



Skills anticipation: Green skills for sustainable development

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*REVERSED PEER LEARNING ACTIVITY: LEARNING & TEACHING IN PROFESSIONAL HIGHER EDUCATION (PHE)
Warsaw, 8 March 2019*



“This project has been funded with support from the European Commission. This publication [communication] reflects the views only of the author, and the Commission cannot be held responsible for any use which may be made of the information contained therein”



Skills Anticipation



CEDEFOP

European Centre
for the Development
of Vocational Training

BRIEFING NOTE

SKILLS ANTICIPATION: LOOKING TO THE FUTURE

Skills anticipation can be a powerful policy tool
for decision-making

Things change. It would be helpful to know how the labour market will be transformed by technology, climate change and demography. Individuals would benefit greatly from knowing what type of education and training to follow; enterprises would know the skills they need; and policy-makers could adapt education and training systems to new skill needs.

signal current and possible future skill mismatches and inform decisions on how to address them.

Cedefop's overviews of skills anticipation highlight that all Member States (box) are establishing new and/or expanding existing skills anticipation activities and strengthening their use in policy-making.



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Blueprint for sectoral cooperation on skills

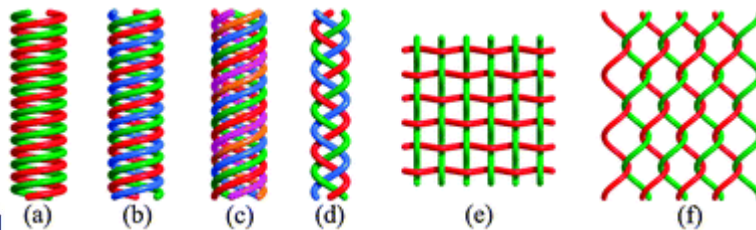
- Responding to skills mismatches at sectoral level
- A key action of the New Skills Agenda for Europe
- 6 pilot sectors:
 - automotive
 - defence
 - maritime technology
 - space (geo-information)
 - textile, clothing, footwear
 - tourism
- **Three steps to match skills to sectors' needs**
 - 1. Is the sector ready for an EU-wide partnership on skills?**
 - 2. Launching sustainable sectoral partnerships**
 - 3. Roll-out at national and regional level**





N-tuple Helices: From 3 to ∞

- Triple Helix:
University + Industry + Government
- Quadruple Helix
...+ Public/Civil Society
- **Quintuple Helix**
...+ **Ecology/Natural Environment**



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Green Skills

Technical skills, knowledge, values and attitudes needed in the workforce to develop and support sustainable social, economic and environmental outcomes in business, industry and the community.



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Green/Sustainability Knowledge and Skills Statements (USA)

- Three levels:
 - All Career Clusters
 - Specific Career Clusters
 - e.g. Agriculture, Food and Natural Resources
 - Pathways
 - e.g. Food Products and Processing Systems Pathway
- Green/Sustainability Standards
 - Knowledge and Skills Statement
 - Performance Elements
 - Sample Indicators





Green/Sustainability Standard (example)

Define the following key terms and explain their relationship to one another:

- Green
- Green job
- Sustainability
- Sustainable development

1. State the definitions of each term:

Green: The term —greenll has been loosely applied to any effort, product or initiative that proposes to benefit the environment. The term is not scientific and there is little consensus about what activities can qualify as „green“ and which cannot.

1a. When presented with a term, provide the correct definition.

1b. Share the definition of sustainability and sustainable development in a presentation.

2a. Identify distinctions between the four key terms.

2b. Write a company memo explaining the company approach to sustainability.

3a. Identify examples of sustainability initiatives by organizations within a career pathway of interest.

3b. Prepare a report that describes the sustainability efforts





Green Skills Agreement (AUS)

The Agreement will deliver the following outcomes:

- excellence in skills for sustainability practice and training
- **stronger collaboration and coordination between governments, employer and employee representatives, the VET sector, universities and community organisations to improve integration and leveraging of effort**
- VET practitioners skilled in the effective delivery of skills for sustainability
- graduates and learners understand and promote business practices and innovation that support the transition to a sustainable, low-carbon economy
- increased business and community awareness of the VET sector's capacity to support Australia's transition to a sustainable, low-carbon future by delivering the required skills and sharing knowledge about sustainable ways of working
- improved linkages and collaboration across schools, VET and higher education to ensure an integrated sustainability pathway for learners and trainees and to support careers and jobs pathways for the Australian workforce
- clear pathways and supportive networks for vulnerable workers and communities to re-skill and to participate in the opportunities created by a low-carbon economy
- **upskilling or re-skilling of the existing workforce in skills for sustainability.**



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Task for us: Environmental awareness and education

- Environmental awareness:
 - Research on skills anticipation
 - Research on environmental attitudes amongst various groups
- Environmental education:
 - Tailor-made courses
 - For different target groups
 - „Common denominators”





ERASMUS+ Capacity Building Structural Project
574056-EPP-1-2016-1-PL-EPPKA2-CBHE-SP

**LIFELONG LEARNING FOR SUSTAINABLE
DEVELOPMENT
(SUSDEV)**



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SUSDEV Partners

(AT, IE, KZ, PL, PT, RU, SE)

European Union Partners

- Warsaw University of Life Sciences (SGGW-WULS)
- Jagiellonian University in Krakow (JU)
- University of Natural Resources and Life Sciences (BOKU)
- Coimbra Polytechnic Institute (IPC)
- Dublin Institute of Technology (DIT)
- Royal Institute of Technology (KTH)
- Association for European Life Science Universities (ICA)

Russian Federation Partners

- Saratov State Agrarian University (SSAU)
- Moscow State University of Food Production (MSUFP)
- Omsk State Technical University (OSTU)
- Moscow State University of Geodesy and Cartography (MIIGAİK)
- State University of Land Use Planning (SULUP)
- Tula State University (TSU)
- Russian State Agrarian University - Moscow Timiryazev Agricultural Academy (RSAU-MTAA)
- Ministry of Education and Science of the Russian Federation (MESRF)
- Siberian Federal University Krasnoyarsk (SibFU)
- Agrotex Semena Saratov (AS)

Republic of Kazakhstan Partners

- Ministry of Education and Science of the Republic of Kazakhstan (MESK)
- Taraz State University (TarSU)
- Seifullin Kazakh Agrotechnical University (KazATU)
- Kazakh National Agrarian University (KazNAU)
- Atyrau State University (ASU)
- West Kazakhstan Agrarian-Technical University - Uralsk (WKATU)
- Kostanay State University (KSU)
- Coalition for Green Economy (ALE)
- KZ Agency of Applied Ecology (KAPE)



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SUSDEV Objectives

Wider Objective

- Enhancement of the role of Higher Education Institutions in ensuring sustainable development of industry and society, support of national “green policies” in Partner Countries and promotion of "green culture" by means of Lifelong Learning

Specific Project Objectives

- Development of modules to foster green skills for different target groups and qualifications levels
- Enhancement of access of target groups to open education resources, promotion of LLL
- Enhancement of green culture and continuing education through training of teaching staff, external stakeholders and public administration





Project's characteristic features

- **Green skills** are promoted among **different types of learners** through **lifelong learning** channels and using new IT possibilities for **three complementary subject areas conditioning better quality of life (ecology, food sciences and land management)**.
- A **systemic approach** based on "**complex adaptive systems**" methodology is used. It gives theoretical framework for designing, testing and putting into motion "**self-organization**" mechanisms within the consortium and support **feedback loops** between the project and its environment.





Project Results

- **Reports** on "green policies and practices" in European Union and in Partner Countries
- **Green Open Education Resources (GOER) Repository and Network**
- **Green Training Centers (GTC)** in Partner Countries
- **Green Training Modules (GTM)** for Ecology, Food Sector and Land Management
- **Regional Centres of Expertise (RCE)** applications submitted to the United Nations University, Tokyo





Web page:

<http://www.susdev.confer.uj.edu.pl/start>

The screenshot shows a web browser window displaying the SusDev website. The browser's address bar shows the URL www.susdev.confer.uj.edu.pl/start. The website has a blue header with the SusDev logo (Universytetu Jagiellońskiego) and a 'logowanie' button. Below the header is a navigation menu with links for 'About project', 'Partners', 'Chronicle', 'Results', 'Resources', and 'Contact'. The main content area features the SusDev logo on the left and the text 'GREEN SKILLS FOR SUSTAINABLE DEVELOPMENT' on the right, accompanied by the Erasmus+ logo. A sidebar on the left contains a navigation menu with links for 'About project', 'Partners', 'Chronicle', 'Results', 'Resources', and 'Contact'. The main content area also includes a 'Project' section with the following details: **Title: Lifelong Learning for Sustainable Development (SUSDEV)**, **Number: 574056-EPP-1-2016-PL-EPPKA2-CBHE-SP**, **Programme: ERASMUS +**, **Duration: 36 months (2016 - 2019)**, and **Project Budget: 712 683,00 EUR**. The footer contains copyright information: '© 2010-2017 Uniwersytet Jagielloński, Polityka obsługi ciasteczek' and links for 'Redakcja strony', 'mapa serwisu', and 'kontakt'.



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Skills Anticipation & Green Skills Issues: A Topic for Future Joint Ventures?



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