

Putting SDG4 into practice



Climate Change Education

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INTRO



Inclusive and equitable education provides all learners with the capabilities to become economically productive, develop sustainable livelihoods, contribute to peaceful and just societies and enhance their individual wellbeing. This technical brief explains why climate change education should be considered an integral element of quality education and how VVOB – *education for development* contributes to ensuring

learning that is relevant for today and tomorrow. VVOB's experiences demonstrate the importance of a whole society and transformational approach to education in conjunction with government partners while **embracing the complexity of quality climate change education**. We are grateful to the Aga Khan Foundation (AKF) for sharpening our thinking and sharing experiences along the way.

VVOB's Definition of Climate Change

By the term climate change, we mean the entirety of the interlinked phenomena of climate change, environmental degradation, depletion of natural resources and loss of biodiversity.

For practical reasons, we use the term 'climate change' while stressing that climate change, environmental degradation and biodiversity loss are among the world's most pressing crises.

Why Climate Change Education Matters

There is a sense of urgency when it comes to fighting climate change and environmental degradation while striving to limit global warming to 1.5°C, a 2050 target which already seems to be beyond reach.

Strategies aimed at addressing climate change often focus on technologies with relatively little discussion regarding the potential impact of quality climate change education in terms of reducing carbon emissions, for example.

We consider education to be key in tackling climate change, in terms of its contributions to climate action, handling the risks and effects of climate change as well as transforming humankind's relationship with nature to reverse environmental degradation.

Building on UNESCO's definition of climate change education (2015), we refer to the process of learning about the causes, consequences and solutions to the problem of climate change. This involves increasing knowledge and awareness of the scientific, social and economic factors contributing to climate change and fostering attitudes and behaviours that promote a just transformation towards a sustainable future.

The Evidence

International literature shows that quality climate change education calls for:

- A balance between acquiring scientific knowledge and practising activist skills. As a 2022 PISA report³ demonstrates, learners need support in putting their climate change knowledge into action and maintaining those efforts over time. Recent research⁴ highlights that quality climate change education leads to estimated reductions in carbon emissions of more than 10% per student. Therefore, education should support young people in forming part of the solution and continue to be the driving force for climate action.
- Effective professional development for educators. A 2021 Education International & UNESCO survey highlights⁵ that while 95% of surveyed teachers believe it is important to teach students about climate change, less than 40% feel confident to do so. Additionally, climate educators are often lone pioneers in their contexts who can greatly benefit from establishing a community and exchanging knowledge with fellow instructors.
- Actions which address a combination of individual, collective and political responsibilities. Climate change education requires teaching whereby educators employ methods of personal engagement and social activism⁶ (Cordero, 2008). At political level, this requires breaking silos between different ministries and sectors to harness nations' willingness to commit to climate change education. As such, 49% of countries' national statements⁷ for transforming education highlighted the need for integrating climate change education.

Climate Change Education and SDG4

UNESCO places climate change education within the broader framework of Education for Sustainable Development⁸, empowering learners to take informed decisions and responsible actions to create environmental integrity, economic viability and a just society for present and future generations while respecting cultural diversity⁹. Climate change is one of the critical and urgent challenges for sustainable development, with Education for Sustainable Development being highlighted as a crucial enabler for transformative actions. Sustainable Development Goal 4 (SDG4) explicitly captures the Education for Sustainable Development (ESD) ethos in target 4.7, ensuring “that all learners acquire the knowledge and skills needed to promote

sustainable development, including, among others, through education for sustainable development ...” The specific goal on climate action (SDG13) also puts forward the role of climate change education in target 13.3: “Improve education, awareness-raising and human and institutional capacity on climate change mitigation, adaptation, impact reduction and early warning.” Critical remarks¹⁰ about the Sustainable Development Goals (SDG) framework point, however, at the tension between ecological sustainability and continued global economic growth (SDG8), suggesting alternative frameworks (for example, doughnut economy¹¹, circular economies) to realise the human development objectives expressed in SDG4.

VVOB’s Conceptual Framework for Climate Change Education

Quality climate change education foregrounds science and knowledge, agency and action, ethics and justice (Lotz-Sisitka, 2021, see Figure 1)¹².

While **accurate knowledge** of earth systems is an important aspect of climate change education, it risks reducing education to learning about instead of for climate change. As the complexity of climate change requires a multidisciplinary approach, it is important to emphasise that knowledge should not be limited to traditional subjects (for example, geography) but comprise various types of information¹³. Rather, it should be seen as a set of qualities of meaningful climate change education that can and should be incorporated across all subjects.

For learners to take action, **agency development is required** to respond to climate change. This is not taught in a single lesson but requires a continuous effort from learners and teachers as well as a coherent trajectory from early childhood education up to tertiary education.

Agency requires:

- A wide range of skills including social, emotional and cognitive skills such as critical thinking, problem-solving, creativity, strategising, understanding complex systems, coping with uncertainty, imagining future scenarios, understanding alternative worldviews, making decisions in a participatory and collaborative way, resolving conflicts and dealing with frustrations;
- Technical skills needed to develop solutions that reduce carbon emissions and reverse environmental degradation.

Gender and Climate Change Education

The most vulnerable members of society are more often faced with the effects of environmental degradation as well as natural and human-created disasters such as climate change. Climate vulnerability also reflects (gender) inequalities and exacerbates socially constructed power relations, norms and practices. In the education sector, this leads to educational access, attendance and learning outcomes being put unequally at risk by climate change and environmental degradation.

Young people, and girls in particular, are adopting a leading role in putting climate action on the global agenda. There is growing evidence²² about the important role of education in reducing climate vulnerability and the **mutually reinforcing interlinkages between education, (gender) equity and positive climate outcomes**. Education, that transforms harmful (gender) norms and power relations, has enormous potential to decrease carbon emissions (for example, for equitable green sector job participation, for reduced population growth and for inclusive climate-relevant decision making).

At the heart of this continuous effort lie the motives that drive agency for transformation in society which are captured in the **ethical and justice aspects**. These encompass, on the one hand, the ethics of care and our human-environment interactions, and on the other hand, the social justice perspective. The latter focuses on those who benefit and those who are most affected in current and future generations due to the lack of collective action.

As such, climate vulnerability reflects gender and socioeconomic inequalities¹⁴, intensifying socially constructed power relations, norms and practices. To be just, climate action requires that those who have polluted most, put in most efforts to mitigate¹⁵ the effects, restore loss and damage worldwide and build climate-smart¹⁶ societies on a global scale.

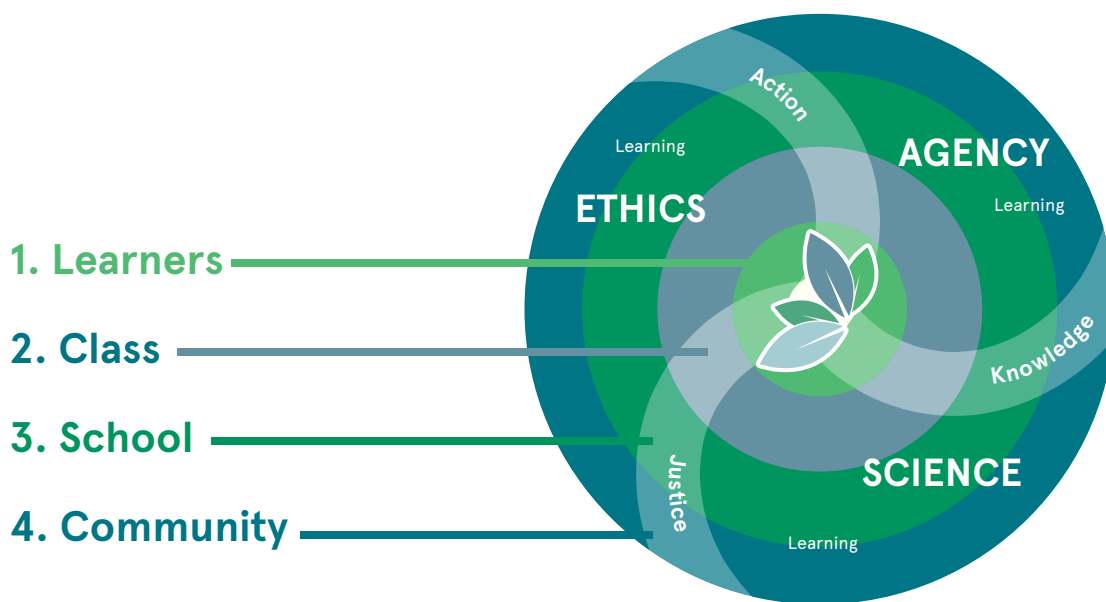


Figure 1: based on an illustration from Lotz-Sisitka, Mandikonza, Misser and Thomas, 2021

As shown on the left hand side of the framework, for climate change education to act as a catalyst to generate transformative action among learners, it does not just focus on a specific subject in a classroom as the sole entry point. It involves adopting a **whole-school approach** which incorporates teaching, learning, school facilities, school governance, school culture and community engagements for effective climate change education. In this regard, school leaders have a vital role in creating the conditions for effective teaching and learning¹⁷ but also in terms of climate change. Similarly, climate action is not a matter of individual responsibility but requires connection and a call to action at the societal level through a **whole-of-society approach** (involving for example, politicians, companies, communities and more).

Cross-disciplinary research¹⁸ underscores the importance of addressing the **well-being and mental health** of learners dealing with climate change. Neglecting this aspect may lead them to experience eco-anxiety, passivity, guilt, doubt, inaction or helplessness given the complexity of taking meaningful climate action.

It is important not to minimise the emotional reactions of learners to distressing climate-related information. Climate change education is about encouraging emotional resilience and intelligence, offering compassion and understanding, narrowing the focus to a specific problem, reflecting on what fosters motivation and encouraging connection with like-minded people for collective action¹⁹.

What Does This Framework Look Like in Practice?

CASE STUDIES

The Case of South Africa: VVOB and Fundisa for Change

In **South Africa**, VVOB and Fundisa for Change²⁰ have taken a leading role together in conjunction with government partners in the field of climate change education through the [Keep It Cool Project](#) (2019-2022).

One hundred secondary schools across five districts were selected to make climate change education part and parcel of school and classroom practice while involving the local community through **change projects**. This allowed for effective teaching and learning

about climate change: linking climate science and culture through everyday knowledge, being future-oriented and authentically embedded in the context.

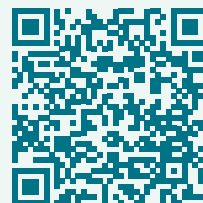
With this practical experience, students and the community were prompted to recognise locally relevant climate change challenges and try out possible mitigation and adaptation strategies, thereby reducing impact and vulnerability to climate change or increasing resilience to future effects.

"It is not just a climate change project, but something that is keeping our kids in school and providing them with a healthy meal."

- Head of the Science Department at Iniwe Secondary School in the King Cetshwayo District, South Africa



Keep it Cool playlist on Youtube:



Science: to assure state-of-the-art scientific knowledge about climate change, the project partnered with five South African universities to develop a training trajectory for teachers. These universities also carried out research during the project, strengthening the evidence-base for quality climate change education.

Agency: through these change projects, learners were offered practical experiences to understand climate change concepts and how to take care of the environment. A variety of projects were set up such as recycling waste, making compost, growing a food garden, planting trees, using eco-bricks, designing sensitisation posters, capturing rainwater and collecting litter.

Ethics: schools in the project displayed a better-looking and cleaner school environment with improved waste management, vegetable gardens and an overall more attractive appearance. Furthermore, disadvantaged schools benefitted the most from the project, through income generation and supplements for the school nutrition programmes from the food gardens.

Whole-school approach: a support base for the change projects was created at school level by informing school leaders and management and by involving two to three teachers per school. Change projects were also showcased to the broader community. Lastly, learners influenced the behaviour of their community members by minimising the felling of trees and buying needed firewood instead, conserving water, recycling as well as planting flowers and vegetable gardens.

Whole-of-society approach: the project also involved different policy levels (district, provincial and national) and three different ministries (education, environment and research) through symposia as well as participation in ministerial meetings with the aim of creating political commitment and high-level policy buy-in for the structural integration of climate change education into the system.



The Case of Kyrgyzstan: Aga Khan Foundation

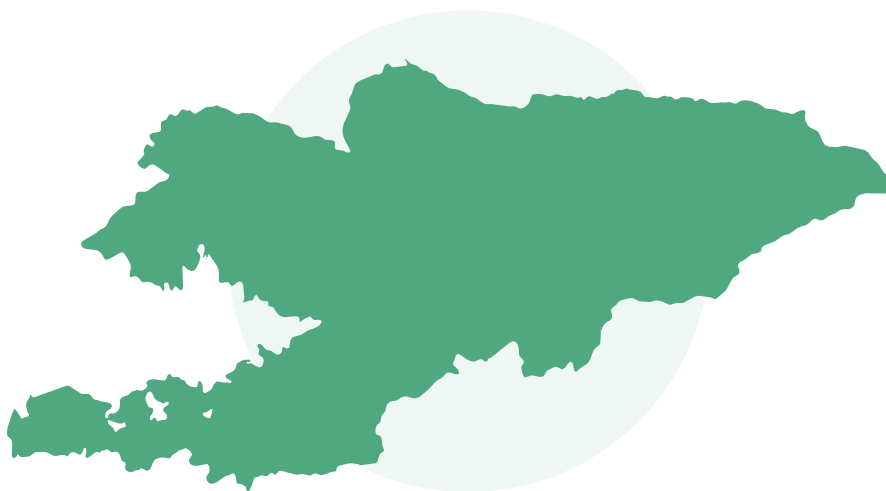
In Osmonov School in the Kara-Kulzha district of **Kyrgyzstan**, secondary school teachers participating in the Aga Khan Foundation's **Schools 2030 programme** wanted to support their students' growing awareness of environmental issues. They also wanted to address poor results in mathematics and a lack of interest among students in studying maths. Through dialogue with learners, teachers understood that for many students, maths is disconnected from their everyday life and not linked to practical skills.

The teachers set up a challenge for students that would integrate both their regard for the environment and their need to develop maths skills. The focus was on addressing the issue of poor air quality during the winter months which arises from burning fuels to heat homes. The students worked together to **research** different fuel types and to calculate comparative carbon

dioxide emissions thereby **improving their mathematical skills and their understanding of climate science**. As a result, the students discovered an alternative called "eco-firewood", made from compressed sawdust, leaves and wastepaper, which burns more cleanly than conventional fuels.

The students set up a small manufacturing hub to **produce the eco-friendly firewood** using locally collected wastepaper and other materials. They engaged in advocacy campaigns and raised awareness to **encourage community members** to switch to using their eco-friendly alternative.

Students participating in the project demonstrated an increased understanding of mathematical and scientific principles as well as a growing sense of agency in combatting climate change through science and community activism.



A Coherent Climate Change Education Trajectory²¹ from Early Childhood to Secondary Education

International literature shows that quality climate change education calls for:

- **Early childhood education:** interacting with children in a playful way to develop a sense of appreciation for and connection with the natural environment and each other, exploring initial concepts linked to climate change through place-based learning (for example, taking turns to feed the school chickens as a solution for organic waste);
- **Primary education:** gaining experiences, experimenting and developing skills around dealing with complex challenges in line with their own everyday life. Experiential learning is crucial to introduce abstract concepts (for example, making compost together with learners as an example of the carbon cycle). Learners become able to assess the consequences of their personal choices and actions. In upper primary school, initial understanding of the systemic and structural aspects (economic, political, social) of climate change starts to develop which allows a shift from day-to-day to societal activism (for example, a class enforcing an island-wide ban on plastic bags through a sensitisation campaign, leading to adapted local legislation);
- **Secondary education:** building accurate climate knowledge and improving key competences for climate change action such as systems thinking, critical reflection, expressing an informed opinion and adopting a creative attitude in a contextualised and participatory way (for example, experiencing trade-offs through a climate change board game, becoming fake news detectives, ticking off a class bucket list for action).



VVOB's Approach to Professional Development of Teachers and School Leaders for Climate Change Education

Ensuring provision of quality education is at the heart of VVOB's interventions from early childhood to primary education, general secondary education, technical and vocational education and training (TVET). VVOB supports ministries of education and national education authorities to strengthen teacher and school leader professional development systems to create safe and supportive, equitable and effective school environments.

The ambition of providing quality education can however only exist in the context of just and peaceful societies, a healthy planet and shared progress that benefits all. Education plays a crucial role in bringing about this social transformation which requires professional development able to champion teachers and school leaders as professionals who are capable of bringing about such a change. As such, VVOB's approach to climate change education is grounded within our stance on professional development that fosters social transformation.

The Role of School Leadership

The continuous **professional development** of school leaders throughout their careers, including the training of aspiring or new school leaders, is a cornerstone of VVOB's approach to school leadership. When designed and delivered productively, professional development is a potentially effective entry-point for improving school leaders' competences and practices.

The role of teachers in facilitating climate change education within the classroom is crucial, requiring a **conducive environment** created by school leadership. The role of a school leader is geared towards the professional development of teachers (for example, facilitating professional learning communities (PLCs), strategic personnel and resource management, policy development and advocacy at education sector level, community engagement and 'setting the tone' by giving direction and visibility to climate change education.

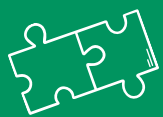
School leadership and management support was also highlighted as a crucial aspect in the Keep It Cool end evaluation to gain momentum from teachers across the school to support the change projects and influence a new culture within the school.



To this end, VVOB presents the following principles for transformative professional development:



Nurturing **critical consciousness** to enable teachers to critically analyse their own beliefs and (pedagogical) practices while promoting broader critical reflection on societal power structures, norms and values. A valuable entry point for this is the notion of teacher positionality and authority²³, explicitly identifying the knowledge, understanding and lived experiences that have shaped a teacher's understanding of subjects such as climate change;



Acknowledging the importance of **different perspectives in the knowledge development process**²⁴. Educational practices, which are fundamentally centred on knowledge development, need to be interrogated on how diverse forms of knowledge, languages and cultures are considered. Learners and teachers should not be considered as passive recipients but as active constructors of knowledge. A multimodal approach to learning is crucial for this, recognising, for example, the role arts or play can take up;



Ensuring active involvement and engagement of teachers in order to promote **teacher agency**. Valorising teachers as participants in the societal responses to social transformation requires action-oriented approaches in education in general and in the professional development of teachers. Schools and their broader environment can function as a living lab²⁵, places where teachers and students are involved in co-creating solutions and enacting them through real life behaviour;



Recognising the unique concerns and challenges for teachers **but remaining rooted in a specific context and globally informed**²⁶ given that climate change is an international challenge. It requires deep, authentic partnership with communities while being informed by global best practices, quality resources and examples from other contexts of 'what's possible' for climate education;



Providing opportunities for **collaborative learning**, which is one of the recommended elements for quality teacher professional development²⁷. It is an effective way of promoting innovation and experimentation in teaching strategies and strengthening the implementation of existing practices through peer learning and collaboration among teachers²⁸.

What Does This Model Look Like in Practice?



Kenya – Critical Consciousness

The **Teachers for the Planet** Programme, co-led by the Aga Khan Foundation, Teach for All and Learning Planet, is a global coalition that galvanises leading experts in climate change and education to make more explicit and concrete links between the education and climate change sectors, putting teachers and education leaders firmly at the centre of the educational response to our climate crisis. Through the Teachers for the Planet Programme, teachers in **Kenya** are developing their critical consciousness and their leadership skills in climate education.

The **Kwa Njenga Climate Education Leadership** is an initiative of Esther Gacigi, a teacher in Nairobi. She recognised that climate change was directly affecting the lives of teachers, students and the wider community, leading to issues like drought, flooding, rising food prices, localised conflicts and displacement. She wanted to enhance the agency of teachers, learners and the community to tackle climate action. To achieve this, it was crucial to generate critical awareness among teachers of **how they consider climate change as a reality in their community**.

As a member of the Teach for All Network, Esther was able to draw upon the wider expertise of educators around the world to help develop a **teacher training module** focused on their capacity and agency to teach climate education. This model is designed to empower teachers to incorporate climate education in the classroom and engage learners in climate education conversations.

Teachers prompt learners to come up with locally focused solutions, for which they collaborate with the community. To date, 76 teachers have participated in the module with hundreds of students now actively engaged in climate-focused education projects. The team is now co-developing a **learning resource handbook** with other teachers to link climate education with key subject areas in the curriculum – a crucial step in establishing a school-wide approach to climate education.



AGA KHAN FOUNDATION



Uganda – Different Perspectives for Knowledge

With a specific focus on agriculture and entrepreneurship education in secondary and technical and vocational education and training (TVET), VVOB strengthens teacher training and education in **Uganda** together with Ministry partners. Based on **our skills for sustainable futures** approach, three innovative teaching practices have been put forward: project-based learning, career talks and work-based learning (internships). Together with instructors, teachers and training colleges, the aim is to integrate sustainability within teaching practices and in partnerships with the agri-food sector.

The programme aims to strengthen teachers to be very intentional about environmentally friendly practices in the field of agriculture and when it comes to project-based learning (for example, making organic fertilisers). The same aspiration applies to the teaching practice of career talks. By making a choice of whom to invite as a guest speaker in a school environment, different types of knowledge enter the classroom. Speakers who can share knowledge about environmentally friendly agricultural practices are selected,

defining knowledge as authority based on day-to-day practical experience. Lastly, internships in firms that adhere to sustainable practices expose students to realistic, experienced knowledge and expands opportunities for them to build their own career in sustainable agri-entreprises.

The programme also explicitly takes **gendered differences** into account. In the selection of guest speakers for career talks, it is important to intentionally seek out inspirational examples (for example, women breaking gender-stereotypes by choosing a male-dominated profession in agro-entrepreneurship). When choosing a work-based learning opportunity, teachers and students should be first made aware of gender-stereotypes which might limit a motivated choice.



Ecuador – Teacher Agency

In Ecuador, VVOB has been intensively engaged in **sustainable development teaching through challenge-based education**. The starting point for this was the LORET methodology²⁹ (Locally Relevant Teaching) which is designed to support teachers in using real-world problems, balancing between engagement with societal problems and the realisation of pedagogical aims and objectives. Teachers lead the development of a plan for implementing locally relevant teaching and design a series of lessons that take students and other groups of the school community along in an authentic problem-solving process while finding a solution together.

For this, VVOB worked together with two Ecuadorian universities and developed [a guide](#) for teachers to introduce the methodology which was based on the [LORET handbook](#). Experts from both universities kickstarted the LORET implementation at different schools and communities through a series of workshops with teachers, aimed at deepening the understanding of the methodology and incorporating active teaching and learning methods to address sustainability issues.

The process included the identification of pivotal issues, building awareness about values in education, interdisciplinary approaches and community engagement. As such, teachers engage students in an **authentic problem-solving strategy** with the opportunity to address issues where they or the teacher do not know the solution and which therefore requires an authentic inquiry.

A designated teacher acted as LORET coordinator within the school, playing a pivotal role in facilitating the process, coordinating activities and acting as a liaison with the universities. A LORET plan was created for different subjects and implemented at the school, resulting in valuable pedagogical experiences and tangible outcomes. Not only did this method improve the teaching and learning processes, it also strengthened teachers' abilities to establish connections with external stakeholders, promoting community involvement.



Global – Locally Rooted & Globally Connected

VVOB's [S-Cool-Links Platform](#) is a **free, global digital community of practice** which focuses on climate change education and **offers secondary school teachers worldwide an opportunity to connect, learn and take action**. Through the platform, teachers can have meaningful exchanges across country borders and subjects, mobilising their capacity to bring climate education to their classrooms. Cross-border exchanges add new climate and education perspectives, understanding of one another's positions and vulnerability within climate crisis issues. It also induces a sense of belonging, crucial for climate educators who are often lone pioneers in their contexts who can greatly benefit from building communities and sharing experiences or information with fellow instructors.

To support collective action and make climate education hands-on, the platform provides tools and resources and offers teachers a safe space to share their climate teaching practices. This allows for school climate projects to be adapted by or scaled up to other schools.

Based on [resource sets](#) for South African teachers, the platform offers a global trajectory for teachers to set up a change project in their school. The starting point of this journey is a reflection on matters of concern for the specific context of a school, making teaching more relevant to the lives of learners and creating possibilities for environmental change in the community.





South Africa – Collaborative Learning

In the before mentioned Keep It Cool Project in **South Africa**, a **professional development pathway for 200 in-service secondary school teachers** was rolled out. The teachers participated on a voluntary basis and were selected based on motivation and subject matter (geography, natural science or social and life sciences). Trained teachers were encouraged to collaborate, continue to learn from each other and share their knowledge with colleagues through the formation of **professional learning communities**. Throughout the project, 23 professional learning communities were established where teachers engaged in conversations with each other.

During the project, five South African universities conducted process tracing research³⁰, focusing on effective teacher professional development to implement climate change projects. The research highlighted that professional learning communities were **identified by teachers as a key area of success**: practical application and questioning in a safe space supported teachers to improve their teaching practices. Additionally, they received ideas on how they could design and implement their school change projects. From an equity perspective, schools with limited resources gained the most from the opportunity to participate in the professional learning communities (PLCs) since teachers who attended and met up at the PLCs motivated each other.

About VVOB

VVOB – *education for development* is an international non-profit organisation with over 40 years' experience in strengthening the quality of education systems in Africa, Asia and South America in close partnership with ministries of education and their institutions. Research shows that, of all school-based factors, the quality of teaching and school leadership has the biggest impact on learning outcomes of learners. As such, the professional development of teachers and school leaders is VVOB's primary focus in ensuring quality education for all. By working closely with governments, research institutions, committed donors and national, regional and international networks and expertise partners, VVOB strives to maximise the sustainability and potential for upscaling its initiatives.

About VVOB

Children and Youth

In pursuit of quality education, VVOB focuses on strengthening the professional development of teachers and school leaders in the following subsectors:

- early education to improve the quality of formal pre-primary education and assist the transition to primary school;
- primary education to improve literacy, numeracy and life skills;
- secondary education leading to relevant and effective learning outcomes;
- secondary technical and vocational education and training to improve quality, align knowledge and skills imparted with the labour market and integrate entrepreneurship.

Flagships

Flagships are evidence-informed and scalable initiatives with a distinct regional and international ambition. VVOB's flagships structurally address persistent educational challenges through key efforts for equitable learning outcomes. These key efforts are:

- gender-transformative pedagogy to create learning environments where harmful gender stereotypes are challenged and addressed;
- effective school leadership to create the conditions for effective teaching and learning;
- skilling for sustainable futures to ensure young people leave school with high chances of securing decent work.

VVOB Expertise

VVOB teams of experts specialise in meeting the most important education needs identified by international research and in the education strategies and priorities of VVOB's partner countries. Formalised, longstanding partnerships with governments are the steadiest pathway towards scale and sustainability. For VVOB, working in partnership with ministries of education means:

- offering structural and sustainable solutions to support and reinforce governments and national education authorities responsible for the initial education, induction and continuous professional development of teachers and school leaders;
- offering practical and technical education expertise and support for processes through a wide range of in-person, remote or blended methodologies from classical training and workshops to mentoring, coaching and peer learning;
- ensuring that partners increasingly take the lead throughout projects to guarantee sustainability.

To facilitate learning and scaling of successful projects, VVOB invests in research and knowledge generation. Based on the evidence generated, VVOB engages governmental partners and stakeholders to influence policy and practice and to mobilise governments towards ownership and sustainability for systems change.

VVOB Values

As an organisation committed to contributing to an equitable world where every learner's right to quality education is respected, protected and fulfilled, respect for people, policies and planet represents a core value of VVOB. VVOB works to champion the important role of education for advancing progress in gender, equity, inclusion and climate.

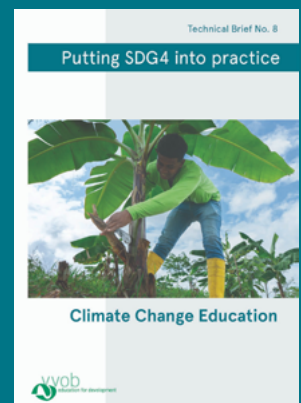
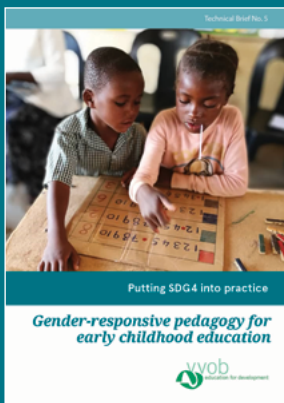
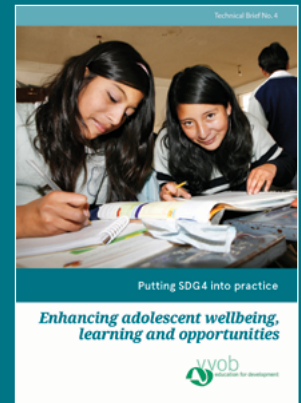
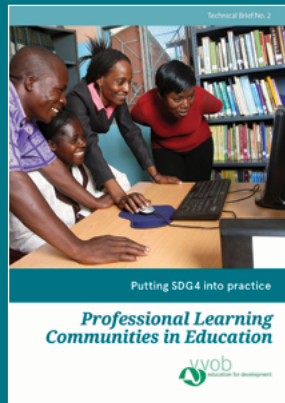
We see ourselves as a value-driven organisation and place significant emphasis on managing and improving our environmental and sustainability performance both at the level of VVOB as an organisation and in our programmes. VVOB does not accept funding from donors that are involved in the production of, or trade in, fossil fuels. More information on the ethical check we apply before accepting funding can be obtained from programmedirector@vvo.org.

Endnotes/References

- ¹ Cordero, E.C., Centeno, D., & Todd, A.M. (2020). The role of climate change education on individual lifetime carbon emissions. *PLoS ONE*, 15(2): e0206266. <https://doi.org/10.1371/journal.pone.0206266>
- ² UNESCO. (2015). Not just hot air: putting climate change education into practice. <https://unesdoc.unesco.org/ark:/48223/pf0000233083>
- ³ OECD. (2022). Are Students Ready to Take on Environmental Challenges?, PISA, OECD Publishing, Paris, <https://doi.org/10.1787/8abe655c-en>.
- ⁴ Cordero, E.C., Centeno, D., & Todd, A.M. (2020). The role of climate change education on individual lifetime carbon emissions. *PLoS ONE*, 15(2): e0206266. <https://doi.org/10.1371/journal.pone.0206266>
- ⁵ UNESCO & Education International. (2021). Teachers have their say: motivation, skills and opportunities to teach education for sustainable development and global citizenship. <https://unesdoc.unesco.org/ark:/48223/pf0000379914>
- ⁶ Cordero, E.C., Todd, A.M., & Abellera, D. (2008). Climate Change Education and the Ecological Footprint. *Bulletin of the American Meteorological Society*, 89(6), 865–872. <https://doi.org/10.1175/2007BAMS2432.1> https://journals.ametsoc.org/view/journals/bams/89/6/2007bams2432_1.xml
- ⁷ United Nations. (2023). Report on the 2022 Transforming Education Summit. https://www.un.org/sites/un2.un.org/files/report_on_the_2022_transforming_education_summit.pdf
- ⁸ UNESCO. (2010). Climate change education for sustainable development: the UNESCO climate change initiative. <https://unesdoc.unesco.org/ark:/48223/pf0000190101>
- ⁹ UNESCO. (2023). Education for sustainable development. <https://www.unesco.org/en/education-sustainable-development>
- ¹⁰ Hickel, J. (2019). The contradiction of the sustainable development goals: Growth versus ecology on a finite planet. *Sustainable Development*, 27(5), 873–884. <https://onlinelibrary.wiley.com/doi/abs/10.1002/sd.1947>
- ¹¹ Raworth, K. (2012). About doughnut economies. <https://doughnuteconomics.org/about-doughnut-economics>
- ¹² Schudel, I., Songqwaru, Z., Tshiningayamwe, S., & Lotz-Sisitka, H. (2021). Teaching and Learning for Change: Education and Sustainability in South Africa. <https://www.africanminds.co.za/teaching-learning-change/>
- ¹³ Greer, K., & Glackin, M. (2021). 'What counts' as climate change education? Perspectives from policy influencers. *School Science Review*, 103(383), 16–22. <https://discovery.ucl.ac.uk/id/eprint/10165333>
- ¹⁴ Sims, K. (2021). Education, Girls' Education and Climate Change. K4D Emerging Issues Report 29. Institute of Development Studies. <https://opendocs.ids.ac.uk/opendocs/handle/20.500.12413/16523>
- ¹⁵ WWF - Climate change mitigation means avoiding and reducing emissions of heat-trapping greenhouse gases into the atmosphere to prevent the planet from warming to more extreme temperatures. Climate change adaptation means altering our behavior, systems, and—in some cases—ways of life to protect our families, our economies, and the environment in which we live from the impacts of climate change.
- ¹⁶ Verrecht, K. (2023). From crisis to leverage: mapping opportunities for climate-smart education systems. A small-scale integrative research review [Master's thesis, Oulu University of Applied Sciences]. – https://www.theseus.fi/bitstream/handle/10024/805477/Verrecht_Koen.pdf?sequence=2&isAllowed=y
- ¹⁷ VVOB education for development. (2018). Putting SDG4 into practices – School leadership [Technical Brief No. 1]. https://www.vvob.org/sites/belgium/files/2018_vvob_tech_brief_school-leadership_web.pdf
- ¹⁸ Hargis, K., McKenzie, M., & LeVert-Chiasson, I. (2021). Curriculum and Learning for Climate Action. https://doi.org/10.1163/9789004471818_004
p.48: "Key elements of "good" CCE, which include cognitive, socio-emotional, behavioral ("action"), and justice-oriented components (from Hargis & McKenzie, 2020). (The literature that informed elements: Amel et al., 2017; Brownlee et al., 2013; CRED, 2009; Hornsey et al., 2016; Kahan et al., 2012; Monroe et al., 2017; Plutzer et al., 2016; Tuck & McKenzie, 2015; UNESCO, 2010, 2020; Wibeck, 2014)"
- ¹⁹ Force of Nature. (2023). Discussion Guide For Educators. <https://www.forceofnature.xyz/s/Discussion-Guide-hyperlinksreduced.pdf>
- ²⁰ Fundisa for Change is a multi-stakeholder collaborative national professional learning community that has been operating nationally as a consortium of partners for over 12 years, enhancing and supporting transformative environmental and sustainability learning through teacher education in South-Africa.

- ²¹ Omgeving Vlaanderen. (2023). Climate Education with Impact [Flemish]. <https://omgeving.vlaanderen.be/nl/klimaateducatie-met-impact>
- ²² Sims, K. (2021). Education, Girls' Education and Climate Change. K4D Emerging Issues Report 29. Institute of Development Studies. <https://opendocs.ids.ac.uk/opendocs/handle/20.500.12413/16523>; FCDO. (2022). Addressing the climate, environment, and biodiversity crises in and through girls' education [Position paper]. https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1122368/Addressing_the_climate__environment__and_biodiversity_crises_in_and_through_girls__education.pdf; Newman, K. (2021). Killing Neither Bird (But Wasting the Stone): The Conundrum of Girls' Education and Climate Change [UKFIET Blogpost]. <https://www.ukfiет.org/2021/killing-neither-bird-but-wasting-the-stone-the-conundrum-of-girls-education-and-climate-change/>; Kwauk, C. (2020). Girls' education as a solution to climate change is about more than fertility [Opinion piece]. <https://www.devex.com/news/opinion-girls-education-as-a-solution-to-climate-change-is-about-more-than-fertility-96867>
- ²³ Majid, N. (2023). Sustainability and Climate Change Education. In N. Majid (Ed.), Essential Subject Knowledge for Primary Teaching (pp. 313-328). SAGE. https://us.sagepub.com/sites/default/files/upm-assets/127655_book_item_127655.pdf
- ²⁴ Balarin, M., Paudel, M., Sarmiento, P., Singh, G.B., & Wilder, R. (2021). Exploring epistemic justice in educational research [Background paper]. <https://zenodo.org/record/5502143/files/FINAL%20epistemic%20justice%20paper.pdf?download=1>
- ²⁵ Vaughter, P. (2016). Climate Change Education: From Critical Thinking to Critical Action [Policy brief]. United Nations University. https://collections.unu.edu/eserv/UNU:3372/UNUIAS_PB_4.pdf
- ²⁶ Kuntze, L. (2023). Climate education must be locally rooted and globally informed [Blogpost]. <https://teachforall.org/blog/climate-education-must-be-locally-rooted-and-globally-informed>
- ²⁷ World Bank. (2021). Structuring and Supporting School- and Cluster-Based Continuous Professional Development: A Technical Guidance Note. Washington, DC: The World Bank. License: Creative Commons Attribution CC BY 4.0 IGO. <https://documents1.worldbank.org/curated/en/655161630089624409/pdf/Technical-Guidance-Note.pdf>
- ²⁸ Nguyen, D., Boeren, E., Maitra, S., & Cabus, S. (2022). A review on the empirical research of PLCs in the Global South: evidence and recommendations. VVOB education for development. <https://www.vvob.org/en/downloads/review-empirical-research-plcs-global-south-evidence-and-recommendations>
- ²⁹ Östman, L., & Svanberg, S. (2004). LORET methodology. <https://loret.se/background/>
- ³⁰ Mavuso, M.P., Olawumi, K.B., Khalo, X., Kafu-Quvane, B., & Mzilikazi, B. (2022). Implementation of Teacher Capacitation Programs to Integrate Climate Change Education: The Case Study of Geography Teaching in South African Secondary Schools. International Journal of Learning, Teaching, and Educational Research, 21(11), 73-86. <https://doi.org/10.26803/ijlter.21.11.5>

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