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Cities Environment Reports On the Internet: understanding the CEROI template

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Contents

About CEROI	4
SoE reporting – an introduction	5
The template	6
Issues and themes	7
DPSIR framework	8
Indicators	9
Think!	10
SoE Checklist	11

About CEROI

Cities Environment Reports On the Internet (CEROI) is a programme within the framework of Local Agenda 21. Its purpose is to facilitate access to environmental information for sound decision-making and awareness-raising in cities, both locally and world-wide.

A sustainable local environmental policy requires knowledge and easy access to environmental information for politicians, administrators and citizens. The CEROI programme aims to bring together a network of cities that want to make information about their environment available on the Internet in an easy-to-understand, well-structured and internationally comparable format. The concept provides city authorities with an efficient tool to produce and present a report on the cities' environment on the Internet, as well as through other media such as CD-ROM. City reports are based on a template with standardised presentation of issues and indicators. Work with the template is facilitated through a tailor-made software for easy presentation of graphs, maps, photographs and text in a uniform electronic format.

A CEROI secretariat has been established at UNEP/GRID-Arendal in Norway to

promote, develop and facilitate the network of CEROI cities and to help raise funds for participation of cities in developing countries and in countries with economies in transition. The pilot phase of the project has been supported by UNEP and the Norwegian Industrial and Regional Development Fund through a public research development contract with the Norwegian software developing company Ugland Publikit. Over 20 pilot cities have participated in the pilot phase. An international Advisory Board has been set up in order to ensure continuous communication and co-ordination between cities and organisations. This Board is composed of leaders from UNEP's Regional Office for Europe, the European Environment Agency (EEA), the Healthy Cities Project of the World Health Organisation (WHO), the Global Urban Observatory of UNCHS/Habitat, and the International Council of Local Environmental Initiatives (ICLEI).

For more information, please visit the CEROI web site: <http://www.ceroi.net/>



SoE reporting – an introduction

The purpose of a state-of-the-environment (SoE) report is to describe the state of the environment in a city so that an information base for awareness and action can be developed. The audience of such reports includes administrators, politicians, media, schools, universities, industry, businesses, and the general public. These groups may utilise information contained in the report for decision making purposes, ranging from voting choices to policy setting.

An SoE report normally asks and answers questions like:

- what is happening to the city's environment, and what are the consequences?
 - why is it happening?
 - what is being done, and what else can be done to solve the problems?
-

The impetus for SoE reporting is partially due to the adoption of Agenda 21 at the 1992 UNCED conference in Rio de Janeiro. Chapter 40 of Agenda 21 specifically calls for improved environmental information for decision-making. In Europe, the recently adopted Århus

Convention on Access to Information, Public Participation in Decision Making and Access to Justice in Environmental Matters leads in a similar direction.

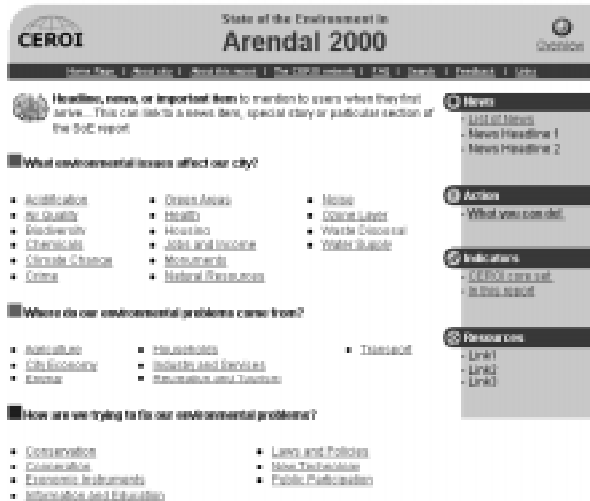
SoE reports are now being prepared globally as well as nationally, regionally and locally. A continuously increasing number of such reports are being made accessible in electronic form through the Internet, thus reaching a wider audience. Moreover, Internet publishing can improve the overall cost-efficiency of SoE reporting and make updating information in the report much easier.

CEROI has developed a template for cities making environmental reports on the Internet. Cities can use a ready-made, yet flexible structure that includes suggestions for themes and format for presenting information. The use of indicators is promoted to make the reports more credible, convincing, and easy to read.

For more information, please examine UNEP/GRID-Arendal's Cookbook for State of the Environment Reporting on the Internet:

<http://www.grida.no/soe/cookbook/>

The template



The CEROI template provides the structure, graphical layout and framework for a report. It allows you to insert collected data in a finished report framework, which requires relatively little technical work.

The main structure of the report is already made for you in the way the different themes and their corresponding pages are organised. This should make the creation of the report as easy as possible.

The template is flexible enough to adapt to the needs and priorities of individual cities in the way information is presented, themes and indicators are selected, and internal structure is elaborated. Regardless of the issues and indicators your city chooses to use, the template will accommodate them. Many of the issues are already included in the template together with the basic elements needed on the report pages. There is also room in the template for highlighting the most important items, including news, frequently asked questions, links to other resources, contacts, and any other complementary information you may wish to publish.

The presentation of individual issues within the template follows a DPSIR framework that is widely used for SoE reporting and has proven to be a logical and efficient way to deliver SoE information in a well-structured and user-friendly way. This also allows the full use of possibilities offered by electronic media.

A *Help* section is available in the software to assist you with filling each template page with information.

Issues and themes

Several groups of issues or themes have been proposed by CEROI and are included in the SoE template. However, this does not mean that other issues cannot be included. The proposed list can be modified, and new issues may be added. All themes suggested by CEROI and included in the template can

be divided into two groups. One group of themes deals directly with environmental problems of the city. These include traditional issues addressing the local physical and social environments, as well as issues dealing with how the city interacts with its immediate surroundings and the global environment.

■ **What environmental issues affect our city?**

<i>Physical environment</i>	<i>Social environment</i>	<i>External impact</i>
<u>Water supply</u>	<u>Crime</u>	<u>Climate change</u>
<u>Noise</u>	<u>Heath</u>	<u>Ozone layer</u>
...

Another group of themes describes the main causes of environmental problems in a city and measures that are used to solve them.

■ **Where do our environmental problems come from?**

Energy Industry Households Transport ...

■ **How are we trying to fix our environmental problems?**

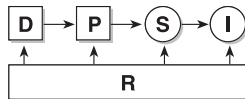
Conservation Law Information New technologies ...

It is intended that information on common themes from different cities will become available in a comparable way through the CEROI central server.

DPSIR framework

Environmental information is structured in the CEROI template within a DPSIR framework, which is a general framework for organising information about the state of the environment. We believe you will find this to be a logical and good way

to structure your information, with the purpose of making visible the links between the causes of environmental problems, their effects on the state of the environment, and relevant societal responses.



The DPSIR framework assumes cause-effect relationships between interacting components of the social, economic and environmental systems, which include:

- **D**Driving forces of environmental change (e.g. industrial production)
- **P**Pressures on the environment (e.g. emission of air pollutants into the air)
- **S**State of the environment (e.g. air quality)
- **I**Impacts on population, economy, ecosystems (e.g. health problems)
- **R**Response of the society (e.g. emission permits)

The use of this framework within CEROI increases the comparability of information since it clarifies what type of information belongs in various sections of the report. It does not however require a full harmonisation of themes and indicators so that it is possible to have a certain level of diversity and flexibility among participating cities.

The DPSIR framework governs the way different issues and themes are organised in the report. After an introductory page,

each theme is further divided into separate but inter-linked pages with text and graphical indicators describing various DPSIR elements. For some of the themes, a simplified version of the framework is proposed where several DPSIR elements are presented together.

In the *Action!* section citizens, organisations, schools, city officials and other groups can be advised about what they can do to help their city's environment.

Indicators

Indicators are representative, concise and easy-to-interpret parameters which are used to illustrate the main features of a city environment and their development over time and space. The idea of an indicator stems from economic analysis where economic indicators such as GDP (Gross Domestic Product) have been used for a long time. A set of indicators, if selected well, provides a shortened, but accurate picture of a system. Moreover, when combined with text, indicators serve as "evidence" that confirms what is being said. CEROI suggests two groups of indicators to be included in the report.

A limited core set of indicators is common for all CEROI cities, making it possible to compare some key values in an easy way. These indicators will be accessible both through individual city reports and through the CEROI central server. The final list will be selected in

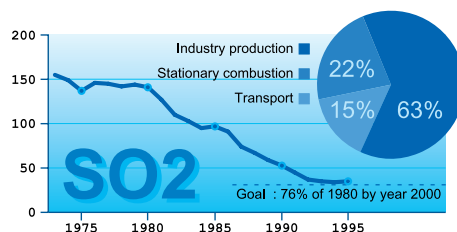
-
- Population growth (%/year)
 - Floor area (m²/pers.)
 - Employment (%)
 - Murders (1/year/100,000 pers.)
 - Water use (l/day/pers.)
 - NO_x emissions (tons/year/ha)
 - «Green areas» (ha/pers.)
 - ...

close co-operation with participating cities, partner organisations and the CEROI Advisory Board, as much as possible taking into account international experience.

City-specific indicators for individual themes will make up the main part of the city report.

These indicators will be chosen by cities themselves depending on various criteria, not least local priorities and data availability. CEROI will assist cities in selecting such indicators by developing lists of possible or proposed indicators for individual issues and themes in co-operation with project partners.

Although indicators can be presented in the report as statistics or incorporated into text, they have a greater impact when presented in such graphical forms as trends, distribution maps, or diagrams. It is also possible to use one indicator in various parts of the report in order to highlight linkages between different themes.



Think!

However helpful and intelligent the CEROI template and software are, they will not do the whole job for you. A great deal of work can only be accomplished if the knowledge, creativity and imagination of the authors of the report are rightly utilised.

Although the template will indeed guide you through the main stages of your work (so that often you will hardly notice how particular technical tasks were done) it is still useful to know what features of your report may need special attention and extra care.

Included below are some basic principles for making an SoE report:

- Always keep in mind that the ultimate purpose of the SoE report is to help steer city development in a sustainable direction
 - The contents of an SoE report should depend on your readers' interests. In other words it should reflect priority environmental issues in your city.
 - The contents will also depend to a certain extent on available data. If data for some of the issues or areas are not available, the report can help identify and fill such information gaps;
 - In addition to addressing your own priorities, it is also important to be able to compare the state of the environment of your city with that of other cities within or outside your country. Whenever possible and feasible, the report's structure and contents should be harmonised with international practices.
 - Always try to make your report user-friendly, concise and understandable. Formulate and present conclusions that non-specialists will find easy to grasp.
 - Ensure that environmental professionals looking for additional details and raw data will be able to find them. Include links to additional information resources, sources of data and contact information.
-

These are followed by UNEP/GRID-Arendal's standard checklist for an electronic SoE report.

Checklist for an electronic SoE report

Entries where the software itself would ensure compliance with the list are checked off as follows:

- (●) partly automated but still requires attention
- fully controlled

Contents and structure	
Issues are visible, reflect priorities and are generally comparable internationally	(●)
Global issues are present (Climate change, Ozone, etc.)	(●)
There are chapters about sectors/driving forces and environmental management instruments	(●)
There is an "about" button with the description of purpose and context	(●)
Information is structured in several layers	(●)
Summaries and background information for the issues are given	(●)
Cross-references connect parts with related information (e.g. forests / bio-, water/ marine, etc.)	(●)
DPSIR framework is present, information is structured accordingly	(●)
DPSIR balance is maintained, no bias towards only part of the framework	(●)
There is a section where highlights and news from the report are presented (for the press, etc.)	(●)
Target levels are used together with indicator values and are visible	
Text/table/graph balance is maintained, neither only text nor only graphics	
Explanatory text puts graphics/indicators into context	(●)
Underlying data tables are accessible behind indicators/graphics ("view data..")	(●)
References for each table, graphic or text are always made to data sources/ organisations	(●)
Links/contacts are included together with references – web sites, e-mail, phone, etc.	(●)
English and local language versions are available	
The language is proof-read and easy to understand	
There is a user feedback form	•
There is a possibility of a free-text search and/or search by category	•
Design, maps and graphics	
Graphical design and layout, including colours and fonts, are consistent throughout the report	(●)
Each figure clearly shows a title, measurement units and a legend (if appropriate)	(●)
Figures are checked against original data	(●)
Right visual representation is used for various types of data	(●)
Spatial information is presented on maps	
Each map or graphic displays no more than 4-5 different variables	
Font size on maps and graphics is no less than 10-11 points	
Thick lines are used on line graphics	

Checklist (continued)

Elements of the homepage, additional pages and HTML	
Indicative title (State of the Environment ...)	•
Date of creation/update clearly visible	•
Reference to creator of report clearly visible	•
Direct links to main parts of the SoE report	•
Homepage is called index.htm	•
Links are provided to co-operating institutions/donors	(•)
Every sub-folder has an index.htm file	•
No blank spaces in file names (ex: first page.htm)	•
No use of upper case letters in file names	•
No use of backslash “\” in paths	•
Pages fit properly on 640 pixel resolution	•
Pages look the same with different web browsers	•
Unique and indicative title tag on each page	•
Meta tags on each page	
Site does not contain faulty links (i.e. page not found)	(•)
Sub-pages are free-standing (all pages have links back to homepage)	•
No page together with graphics linked to it exceeds 60K in file sizes	
Additional features for a CD-ROM	
All files (htm / image) follow 8.3 naming convention	
Only relative links are used when linking to local htm files and images	
No reference to “http” when linking to local files	
No use of tags which only work on a web server (e.g. <BASE HREF=“http...”>	
CGI scripts are not used as an important part of the navigation	
Only client-side imagemaps are used (coordinates are always saved in a local htm file)	

We believe that by regularly going through this list while making the report you can better control and increase the quality of your work.

Please also remember to remove all unused elements of the original CEROI template from the final version of your report. We can assure you that only very

few users of your report will enjoy empty pages or links leading nowhere.

And please feel free to contact us anytime when you have questions and do not forget to tell us when your report is finally completed: ceroi@grida.no.

Good luck!