



**INVITATION**  
TO PARTICIPATE  
IN  
**THE GLOBE PROGRAM**  
**2011-13**



Student Climate Research Campaign  
**SCRC**

## Student Climate Research Campaign

*“The GLOBE Student Climate Research Campaign (SCRC) will engage students from around the world in the process of investigating and researching their local climate and sharing their findings globally. SCRC is comprised of learning activities, events, and research investigations.*

*The SCRC will focus on improving students' understanding of climate and how it differs from weather as well as guide them through the process of climate research using GLOBE materials and protocols. The SCRC will continue GLOBE's tradition of inquiry-based, hands-on science and will promote international collaborations between students and with scientists.”*



INVITATION  
TO PARTICIPATE  
IN  
**THE GLOBE PROGRAM**  
2011-13



## In search of a project

- How to find an interesting topic?
- How to involve scientists?
- How to involve schools?
- How to involve other countries?



INVITATION  
TO PARTICIPATE  
IN  
THE GLOBE PROGRAM  
2011-13



IPY-The International Polar Year

Specific theme

Countries

Scientists- Andreas, Vlado, Elena and Martha

# INVITATION TO PARTICIPATE IN THE GLOBE PROGRAM 2011-13



Would you like to participate in an inspiring network with a focus on climate?

Would you like to collaborate in a network of schools from Norway, The Czech Republic and Croatia?

Do you want to engage your students through an inspiring project that may also be useful locally?

Do you have pupils at the age of 14 or 17 (level 9 or 11)?

If you answer yes to these questions, you are an obvious candidate to participate with your class in the project [Student Climate Research Campaign](#) in The GLOBE Program.

## Organisation

We want to invite up to 10 schools from each country to participate in the project.

Basically we want five 9. grade classes and five 11 grade classes. The distribution is determined by how the registration is in the individual countries.

The schools will work together in pairs. Which schools will cooperate is to be determined when we have selected the schools in all countries.





THE RESULT

<b>School</b>	<b>Country</b>
Hotelijersko-turisticka i ugostiteljska skola, Zadar	Croatia
Prirodoslovna i graficka skola, Rijeka	Croatia
Privatna klasic gymnazi	Croatia
Skola za medicinske sestre Vrapce, Zagreb	Croatia
Srednja skola Mate Blazine, Labin	Croatia
Srednja skola Prelog	Croatia
Sumarska i drvodjeljska skola Karlovac	Croatia
Tehnicka Skola Daruvar	Croatia
Gymnázium Globe, s.r.o. , Brno	Czech
Schola Humanitas Litvínov	Czech
SLŠSOŠS Šluknov	Czech
Základní škola Josefa Bublíka, Bánov	Czech
Základní škola Pomezí	Czech
ZŠ TGM Moravské Budějovice	Czech
Den franske skolen Oslo	Norway
Eidskog Ungdomsskole	Norway
Finnfjordbotn videregående skole	Norway
Høydalsmo skule	Norway
Krogstadøra oppvekstsenter	Norway
Polarsirkelen vgs	Norway
Skeisvang videregående skole	Norway
Sørreisa sentralskole	Norway
Vest-Telemark vgs	Norway
Åmot skule	Norway

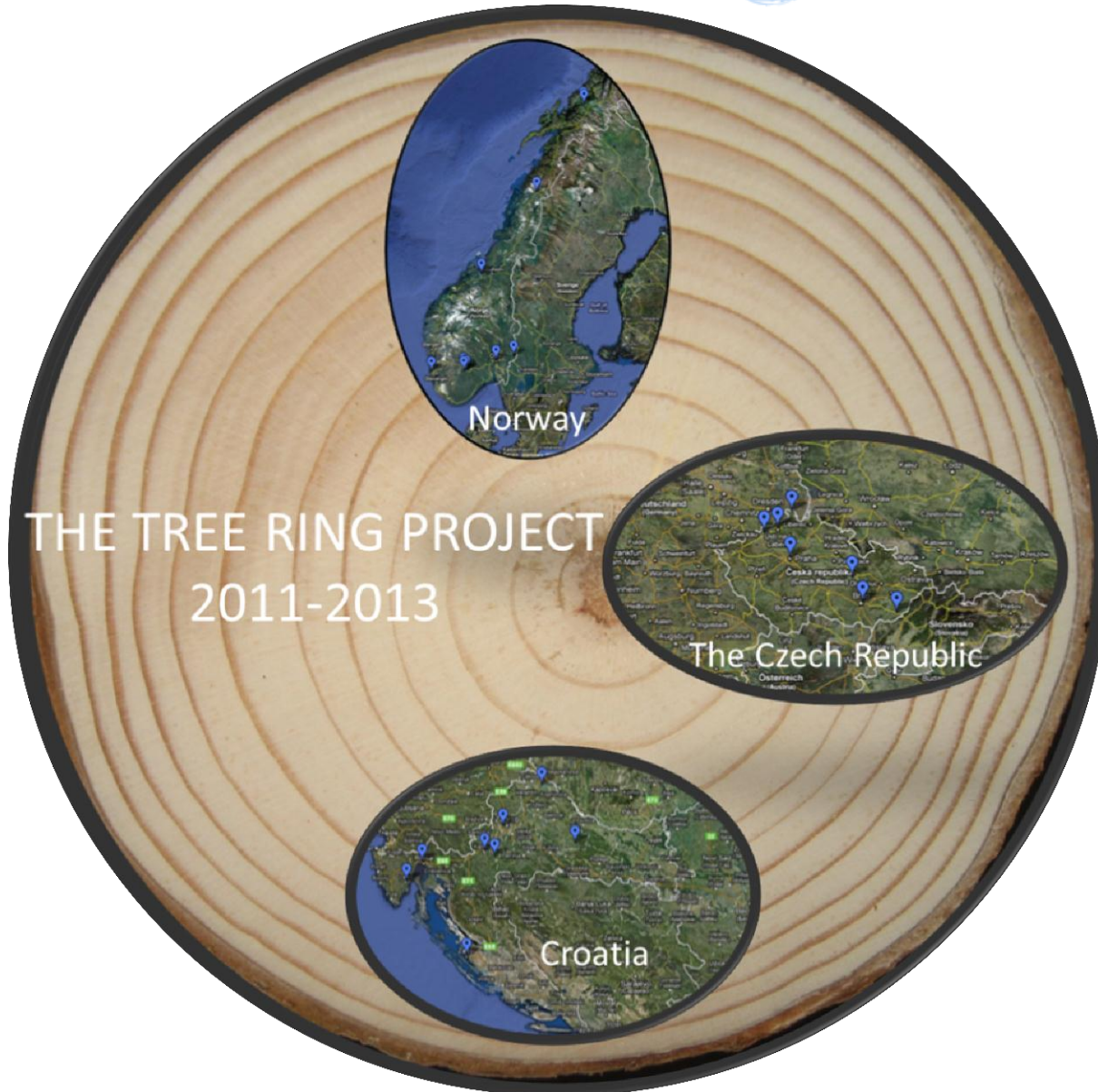




NATURFAGSENTERET  
NORWEGIAN CENTRE FOR SCIENCE EDUCATION



THE GLOBE PROGRAM  
CONNECTING THE NEXT GENERATION OF SCIENTISTS



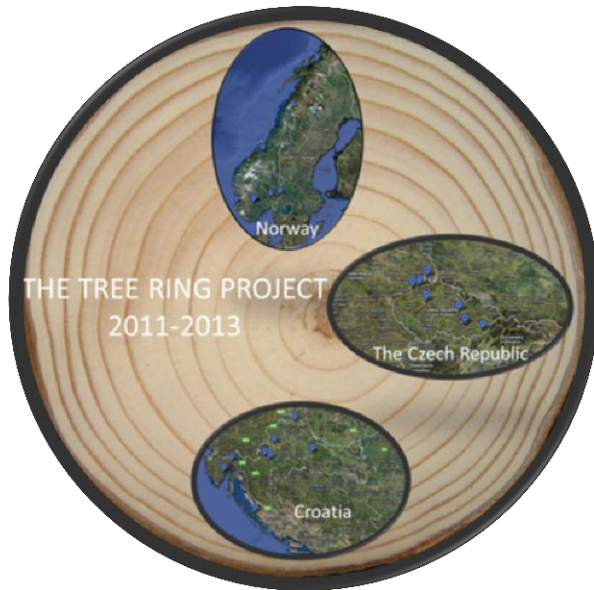
THE TREE RING PROJECT  
2011-2013

Norway

The Czech Republic

Croatia

## GENERAL GOALS



### **Research Investigations**

- Students carry out their own research projects
- Work together with scientists

### **Integrated into the curriculum**

- Find goals in your curriculum that can be reached by doing this project

### **International collaboration**

- The two twin schools find a common research question
- Develop knowledge about each others country
- School student exchange

## Workshops

One workshop will be held each year.

At the workshops one will learn the basic scientific methods in the GLOBE protocols and in ***Dendrochronology and Dendroclimatology*** .

The workshops will probably last from Wednesday to Sunday.





## Workshops

One workshop will be held each year.

At the workshops one will learn the basic scientific methods in the GLOBE protocols and in ***Dendrochronology and Dendroclimatology*** .

The workshops will probably last from Wednesday to Sunday.



## Workshops

One workshop will be held each year.

At the workshops one will learn the basic scientific methods in the GLOBE protocols and in ***Dendrochronology and Dendroclimatology*** .

The workshops will probably last from Wednesday to Sunday.





## Workshops

One workshop will be held each year.

At the workshops one will learn the basic scientific methods in the GLOBE protocols and in ***Dendrochronology and Dendroclimatology*** .

The workshops will probably last from Wednesday to Sunday.



## Workshops

One workshop will be held each year.

At the workshops one will learn the basic scientific methods in the GLOBE protocols and in ***Dendrochronology and Dendroclimatology*** .

The workshops will probably last from Wednesday to Sunday.





## **Common project (proposal)**

*Use of annual tree rings in climate research (Dendrochronology and Dendroclimatology)*

Pupils will learn how one can use the annual rings to say something about the local climate and how the annual rings can be used to determine the age of old log houses.

Pupils carry out measurements on local trees by looking at already chopped trees or by drilling out a timber core.

*One or more exercises that are defined in the Student Research Climate Campaign*



## **Common project (proposal)**

*Use of annual tree rings in climate research (Dendrochronology and Dendroclimatology)*

Pupils will learn how one can use the annual rings to say something about the local climate and how the annual rings can be used to determine the age of old log houses.

Pupils carry out measurements on local trees by looking at already chopped trees or by drilling out a timber core.

*One or more exercises that are defined in the Student Research Climate Campaign*







NATURFAGSENTERET  
NORWEGIAN CENTRE FOR SCIENCE EDUCATION



THE GLOBE PROGRAM  
CONNECTING THE NEXT GENERATION OF SCIENTISTS

# Sampling





## Another way of taking samples



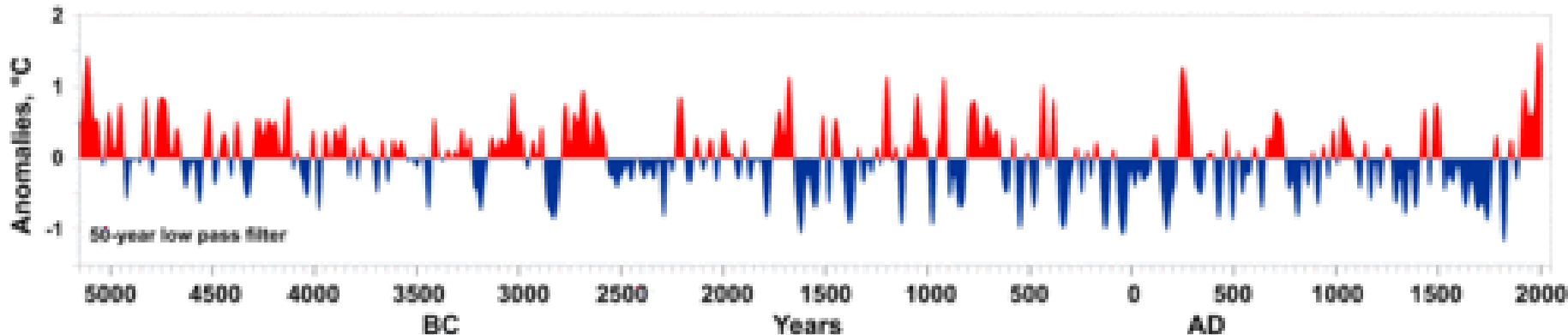
# Tree Field Study Kit



## Common project (proposal)

*Use of annual tree rings in climate research (Dendrochronology and Dendroclimatology)*

Variation of tree ring width translated into summer temperature anomalies for the past 7000 years, based on samples from [holocene](#) deposits on [Yamal Peninsula](#) and Siberian now living conifers.[\[1\]](#)



## Local Projects

Every couple of schools discuss what might be an interesting climate project in their area.

It may be a project where you compare the development of the climate in the two areas. The research question may be:

- How has the temperature changed in my area the last 150 years?
- How has vegetation changed over the last 150 years?
- Does spring comes earlier or later than 150 years ago?

## Timeline

June 2011: Invitation to schools in Norway, The Czech Republic and Croatia  
August 2011: Selection of schools  
October 2011: Startup workshop in Croatia.  
Two teachers and the principal from each school will be invited

Schoolyear 2011/12: Work with the research question and develop collaboration between schools

May/June 2012: Reports from the schools

October 2012: Workshop in The Czech republic. Two teachers from each school will be invited

Schoolyear 2012/13: Work with the research question and develop collaboration between schools

May/June 2013: Report from the schools

Sept. 2013: Closing workshop in Norway. Two teachers and the principal from each school will be invited



# Let's do it!