ENVRIplus project

Supporting teachers for training a new generation of students on Environmental Sciences

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**ENVRIIplus** is a Horizon 2020 project funded by the European Commission bringing together Environmental and Earth System Research Infrastructures, projects and networks together with technical specialist partners to create a more coherent, interdisciplinary and interoperable cluster of Environmental Research Infrastructures across Europe.

- The project aims to provide the necessary data, data elaboration and facilities **to face major scientific questions related to the natural and anthropogenic environmental changes.**
One of the aims of ENVRIplus is to disseminate knowledge on environmental topics, and on Research Infrastructures supporting the scientists, focusing attention on European secondary schools.

The ENVRIplus scientific community aims to increase awareness on the great challenges that our planet is facing.

Other main purpose is to favor teachers and students training on selected scientific themes: Biodiversity and Ecosystem Services, Greenhouse effect and Earth Warming, Ocean acidifications and Environmental sustainability.
Research Infrastructures in ENVRIplus cover the following Earth components:

**Atmosphere**
**Oceans and Seas**
**Biosphere**
**Solid Earth**
In 2017 we prepared a questionnaire to improve and better fit the content of the e-learning Platform, investigating the teachers' needs.

The questionnaire was administered to 137 teachers from 29 countries during EGU 2017 and 2018 and at the Open Science event of Teacher Training Meeting organized by INGV in 2017.
Most used, Available, Most useful, Needs
One of the aims of ENVRIplus is to disseminate knowledge on environmental topics, and on Research Infrastructures supporting the scientists, focusing attention on European secondary schools.

We elaborated two main tools:

- **e-learning Platform**; a multimedia educational support to secondary school teachers and students.

- **educational games** for pc, tablet smartphones to verify and improve students learning in an amusing way.
The e-Learning Platform is included in e-Training ENVRIplus website (https://training.envri.eu/) that is devoted to providing professional courses for the project partners. The e-Training Platform, also, incorporated a Scientific Gaming section (http://scientificgame.envri.eu/). The e-Learning Platform section is addressed to students and teachers and its aim is to offer a point of reference to the school community (elementary, middle and high) on the recent environmental themes, providing: courses, links to the other European and worldwide platforms, and illustrated boards to aid teachers to develop innovative lessons.
**Courses characteristics:**

- Tools for teachers who want to find resources on a specific environmental topic
- Different teaching / learning method
- Learning resources to fill the gap in the topic not yet covered
<table>
<thead>
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<th>Domain</th>
<th>Number of Courses</th>
<th>Number of Topics</th>
<th>Language</th>
<th>School level</th>
<th>Tools</th>
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<tr>
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<td>15</td>
<td>2 EN/1 IT</td>
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<td><strong>14 Italian 11 English</strong></td>
<td><strong>6 Low 8 Medium 11 High</strong></td>
<td>presentations quiz labs videos games web site links documents</td>
<td>INGV</td>
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**ENVRIgame**

Teams of 4 - 8 students and with the support of a teacher (mentor)

- **Phase 1** Students realize a scientific project and publish the results of their research.
- **Phase 2** online competition (on-line games in the same topic of research project)

**Goal:** to obtain the major score in a scientific competition made by two different phases:

http://scientificgame.envri.eu/
Thank you for your attention!

ENVRIplus e-learning URL: https://training.envri.eu/course/

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