually expressed in equivalent tons of carbon dioxide (CO_2). An office's carbon footprint is the sum of all emissions of CO_2 (carbon dioxide), which is produced by activities of that office in a given time frame. Carbon footprint is usually calculated for the time period of a year. Some of the activities that can affect carbon footprint of an office are: business travel and commuting, use of heating and cooling systems, amount of electricity use, amount of resources consumed (water, paper, etc.), generation and disposal of waste, use of IT and other equipments.

Another associated measure is the **ecological footprint**--human activities consume resources and produce waste, and as our populations grow and global consumption increases, it is essential that we measure nature's capacity to meet these demands. The Ecological Footprint is a measure of human demand on nature and addresses whether the planet is large enough to keep up with the demands of humanity. Organizations and offices can also be measured to assess their impacts on environment by means of ecological footprint calculator. Conceived in 1990 by Mathis Wackernagel and William Rees at the University of British Columbia, the Ecological Footprint is now widely used by scientists, businesses, governments, agencies, individuals, and institutions working to monitor ecological resource use and advance sustainable development.

Chapter 2
Tools for Greening SAIs

2.1 INTRODUCTION

Whether we work in a small or large office, there are many things that we, as individuals and as organizations, can do to "green" our offices. By taking a careful look at office procedures, identifying possible improvements, implementing and communicating changes, we can significantly reduce the SAI organization's impact on the environment. Many of these activities could be individual driven initiatives and many of these will be organizational driven.

These activities have been classified, for clarity, into two broad categories—policy level issues and operational issues. While policy issues deal with organizational driven activities at a broader, conceptual level, operational issues deal with activities that need to be undertaken by members of the organization to translate these policy level initiatives into action and thus achieve the purposes and goals of greening.

Specific steps promoting each of the initiatives discussed below are listed in **Annexure 1** which is in the form of a checklist of activities for greening SAIs. This checklist can also be used by the SAI to assess how green it is and decide on areas which require further actions. Steps taken by SAIs to green their organizations is attached as **Annexure 2**.

Policy level initiatives that can be adopted are discussed below.

2.2 POLICY LEVEL INITIATIVES

I. Environmental commitment and policy

The top management of the SAI are clearly committed to deal with the environmental performance of the organization and have stated that they support pro-environmental activities in the offices. The organization should have a documented environmental policy statement that has been approved by the SAI top management.

II. Do an Inventory

Before SAI decides on a course of action, it needs to determine its current status. As such, it would require an assessment or inventory of the green initiatives that the SAI is already undertaking. This would entail gathering information about the environmental impacts of your current office operations. This would help the SAI determine green priorities in subsequent steps. People from throughout the SAI office can be contacted to find out about current green initiatives. This will identify opportunities to support them, to learn from past experiences, or toassess current impacts. What is the SAI's current consumption of energy and water? How much waste is generated? What policies and practices are already in place that support the greening of the SAI? Gathering this information will allow the identification of gaps and to establish priorities and goals. The scope of this activity can vary significantly, depending on SAI's objectives and available resources.

III. Environmental objectives and action plan with budget requirements

The SAI should identify the significant environmental issues in its organization (environmental aspects/ impacts), by taking into account the special features of the organization and its situation. Based on this information, SAI should define its environmental objectives and develop a clear environmental action plan coherent with other corporate / strategic plans and initiatives. The environmental objectives and action plans should show how environmental performance will be continuously improved and developed in the future. Budgetary requirements can also be set out at this juncture which will allow the SAI to set realistic timelines in the action plan.

IV. The Green Office coordinator and team

The SAI management should select a person (a green office coordinator) and team from the office personnel to coordinate the implementation of the green office activities.

V. Raising environmental awareness of staff

All staff in a Green Office should be aware of the Green Office objectives, management system and the practices which are being encouraged and supported in the office. The staff should be instructed, trained, and guided so that they know which practical measures are being implemented and which relate to their job profiles.

VI. Monitoring and tracking progress

The SAI should monitor and check the fulfillment of its environmental objectives and action plan, as well as environmental performance, on a regular basis. The SAI should define key performance indicators for its activities that have significant environmental impacts and monitor/measure them on a regular basis.

VII. Incentivizing greening activities

SAI management can also think about incentivizing green initiatives for wider implementation. These incentives can be monetary or non-monetary. Monetary incentives can include some kind of cash rewards, coupons, surprise gifts, etc., while non-monetary rewards could be certificates, mentioning of green activities in appraisals, declaration of champions in this area, etc.

VIII. Communication with internal and external stakeholders

SAI management need to communicate continuously with their internal stakeholders like with their staffs regarding the steps to be taken and improvements that can take place. The SAI management also need to communicate with their external stakeholders like contractors, suppliers, and partners regarding greening office steps and requirements that put in place by the SAI so that the contractors/partners can comply with the requirements. SAI also needs to communicate with the wider public with regard to steps taken and how they are contributing to sustainability initiatives.

IX. Environmental Management System Certification

An Environmental Management System (EMS) helps organizations identify, manage, monitor and control their environmental issues in a holistic manner. Environmental management has become a core business issue for many organizations. The interest of organizations in their environmental performance is increasing. They are proactively approaching the environmental challenges and want to improve their performance by going beyond minimum legal compliance. The private organizations have incentives in adopting EMS as they can minimize the amount of waste that is produced, reduce energy consumption and make more efficient use of resources in addition to protection and enhancement of the environment. Some of the international standards provide practical tools for organizations of all kinds looking to manage their environmental responsibilities. These kind of practices can also be adopted by the SAIs to improve and maintain their environmental performance. SAIs can demonstrate efficient use of resources, reduction of waste through adoption of such standards and can enhance the trust of their stakeholders.

Operational initiatives are discussed below.

2.3 OPERATIONAL INITIATIVES

I. Energy efficiency

The energy challenge is one of the greatest challenges faced by the world. Activities which promote energy efficiency often have short-term, up-front costs before the medium- and longer-term benefits are felt. However, being energy efficient doesn't always mean making large investments; sometimes small, simple changes in habits (for example, using office equipment more efficiently) can significantly reduce SAIs' office energy bills. By becoming more energy efficient, SAIs do not just help the environment and support the principles of sustainable development, but they also reduce costs.

II. Procurement activities

The purchase of environmentally-sustainable office equipments in a viable way in which SAIs' offices can reduce electricity demand, save money, and help their organization reduce their direct and indirect impact on the environment. Green procurement is the purchase of products and services that have a minimal or reduced environmental and human health impact. In addition to improved environmental performance, many environmentally preferred products work as well or better than traditional products. SAIs can classify certain activities under green procurement as mandatory and some as desirable, with the aim to make all the activities mandatory, in a phased manner.

III. Reducing the consumption of natural resources

Conservation of natural resources like timber (used in production of paper/office furniture) and water can result in reduction of ecological footprint. It affects the future of the world's forests, endangered species, water resources, climate, and people. Human-kind's water footprint has exceeded sustainable levels in several areas around the world recently, which makes it crucial for organizations to reduce both direct and indirect water usages.

IV. Reducing Waste

All the wastes that an office produce have both an associated financial and environmental costs, and these costs are often underestimated. The production of waste is seen as a form of inefficiency and misuse of resources, which has both economic and environmental implications for individual companies and the country as a whole. As more businesses and organizations consider the effects of their activities on the environment, waste generation at work is receiving increasing attention. Waste hierarchy principle works well in office situations too—the first option should be to avoid waste generation, the next to minimize waste generation, then reuse as much of office items as possible, then recycle after reuse and dispose of what's left in an environmentally responsible way. SAIs can use WGEA paper "Towards Auditing Waste Management" as a general reference.

V. Others

Other activities in SAI offices like holding events/conferences, cleaning and others also contribute to environment impacts of an office and need to be addressed.

Operational initiatives that can be introduced by SAIs are discussed below.

Energy Efficiency

I. ***Functioning of computers, servers, office equipment and other electronic tools:*** Many easy energy conservation measures can be introduced in this area. Any office equipment left plugged in consumes electricity. Computers, printers, monitors, modems and even cell phone chargers consume electricity when switched off but plugged in. By unplugging chargers when they are not being used, powering down computers at the end of the day and switching off any equipment such as printers and monitors when they are not in use, the office's electricity use will be reduced.

II. ***Lighting the workplace:*** To increase office energy efficiency means to decrease the energy usage in the office and increase usage of natural energy sources. The first thing to consider should be workplace and design in order to ensure the maximum usage of daylight and save energy on lighting.

III. ***Heating, Ventilation and Air Conditioning (HVAC) systems:*** These also contribute a lot to energy requirements of an office. Central air-conditioning/heating uses up a lot of energy. Climate control accounts for about 40 percent of an office's total energy use. The opportunity for big savings in energy efficiency can be found in SAI offices heating, cooling, and ventilation systems.

Procurement Activities

I. ***Purchase of energy rated appliances:*** Buying and using energy-efficient equipment save money and can provide enormous savings in electricity use alone. Environmental benefits of using energy-efficient equipment are tremendous. By reducing the electricity usage, SAIs are reducing air and water pollution from power stations and saving a ton of greenhouse gases for each 1,000 kilowatt-hours of electricity saved.

II. ***Purchase of locally made products:*** Since transport causes pollution and climate change emissions, buying goods and services from local providers is more environmentally responsible. Buying locally also benefits the local communities economically.

III. ***Purchase in bulk, where appropriate****:* In addition to minimizing waste by reducing packaging, buying in bulk also reduces emissions by reducing the number of trips needed to deliver the product.

IV. ***Purchase of products with improved recyclability, high recycled content, reduced packing and greater durability:*** Reusing or recycling materials can significantly reduce the embodied energy in office equipment. Is the manufacturer prepared to take back equipment at the end of its life for reuse or recycling? Does the equipment come apart easily and are the components labeled to make recycling easier? Some manufacturers are grappling seriously and creatively with "extended producer responsibility[2]," which sees them as broader service providers and not merely suppliers of equipment.

V. ***Products which utilize clean technology and/or clean fuels****:* Preferences should be given to resource-efficient products, i.e., products that use the least or conserve the most energy, water, gas, and other nonrenewable or environmentally costly resources.

Reducing The Consumption of Natural Resources

I. ***Saving paper:*** Approximately 45% of annual office waste produced (mass %) in a typical office is office paper. As digital technology has made printing cheaper and easier, global consumption of office paper has actually more than doubled in the last two decades. Therefore, paper use and its minimization is one of the most significant environmental aspects that should be addressed by SAIs when implementing the principles of a green office. Office paper reduction provides environmental, economic and efficiency benefits as fewer natural resources will be used for the production of paper. Reduced air and water emissions will be generated from the manufacture of paper, reduced paper use and (cutting down fewer trees) reduces greenhouse gases (forests absorb carbon dioxide). Economic and efficiency benefits come from less money being spent on buying paper, reduced costs of disposal of paper waste and less time spent on retrieval of documents.

II. ***Water conservation:*** Water is one of the most important elements of the biosphere. 70% of the earth's surface is covered with water but just 2.5% of it is drinkable freshwater. Supplies of our most precious resource are decreasing due to growing demands from agriculture, industry and an ever growing world population. Water consumption of office buildings comes from use in restrooms, in kitchens and in cooling towers where offices are centrally air-cooled. Steps need to be taken in an office to reduce water consumption.

III. ***Office furniture:*** Furniture is a broad product group that covers very different types of furniture such as cupboards, chairs, tables, and shelves each with very different uses. To identify the environmental impacts of the furniture, it is necessary to consider the life-cycle impact of materials the furniture is made of and the impacts of the final product during its life span and disposal. In general, a large proportion of the environmental

2 Lindhqvist and Lidgren, 1990

impacts of furniture depend on the production and treatment of the raw materials. The second major part of environmental impact comes at the end of the product lifecycle (recycling, reuse or just disposal).

Control of Pollution

I. ***Waste management for reducing pollution:*** Control of pollution through management of waste and air emissions is another important area that needs to be tackled by offices. Waste has become an increasingly difficult environmental and economic problem, one which affects us all and to which everyone contributes. Individuals, at home or at work, have a vital role to play in schemes to minimizing and reducing pollution through waste management. Effective waste management can help in restricting the pollution of land, water and air.

II. ***Sustainable transport:*** The transport sector (particularly cars) is one of the major emitters of greenhouse gases. There are a number of other environmental problems associated with transport, including pollution from engine exhaust gases (nitrous oxide, carbon monoxide and fine particles) which reduces air quality and affects human health, plants, animals and habitats; loss of land and habitats from the construction of transport infrastructure - such as new roads, railways and runways. Not all of these are under control of the SAIs' offices, but emissions from transport sector can definitely be addressed through a sustainable mobility/transport policy like incentives for public transport, parking privileges for carpooling by SAIs.

III. ***Indoor air quality:*** Health and environmental organizations view indoor air pollution as one of the greatest risks to human health. These pollutants come from activities, products and materials we use every day. The air in our homes, schools and offices can be 2 to 5 times more polluted, and in some cases 100 times more polluted than outdoor air. Therefore, it is essential to reduce noxious emissions present in building materials as well as in all cleaning products, soft furnishings and floor coverings in SAIs' offices.

Others

IV. ***Office design and siting****:* If an SAI is constructing a new building or renovating an old one, there is a range of environmental impacts related to the design, (re)construction, use and the disposal of the building to consider. Successful green buildings leave a lighter footprint on the environment through conservation of resources, while at the same time balancing energy-efficient, cost-effective, low-maintenance products for construction/renovation needs.

V. ***Cleaning:*** Office cleaning is the act of cleaning up rooms of the office, often after the employees have left/come for the day. Although not often considered, offices are in constant need of cleaning support. Offices are highly trafficked areas. Dust is spread by foot traffic and using computers and other equipment. In addition, employees and visitors regularly use the washrooms and common eating areas; basically living in a contained environment for up to 12 hours a day. Such close proximity on a continual basis is a breeding ground for germs. The usage of non-environmentally friendly detergents has several negative impacts on the environment and human health. The biggest impact of cleaning products comes from the chemicals they contain; however, their packaging is also an issue.

VI. ***Conferences and events:*** SAIs often have to organize conferences and events either for their own staffs or for the public. In the context of business events, the word 'event' can refer to conferences, seminars or business meetings. Throughout its duration, an event will usually require transport and accommodation for participants, the use of different material such as papers, equipment, food and catering services, the use of energy and water. It will also generate waste. Organizing an event or a conference inevitably has an environmental cost since it requires great amounts of water, energy, and materials that result in waste and greenhouse gas emissions. A green event is not necessary all about "carbon neutrality" but one which is designed, organized and implemented in a way that minimizes negative environmental impacts by conserving and restoring resources.

Chapter 3
Challenges in Greening SAIs

3.1 BACKGROUND

How we choose to work and live has significant impact upon the world. Our footprint upon the planet contributes to climate change - one of the most urgent global sustainability issues. Steps to be taken to transition to a more resource efficient, sustainable, economical, and healthy office environment are taking place worldwide. However, like any other changes, it has challenges and barriers which need to be addressed for successful implementation. Specific challenges that SAIs have faced in greening their organizations are listed in **Annexure 2**.

3.2 CHALLENGES AND STRATEGIES

1. Funding and cost of implementing green infrastructure

Challenge	Change to green offices and sometimes require additional costs, even though these might be recovered in the long term. Many SAIs may find access to funding difficult.

Strategy	One way out of this is to target those activities first that do not require additional funding or the low hanging fruit. More drastic changes envisaged can be planned later when more funding might get available.

2. Lack of regulatory mechanisms to implement many green office activities

Challenge	Many countries may lack regulatory framework for many initiatives which define required standards of operation—for example green building codes, lack of green procurement guidelines, lack of efficiency ratings for electrical and IT equipment, etc.
Strategy	SAIs can adopt industry best practices or regulations put in place by its government or neighboring countries and some regulations introduced by international organizations, which have local applicability.

3. Lack of acceptance by office staff

Challenge	Many of the steps for greening SAIs involve change in behavior and actions by staff and may involve extra efforts and works. So the staff can resist these changes and make it difficult for management to make as many changes as planned.
Strategy	Staff members are the most important stakeholders in this change—so their views and concerns need to be taken on board. The SAI management can involve the staffs in deciding the activities with regard to greening and let staff decide priority regarding the steps to be taken. This will increase acceptance by staff and signify clear commitment on their part.

4. Keeping the momentum going

Challenge	Many offices start greening activities with great fervor and enthusiasm but over time, their zeal decreases and greening activities become a part of the drudgery of routine. This causes these greening activities to fizzle out and slowly come to a complete stop.

Strategy	Top management support needs to be visible, incentive schemes like awarding staff members as green champions, etc. need to be undertaken to keep staff morale high and build such activities into a regular part of their life in the office.

5. Absence of experts/inability to hire experts to assess/build plan for greening steps to be taken by SAIs

Challenge	To assess resource consumption, SAI needs to draw up objectives of greening activities and other activities, which may initially require an expert with some experiences in this field. Not all offices may have the resources and availability of key staffs to plan and implement activities in this field adequately and effectively.
Strategy	The office can ask for volunteers among the staff to kick off the process and can work on non-technical issues. They can also ask their government to help with the services of an expert/consultant, maybe part-time which may help in reducing costs associated with hiring of an expert.

6. Issues relating to maintenance

Challenge	Many of the greening activities may rely on new infrastructure like green buildings, new machinery, new technology which requires periodic maintenance and updating. Often the office may not have the requisite qualified staff or funding to hire such staff for periodic maintenance and operations update.
Strategy	The SAI may need to enter into maintenance contracts, for such activities. Funding for this can be set apart from the total funding. This is very necessary as lack of maintenance can compromise performance and the efforts taken for greening activities may go waste.

3.3 CHANGE IN PERSPECTIVES AND ATTITUDES

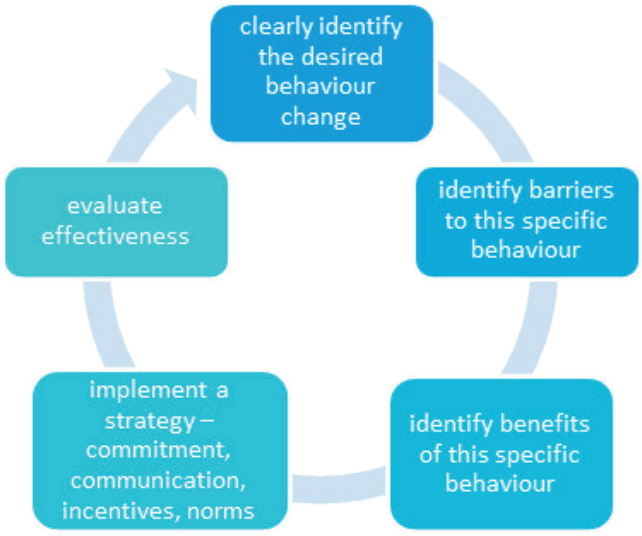
Green office programs are change programs attempting to promote more sustainable behavior within the SAI office environment. For such changes to be successful, there has to be a shift in behavioral management toward more environmentally sustainable work, and potentially home practices. Research has shown there exists a causal difference between 'attitude' and 'behaviour'. Numerous people may maintain that environmental

sustainability is a personal responsibility, such as recognizing that switching off a light and reducing energy consumption is 'good' for the environment. However, this is in stark contrast with the number of people who actually exert that behavior, and carry out that action of switching off the light when they leave a room. Thus, it is important to develop management policies whereby a 'green' attitude is transferred into 'green' behavior.

Furthermore, social norms are important tools for behavioral management changes within the office environment. Thus, it is imperative that in order for the steps for greening SAI office proposed to be effective, activities such as recycling, turning off office appliances at the end of the day, switching off lights, and so forth, must become social norms within the SAI office environment.

One way of achieving this is given in the diagram below:

Figure 1 Diagram on Behavioral Management Change



An example is provided below using this methodology focusing on the attempt to change the behavior of staffs with regard to energy efficiency in the office environment:

1. Desired behavioral change

"Staffs to switch off common area lights at the end of the day"

2. Barriers

Staffs are not aware of location of light switches; staffs are not aware of how the switches correspond to specific areas; there are no reminders or incentives to switch off the lights at end of the day.

3. Benefits

- Environmental benefits – lower energy consumption
- Monetary benefits – lower energy costs
- Increase positive office culture and social norms

4. Communication

- Office environmental representatives survey staffs about switching off lights and remove certain light globes.
- Office environmental representatives discuss ideas with staffs.
- Signage, e.g. color-coded floor plans, explaining switches and location; signs/stickers next to light switch reminding people to switch off; signs redesigned every two months to grab people's attention.
- Environmental audits made public and discussed with staffs.
- Social media is used for increasing the awareness and communication with the staffs.

5. Incentives

- Night audits conducted, if staffs meet two of three criteria (lights off, screen off, paper recycling bin emptied). A formal recognition of the effort in an appropriate manner is necessary.

6. Norms

- The incentive becomes a visible sign of the night audits and shows who did and did not meet the environmental night audit from the previous night.
- This will be effective once switching off all equipment and lights becomes a natural routine.

This example of a framework for changing the behavior of office workers to switch off lighting can be applied to many facets of management of the green office, including information technology management, office paper-waste management, or water conservation.

Appendices

APPENDIX 1 CHECKLIST FOR ASSESSING GREENING ACTIVITIES BY SAIS

Guidance for use:

Greening activities that can be undertaken by SAIs are listed in Column 1. The office has to put an 'X' in any one of the cells (2-4) which is true for your organization. Only one cell per row can be selected. Total of fully, partially, or no answer according to each theme or for the entire checklist is calculated.

Greening activities (1)	Fully (2)	Partially (3)	No (4)
Theme 1: Policy initiatives (examples of these initiatives are discussed at the end of this annexure)			
1. Does your SAI have a top-level commitment regarding developing and implementing a green office (GO) in some sort of written statements (e.g. a signed environmental policy)?			
2. Have a GO coordinator and a GO team been appointed/ selected by your SAI?			
3. Have the most significant environmental impacts of the organization been identified/ reviewed by your SAI?			
4. Have GO environmental objectives been defined and corresponding action plan been developed by your SAI (with goals, actions, responsibilities and a timeline)?			

Greening activities (1)	Fully (2)	Partially (3)	No (4)
5. Does your SAI regularly inform and train the staffs about the GO program (why it's being done and what can each of the members do in order to minimize their environmental impact)?			
6. Does your SAI revise the action plan regularly?			
7. Has your SAI defined indicators to monitor its organizations' environmental performance?			
8. Does your SAI regularly monitor the progress of GO activities of yourorganization?			
9. Has your SAI calculated the ecological and/or carbon footprint of your organization?			
10. Has yourSAI management introduced incentives for rewarding significant action by staff?			
11. Does your SAI conduct awareness raising of its staffs by using external experts who educate employees about global problems?			
12. Does your SAI communicate and involve / inform all your partners and subcontractors about the environmental aspects and greening efforts of the organization?			
13. Has your SAI created a Corporate Citizenship / CSR / Sustainability Report and included a section about its Green Office program?			
14. Has your SAI created an external communication plan to promote its GO (e.g. regular press releases / short videos / case studies presenting your Green Office program)?			
Total for the theme			
Theme 2: Energy Efficiency			
Functioning of computers, servers, office equipment and other electronic tools			
1. Is your SAI measuring energy consumption of the organization and cost it incurs on energy consumed?			
2. Does your SAI have an action plan for reducing energy consumption of the organization?			
3. Has your SAI invested in any technology for producing renewable energy (solar panels, wind energy, etc.)?			
4. Do about 85% of the computers, notebooks, monitors, imaging equipment and internal servers have officially-recognized environmental certification (related to energy saving, toxic free materials, or healthy noise levels) (e.g. Eco label, Energy star)?			
5. Has the ICT department of your SAI introduced an energy management plan for IT equipment (e.g. programmed the relevant IT equipment to shut down automatically at a certain hour or after a certain period when the equipment has not been in use (e.g. during lunch breaks, during weekends, public holidays)?			

Greening activities (1)	Fully (2)	Partially (3)	No (4)
6. Has an energy audit of your organization been undertaken by an external consultant?			
7. Does your SAI encourage employees to turn off computers, heating, air-conditions and electronic equipment when they leave their offices (especially at the weekends and on holidays)? Or use stairs instead of elevators?			
Lighting the workplace			
8. Does your SAI take advantage of natural light by encouraging staffs to switch off lights if not required?			
9. Has your SAI installed local lights that allow staffs to control their own lighting areas?			
10. Has your SAI installed motion detectors that automatically turn lights on and off in rooms and areas that receive infrequent traffic?			
11. Has your SAI installed software that centrally shuts-down office lighting and equipment on a pre-determined schedule?			
12. Has your SAI replaced traditional incandescent bulbs with CFCs/ LED lights?			
13. Has your SAI installed movement sensors or timer switches in areas such as store rooms, meeting rooms and photocopy rooms to reduce light usage?			
14. Does your SAI get dirty lamps and fittings cleaned on a regular basis to maximize lighting efficiency?			
15. Has your SAI placed easy to read and eye-catching energy saving reminder signs/stickers near all major light switches?			
HVAC systems			
16. Does your SAI regularly maintain HVAC systems?			
17. Has your SAI set heating and cooling temperatures correctly to keep the office comfortable and energy efficient and encourage workers to bring warm clothes to work in the winter, and to dress for the heat in the summer			
18. Does your SAI have a system where HVAC systems can be shut down for rooms not being used?			
19. Do your office rooms also have switches to switch off/switch on HVAC systems?			
Total for the Theme			
Theme 3: Procurement activities			
1. Does your SAI have a written and implemented green and/ or sustainable procurement policy/principles/procedure, especially for IT products?			

Greening activities (1)	Fully (2)	Partially (3)	No (4)
2. Is the GO coordinator of your SAI involved in the process of (green) procurement?			
3. Is a greener equipment registry consulted when buying new equipment in your SAI?			
4. When procurement is contemplated by your SAI, does the office carry out an exercise to determine if the product is really needed; can the old product be maintained and repaired; can it be borrowed, rented or bought second-hand?			
5. Are your SAIs' procurement staffs aware of the principles/ procedures of green procurement and eco and Fair Trade labels?			
6. Are local suppliers given preference by your SAI in procurement policy/while purchasing products for office?			
7. Does your SAI purchase frequently used office products (paper, tea/coffee, etc., in bulk whenever possible?			
8. Does your SAI purchase office equipment which is eligible for recycling at end of its life?			
9. Does your SAI encourage the purchase of materials made of recycled material, as far as possible?			
10. Does your SAI avoid purchase of products made of toxic materials where choices are available, e.g.; inks, paints high in volatile compounds, carpets high in noxious odors and chemicals, cleaning solutions containing hazardous or environmentally harmful components?			
11. Does your SAI give preference to products which utilize clean technology and/or clean fuels like purchasing green power, purchasing green cars, etc.			
Total for the theme			
Theme 4: Reducing the consumption of natural resources			
Saving paper			
1. Does your SAI have an approved procedure (guidance/ internal rules) for reducing paper use (incl. setting rules and measures for reducing, reusing and recycling paper)? (This can either be a part of the general environmental rules of the office or a separate procedure for paper products).			
2. Does your SAI have an approved procedure (guidance/ internal rules) for purchasing environmentally friendly paper products (e.g. eco-labelled paper)? (This can either be a part of the general procurement policy of the office or a separate procurement procedure for paper products).			
3. Does your SAI regularly communicate to and train your employees about how to use paper sustainably in the office?			

Greening activities (1)	Fully (2)	Partially (3)	No (4)
4. Has your SAI defined indicators to monitor office paper usage periodically (e.g. monthly or quarterly or yearly)?			
5. Does your SAI periodically give feedback to all staff about decreases/increases in paper use in the office (e.g. once a year)?			
6. Does your SAI have measures designed to engage and motivate staff to save paper (e.g. organising paper-saving campaigns and competitions for employees)? (Has the office carried out any specific activity like this in the last 1 year)?			
7. Concerning communication and training, do all staffs in your SAI know and follow the commonly-agreed-on paper saving rules and measures?			
8. In your SAI, to avoid paper print-outs, are electronic document handling options widely used in the office[3]?			
9. Has the duplex printing ("print on both sides") function been selected as default for all printers and copiers that have this function in your SAI?			
10. Does your SAI have a system to collect office paper for later reuse in the office[4]?			
11. Does your SAI have a paper waste collection system at workplaces where paper waste is generated (e.g. clearly labelled small bins are placed near desks and bigger ones near printers and copiers)?			
12. Is a minimum of 80% of all the office papers used in the SAI environmentally friendly[5]?			
13. Is a minimum of 80% of all other paper products (at least toilet paper and paper towels) used in the SAI organization environmentally friendly[6]?			
14. In your SAI, are all the printed paper materials (leaflets, brochures, reports, etc.) printed on environmentally friendly paper[7]			
15. In your SAI, Is 'personal printing footprint[8]' being tracked in the office?			
16. Has your SAI reduced the amount of periodical subscriptions that it receives by mail; has itcreated a sharing/circulating system for those who read the same periodical and are currently ordering duplicates to the office?			
Water conservation			
17. Is your SAI regularly tracking and measuring water consumption?			

3 e.g. documents are read and edited on-screen rather than printed; presentations and other documents are made available on the Internet instead of on paper; information is sent electronically rather than in printed format, etc.

4 e.g. workplaces may have trays for collecting paper that has been only used on one side for internal needs such as draft papers

5 i.e. have been awarded the national/regional/ISO type/ eco-label

6 i.e. have been awarded the national/regional/ISO type/ eco-label

7 i.e. have been awarded the national/regional/ISO type/ eco-label

8 e.g. a system that allows measurement and reporting of how many sheets of paper each staff member is personally responsible for, e.g. each month

Greening activities (1)	Fully (2)	Partially (3)	No (4)
18. Does your SAI have an action plan for reducing water consumption?			
19. Does your SAI have water-saving guidelines and procedures for using kitchen equipment? (e.g. using the dishwasher only when it is full).			
20. Does your SAI harvest rainwater?			
21. Does your SAI promote the drinking of tap water instead of bottled water to employees?			
22. Do the offices of your SAI use water saving equipment (perlators, efficient shower heads, dual flush toilets, waterless/ sensor controlled urinals, low flow fixtures)?			
23. Does the office of your SAI recycle and reuse its water?			
Office furniture			
24. Is the office furniture in your SAI made of environmentally-friendly substances? Does it conform to any eco-label criteria?			
25. Are the textiles of the furniture in your SAI's office use washable and made from natural materials?			
26. Is there a written policy in your SAI about methods for dealing with furniture at the end of its life (official recycling policy, distribution for second hand use, etc.)?			
Total for the theme			
Theme 5: Control of pollution			
Waste management			
1. Does your SAI have an approved waste management procedure[9] (guidance/internal rules) for reducing, reusing and separately collecting (recycling) waste?			
2. To reduce/minimize waste generation, does your SAI follow specific measures - e.g. paper use reduction, purchase of only durable and repairable equipment, products purchased in bulk to reduce packaging, products with nontoxic content selected, or equipment that do not need batteries purchased.			
3. When reusing office waste, are several activities being undertaken by your SAI, like re-using office paper, re-using packaging-boxes, using re-usable tableware rather than disposable, or purchasing used furniture?			
4. Does your SAI collect hazardous waste like batteries, paper waste, chemical waste, Hg-lamps, etc. separately? Also, do all staffs have access to centralized collection bin(s) for hazardous items?			

9 can either be a part of the general environmental rules of the office or a separate procedure for waste management

Greening activities (1)	Fully (2)	Partially (3)	No (4)
5. In addition to the separate collection of hazardous waste, are there other types of waste which are collected separately by your SAI, like WEEE, paper waste, packaging waste (glass, plastic, metal) and, if possible bio waste?			
6. Does your SAI regularly communicate and train employees about how to reduce, reuse and separately collect waste in the office (e.g. through providing instructions on how to handle waste to all staffs)?			
7. Does your SAI monitor waste generation periodically (e.g. monthly or quarterly or yearly)? Is the share of recycled waste to total waste measured and is this shared with the employees?			
8. Does your SAI motivate staff to reduce the generation of waste through specific waste-related campaigns and competitions for employees and were these carried out in the last 1 year?			
9. Does your SAI compost food waste generated in its offices?			
Sustainable transport			
10. Has your SAI been able to reduce conventional commuting trips by providing employees with support for using public transport?			
11. Does your SAI monitor the mobility of its employees like number of km travelled, number of litres of gasoline used, etc.?			
12. Has your SAI implemented a mobility plan[10]?			
13. Does your SAI promote carpooling and car-sharing and make it easy for staffs to find car-pool options?			
14. Does your SAI have a policy about purchasing clean vehicles?			
15. Does your SAI measure carbon emissions from transport?			
16. Does your SAI purchase carbon offsets for the transport emissions?			
17. Does your SAI implement and encourage the use of desktop webcams / videoconferencing to reduce travel?			
18. Does your SAI provide access to showers, lockers and secure bike storage facilities?			
Indoor air quality			
19. Does your SAI have green plants in the office (selected according to environmental criteria)?			
20. Does your SAI have a smoking policy?			
21. Are air ventilation system and the air handling unit room of your SAI cleaned and maintained to achieve good indoor air quality?			

10 A transportation plan based on environment friendly alternatives like use of public transport, bikes, carpooling, etc.

Greening activities (1)	Fully (2)	Partially (3)	No (4)
22. Are the cooling towers in your SAI office cleaned and treated in accordance with appropriate guidelines?			
23. Are the cooling coils, condensate pipes and water trays checked regularly for signs of sludge, algae or rust build-up, choking and leaks where water could enter the airstream?			
24. Does your SAI carry out indoor air testing to study if the air quality complies with the relevant specifications?			
25. With regard to ACs in your SAI office, is there at least one each in every room and are vents located in positions that will permit the best air circulation?			
Total for the theme			
Theme 6: Others			
Office design and sitting			
1. if your SAI is constructing a new office or refurbishing an old one, during the planning / design phase, has your SAI considered at least two of the following options: ▪ net energy demand (for space heating, cooling and ventilation) ▪ waste generation ▪ the potential for using local renewable energy sources ▪ the use of sustainable building materials and/or reducing dangerous substances.			
2. Does the newly constructed/refurbished building of your SAI have at least two of the following: ▪ external (facade) insulation, ▪ double/triple glazed windows, ▪ roof insulation ▪ insulated heating system			
3. Has the office building of your SAI been environmentally certified?			
4. Does the building of your SAI itself generate up to 50% of its energy needs?			
5. Are regular energy audits of the SAI building carried out?			
Cleaning			

Greening activities (1)	Fully (2)	Partially (3)	No (4)
6. Are all the environmental aspects of cleaning identified and considered by your SAI with regard to the cleaning process[11] or does your SAI have an agreement for subcontractors to provide a green cleaning service?			
7. Are you using "homemade" products for cleaning which are made from simple household ingredients, such as: lemon juice, conventional and electrolysed water, borax, vinegar, salt, mineral oil, and baking soda?			
8. Is your SAI monitoring the quantity of cleaning products used?			
9. Are cleaning staffs of your SAI informed and trained about the environmental aspects of their work and the most appropriate ways of cleaning?			
Conferences and events			
10. Do you have a written green checklist for events (which includes all potential environmental aspects and solutions)?			
11. Do you have strategy for reducing the environmental impact of your events?			
12. Are you communicating with all participants about how to be a part of efforts to organize green events?			
13. Are you making an effort to minimize paper-based handouts (through using e-registration, digital posters, etc.)?			
14. Do you support the purchase of fresh and seasonal/organic/local food & beverages at your company buffet/restaurant/events?			
15. Do you have a policy about reducing waste related to your food consumption practices?			
16. Does the office encourage use of mugs, plates, water glasses, etc., rather than disposables?			
17. Does the office encourage serving foods that are not individually packaged?			
18. Does the office encourage the use of table cloths and napkins if possible? If not, use paper products made from recycled paper.?			
19. Does the office discourage the use of individually wrapped condiments (e.g. sugar/sugar alternative packets, salt/pepper packets, individual creamers)?			
20. Have appropriate recycling receptacles been in place (cans/ bottles/mixed paper/trash). Have your SAI ensured that catering staffs or vendors comply with your efforts to make it a sustainable event by using the appropriate trash/recycling receptacles?			
Total for the theme			

11 Amount and type of detergents used, use of microfiber textiles, etc.

APPENDIX 2 GREENING ACTIVITIES UNDERTAKEN BY SAIS (LIST IS NOT EXHAUSTIVE)

SAI	Greening Initiatives implemented by SAIs	Challenges in implementation/SAIs staffs support	international certification obtained/planned
Australia	▪ Established an Environmental Strategy (reviewed annually) that incorporates an environmental policy, environmental management system and monitoring/ reporting arrangements. The environmental areas impacted by the strategy are: energy consumption; information and communications technology (including equipment to per end user ratio, and paper consumption); waste (recycled paper, comingled recycling, general waste and organic waste); water usage; transport; and property management (building energy efficiency). ▪ Initiatives introduced during 2013-14 included: upgrading halogen down lights to LED lights; installing a windbreak in the reception area to eliminate wind tunneling effect when both sliding doors open simultaneously; correcting air conditioning issues in the ANAO data centre to reduce energy consumption; and promoted paper reduction guidelines.	▪ Challenges related only to the extent of the (minor) disruption to normal operations ▪ Generally, the ANAO has received good support from staffs. ▪ Periodic promotion of greening initiatives to staff reinforces the benefits of these initiatives.	No
Azerbai-jan	▪ The Chamber of Accounts took part in the greening and planting of trees on the side of the airport road in 2012	No challenges	No
Bangla-desh	▪ Office building SAI constructed in a way with sufficient sunlight naturally enters the office rooms directly and saves electricity consumption	No challenges	No
Bhutan	▪ To reduce the use of paper in the office, SAI Bhutan has initiated a system called Office Procedures Automation (OPA) System as a medium to deliver information to the auditors ▪ Centralize printing or audit reports: engaging only few printing machines; ▪ In the Strategic Plans 2010-2015, the SAI Bhutan had identified 'Greening the RAA (SAI Bhutan)' as one strategy under the Programme Goal 3 (To reduce cost of audit) – it requires transmitting of audit reports electronically in the future.	Challenges in transmitting of audit reports electronically since it also requires acceptance of the users of the reports and issues on sensitivity of information contained in the audit reports	No

SAI	Greening Initiatives implemented by SAIs	Challenges in implementation/SAIs staffs support	international certification obtained/planned
Brazil	▪ Resource use: self-closing basin taps and automatic flush valves in restrooms to reduce water consumption; although not originally intended, electronic work processes helped reduce paper consumption. ▪ The TCU established its Institutional Policy on Sustainability and created the Steering Committee for Sustainable Logistics (CLS) in April 2015. ▪ CLS aims to propose, formulate and implement the guidelines of the Sustainable Logistics Plan (PLS). ▪ The CLS is responsible for defining model for sustainable logistics management, promoting best practice in sustainable logistics, publishing annually the results achieved and benefits accrued as well as drafting strategic regulations for consideration of senior management. ▪ The TCU through CLS has adopted selective waste collection. It has also encouraged sustainable practices through weekly news bulletin, collected data on consumption of water electricity and development of indicators for actions of CLS. ▪ TCU, in its new building projects, has also adopted sustainable practices such as use of rainwater harvesting, natural lighting and ventilation, efficient sanitary appliances and artificial lighting	▪ The real challenge is to expand initiatives beyond these somewhat basic measures. ▪ Staffs could be expected to show support but the senior administration is not fully committed to greening our SAI.	No
Bulgaria	▪ Introduction of PENTANA audit software, most SAI Board meetings are paperless	▪ Insufficient financial resources	No
Came-roon	▪ Green spaces have been provided in the courtyard of the building ▪ Minimize the use of printed material: most documents are transmitted through internet ▪ Campaign to use lights is only conducted when it is imperative and it is forbidden to turn on lights during non-working periods (at night). The efforts are being made to use economic bulbs that consume less	▪ Difficulties in adopting new energy serving measures; ▪ Cost involved in maintaining green space	No

SAI	Greening Initiatives implemented by SAIs	Challenges in implementation/SAIs staffs support	international certification obtained/planned
Canada	▪ Position of Commissioner of the Environment and Sustainable Development was created in the Office who conducts performance audits and reports to Parliament on the federal government's management of environment and sustainable development issues. ▪ Departmental Sustainable Development Strategy (2014-2016) was developed and outlined 14 commitments (each with specific due dates and individuals responsible for ensuring that the commitment is completed) related to SDS (http://www.oag-bvg.gc.ca/internet/English / acc_rpt_e_38860.html) ▪ OAG Green Team: A component of the OAG sustainable development strategy. The Green Team is a volunteer group within the office with a series of sub-committees including: ▪ Greening events and meetings: Their tasks are to remind people to use of re-usable cutlery and plates, to ensure kitchens are stocked with re-usable dinner ware, and to buy stock of compostable plates and cutlery. ▪ Eco-bulletin: Publish an eco-bulletin at least 4 times a year. (Or as required). ▪ Enviro and Social Events: Organize activities during events such as Canadian Environment Week (first week of June), Earth Day (April 22) and Earth Hour (March of each year), organize photo contest and organize other events (e.g. vegetarian and organics pot luck or swap gently used clothes events). ▪ Green Series: Organize presentations on an environmental or SD topic. Invite external or internal presenters or project a movie or documentary.	▪ Competing priorities make it difficult to focus on non-audit related Greening Initiatives. However, further effort is being made to integrate environmental considerations into audit-related work	No
China	▪ Strengthen the awareness of saving electricity, water and energy ▪ Carry out assessment annually to reduce the consumption of office supplies ▪ Advocate moderate consumption, and a green and low carbon way of life		

SAI	Greening Initiatives implemented by SAIs	Challenges in implementation/SAIs staffs support	international certification obtained/planned
Costa Rica	▪ Annual Environment Fair: comprises of cultural and environmental activities to inform and make employees aware of sustainable environment best practices; activities such as poetry and oratory competitions, environmental games, dance and plays presentations; Zero Paper Competition: Department that saves more paper in the last year is rewarded; "Green Corner Competition": Department that builds the best model about an environmental issue is rewarded; Recycling Campaign for remainders generated in the homes of the employees; stands of products/information about environmental development; 30 minutes for environment activity: electricity consumption is reduced during 30 minutes as much as possible. The results are published in the SAI. ▪ Committee to address issues related to sustainable development, implement strategies to reduce carbon emissions, bring environmental education, as well as save and conserve natural resources. It leads all the greening initiatives through programs and projects. ▪ Devices that reduce water consumption, like faucet with infrared sensors and water-free urinals. ▪ Automation of lights system with sensors of movement and replacing lights by lamps of low consumption. ▪ Guidelines for sustainable purchases. ▪ Monthly consumption records of paper, fuels, water, electrical energy and generation of remainders. ▪ Replacement of cleaning products by others with higher biodegradation. ▪ Projects that are scheduled for February 2015 include training for staffs about eco-efficient driving, construction of a waste storage facility, offsetting carbon emissions by buying eco-label for vehicle fleet and environmental compensation for trips abroad.	▪ Top management has always supported the initiatives of the Committee. It has been necessary to drive institutional support for projects. ▪ While most functionaries are aware of the importance of these actions and they participate actively in the activities that are scheduled, it remains a challenge to ensure the proactive support to initiatives by personal choice.	▪ No plans In the short term ▪ Planned to obtain national award "Bandera Azul" (Climate Change category) which considers reduction efforts in water, electricity, fuel/ paper consumption, environmental education, etc. ▪ Plan to obtain certification of C-Neutrality under standard INTE 12-01-06: 2011

SAI	Greening Initiatives implemented by SAIs	Challenges in implementation/SAIs staffs support	international certification obtained/planned
Croatia	▪ Reducing paper usage and paper waste ▪ Use of electronic forms whenever possible, e-mail letters and documents to be read online rather than printed out ▪ Auditors use laptops during field work so they don't need printed materials. By using less paper we also reduce printer usage ▪ Whenever possible auditors use public transportation when going to field work ▪ Reducing energy usage especially for heating and cooling offices	▪ Auditors as well as staffs support green initiatives	No
Cyprus	▪ The General Auditor issued internal guidelines (2009 & 2014) highlighting energy saving actions to be taken for achievement of targets and fulfillment of obligations set by EU Directives 2012/27/EU, on energy efficiency and 2010/31/EU, on the energy performance of buildings. These guidelines cover, inter alia, office lighting, the operation of air conditioning units and personal computers ▪ An Energy Conservation Officer has been appointed by the Auditor General for the implementation of these directives. ▪ Participation in recycling programs for paper and batteries/accumulators.	▪ The above initiatives are supported and mostly implemented by staffs, yet a small degree of non-compliance has been noted by the responsible Officer. ▪ 9% drop in energy consumption was recorded in 2013 compared to 2012.	Procedures are currently under way to obtain an Energy Performance Certificate for the building of the Audit Office of the Republic. It is expected that these will be completed, and the certificate obtained, in 2015.
Czech Republic	▪ Sorting of waste ▪ Internal rules for ecological using electricity equipment ▪ Internal rules for ecological and economic printing ▪ Less using paper documents – electronic files for each audits ▪ More using it for communications with our regional departments	▪ Internal rules are binding for staffs, but approach of our staffs is positive.	No

SAI	Greening Initiatives implemented by SAIs	Challenges in implementation/SAIs staffs support	international certification obtained/planned
ECA	▪ Energy reduction: During construction of the newest building, assessment schemes for building projects were used and BREEAM environmental certification requested; progressive replacement of desktops by laptops; use of video-conferencing and electronic data exchange to avoid travelling; offering the possibility of home-working; 100% of purchase of electricity from renewable resources; progressively replacing traditional light bulbs with low energy light bulbs. ▪ Transportation: opened a new ECA Bicycle Room equipped with new showers and changing areas; installed a recharging station for electric cars freely available for those who opt for more sustainable form of transport ; promotion of public transport by providing bus passes for ECA staffs (Jobkaart); all ECA staffs entitled to free use of the Vel'oh! Bicycle network; promoting carpooling through ECA Carpooling website. ▪ Saving of natural resources: removed papers and plastic cups and replaced them with reusable mugs; implementation of printing policy; use of the 100% recycled paper; installation of the system to recover rain water; compensated for trees felled on the construction of the new building; green space management project is in progress, with the aim of preserving biodiversity. ▪ Promoting eco-consciousness: Promotion of best practices through the organization of and participation in different environmental campaigns, events and seminars such as: EU Mobility Week, EU Green Week, Green IT seminar, Printing policy presentation, Take the stairs Campaign, Earth Hour; eco-consciousness training for new-comers; ▪ Public procurement: started including environmental criteria in recent invitations to tender, aimed at awarding contracts to contractors who provide environmentally-friendly services. ▪ Waste management: achieved a quality label for exemplary waste management – Super Drecks Këscht ® (SDK)	▪ ECA staffs fully support the project through very active participation in different environmental campaigns, trainings and events and also through applying "green practices" in the workplace.	▪ EMAS[12] registration is envisaged by the end of 2016.

12 EMAS - the Eco-Management and Audit Scheme, is at the present considered as the strictest international certification for environmental management [based on EU Regulation (EC) No 1221/2009]. EMAS is a voluntary tool developed by EC in 1995 for any type of companies or organisations that helps evaluate, report and improve their environmental performance and reduce their environmental impact.

SAI	Greening Initiatives implemented by SAIs	Challenges in implementation/SAIs staffs support	international certification obtained/planned
Estonia	▪ Move to almost paperless document management: All administrative/ audit documents of the ENAO are produced and filed electronically, internal signing procedure is digital with the use of ID cards and electronic signatures, ENAO mails letters/ documents in physical format only in exceptional cases on paper, all incoming paper documents are digitalised and paper copies are not circulated in the office, digital archive, printers available at each floor to be used in case of need, default settings encourage double-sided printing and use of recycled paper. ▪ Energy saving: most office machines (e.g. laptops) hold Energy Star labels, office cars have energy saving functions, a detailed internal policy for shutting windows and switching off the lights, individual temperature control options in every office ▪ Consumption of fewer resources: purchase, where possible, of office consumables (e.g. paper, pens etc.) with eco-labels; the use of bottled water is kept to a minimum and instead water is provided in 19 litre refillable water containers. ▪ Waste sorting: paper waste collection sites located at each department; and hazardous waste (e.g. batteries), as well as plastic and glass bottles are collected separately, electronic devices recycled by companies who hold specific certificates, green procurement strategy adopted ▪ Company managing the office building and providing cleaning service holds an ISO 14001:2004 for Environmental Management System. ▪ Transportation: Promote using public transportation during office hours and when possible (e.g. when visiting auditees), promote using bicycles – new innovative bicycle parking area next to the office using electronic mobile locking system bike racks ▪ Raise awareness among the staff – during a waste audit conducted by the ENAO, also our own staffs were asked to be involved to detect the reported official waste sorting areas all around the country and to report on their condition and usability	▪ Greening initiatives in the office have become an everyday routine and the staffs have been fully supportive. ▪ Main challenge for the Office is use of taxis. Staffs need to consider if taxi is required or other alternatives could be used (e.g. going on foot or using public transportation). Very often the distances are very short (1.5 km) and using taxi services is not justified ▪ ENAO is planned to be moved to a renovated medieval-time building in Tallinn Old Town and as rules for protection of cultural heritage should be followed, this limits having a higher energy class building.	▪ Obtaining the EU Eco-Management and Audit Scheme (EMAS): a management instrument for organizations to evaluate, report, and improve their environmental performance (similar to ISO standard) ▪ All required aspects were mapped and a report was developed for the management board. But as the office is about to move to another building in the near future, activities for obtaining the EMAS certificate were postponed for the time being.

SAI	Greening Initiatives implemented by SAIs	Challenges in implementation/SAIs staffs support	international certification obtained/planned
Fiji	▪ Turning lights and air cons off during lunch hour ▪ Printing of documents using both sides of the paper ▪ Recycling of used papers ▪ SAI has an in-house committee to monitor these initiatives	▪ No challenges, staffs are fully supportive of the initiative.	No
Finland	▪ Office has Policy Programme for Sustainable Development 2013-2020	▪ No challenges, staff fully support the plan	No
Greece	▪ Recycling paper: Special boxes for disposal of paper next to each photocopier and in selected areas of the central building ▪ Automatic shutdown of heating and cooling systems of the building after working hours	▪ Difficult to monitor if staffs really comply with the obligation to put waste papers in the special boxes ▪ Difficult to monitor if cleaning staff carries waste paper in the recycling bins outside the building	No
India	▪ Wherever new buildings being constructed, adherence to green building norms should be done. ▪ Electronic/ mechanical products purchased should have energy certification. ▪ Energy saving measures—sensors to switch lights. ▪ Waste minimization measures	▪ Costs of implementing new measures	Not yet. Two buildings are planning to get Green Building Certification. One of these buildings is the International Centre for Environment Audit and Sustainable Development (iCED) which is a Global Training Facility for the INTOSAI WGEA
Indone-sia	▪ The training centre has started an initiative in paper and electricity savings	▪ The main challenge was to shift the paradigm and attitude of the staffs. Finally, they fully support the program.	No

SAI	Greening Initiatives implemented by SAIs	Challenges in implementation/SAIs staffs support	international certification obtained/planned
Kuwait	▪ Energy Saving and Decreasing CO_2: building design which maximises natural light, increases green spaces inside and outside SAB by using plants, programed control system for lighting, energy saving lights, and a programmed replacement with (LED) lights etc., ▪ Use of natural and artificial recyclable materials during design and construction like the use of celeste rocks, granite rocks, metal structure used for glass cube surrounding the building, metal covers for walls and piers in the main lobby, external entrances, and others. ▪ Recycling of materials used like papers and plastic ▪ SAB is smoke free building; dust is minimized; air vents are monitored. ▪ Spread Greening SAB Building among SAB staffs by periodical publications internal websites, printed publications to educate the employees about papers and plastic containers placed in the different floors, text messages are sent to SAB employees that explain the recycling importance.	▪ No Challenges	Local Certificates from Ministry of Electricity & Water: The ministry presents appreciation certificates for SAB annually in support of the rationalizing and reducing of electricity consumption.
Latvia	▪ Process of implementing an electronic document management system has started. The system is supposed to reduce not only the time spent on managing documents, or retrieval of documentation, but also to decrease papers and printer toner consumption. SAI's objective and the main greening initiative currently is the way towards a paperless office.	▪ Beginning of the system implementation phase, so cannot comment on challenges yet.	None planned
Lithuania	▪ Sorting recyclable materials (paper and plastic), collecting small electronic equipment/ battery cells & forwarding these for recycling. ▪ Green public procurements of furniture, papers, cleaning products, office equipment (printers, fax and copying machines, scanners, etc.), IT equipment (computers, monitors), light bulbs, home appliances, and mobile phones ▪ The environmental criterion of energy efficiency was applied when purchasing cars in 2012	▪ Full support of staffs	No

SAI	Greening Initiatives implemented by SAIs	Challenges in implementation/SAIs staffs support	international certification obtained/planned
Malaysia	▪ Government Instructions on reduce energy consumption by reducing air-conditioning temperature and switching off the lights during lunch time/ after work	▪ Full support by the staffs	N/A
Malta	▪ In accordance with Public Sector Policy, a 'Green Leader' is appointed to further promote environmental awareness.	▪ The major challenges related to the creation of mechanisms to implement environmentally-friendly practices, such as recycling and separation of waste as well as the efficient use of energy. ▪ The majority of NAO staffs fully supported and cooperated in the implementation of such initiatives	No
Nether-lands	▪ Operations: Reduction of CO_2 footprint from 412 MT in 2009 to 300 MT in 2013; 100% renewable energy; energy efficiency measures in our headquarters; promotion of use of public transport and bicycles; higher than average investment in training and education; improved gender balance in management; green meetings guide; support for volunteering initiatives and large number of traineeships. ▪ Core business: 'People' and 'Planet' key pillars of Strategic Plan, resulting in many performance audits and public debate on these themes	▪ Measures were supported by the staffs of our SAI.	No but we plan to work towards an integrated report in line with international standards

SAI	Greening Initiatives implemented by SAIs	Challenges in implementation/SAIs staffs support	international certification obtained/planned
New Zealand	▪ Waste management: most offices operate waste recycling to reduce the amount of waste to landfill. ▪ Video conferencing: extensive use of video conferencing between offices to reduce air and vehicle travel. ▪ Resource use: MFD printers that have very high Eco ratings for emissions within the office and energy saving "turn off" functions and most printers are set to print double sided to reduce paper consumption. ▪ SAI Wellington building, which houses most staffs, has an "active chilled beam" air-conditioning system which is relatively new to the New Zealand market and has benefits like being more energy efficient, low maintenance therefore low cost, longer life expectancy and occupant comfort. ▪ Our proposed new vehicle policy specifies a minimum of 3½ stars economy rating.	▪ Staffs generally support these initiatives. Support is more likely if there are clear environmental benefits and cost savings.	No
Norway	▪ Carried out a mapping of the organization's environmental impact in the areas of energy, waste, procurement and transport and developed a set of suggested indicators and measures within these areas. The mapping followed the principles of environment management system (ISO 14 001), but the purpose was not to achieve a certification ▪ Annually status, implemented measures and changes are reported on by using the developed indicators. Based on the results, the organization should consider whether new measures should be implemented.	▪ One evident challenge so far is little knowledge about the system, which is administered/ followed up by administration department, which is separated from audit departments. So far many of the measures have not been implemented, so monitoring and follow up is a challenge.	Purpose is not to obtain a certification

SAI	Greening Initiatives implemented by SAIs	Challenges in implementation/SAIs staffs support	international certification obtained/planned
Poland	▪ Conduct a survey among employees about compliance with rules concerning environmental protection in the workplace and approval for the initiative to make NIK an environmental friendly office ▪ Appointment of a team responsible for the System of Environmental Management (SZŚ) comprising of NIK employees, which was to design the SZŚ ▪ Introduction of an Environmental Policy of NIK and establishing of the environmental management system in compliance with the ISO 14001:2004 norm ▪ Energy use: successive exchange of light bulbs for the energy-saving ones; taking into consideration the criterion of energy efficiency while purchasing the electric devices; limitation of heat in the rooms in which temporary no employees are present; design of the Building Management System – BMS that provides monitoring and control of the ventilation, air conditioning, heating and electric installation; installation of solar panels used to heat water and the bio fuel boiler (pellets) to heat the training centre of NIK – 2004/2005 ▪ Paper use: two sided printing of documents, purchase of paper with the FSC certificate, use of management system of documents and cases to be made accessible in an electronic form ▪ Waste management: organization and selective collection of communal waste; improvement of the system of transfer of waste other than communal deemed for recycling (among others waste paper, used toners, scrap metal) Transportation: Limitation of the business trips by using the video conference system to conduct conferences and trainingMonitoring of the electric and heat energy as well as water and paper use by means of an IT application prepared in NIKAwareness : Promoting pro-environmental behaviour in the workplace among the employees via the Intranet, creation of a sub-site on the www.nik.gov.pl web page that allows the users to access the audit results in the scope of environmental protection	▪ NIK is an institution which comprises of many units (central office and 16 field offices – regional branches); while designing the system, differences concerning environmental systems/ regulations had to be taken into consideration, as well as the organizational requirements present in the particular locations. ▪ Difficulties connected with execution of basic regulations in the scope of environmental protection and the Environmental policy of NIK by external companies providing services for NIK; this concerns in particular the renovation and construction companies; such situation is caused by low ecologic awareness of the employees of those companies. ▪ Difficulties concerning the possibilities of further improvement of the waste segregation system.	No

SAI	Greening Initiatives implemented by SAIs	Challenges in implementation/SAIs staffs support	international certification obtained/planned
Saudi Arabia	▪ Implementation of environmental audits	▪ Lack of awareness of the importance of environmental auditing	No
Slovenia	▪ Separate collection of waste and assuring proper treatment of all kind of waste ▪ Integrating possible environmental component (e.g. composition of recycable materials, producers with eco-labels, etc.), when purchasing equipment and materials ▪ Always serving tap water at meetings, conferences, and other functions	▪ The staff fully and willingly accepted above mentioned measures.	None
South Africa	▪ Commissioned Carbon footprint (CF) reported in the past year to establish a baseline for future management for water use, electricity use, paper use, road and air transport. ▪ Waste Minimisation: Procured iPads, standardised settings on multifunction printing devices that enable efficient use of paper, i.e. Back-to-back printing by default; Discontinued the use of printed newspapers and introduced electronic ones; Sorted waste for disposal, i.e. Separated paper, glass, cartridges and hazardous waste. ▪ Business travel minimisation: Video-conferencing systems for meetings, remote connection to the SAI systems from laptops to reduce travelling ▪ Resource use: timers installed for water sprinkler system at two offices, motion detector for lighting installed at one of the offices ▪ Initiatives to offset metric tons of carbon dioxide are underway	▪ Staffs were a little apprehensive on the introduction of some initiatives, such as the replacement of printed newspapers. The staffs have however fully supported the initiatives once they have seen the benefits of the new approach.	No
Turkey	▪ Recycling facilities for papers and batteries ▪ Exterior heat insulation for the building	▪ Staff support	No

SAI	Greening Initiatives implemented by SAIs	Challenges in implementation/SAIs staffs support	international certification obtained/planned
Uganda	▪ SAI has not put in place any formal greening initiatives. However, the following practices form part of a general culture within the SAI: ▪ Preference of soft copies instead of printing; ▪ Use of Intranet ▪ Use of teammate and spread of its utilisation in all audit directorates as a way to store and document audit steps and working papers	NA	NA
United King-dom	▪ SAI has set challenging targets to reduce the environmental impact of SAI business, including for CO_2 emissions; business travels; paper usages; waste generated; and water use ▪ Range of initiatives taken to meet these targets including a printing awareness campaign ▪ A group of staffs meet regularly to review progress ▪ Reduced emissions by 26 per cent compared to a target reduction of 20 per cent	▪ Challenges in waste reduction measures ▪ Difficulties in reducing the number of domestic flights	Re-certified as ISO 14001:2004 compliant in 2013
USA	▪ GAO's energy consumption in fiscal year 2013 was 13 percent lower than in 2003. ▪ Energy consumption: Installed a natural gas powered water boiler system; replaced the HVAC delivery system to improve temperature control and energy efficiency; upgraded of the chiller controls and replaced the purge; replaced incandescent bulbs in the auditorium with LEDs, replacement of air handlers on the west side of the penthouse (ongoing)	▪ GAO's management fully supported these efforts	No
Zim-babwe	▪ Initiative to separate plastics, papers and metals when disposing waste at the office is at an advanced stage. When separated the respective waste will be sold to firms which recycle ▪ Considering the use of bulk water dispensers instead of buying bottled water in small packs.	▪ There are no challenges yet encountered since the idea is still at the inception stage. The SAI has fully embraced the idea.	Not yet

Bibliography

International best practices in terms of policies, laws, legislation

Some international standards/ certifications that can be used to green offices—ISO 14001, EMS etc.

Public Sector Environmental management: Reducing the environmental impacts of public sector operations by the Australian National Audit Office

www.environmental-auditing.org

ISBN 978-979-15853-7-8