



# Strategy for Environmental Data Management

WELL MANAGED ENVIRONMENTAL DATA IS OF SIGNIFICANT BENEFIT  
AND MAKES A DIFFERENCE FOR THE ENVIRONMENT

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The Strategy for Environmental data management was created in collaboration between the Swedish Environmental Protection Agency, the Swedish Agency for Marine and Water management, the County Administrative Boards and the Regional Water Authorities and has been approved by MIT<sup>1</sup>.



Havs  
och Vatten  
myndigheten



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<sup>1</sup> MIT is a strategic collaborative council for management and development of business solutions (mainly IT) in the areas of environmental protection, nature preservation, water and environmental objectives where there is a need for joint authority initiatives or a common interest for developing an extended cooperation between authorities.

## ***Introduction***

This strategy, for management of environmental data, is a support for the authorities and organizations that want environmental data to be considered as a strategic and important community resource.

Through agencies and organizations embracing the strategy and thereby working in a similar way, we can together improve efficiency and the management of environmental data.

The strategy is based on a vision that explains the benefits of well-managed environmental data. Ten guidelines with recommendations describe how authorities and organizations shall jointly manage environmental data to realize the vision.

# **Strategy for Environmental Data Management**

## **Vision**

**Well managed environmental data is of significant benefit and makes a difference for the environment.**

Environmental data is an important community resource. Well managed and frequently used it will and can contribute to a better environment by providing a basis for assessment, analysis, understanding, decisions and actions. Environmental data should be easily accessible, easy to use and efficiently managed.

## **Guidelines and recommendations**

### **1. Make Environmental Data well-known**

*Recommendation:*

- a) Establish a plan for how the organization's environmental data can be made well known.

### **2. Make environmental data easy to find**

*Recommendations:*

- a) Make data and digital services as well as their descriptions (metadata) searchable on the Web. Both through conventional search engines and directories with descriptions of the data and services as well as through encyclopedias such as Wikipedia.
- b) Follow the E-delegation's recommendation of a public list of the organization's data.

### **3. Make environmental data directly accessible in forms that are requested**

*Recommendations:*

- a) Make the Information Owner responsible for making data available.
- b) Follow the E-delegation multistage model for making data available.
- c) Make environmental data available through online services for viewing, downloading, direct access and transformation.
- d) Reconcile periodically the needs, uses and modes of supply.

### **4. Ensure that environmental data is well described and easy to understand**

*Recommendations:*

- a) Ensure that data and digital services are so well described that they can be used without expert assistance and for other purposes than the original.
- b) Create additional descriptions of data and digital services in the form of product specifications or similar where these are required for the understanding and use.
- c) Describe data and digital services with metadata according to standardized metadata profiles.
- d) Use common keyword lists for the description of content and application areas.

## **5. Make environmental data available, as quickly, as possible**

### *Recommendations:*

- a) Make a plan, before the data is created (through collection, calculation, simulation, modeling etc.), that states when, how and by whom the data should be made available.
- b) Make environmental data available, created or updated, without undue delay.
- c) Ensure that the quality of the descriptions (metadata) of data and digital services are assured regularly and updated at least when a new version of data or a service is made available.

## **6. Provide environmental data and digital services free of charge and with conditions that encourage use and re-use**

### *Recommendations:*

- a) Decide on a policy, or equivalent, containing a standardized set of conditions regulating the use of the organizations data (owned or financed).
- b) Let the policy be as permissive as possible. Base the conditions set on the Creative Commons (CC) standard or equivalent standard.
- c) Work actively to find ways to make data available even when there are legal barriers - for example, by generalization or de-identification.

## **7. Ensure that there is a clear management structure for all environmental data**

### *Recommendations:*

- a) Manage environmental data in a documented organization and establish an information owner.
- b) Describe the organization, either through an established standard model or through another specifically documented model and work according to a documented budget
- c) Establish management before the environmental data is created (eg, via collection, calculation, simulation, modeling, etc.).

## **8. Use established standards**

### *Recommendations:*

- a) Use established and agreed upon standards for all management of data, digital services and metadata as well as concepts and terms (including code lists and keyword lists) where available.
- b) Choose Open standards without licensing costs instead of proprietary or vendor-specific standards.
- c) Consider using international reporting specifications if there are no other formal standards.
- d) Collaborate with other parties regarding standards for concepts, terminology (including code lists and keyword lists), master data, metadata, digital services and other aspects of data management where there are no standards and common needs exists.

## **9. Make environmental data easy to use for joint/collaborative processing**

### *Recommendations:*

- a) Use established concepts and terms as well as unique and persistent identities.
- b) Use Master data if available.
- c) Follow the standard "Observations and measurements" for measurement data, if applicable.

## **10. Maintain environmental data for future reuse**

### *Recommendation:*

- a) Convert, when necessary, environmental data and their descriptions to new formats to maintain usability.

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