

# Croatia

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## **Organization and Number of Staff:**

Education and Teacher Training Agency is in charge of the GLOBE Program implementation. There is only one person involved (Mrs. Lydia Lugar), but it has several (8 – 20) external collaborators who participate in the implementation of different activities and decision making. Those are GLOBE mentors and trainers, as well as regional coordinators and members of the State committee for the National GLOBE Science Fair and GLOBE school competition.

## **Funding by:**

Ministry of Science and Education; Education and Teacher Training Agency

## **Cooperating Organizations / Individuals:**

National Meteorological Service, Faculty of Science / Department of Biology, Technical school Daruvar, Alumni association ZNAM

## **GLOBE Schools (what types, how many):**

Totally there are 417\* schools listed.

**Most of our organizations are public schools – 60% primary and 30% secondary schools**, we also have **20 kindergartens** and just **few other educational organizations**, like environmental education centers.

## **GLOBE Areas you and schools focus on:**

Croatian schools are mostly focused on Atmosphere / clouds, temperature, precipitation, phenology but also on other GLOBE areas.

## **Number of Schools Reporting Data Over Past Year:**

85

## **Program Implementation, International Cooperation in GLOBE Network, and Activities over Past Year (categorized by GLOBE Strategic Plan 2018-2023 Goals):**

### **1. Education**

In Croatia, we tried to enhance **the implementation of GLOBE** measurements, research activities and the use of GLOBE database **in regular teaching of the subjects Science (Early Science), Geography, Biology, Chemistry, Physics and some other subject areas**. Following that, we published the guide „GLOBE in Curriculum“, available on our web site <http://globe.hr>, which highlights the connections between curriculum outcomes and the GLOBE content.

Education and Teacher Training Agency organizes **GLOBE workshops twice each year**. One is initial GLOBE training and is open to all teachers. The other is an advanced training for teachers who already joined GLOBE. Its focus is on learning activities, inquiry-based learning and research project work. All training workshops are **free of charge and participants receive a certificate of participation**, which is important for their professional development. They are under no obligation to actually implement GLOBE after they are trained. The consequence is that out of big number of listed GLOBE schools, relatively small percent of schools is actively reporting their measurements and observations. Although this seems like a weak point in the system, we believe that teachers trained in GLOBE tend to improve and modernize their teaching, which is a big aim of GLOBE implementation.

Croatia has **3 GLOBE mentor trainers and 24 GLOBE trainers**. Several of Croatian trainers were invited to guide the training in Slovenia, as Slovenia did not have their own trainers. Croatian mentors were also engaged in observing two Slovenian trainer candidates, which was completed in mutual satisfaction.

### **2. Science**

Science is the framework of all GLOBE activities and especially of students' research projects which are the part of **National GLOBE Science Fair and Competition**, that takes place in May each year. The guidelines for developing a research projects are published in **National Competitions Guide for Schools**. There are several steps in project development and the first one is the short presentation of the main idea, the aim, research question(s) & hypothesis and methods to be used. Based on delivered research plans, the State committee assigns a mentor to each school. At the beginning, mentor, who is the scientist or expert in given field of research makes sure that school team proceeds in right direction, according to scientific principles. In next steps, mentor's role is changed to the reviewer of the science report. Finally, if the project report reached the quality to be presented at National Fair, members of the State committee make the judgement in order to highlight most successful projects, good in science and properly written to be published on Croatian GLOBE web site.

We have several scientists and experts who are promoting GLOBE science in described way, as well as by participation in above mentioned advanced trainings. In 2023 there were **7 scientists and experts participating as mentors and reviewers for GLOBE Science Fair**.

### **3. Community**

Country coordinator (and deputies) doesn't have the means to visit all GLOBE schools or even to communicate with all GLOBE educators regularly. Therefore, we have **7 regional centers** located in experienced GLOBE schools. Their role is to promote GLOBE in local community, to help the beginners or those who have a problem and to enhance the communication with country coordinator and state committee. Regional coordinators are very important in our GLOBE implementation model. For their activities they receive a small funding from the Education. **Regional centers organize regional meetings and trainings** three times each year as well as **regional GLOBE Fair**. That is where the most active GLOBE schools are selected for National Level

of GLOBE Fair and Competition. Regional committees have common criteria for scoring the schools.

Many GLOBE schools participate in **Erasmus+ projects** and GLOBE appears to give good bases and the content for international collaboration. For example, in 2023, two Croatian schools (from Zadar and Omiš) were hosting GLOBE teams from Slovenia. In October the representatives of 3 Slovenian schools visited 4 active and experienced Croatian GLOBE schools with the aim of **job shadowing activity**.

**In last year 9 kindergartens joined GLOBE community.** It happened after a big workshop for kindergarten educators, organized by Education and Teacher Training Agency, included GLOBE workshop in the program, as the example and the tool for early science education

#### **4. Technology**

**GLOBE Observer** is great help for GLOBE teams and is very much used in GLOBE schools.

**GLOBE website** is huge and rich with contents, so not many teachers research the web on their own. Noticing that, in last year we tried to show some Learning activities in mentioned workshops, which rose great interest among teachers, but that effort is far from enough. So, plenty is still to be covered.

#### **5. Communications**

Online communication makes participation possible for all GLOBE members and candidates, but they all recommend face to face meetings. On the other side, face to face meetings are more demanding for schools (time and travel funding) and it appeared last year that they were not visited as much as we expected.

Great help in communication with schools are **Croatian Regional centers, our web site and FB.** Regional GLOBE office gives great help with solving the problems that might appear and in coordinating and harmonizing international activities.

#### **Plans and Ideas for Next Year:**

- Clearing of GLOBE data base – deactivate schools that did not report for 5 or more years
- Participation in CCY campaign and local EE campaigns; Organize local activities for the CCY campaign together with US Embassy
- Organize traditional two GLOBE training workshops and GLOBE Science Fair & Competition

*\* I am not sure if those numbers are correct, because the School status report doesn't show Not yet reporting category any more. Last Status report (checked a month ago) showed 185 organizations as Not yet reporting.*

*In any case the percentage of Not yet reporting schools is too big, as well as the percentage of schools that Have reported in the past. That is the reason for clearing the data base and deactivate schools that haven't been active for more than 5 years.*