

Template Environmental Policy for NRENs

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Version: 1.0

Date: 10-04-2014

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1 Introduction

Countries, organizations and individuals are becoming increasingly aware of the need to transition to a environmentally sustainable society. In order to do so, we need to use renewable energy; become much more energy efficient; reduce the amount of (exotic) materials we need; minimize waste production; stimulate sharing (in communities) and help each other to change our awareness and behaviour. As we are witnessing how information and communication technologies are changing society, many innovations and efficiency gains needed for the transition are made possible by (Green) ICT. Through automation and digitalization, ICT can optimize processes and substitute physical activities for digital activities (and dematerialize the footprint). In addition, ICT can provide valuable information through data mining and analyses to support decision-making and give timely feedback on our behaviour. In short, ICT can play an important role in greening our society.

As innovative organizations close to the needs of society, smart use of ICT for sustainability is naturally relevant for NRENS. This has also been recognized by the European Union in their grants for the GN3 and GN3+ programs in which activities related to Green ICT have been included, carried out by the so called GEANT Green Team. To help NRENS formulate their role in greening society, this document provide means to create an environmental sustainability policy. Here, we provide a template and suggestions for such a policy. The purpose is to inspire NRENS to publish their own policy and make it easy to create a policy.

2 How to use

The GEANT Green Team suggests that an NREN's environmental sustainability policy should consist of a general motivation and a number of statements supporting that motivation. The policy should be formulated in such a way that it remains relevant for a significant period of time (i.e. it should not be changed on a yearly basis). The statements could (and should) be used as (architecture) principles, guiding the way the NREN carries out its activities.

Creating a policy can be very straightforward. Below we provide a simple template consisting of two parts: one for a motivation and one for statements. In addition, NRENS can find suggestions for a motivation and statements. We suggest that NRENS start out by copy-pasting the elements they want to use in the template and personalize it by adjusting it, maybe add extra statements, etc.

The final step is to gain approval from the NREN management and publish it within the organization and online. The GEANT Green Team would also like to gather all published NREN sustainability policies on one webpage to create an overview, which can be found here: <http://www.geant.net/Network/Environmental-Impact/Pages/Policy.aspx>. Please let us know if your NREN has published it's environmental sustainability policy so that we can add it to the list. You can also use this list as an inspiration for your own policy.

3 Template for an environmental policy

The template provided here can be used as a starting point for creating an environmental sustainability policy. Just copy-paste the example motivation and the statements you like and make adjustments from there. Or you could start from the full example policy provided in the appendix.

<NREN NAME> Environmental Sustainability Policy
<p><i>Motivation</i></p> <p><insert text here></p>
<p><i>Statements</i></p> <p><NREN NAME> will:</p> <p><insert statements here></p>

3.1 Motivation

The purpose of the motivation is to show why the NREN finds it important to have an environmental sustainability policy. It should describe on a general level what motivates the NREN to act sustainably.

Example motivation:

ICT is one of the fastest growing sectors in terms of energy consumption. The increasing pervasiveness of ICT and the continuously growing demand for more computing and bandwidth creates a significant footprint within organizations and as whole. Optimizing energy and material efficiency of ICT services is imperative to ensure both economical and environmental sustainability.

<NREN NAME> is aware of the impact of greenhouse gases (GHG) on our climate and on prospects for society now and in the future. We accept that people and organisations at all levels have obligations to control GHG emissions and to act responsibly in our lives and our businesses.

Furthermore, <NREN NAME> has a special position due to its national standing, its intimate relationship with higher education and research and its advocacy of leading-edge technology and applications. In this sense, we have a duty both to adopt environmental best practices, and to promote appropriate networking technology as an alternative to practices which act as large pollution and emission sources.

Therefore, we will integrate environmental best practices into our business activities while maintaining an appropriate balance between environmental and economic considerations.

In addition, we will help and support the higher education community in their transition to a low-carbon operation through our services and through sharing our knowledge and expertise.

3.2 Statements

The purpose of the statements is to provide guiding principles for activities at the NREN. They should increase awareness and stimulate behaviour change for NREN staff as well as be an inspiration for new activities.

Since NRENs have a special position with their connection to the Higher Education community, there are a number of different ways for NRENs to carry out environmental sustainable activities. We have therefore defined statements on four different levels - representing a form of maturity if you wish - that relate to the NREN's own organization as well as extend into society:

- Making the own organization sustainable
- Delivering green services
- Helping the HE community use Green ICT
- Doing good for society and remaining relevant

Making the own organization sustainable

- **Apply** responsible standards in areas not already covered by existing laws and regulations;
- **Report** on the environmental footprint and be transparent about how it is built up;
- **Monitor** energy and material use and create an energy-aware infrastructure;
- **Save** energy through the procurement and use of energy efficient equipment and energy efficient management of equipment;
- **Respect** the environment and emphasise every employee's responsibility to improve environmental performance;
- **Observe** prudence in our use of resources and reduce wastage as far as economically possible;
- **Support** staff in the use of sustainable practices at the office, during travel or at home;
- **Help** to achieve relevant targets set for sustainable operations and development;
- **Re-use** and recycle where possible, and dispose of what is left in a responsible way.

Delivering green services

- **Consider** environmental issues in all our business activities, including procurement decisions for goods and services;
- **Develop** services that naturally reduce GHG emissions of their users through substitution and optimization effects of ICT.

Helping the HE community use Green ICT

- **Promote** the use of appropriate ICT services as an environmentally positive alternative;
- **Share** experiences with others to foster wider improvements within the community and communicate with the Research and Education community on environmental matters.
- **Stimulate** HE institutions to share best practices on environmental sustainability within the community.

Doing good for society and remaining relevant

- **Work** with others in the NREN community to raise standards and carry forward greater enhancements in environmentally sensible practices;
- **Push** vendors and other suppliers to improve their environmental standards through procurement and service level agreements;
- **Participate** in research activities to discover new innovations in Green ICT;
- **Collaborate** with HE institutions, governments and industry partners to maximize overarching impacts and avoid local maxima.

4 Examples for each statement

Because we recognize that statements can be a little abstract, we would like to provide some examples from our own experiences to show what such a statement might mean. Note that these are just examples and do not necessarily mean an NREN has to do the exact same activities in order to fulfil the statement.

Statement	Examples
<i>Making the own organization sustainable</i>	
Apply responsible standards in areas not already covered by existing laws and regulations	EPEAT, ENERGY STAR, BREEAM.
Report on the environmental footprint and be transparent about how it is built up	GEANT GHG Audit
Monitor energy and material use and create an energy-aware infrastructure;	Remote Real-time Monitoring of Power Distribution units in Data Centres and at PoPs
Save energy through the procurement and use of energy efficient equipment and energy efficient management of equipment	
Respect the environment and emphasise every employee's responsibility to improve environmental performance	Hold Environmental Days awareness at NREN every X time.
Observe prudence in our use of resources and reduce wastage as far as economically possible	Review of GHG results
Support staff in the use of sustainable practices at the office, during travel or at home	Stimulate the use of public transportation and carpooling.
Help to achieve relevant targets set for sustainable operations and development	
Re-use and recycle where possible, and dispose of what is left in a responsible way	Local Recycling policies
<i>Delivering green services</i>	
Consider environmental issues in all our business activities, including procurement decisions for goods and services	<ul style="list-style-type: none"> - Use Total-Cost-of-Ownership approach in procurement - Use green guiding principles in tenders - Think about end-of-life when procuring or designing new services.
Develop services that naturally reduce GHG emissions of their users through substitution and optimization effects of ICT	To reduce travel: <ul style="list-style-type: none"> - Videoconferencing - Online collaboration tools
<i>Helping the HE community use Green ICT</i>	
Promote the use of appropriate ICT services as an environmentally positive alternative	<ul style="list-style-type: none"> - Highlight savings achieve with Video Conferencing & Remote Working - Dematerialization activities such as school e-Books and Digital examinations
Share experiences with others to foster wider improvements within the community and	Support Initiatives such as FEE (Federation for Environmental Education)

communicate with the Research and Education community on environmental matters	
Stimulate HE institutions to share best practices on environmental sustainability within the community	Highlight success stories in newsletters and at conferences Perhaps promote a competition to stimulate these activities
<i>Doing good for society and remaining relevant</i>	
Work with others in the NREN community to raise standards and carry forward greater enhancements in environmentally sensible practices	GEANT Environmental (Green Team) work and associated activities
Push vendors and other suppliers to improve their environmental standards through procurement and service level agreements	Inclusion of Environmental consideration section in Procurement Documents
Participate in research activities to discover new innovations in Green ICT	ECONET
Collaborate with HE institutions, governments and industry partners to maximize overarching impacts and avoid local maxima	

5 Example Policy

You can use the policy below as a starting point and edit and adjust it to your wishes. The policy below includes the full motivation text and all statements.

<NREN NAME> Environmental Sustainability Policy

Motivation

ICT is one of the fastest growing sectors in terms of energy consumption. The increasing pervasiveness of ICT and the continuously growing demand for more computing and bandwidth creates a significant footprint within organizations and as whole. Optimizing energy and material efficiency of ICT services is imperative to ensure both economical and environmental sustainability.

<NREN NAME> is aware of the impact of greenhouse gases (GHG) on our climate and on prospects for society now and in the future. We accept that people and organisations at all levels have obligations to control GHG emissions and to act responsibly in our lives and our businesses.

Furthermore, <NREN NAME> has a special position due to its national standing, its intimate relationship with higher education and research and its advocacy of leading-edge technology and applications. In this sense, we have a duty both to adopt environmental best practices, and to promote appropriate networking technology as an alternative to practices which act as large pollution and emission sources.

Therefore, we will integrate environmental best practices into our business activities while maintaining an appropriate balance between environmental and economic considerations.

In addition, we will help and support the higher education community in their transition to a low-carbon operation through our services and through sharing our knowledge and expertise.

Statements

<NREN NAME> will:

- **Apply** responsible standards in areas not already covered by existing laws and regulations;
- **Report** on the environmental footprint and be transparent about how it is built up;
- **Monitor** energy and material use and create an energy-aware infrastructure;
- **Save** energy through the procurement and use of energy efficient equipment and energy efficient management of equipment;
- **Respect** the environment and emphasise every employee's responsibility to improve environmental performance;
- **Observe** prudence in our use of resources and reduce wastage as far as economically possible;
- **Support** staff in the use of sustainable practices at the office, during travel or at home;
- **Help** to achieve relevant targets set for sustainable operations and development;
- **Re-use** and recycle where possible, and dispose of what is left in a responsible way.
- **Consider** environmental issues in all our business activities, including procurement decisions for goods and services;
- **Develop** services that naturally reduce GHG emissions of their users through substitution and optimization effects of ICT.
- **Promote** the use of appropriate ICT services as an environmentally positive

alternative;

- **Share** experiences with others to foster wider improvements within the community and communicate with the Research and Education community on environmental matters.
- **Stimulate** HE institutions to share best practices on environmental sustainability within the community.
- **Work** with others in the NREN community to raise standards and carry forward greater enhancements in environmentally sensible practices;
- **Push** vendors and other suppliers to improve their environmental standards through procurement and service level agreements;
- **Participate** in research activities to discover new innovations in Green ICT;
- **Collaborate** with HE institutions, governments and industry partners to maximize overarching impacts and avoid local maxima.