

**European Employment Observatory**

**EEO Review: The Employment Dimension of Economy  
Greening**

**Lithuania**

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## **1. Introduction**

In recent years, there has been a growing discussion in Lithuania on climate change and its present and future impact on environment and rational use of natural resources, energy, industry, transport, healthcare and agriculture. Considerations based on research, SWOT analysis and/or ongoing monitoring results have been presented in development programmes for relevant economic sectors, for example, in the Programme for the Financing of Modernisation of Multi-flat Buildings [1], Programme for the Promotion of Production and Use of Biofuels for 2004–2010 [2], National Energy Efficiency Improvement Programme [3], National Strategic Waste Management Plan [4] and others. In addition, substantial attention is paid to the problems of climate change in such “umbrella” strategic documents as, for example, the Sustainable Development Strategy [6], National Lisbon Strategy Implementation Programme [7, 8]. However, potential changes in employment and its structure relating to climate change or its impact on certain economic sectors actually have not been assessed or analysed. Some information on the existing or potential shortage of certain professionals could be found in SWOT analyses, but information of this type is quite sparse and usually not based on any research.

So far, there have been no surveys conducted in Lithuania to analyse the effects of climate change on employment. Lithuanian government has not yet formulated a clear concept or idea/vision of the effects of climate change on employment as well. Even less is known about measuring of such effects, methods of estimating the impact of the effects on employment structure, changes in professions and qualifications.

Moreover, with regard to general public opinion on climate change, the problem of climate change, under the current difficult economic conditions, is seen to be pushed aside. It is also relatively little addressed by the social partners.

## **2. Labour market outcomes**

The study for the evaluation of climate change effects on national ecosystems, bio-diversity, water resources, agriculture, forestry and human health [9], conducted by the Institute of Ecology of the Vilnius University by request of the Ministry of Environment in 2007, states that “forecasts of climate-change effects are hardly imaginable without detail research. To this effect, it is worth noting that specific studies have been insufficient and underfinanced in Lithuania so far”. The above-mentioned study used basic findings of research conducted and material published in Lithuania as well as other data for the evaluation of climate-change effects, projecting likely scope of such effects, identifying problematic areas that are the most sensitive to climate change and developing a strategic plan for mitigation of consequences of climate-change effects. Evaluations and conclusive findings of the study have been used in a number of strategic and programme documents.

The National Strategy for the Implementation of the United Nations Framework Convention on Climate Change (UNFCCC) by 2012 [10] is one of the most consistent documents addressing all aspects of climate change. It summarises the existing scientific information on the Lithuanian nature and economy, contains a strategic analysis of economic, social and regional development in Lithuania, presents information on Lithuanian climate variations and their forecasts in the context of global climate changes, and identifies strengths, weaknesses, opportunities and threats in various economic sectors related to climate-change problems. The aspect of employment is only fragmentary addressed in this document. For example, the strategy states that “there is an increasing opportunity for the implementation of state-of-the-art technologies and exchange of professionals”, “there is an opportunity for training and qualification improvement of professionals in other countries”, and that the “energy crop production for energy purposes will contribute to better employment of rural population”.

On the other hand, though listing new threats for human health (increasing threat of communicable diseases and epidemics; weakening of immune system; more complicated prevention and treatment of allergies), the strategy does not at all mention the increasing need for medical staff or certain medical qualifications in future. The strategy implementation action plan provides for the development of research and technologies intended to measure and mitigate the consequences of climate change. It is therefore quite probable that findings of research conducted by 2012 will give a better view of likely consequences of climate change on certain economic sectors and, at the same time, enable better assessment of the need for employees and qualifications.

Despite the fact that under conditions of the present economic recession the government has limited financial capacity to fund structural reforms, the Programme of the Government of the Republic of Lithuania [14] outlines the following major tasks in the energy sector in 2009 - energy saving and increasing energy efficiency, development of renewable and local energy sources, integration of Lithuanian energy systems into EU systems. The Progress Report on the Lithuanian National Lisbon Strategy Implementation Programme (2009) also notes that energy saving, more efficient use of the available energy resources and the scope of contract works necessary for the renovation of public buildings are of particular relevance under conditions of the current difficult economic situation. As a result, implementation of measures intended for the energy sector is accelerated in order to mitigate the effects of the economic downturn. In addition, efforts are taken to implement all the approved investment projects on the modernisation of multi-apartment buildings in 2009 and create additional financial measures to start the implementation of large-scale modernisation of multi-apartment and other buildings. These measures are believed to maintain, at least to a certain extent, jobs in the construction sector and, at the same time, to promote the need for new (in qualitative terms) qualifications in the construction sector and other related sectors.

The above-described government's efforts are in conformity to the goals of the European 20-20-20 initiative. This initiative and Decision No. 406/2009/EC of the European Parliament and of the Council of 23 April 2009 on the effort of Member States to reduce their greenhouse gas emissions are directly linked to the Law of the Republic of Lithuania on Financial Instruments for the Management of Climate Change, adopted by the Parliament (*Seimas*) of the Republic of Lithuania on 7 July 2009. The Law defines the rights, duties and responsibilities of entities whose economic activities cause greenhouse gas emissions as well as the competencies of public authorities and agencies. The Law obligates the Government to submit a National Strategy for Climate Change Management Policies for the Parliament's approval by 1 September 2012. The aforementioned strategy should cover the following areas of general government: environment and rational use of natural resources, taxes and finance, science, industry, health care, education and public information, international cooperation, transport, internal affairs, and agriculture. Preparation of the strategy is supposed to include, *inter alia*, the need for required qualifications and likely structural changes in employment. So far, it is quite difficult to give any estimates to this effect.

The National Energy Efficiency Improvement Programme (NEEIP) for 2006–2010 also mentions changes in labour force in a very vague form. For example, it states that “labour force is psychologically adapted to the requirements of market economy better than before”, and that “one of the opportunities for improving energy efficiency is matching support to the development of the use of modern energy sources with support to regional industry through creation of new jobs, promotion of regional development”.

Unfortunately, it should be noted that such general statements are based on intuition rather than on specific studies. It is therefore natural that NEEIP implementation policies include such measures as to carry out expert analysis of the quality of training of energy professionals by the fields of energy studies and to identify regional and structural need for training professionals in the field of utilisation of energy resources, design, operation and maintenance of power consuming installations and systems. However, these measures have not yet been implemented.

Within the context of climate change and efficient energy use, increasing attention is paid to the problems of waste handling. The National Strategic Waste Management Plan (NSWMP) singles out two aspects: waste should be managed so as to not cause any danger to human health and environment; and rationally use material and energy resources. Accordingly, the NSWMP envisages the tasks to improve the qualifications of dangerous waste handling operators and to improve the qualifications of professionals of regional environmental departments and public environmental control officers. The NSWMP implementation action plan for 2007–2013 envisages actions to define requirements for training programmes designed for hazardous/dangerous waste managers and operators willing to obtain qualification certificates; to update, on a regular basis and according to the need, qualification improvement programmes for the

professionals of regional environmental departments and public environmental control officers.

A new version of the National Sustainable Development Strategy defines the following Lithuania's development priorities (which include provisions for implementation of the UNFCCC and Kyoto Protocol):

- reduction of environmental impact caused by main economic sectors (transport energy, agriculture, housing, tourism);
- more efficient utilisation of natural resources and waste handling;
- mitigation of global climate change and its consequences;
- protection of bio-varieties;
- reduction of unemployment, poverty and social exclusion.

The principle of integration is one of the key strategy implementation principles. Application of this principle should promote the integrity of economic, social and environmental efforts. This provision raises hopes of climate-change effects on employment being properly analysed and evaluated within the framework of the strategy implementation. The strategy itself contains only a few statements addressing, to a certain extent, the relation between climate change and employment. For example, it states that “local authorities lack skilled employees and funds for more efficient planning of waste management, ensuring of maintenance and control of municipal waste handling systems”; “all energy sectors employ highly-skilled professionals. The training and qualification improvement system for these professionals has been meeting the national needs, while Lithuanian universities and education establishments have been capable of training highly-skilled professionals”; “development of more profitable crop production and non-traditional rural business in addition to traditional ones will improve competitiveness of smaller farms and ensure more favourable economic, social and cultural development of rural regions”.

The Research and development programme for agriculture, food sector and rural development in 2007-2013 [13], among other key research trends, mentions the development of energy-saving and cost-effective technologies for growing plants and livestock, complex research of ecologically clean food raw materials and environmental quality, studies on the search and utilisation of plant biomass and other renewable energy sources for bio-energy, economic research of various farming models, studies of the development of rural residential areas and quality of life.

This gives grounds to believe that employment of rural residents in non-traditional rural business should grow in future, but it is very important to better define the qualifications lacking in rural areas and in the country in general, and to properly prepare for the need to improve such qualifications.

The Lithuanian Strategy for the use of European Union Structural Assistance for 2007-

2013 [11] lists the improvement of energy efficiency, promotion of renewable energy resources, waste management and land afforestation among other prioritised funding trends. This is expected to promote employment increase in these areas.

In general, climate-change effects in Lithuania are mainly related to energy, waste management and agricultural sectors, and, to a somewhat lower extent, the construction sector. Implementation of high-tech, state-of-the-art and eco-friendly technologies is supposed to create conditions for better labour productivity and production growth, without increasing negative effects on environment. Presumably, climate change will have a higher impact on coastal regions of the country (the Curonian lagoon, continental coast of the Baltic Sea, delta of the Nemunas River and the region of Nemunas Middle-Course-Basin).

To summarise, the effects of climate change on employment, its level and structure as well as creation of new jobs, loss of certain currently existing jobs in relation to the greening of the economy and the quality of jobs have not been explored in essence in Lithuania. Specific studies and modelling required for these purposes have not been conducted. The situation is expected to change in future, as insights are necessary in order to ensure supply of adequately qualified labour force and training of required labour force/qualifications.

### **3. Review of labour market policy developments**

#### ***3.1. Forecasting labour market changes***

The Lithuanian Labour Exchange (Public Employment Services) conducts monitoring of the labour market in Lithuania which, inter alia, includes the evaluation of labour market situation and forecasts of anticipated changes in the labour market. The purpose of forecasting labour force employment is to plan activities of labour exchanges, to seek the match between labour supply and demand and to assess the need for labour market vocational training. The basis of labour force forecasts is employers' interviews conducted in territorial labour exchanges in September-October (every year). The forecasts are preceded by the analysis of economic and demographic indicators, which show general developments in the labour market. A random selection method is used to select employers who are interviewed, using a standardised questionnaire. Based on the obtained data, territorial labour exchanges produce next year's labour force employment forecasts and job opportunity barometer in the territories they cover. The Lithuanian Labour Exchange summarises the results received from the territorial labour exchanges and produces the national forecast and job opportunity barometer in December. Unfortunately, effects of climate change on employment are not reflected in these studies.

There were two projects of national importance implemented in Lithuania in 2008, funded from the European Social Fund (ESF). The projects were designed to create instruments to forecast the qualifications demand. One of them, a methodology to identify "future skills", as developed by the Methodical Centre for Vocational

Education and Training, is applicable to various economic sectors. It expects that monitoring of skills, if conducted according to an exhaustive list, would enable the identification of economic sectors with skills shortages. The project report [19] recommends conducting such assessments every year in order to identify the existing and future problems relating to employees' qualification and study/training needs. The methodology does not directly analyse potential climate-change effects on economic sectors and employees' skills, and these effects are not mentioned among factors impacting on the labour market. Such effects can be indirectly (hypothetically) reflected through such indicators as the share of innovatory enterprises in the total number of enterprises and their average change per year and the product/process innovators and their average change per year.

Another project conducted in 2008 was aimed at the development of medium-term forecasting methodology for skills demand in the Lithuanian labour market and producing forecasts of skills demand in individual economic sectors [21]. In the methodology, the forecast of skills demand is expressed as quantitative demand for labour force by professions (main groups/main subgroups/largest profession groups by the number of employees) with a certain education level in particular economic sectors. Following the logical structure of the model, there are three key variables used to develop different forecast scenarios for skills demand: GDP growth trend, productivity change and emigration trends. Three possible scenarios of economic development in 2008-2012 have been identified on the basis of the above-mentioned variables. These scenarios are used as a basis for modelling three alternative forecasts of skills demand. As compared to the CEDEFOP study [12], this nationally developed forecasting methodology for skills demand in the Lithuanian labour market enables generation of more detail and extensive results. Unfortunately, the methodology does not analyse climate change as a factor impacting on the labour market. This methodology was not used after 2008 due to the shortage of funds.

### ***3.2. Active labour market policy measures***

Considering all active labour market policy measures, public works would most contribute to the reduction of climate-change effects. Public works is one of the most popular direct methods of job creation by the state. Public works are organised to carry out temporary works useful for the society and/or local community. They mostly include planting of greenery, handling of territories, bridges and roads, etc. Public works can be organised to renew forests, to ensure their maintenance and protection (reconstruction of nursery gardens, supplementation of green plantations, formation of saplings, laying out forest roads, installation of fire barriers, recreation sites, timber storages, etc.).

The scope of public works measure was expanded during the period of economic crisis. The new Law on Support for Employment (LSE) creates conditions for the organisation of public works in enterprises undergoing economic difficulties (such as layoffs, interrupted sales of production). Public works help part-time employees and those

exposed to forced layoffs to undertake public works at their workplace and thus recover some earnings lost. Employees can take care of the territories of enterprises, do greenery planting and minor repair works as well as other works improving the welfare of the enterprise. As public works can be organised by enterprises, agencies, organisations or other organisational structures, irrespective of their form of ownership, as well as by registered farmers' holdings and agricultural companies, there can be a great variety of public works. Public works can be undoubtedly related to partial technological reorganisation of a company, as for example, installation of a new energy saving system, modern waste treatment facility. The state provides a weighty financial support for the organisation of public works. On 21 October 2009 a three-year ESF-funded Temporary Works Project was launched. The project is to involve about 13 000 people and spend LTL 42.5 million (EUR 12.3 million) of the ESF funds. The project implementation is planned in 46 territorial labour exchanges.

A wider spread of greener labour market policies in Lithuania is hampered by an insufficient understanding of the problem, the lack of information and practice. A bigger role should be given to vocational training organised for unemployed individuals and those on redundancy notices. This is of particular relevance during the period of crisis, when the new version of the LSE allows combining part-time work and training. Territorial labour exchanges should take into more account the internal restructuring processes taking place in enterprises, and hold, where necessary, consultation on the better use of personnel training opportunities, attracting ESF support for this purposes, and organise more flexible the procurement of training services.

As it was noted in the ELECTRA communication adopted by the European Commission [16], the future competitiveness of the engineering sector (including energy) and its ability to provide technologies relevant to the EU's climate change objectives will depend largely on how the crisis affects its existing workforce. In the nearest future, it is necessary to set up training schemes to ensure that workers' skills are not lost in the economic crisis, but upgraded in anticipation of economic recovery. The challenge for the industry, other social partners, national authorities, particularly employment authorities, education and training systems, preferably in cooperation, is to ensure a supply of highly qualified and well-educated workers with the right combination of theoretical and practical skills.

#### **4. Conclusions**

To summarise, potential climate change effects on employment have not been researched in Lithuania and it has not yet formulated a clear concept of the effects of climate change on employment. Even less is known how to measure such effects, and how to estimate the impact of the effects on employment structure, changes in professions and qualifications. Though strategic and programme documents addressing the climate change problems contain some statements concerning the existing or anticipated shortage of certain professionals and competencies, these documents are usually not based on arguments, figures and research findings. In the context of

analysing the effects of climate change on employment, socio-economic and environmental development in general, it is extremely important for Lithuania to strengthen interdepartmental co-operation and analyse the problems at issue as a complex phenomenon.

As for the assessment of the effects of climate change and related policies/initiatives on employment, the co-operation of all stakeholders in the environmental and employment areas is of high importance. Agencies responsible for the environmental protection are currently little aware of any employment-related problems. They have actually never performed (and will not perform in future) any assessments of effects on employment. On the other hand, employment policy professionals have insufficient knowledge of problems relating to the environment, and climate change. Therefore, the only way forward is to develop in co-operation models integrating both environment and employment problems. As a matter of fact, such co-operation has not been observed in Lithuania so far and it is not clear which authority would be responsible for taking forward such co-operation.

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