

An intimate understanding of the physical makeup of our water intrusion in aquifers, subsidence, sea storm surges,

Emilia-Romagna Region is a technical body which was estab- National and European directives and laws.

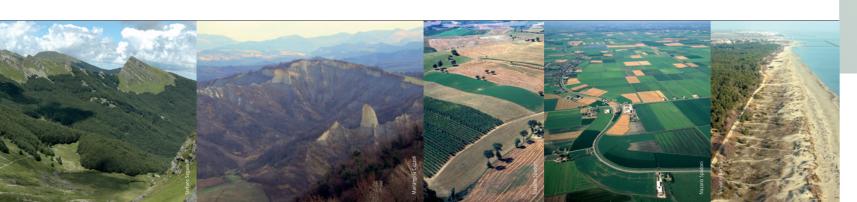
territory – above and below the Earth's crust – is an essential landslides) with a view to mitigating any impact on the terrirequisite for territorial planning, as well as for efficient and sustainable use of natural resources, prevention and mitigation of tion and study of natural resources (water, soils, geothermal natural risks and the safety and wellbeing of the population. energy, mineral resources). This knowledge is essential for The Geological, Seismic and Soil Survey (SGSS) of building up cognitive frameworks and for implementation of

"knowing the Territory

lished in 1976. Its mission is to support regional policies tion and strategic monitoring of a number of natural risks (salt

Our work is predominantly directed at technicians within relating to the environment and territorial planning, primarily the Public Administration, professionals (geologists, pedthrough the development of geographic information systems ologists, architects, engineers, building surveyors, agronoand geological, pedological and geo-thematic cartography. mists), businesses, the academic world and research insti-Today the Survey's remit encompasses seismic risk reductutes, and all other parties operating on the regional territory.

Knowledge of the territory is our common heritage



MUSEO GIARDINO GEOLOGICO







The Geological Garden & Museum is a project set up by Geological Seismic and Soil Survey of Emilia-Romagna Region to offer people a space where they can meet but also further their understanding of the environment in which we live. The Museum houses an impressive collection of minerals, rocks, soils and fossils from across the region and indeed from all over the world. Through the guided tour, the museum helps visitors grasp the fundamental notions of Earth Sciences and the key stages in the geological history of Emilia-Romagna. In the garden, visitors can enjoy a virtual stroll back in time thanks to the various stages illustrated in 14 rocks from the Emilia-Romagna Apennines, tasked with recounting the geological history of the region; a history which, starting some 250 million years ago, led to the formation of the current landscape of our region and its remarkable geodiversity.



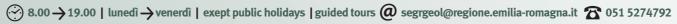


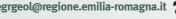






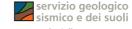








DIFESA DEL SUOLO E DELLA COSTA, PROTEZIONE CIVILE DIREZIONE GENERALE DIFESA DEL SUOLO E DELLA COSTA



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servizio geologico sismico e dei suoli

what we do 4 you

4 basic knowledge

Emilia-Romagna, which began in the '70s, soil defence sector. can today be considered completed and all the data related to **basic cartography**, tic, are available on the SGSS website and at the various scales, has been collected can be consulted using web-gis - Geoand organized in a Geographic Informa- graphic Information Systems (GIS) publition System. These maps are constantly shed on the web – and thematic sites with updated thanks to close collaboration with maps that can be consulted using Google regional and provincial services operating Earth.

The geological and soil surveying of in the agro-forestry, environmental and

All the maps, both basic and thema-



4 efficient use of natural resources

The capacity of our region to assess, duce, manage and process data relating to: **Europe 2020 strategy**. water, soils, mineral resources, geothermal energy, subsurface resources, the sea, **geological heritage** and the **landscape**.

Thanks to this rich heritage of manage and protect some of the key natu- knowledge, the Region is fully prepared to ral resources in Emilia-Romagna is depenment the new European challenge which dent upon the knowledge system acqui- has identified efficient use of resources as red across the region by the SGSS. We pro- one of seven points forming the basis of the



4 territorial and urban planning

Supporting the Region, the Basin Authorities and the Provincial and Municipal authorities of Emilia-Romagna, we produce **geo-thematic maps** and develop databases to assist territorial and urban planning activities. The SGSS surveys and collects, organizes and shares data and knowledge relating to the coast, soil, geosites, landslides, springs, groundwater of the plain and seismic microzonation.



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a safer environment

Region has been working to improve its **seismic risk**. understanding of **natural risks** and how to focuses largely on: hydro-geological risk, impact of storm surges. subsidence, salt water intrusion in aquifers. coastal erosion, fluvial and coastal flooding,

For years now, Emilia-Romagna soil erosion, soil sealing, soil quality and

Working closely on a daily basis with forecast, prevent and mitigate them. We ARPA, the Regional Agency for the Protectoo are involved in this activity through tion of the Environment and the Regional in-depth studies that analyze criticali- Civil Defence Agency, we produce early ties of physical systems and establish hydro-geological warnings essential for the key monitoring indicators of the natural risk under scrutiny. The Survey today marine weather warnings with forecast



4 a European dimension

between the various players of the natio- lated memorandums of agreement with the nity. Since 1992 we have been working in Morocco for specific projects. At European the **European Commission** to organize the within the EuroGeoSurveys. European Congress on Regional Geo-Scien-

We have always promoted exchange of tific Cartography and Information Systems, knowledge, methodologies and approaches now at its seventh edition. We have stipunal and international geo-scientific commugeological surveys of **Hungary**, **Holland** and tandem with the regional surveys of **Bava**-level, the Survey has taken part in a number **ria** and **Catalonia**, with **EuroGeoSurveys** and of projects and represents the Italian regions



seismic risk reduction

The SGSS coordinates technical-sci- of seismic risk, especially when adopted

dated tool for the prevention and reduction tural safety.

entific activities for implementation of right from the earliest urban planning Regional Law on seismic risk reduction stages. On the operative front, the Survey "Norme per la riduzione del rischio sis- is involved in seismic monitoring of school mico" and manages national financing pro- buildings and public buildings of strategic grammes for the implementation of safety use for Civil Defence purposes; in relation measures for public and private buildings. to seismic emergencies the Survey takes On the technical front we coordinate part, at regional and National level, in surseismic microzonation studies: a consoliveying of damage and assessment of struc-





SGSS online

- catalogue of geographic data
- geological maps
- soil maps
- the soils on Google Earth
- soil erosion maps
- landslides inventory map
- geological sections and geognostic testing of the plain
- piezometric level and groundwater quality of the plain
- springs and geological units containing aquifers
- sea-coast geographic information system
- geological heritage and geosites

- - register of natural cavities
- geology, history and tourism
- GeoAgritur
- SentieriWEB
- Integrated Seismic Information System





common heritage and the Public Adminis- cific products and activities. Through such behaviour guided by respect for the envitration has a duty to educate the population efforts, we endeavour to raise society's ronment and responsible use of natural about such matters. We are committed to a awareness of the "environment as our col-resources and to spread a culture of geologcampaign of knowledge-sharing and pop- lective heritage" in order to support man- ical hazard prevention.

Knowledge of the environment is our ularization of Earth Sciences through speagement choices and encourage individual

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