

Promoting sustainability in education

POLICY DEVELOPMENT

PRACTICAL MEASURE/INITIATIVE

 LUXEMBOURG

Timeline



ID number 41489

Background

Equipping the future workforce with the right skills to master the green transition is high on the political agenda in Luxembourg. With the increasing global concern for climate change and the need for sustainable development, and the commitment to the European Green Deal, green skills are becoming increasingly important to guarantee the economy's resilience and sustainable economic growth. Raising awareness of topics of sustainability, circular economy, resource management, energy efficiency, and reduction of the carbon footprint requires a transversal approach that involves a large number of stakeholders.

Integrating green skills into initial vocational education and training (IVET) programmes and broadening continuing VET (CVET) help ensure that the workforce is equipped to address environmental challenges and that individuals are skilled to tackle the twin, green and digital, transition.

Objectives

The Ministry of the Environment, Climate and Sustainable Development (MECDD) coordinates the development of an inter-ministerial National Strategy for Circular Economy (Stratégie pour une Économie Circulaire Luxembourg). In this framework, the Ministry of Education, Children and Youth contributes to the provision of educational offers and material on sustainable development for teachers, while adapting the VET offer to the needs of the green transition by increasing and promoting CVET offerings, introducing new green IVET programmes, incorporating occupation-specific green skills into existing programmes, and piloting transversal skills such as circular economy.

Description

The platform for education on the environment and sustainable development, created following the 2007 National Nature Conservation Plan and launched online in 2012 as part of the Luxembourg Education for Sustainable Development (ESD) strategy of 2010, enables networking among professionals, NGOs, local administrations, institutions, teachers, and trainers involved in Education for Sustainable Development (ESD), who now cooperate in line with the objectives of the 2030 Agenda. It provides expertise, ESD activity

opportunities, and teaching materials; shares examples of good practice and experiences; and supports the development of interdisciplinary educational projects. Organisations presented on the platform are signatories of the ESD charter, which sets quality criteria for educational ESD activities, and the platform is managed by the Ministry of the Environment, Climate and Sustainable Development (MECDD), Natur&mwelt, and the Ministry of Education.

Complementing this initiative, the Department for Coordination of Educational and Technological Research and Innovation (SCRIPT) develops projects and initiatives on sustainable development for primary and secondary schools, while the Training Institute for National Education (IFEN) offers teacher training courses in its catalogue section Sustainable development education - Environment (Education au développement - Environnement), aligned with the Luxembourg Agenda 2030 on sustainable development.

Central to delivering practical green skills is the National Centre for Continuing Vocational Training (CNFPC), which has modernised its infrastructure—including workshops, labs, and training spaces—and expanded its course offerings to address Industry 4.0 and sustainability challenges, covering areas such as Waste Management, Circular Economy, Building Engineering, Energy Efficiency, and Forestry.

New IVET programmes in green and digital occupations, such as technician diplomas in Smart Buildings and Energies (EQF 4) and Smart Technologies (EQF 4), have been introduced. Internationally recognised certifications, including the safe handling of climate-hazardous gases, are now integrated into IVET programmes for Heating and Sanitation Installers and Refrigeration Technicians.

2019 Implementation

In 2019, the third plan for Sustainable development was published based on the UN 2030 agenda. Educational material on the 2030 Agenda has been made available on the platform.

The first Education for Sustainable Development Fair, which took place on 15 October 2019 at the Geesseknäppchen Forum, aimed at bringing together ministries, schools and NGOs to present their offers of activities and teaching materials on sustainable development.

Since 2019, five secondary schools have offered the 4-year technician diploma, Smart technologies. After the first 2 years, learners can specialise in several fields of study, such as infotronics' renewable energies, robotics and automation, smart energy, and e-controls, for the last 2 years.

The Technical Secondary School of Ettelbruck (Lycée technique d'Ettelbruck) offers a programme, Renewable energies, with an emphasis not only on production (wind turbines, solar panels, hydraulic installations), but also on energy storage, one of the major challenges of the future.

The Lënster Secondary School in Junglinster (Lënster Lycée) offers a programme, Smart energy, with emphasis on the planning, connection and operation of 'intelligent networks' (smart grids) or storage systems (energy clouds), and some courses.

The Secondary School Arts et Métiers offers a programme, Infotronics, that covers the basics of robotics, automation, applied computing, renewable energies, electromobility and telecommunications.

The Secondary School Guillaume Kroll (Lycée Guillaume Kroll) offers a programme, Robotics and automation, with an emphasis on robotics, smart home, renewable energies, electromobility and internet of things.

The private secondary school Emile Metz offers a specialisation in e-control.

2020 Implementation

No major developments in 2020, the platform was regularly updated.

Implementation of the 4-year technician diploma, Smart technologies, in five schools continued.

2021 Implementation

In 2021, the platform was regularly updated. The second fair on ESD took place online in June 2021, more than 120 participants presented educational projects aimed at raising learners' awareness, but also their own, acquiring the necessary skills to face the challenges of sustainable development and becoming responsible citizens.

In 2021, the technician diploma, Smart buildings and energies, was introduced. The four-year programme includes such subjects as electrical installation techniques, heating, air conditioning and ventilation, home automation, renewable energies, energy advice, and three internships of four weeks each.

CNFPC introduced various short courses in transversal green skills addressed to both the private sector and local and regional authorities, in partnership with public agencies responsible for the promotion of sustainability and climate action, public and private training providers and a regional circular economy hub. Courses are: Waste and resource management (*Abfall- und Ressourcenmanagement*); Circular economy for municipalities (*Kreislaufwirtschaft für Kommunen*), Sustainable digitalisation - Measures for a sustainable use of the internet, hardware and software (*Nohalteg Digitaliséierung - Mesurë fir een nohaltegen Ëmgang mam Internet, Hardware a Software*), the path to a CO₂-neutral organisation (*Der Weg zur CO₂ - neutralen Organisation*).

2022 Implementation

In 2022, the platform for education on the environment and sustainable development was regularly updated.

The third fair on ESD took place in April 2022; different actors involved in education for sustainable development, such as NGOs, administrations, teachers, and educational staff, took part. 250 participants gathered and more than fifty exhibitors presented their activities and materials or their educational projects. Workshops were offered to share good practices and discover new approaches. The Training Institute for National Education (IFEN) and the Department for Coordination of Educational and Technological Research and Innovation (SCRIPT) presented their new projects.

CNFPC introduced courses on transversal green skills for staff of public administrations and employees in the private sector, such as Construction and installation of insect nesting aids (*Bau- und Anlage von Insektennisthilfen*), General introduction to nature protection legislation, and General introduction to legislation on waste and resources and classified establishments.

2023 Implementation

The fourth fair on ESD took place in April 2023; different actors involved in education for sustainable development, such as NGOs, administrations, teachers, and educational staff, took part. Over 70 stands were open to visitors who had the opportunity to share experiences and examples of good practice and be encouraged to become more aware of sustainable development and the implementation of the 17 sustainable development goals of the Agenda 2030.

The House of Training, in partnership with the House of Sustainability and Solvay Brussels Economics and Business School, offers a certifying course "Luxembourg Sustainability Management Series - LSMS" addressed to executives and students enrolled in the Chamber of Commerce's MBA programmes. The training sessions aim to introduce participants to the major issues of sustainable development and their concrete application in a company's strategy.

It is organised in 11 modules; The diversity of the speakers and concrete case studies

allow the participants to acquire theoretical knowledge but also to benefit from field experiences.

The National Institute for Sustainable Development and Corporate Social Responsibility (INDR), in collaboration with the House of Training offers a training cycle in Corporate Social Responsibility (CSR) three times per year. It consists of four specific modules devoted to CSR strategy, governance, and social and environmental aspects. Target audience are Directors, HR managers, sustainable development and CSR managers, quality managers, ESR-Responsible Enterprise coordinators, designated workers and any employee of a company involved in the ESR-Responsible Enterprise labelling process.

The University of Luxembourg's Competence Centre offers a University Certificate (1-year programme, 20 ECTS) on Sustainable Development and Social Innovation.

2024 Implementation

The fifth fair on ESD took place in March 2024; over 70 stands were open to visitors. The Fair has been awarded the Green Business Events logo. The aim of this logo is to promote eco-responsible events in Luxembourg and to develop sustainable event solutions in collaboration with players in the sector.

During the fair, the Training Institute for National Education (IFEN) and the National Youth Service (SNJ) present a series of training courses for teaching and educational staff and a selection of books on the theme of sustainable development. The Department for Coordination of Educational and Technological Research and Innovation (SCRIPT) gives an overview of its projects and teaching materials available to teachers and initiatives in the field, in schools and colleges.

In 2024, CNFPC launched an online survey to gather expectations and training needs related to the circular economy.

The Luxembourg Life-long Learning Centre (LLLC) offers, in partnership with the French Institute of Technology Lorraine (IUT Lorraine), a higher education programme leading to a *Bachelor Universitaire de Technologie* (B.U.T.) diploma - Occupations in Energy Transition and Efficiency. It focusses on designing, sizing, auditing, and recommending solutions to optimise the energy and environmental performance of buildings and industrial utilities. The course encompasses 361 hours; the third year of the programme is organised over a period of two years as continuing education and offers a blend of lectures and practical workshops.

Faced with the ecological transition and the growing importance of sustainable development, the Chamber of Skilled Crafts and Trades (CdM) offers a full catalogue of training courses to help craftspeople prepare for today's current challenges related to Energy and Efficiency, in the framework of the EU co-funded FSE+ programme 'Investir dans le futur' (2021-2027).

Projects preparing for the challenges of the green transition in the crafts sector are:

Nohalteg an d'Zukunft + (NANZ+)

Continuing education cycle on the construction of sustainable and energy-efficient buildings. The aim of this programme is to guarantee high quality during the construction and renovation of these buildings and to integrate sustainability aspects into the work. It is certified by a Label.

Sustainability

Training cycle to prepare employees of craft businesses for the new challenges in business management (circular economy, sustainable purchasing, carbon footprint measurement, CSRD (Corporate Sustainability Reporting Directive) reporting, etc.)

Heat pump technology training modules (Pompe à chaleur (PAC))

The Competence Centre of the building sector, CDC-GTB developed training modules relating to heat pump technology, and delivers the courses to employees of heating and sanitation companies. The target audience for the PAC training courses are employees of Luxembourg heating and sanitation companies who plan, install, troubleshoot and maintain heat pumps in buildings.

2025 Implementation

The CNFPC launched several targeted training initiatives and events to support municipalities and companies in their sustainability and climate action efforts:

- **Product Repairability and Sustainable Procurement:** A training module focused on the repairability of products, decision-making criteria for when to repair rather than replace, and the principles of sustainable public procurement. The target audience included municipalities and private-sector companies.
- **Use of European Satellite Data for Climate Commitments:** CNFPC launched the first module of a broader training programme on how municipalities can leverage European public satellite data to monitor and support their commitments under international climate agreements. The training was aimed at municipal staff and energy consultancy professionals.
- **Sustainable Public Catering Procurement:** A dedicated training explored how public catering providers—and entities involved in public procurement for catering services—can reduce their CO₂ footprint through more sustainable procurement and operational practices.
- **Expert Conference on Eco-Design in Construction:** CNFPC organised an expert conference addressing the opportunities and challenges of eco-design in the construction sector. The event focused in particular on strategies for deconstruction and the reuse of building materials, promoting circular approaches in public and private building projects.

Bodies responsible

- Ministry of the Environment, Climate and Biodiversity (MECB)
- Natur&ëmwelt
- Ministry of Education, Children and Youth
- Department for Coordination of Educational and Technological Research and Innovation (SCRIPT)
- Training Institute for National Education (IFEN)
- VET Department of the Ministry of Education, Children and Youth (SFP)
- National Centre for Continuing Vocational Training (CNFPC)
- Chamber of Commerce
- Chamber of Employees
- Chamber of Skilled Trades and Crafts
- University of Luxembourg
- House of sustainability

Target group

Learners

Learners in upper secondary, including apprentices
Young people (15-29 years old)
Adult learners

Education professionals

Teachers
Trainers

Other stakeholders

National, regional and local authorities

Thematic categories

Modernising VET offer and delivery

Modernising VET standards, curricula, programmes and training courses
Integrating green transition and sustainability in VET curricula and programmes

Supporting lifelong learning culture and increasing participation

Providing for individuals' re- and upskilling needs

Subsystem

IVET CVET

Further reading

[The portal for education for sustainable development](#)

[Second fair on ESD](#)

[Third fair on ESD](#)

[IFEN Offer](#)

[Fourth fair on ESD](#)

[Fifth fair on ESD](#)

[Technician programme, smart buildings and energies and Smart technologies](#)

[Ministry of Education, Children and Youth](#)

[CNFPC offer - nature protection legislation](#)

[House of Training: Courses CSR and Sustainability management](#)

[LLLC- Bachelor Universitaire de Technologie \(B.U.T.\) diploma - Occupations in Energy Transition and Efficiency](#)

[University of Luxembourg: Certificate Sustainable Development and Social Innovation](#)

[Chamber of Skilled Crafts and Trades: NANZ +](#)

[Centre de Competences GTB: Transition energetique artisanat+](#)

[CdM: Course catalogue Energy and Efficiency](#)

[Centre de Competences GTB](#)

“ ... ” **Cite as**

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<https://www.cedefop.europa.eu/en/tools/timeline-vet-policies-europe/search/41489>