

1 Geoethics literacy: Clarifying values, principles and behaviour

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Learning about geoethics is not easy partly because the area is relatively new (having emerged in the early 2010s), the concepts are sometimes difficult to fathom and geoethics touches on such a wide area of geoscience phenomena and on such a variety of human issues.

Learning through active, participatory engagement has been developing since the 1960s, and is now deployed, albeit sporadically, across the full educational and training spectrum (from the humanities, through the social sciences to the hard sciences). **Methods** that have developed in this learning paradigm include project work, internships, experiential learning, simulation/gaming, values clarification and many more. We contend that **participatory methods** are an **effective** way in which to learn, as supported by much research.

Our poster invites you to participate in a game-like, **values clarification exercise**. We have developed a new version of an exercise that we have used in several places (Austria, Costa Rica, France, online) to unravel the **knotty relations** among **values, principles and behaviours** related to geoethical issues and dilemmas.

It is possible to play alone, but it is more enlightening and engaging to play in pairs or small groups. Please **bring a friend** or two to our poster and **participate** in our exercise. The basic process of the exercise can be adapted to your own specific areas of interest. We look forward to seeing you – please bring a pencil.

(This poster was originally intended as a workshop in a short course, but our SIC proposal was declined.1. Poster game prepared for EGU, April 2024.

2 Concepts mishmash

Some previous versions (mostly in workshops)

- CRAI & CATE, Costa Rica, 2018
- ISAGA, Warsaw, Poland, 2019
- Earth Action Hub, Denmark, online, 2021
- Eastern Mediterranean Lia, Cyprus, online, 2021
- ISAGA, La Rochelle, France, 2023
- EGU, Vienna, Austria, 2023

1. https://imgur.com/a/gj22-2014-74page_p-12
 2. Simon Sinek (2009). *Start with Why: How Great Leaders Inspire Everyone to Take Action*, p.53, Penguin

3 Relationships & contrasts

Values	Principles	Behaviours
Indicate what we hold as important	Guidelines influencing how we operate and make decisions	Actual behaviours we exhibit / have exhibited
Based on core ideologies	Based on what we value	Guided by our principles
A concept	Actionable	The action itself
Example: <i>Ethical above all else</i>	<i>We work with only those with a proven track record of ethical conduct</i>	<i>We exclude hiring those who have behaved unethically (eg, harassment, plagiarism, falsification of data)</i>

VALUES
VALUES are qualities or standards of behavior

Help to form principles

Qualities

Not as firm as principles

PRINCIPLES
Principles are rules or beliefs governing one's behavior

Based on one's values

Rules

Stern and unyielding

1. Horta (2014). In: 175 Differences Between Values and Principles (Definition, Interrelation, Differences). Public Cost. https://jodan.com/differences-between-values-and-principles/
 Modified from: https://shapackstart.com/post-differences-between-values-principles-behaviours

4 Geoethics in a nutshell

Geoethics is not simply professional ethics. Originally, it was developed in the context of geosciences to increase the awareness of geoscientists to their cultural and social role, but over time expanded to define a way in which **humans** can rethink their **relationship with the Earth system** in the light of **principles and values** that can provide a healthy and safe life in **respect for geoecosystems**.

The theoretical framework of geoethics has now consolidated, and it has become the proposal on which to base a **global ethics** for the new millennium.

Popovski, S., & Di Capua, G. (2021). Geoethics as a global ethics to face grand challenges for humanity. *Geological Society London, Special Publications*, 508(1), 13–29. https://doi.org/10.1143/GSP/508-13-29

(Over?)Simplification: Basis for the exercise
 Values → Principles/Norms → Behaviours/Actions

1. "Action speaks louder than words but not nearly as often." Mark Twain
 2. "How to do things with words." J.L Austin
 3. "Well done is better than well said." Benjamin Franklin
 4. "Words may show a man's wit, but actions his meaning." Benjamin Franklin
 5. "The superior man acts before he speaks, and afterwards speaks according to his actions." Confucius
 6. "In leadership, life and all things it's far wiser to judge people by their deeds than their speech... their track record rather than their talk." Rashidun Ogunlana

5 Please play (short poster version) SVG – The Sustainable Values Game (© Crookall, 2017)

A. We must act responsibly towards the Earth and all its inhabitants (flora, fauna, humans), including future generations.	B. We must be professional in all actions related to the Earth, including research, policy-making, and decision-making.	C. Water (including waterways, sea) must have similar rights as humans, implying protection by law.
D. All decisions, at all levels, should be made with regard to all aspects of community life (health, gender, wealth, environment).	E. We must acknowledge and celebrate the diversity of the Earth's ecosystems and cultures.	F. All people with community responsibility (politicians, mayors, directors, managers, etc) must pass tests for basic geosciences (esp climate science) and geoethics.
G. We must promote accessibility & transparency in all actions related to the Earth, incl. sharing information, open communication and public participation in decision-making processes.	H. Those who pollute & degrade nature (eg, oil, chemical, mining) must pay the full price of the pollution or degradation that they cause, without subsidies.	

6 Select & rank underlying values

Individually:
 Select **3 or 4 values** from the ones on the game board, and **1** value of your own

In your group:
Rank your top 3 values (1 = top)
 1. .
 2. .
 3. .

Select & rank geoethical principles

Individually:
 Select **3 or 4 geoethical principles** from the ones on the game board, and **1** of your own

In your group:
Rank your top 3 geoethical principles (1 = top)
 1. .
 2. .
 3. .

EGU 2024, poster, 15 Apr 2024

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Select & rank resulting behaviours (based on your selected geoethical principles)

- Volunteer my geo-expertise
- Avoid polluting
- Act for the climate
- Follow the Cape Town statement
- Respect indigenous people & their rights
- Talk to friends about climate change or pollution or ...
- Cooperate with colleagues
- Tell the truth (as I know it)
- Promote geoethics
- Help young people to understand their responsibilities towards the Earth
- Save fresh water (light waterfootprint)
- Keep my ecological footprint light
- Communicate clearly about the Earth
- Participate in geoethical games

Individually or in your **group**
Select 2 or 3 behaviours from the ones on the left and 1 or 2 of your own

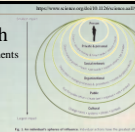
Rank your top 3 behaviours (1 = top)

1. .
2. .
3. .

8

Diagram, drawing, sketch

You do not need to use all your selected elements



highlighting or explaining the main relationships among your ranked top 2 or 3

- principles,
- values &
- behaviours

Own your arms to change, but don't let go of your values. - Dalai Lama

EGU poster on debriefing: <https://meetingorganizers.com/EGU2024/EGU24-2607.html>

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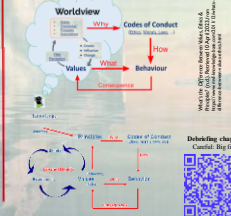
Individual debriefing

Put down a few notes for the questions below (* mandatory questions). Short notes only is fine; long sentences are not needed. Do this in **silence**, no talking.

- 1.* What were some of your **emotions** during the exercise?
2. What was your overall **experience** during the whole exercise?
- 3.* What things were the most **interesting** for you? Why?
4. What were the **easiest** and most **difficult** aspects of the exercise? Why?
5. How **far** do your **sketches, thinking or discussion** relate to the **diagrams** opposite?
- 6.* How **far** do you think that you were able to clarify the values underlying geoethical principles.
- 7.* In what ways do you think that this clarification will help you personally in the future? Or help you to help your students?
8. Your own question: _____

Group debriefing: Sharing

- With your friend(s) colleague(s), **share** and compare your notes from the individual debrief. Discuss the various aspects, and any others that come to mind.
- Make notes of the **essence** of your discussion. Do not simply make a list of what you say.



Worldview

Code of Conduct

Behaviour

Consequences

Values

Why

How

Debriefing chapter: Clarifying, Reflecting