



The sectoral impacts of the
climate transition
**Focus on employment,
skills and training**

Policy brief

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Summary

This report dives into the sectoral variations of the impacts of the climate transition on employment, skills and training. Six subsectors are analysed through literature review, quantitative and qualitative analysis and stakeholder workshops: transport, health sector, agriculture and food industry, circular economy, R&D and education. This policy brief also integrates the conclusions on the construction sector from a previous report (FPS Health, 2023).

To effectively address the climate transition, it is crucial to better identify employment and training needs, enhance job quality and attractiveness, and bridge the gaps between the labour market and education. The first part of the report outlines 19 transversal policy considerations to tackle these challenges, involving a diverse range of actors. Amongst these are:

- Governments should provide clearer climate **transition pathways**.
- Employers should put more effort into highlighting the **need for green skills** and developing occupational profiles in line with the climate transition.
- Public training bodies need to adopt more **proactive and forward-looking** approaches.
- Sectoral funds must better represent the interests/address the challenges of **emerging jobs**.
- Initial education actors should integrate mandatory **courses on the climate transition**.

The second part of the report analyses the impacts of several climate transition scenarios on labour demand and skills for the six subsectors and identifies policy considerations for a wide range of actors. These include the following ones:

- In the **transport sector**, social partners should improve working conditions of new professions such as last-mile delivery drivers and bicycle couriers, in order to foster the reconversion of declining professions in the same sector. Sectoral funds could increase participation in education by offering more short, practical trainings.
- Higher education for **healthcare** workers should focus more on healthcare's role in the climate transition, especially concerning prevention and circular economy, in both initial and continued medical education.
- Governments should be more clear on the long-term vision for the **agricultural sector** and provide technical guidance, e.g. on farming model conversions. Farmers should pool resources, skills and knowledge through cooperatives.
- **Education** and climate administrations should centralise and coordinate sustainability initiatives and programs for initial education institutions.
- In the **circular economy**, working and wage conditions should be improved to attract workers. Sector-specific experts and educators should develop curriculum frameworks and training programs that are tailored to the needs of the circular economy.
- For **R&D**, better monitoring tools could help to analyse the contribution of the R&D sector to the decarbonisation efforts.
- Finally, initial education institutions should urgently update the curriculum for **construction** profiles to include climate renovation skills and knowledge. For existing construction workers, training institutions should improve the offer of short, practical on-site trainings.

Cooperation and coordination between all these actors (federal and regional governments, public employment and training services, social partners, sectoral funds, education and training institutions, ...) will be needed to further map the labour market needs, attract enough skilled workers for the climate transition and tackle the discrepancies between the labour market needs and the offered education and training.

1 Introduction

Based on the 2050 scenarios of the FPS Health (2021), the report *Implications of the climate transition on employment, skills, and training in Belgium (2023)*¹ pointed out that the transition towards climate neutrality in 2050 is expected to lead to small net job gains in Belgium. However, large variations are expected within sectors.

Different reports and studies have been published in recent years on jobs and skills in the context of the climate transition. For example, a recent report of the High Council of Employment (2025) points out the need to combine climate and employment policies, increase STEM skills, support reskilling and upskilling, especially for employees in high emission sectors. However, to our knowledge, detailed analyses of these issues per subsector, do not exist to date.

Therefore, this study, with a subsectoral focus, was launched by FPS Health and conducted by Climact and IDEA Consult. This policy brief is based on the key findings of the study by Climact and IDEA Consult and focuses on policy considerations.

The study dives into six groups of subsectors to analyse in detail the expected effects of the climate transition on employment, skills and training. The subsectors were selected based on the impact of the climate transition on the subsector, the number of jobs, the economic value and the current maturity level of transition knowledge in the subsector².

The study aims to make specific policy considerations on a subsectoral level and interact with key stakeholders in these subsectors on the climate transition and its implications for the labour market.

The study is based on the following methodology. The impact of the climate transition on jobs, skills and training was mainly estimated through the transition levers from the 2050 scenarios (FPS Health, 2021), completed by literature review, after which all results were discussed in small workshops and interviews with the subsectoral stakeholders. The study has also benefited from the guidance of a broad follow-up committee³. These exchanges were consolidated into concrete policy recommendations, resulting in an extensive factsheet per subsector, a detailed report and this policy brief, all available online⁴.

The following section summarises the transversal learnings and considerations. The third section is devoted to the analysis per subsector: it presents the labour market impacts, in terms of job demand and skills, and formulates a number of specific recommendations linked to employment and education policy.

¹ FPS Health, Food chain safety and Environment (2023), *Implications of the climate transition on employment, skills and training in Belgium*, available on <https://climat.be/2050-en/complementary-analyses>. Hereafter referred to as FPS Health (2023).

² More precisely, subsectors were selected if the climate transition tends to have a significant impact on the subsector, if the subsector has a high economic value and if the current maturity level of the transition knowledge in the subsector is low. As a consequence of their high maturity level of transition knowledge, the energy industry and the manufacturing industry were not included in this study.

³ The authors would like to thank the members of the follow-up committee for their contributions. The usual disclaimers apply.

⁴ See <https://climat.be/2050-en/complementary-analyses>

2

Transversal learnings and policy considerations

The learnings and policy considerations can be grouped into three themes. The first one, ‘map’, is related to the identification of the potential changes in employment levels and training needs. The second one, ‘attract’, has to do with the quality of the jobs and their attractiveness. The third one, ‘educate’, deals with the discrepancies between the labour market and education.

2.1 Map – Identifying employment and training needs for the climate transition

For the climate transition to succeed, it is crucial **to identify the expected changes in labour demand and skills needs and translate these into education and training needs.**

There are several channels through which the needs of businesses for new competencies are embedded in education and training. The main formal channel is through the establishment of **occupational profiles**⁵. These are designed by the public employment and training services (FOREM, VDAB, Actiris, ADG and Bruxelles Formation) in cooperation with the employer organisations and trade unions. Additionally, more informal channels can be used, such as the development of learning materials, training educators and internships.

However, **a strong disconnection between prospective work on the climate transition and the design of (public) training programs is observed.** If this is not addressed properly, skills gaps (if not already striking) will remain strong and will put at risk Belgium’s climate transition. We identify several shortcomings in the current system.

First, the model of occupational profiles is “reactive”, meaning that it focuses on filling **short-term shortages** and ensures workers are employable. It is aligned with companies’ current expectations but fails to identify and anticipate the significant need for new skills that the climate transition requires. Similarly, **sectoral funds** who offer lifelong learning trainings, do not necessarily have a positioning that allows them to identify emerging needs.

Moreover, this process **favours larger, established companies** that have more resources to participate in forecasting exercises and in adapting occupational competency profiles. This leads to underrepresentation of small and emerging businesses that account for an important part of economic activity in most of the subsectors studied.

As a consequence, many occupational profiles **do not sufficiently embed skills required for the transition.** This is preoccupying as updating the occupational profiles is a slow and complex process involving many stakeholders, delaying their alignment with educational content. For example, for all sectors, change management and STEM skills that are essential for the transition, are missing. Furthermore, **robust strategies and reskilling plans are lacking**, meaning that **additional jobs needed for the transition do not represent a real opportunity for declining professions.** Converting automotive mechanics into bicycle repair roles or transferring nurses from hospital settings to mobile nursing services are just a few examples illustrating that the connection between declining and emerging professions is neither automatic nor linear.

Finally, **skills acquired outside formal education are not consistently recognised or certified.** This limits the ability to formalise the competencies required for the transition.

⁵ *Beroepscompetentieprofielen or profiles de compétences professionnelles.*

Policy considerations

- Governments should provide more **clarity on the climate transition pathways** to achieve climate neutrality in 2050 in the different sectors, to allow the labour market and education and training institutions to adapt to these pathways.
- Public administrations should support public training bodies in switching from a market-reactive approach to a **proactive and forward-looking approach**, with an independent and neutral view, built on transition scenarios.
- Employers should put more effort into **highlighting the need for green skills and developing occupational profiles in line with the climate transition**, for example through the *service francophone des métiers et des qualifications*. This is crucial in order for employment services to develop relevant competency profiles and for education institutions to develop learning curricula.
- Map emerging “green businesses” and support their integration into the process of defining occupational profiles. Administrative procedures should be simplified where possible for small and emerging companies.
- Initial education programs should, beyond technical aspects, include social and economic impacts of the climate transition and reflect its complexity.

2.2 Attract – Job quality and attractiveness

In almost all sectors studied, improving job quality and attractiveness was identified as key. In some sectors poor working conditions lead already to work shortages today, in others low job quality can be a barrier to attract enough workforce for the climate transition.

In some specific jobs and sectors crucial for the climate transition, existing structures are hindering the improvement of job quality. For example, **collective bargaining coverage rates are lower for emerging and growing jobs**, which might result in poorer working conditions, low attractiveness, and a very weak integration of skills’ needs into training programs.

Without significant and quick efforts to structure emerging activities, the transition is at risk in a series of subsectors. Trade unions could potentially play a larger role. However, they currently represent only a small fraction of jobs in these businesses, primarily due to legal thresholds.

Policy considerations

- Sectoral funds and other intermediate institutions should develop a support framework for emerging and growing jobs.
- Sectoral funds and other intermediate institutions should work in a closer collaboration with emerging and sustainable-oriented businesses networks, such as for example the Kaya Coalition in Wallonia that aims to boost ecological entrepreneurship.
- The federal government should reinforce policies to safeguard decent working conditions and the health and safety of workers, especially in the construction sector and cyclo-logistics. Examples include controls, social inspections to address illegal work and social fraud, and strict social criteria in public tenders (FPS Health, 2023).

2.3 Educate – Tackling the discrepancies between the labour market and education

Even if a clear mapping of the labour market needs for the climate transition is available, it **remains challenging to translate these needs into relevant training content and to include it into curricula**. Furthermore, reaching the right audience is not straightforward. Specifically, striking the right balance between general and specialised competencies, with relevant and actionable information, is key to shape meaningful training programs.

Moreover, educational programs should be adapted to fit the needs of students and organisations. This can be achieved by expanding the offer of internships, work-study programs and vocational education but also through more modular and flexible program formats.

In addition, there is quite a time gap between students in primary and secondary school today and the moment they arrive on the labour market, especially until they reach decision-level positions. Therefore, **continuous training and lifelong learning are key**, especially for decision-makers who focus on the integration of climate risks into business models. This is often overlooked as high-skilled profiles are less subject to employability issues.

Two more factors influence training and employment strategies across different sectors. Sectors with a higher level of **internationalisation of the production chain**, are more difficult to reach with structured intervention through regional or community training mechanisms. The same goes for sectors where the **level of complexity and specificity of the skills** and techniques required for the sector's transition is **high**.

Policy considerations

- **Initial education actors should integrate in mandatory courses both discipline-specific aspects and transversal aspects of the climate transition.** This would foster interdisciplinary reflection and ensure alignment between green skills development and broader educational objectives.
- **The regional government should provide a clear mandate to professional associations and economic actors** to accelerate the development of training programs for emerging skills. Offering incentives for early adoption and fostering innovation in workforce training will drive a faster and more inclusive adaptation process.
- **The government should fasten the integration of new professions into the training offer** by reducing bureaucratic hurdles and enhancing coordination among regional and federal bodies. A streamlined approach should ensure that training programs remain responsive to evolving labour market demands.
- **All governments should simplify and standardise legal frameworks for internships and apprenticeships across Belgium.** This harmonisation would improve student integration, reduce administrative complexity for businesses, and ensure consistent regulations nationwide.
- **Training institutions** could increase the accessibility of their trainings by organising them in a modular and flexible way, with as few limitations as possible regarding prior qualifications (FPS Health, 2023).
- **Training institutions** should offer basic energy-climate upskilling/reskilling trainings to all workers. The total offer of energy-climate upskilling/reskilling trainings should be increased.
- **Nominate a government-supported mediator, such as an extension of VDAB, Actiris, Forem, or Bruxelles Formation, or create a new entity in collaboration with professional federations or sectoral training funds to connect businesses and educational institutions.** This mediator would streamline internships, thesis projects, and apprenticeships by translating business needs into academic projects, reducing administrative burdens, and helping companies access funding for collaborative research.
- **Communication campaigns on the opportunities for the climate transition in terms of jobs and skills** should be implemented with no further delay, including information on the energy-climate skills in demand and the emerging climate related jobs and related trainings. Centralising information on training opportunities and financial support in one single platform could support workers in taking the first steps towards training.
- Regional education authorities should also implement targeted programs and awareness campaigns to **attract more girls and students from diverse backgrounds to STEM careers**, highlighting the importance of STEM skills in the climate transition. In addition, dedicated efforts should be carried out to attract the inactive population towards climate transition-related sectors.
- **Schools and public employment services** should advise students on the needs of the labour market related to climate transition and on the potential courses and trainings available.
- **Training facility operators should walk the talk**, by lowering their own impact in terms of energy efficiency, food, mobility, etc.

3

Sectoral level learnings and policy considerations

The final impact of the climate transition on labour demand will strongly depend on which transition scenario is chosen. Some scenarios are more transformative than others, depending on whether they rely predominantly on technological deployment or also significantly on sufficiency options. More information on the levers of the transition scenarios can be found in the full report.

It is crucial to decide on a transition scenario, that is clear on decarbonisation orientations or strategies in the different sectors, to define the exact labour market needs. In absence of such a decision, this report reflects on the impacts of different scenarios. For transport, agriculture, construction and circular economy, a quantitative analysis of the labour demand is presented, while for the health sector, R&D and education, a more qualitative analysis was conducted.

3.1 Transport sector

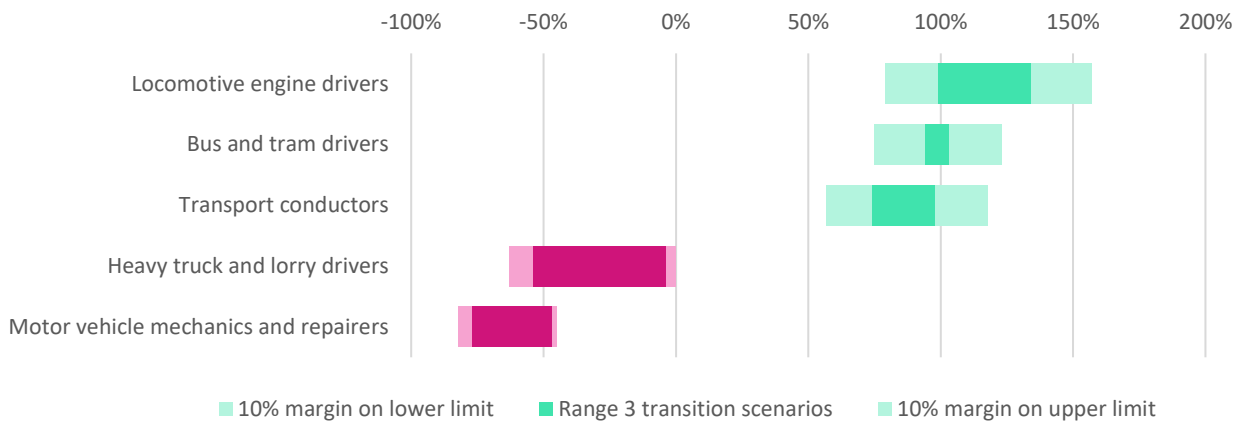
The following estimations are based on the CORE95 transition scenarios (FPS Health, 2021). Figure 1 shows the range of the estimations based on the Behaviour and Technology scenarios. Estimations show that the modal shift will **double the demand for public transport drivers** (bus, tram and train drivers) towards 2050, mainly for passenger transport. The **growth in demand for train drivers is even more pronounced** as it is also influenced by the modal shift in freight transport. In the last years however, the number of workers for these profiles have stagnated or even decreased. The demand for transport conductors shows an increase of 80% towards 2050, which aligns with the historical trend in the number of transport conductors.

The demand for heavy truck and lorry drivers is expected to decrease **due to the modal shift and optimisation**, such as increased load factors, in the freight transport sector. However, **the impact on the Belgian labour market might be limited**, as truck driver is a profession that is already in shortage and characterised by a European (labour) market, with many truck drivers on the Belgian roads not being employed in Belgium. In addition, the job has an old average age, which will lead to a natural decrease of employees without large reconversion impacts. Truck drivers staying in the sector, will however need **upskilling in using embedded technologies such as advanced fleet management systems and knowledge of new environmental regulations**.

The number of **motor vehicle mechanics and repairers will face an even sharper decline**, both due to a modal shift and electrification of vehicles. These workers will need to be redirected towards other professions. Remaining car mechanics will need to be **upskilled** for the maintenance of electric vehicles, as well as sustainable car repair practices and skills such as recovering and reusing materials and optimising resource use. The latter appear to be already well integrated into current occupational competence profiles.

Bicycle couriers and bicycle mechanics will experience **large increases in job demand** by 2050 as a result of the freight and passenger modal shift. To meet these demands, the social status and working conditions of these jobs will need to improve. In addition to the increase in job demand, bicycle mechanics need **advanced technical skills to adapt to rapidly evolving technologies, which will need to be continuously updated**. They will also play a role in educating consumers on maintaining electric bike batteries and adopting sustainable practices.

Figure 1: Potential impact of decarbonisation on some jobs in the transport sector in 2050 (% change with regard to 2023)⁶



Source: Climact & IDEA Consult (2025), The sectoral impacts of the climate transition: focus on activity, employment and training – Methodology, main learnings and considerations

It is not clear how the transition will impact logistic jobs. Nevertheless, **procurement and logistics managers will play a pivotal role in advancing green logistics**. Their responsibilities will include efficient reverse logistics to manage returns, unsold goods and waste while reducing environmental impact and production costs at the same time. Current occupational competency profiles lack explicit references to the environmental and technical knowledge necessary for this shift.

In general, we find that most jobs will require enhanced technical and green skills rather than entirely new competencies.

To conclude, stakeholders indicate that the transition will not be as simple as just transferring workers in car maintenance to bicycle maintenance, given the difference in skills, remuneration and personal motivation. **Reconversion opportunities from one job to another need to be analysed case by case.**

Policy considerations

Map – Identifying employment and training needs for the climate transition

- **Training centres and sectoral funds**, such as Educam, should give attention to the quantity and quality of training programs related to complex logistics and last-mile urban deliveries, as this function will play a lever role in the transition.

⁶ The range indicates the impact estimation for the technology scenario (smallest impact) and the behaviour scenario (largest impact), with the impact of the CORE95 scenario being somewhere in the middle. A 10% uncertainty margin is added on top of this range.

Attract – Job quality and attractiveness

- For **heavy duty vehicle drivers and last-mile delivery drivers**, governments together with social partners should **improve working conditions** and ensure the quality of employment, thus increasing the jobs' attractiveness.
- The federal minister for Employment and the social partners should integrate **all bicycle courier companies into the same joint committee**. This ensures equal socio-economic conditions, stronger legal protection, and a platform for dialogue between employers and workers. The current framework ranges from independent contractors to employees, which leaves many couriers insufficiently protected and vulnerable to exploitation. A quick **implementation of the European directive on platform work is also crucial**.

Educate – Tackling the discrepancies between the labour market and education

- **Sectoral federations** (Febetra, TLV, UPTR, BCLF, FEBIAC, Traxio, FBAA, etc.) **should offer short, practical trainings or work on developing vocational training centres**. This could help to tackle the barriers identified in the transport sector, such as limited time and resources due to labour shortages, small businesses and strong competition.
- Communication oriented towards the positive climate impact could be helpful, but climate should be a co-benefit rather than the main argument to attract bicycle couriers and public transport drivers.

3.2 Health sector

In general, **evolutions in labour demand due to the transition should not be strong, but occur in an already challenging context** of labour shortages, an ageing population, overloaded curricula for nurses and a lack of teachers in environmental health. The study Operation Zero (2025)⁷ shows that the GHG emissions from the healthcare sector result mainly from the pharmaceuticals and medical equipment (scope 3). Therefore, circular practices and the shift towards a preventive health system will be key in decarbonising the healthcare sector and as a result, be the main driver of labour market impacts.

The shift towards **more circular practices implies the need for technicians, logisticians, regulatory compliance experts and quality insurance engineers**. Healthcare managers need to be upskilled to enable the development of circularity, including expertise in the eco-design of care practices, eco-prescription, and resource management. In addition, healthcare managers need greater skills in change management and developing and implementing decarbonisation plans.

To activate the shift to a preventive health system, federal and regional health administrations, health insurance funds, trade unions, professional associations and INAMI-RIZIV should work together to revise the reimbursement structures as well as the funding for primary prevention. They could for example experiment with new cost-sharing models where healthcare providers are compensated based on health outcomes achieved, rather than time spent with each patient.

The shift towards a **preventive healthcare system calls for an upskilling of healthcare workers, especially general practitioners**, in awareness raising, environmental health and a more general understanding of the impact of the healthcare sector on climate change. Additionally, community workers could make sure vulnerable populations benefit from preventive care.

Shifting to a more preventive healthcare system would tend to **decrease labour demand**, which, given the current labour shortages, should not be a problem and lead to more qualitative working conditions. In addition, a more preventive system might lead to a relative change in the number of specialists needed. These changes should be planned well in advance given the long initial education of doctors. The assumed shift towards prevention is a challenging choice, given failed attempts to make this shift in the past. In addition, with a strongly ageing population, shifts towards prevention will need to be massive in order to lead to decreases in labour demand.

However, **adapting to climate change might require more flexibility in workforce planning** and increased peak demand, e.g. during heatwaves.

⁷ Health care Without Harm (2025), Operation Zero, commissioned by the Belgian health and environmental authorities, available on <https://klimaat.be/news/2025/operation-zero> (NL) and <https://climat.be/actualites/2025/operation-zero> (FR)

Policy considerations

Map – Identifying employment and training needs for the climate transition

- The report does not identify considerations directly linked to jobs and skills. However, it identifies a number of other crucial considerations to improve circularity in the healthcare sector and shift towards preventive care. This goes from the federal government who needs to change waste management regulations to all healthcare stakeholders who need to jointly rethink the reimbursement structures in favour of preventive care. More details can be found in the full report.

Attract – Job quality and attractiveness

- The shift towards more preventive care can decrease the time allocated to treatment by healthcare professionals. Healthcare facility managers can use this lever to reduce the workload for healthcare professionals or ease staffing shortages.

Educate – Tackling the discrepancies between the labour market and education

- In terms of education, universities and higher education institutions should foster the **inner capacity of healthcare workers to be powerful drivers for change by massively raising healthcare’s professionals awareness on climate change** and their role in its mitigation in their initial and continuing medical education.
- As **initial education programs for nurses** are already totally filled up today, it can be a solution to include short modules on climate change as part of continuing education.
- **For doctors, education on environment, prevention and climate change should be part of their continuing medical education (CME)**, ensuring they are equipped with the knowledge and tools to adopt environmentally responsible practices. Universities and higher education institutions should work closely on this with key stakeholders, such as healthcare institutions, professional associations representing nurses, caregivers, and physicians, trade unions, and other specialised organisations (e.g. the Order of Physician). This CME should also be made mandatory.
- **As a facilitating measure, healthcare institutions could organise themselves in networks.** This can help the sector to act around climate change issues by generating scale effects. For example, the Sustacare initiative of Zorgnet-Icuro in Flanders helps organisations to implement sustainable practices and focus on key areas of environmental impact, empowering institutions to reduce their carbon footprint.

3.3 Agriculture and food industry

The impact of the transition on labour demand in the **agriculture sector** will look very different depending on the transition scenario chosen. All the effects combined, result in a **small net job loss** in a low transformation scenario, whereas an intermediate or a high transformation scenario would lead to an **increase in labour demand of 50,000 to 100,000 workers by 2050** (see Figure 2). This increase implies going back to agriculture employment levels of the early 2000s.

Breaking down the total effect, the shift towards more **agroecological practices will lead to a high increase in labour demand of 35,000 to 70,000 additional workers**, given the labour-intensity of agroecology practices.

The **decrease in meat production** on the other hand **will lead to small job losses**, partially compensated by more extensive farming practices and smaller farms. Estimations show that the net job loss related to lower meat production might range from 4,000 to 4,800 jobs in agriculture.

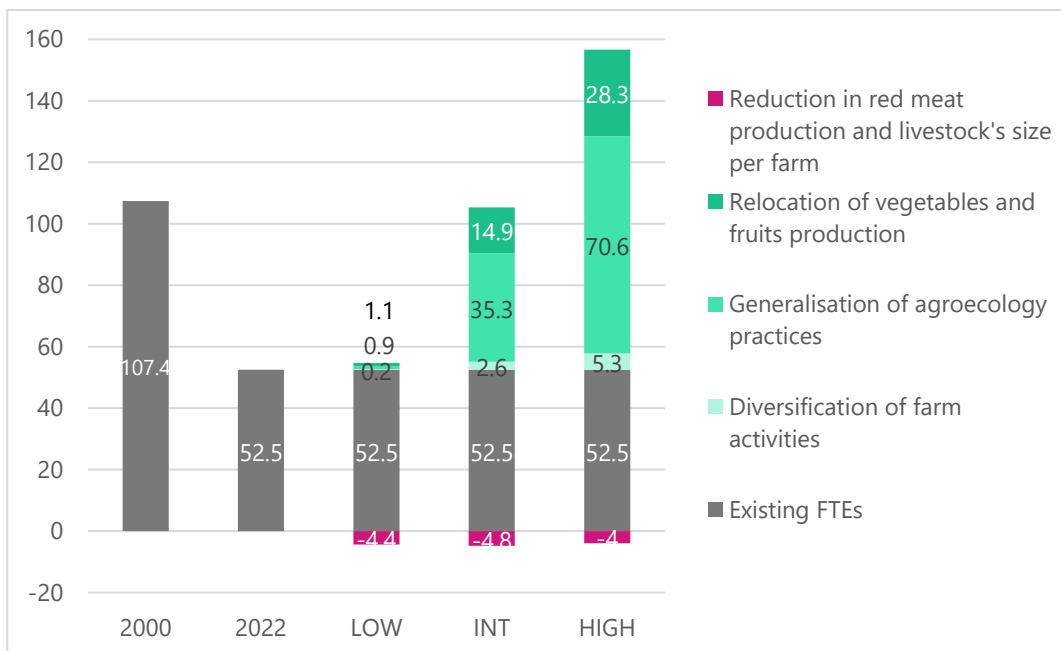
The **relocation of vegetables and fruit production will have a positive effect on labour demand in the agriculture sector**, ranging from 1,100 to 28,300 additional workers.

The **diversification of farm activities will have little to no effect on labour demand** but requires farmers to acquire commercial and processing skills.

Changes in agricultural practices and dietary changes will also have an impact on the **food industry**. A crucial element in these effects will be the potential changes in import and export of agricultural products. Supposing the import and export of agricultural products stays the same, reduced meat consumption would lead to a decrease between 0 and 11,000 jobs **in the food industry**.

Diet changes could lead to an increase of 7,000 to 17,000 additional workers in the food industry, especially in the bakery and farinaceous products manufacturing.

Figure 2: Potential impact of decarbonisation on jobs in the agricultural sector in 2050 (in FTEs)



Source: Climact & IDEA Consult (2025), The sectoral impacts of the climate transition: focus on activity, employment and training – Methodology, main learnings and considerations

Reorienting farmers from monoculture to more agroecological practices or from bovine to poultry farming implies **reskilling agricultural workers**, in combination with substantial investments. This comes with some challenges as the transmission of know-how in agriculture largely spreads **through familial and informal frameworks** instead of traditional trainings, which is pressured by the lack of successors for Belgian farmers.

Ultimately, these labour market changes come at a moment where the agricultural sector faces already difficult economic conditions and an insecure future. Therefore, regional administrations could define transition plans with a **long-term vision** and science-based targets. This would increase stability and help farmers to plan investments and necessary changes in production and practices. In addition, changes in the Common Agricultural Policy of the EU can help improve the economic conditions of farmers. Other climate-related instruments, such as a Carbon Border Adjustment Mechanism (CBAM) for agricultural products could have indirect positive impacts on European farmers⁸. Altogether, the climate transition can be a momentum to create a better income and future for farmers and their successors.

Policy considerations

Map – Identifying employment and training needs for the climate transition

- **For the agricultural sector to play its role in the climate transition, a long-term perspective should be developed that ensures its viability.** Crucial elements are fair wages, but also access to land and a long-term vision for the sector. This implies action from all stakeholders and authorities, including Belgian governments, the EU, sectoral organisations and the food industry.

Educate - Tackling the discrepancies between the labour market and education

- **Regional administrations should adapt the existing technical guidance to include farming model conversions** coherent with the transition targets. The current guidance is useful but focuses primarily on direct energy use and conversion to organic farming without addressing the production model itself.
- **Research institutes, agricultural chambers and unions should mobilise their advisory capacity by developing a network of independent technical advisors**, in order to guide farmers through the transition, offering expertise, and supporting diversification efforts. Regional administrations can help to institutionalise this collaboration.
- **Cooperatives and employer groupings** play a crucial role in sharing and pooling of resources, skills, and knowledge. These organisations foster collaboration across the value chain, from production to processing and sales, reducing costs and supporting sustainable, diversified business models. **Regional governments should facilitate and support these forms of organisation** and collaboration in the agricultural sector.

⁸ A CBAM on agricultural products should in any case be combined with a carbon price on agricultural products. The complexities of an agricultural CBAM are out of scope of this publication.

3.4 Education and training

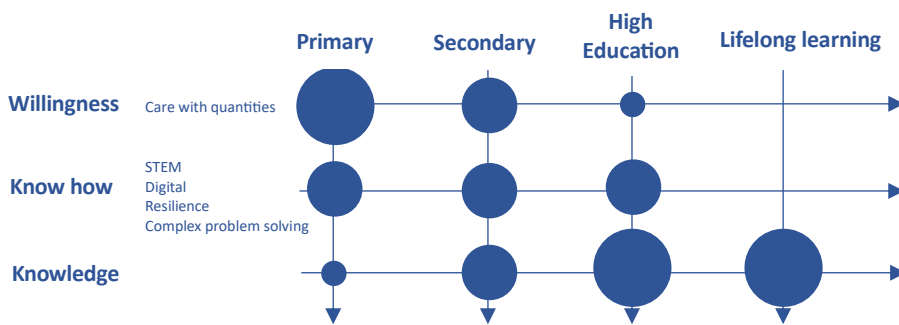
Competences in sustainability need to be developed throughout the different stages of education (Figure 3). In primary education, the focus should be on **'willingness'**, which implies mainly raising awareness and developing an understanding of the environmental challenges. As students progress, the focus shifts to **'know-how'**, including both STEM skills and transversal skills, such as critical thinking and problem solving. During higher education and lifelong learning, the focus is on **'knowledge'**, encompassing technical and practical skills needed for green skills and jobs. Throughout the initial education, teachers should inspire students to adopt a culture of continuous learning.

Current and future teachers will need substantial upskilling, linked to the relative importance of 'willingness', 'know-how' and 'knowledge'. All teachers need to develop more knowledge on the climate transition. Teachers in primary and secondary schools need to develop the ability to foster transversal competencies among their students, such as critical and system thinking. Teachers will need to work more on interdisciplinarity and learn how to ensure a critical learning approach by students. In higher education, teachers need to learn students to anticipate on how jobs and skills will change in the future.

Stakeholders emphasise the importance of lifelong learning as most of the 2030 workforce is already part of the workforce today. Trainers for lifelong learning courses must be ready to adapt their teaching to dynamic and uncertain contexts. They need to help trainees gain the expertise required for new professions or, when certain jobs disappear, support them in transitioning to entirely different fields.

This study does not give any quantitative estimation of the additional labour demand in education linked to the climate transition. However, given the current workforce shortage in the sector, **the lack of enough adequately trained teachers, both in initial education and lifelong learning, is a bottleneck in the transition.**

Figure 3: Competences in sustainability's potential degree of inclusion into educational programs



Source: Climact & IDEA Consult (2025), The sectoral impacts of the climate transition: focus on activity, employment and training – Methodology, main learnings and considerations

Policy considerations

Map – Identifying employment and training needs for the climate transition

- Establish a cohesive framework on climate education through the learning objectives on sustainability in primary and secondary education. Ensure that it provides clear guidance on how to include sustainability across curricula, whether through dedicated modules, interdisciplinary approaches or case studies and make it tailored to accommodate diverse educational contexts.

Educate - Tackling the discrepancies between the labour market and education

- **Education and climate administrations should centralise and coordinate sustainability initiatives and programs.** Efforts should be streamlined to ensure schools can focus on implementing impactful actions, also in terms of 'ecolabels' for schools. This approach ensures operational stability while encouraging the gradual acceptance of reforms, reducing the risk of resistance from already overloaded institutions.
- **Create regional support networks where information can be centralised and spread**, such as the KlasCement platform.
- **Policymakers must provide clear guidance to institutions** such as the *Institut de la Formation en cours de Carrière* (IFCS), school networks, and school administrations to integrate these themes into lifelong learning. The annual training days of teachers should include modules on 'willingness', 'know-how' and 'knowledge' for the climate transition.
- **Training institutions should offer more diverse teacher trainings.** For example, to overcome time constraints, shorter trainings can be offered through targeted workshops to address specific sustainability-related topics or through Massive Open Online Courses (MOOCs) and online platforms, ensuring teachers are equipped to effectively integrate sustainability into their teaching practices.
- **Finally, schools could appoint a sustainability coordinator**, one for every primary and secondary school, replicating the Federation Wallonia-Brussels model in higher education. This role should focus on centralising climate-related initiatives, mobilising resources, and providing continuous support to teachers and administrators.

3.5 Research and development sector

For the R&D sector, it is impossible to identify the number of jobs linked to climate change related R&D. Therefore, only a qualitative analysis of the labour demand was conducted. **In general, an increase in the number of researchers is expected**, both in technological R&D as well as human and social sciences. The additional labour demand will be a combination of master's degree profiles, PhD profiles and support personnel.

The R&D sector competes with other sectors for STEM skills, which are already in shortage. In addition, supportive R&D personnel may require upskilling to better support the regulatory and financial challenges. To address the underuse of digital tools in the sector, IT skills must be better developed or additional workers with IT skills must be attracted to the sector.

Policy considerations

Map – Identifying employment and training needs for the climate transition

- The study did not manage to develop policy considerations in terms of employment and skills. In general, we noticed a lack of data to analyse the effectiveness of R&D investments in terms of environment and climate. Better tools and methodologies to analyse the contribution of the R&D sector to the decarbonisation efforts would be helpful.
- **Additionally, the federal government should leverage the existing tax incentives to promote sustainability-focused R&D** and increase the attractiveness of research jobs, in terms of long-term employment. Moreover, **sustainable procurement** can help to create a market for some newly developed sustainable products.

3.6 Circular economy sector

In 2024, **circular economy** activities generated 45,000 direct jobs and 248,000 indirect jobs (Circular Jobs Monitor)⁹ or 8,4% of all jobs in Belgium. The number of circular jobs increased by 2,66 between 2019 and 2024 and labour demand will continue to rise, yet slower compared to last years' trend.

The climate transition is expected to strengthen this upwards trend, with disparities between activities and subsectors. For all sectors, jobs should mostly be created at the top of the Lansink scale (reuse/repair), as these jobs can hardly be delocalised. For circular jobs within the transport sector both upward (bike mechanics) and downward (car mechanics) trends are being observed (see also section 3.1). For industry, material demand reduction would lead to a reduction in labour demand. While renovation activities for reasons of energy efficiency and climate change are expected to have a positive impact on labour demand, circular economy is not expected to significantly change the labour volume dynamics for the construction sector (FPS, 2023). Productivity gains due to new practices could lead to job losses that could be offset by the development of new direct jobs, such as “valorist”¹⁰ and “inventorist”¹¹. It would be interesting to further assess indirect job creation, especially for the logistics sector that has a key role to play when it comes to the creation of material banks, warehousing, etc.

Jobs losses due to circular economy will mainly occur in fossil-fuel and material-extraction industries (FPS Health, 2023). However, job evolutions within the fossil fuel industry are well documented and the circular economy is not an important evolution driver. In addition, material-extraction industries are not very present in Belgium.

⁹ See <https://www.circular-jobs.world>

¹⁰ People responsible to valorise for reuse or repurpose what would have been waste otherwise

¹¹ People responsible to inventory materials that can be reused on a demolition site

Policy considerations

Attract – Job quality and attractiveness

- Working and wage conditions in sectors that face challenges in attracting workers, such as repair services, must be improved.

Educate - Tackling the discrepancies between the labour market and education

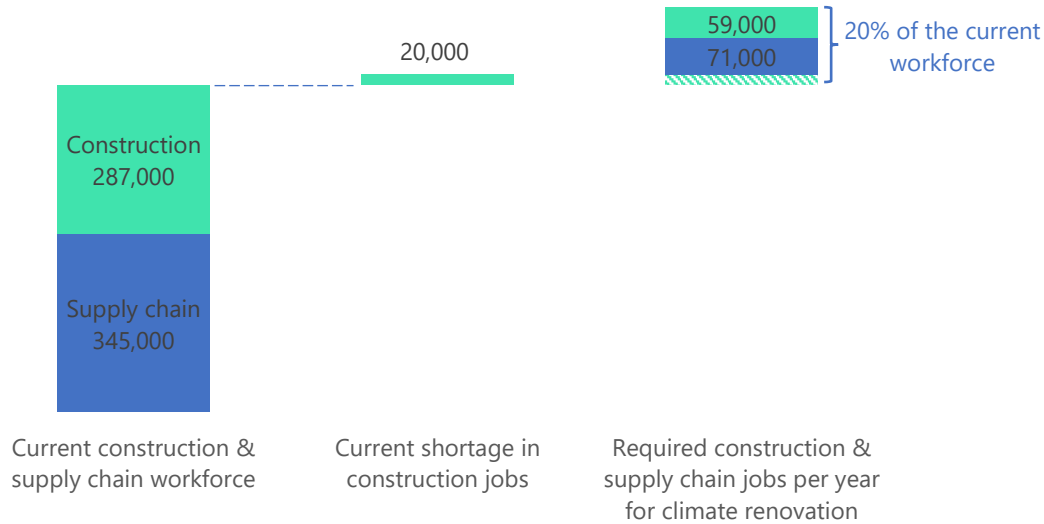
- **Sector-specific experts and educators should develop curriculum frameworks and training programs that are tailored to the needs of the circular economy**, e.g. through sector-specific working groups. Initial education institutions should work on updating curricula across all education levels but specifically for architects, engineers, designers, and technicians to integrate circular economy concepts such as life-cycle analysis, eco-design, and sustainable materials, thereby ensuring that future workers are equipped with the necessary skills from the outset.
- In addition, education institutions must integrate circular economy principles (e.g. through specialised modules or certification programmes) into **non-technical training programmes, such as law, marketing, and finance** to provide them with the knowledge to advise businesses on circular economy practices and policies and ensure that professionals in support roles understand the operational aspects of a circular economy.
- Training institutions and sectoral federations have a role to play in **formalising emerging circular economy roles** (such as waste recovery specialists) and creating dedicated training pathways for these positions, ensuring to integrate them into formal education, career progression systems and associated recognised certification. Additionally, they could offer specialised, continuous professional development programs for existing roles such as repair technicians to ensure that they stay up-to-date with new technologies and product designs.
- The federal government could increase its support for on-the-job training programmes, for instance through subsidies or tax or parafiscal incentives for companies that offer practical, hands-on training in circular economy related fields. In addition, it could implement a tax shift, from labour to extraction, to increase the competitiveness of reclaimed materials over virgin resources while lowering labour taxation (Mossay & Peters, 2024).

3.7 Construction sector

The **construction sector** was analysed in the previous report of the FPS Health (2023). That analysis showed that 130,000 additional jobs will be needed for the period up to 2050 to renovate the Belgian building stock (Figure 4). 59,000 of these jobs are in the construction sector itself, which represents 20% of the current construction workforce. The other 79,000 jobs will be needed in the supply chain of the construction sector. However, the construction sector has currently already a workforce shortage of 20,000 people, mainly due to insufficient training, hard work and low salary.

The additional labour demand is crucial to provide in the fast renovation of the building stock towards 2050. To avoid significant job losses after this peak demand, a reconversion and reskilling plan should be available to these workers.

Figure 4: Potential impact of climate renovation of buildings on direct and indirect jobs in the construction sector in 2050



Source: FPS Health, 2023

Policy considerations

Map – Identifying employment and training needs for the climate transition

- Regional governments should increase marketing and incentives for trainings and make sure reconversion trainings are available and promoted post 2050, after the renovation peak.

Attract – Job quality and attractiveness

- While building renovation in the context of the transition will create additional jobs, policies to safeguard decent working conditions in the **construction sector** such as controls, social inspections, and strict social criteria in public tenders should be reinforced to increase the sector’s attractiveness and tackle existing and future labour shortages.

Educate - Tackling the discrepancies between the labour market and education

- Initial education institutions should urgently update the curriculum for construction profiles**, so that climate renovation skills and knowledge are included. Promoting work-study training and extending the Individual Professional Training from maximum six months to two years, can help to include climate renovation skills and quickly make these workers available on the labour market.
- Additionally, to accelerate the upskilling of workers currently in the workforce, training institutions should **improve the offer of short, affordable, practical on-site trainings**. For **small businesses** to overcome resource barriers to training, training subsidies could be linked to company size and temporary unemployment could be combined with a climate renovation reskilling or upskilling training. A climate renovation certificate could give an additional incentive to reskill or upskill.
- Finally, to tackle the shortage of construction trainers, a special trainer status for end-of-career workers** should be created.



Health
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