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NOTE

from: General Secretariat
to: Delegations
Subject: GMES services (Global Monitoring for Environment and Security)

Delegations will find attached an information note from the Presidency on the above subject, for consideration by the Environment Council under "Other business" at its meeting on 4 December 2008.

GMES services (Global Monitoring for Environment and Security)

- Information from the Presidency -

GMES (from the English "Global Monitoring for Environment and Security") is an initiative led by the European Union (EU), in partnership with the European Space Agency (ESA) and their respective Member States. Its purpose is to provide Europe with a major service of general interest in supplying information on the environment and for the security of persons and property. That information will be produced using earth observation data collected from space and on the ground (*in situ*).

GMES services cover the following areas:

- the marine environment: thanks to the development of the Marine Core Service, which supplies information on ocean dynamics and marine resources, Europe now has a set of downstream services to assist with decision-making in the event of a crisis such as the Erika or Prestige disasters. The European Maritime Safety Agency (EMSA), for example, offers an oil slick observation service using space technology *inter alia*. In addition, national agencies can use oil spill drift models to determine the identity of the vessels responsible. Better knowledge of the oceans is also essential for research, notably for making projections of climate trends and for resource management, but also for the information and education of citizens;

- territorial management: a dedicated territorial service will produce Europe-wide mapping for the implementation and monitoring of European policies such as the water framework Directive, the European biodiversity strategy or the common agricultural policy. It will also provide valuable information at local level for dealing, for example, with land use in urban areas or noise modelling;
- air quality and the atmospheric environment: the GMES Atmosphere Service combines the basic atmospheric environment services. It provides worldwide surveillance and forecasting of the chemical composition of the atmosphere (including stratospheric ozone and ultraviolet radiation), and offers Europe-wide air quality monitoring. It produces and disseminates pollutant distribution maps (analysis, interpretation, interpolation, forecasting). The service will have numerous applications such as predicting ozone level peaks and analysing implications for health and agriculture and the general movement of pollutants between States;
- support for emergency situations and security, in particular in the event of natural disasters and humanitarian crises, in the form of cartographic data in quasi-real time on the extent of the affected areas and the state of the main buildings or means of communication.

A GMES service providing information on climate parameter monitoring should shortly be set up. The emergence of a European information service on climate change is needed in order to ensure that decision-making in this area can rely on the best possible information available in the current state of research. A number of functions are already likely to be integrated into a GMES climate service: obtaining relevant information on changes in the climatic environment ("indicators"); reconstituting climate history at global/regional level; regularly producing a set of coordinated climate projections to be able to anticipate climate trends in response to European policy demands; developing and making available toolboxes on methods of downscaling to be able to meet the needs of impact evaluation and anticipation; disseminating knowledge and training in the field of climate change and quantification of uncertainty margins; anticipating the effects of climate change, notably effects on the coastline, on areas prone to flooding, on biodiversity, etc. The effects of climate and climatic trends on the economies of the regions are also a major challenge for this service.
