

## List of skills D.15

### PURPOSE OF THIS TASK:

*The aim of this task was to study the labour force in the construction sector assessing the skills, abilities and technical and/or personal reasons that prevent workers finding new jobs in their professional field in order to detect the work and training factors that make it impossible for construction sector professionals to get jobs that require new jobs and skills.*

*The second aim was to diagnose the professional situation of construction personnel based on new competitive market demands and criteria of equal opportunities.*

*Surveys were conducted in five countries: Spain, Poland, Lithuania, Denmark, and Cyprus. Ten employed and ten unemployed participants took part in each research. Some general findings and outcomes were presented below.*

## QUESTIONNAIRES RESULTS IN EACH COUNTRY

### Country: Spain

#### Responsible partner: PATER, IVE, FEVEC

In Spain the survey was conducted with 20 participants, including 10 workers and 10 unemployed persons, with male respondents prevailing over female ones by 70% to 30%. The majority of the respondents were adults, aged from 40-60 (75%).

Practically all respondents consider that they are prepared in terms of training and experience, and that these are not the main reasons for unemployment.

Both groups are convinced that training influences achieving or maintaining employment so are therefore extremely willing to train in the sector.

Although both groups feel that they are prepared to work in sustainable/green construction, the rating is higher in the group with less training.

All participants agree that ongoing training and information on their job are priority issues.

The rating in terms of equal opportunities is low, but high in terms of equal ability to work in the sector. The higher rating in the latter comes from the qualified personnel group.

The rating is higher than the average in most items related to this factor, meaning that they agree with the need for training.

#### **LEVEL OF PREPARATION AND INTEREST**

**Photovoltaic Energy** - 85% of those surveyed feel that they have a low level of preparation and around 90% are very interested in this speciality even though it requires training.

**Renewable Energies** - In this speciality just 25% of the participants say they have a good or very good level of preparation, therefore 75% would need to improve their preparation. Meanwhile, the level of interest in the speciality is around 95%.

**Hydropower** - For this speciality 90% of those surveyed admit they have little or no preparation. Only 10% say they have any notion, but the level of interest in working in this speciality is 84%.

**Passive home device programmer** - 30% of participants say they have some notion or a certain level of preparation in this speciality, while 68% would be interested in working in this sector.

**LEED accreditation auditor/evaluator** - 25% of participants say they have a certain level of preparation in this field and 90% would be interested in working in it.

**Air conditioning systems** - In this speciality 50% of those surveyed have a good level of preparation and around 85% say they are very interested in working in this area.

**Others** - Just 20% of the participants say they have trained in a speciality other than those mentioned although they would all be very interested in working in these areas.

#### **Country: Lithuania**

#### **Responsible partner: VSRC**

In Lithuania the survey was performed with 20 participants, including 10 workers and 10 unemployed persons, with male respondents prevailing over female ones by 85% to 15%. The majority of the respondents were young people, up to the age of 30 (75%).

More than a half of the respondents have the background of vocational education and training, 50% of them being graduates from technical schools of construction. The trainings they attended belong to common construction trades (e.g., bricklaying, painting, finishing) that lead to gaining general construction skills and competences.

A great majority of participants agree that training plays important role in the achievement and maintenance of employment. The respondents feel rather prepared to work in green building. They try to learn the new things in their occupation and show interest in following the new developments in their professions due to new technologies.

Half of the respondents believe that men and women have the same opportunities at a workplace and they have the same have the same abilities to work in the construction sector.

The majority of the respondents admitted that they need more training to get a job or to improve the one they have. They are well-aware of the new job opportunities emerging within their working sector and they have information about it.

The respondents do not feel being well-prepared in any of the proposed specialties or professions. Nevertheless, their greatest interest is in Photovoltaic, Renewable Energy, Programing passive houses devices.

#### **LEVEL OF PREPARATION\*AND INTEREST**

##### **Level of interest**

	<b>5</b>	<b>4</b>	<b>3</b>	<b>2</b>	<b>1</b>	<b>Weighted average</b>
<b>Photovoltaic</b>	33%	27%	27%	4%	9%	3.68
<b>Renewable Energy</b>	23%	32%	27%	9%	9%	3.50
<b>Hydropower</b>	18%	9%	32%	14%	27%	2.77
<b>Programing passive houses devices</b>	27%	32%	18%	9%	14%	3.50
<b>LEED &amp; BREEAM accredited assessment</b>	23%	0%	22%	18%	32%	2.64
<b>Air-conditioning system</b>	14%	18%	27%	23%	18%	2.86
<b>Others</b>	45%	9%	27%	4%	14%	3.68

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\*unfortunately level of preparation to the mentioned profession is inversely proportional to respondents interest. The respondents do not feel being well-prepared in any of the proposed specialties or professions.

### Country: Cyprus

### Responsible partner: EOC

In Cyprus the survey was conducted with 21 participants, including 12 employed and 9 unemployed people. The majority of the respondents were adults, over 30. Female: 3 – Male: 18.

Both unemployed and employed persons believe that unemployment is the result of a lack of training, lack of character, or lack of information and knowing where to find employment.

Both groups coincide that training has a positive influence on achieving and maintaining employment. Both groups currently consider that they are sufficiently prepared to work in green building. Ongoing training is highly valued by both groups, which show interest in learning new things and keeping up-to-date.

The respondents are convinced that training influences achieving or maintaining employment so are therefore are extremely willing to train in the sector.

Keeping continuously informed on how the profession evolves with new technologies is also highly valued. The ratings show that both groups consider that men and women do not have the same opportunities in the sector.

There is a clear difference of opinion between the group with greater training and the group with no training. The first considers that the abilities to work in the construction sector are the same for men and women; but the second group makes an important distinction between both sexes.

Practically the entire sample considers that they are prepared in terms of training and experience, and that these are not the main reasons for unemployment.

### LEVEL OF PREPARATION AND INTEREST

**Photovoltaic Energy** – 9.5% feel that they have a very low level of preparation – 19.04% feel that they have low level of preparation – 42.85% feel that they have medium level of preparation – 19.04% feel that they have high level of preparation and 9.5% feel that they have very high level of preparation. Around 90% are very interested in this speciality even though it requires training.

**Renewable Energies** – 4.76% of the participants say they have a good level of preparation, 42.85% they have medium level of preparation and therefore 52% would need to improve their preparation. Meanwhile, the level of interest in the speciality is around 95%.

**Hydropower** - 90% of those surveyed admit they have little or no preparation. Only 10% say they have any notion. But the level of interest in working in this speciality is 70%.

**Passive home device programmer** - 10% of participants say they have some notion or a certain level of preparation in this speciality, while 60% would be interested in working in this sector.

**LEED accreditation auditor/evaluator** - 10% of participants say they have a certain level of preparation in this field and 60% would be interested in working in it.

**Air conditioning systems** - In this speciality 50% of those surveyed have a good level of preparation and around 85% say they are very interested in working in this area.

### Country: Denmark

### Responsible partner: Gate21

In Denmark the survey was conducted with 20 participants, 18 employed and 2 unemployed. The majority of the respondents were adults, aged from 30-60.

The majority of the respondents have the background of vocational education and training, a minority of the respondents being graduates from technical schools of construction. The trainings they attended belong to common construction trades (e.g., carpentry, bricklaying, painting, finishing) that lead to gaining general construction skills and competences.

Most of the participants considered themselves ready for a job in the green construction area although only a few had actual training in sustainability. A little less participants felt motivated for an actual job search in the sustainable construction sector.

Most participants agree that continuous training and information related with their employment are priority issues.

It is believed that men and women have the same opportunities to educate themselves to a job in the construction sector. Nevertheless, there seems to be a majority of men working in the construction sector.

### Level of preparation

	5	4	3	2	1	Weighted average
<b>Photovoltaic</b>	10%	5%	10%	10%	65%	1,85
<b>Renewable Energy</b>	5%	5%	25%	25%	40%	2,1
<b>Hydropower</b>	0%	5%	15%	55%	25%	2,00
<b>Programing passive houses devices</b>	5%	10%	15%	30%	40%	2,1
<b>LEED &amp; BREEAM accredited assessment</b>	0%	0%	5%	5%	90%	1,15
<b>Air-conditioning system</b>	0%	0%	0%	5%	95%	1,00
<b>Others</b>	10%	35%	40%	10%	5%	3,35

### Level of interest

	5	4	3	2	1	Weighted average
<b>Photovoltaic</b>	20%	35%	25%	10%	10%	3,45
<b>Renewable Energy</b>	5%	15%	30%	30%	20%	2,55
<b>Hydropower</b>	0%	0%	10%	65%	25%	1,85
<b>Programing passive houses devices</b>	5%	10%	15%	25%	45%	2,05
<b>LEED &amp;</b>	0%	0%	5%	10%	85%	1,20

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<b>BREEAM accredited assessment</b>						
<b>Air-conditioning system</b>	0%	0%	0%	5%	95%	1,00
<b>Others</b>	10%	35%	45%	5%	5%	3,4

### Country: Poland

### Responsible partner: PZPB, DANMAR

In Poland the survey was performed with 20 participants, including 10 workers and 10 unemployed persons, with male respondents prevailing over female ones by 85% to 15%. The majority of the respondents were young people, up to the age of 30 (75%).

More than a half of the respondents have the background of vocational education and training, 50% of them being graduates from technical schools of construction. The trainings they attended belong to common construction trades (e.g., bricklaying, painting, plastering, plumbing) that lead to gaining general construction skills and competences.

A great majority of participants agree that training plays important role in the achievement and maintenance of employment. The respondents feel rather not prepared to take part in works connected with green building. They are trying to learn the new things in their occupation and show interest in following the new developments in their professions due to new technologies but it is really hard to do by themselves. Evidently they need support e.g. in the form of free training. Currently curricula has been changed and some parts of learning programme cover green building elements. But it is still to less in order to train professional employee or worker.

Half of the respondents believe that men and women have the same opportunities at a workplace and they have the same have the same abilities to work in the construction sector.

The majority of the respondents admitted that they need more training to get a job or to improve the one they have. They are well-aware of the new job opportunities emerging within their working sector and they have information about it. The main obstacle is lack of money needed to pay for the specialized trainings. The other issue is lack of possibilities to work as a trainee in green building profile companies.

The respondents do not feel being well-prepared in any of the proposed specialties or professions. Nevertheless, their greatest interest is in Photovoltaic, Renewable Energy,

Programing passive houses devices and being BREEM and LEED assessors (the last one refers to University of Technology graduates).

## **LEVEL OF PREPARATION AND INTEREST**

Data gained during Polish research is very similar to Lithuanian. In this case too level of preparation to the mentioned profession is inversely proportional to respondents interest. The respondents do not feel being well-prepared in any of the proposed specialties or professions. Most of respondents were interested in photovoltaic panels/solar collectors and heat pumps.

## **LEVEL OF INTEREST**

**Photovoltaic Energy** - 95% of those surveyed feel that they do not have a satisfied level of preparation and around 95% are very interested in this speciality even though it requires training.

**Renewable Energies** - In this speciality 95% of the participants say they have a low level of preparation, therefore 85% would need to improve their preparation.

**Hydropower** - For this speciality 90% of those surveyed admit they have little or no preparation. Only 10% say they have any notion, but the level of interest in working in this speciality is not high 30%.

**Passive home device programmer** - 10% of participants say they have some notion or a certain level of preparation in this speciality but 90% do not have any knowledge, while 90% would be interested in working in this sector.

**LEED accreditation auditor/evaluator** - 90% of participants say they do not have a certain level of preparation in this field and 90% would be interested in working in it.

**Air conditioning systems** - In this speciality 30% of those surveyed have a good level of preparation while 70% do not have any knowledge and around 95% say they are very interested in working in this area.

**Others** - Just 20% of the participants say they have trained in a speciality other than those mentioned although they would all be very interested in working in these areas.

## **GENERAL SUMMARY OF THE SURVEY**

It is clearly visible that trainings concerning green skills are needed in construction sector. Independently of nationality and level of background all participants taking part in survey expressed their will and necessity to attend such course and its presence on the market.

Some respondents identified the reason of their unemployment in lack of appropriate training. Most of the surveyed were young people starting their career and they had difficulties in finding good job at all because they had no experience. So they were not seeing such reasons as experienced workers who had experienced but not in this field.

Opinion that men and women have the same opportunities at work is divided. It is hard to say unambiguously that women are treated on the equal level with the men. The situation might be different on the higher position e.g. engineers. Unfortunately on the lower level of employment (blue collar workers) situation is more complex in men's favour. Nevertheless this situation is changing (women are getting more jobs in construction) and it needs some time to change the whole generation mentality.

### Level of interest

Table presented below shows levels of respondents' **interest** in specific professions. It is clearly visible that only photovoltaic job is common for the group of polled countries. It may show that it is a great demand on the market for the skills referring to this job.

Other outcomes are more or less similar. Only what it is worth to be noticed is that interest in profession such LEED assessor which required really high skills and knowledge from employees was distinctly highlight by respondents.

Only Denmark case is totally different from the others. In Denmark staff is clearly not interested in specified professions and such vocational trainings.

Level of interest in %	Spain	Lithuania	Cyprus	Denmark	Poland
<b>Photovoltaic Energy</b>	90	87	90	80	95
<b>Renewable Energies</b>	95	82	95	50	85
<b>Hydropower</b>	84	59	70	10	30
<b>Passive home device programmer</b>	68	77	60	30	90
<b>LEED and BREEAM accreditation auditor/evaluator</b>	90	45	60	5	90
<b>Air conditioning systems</b>	85	59	85	0	95

### Level of knowledge

More or less discrepancies were noticed in terms of level of **knowledge** among the surveyed but all of them expressed the need of increasing their knowledge on sustainable building. Cyprus and Denmark employees suffer for less lack of knowledge than other country representatives. The rest data shows that there is a great demand for training and increasing level of vocational knowledge.

Lack of knowledge in %					
	Spain	Lithuania	Cyprus	Denmark	Poland
<b>Photovoltaic Energy</b>	90	87	9,5	25	95
<b>Renewable Energies</b>	25	82	4,7	35	95
<b>Hydropower</b>	90	59	90	20	90
<b>Passive home device programmer</b>	30	77	10	30	90
<b>LEED accreditation auditor/evaluator</b>	25	45	10	5	90
<b>Air conditioning systems</b>	50	59	50	0	70

## FINAL CONCLUSION

Above presented data show that it is possible to find some similarities among various developed countries. These similarities refer to level of knowledge and lack of demanded knowledge representing by respondents. The biggest similarities could be identified in case of Lithuania and Poland. Spain and Cyprus have common problems but Cyprus has less problems with photovoltaic staff. It depends on geographical position and amount of sun during the year. Totally different case is Denmark. Data has shown that Denmark has very little problems with staff working in construction branch. It could result from Danish well developed economy.

Anyway, despite of presented differences, it is possible too to develop and implement some vocational trainings which could refer to common problems presented by Green Skills project's partners.

The main reason may lay in constant changing of labour market requirements and technology. Most schools and even universities are not able to compare with its curricula with market expectations. That is why specific vocational trainings on state of the art solutions are the future.

Of course it is necessary to constantly adjust curricula to market needs. The background which is gaining by students at school is really important for their future trainings. So any training which would support this effort is worth to be implemented.

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