

Foreword

At the Rio Conference in 1992 one would have needed a truck to carry the state of the environment information presented there back home. Today, information is more compact and easier to disseminate through the use of electronic media, such as the Internet and CD-ROM. In addition, efforts have been undertaken to standardise, streamline and popularise this information.

Acknowledgements

Innumerous individuals and organisations all over the world have contributed to the compilation of this CD-ROM. My particular thanks go to all countries, who contributed their SoE to this CD, and to the GRID-Arendal team - alphabetically: Aake Bjørke, Emmanuelle Bournay, Lorant Czaran, Nickolai Denisov, Claudia Heberlein, David Henry, Lawrence Hislop, Roy Jørgensen, Inge Knudsen, Sindre Langaas, Philippe Rekacewicz, Petter Sevaldsen and Morten Sørensen - for their tireless efforts in putting the final product together. UNEP, in cooperation with other international organisations - such as the EEA and PHARE - have taken a lead in strengthening the existing national and regional environmental information networks in Central and Eastern Europe and the NIS to make environmental information more widely accessible to policy-makers, planners and the general public. Results of these activities are presented on the enclosed compact disc 'State of the Environment Reports Sampler', which features a 'Cookbook for State of the Environment Reporting on the Internet' - straight-forward guidelines on how to make your own State-of-the-Environment report.

This compact disc documents the progress made in environmental information management over the past six years. It provides a sample of the most current products available and highlights clear examples of well structured, cross-sector, and easily accesible environmental information. The challenge remains to put this information into action.

Arendal, June 5, 1998

Otto Simonett Global Programme Manager UNEP/GRID-Arendal



Questions to ask (after UNEP/DEIA 1996)

What is happening?

- Why is it happening?
- Are changes significant?
- What is being (can be) done?

SoE report audience

Government Parliament and politicians Public and press Schools and universities Industry and business

Growth of the Internet



Why SoE on the Internet?

SoE refers to state of the environment or, in this book, a report about the state of the environment in a particular region. It is intended that the ◀ audience of these reports applies information contained within them for decision making purposes, ranging from voting choices to setting policies. The impetus for SoE reporting is partially due to the adoption of Agenda 21 at the 1992 UNCED conference in Rio. Chapter 40 of Agenda 21 specifically calls for improved environmental information for decision-making.

The Internet is a fast growing, efficient and inexpensive tool for spreading information world-wide. It is already widely used in Europe and North America, and is becoming more and more available in other regions. As a result, it is increasingly common to publish otherwise difficult to access SoE information on the Internet. Besides reaching a wide audience, Internet publishing can improve the overall cost-efficiency of SoE reporting, and will make updating information in the report much easier.

Partners and players

To make your report broadly accepted and to ensure its quality, start your SoE with developing a partnership with key users and holders of environmental information. A network of **partners** \blacktriangleright can help formulate



 indicates more information where the arrow is pointing user needs, provide data, and ensure feedback and quality control. Identify key players and establish a **consultation** mechanism best suited for your situation, e.g. setting regular meetings, review rounds, or a permanent advisory group. For official SoE publication, support from government authorities is important.

The team

Your SoE team, whether an independent group or a network secretariat, will be **responsible** for the everyday management, final compilation and routine editing of the report. Although some tasks can be subcontracted, your team should have **qualifications** in areas such as environmental analysis, data processing, journalism, cartography, graphic design, and design for the Internet. Knowledge of foreign languages may be an asset, too.

Resources and Planning

From the beginning, think about SoE preparation in project management terms. Proper planning of **tasks** and allocation of **resources** is critical to the success of the report ($\triangleright \triangleright$ p.6).

Important players (national level)

Environment Agency Bureau of Statistics Sectoral Ministries Mapping Authority Geological Survey Forestry Service Universities Public groups, NGOs Private sector

Milestones in SoE reporting

- 1970s USA, Japan, OECD
 1985 Pacific-Asia ESCAP
 1992 UNCED, Agenda 21
 1993 Nordic indicator report
 1995 European EEA's Dobris
 1996 The Internet Australia (NSW), Canada, Norway
- 1997 UNEP's GEO-1

Note:

See links to selected SoEs on pp. 28-29



Critical resources

Task	Hardware	Software	External expertise
Data collection			
Data preparation			
Writing and editing			
Graphical design			
HTML programming			
CD-ROM			

Human resources are the most expensive and critical ones. Carefully plan the allocation of your staff time following a project plan.

Generic SoE project plan Plan/table of contents Terms of reference Start-up meeting Data collection Data processing Writing and editing Intermediate review Graphical production HTML programming Final review CD-ROM Launch of the SoE Evaluation and updating

The overall project duration may vary from months to years, depending upon the scope of the report





Commonly present issues

Media and resources

Air quality Climate change Fish resources Forest resources Nature and biodiversity Ozone layer Soil and land resources Waste Water resources

Cross-cutting concerns

Acidification Hazards and accidents Health Noise Radiation Toxic substances

Spatial systems Coastal and marine areas Urban settlements

Examples of economic indicators

- GDP/GNP
- Dow-Jones Index
- unemployment rate
- investment security rating

What's in an SoE?

While preparing an SoE report, it is important to remember some guiding principles:

- The contents of an SoE should depend upon your readers' interests, in other words upon environmental priorities in your society;
- It will also depend to a certain extent on available data, but should ideally be driven by national priorities. Either way, the SoE can help identify gaps and (re)structure monitoring;
- Beside your national priorities, it is important to compare your SoE situation with that of your neighbouring countries. Whenever possible, the SoE structure and contents should be harmonised with international practices;
- Make your SoE 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. This is done by creating lists of links, sources and contact information.

Structuring the contents

Use the common environmental **◄ issues** present in most reports as a starting point to decide which chapters to include in your SoE, but adjust the final selection to your priorities and data.

In addition to environmental issues, include chapters describing the development of main economic **sectors** \blacktriangleright influencing the environmental situation in your country, and chapters about the use of environmental management **instruments** \blacktriangleright .

After you have made the list of chapters, think about elements you will include in each chapter. You will need hard facts to illustrate your statements. The use of **indicators** - representative, concise and easy-tointerpret parameters - is common in **∢** economics for this purpose, and is widespread in SoE reporting as well.

Indicators can **represent** an issue in a broad sense (e.g. the level of heavy metals in soil indicates not only metal contamination but a situation with toxic pollution in general). Indicators can also **aggregate** separate pieces of information (e.g. water quality index or greenhouse gas emission index).

Commonly described economic sectors,

Agriculture	production, land use
Energy	production,
	structure
Fisheries	catch, aquaculture
Forestry	felling, management
Households	consumption
Industry	production,
	eco-industry
Mining	excavation, trade
Tourism	growth, consumption
Transportation	fleet, traffic, density
·	

other drivers,

Economy	GDP, structure
Population	growth rate,
	structure

and instruments

Technology	pollution ab
Conservation	protected a
Finance	expenditur
Information	monitoring,
Law, policies	legislation,
Institutions	ministries,
Participation	NGOs, atti

pollution abatement... protected areas... expenditures, taxes... monitoring, reporting... legislation, plans... ministries, councils... NGOs, attitudes...

Note:

See also examples on p.12 and in literature cited on p.30

Cookbook for SoE Reporting shopping and cooking

DPSIR indicator framework

(examples in brackets)

- <u>Driving forces of</u> environmental change (industrial production)
- <u>Pressures</u> on the environment (waste water loading)
- State of the environment (water quality in rivers and lakes)
- Impacts on population, economy, ecosystems (% of water unsuitable for drinking)
- <u>Response</u> of the society (protected watersheds)

DPSIR concept



Some international indicator lists

EU (DPSIR) OECD (PSR) UNCSD (DSR) World Bank (DSR)

A good indicator

- is relevant to an issue,
- can be expressed as 'below' or 'above' a target,
- is comparable internationally,
- is based on available or cost-efficient data,
- is easy to communicate and understand.

Remember that indicators are not only numbers or time-series, they can also be "yes" / "no" statements (ratification of a convention), maps, diagrams (structure of a Ministry) or text (list of laws).

You may select indicators for your SoE from existing ◀ lists or suggest new ones. Arrange indicators that you choose for each chapter in tables following a ◀ **DPSIR** type framework, and try to achieve a balance between various types of indicators (examples ▶ p.12). Some indicators may be used for more than one issue (▶ p.24).

Assembling the contents

After you have completed the table of contents, use your partners' network and technical literature to **collect** data for your indicators. Catalogues, meta-databases and the Internet are useful tools for learning about what data sets exist, and for getting access to them. For each indicator, maintain a paper or electronic fact-sheet with the description of data source **>**, quality and scope, other reference information, actual and reference indicator values \blacktriangleright , and its graphical draft.

Indicator methodology sheets developed by various organisations can be helpful for data **processing**. Use common denominators ► to construct ratios for D and P indicators (emissions per capita) and to express S/I and R indicators (population served by wastewater treatment). Use GIS and statistical software to draft maps, diagrams, time-series, and forecasts.

With the help of your team and experts compile SoE **chapters** that will later make up WWW pages ($\triangleright \triangleright$ p.24), each chapter normally containing:

- a condensed and clear **overview** of the issue (good / bad, better / worse, why), possibly with a qualitative assessment using colours or symbols ▶;
- sections on D,P,S,I,R with explanatory text and facts - indicators, case-studies, photos, links to pages where single indicators are described in detail;
- links to other related chapters of your SoE and to background and reference information.

After necessary reviews and quality checks, your SoE is ready for graphical **design** and **conversion** to the Internet $\triangleright \triangleright$.

Data for DPSIR indicators

	D/P	S/I	R
statistics monitoring policies			

Reference values

(inter)national targets scientific tresholds historical values (inter)national averages

Common denominators

GDP, production population area, time stock of resource or product

Visual qualitative assessment

positive development	\odot
neutral / mixed	☺
negative development	8

Applied by Nordic Council 97, EEA 98

OECD indicators of acidification (OECD 1994)			
Pressure	State	Response	
index of acidifying substances emissions of NOx and SOx	exceedance of critical loads of pH in water and soil concentrations in acid precipitation	% of car fleet equipped with catalytic converters capacity of NOx and SOx abatement equipment of stationary sources	

UNCSD indicators of combating	deforestation (UNCSD 1996)
-------------------------------	----------------------------

Driving Forces	State	Response
wood harvesting intensity	forest area change	managed forest area ratio protected forest areas as a percent of total forest area

Indicators related t	o Swiss army activities	(SFSO and SAEFL 1997)
army land use structure	metals in soils in target zones	management of shooting ranges upgrade of planes and vehicles substituting halogenated solvents waste disposal facilities bog protection inventory of contaminated sites legislation and regulations Environmental Office mandate

Note: See other examples of indicator frameworks in the literature cited on p.30.



Types of visual representation

- Maps locational mono- or polythematic
- Charts pie charts bars/columns lines
- Diagrams

A visual display is

a combination of points lines areas

dressed with elements such as identification labels title legend, units scale inset location map

The power of the image

Composite

image

Separation

Legend, Scale

Point symbols

and Title

Lines

Areas Background

When viewing a web site, a **user's attention** will immediately be drawn to any graphical elements present rather than to text elements. For many years, editors and publishers have understood the power of graphical production and have devoted considerable resources to carefully crafting high quality, effective images which capture the attention of readers. Pleasant to the eye, and simply conceived, an image should significantly help users to rapidly absorb basic information. A well designed graphic will not only convince the user of the quality of information being presented, but will also entice them to investigate the web site in more detail. The success of graphical production will depend on one's ability to follow some basic rules of graphical semiology, and to rely on a

consistent presentation methodology.

Investigation of the data

Once data are collected and analysed, they are sent to a cartographic designer for further **processing and refinement**. This step involves transforming the data into a clear and efficient visual representation \blacktriangleright . Ideally, the figures should give an immediate message \mathbf{v} to the users, with no more than two or three items being presented.



Implement time saving techniques

Continuous and efficient updating of your SoE can be facilitated by the tools of graphical production. To take advantage of this system it is important to consider the

A multidisciplinary approach

- Ethics do not manipulate data represent data as close as possible to reality
- Science analysis, methodology
- Technology hardware and special (design) software needed
- Esthetics design, style, elegance, balance

Before you begin, ask yourself...

What is my intention? What do I want to show? Why do I choose these data? What level of detail do I want to reach?

What representation am I going to choose ? What style am I going to create? How will I draft a figure? How will I produce a figure?

Construction of a graph using template layers



project on a long time scale, so that production routines can be implemented from the beginning.

Create templates and libraries that can easily be assembled and stored on a computer, so that they can later be used for multiple purposes. At the beginning of the production process, time is spent creating the necessary elements to produce graphics (e.g.: base maps used as backgrounds, color scale, symbols, typography, etc). These elements should then be logically stored in libraries and as 4 templates so they can be easily retrieved for future projects.

Using elements which already exist rather than recreating new components again and again will save time and allow for consistency in visual presentation. Throughout the production process the library will continuously expand, and eventually graphical production will simply consist of assembling various elements into a final figure.

◀ The layer structure of design offered by most drawing software on the market allows user-friendly templates. For example, a template used to create bar graphs should contain at least 5 layers (grid, x and y axes, typography, columns, remaining elements from the template).

The file structure on the hard disk must also be organised in a logical and efficient way, so that it is

easy to find specific files which may otherwise be buried among hundreds or thousands of others.

Choose the right type of graphic

A persuasive message may be delivered to an audience in a variety of ways by choosing the right type of visual representation. An appropriate mapping, graphing or charting methodology can be used to accomplish this goal. For example, in the cases below \mathbf{v} , you'll find different solutions for graphic representation of information.

- (1) Trends over time: lines;
- (2) Proportions of various features: pies or bar charts;
- (3) Comparisons: bar charts;
- (4) Maps with values: proportional circles or squares;
- (5) Maps showing percentages: shaded areas.





Final step...

- Review, quality check Spelling Conformity between raw data and a final figure Consistency between legend and image
- Deliver the figures on the web Save files as jpeg, gif, or downloadable high resolution format (i.e. postscript)

Recommended software

- Mapping and graphing Freehand™ (Macromedia) Illustrator™ (Adobe) Corel draw™ (Corel)
- Desktop publishing X-press™ (Quark) Pagemaker™ (Adobe)
- Image processing Photoshop™ (Adobe) Paintshop Pro™ (Jasc) Photopaint™ (Corel)

Cookbook for SoE Reporting 2

Examples: Simplify information, reduce the number of categories













			9
	United Variance B	Contract Programmer	
	-		
H	Contraction of the local division of the loc	Minet and	•
		F B	
	inter.	A statements	•
	Statistics.	THE R PERSON NAMES IN COLUMN	

Browsers

Microsoft Explorer Netscape Navigator

Learning about the medium

The World Wide Web is a seamless world in which all information, from any source (client / server), can be accessed in a consistent and simple way. It uses a concept called hypertext to link documents together.



Hypertext Mark-up Language (HTML) is the language of web files. The basis for HTML is plain text files, since these can be read on all computer platforms. In HTML, the text contains tags - commands enclosed in angled brackets < > which tell the browser how to display the document, e.g. <center>

▲ A Web Browser is a software used to interpret and display HTML files. A browser can search networks and retrieve and display copies of files in an easy-to-read format. A browser will let you "travel" on the Internet.

Visualising the site

The success of your Web site as an **organisation of information** ▶ will largely be determined by how well your actual organisation system matches your users' expectations. A logical site organisation allows users to make successful predictions about where to find things. Use consistent methods of grouping, ordering, labelling, and graphical arrangement of information.

User-centred design: the goal is to be consistent and predictable, so that your users will feel comfortable exploring your site, and confident that they know how to find what they are looking for. The graphic identity of a series of pages in your Web site provides visual clues to the continuity of information.

Build **clear navigation** aids ▼: simple, consistent icons, graphic identity schemes, and graphic or text-based overview and summary screen can give the users confidence that they can find what they are looking for.



File structure



Create easy navigation



Create organic design



A basic HTML template

<html> <head> <title>page name</title> </head> <body> The main contents of your page go between these two 'body' tags. </body> </html>

Your main home page file MUST be titled **index.htm**, because this is the name all web servers are set up to identify as a home page.

For proper display on small screens, adjust your pages to a screen resolution of 640 pixels



Building the site

▲ A web page consists of an HTML file, plus any image (picture) files used on the page. The HTML file (a normal text file) contains all the text to display, and also acts as the "glue" to hold the text and images together in the right places, and display them in the right style. Complete web training will involve learning how to code a web page using HTML tags, and how to use a web graphics program to create images.

You do not need any special **software** to create an HTML page. You can write HTML in any program that can create a plain text file, e.g. Notepad[™] or Simple-Text[™]. There are also special software (web editors) available to help simplify web page development: WebEdit[™], HotDog[™], FrontPage[™].

HTML is just a series of tags that are integrated into a text document. They are a lot like cooking instructions - telling a browser what to do, and what spices to use. HTML tags are usually English words (such as "center") or abbreviations (such as "p" for paragraph), but they are distinguished from regular text because they are placed in small angle brackets. So the paragraph tag is , and the center tag is <center>. Every time you use a tag - like <center> you must also close it off with another tag - in this case, </center>.

You can create complex tables of information and

arrange elements of your page in general by using the tag \blacktriangleright . You can create a user feedback mechanism using the <form> tag, and you can split your page into multiple linked pages displayed on the screen at the same time by using frames.

Use **graphics** programs to include button style navigation tools, maps, graphics and photos. The easiest and most popular programs are Paintshop Pro[™] and Adobe Photoshop[™]. Clickable maps (imagemaps) are created using a program called MapEdit[™] which draws coordinates on any part of an image and links it to another page or website.

Add a **search** engine to your web site for free text search (this will work similarly to a word index in a book).

Since some people still do not have a good access to the Internet, make an off-line version of the most essential part of your site on a CD-ROM. You may then need to change some of the tags, links and routines \blacktriangleright .

Promote the site

Once your site is complete, promote it by **registering** it with as many search engines ▶ as possible. You can also improve your location on a search engine by using <meta> tags. These allow you to insert relevant keywords and a description to your page.

Using the tag

```
<TABLE>
<TR>
<TD>cell 1</TD>
<TD>cell 2</TD>
</TR>
<TD>cell 3</TD>
<TD>cell 3</TD>
<TD>cell 4</TD>
</TR>
```

cell 1	cell 2
cell 3	cell 4

Making it work on a CD-ROM

- Use relative links to local files or images (map.gif, not http:// www.soe/map.gif)
- CGI-scripts will not work on a CD-ROM
- Never refer to "http" (not used off-line)
- Always use "8.3" file naming convention (*thisfile.htm*, not *this file.html*)
- Use only client-side image map

Search engines on the Web

Yahoo: <u>www.yahoo.com</u> Excite: <u>www.excite.com</u> HotBot: <u>www.hotbot.com</u>

Note: Check the GRID-A homepage for an in-depth description of HTML

Possible organisation of an SoE Web site





- Links to SoEs on-line
- References and abbreviations

SoE project evaluation techniques

(after UNEP/DEIA 1996)

- sale / usage statistics
- media coverage
- feedback from users
- feedback from partners
- commissioned reviews, interviews
- costs and implementation analysis

Web usage statistics

- hits per period
- hits from outside
- hits excluding search engines
- number and size of downloaded files
- accesses by country / domain
- frequently requested pages
- recurrent visits
- external links to your site

Tools for web use monitoring

Web Trends: <u>www.webtrends.com</u> Net Tracker: <u>www.sare.com</u>

Evaluation and feedback

◀ The evaluation stage is often forgotten after an SoE project is completed. However, information received through a systematic evaluation and feedback will save resources in the future when the report will be updated, and will improve its quality. In addition, the possibility to provide feedback and to influence the process will increase the sense of ownership of the SoE within the community.

Beside a direct evaluation, analysis of ◀ web site usage statistics provides useful information on who reads the report, how it is being read, and it can also highlight possible programming errors. There are special techniques for monitoring the use of a web site, described in web development and site maintenance tutorials.

One way to encourage users to express their opinions is to prepare an electronic feedback form which can be filled out and sent immediately over the Internet \blacktriangleright .



What a feedback form may look like

◀



http://www.soe.net/





Links to selected SoEs on-line

Reports on this CD-ROM are in italic.

National and sub-national

Australia	kaos.erin.gov.au/environment/epcg/soe.html
Capital Territory	www.act.gov.au/environ/actser95.html
Fairfield City	www.fairfieldcity.nsw.gov.au/council/environ/19951996/19951996.htm
Hurstville City	www.slnsw.gov.au/plb/libs/hurstville/report/9596/96env.htm
Lake Macquarie City	www.infohunt.nsw.gov.au/lakemac/environ/soe/SOE97.htm
North-South Wales	www.epa.nsw.gov.au/soe/97
Penrith City	www.penrithcity.nsw.gov.au/Lib/LocalSuburbs/soe.htm
Western Australia	www.environ.wa.gov.au/current/soe/soe.html
Woollahra Municipality	www.slnsw.gov.au/plb/libs/woollahra
Austria	www.ubavie.gv.at/info/situatio.htm
Vienna City	www.magwien.gv.at/ma22/top/umwelt.html
Canada	www1.sid.ncr.doe.ca/~soer
British Columbia	www.env.gov.bc.ca
Manitoba	www.gov.mb.ca/environ/pages/soerepts.html
Vancouver City	www.city.vancouver.bc.ca/commsvcs/enviro/summary.html
Saskatchewan	www.gov.sk.ca/serm/WWW/ECOREGON/SOEREPRT/INTRO.HTM
Yukon	www.taiga.net/yukonsoe
Czech Republic	www.env.cz
Prague City	www.monet.cz
Denmark	www.mem.dk/publikationer/, http://www.dmu.dk
Estonia	www.envir.ee/ehp
Finland	www.vyh.fi/fei/enviprob/enviprob.htm
France	www.ifen.fr/pages/2indic.htm
FYROM	www.mupce.unet.com.mk
Georgia	www.parliament.ge/SOEGEO/hp_soege.htm
Germany	www.umweltbundesamt.de/uba-info-daten-e/index.htm
Hungary	www.gridbp.meh.hu/angol98/index.htm
Ireland	www.compass.ie/epa/report/soe-report.html
Italy	www.mclink.it/com/econet/databank/bank1.htm
Japan	www.eic.or.jp/eanet/index-e.html
Latvia	www.vkmc.vdc.lv/soe96
Lithuania	www.ktl.mii.lt/aa/index.html



Malaysia	161.142.128.10/doe/egr94/html/content.html
Netherlands	www.milieubalans.rivm.nl/, http://neon.vb.cbs.nl/sec lmi e/statistix.htm
New Zealand	www.mfe.govt.nz/soe.htm
Norway	www.grida.no/prog/norway/soeno97, www.ssb.no/www-open/statistikk_etter_emne/01natur
Poland	www.mos.gov.pl/soe/index.htm
People's Republic of China	nepa.unep.net
Russia	www.fcgs.rssi.ru/eng/mepnr/index.htm
Leningrad Oblast	www.dux.ru/lcp/LE_HOMT.HTM
Moscow City	www.md.mos.ru/unep
Slovak Republic	sun.sazp.sk/metainfo/sprava/index.html
Slovenia	www.sigov.si/mop, www.kud-fp.si/retina/okolje/porocilo/index.html
Sweden	smn.environ.se/smnproj/miljonat/english/katalog, www.environ.se/sweionet
Switzerland	www.admin.ch/bfs/stat_ch/ber02/eber02.htm
Ukraine	www.freenet.kiev.ua/ciesin/envinfo/index.htm
UK	www.detr.gov.uk
Brent Borough	www.brent.gov.uk/brent/brent/la21/statenv/repintro.htm
England-Wales	www.environment-agency.gov.uk
Linkolnshire	www.personal.u-net.com/~lincscc/soerhome.htm
Scotland	www.sepa.org.uk/stateenv/soeindex.htm
USA	www.epa.gov/indicator
states	www.fsu.edu/~cpm/segip/othergov.html

SoEs or selected chapters for Azerbaijan, Armenia, Bosnia and Herzegovina, Bulgaria, the Kyrgyz Republic, the Republic of Moldova and and other CEE/NIS countries are also accessible through www.grida.no/soe.

UNEP/GRID-Arendal

Regional and international

Arctic	www.grida.no/amap/summary.htm
Baltic	www.bef.lv
Europe/EU	www.eea.eu.int
Latin America	www.ciat.cgiar.org/indicators/project.html
Nordic	www.ssb.no/www-open/ukens_statistikk/utg/9720/4.html
Global	www.grida.no/geo1

Note: These links were verified on the date of publication. If a page is not accessible, you may try to access the organisation's home page by taking a part of the full link from its beginning to the first slash "/".

Selected references

Data and contents

- OECD 1994. Environmental Indicators. OECD Core Set. Paris
- EEA 1998. EU State of the Environment Report 1998. Guidelines for Data Collection and Processing. ITE, NERI. Copenhagen
- UNCSD 1996. Indicators of Sustainable Development Framework and Methodologies. New York, NY
- UNEP/CEU 1997. Denisov, N., Mnatsakanian, R., and A. Semichaevsky. Environmental Reporting in Central and Eastern Europe: A Review of Selected Publications and Frameworks. Arendal - Budapest
- UNEP/DEIA 1996. Rump, P. State of the Environment Reporting: Source Book of Methods and Approaches. UNEP, RIVM, Environment Canada. Nairobi

Carto-graphics

- Bertin, J. 1983. Semiology of Graphics: Diagrams, Networks, Maps. Madison: University of Wisconsin Press.
- Tufte, E.R. 1997. The Visual Display of Quantitative Information. Cheshire, CT: Graphic Press
- Tufte, E.R. 1990. Envisioning Information. Cheshire, CT: Graphics Press

Going on-line

- Apple Computer, Inc. 1992. Macintosh Human Interface Guidelines. Reading, MA: Addison-Wesley
- December, J. and N. Randall. 1994. The World Wide Web Unleashed. Indianapolis, IN: SAMS Publ.
- Lemay, L. 1995. Teach Yourself Web Publishing with HTML in a Week. Indianapolis, IN: SAMS Publ.
- Lynch and Horton. 1997. Yale C/AIM Web Style Guide. Yale University
- Marcus, A. 1992. Graphic Design for Electronic Documents and User Interfaces. New York: ACM Press, Addison-Wesley



Abbreviations

- CD-ROM Compact Disk Read-Only Memory
- CGI Common Gateway Interface
- CEU Central European University
- DPSIR Driving forces Pressures State Impact Response (indicator framework)
- DEIA (UNEP's) Division of Environmental Information and Assessment
- EEA European Environment Agency
- $\label{eq:ESCAP} \textbf{(UN)} \ \textbf{Economic and Social Commission for Asia and the Pacific}$
- EU European Union
- GDP Gross Domestic Product
- GIS Geographic Information System
- GNP Gross National Product
- GRID (UNEP's) Global Resource Information Database
- GEO (UNEP's) Global Environmental Outlook (report)
- HTML Hypertext Mark-up Language
- HTTP Hypertext Transfer Protocol
- NGO Non-Governmental Organisation
- OECD Organisation for Economic Co-operation and Development
- PHARE EU's economic assistance programme for Central and Eastern Europe
- PSR Pressure State Response (indicator framework, see also DPSIR)
- SoE State of the Environment (report)
- UNCSD United Nations Commission for Sustainable Development
- **UNEP** United Nations Environment Programme
- WWW World-Wide Web