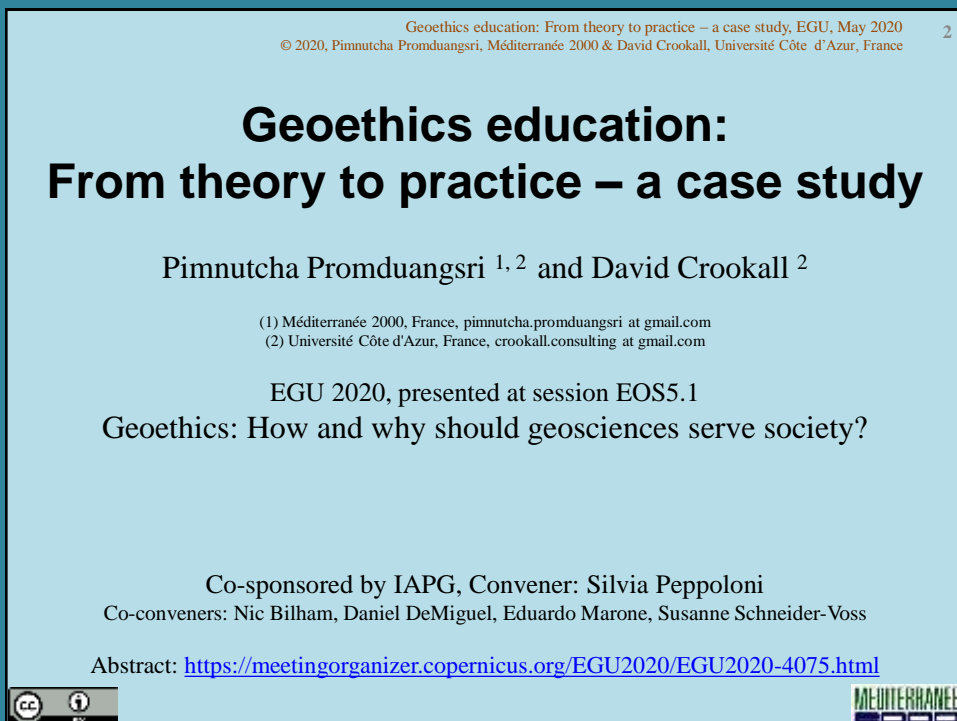


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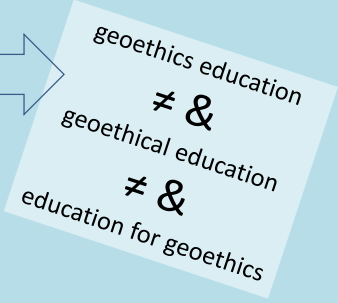
Plan

a) Background & principles:
Necessity of **geo-edu-ethics**

- At all levels of society
- In all subject areas of education
- Current failure of education
- Geoethical imperative for ordinary citizens

b) Case study

- Translation of principles into action
- Méditerranée 2000
- Example actions


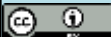
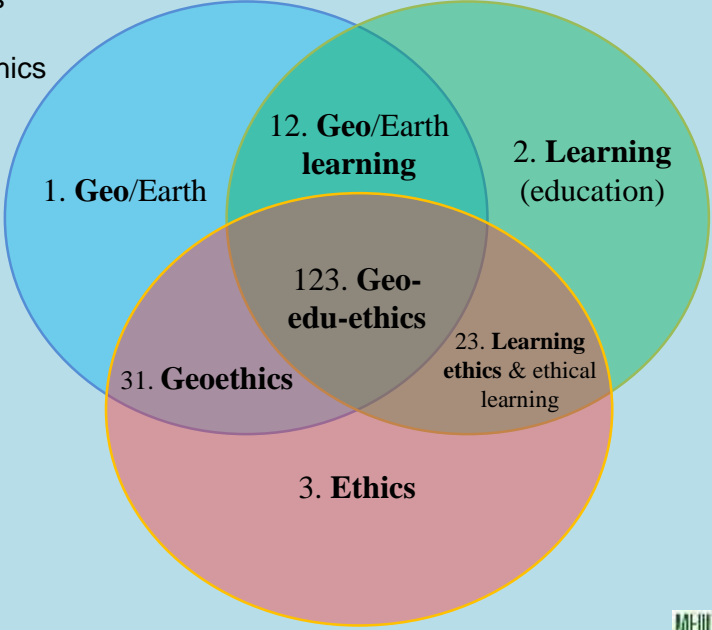


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Dimensions of geo-edu-ethics



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Geoethics: A few elements

What is (in) geo-edu-ethics = learning geoethics, ethical learning about the Earth, ...



- ‘edu’ (learning) is sandwiched between ‘geo’ and ‘ethics’
- We need education to bring together geosciences and ethics

Definitions of geoethics, esp applicable for geo-edu-ethics

- From **IAPG**
 - Appropriate **behaviours** and **practices** wherever human activities interact with the Earth system
 - Ethical, social and cultural implications of geoscience knowledge
 - **Tool to influence the awareness of society** regarding problems related to geo-resources and geo-environment

<http://www.geoethics.org/definition>
- From **Wikipedia**
 - The branch of ethics which relates to the interaction of human activity with our physical world, and with the practice of the Earth sciences

<https://en.wikipedia.org/wiki/Geoethics>




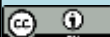
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Necessity of geo-edu-ethics

- Geo-edu-ethics is **not** included in school programs = Current failure of most educational systems & ministries
- It must be at the heart of the learning society
 - Primary, elementary, secondary & tertiary education
 - Life-long & professional education & industry
 - In all subject areas (geography, history, maths, physics, etc.)
- Geoethical imperative
 - The most powerful way to mitigate climate change is to make **geoethics** the **core of all learning** and education



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Geoethics throughout edu



From *Climate Change and Simulation/Gaming: Learning for Survival*
Published seven years ago, in **2013**, in *Simulation & Gaming*

“... sustainability, climate change, and resilience must be included in one way or another in **every single course, at all levels**, primary to university, **across the world**”

“Sustainability, climate change, and resilience is so urgent and essential that it needs to take first place of all subjects ... **all curricula should be built around climate change.**”

“Climate change and resilience courses can be used to teach language, mathematics, history, chemistry, medicine, economics, computer science, finance, management, and most other subjects”

David Crookall
DOI: 10.1177/1046878113497781


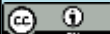


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Why geo-edu-ethics?

- The planet is in dire need of **ethical behaviour**, to **combat**:
 - Dangerous impact of human activities on life systems
 - CO₂, CH₄ and other GHG emissions → Global heating & CC
 - Pollution: Air, water and ground
 - Loss of biodiversity & species extinction
 - Resource depletion
 - Poverty, wealth gap, migration
 - ...
- Most **systems & ministries** of education are **failing their citizens**
 - despite action by some organizations (UNEP, UNESCO, IPCC, NGOs, activist groups, associations, ...)



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Ends & means of geo-edu-ethics

Difficulty of matching ends & means

Show us not the aim without the way.
For ends and means on earth are so entangled
That changing one, you change the other too;
Each different path brings other ends in view.

— Ferdinand Lassalle, quoted by Arthur Koestler in *Darkness at Noon*





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<p>Problems</p> <ul style="list-style-type: none">Global warmingClimate changeSea-level risePollutionDeforestationOcean acidificationBiodiversity lossOver exploitation of natural resourcesFailure of education systems <p>Unethical: Not to provide knowledge about & skills for the Earth, sustainability, climate change, etc</p>	<p>Geo-edu-ethics - Means</p>	<p>Behaviour - Ends</p> <p>Individual & collective behaviors contribute to a sustainable Earth:</p> <ul style="list-style-type: none">• Limit energy consumption• Avoid waste• Recycle• Eating vegetarian• Using fossil-free energy• Stop pollution• Geo-edu-ethics for all• Make the Geoethical Promise
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[Geoethical Promise: http://www.geoethics.org/geopromise](http://www.geoethics.org/geopromise)



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Méditerranée 2000, France – A case study

Med2k = Educational association for sustainability and ecology, Cannes, France

General missions

- To create relationship between citizens and nature
- To raise public awareness about the environment & environmental issues
- To promote ethical behaviour on the part of citizens

Principles of geo-edu-ethics → translated into local actions

- Recycling, learning about raw materials, raising awareness about flooding & pollution, reducing one's carbon footprint and energy use, etc
- Schools, local governments, industry

Med2k is a member of the **IAPG**: Helps us to improve our activities



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Inf'Eau Mer → Geo-edu-ethical compaign

Inf'Eau = play on phrase 'info+eau' (water/info)

Public awareness (geo-edu-ethical) campaign about:

- water pollution and
- the environment

Objectives:

- Educate general public about protecting the sea
- Develop tourism that is respectful of the environment
- Inform people about the ethical actions carried out by the municipality in favor of the environment
- Collect information on the perception of holidaymakers and residents regarding the environment



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Inf'Eau Mer → Geo-edu-ethical compaign

Means (methods)

Organize stands:

- about the **marine environment**
- on the beaches, in summer

With:

- **Games**
- Information **booklets**
- **Exhibitions**




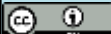

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Les Ambassadeurs du Littoral → Geo-edu-ethics

Les Ambassadeurs du Littoral = Coastal Ambassadors

- Objectives (desired outcomes):
 - Introduce children to:
 - marine environment
 - impact of human activities on marine biodiversity
 - For preservation of seas and oceans






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Les Ambassadeurs du Littoral → Geo-edu-ethics

Means (methods): 4 sessions:

1. & 2. Learning in class
3. Visiting a water treatment station
4. Cleaning the beach & leaving messages in the sand



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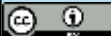
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Scol'Air → Geo-edu-ethics

Scol'Air = play on phrase 'scholarly' and 'air'

Objectives:

- Educate children about environmental health
- Teach about air, its properties and pollution
- Raise awareness of air pollution and discover geoethical actions to take
- Acquire a scientific approach
- Reinforce group work, cooperation, learning by the senses




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Scol'Air → Geo-edu-ethics

Means (methods):
2 sessions:

1. Learning about physical and chemical properties of air
2. Learning about air pollution, solutions and geoethical behavior



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Geo-edu-ethical thoughts by great thinkers

Never doubt that a small group of thoughtful, committed citizens can change the world; indeed, it is the only thing that ever has. - Margaret **Mead**

The more clearly we can focus our attention on the wonders and realities of the universe about us, the less taste we shall have for destruction. Rachel **Carson**

You cannot get through a single day without having an impact on the world around you. What you do makes a difference and you have to decide what kind of a difference you want to make. - Jane **Goodall**

One of the first conditions of happiness is that the link between man and nature shall not be broken. - Leo **Tolstoy**

Progress is impossible without change, and those who cannot change their minds cannot change anything. - George Bernard **Shaw**

Note that **change** can be another word for **learning**

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Conclusion

- Geo-edu-ethics = Needed in every walk of life and across the globe
- A small local association can have a big impact - Med2k
- Geo-edu-ethics activities & compaigns for all citizens:
 - Geothical behaviour
 - Changing people's behaviour
 - Pushing for a sustainable world
 - Respecting the environment
 - Making wise decisions regarding the planet
 - Keeping the *Geoethical Promise*
 - ...

 [Geoethical Promise: http://www.geoethics.org/geopromise](http://www.geoethics.org/geopromise) 

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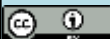
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Thank you & contact details

Merci

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Gracias



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