

Education for Sustainable Consumption (ESC): the RCE Czechia case study

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Introduction – Education for Sustainable Development (ESD) in a broader policy context

Sustainable consumption is a prominent theme of ESD as it is an important impulse for transition of our societies. To achieve this transition and positive impact, both educational principles of ESD, and specifics of the SC theme must be respected and drawn upon. Moreover, support from policy-makers is necessary to facilitate the desired overall change in habitual practices. This need for a deep transition is demonstrated on the case of the Czech Republic – a relatively rich country, member of the European Union since 2004, with quite a high standard of living. The breakdown of centrally planned economy of the communist regime in 1989, and change to the liberal market economy facilitated the shift towards a consumer society, as new consumption opportunities were enthusiastically welcome by the majority of the population. These new consumption patterns are still evolving – material comfort, conflated in the concept of well-being is one of the top policy priorities of all democratic governments. Nevertheless, the wages in CR are much lower than in surrounding Western countries (Germany, Austria), which means that this consumerist desire manifests in quantitative expansion, rather than a qualitative shift in lifestyle.



Figure 1. Czech Republic in Europe

Education for sustainable consumption (ESC)

Education is an important tool for the overall change in consumer behaviour towards minimizing and reorienting consumption to reduce its environmental impacts; as education prepares the next generation of global citizens, its role is irreplaceable. Education for Sustainable Consumption (ESC) is an important part of the Sustainable Development Goals: in SDG 4.7 ESC principles are formulated for SDG 12.8. These goals and targets are based on decoupling economic growth from natural resource use – this challenge requires technological progress accompanied by restrictive economic regulations, and more importantly qualitative change of lifestyles, brought about by education.

Education for sustainable consumption aims to qualitatively improve conditions for life – to achieve ‘well-being’ at lower environmental costs. A long-term impact on the changing of consumption patterns of the entire population and the promotion of the principles of sustainable behaviour is only possible in league with the education system. To this end, different actors from science, pedagogy and practice must be involved in the systemic change – leading to the transformation of the educational system on different levels. As the role

of partnerships in change processes is crucial (as mentioned above), the RCE framework represents an excellent opportunity to realize such cross-boundary cooperation.

SC theme in research and education

Rapid developments in basic research (an increasing amount of data on consumption and methods for consumer behaviour analysis), if properly understood and harnessed, can contribute to a societal change starting at individual level, mediated through education. New knowledge can improve the quality and sustainability of lifestyles, promote informed decision-making, and provoke change in the everyday behaviour of individuals and communities. This potential of the most up-to-date research for educational purposes has yet to be exploited in practice. Although consumption is a part of everyday life for every person, and life in today's society offers countless alternatives, from which each of us (consciously or unconsciously) has to choose, the education system has not resolved to rationalize this process. More and more high-tech solutions are entering our private life, but education currently does not fully prepare us for an informed choice or their everyday management, including waste recycling. The domestic economy, although it is an essential part of a large economic system, still functions through intuition, so the choice of consumer goods can be largely influenced by emotions connected with advertising. Alongside the opening up of alternative pathways, there is a need for knowledge and skills that would help to raise the quality of life of individuals and communities with only minor material demands. However, the education system is not yet prepared to comprehensively deal with the theme of sustainable lifestyle.

In research, sustainable consumption is analysed with regards to potential political decisions but insufficiently developed from the point of view of the individual – which is more relevant to education. To transfer the theme into an educational context, the principles outlined below must be respected.

Box 1. Educational principles of ESC:

- **Quantitative vs. qualitative** – consumption (reduction as a technical issue) vs. lifestyle (qualitative change). To achieve transition, an overall change of values and lifestyle choices as well as a qualitative shift in the concept of well-being is needed.
- **Reflection** – habitual practices and consumption patterns should be examined at individual level (existing tools are mostly quantitative, e.g. footprints, and lacking qualitative perspective)
- **Lifestyle cultivation** – developing individuals' long-term perspectives concerning meaning of life is a challenge for education
- **Alternatives** – change of everyday consumption and habitual patterns on individual level are needed (should be developed, tested, shared)
- **Change** – there is a need to support non-materialistic values, and to ensure these are expressed in consumer behaviour
- This should be achieved through setting **new educational goals** - values, competencies, patterns of behaviour; and enforcing them at different levels.
- **A whole school approach** is necessary to have a holistic impact on daily practices, and bring about a commitment for change
- **Policy impact** – an environment for sharing practices, consulting and promoting systemic change in education is an important success factor

Czech context

In the Czech education system, the topic of sustainable consumption is virtually absent, appearing sporadically in the Czech main curricular document, Framework Educational Programs (FEP), and its cross-cutting themes. In the curriculum documents for pre-school education it is completely absent, in the FEP for primary and secondary schools, especially grammar schools, it then is marginally present in cross-sectional

themes. It is also part of selected educational fields (so called ‘adjectival’ education) which in the Czech system have no unifying concept. This is potentially a place for the inclusion of education for citizenship, health, cross-cutting themes such as environmental and cultural education, global and multicultural education aimed at developing critical thinking and communication skills, and prevention programs for high-risk behaviour and strengthening psychological resilience. However, these educational fields are not considered to be a fully-fledged part of the educational system, and the responsibility for these areas is placed instead on the family.

On the other hand, several non-formal education programs address the ESC field, many of which offer interesting experiences and methods, but they are not automatically integrated into the educational system. Educational materials produced by NGOs are usually not sufficiently anchored in current theoretical discourse – and as the progress in consumption research and its environmental impacts is very rapid and pedagogical awareness is scarce, there is a danger that these educational programmes deal with a few clichés that no longer correspond to current knowledge. There are a number of inadequacies among these non-formal educational programmes: they use programs/materials also usually focus only on some aspects of individual decisions paying too much attention to reducing the quantity of consumption and too little attention to the qualitative shift in lifestyle. The educational materials are often not fully adapted for effective teaching, the programs upon which they are based are often detached from practice, do not allow for local specific contexts and do not provide enough space for the creativity of the teacher and the learner. The problematic lack of integration of these programmes into the school environment results in them functioning as separate units. Last but not least, these materials do not provide a basis for evaluation of these programs, and do not summarize interesting experience from practice.

Educating to consume sustainably in CR

RCE Czechia was established/acknowledged in early 2017 to promote the objectives and approaches of the ESD in the Czech Republic (where the tradition of environmental education is predominant). In late 2017, several members of the RCE Czechia prepared a project that aims to improve this situation. On the basis of new knowledge generated in research, this project aims to create teaching materials for preschool children and pupils of the elementary and secondary schools. The overall ESC processes will be initiated through the regular dialogue between different stakeholders. As a result, the project will demonstrate sustainable consumption alternatives so that children will be (age-appropriately) informed and aware of the values of sustainability, able to choose their own lifestyle, critically consider different opportunities and choices, and discuss diversity in this area. The project is unique as it promotes a whole-institutional approach, so that the learning objectives will correlate with the values and environment of the whole school.

Project steps

The initial analysis will summarize the latest findings from environmental research, define the concept of sustainable lifestyles and find opportunities to apply this knowledge at lower levels of education. Pedagogically focused research conducted both theoretically and in dialogue with practice will identify learning objectives, resources and methodological tools. Implementation involves practitioners to ensure testing, application and feedback. Holistic insight into the theme, developing links between disciplines and

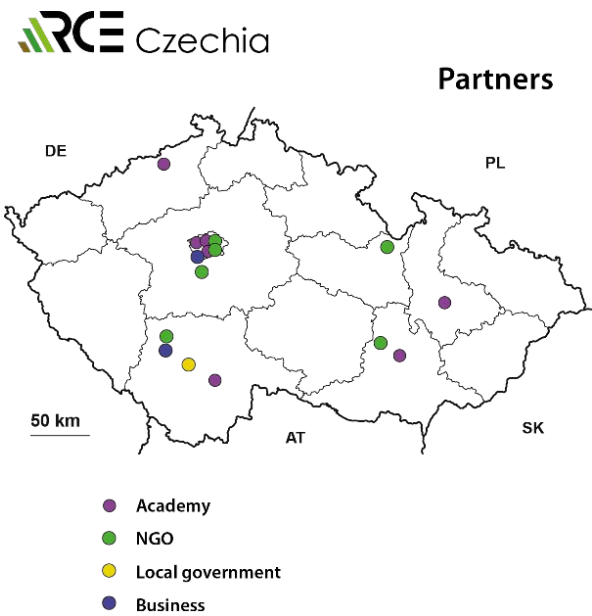


Figure 2. RCE Czechia partners

actors, and connecting results to policy making will ensure its impact on multiple levels. In the first year, the project will review the most up-to-date research results on environmental aspects of consumer behaviour (quantitative aspect – impact assessment and prevention, qualitative view – lifestyle change); and determine the relevance of these results to education. Consequently, the project team will develop concepts and methodological tools to support behavioural change: sustainability values, competences, creativity for innovation, critical thinking and orientation in the information environment, while respecting whole-institutional approach. Based on theory and experience, methodical toolkit will be developed and tested in the second year. Reflection in the third year will include experience from the processes of learning and sharing/transferring knowledge; the main result will be a methodology for teaching and developing educational policies based on evidence.

The most up-to-date knowledge on sustainable consumption will thus be translated from the research and expert context into the educational context, to influence ways of thinking and behaving at individual and group level. The target groups are preschool children and pupils of primary and secondary schools (also involving their parents), and in-service and future teachers who will gain new knowledge and methodical materials for working with the SC theme in education. New findings will be delivered by the research team at CUEC; pedagogical relevance and its evaluation will be provided by the Pedagogical Faculty of the University of J. E. Purkyně (UJEP); selection of methodological tools and their testing in practice will be done by TEREZA Educational Centre. TEREZA has developed a network of more than 400 Eco-Schools (at pre-school, primary and secondary levels) which will be encouraged to test the methodological materials in their practice; the Pedagogical Faculty of UJEP is responsible for the training of future teachers at all types of faculty schools (19 schools involved). Further application of the developed materials will take place within the RCE and through its collaborative networks of non-formal education, such as the Pavučina network (which translates as “Spider Web”) of environmental education centres. For the systemic use of the Methodology in the education of all intended target groups (preschool children, pupils of primary and secondary schools and teachers-in-training) in the formal education system, policy-recommendations will be developed and delivered to policy-makers through the Committee for Education of the Government Council for Sustainable Development. This institution (an associated partner of the project) is involved in formulation of the official education strategies of the Czech Republic.

Analysis and Methodology

Education for SC requires knowledge and holistic action of the individual. The RCE Czechia project is based on the need to work with the topic of sustainable consumption systematically. In this regard, input from research and practice is balanced: an analysis of the latest scientific knowledge will be conducted with regard to the intended application, i.e. its effective transformation into educational discourse. New research themes will be opened, relevant knowledge about the lifestyle of the individual will be identified, the relationship between qualitative and quantitative approaches and their educational relevance will be analysed, and appropriate pedagogical methods will be developed for achieving educational goals. With respect to the project goals, the research will focus on the area of competencies related, for example, to the values of sustainability, creativity, critical thinking, orientation in the information environment; also taking into account the whole-institutional approach.

The formulation of educational/training objectives will focus on achievement of educational impact in cognitive and affective domain. The pedagogical tools are designed to present the topic and provide knowledge and orientation in the information environment, to support critical assessment of the habitual values and practices, developing thus competences and creative thinking that are necessary to implement alternative consumption patterns. As a whole-institution approach is strongly supported, the overall school environment is required to contribute in consistency with the pedagogical activities. These assumptions will be clearly described in a background study, the basis of methodical procedures – developed as methodical sheets to be used in practice, and a more general methodology.

Dialogue will be held at academic level and in close cooperation between partners and application guarantors. On the basis of collaboratively set educational goals and methods, specific methodical materials will be produced – the whole process of their creation will be discussed within the project partnership and with teachers from practice. These materials will be pilot tested on each of the target groups (kindergartens, primary and secondary schools, teachers in service and teachers-in-training). Tools will be developed to evaluate the results of the educational process: the impact on the target groups, and the overall satisfaction of the learners. The experiences of all research phases – generalized and summarized in the methodology – will be translated into recommendations for policy makers at different levels (institutions responsible for education at regional, national, etc.).

(Education for) sustainable consumption as a multi-stakeholder issue

The project builds on close cooperation between researchers (experts on lifestyle, economics, regional development, environmental issues...), educators (representatives of pedagogical faculties), and teachers (representatives of educational NGOs). This cooperation is formally managed through the close connection of the research team with the RCE Czech Republic, which brings together the actors and organizations relevant to the project implementation. Through the RCE interactions, opportunities to develop topics that are currently lacking in educational practice will be opened. The project's 'application guarantor', the Government Council for Sustainable Development, will ensure that project results are enforced in education policies. It is assumed that such dialogue and cooperation can bring about changes in the system.

To cross the boundary between sustainable consumption theories, ESD pedagogies, and educational practices, we will take advantage of the involvement of a non-governmental organization, TEREZA Educational Centre. NGOs are better positioned to bring about the innovations into educational programs: they are more flexible, open to the international dialogue and sharing of good practices, and willing to experiment with the new themes and approaches. In this case, TEREZA has a long tradition of innovation and operates a powerful network of schools (formal education institutions).

Box 2. Description of the Eco-schools program operated by TEREZA Educational Centre

The TEREZA Educational Centre brought the international Foundation for Environmental Education (FEE) Eco-Schools program to the Czech Republic in 2005. After 12 years of coordinating the program in the Czech Republic, approximately 400 primary, secondary and secondary schools from all over the Czech Republic, approximately 70,000 pupils, have taken part. The program has a relatively robust implementation structure, educational materials, seminars and workshops for participating schools, a trained team of lecturers, consultants and auditors for schools, and a network of regional coordinators of the program. This facilitates the involvement of teachers and the effective transfer of new materials and learning processes to schools. Several evaluation studies were carried out in the Czech Republic which demonstrated the positive impact of the Eco-Schools program on the development of responsible behaviour of pupils, but also pointed out some difficulties in its implementation. For example, it has been proven that the highly participatory, emancipatory approach emphasized in education for sustainable development, and conveyed by Eco-Schools program, represents a new paradigm for most Czech teachers, which they find challenging without extensive methodological support. The Eco-Schools program has been successful in the Czech Republic, and is now acknowledged by the Ministry of the Environment of the Czech Republic, the Ministry of Education, Youth and Sports of the Czech Republic and the UN Information Centre in Prague.

Sustainable consumption is one of the key themes of the Eco-Schools program. In general, this theme still lacks adequate, modern and up-to-date research-based educational approaches and tools. Therefore, the goal is to identify appropriate sustainable consumption sub-themes that arise from current research and can be appropriately incorporated into the school system. Emphasis is on the questions that children and adolescents tackle in their daily lives, and the problems they can solve in everyday practice, at home and at school. The development of an educational methodology for sustainable consumption is based on cooperation with experts in sustainable consumption, in pedagogy and education for sustainable development, psychology, etc., and also with experienced teachers.

Eat Responsibly! project

TEREZA has implemented a number of projects aimed at developing, creating and piloting educational methods and making research results available in primary education. At present, for example, TEREZA, in cooperation with Glopolis in the Czech Republic and 7 other organisations from different European countries, is finalizing the Eat Responsibly! project focusing on sustainable practices in food consumption (reducing food waste and assessing the environmental and global developmental impacts of our food choices). This project has developed educational methodologies for this topic and is transferring them to pre-school, primary and secondary education in a consortium of partners from 8 countries.

Figure 4. TEREZA, Educational Centre realized project Eat Responsibly! See http://terezanet.cz/_files/userfiles/metodika_Mnu_pro_zmnu.pdf



Charles University Environment Centre CUEC – Nutritional Footprint Calculator in education

Unsustainable food consumption is one of the main challenges of our times. An increasing number of experts agree that we need to change our meals and search for 'more sustainable' options. Environmental footprints and associated tools (most commonly called environmental footprint calculators) is one of the appropriate methods to inform the general public about these problems and (possibly) support a change in consumer behaviour. At present there are relatively few environmental footprint calculators in the Czech Republic that cover the food sector. Within the 2016-2017 applied research project, Dana Kapitulčinová and her colleagues

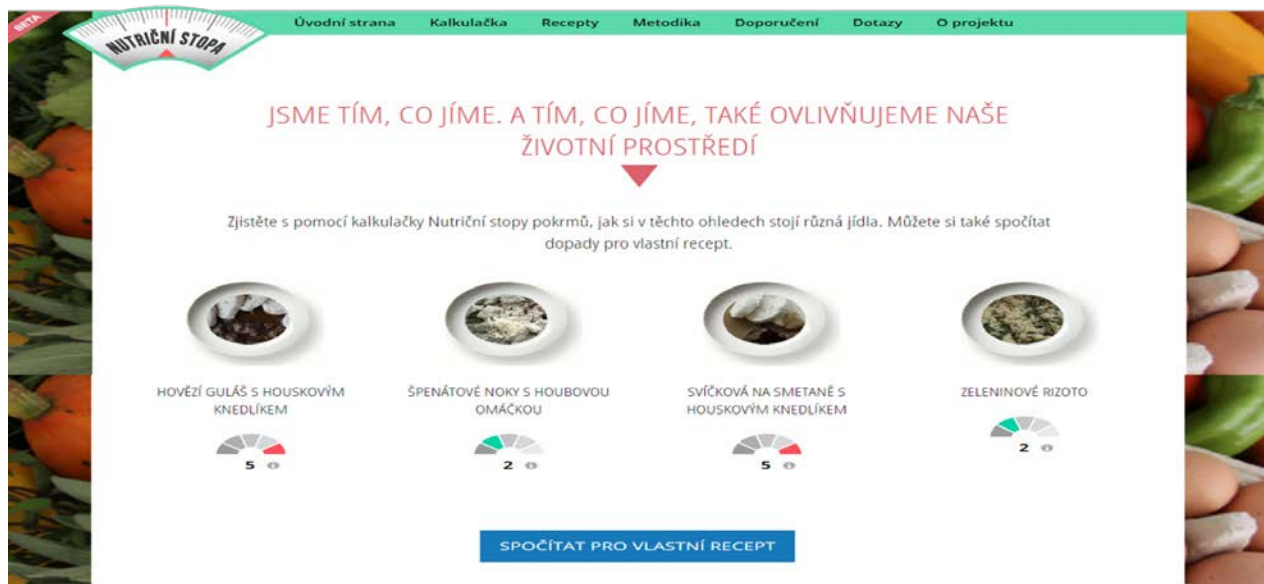


Figure 5. Home page of the Nutrition Footprint Calculator showing the relative environmental impact per portion of the selected meals (using a scale with traffic-light colours from green = lowest impact to red = highest impact), the calculator also allows the user to enter and calculate the impact their own recipe. See nutristopa.cz (under construction).

at CUEC conducted expert consultations and have developed the Nutritional Footprint concept, and created a calculator specifically addressing the environmental impacts of food and its nutritional values with respect to health. The result of this effort is a web application, i.e. the Nutritional Footprint Calculator, where the calculations are linked to the Environmental Impact Database (LCA based database) and the Nutrient Database for individual food products.

The calculator development was consulted with non-profit actors (e.g. TEREZA, Glopolis), state institutions (e.g. MoE), academia (e.g. UK, ETH Zurich) and private actors (e.g. Eaternity company). The main objective of the 'Nutritional Footprint' project is to raise awareness of the interdependence of food consumption and its impacts on individual human health and our common environment. The concept of Nutritional Footprint can support environmentally sustainable and healthy eating; to this end, the Nutritional Footprint Calculator will be used as a new educational tool in the Czech educational environment. It should serve in the broader context to educate the general public (aged about 15+) about sustainable food consumption. This new educational tool, as a web application, will be freely available to anyone with an internet connection (smart mobile phone, tablet, or computer). Besides the general public, the research team also tries to address teachers and other educators who could use the calculator for teaching or other educational activities with learners. The interviews and the pilot workshop that took place in 2017 showed that the interviewed teachers could imagine using the Nutrition Footprint in teaching or extra-curricular activities, but they would also like to have more comprehensive methodological toolkits to use in teaching. The future activities of the research team will be realized in cooperation with other actors in education to address this need.

Planned outcomes of our practices

The project will prepare the background and methodical materials for a holistic, conscious lifestyle development of an individual in an educational setting. These materials aim to initiate desirable changes in individuals' decision-making processes so that he/she is no longer manipulated by marketing, but manages his/her behaviour with long-term life goals (embedded in cultural awareness) and values that are favourable to the development of society as a whole. Informed citizenship requires skills that are important for informed decision making: critical assessment and work with information, understanding different approaches and types of knowledge (local, individual, general, ...), awareness of the risks of the information environment, etc. The intended main result of the project is the Methodology to apply the SC theme in the education of preschool children, pupils of primary and secondary schools and (future) teachers. Education has an impact on the entire population; the methodology will ensure the transfer of knowledge about sustainable consumption to all levels of the education system, including university education, and the use of pedagogical methods with impact on the formation of values and behaviour. In practice, the use of the methodology will lead to a transition to a sustainable lifestyle. The use of the methodology in practice will be tested; in practice, it will cultivate the knowledge and competences necessary for the transition to a sustainable lifestyle. Based on these outcomes, policy recommendations will be formulated and delivered to policy-makers for implementation within Agenda 2030 in CR.

Experiences and recommendations

The educational system (at least in the Czech Republic) is extremely hierarchical, providing few opportunities for the active participation of key educational actors in decision-making. To develop alternatives and encourage innovation, NGOs often play a crucial role. NGOs are more flexible, open to international dialogue and sharing of good practices, and willing to experiment with the new themes and approaches while their expertise in pedagogy is also robust and extensive. The project described above thus takes advantage from the extensive experiences of Czech NGOs, and their numerous networks and partnerships with formal education. In this case, the pedagogical faculty plays only a secondary, but appropriate and essential role in formulating principles of ESC pedagogy.

The main lesson learned from the preparation of the project on education for sustainable consumption is the need for respecting different discourses and 'languages' that different actors entering cooperation understand and utilize. In the shared space of RCE partnership, a research institution, pedagogical faculty, and an NGO met to cooperatively develop educational tools and deliver them to practice. All of these partners have their own methodological approaches that were not compatible at the beginning of their cooperation. After the process of negotiations, differences have been turned into learning opportunities – all of those involved worked from their professional frameworks but learned from the others and communicated across their boundaries. This communication appeared to be highly productive, brought new ideas and impulses.

For success of the dialogue, a favourable political environment is an important factor. The Czech Government Council for Sustainable Development was very pro-active in recent years, supporting participatory development of Agenda 2030 for the Czech Republic, and the involvement of individual actors. This served as a common ground for transdisciplinary dialogue in the context of our cooperation.

Prague, January 14th, 2017