

From Daily Life to the Future: Cultivating Spatial Literacy and Sustainability Awareness through the World Children's Map Competition

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Abstract:

In an era where AI reshapes cognition and the UN SDGs Agenda demands urgent action, cartography education faces a pivotal challenge: **how to cultivate spatial thinking, critical creativity, and responsible global citizenship?** Traditional knowledge-transfer models fall short. The Barbara Petchenik Children's World Map Competition—whose founding mission is to promote children's creative graphic representation of the world — operates as a natural participatory platform that connects local experiences with global issues through hand-created maps. We argue that this mission inherently aligns with the UN Agenda: **children's graphic depictions constitute embodied expressions of sustainability cognition resonating with SDG 4 Target 4.7 (education for sustainable development and global citizenship)**. Importantly, we treat the curatorial shift from *A Map of My Future World* (2021/2023) to *Map of My Everyday Life* (2025) as a natural experiment to examine how SDGs-related expression manifests under future-oriented versus everyday framings.

Using AI as an independent third party tool for preliminary image-based analysis, we discovered that the 2021 and 2023 global award winning entries appear to be connected to the SDGs and demonstrate an age-related cognitive pathway. For instance, works by **younger children (under 8 years old)** often stem from emotional responses and direct observation, focusing on **climate change, nature, and animals** (e.g., *Where Do Glaciers Go?* and *Happy Zoofamily*), linking to SDGs 13, 14 and 15. **Older children (9-15 years old)** tend to demonstrate the ability to engage with systemic issues such as **energy equity, social justice, and ecological fragility** (e.g., *Disparities of Energy Demand and Sources in a Future World*), linking to SDGs 7, 10 and 16.

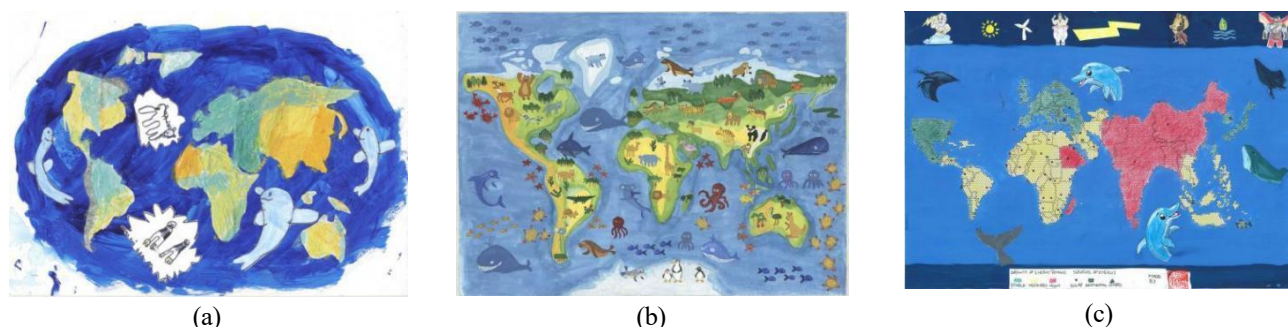


Figure 1. Examples of Global Award Winning Entries, 2023 Edition

(a) *Where Do the Glaciers Go?* (Lytyi Kalakoski, 5, Finland, < 6 years, 3rd place, 2021); (b) *Happy Zoofamily* (Kseniya Belaya, 7, Russia, public vote & 6–8 years 2nd place, 2023); (c) *Disparities of Energy Demand and Sources in a Future World* (Shubham Sen, 12, India, 9–12 years, 3rd place, 2023)

Following ICA President Prof. Georg Gartner's praise for the Czech Cartographic Society's promotion of the Children's Map Competition during ICC 2025, and with EuroCarto 2026 forthcoming in Czechia, we also conducted a Czechia-focused AI-aided analysis of the 2025 entries. The 2025 competition theme, *Map of My Everyday Life*, was thoroughly reflected in the submissions. The works illustrate a pathway from the “perception of everyday life” to “global issues”, while also showcasing age-related differences: **Younger authors** depicted **personal islands** and views of their **homes**, whereas **older authors** conceived **metaphorical narratives** such as *The Last Offensive*. By drawing routes to castles (everyday exploration), views of their hometowns (everyday environment), starting points symbolizing personal growth (everyday journey), and even metaphors for wars or ecological crisis like *The Last Offensive* (reflection on daily

observations and experiences), the children skillfully integrated local knowledge with reflections on SDGs-related topics such as **infrastructure, education, peace, and the environment**.

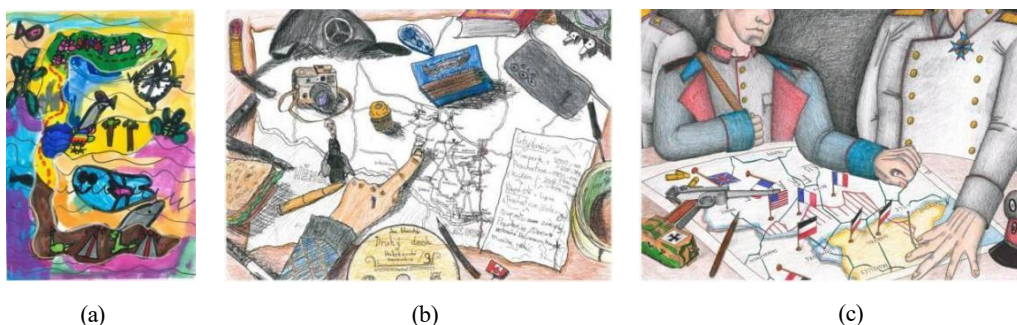


Figure 2. Examples of Submissions from Czech Republic to the 2025 Edition

(a) Map of My Island (Elena Jahodová, 7) ; (b) The Start of My Way (Ondřej Šlechta, 11); (c) The Last Offense (Jindřich Šlechta, 15)

Within the educational perspective of popularizing the SDGs and cultivating related competencies, we believe the competition can be understood as playing three key roles:

Gateway to Cognition and Affect: Using the intuitive form of hand-creating, it stimulates children's observation, perception, and emotional engagement with their environment, providing a sensory foundation for understanding abstract SDGs-related issues. This may be more evident in children under 6. Most of them already can scribble with a pencil or a marker before possessing strong literacy skills.

Anchor of Authenticity: Its rule of “must be original and created via traditional methods” is particularly crucial in an era where generative AI may lead to a homogenization of thinking. It protects children's creativity and questioning ability rooted in genuine experiences, which forms the cornerstone of responsible citizenship.

Bridge for Meaning Construction: It naturally guides children, through the process of depicting their local, micro-worlds (such as their hometown or route to school), to establish meaningful cognitive connections with global macro-goals like sustainable cities, climate action, and quality education.

Future research may integrate AI for large-scale SDG pattern analysis; our exploratory study preliminarily validates this approach through children's perspectives as “viewers.” Informal, exploratory interviews at a rural Sichuan primary school (Sept 2024) showed that fifth-grade boys viewing *Where Do Glaciers Go?* spontaneously linked climate change to local heatwaves, while COVID-19 artworks evoked strong personal resonance. Younger children (K – 3) likewise identified rich visual elements unaided. Separately, 11–15-year-olds viewing the 2023 entry *I Imagine it like this...* (by 11-year-old Olivér Emmert, Hungary) recognized global connectivity—citing efficient transport, high technology and economic globalization—despite only minimal prior exposure to “sustainable development” in geography class. These cases confirm competition entries as potent, accessible educational media that activate sustainability cognition absent formal curricula.

A deeper challenge lies in children as “creators”: **Do external readings truly capture their intent?** For example, a work interpreted as SDG 17 (“Global Partnership”) might simply reflect a child's wish to show “joy with friends.” To bridge this “interpretation gap” and uphold Dr. Barbara Petchenik's interview-based tradition, future research will follow two paths: (1) sharing entries with more children to gather “viewer” perspectives, and (2) ethically collaborating with institutions to conduct online dialogues with past winners about their creative intentions. **We pledge to protect each child's authentic voice, regardless of SDGs awareness. Preserving their unique creativity and worldview is itself vital to “sustainable development”—especially in the AI era.** We urge academia and education to treat this competition as a rich resource, empowering the next generation to depict their “daily lives” and help shape a sustainable future. Ultimately, children's innate hope for a better world is sustainability's most vibrant expression.

Furthermore, as peaceful lunar exploration and resource use gain momentum (relevant to SDGs 7, 9, 12, 13, 16, 17—particularly post-2030), future themes may naturally expand to Earth-Moon perspectives—an evolution foreshadowed in past entries and piloted in our outreach since April 2026.

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