

RAPID MAPPING SERVICE

Floods and Oil Pollution

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ABSTRACT

Rapid mapping services are related to emergency response and land monitoring. In demand we could provide on a regular basis land cover/land use data and update of this information at national, regional, and local level. In case of natural disasters we have the necessary infrastructure and equipment to order satellite data from different sensors, to acquire in-situ and ancillary data, to process the satellite information in due time and to provide up-to-date information, maps and analyses for the affected area.

In the spring of 2006 the region of Western and Central Europe was affected by great floods, as a result of rapidly increasing temperatures, melting of snow cover, and torrential rains. Water level of Danube River rose significantly. Between March and May 2006 high water level of Danube River and its Bulgarian tributaries caused floods in many localities along Bulgarian bank of the river. In the beginning of April Bulgarian government declared state of emergency for entire bank of the river in the state. At the request of ASDE ⁽¹⁾ and ReSAC, on April 17 started scanning of affected areas with FORMOSAT and SPOT satellite imageries in three main regions in the country – Vidin, Belene, Silistra. This procedure of rapid mapping aimed to support the processes of decision making and emergency management. Satellite imageries were delivered every day via FTP server, and were processed immediately in order to extract valuable information about the extent and impact of the hazard. The final result was the creation of thematic maps of flooded areas, which were delivered to the responsible authorities. This thematic products are part of the GMES ⁽²⁾ services.

On the morning of October 2, a large quantity of oil slick was registered in the Bulgarian section of Danube River on the border with Republic of Serbia. According to the Regional Border Service – Vidin, the oil slick was 28 km long and 0.4 km wide. High levels of pollution of the river were reported until October 6 – 7, 2006 due to high water level. The spill reached 60 km in length, and there was oil deposition along river banks. During this period on the river bank from Novo Selo to Lom deposited oil formed strips with 1 - 2 m in width and up to several kilometers in length. For damage assessments were used satellite imageries by FORMOSAT, available only for the period of October 10 to 13 when oil slicks were visible only in separate small sectors. In order to assess the river pollution the State Agency for

Information Technologies and Communications in Bulgaria requested assistance from the International Charter Space and Major Disasters (The Charter). ReSAC delivered available satellite imageries and information was transferred to the Directorate General Civil Defence, Ministry of Interior, at their additional requests.

Focused on current disaster events and dedicated to crisis management actors, rapid mapping service provides information to support the parties during hazard by delivering thematic products for the extent and impact of the event. This service is usually complementary to the services provided by The Charter. It may be activated for events not relevant to The Charter. Rapid mapping service is applicable to any type of disaster event – flood, fire, landslide, oil spill, and earthquake, occurring in Europe or in the rest of the world.

⁽¹⁾ ASDE: Agency for Sustainable Development and Eurointegration

⁽²⁾ GMES: Global Monitoring for Environment and Security