

# Questions to the Soil — Guide

## 5: Boden-Brücke

*For Cross-Border Groups (DE/PL Trilingual, Intercultural)*

---

February 2026 | Version 1.2 | CC BY-SA 4.0

## Guide 5: Boden-Brücke — The Soil Bridge

### For Cross-Border Groups (DE/PL Trilingual, Intercultural)

#### Overview

| <b>Title</b>               | Boden-Brücke / The Soil Bridge / Most Glebowy  |
|----------------------------|--|
| <b>Target Group</b>        | Mixed German-Polish participant groups, cross-border community events, trilingual workshops (DE/EN/PL), European exchange programs, VULCA network visitors   |
| <b>Group Size</b>          | 12–24 (ideally balanced German and Polish participants)  |
| <b>Duration</b>            | Full day (6–7 hours including meal) or two half-days   |
| <b>Location</b>            | Day 1 or Morning: Erdpuls campus (German side). Day 2 or Afternoon: a partner site or landscape on the Polish side (Lubuskie), or a comparison site at the border zone itself  |
| <b>Season</b>              | Late spring or early autumn (comfortable outdoor conditions for a full day; agricultural activity visible on both sides)   |
| <b>Learning Objectives</b> | By the end of this workshop, participants will: (1) demonstrate soil observation in at least two languages, naming at least one soil quality term that gains or loses meaning in translation and explaining the cultural significance of the difference; (2) identify at least three shared geological or biological features of the cross-border landscape — documented with measurements or observations — that predate and transcend the political boundary; (3) contribute paired observation records (from both sides of the border, or from contrasting campus sites) to the Erdpuls trilingual citizen science archive, with at least one entry in each language; (4) co-formulate, with participants from the other country, at least one specific proposal for cross-border soil stewardship — endorsed by both sides and recorded in the closing documentation |

| <b>Sustainability Dimensions</b>  | <p><b>Ecological</b> (shared glacial geology; transboundary watershed and water table; soil type continuity across the Oder-Neisse line; shared biodiversity of organisms that know no political border); <b>Economic</b> (cross-border agricultural cooperation as regional sustainability mechanism; EU INTERREG funding as the institutional-economic infrastructure making cross-border education possible; shared food heritage as economic and ecological common ground); <b>Social</b> (cross-cultural dialogue as community practice; language as social bridge and barrier; Oder-Neisse border region identity as shared social reality; reconciliation through shared ground); <b>Cultural</b> (shared pre-national glacial landscape as common heritage; multilingual ecological vocabulary as cultural resource; Slavic and Germanic soil traditions in the same landscape; the place-name Müllrose/Miloraz as emblem of layered cultural tenure)</p> |
|-----------------------------------|---|
| <b>SDG Links</b>                  | <p><b>SDG 4</b> (Quality Education — multilingual, intercultural, experiential learning; comparative environmental education across national frameworks; OER trilingual publication); <b>SDG 17</b> (Partnerships for the Goals — formal cross-border institutional cooperation as a direct SDG 17 action; shared citizen science infrastructure as a model for regional partnership); <b>SDG 10</b> (Reduced Inequalities — bridging German-Polish institutional disparities in environmental education access and infrastructure; equitable co-facilitation design)</p>   |
| <b>4A-Pathway Focus</b>           | Full pathway, with particular emphasis on Awareness (perceiving across a cultural boundary) and Acknowledgment (recognizing shared ground beneath political division)   |
| <b>Unique Value</b>               | The soil does not recognize the border. This simple fact is the workshop's most powerful teaching.  |
| <b>Methodological Foundations</b> | <p>Comparative environmental education (Bray et al., 2014): systematic cross-national comparison of ecological knowledge and practice as a method for revealing both shared foundations and genuine cultural difference. Place-based education (Gruenewald, 2003): the shared landscape as the foundational educational text — prior to and independent of any national curriculum. Proxemics and intercultural communication (Hall, 1966; 1976): cultural variation in spatial behavior and sensory norms as explicit pedagogical content, not merely background.</p>  |

## The Cross-Border Principle

The Oder-Neisse border between Germany and Poland is one of Europe's most significant political boundaries — drawn in 1945, it divided communities, landscapes, and ecosystems that had been continuous for millennia. The glacial geology, the river systems, the soil types, the vegetation communities, and the human settlement patterns all predate and disregard this border.

The soil on the German side of the border and the soil on the Polish side are, in many places, the same soil — formed by the same ice sheet, fed by the same water table, inhabited by the same organisms. When participants from both countries kneel together and handle this shared ground, the political boundary becomes temporarily irrelevant. This is not a rhetorical claim — it is an observable, measurable fact.

The workshop uses this fact as its foundation: soil as a bridge between cultures, languages, and political histories. The 13 Questions (plus the auditory enrichment at 8b) are asked in three languages simultaneously, and the differences in how German, Polish, and English speakers name what they observe become a rich source of cultural and linguistic insight.

**The proxemic principle of cross-border soil encounter:** Hall's deepest insight is that proxemic behavior is culturally patterned — the distances at which people feel comfortable, the sensory signals they attend to, the meaning they assign to spatial arrangements all vary across cultures. When German and Polish participants kneel side by side for the soil protocol — shoulders 25–35 cm apart, hands in the same earth — they have entered each other's personal proxemic zone across a cultural boundary. The soil is the mediating object that makes this crossing possible without social awkwardness. It gives both parties a reason to be at a specific distance: the distance required to observe the same patch of ground together. The object negotiates the proxemic distance so the humans don't have to. This mediation is one of the workshop's deepest pedagogical mechanisms.

## Language Protocol

**Working languages:** German, Polish, and English. English serves as the bridge language for concepts that resist direct DE-PL translation.

**Practical approach:** - The facilitator (or co-facilitators — ideally one German-speaking, one Polish-speaking) reads each question in all three languages sequentially. - Participants record in whichever language they prefer. - During group discussion, participants speak their preferred language; co-facilitator or bilingual participants translate key points. - Pattern naming at the end is done in the discoverer's language first, then translated collaboratively. The translation process itself is a teaching moment — when a Polish participant names a soil quality "tłusta ziemia" (fat earth) and the German equivalent "fetter Boden" carries a slightly different connotation, the gap between the terms reveals a cultural difference in how soil fertility is perceived and valued.

**Materials:** All printed materials (Field Sheet, reference cards) are trilingual. The Soil Explorer Notebook for this guide has each question printed in DE/PL/EN in parallel columns.

## Preparation and Materials

As in Guide 2, with additions: - Trilingual Field Sheets and Notebooks - A large-format geological map showing the cross-border region (from Brandenburg into Lubuskie) — critically, one that does not emphasize the national border - If a Polish comparison site is used: transport arrangements, permissions, local contact - A shared meal with food from both sides of the border (this is integral, not optional — see below) - Name tags with country flag stickers (small, optional — some groups prefer to de-emphasize national identity, which is also valid)

## Welcome and Framing (25 minutes)

Gather at the campus entrance. Both co-facilitators present.

**In German:** "Willkommen bei Erdpuls. Heute stellen wir dem Boden dreizehn Fragen — und der Boden wird uns etwas zeigen, was die Politik nicht sehen kann."

**In Polish:** "Witamy w Erdpuls. Dziś zadamy glebie trzynaście pytań — a gleba pokaże nam coś, czego polityka nie jest w stanie dostrzec."

**In English:** "Welcome to Erdpuls. Today we ask the soil thirteen questions — and the soil will show us something that politics cannot see."

"The ground we are standing on was formed by a glacier that covered this entire region — from here to well beyond Słubice and Rzepin — about 15,000 years ago. The same ice, the same moraine, the same sand, the same clay. The border drawn in 1945 crosses this landscape, but it does not divide this soil. Today, we discover this together."

Form cross-cultural pairs or small groups: each group should include at least one German-speaking and one Polish-speaking participant. If English speakers are present, distribute them across groups as bridge-communicators.

## The Experience: Part 1 — German Side (90 minutes)

The 13 Questions proceed as in the main protocol, with the following cross-border adaptations:

**Question 3 (Color):** *Cross-Border Prompt:* "What words does your language have for this color? In German, is it 'braun,' 'dunkelbraun,' 'lehmfarben,' 'kastanienbraun'? In Polish, 'brązowy,' 'ciemnobrązowy,' 'gliniasty,' 'kasztanowy'? Do the color words in your language carry associations that the other language doesn't?"

**Question 4 (Touch/Texture):** *Cross-Border Prompt:* "Farmers in different traditions have different words for soil textures. What words did your grandparents use? 'Schwerer Boden' (heavy soil) in German? 'Ciężka ziemia' in Polish? Are these the same concept or different?"

**Question 5 (Smell):** *Cross-Border Prompt:* "Smell is the hardest sensation to translate. Describe what you smell in your language first. Then try to explain it to your partner. What is lost in translation? What remains?"

**Question 11 (History):** This is where the workshop's cultural depth emerges. The same soil in this border region has been worked by Slavic, Germanic, Prussian, Polish, and German hands over centuries. The place-name Müllrose itself derives from the Old Slavic *Miloraz* ("beloved place"). The soil does not distinguish between these occupants — it records all of them.

*Cross-Border Prompt:* "What do you know about who worked this soil before you? Before the current border? Before the war? What stories have you been told about this land's history?"

**Question 13 (Care):** *Adapted for cross-border context:* "If this soil belongs to no nation — if it is simply ground that has been here since the ice left — whose responsibility is its care? How would you care for it together, across the border?"

### Shared Meal (45 minutes)

The mid-day meal is not a break — it is a pedagogical element. Food from both sides of the border, prepared together if possible (using the Zone E community kitchen) or brought by participants. Bread from a German baker and bread from a Polish baker. Pickles from a German garden and pickles from a Polish garden. Perhaps most powerfully: a soup made from vegetables grown in the Erdpuls garden, in the soil that participants just examined.

The meal makes the soil-to-table connection literal. "You held this soil in your hands an hour ago. Now you're eating what it grew."

*Proxemic note — the proxemic center of the cross-border day:* This shared meal is the most powerful sociopetal intervention available for cross-border work. It activates all five sensory channels simultaneously (taste, smell, thermal warmth of soup and coffee, touch of bread being broken and passed, sight of shared table, sound of multilingual conversation) at personal-to-intimate proxemic distance. Hall's research and subsequent cross-cultural studies consistently show that shared meals reduce interpersonal distance, override cultural proxemic defaults, and create conditions for the kind of informal exchange that formal programs cannot engineer. By the end of this meal, the cultural clustering (German speakers with German speakers, Polish speakers with Polish speakers) has typically dissolved. The soil encounter opened the proxemic door; the shared meal walks through it.

Conversation during the meal is unstructured. Bilingual participants naturally translate for others. Stories flow. This is where the "soft" cross-cultural work happens — not in formal exercises but in shared eating.

## The Experience: Part 2 — Comparison (90 minutes)

**Option A (Full day, with transport):** Travel to a comparison site on the Polish side — a field edge, a garden, a park in Rzepin or Słubice, or ideally a location in the Odra/Oder river valley where the geological continuity is most visible. Repeat the 13 Questions (or a condensed version: Questions 3, 4, 5, 7, 8, 11) at the Polish site. Compare.

The comparison is the workshop's climax. When participants discover — through their own hands, not through a lecture — that the soil 30 km east of the border is the same glacial sand, the same color, the same smell, the same springtails, the argument for bioregional thinking becomes experiential rather than theoretical.

*Proxemic note:* This is the moment where proxemics and politics collide. On the German side, participants were in intimate proxemic relationship with "their" soil — familiar, comfortable, personal-distance landscape. Crossing the border produced a proxemic rupture: unfamiliar signs, different language, uncertainty about social codes — a shift from personal to social/public proxemic distance with the same physical landscape. Now, kneeling on Polish soil and finding the same texture, color, smell, and creatures, the proxemic distance closes again. The soil's intimacy is the same on both sides. The participants' senses confirm what the geological map shows: the border is a political fact, not an ecological one. This sensory discovery at intimate distance is more powerful than any lecture at public distance could be.

**Option B (Half day, on campus):** If cross-border travel is not feasible, use comparison patches on the Erdpuls campus that represent different soil conditions. The cross-cultural dialogue continues through the comparison exercise, even without physically crossing the border. The geological map showing the cross-border continuity serves as a proxy.

## Sensor Dialogue: Cross-Border Data (20 minutes)

If sensor data is available from both sides of the border (e.g., if a partner institution in Lubuskie operates environmental sensors, or if openSenseMap has stations on both sides), display the data side by side.

"Look at the soil temperature on the German side and the Polish side. Are they different? If so, why? The geology is the same, the climate is the same. Differences are likely due to land management, not nature."

If no Polish sensor data is available, this becomes a discussion point: "One of the things a cross-border citizen science network could provide is shared environmental data. Currently, the Oder is a data border as well as a political border. Your observations today begin to bridge that gap."

## Citizen Science Output

The cross-border workshop produces: - Paired observation records from both sides (or from contrasting campus sites), recorded trilingually - A cross-border soil comparison table (texture, color, pH, moisture, life count — side by side) - Multilingual pattern names — each pattern named in the discoverer's

language, with collaborative translation - If oral histories from elder participants on either side are included: paired soil memories from the same landscape, different national experiences - A contribution to the case for a cross-border citizen science monitoring network

### Closing and Reflection (25 minutes)

Return to the campus. Spread the cross-border geological map. Each pair marks their observation sites — on both sides of the border if applicable — and draws a proposed "soil boundary" (where the soil actually changes character, as opposed to where the political border falls).

The facilitator synthesizes: "The map shows us that the real boundaries of this landscape — the watershed, the moraine, the soil type — do not follow the national border. They follow geology, water, and biology. If we were to define a bioregion for Müllrose, it would extend into Poland. The soil tells us this. The springtails tell us this. The water table tells us this. Only the map with the dotted line tells us otherwise."

Each participant shares one observation in their own language. No translation required for the closing — the group has spent a day together in the soil, and much has been communicated that words cannot carry.

### Token Economy Integration

| Activity  | Token Element             |
|---|---------------------------|
| Participating in the full cross-border workshop           | Cooperation               |
| Providing translation or interpretation for the group     | Reciprocity               |
| Contributing trilingual pattern names                     | Mutualism                 |
| Sharing cross-border soil data with a partner institution | Mutualism + Regeneration  |
| Organizing a reciprocal workshop on the Polish side       | Reciprocity + Cooperation |
| Establishing a permanent cross-border sensor link         | Mutualism + Regeneration  |

### Facilitator Notes

**BNE Qualification Requirements (Areas 6.1.1/6.1.2 — minimum: one of the following):** Lead facilitator should hold either (6.1.1) formal qualifications in environmental education, intercultural communication, European studies, or a related field, or (6.1.2) demonstrated personal qualification: documented experience facilitating cross-cultural or multilingual workshops for community groups, plus Erdpuls facilitator induction and personal practice of the full 13 Questions protocol. **Co-facilitation by a qualified Polish-speaking co-facilitator is a minimum requirement** — this is not optional. The Polish co-facilitator should bring equivalent qualifications. Both facilitators should brief each other thoroughly



before the workshop, agree on a shared facilitation protocol, and plan for how they will handle sensitive historical content if it arises. Combined, the facilitation team must be able to facilitate in DE, PL, and EN.

**Pre-Workshop Participant Preparation (Area 3.3.1):** Send to all registered participants at least one week before, in their preferred language (DE/PL/EN): (a) a welcome letter from both co-facilitators, in both DE and PL; (b) practical information (timing, location, transport, what to wear, shared meal arrangements); (c) a preparatory question in their own language: "What do you know about the landscape your city/town sits on? How was it formed? How long has it been home to human communities?" — this invites geological and historical curiosity before arrival; (d) for participants crossing the border from Poland: clear information about entry requirements (currently ID card for EU citizens) and the address of the Polish partner site if applicable.

**Post-Workshop Follow-Up Resources (Area 3.3.3):** Provide to all participants after the workshop: (a) the trilingual cross-border soil comparison table, printed and signed by both co-facilitators, as a record of what the group discovered together; (b) a digital photograph of the annotated geological map with participants' observation markings — shared with all participants as a visual record of the group's collective work; (c) the "Cross-Border Citizen Science Network" proposal document (if the group produced one) — circulated to relevant partner institutions on both sides within 2 weeks; (d) an invitation to a reciprocal event on the Polish side, coordinated through the Polish partner institution; (e) the Erdpuls trilingual citizen science archive entry links, so participants can see their contribution in the context of the wider data record.

**Language sensitivity:** Some participants may have personal or family histories connected to displacement, border changes, and loss of homeland. The cross-border framing should emphasize shared ground, not reopen historical wounds. If emotions arise, hold space respectfully. The soil itself is a healing medium — it predates all human conflict and will outlast it.

**Logistical reality of cross-border work:** Travel to Poland requires passports (or ID cards for EU citizens). Plan in advance. If Polish participants are coming to the German side, ensure they feel welcomed and that the workshop does not position Germany as the "host" and Poland as the "visitor" — the soil belongs to neither.

**Co-facilitation is strongly recommended.** A German-speaking facilitator alone cannot provide an equitable experience for Polish participants, and vice versa. Bilingual co-facilitation, or at minimum a bilingual assistant, is essential.

**Political context:** The workshop is not politically neutral — the claim that bioregional boundaries matter more than national ones is itself a political statement. The facilitator should be comfortable with this and prepared for disagreement. The soil data supports the claim; participants can draw their own conclusions.

## Proxemic Design Notes

**Cross-cultural proxemic norms and the mediating object:** German and Polish participants operate within different cultural proxemic norms — research suggests slight but real differences in comfortable interpersonal distance. The soil is the primary proxemic mediator: it gives both parties a shared reason to be at a specific distance (the distance required to observe the same patch together). Additional mediating objects throughout the day: shared food (the meal), shared tools (the trowel passed between partners), shared maps (the closing geological map). Each object bridges the cultural proxemic gap without requiring either party to consciously negotiate distance.

**Translation as proxemic bridge:** When a Polish participant describes a soil quality in Polish and a German participant translates, the translation act is itself a proxemic crossing — a movement from the private linguistic space of one language into the shared space of another. The vocal proxemic channel expands to include all participants. The facilitator should treat translation moments not as delays but as valuable proxemic events: "Notice how the word changed when it crossed languages. The soil didn't change — but our way of being close to it did."

**The closing map as collective proxemic synthesis:** The final exercise (marking observation sites on the geological map, drawing "soil boundaries" vs. political boundaries) should be arranged with all participants standing around the map table — sociopetal, at personal distance, everyone able to reach and touch the map. The physical act of placing marks and drawing lines is a haptic proxemic engagement with the territory-as-representation. If participants cluster by nationality during this exercise, gently intersperse them around the table and assign cross-national pairs a shared section of the boundary to draw. The shared physical task overrides the cultural proxemic default.

## Seasonal Variations

| Season        | Cross-Border Focus   |
|---------------|--|
| <b>Spring</b> | Agricultural comparison: What are German and Polish farmers planting this week? Same soil, different practices?                              |
| <b>Summer</b> | Shared watershed: The Oder/Odra connects the region. Summer water levels, drought effects visible on both sides.                             |
| <b>Autumn</b> | Harvest: What did the same glacial soil produce on each side? Shared meal as culmination of shared growing season.                           |
| <b>Winter</b> | Dormancy and memory: The best season for elder participation and oral history. The landscape reveals its structure when vegetation retreats. |

---

## License & Attribution

---

© 2025–2026 Erdpuls Müllrose - Center for Sustainability Literacy, Citizen Science and Reciprocal Economics Licensed under [Creative Commons Attribution-ShareAlike 4.0 International \(CC BY-SA 4.0\)](#)

All software components referenced in this document are licensed under the [GNU Affero General Public License v3.0 \(AGPL-3.0\)](#)

*This project uses the services of Claude and Anthropic PBC to inform our decisions and recommendations. This document and its translations were developed with assistance from Claude (Anthropic PBC). All strategic decisions, philosophical positions, and project commitments are those of the author.*