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Boosting skills for greener jobs

Synthesis

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BOOSTING SKILLS FOR GREENER JOBS: PROJECT DESCRIPTION AND METHODOLOGY

1. The Local Economic and Employment Development (LEED) Programme of the Organisation for Economic Co-operation and Development (OECD) has conducted a research project on *'Boosting skills ecosystems for greener jobs'* with case studies in four countries: Belgium (Flanders), Poland (Pomorskie), Greece (Attica) and South Africa (Western Cape) and with the support of the European Commission.

2. The project was carried out under the LEED Programme of Work 2013-2014 and builds on previous OECD LEED projects on "Greening jobs and skills: Labour market implications of addressing climate change" (2009-2010) and "Measuring the potential of green growth: Indicators of local transition to a low-carbon economy"(2011-2012). The project considers green growth and green economy in a broad sense, not only focusing on climate change and low-carbon aspects as previous projects. This follows the OECD definition of green growth policies as policies "that favour the transition to a low-carbon, resource efficient economy, that improve the management of the natural asset base, that raise the environmental quality of life, and that create opportunities associated with changes of production and consumption" (OECD, 2013).

3. The *'Boosting skills ecosystems for greener jobs'* project aims to analyse the skills dimension of the transition to a green economy at local level. In particular, it aims to explore how selected local areas/industry clusters identify the specific skills needed to support green growth, and how related skills policies and practices can be made more effective in supporting and accelerating the transition to a green economy. A mixture of transversal and specific skills are needed by different industry sectors, and the project investigated how flexible and responsive the education and labour market system is to developing these skills that are needed to meet business objectives, both now and in the future.

4. The methodology was designed to address the following key questions:

- What skills are needed for accelerating the employment and entrepreneurship potential of green industry sectors and supporting the development of the green economy? What strategies can be proposed for strengthening the skills ecosystem responses?
- What skills are needed for greening high-energy/carbon-intensive industry sectors? What strategies can be proposed to support the transformation of industries and foster the jobs of the future?
- What could be the role for education and labour market institutions, research institutions and the private sector? In particular, in relation to:
 - The flexibility and responsiveness of the education, training and labour market system to current skills gaps;
 - The degree to which the education, training and labour market system is anticipating and supporting future change in industry practices associated with the green economy;

- The degree to which knowledge sharing networks and activities are helping to accelerate the transition to a green economy and the extent to which public policy makers could further facilitate such exchanges.

5. A variety of geographical contexts and industry sectors have been analysed. In Flanders (Belgium) the study focused on the agro-food, construction and chemicals sectors, which are important sectors for the local economies of several Flemish provinces. In Attica (Greece), the main sectors examined were construction and waste management. The Pomorskie (Poland) and Western Cape (South Africa) case studies highlighted the special case of coastal regions where the emerging green “blue economy”¹ can be an engine of local growth. In Poland, a wide range of sectors were considered (shipbuilding, tourism, fishing/aquaculture, water-based activities such as hydropower and water transport). In South Africa, the case study focused on the aquaculture sector.

6. Company surveys were carried out to identify the extent to which businesses are greening their practices, products and services and the related impact on skills and jobs.

7. Survey results were complemented by interviews with selected firms and stakeholders. Seven roundtables and events were organised with stakeholders (public authorities, public employment services, universities, industry representatives) between October 2014 and April 2015 to refine desk research and survey conclusions.

Table 1. Boosting skills for greener jobs - Stakeholders roundtables

Case studies	Roundtables and events
Flanders	Local roundtable Antwerp 1 October 2014 Local roundtable Roeselare 2 October 2014 Local roundtable Ghent 3 October 2014 Flanders final event in Ghent 3 December 2014
Pomorskie	Gdansk 6 November 2014
Western Cape	Cape Town 13 March 2015
Attica	Athens 23 April 2015

Source: OECD LEED 2014-2015

8. Detailed case study reports analysing local green economy initiatives as well as the skills ecosystems responses are currently under preparation.

9. This note presents:

- the results from the company surveys
- the preliminary policy lessons and conclusions emerging from the project.

¹ The concept of “blue economy” encompasses the sustainable economic development of the global oceans and coastal areas. For instance, the European Union describes “Blue Growth” as the long term strategy to support sustainable growth in the marine and maritime sectors as a whole. Focus sectors include aquaculture, blue energy, tourism, and deep sea minerals.

TOWARDS A GREEN ECONOMY: COMPANY PRACTICES AND IMPACT ON SKILLS, RESULTS FROM COMPANY SURVEYS

10. The company surveys carried out in Flanders, Pomorskie, Attica and Western Cape aimed to identify perceptions of environmental challenges, drivers and obstacles to the green economy transition as well as the impact on skills and jobs at the micro-level. The companies were also asked to assess the responsiveness of the local skills ecosystem and the level of knowledge sharing activities within local networks and clusters.

11. A steering committee with the participation of local stakeholders and public authorities helped identify relevant sectors for the survey in each case study area. The structure of the survey questionnaire was common to all case studies, while some questions were adapted and tailored to the local contexts. In all case studies, companies were contacted by phone (by market research companies in Flanders, Pomorskie and Attica, by the Western Cape province staff in Western Cape). This approach of course has its limits. The questionnaire introduction included a reference to the green economy, so there could be initial bias in the survey, with only those companies that were the most interested in the green economy deciding to answer the questionnaire. In addition, the sample of companies is not always statistically robust (e.g. Flanders with 100 respondents, or Attica with 83 respondents). Nevertheless, the survey gives useful indication of company perceptions.

Table 2. Boosting skills for greener jobs - Company surveys description

	Sector covered	Number of companies contacted by phone	Number of responses to questionnaire	Number of companies operating in the sector in the region covered	Timeline
Flanders	Agriculture and manufacture of food products, Chemicals, Construction	1500	100	Around 76000 according to data provided by market research company	Oct-Nov 2014
Pomorskie	Blue economy sectors (fishing/aquaculture, shipbuilding, construction, energy, blue biotechnology, seabed mining and water management)	3000	124	Around 6400 according to data provided by market research company	Sept – Oct 2014
Attica	Construction Waste management	300	83	Unknown	March 2015
Western Cape	Aquaculture (Blue economy)	60	26	60 according to Western Cape listing of aquaculture companies	Feb – April 2015

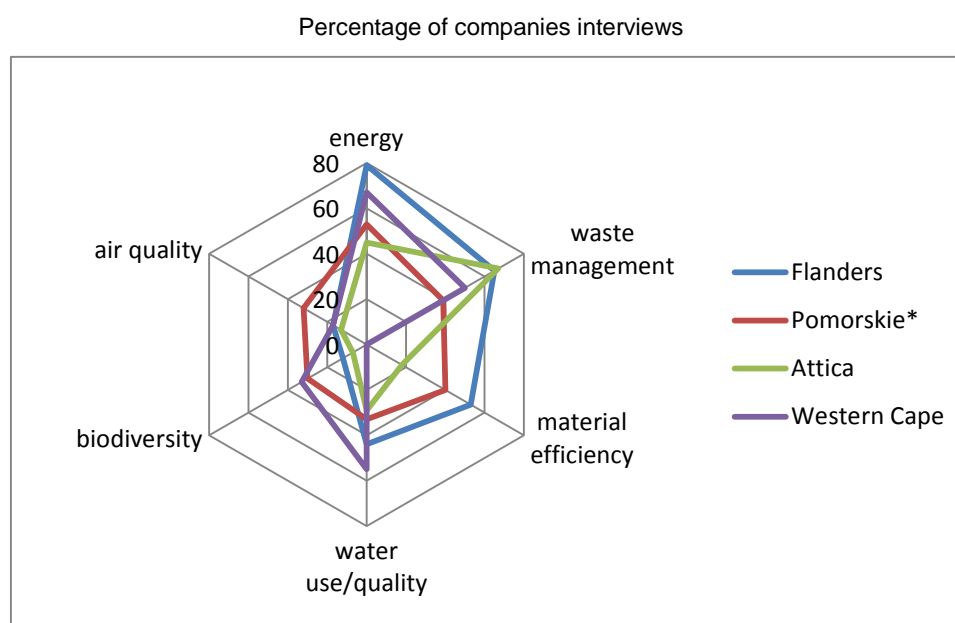
Source: OECD LEED 2014-2015

Perception of environmental challenges among businesses

12. Not all environmental challenges are perceived as pressing for businesses. Most businesses consider energy and waste management as the most prominent challenges. Businesses in Flanders also frequently identified material efficiency (53% of companies) and water quality (44%). In Western Cape, water use and quality is also identified as a major environmental challenge for the aquaculture sector. Air quality and the protection of biodiversity appear less important for businesses in all case studies.

13. Businesses logically show more concerns for environmental issues that have a direct impact on their operational costs (energy, waste, water). The major differences observed between regions could also reflect the different sectors selected for each case study.

Figure 1. Company perception of environmental challenges



* For Pomorskie, percentage of companies identifying environmental challenges as important or moderate challenges as opposed to minor challenges.

Source: OECD LEED 2014-2015 company surveys

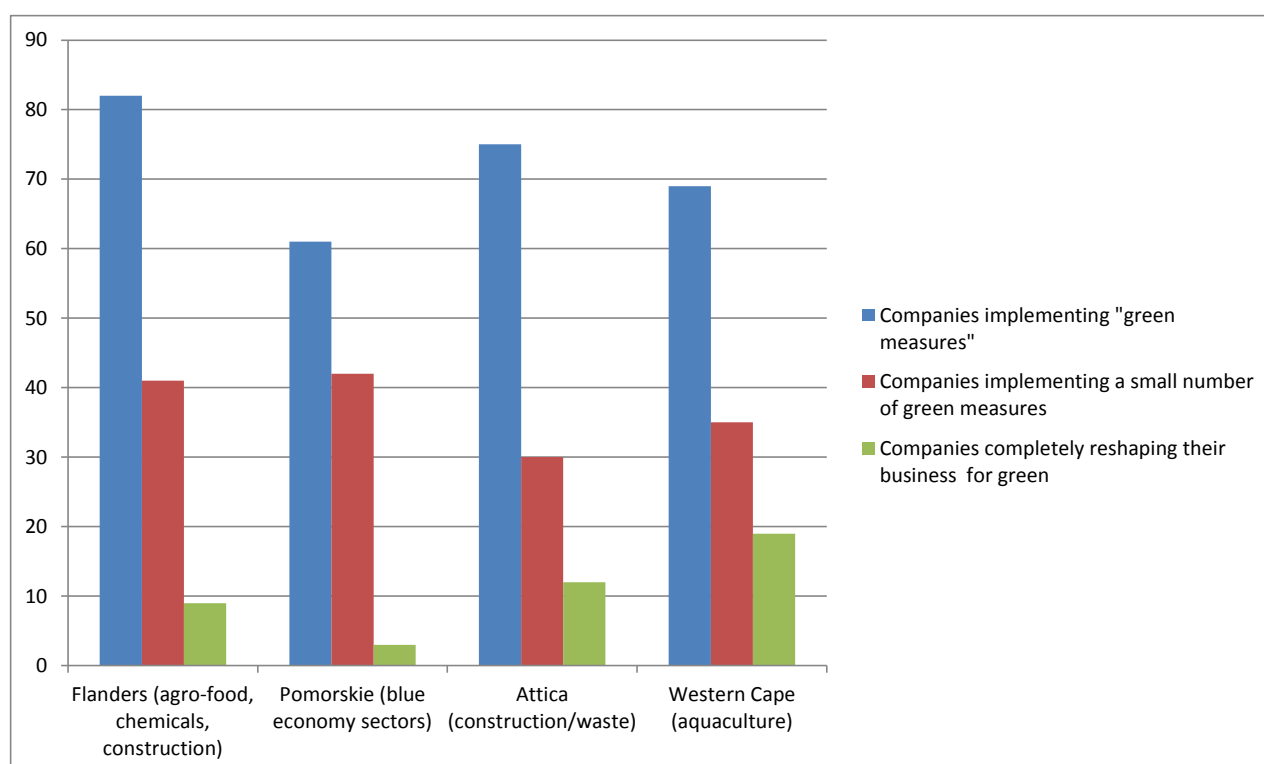
Greening company practices: drivers and obstacles

14. The greening of business practices (understood in a broad sense of greening processes or products) is not yet widespread among businesses. The percentage of companies that have implemented measures to green their business practices varies between local areas from 82% of companies in Flanders to 61% in Pomorskie. Nevertheless, most businesses admit to having implemented only a limited number of measures to green their practices (usually around half of businesses that have declared that they had implemented green measures). Only a limited number of businesses have more fully embraced the green transition and reshaped their whole business to take green measures into account (19% in Western Cape,

12% in Attica, 9% in Flanders and only 3% in Pomorskie). The rather high results in Attica and Western Cape can be understood as reflecting the difference between sectors selected for the case studies and the self-perception of some sectors such as aquaculture as “green” in their very nature - during the interviews in the Western Cape, many aquaculture firms explained that they considered all their processes to be “green” as they offered an alternative to unsustainable fishing practices. In Attica, the percentage of businesses that have been reshaped to take into account green measures is boosted by the responses from the waste management sector – here 17% considered that they had reshaped their whole business, only 7% of the construction sector companies declare the same.

Figure 2. Greening company practices

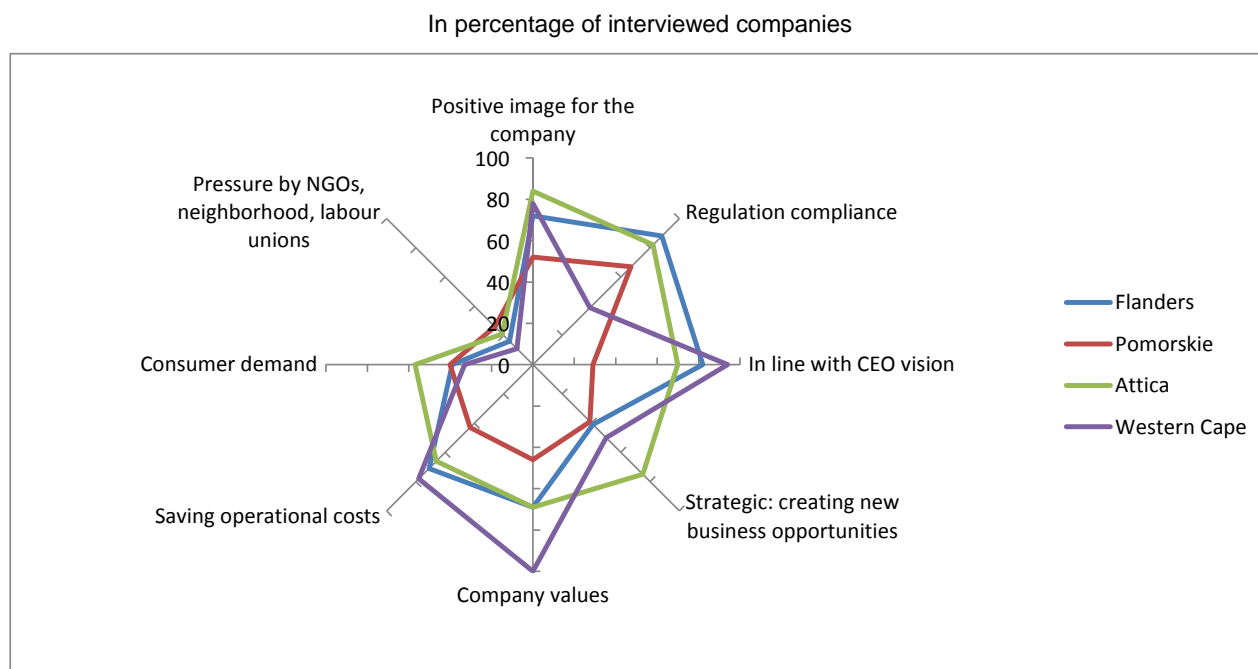
In percentage of interviewed companies



Source: OECD LEED 2014-2015 company surveys

15. The “green” measures implemented in companies mainly relate to energy and waste management. This reflects well the prominent challenges identified by the companies in Figure 1 above.

16. The main driver for implementing green practices in Flanders, Pomorskie and Attica is compliance with regulation. This shows the importance of the policy framework and of a ‘regulatory push’ for businesses to adopt environmentally friendly measures. Saving operational costs is also perceived as an important driver. An important role is also played by company values (corporate social responsibility), concern for the positive image of the firm, as well the presence of vision from the CEO or top-managers.

Figure 3. Drivers to green company practices

Source: OECD LEED 2014-2015 company surveys

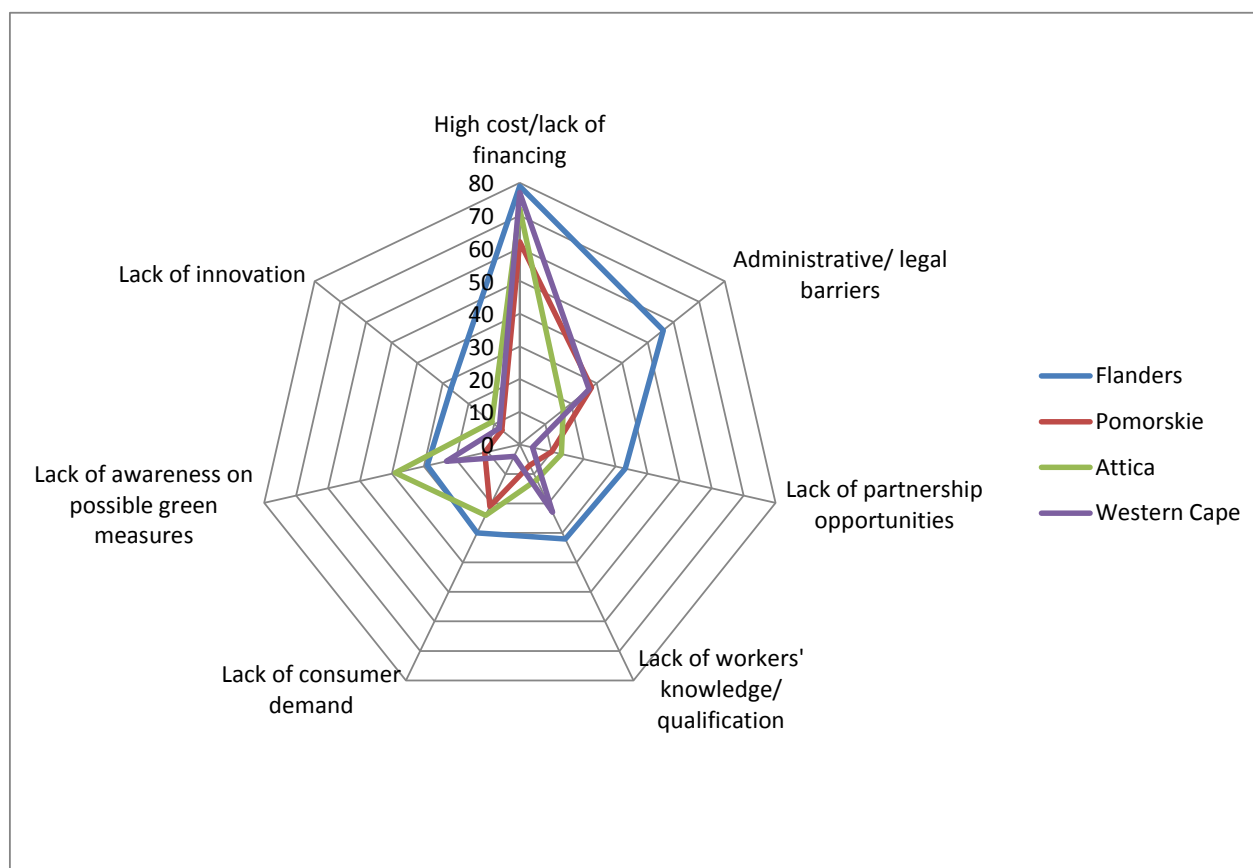
17. The main obstacles to implementing green measures in businesses were found to be very similar in all the considered areas. The principle obstacle identified is higher costs or lack of financing for all case studies local areas (79% in Flanders, 77% Western Cape- aquaculture, 72% in Attica, 62% Pomorskie). Administrative or legal barriers are also frequently mentioned (56% Flanders, 28% Pomorskie and Western Cape – aquaculture, but only 17% in Attica). In Attica, the second most frequent barrier is the lack of information on possible green measures (39% of companies interviewed).

18. It is perhaps surprising that Flemish companies tend to identify more obstacles to greening their company practices while the case study shows that many sectors in Flanders are relatively advanced in having taken steps and initiatives to foster the green economy transition, This could suggest that the more advanced the transition to a greener economy is, the more awareness is raised as to potential barriers for making further progress (e.g. lack of partnership opportunities, lack of workers knowledge).

19. In this context, a lack of skills and qualification among workers is not identified as a major obstacle to the greening of company practices. While this obstacle is quite frequently mentioned in Flanders and Western Cape (by 32% and 23% of companies respectively), it is only mentioned by 12% of companies in Attica and 8% in Pomorskie.

Figure 4. Obstacles to greening company practices

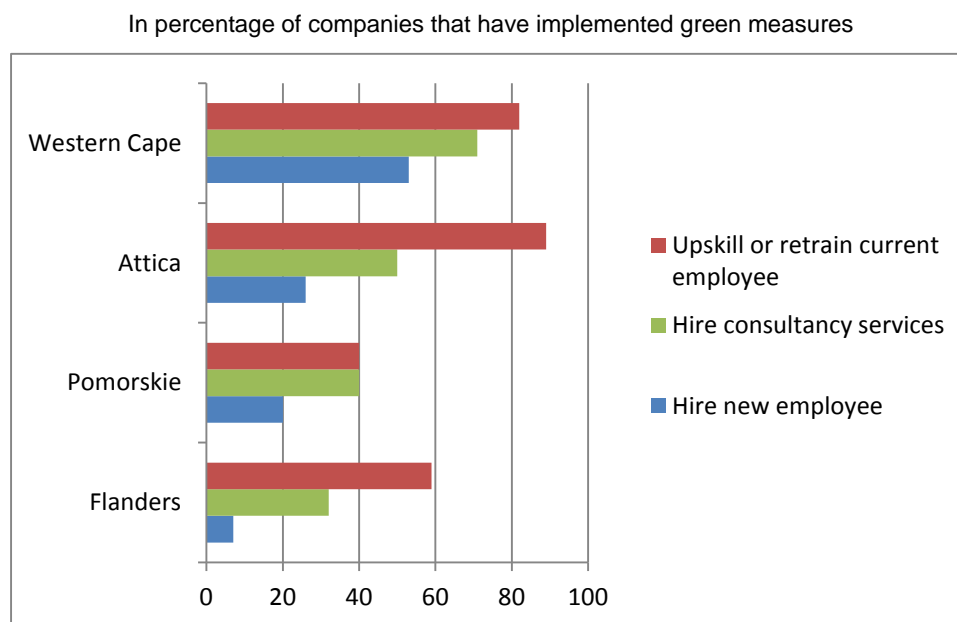
In percentage of companies interviewed



Source: OECD LEED 2014-2015 company surveys

Greening company practices: impact on skills and training needs

20. Although skills aspects are not often identified as a major obstacle to transition, a large majority of companies that have implemented green measures in their businesses have had to address skills issues (94% in Western Cape, 85% in Attica, 70% in Flanders, 65% in Pomorskie). The most frequent action to remedy skills shortages is to up-skill or retrain current employees, as opposed to hiring new employees. Companies also frequently hire consultancy services to tackle skills shortages.

Figure 5. Green transition impact on skills

Source: OECD LEED 2014-2015 company surveys

21. The type of occupations impacted by the green transition is similar in Flanders, Pomorskie and Attica. The majority of companies interviewed considered that greening company practices mostly impacts “professional and technical occupations”. The impact on other categories of occupations (sales and customer services occupations, administrative, legal and clerical occupations or managers) is less important. This widely differs from the Western Cape aquaculture case study where most skills needs are for lower-skilled workers and artisans.

Box 1. Identified skills requirements and gaps for the aquaculture sector in Western Cape

Managerial, IT, Finance: Adequate supply of skills but more specific training needed

Artisans: shortage

Sciences graduates: adequate supply, funding and support needed for Research and Development

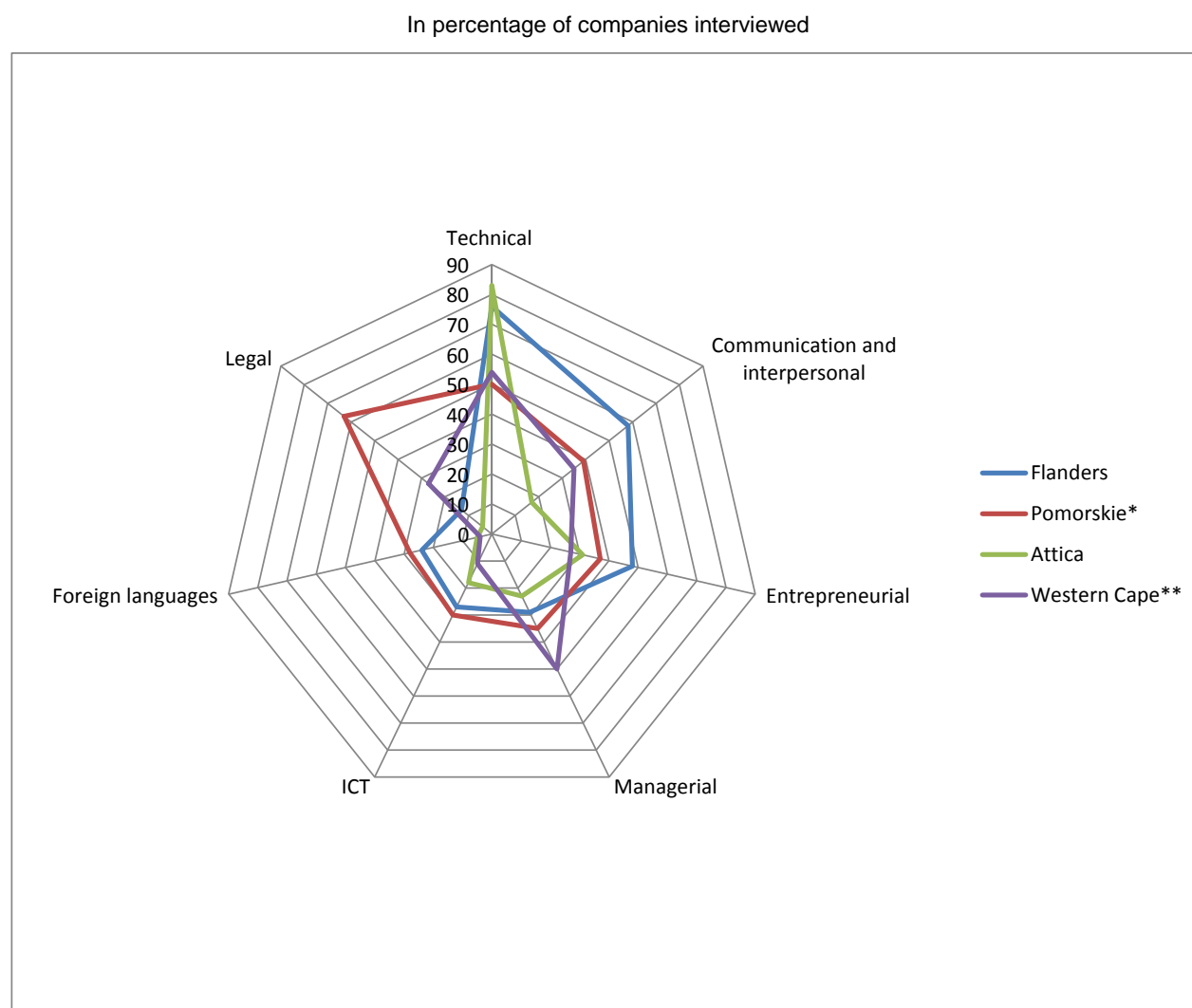
Low-skilled/ unskilled workers: So-called ABET skills are needed (Numeracy, Literacy, Life Skills, Organisational Skills). The industry is providing some training for low-skilled workers. Nevertheless, these skills should be delivered by schooling system or Sector Education and Training Authority (SETAs).

Source : OECD LEED/Western Cape workshop - Capetown 13 March 2015

22. The type of skills impacted by the greening of company practices also reflects the importance of technical occupations. Technical skills are most frequently mentioned as skills in shortage. In Pomorskie, legal skills are also frequently mentioned. This could be linked to the perceived high administrative or legal burden of preparing environmental impact assessments (EIAs) in the sectors selected for the case study (blue economy sectors). EIAs were frequently quoted by business representatives in Pomorskie as a

barrier to innovation and investments in the field of hydropower or water transport. Similar problems related to lengthy procedures for obtaining environmental permits were mentioned for the aquaculture sector in Western Cape.

Figure 6. Skills in demand for the green transition



* For Pomorskie the category “technical skills” was translated as “scientific research skills” in the survey questionnaire

** For Western Cape, an additional category of “artisanal” skills was also proposed :38% of companies believed that greening practices in their business would impact this type of skills.

Source: OECD LEED 2014-2015 company surveys

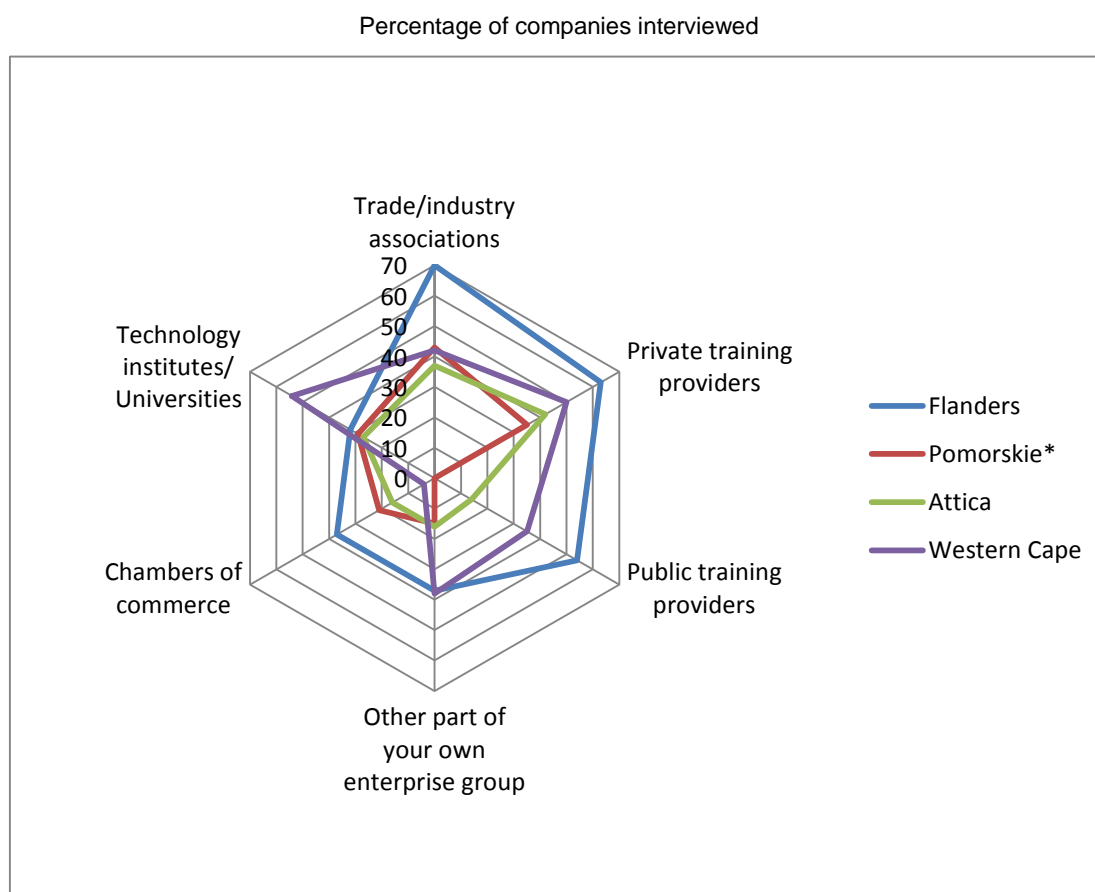
Assessing the skills ecosystems responses: training and knowledge-sharing activities

23. Skills ecosystems vary greatly between countries and at local level. By skills ecosystems, we mean systems for the development and sharing of skills and knowledge, with this going beyond education

and training providers (universities, public and private training providers) to also include a wide range of stakeholders that contribute to the transmission and dissemination of skills and knowledge.

24. Differences within local skills ecosystems are reflected in the variety of responses companies gave when asked to mention which training providers they had used or they would be likely to use to help them green their practices.

Figure 7. Main training providers to deliver training for the green transition



* For Pomorskie: the survey questionnaire did not include a category “public training providers”: nevertheless 3% of respondents mentioned public training providers such as vocational training centres and municipalities in the category “other”.

Source: OECD LEED 2014-2015 company surveys

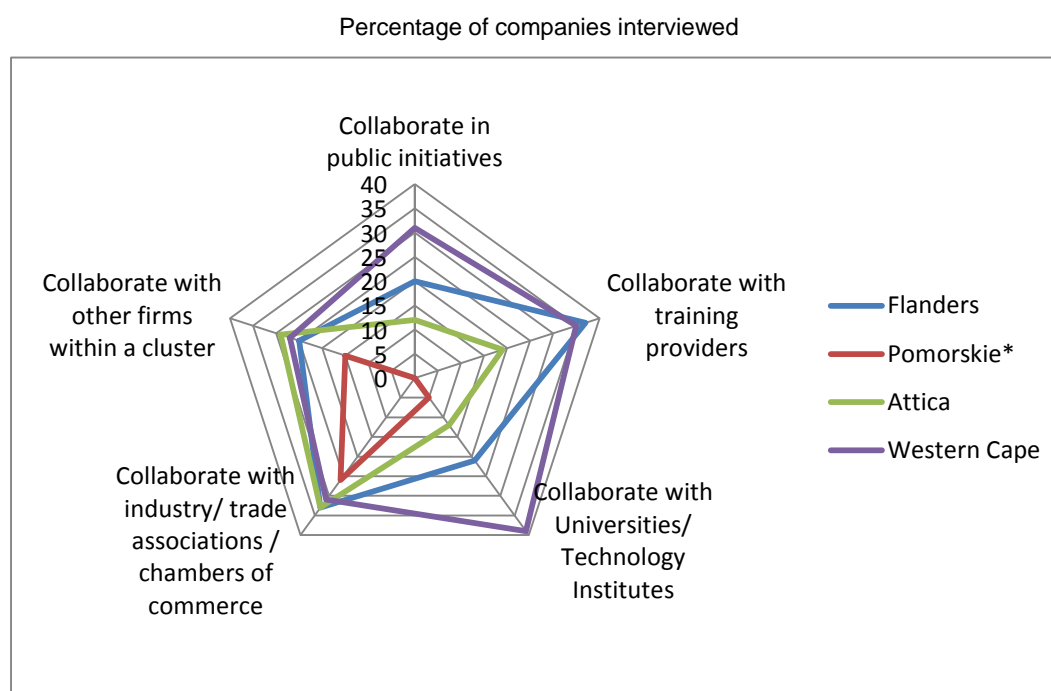
25. Flemish companies collaborate with a wide range of stakeholders for training activities, which seems to indicate a diverse local skills ecosystem. Trade/industry associations, chambers of commerce and both private and public training providers such as the Flemish public employment services (VDAB) or the Flemish Agency for Entrepreneurial Training (Syntra) all provide training related to the green economy. The Western Cape aquaculture sector also seems to benefit from a good network with technical universities such the Stellenbosch University and various trade associations and public training providers. In Pomorskie and Attica, businesses rely more on private training providers and trade or industry associations. Trade Unions also play a role as training providers in Attica, Flanders and Pomorskie (around 4-5% of companies mentioned them). It is interesting that training is often provided by sector specific

bodies and professional associations as opposed to being provided by more general training providers. Such institutions, whether they be private or tripartite, may help in creating a more responsive system locally which can quickly accommodate local business needs.

26. In terms of knowledge sharing activities, the survey results also show many differences between local areas but also between industry sectors. Collaboration with industry, trade associations and chambers of commerce is the most frequent channel of knowledge sharing in all regions. In Flanders and in Western Cape, interviewed companies more often indicate collaboration with universities and technology institutes than in Pomorskie and Attica. In Pomorskie, collaboration within business clusters is very limited. However, in Flanders, several differences are found between sectors.

27. The chemical industry and agriculture sectors have active business clusters (35% and 43% of the companies interviewed indicated taking part in such activities). The manufacturers of food products only have limited interactions with other businesses to discuss the greening of their practices while 65% of these businesses suggested that they would find it useful to engage in such collaboration in the future.

Figure 8. Knowledge sharing activities to green company practices



* For Pomorskie: the survey questionnaire questions was different than other countries referring to ways of keeping abreast of developments in the sector rather than knowledge sharing to green company practices. The options menu did not include the category “collaboration in public initiatives” or “collaboration with training providers”.

Source: OECD LEED 2014-2015 company surveys

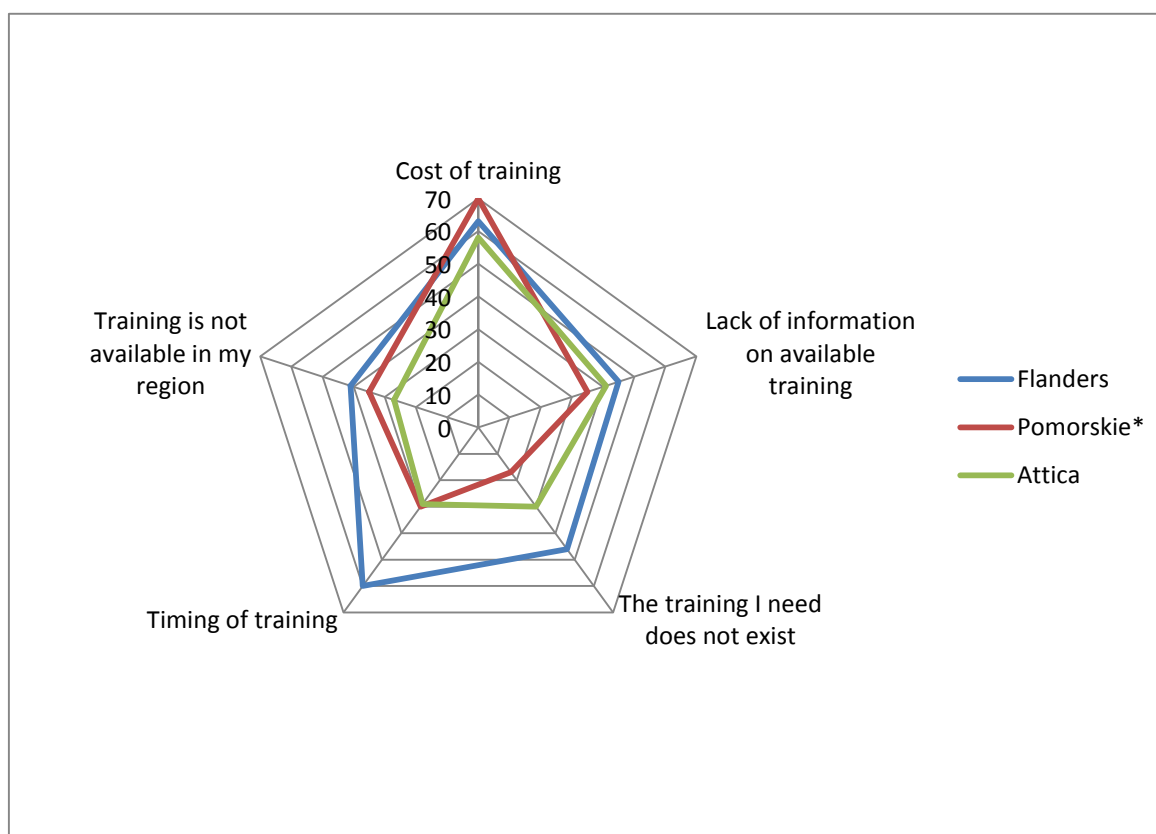
28. Interviewed firms estimate that the skills ecosystem is relatively prompt to respond to their training needs in all the case study areas. A majority (84% in Flanders, 89% in Attica, 77% in Pomorskie, 68% in Western Cape) estimates that it will take less than 6 months between their decision to implement training and the actual delivery of the training to workers.

29. Nevertheless, there are obstacles to training. Training costs and lack of information on training are major obstacles for companies. There are differences between sectors. In Pomorskie, in the energy sector and the water treatment sector, the most prominent obstacles were the cost of training and the availability of training in the region. In the traditional blue economy sectors (mining and seabed mining, fisheries and aquaculture, transport and port, shipbuilding, tourism and recreation), the cost of training and the lack of information on available training opportunities were identified as the main obstacles. In Flanders, 65% of companies in the chemicals sector identified that the training they needed did not exist (this was less frequently mentioned as an obstacle in other sectors).

30. In Western Cape, the obstacles to training were assessed separately for different categories of professionals. For senior managers and technicians, the cost and timing of possible trainings were identified as the most prominent obstacles. For artisanal workers, the main obstacle was the lack of information on possible training.

Figure 9. Obstacles to training

In percentage of interviewed companies



Source: OECD LEED 2014-2015 company surveys

Conclusions

31. Although there are good practices in the many sectors considered, the green economy transition is not necessarily widespread among businesses in the case study areas and in particular amongst the SMEs (small and medium sized-enterprises) that constituted the majority of respondents. Therefore, there seems

to be a gap between the pressing timeline of addressing environmental challenges and the slow pace of the green economy transition in businesses in reality.

32. Only a few companies are fully embracing the transition to a green economy and completely reshaping their businesses. Most companies implement incremental changes following regulatory pushes from the public sector. Perceived high costs and administrative barriers are considered major obstacles. In Greece, there is also a lack of knowledge and information on possible green measures.

33. Although the lack of skills among workers is not frequently mentioned as a major obstacle, there is a strong skills dimension of the transition to a green economy. The great majority of companies that have introduced measures to green their businesses have had to address skills issues either by hiring workers, retraining or upskilling their workers or hiring consultancy services.

34. The response of the local skills ecosystems in the case study areas varies between local areas and industry sectors. In Flanders, all channels of exchange and knowledge-sharing between companies seem active to help businesses to green their practices (although it was identified that some specific sectors such as the manufacture of food products may require additional support for business cluster activities). The aquaculture sector in Western Cape also seems to benefit from a good network of collaboration with universities and other training providers. In Pomorskie, activities related to business clusters, and collaboration with universities are still very limited for traditional and emerging blue economy sectors. In Attica, the training response in the construction or the waste management seems more driven by the private sector (private training providers).

EMERGING LESSONS

Beyond job creation: the resilience potential of the green economy

35. In all the case study areas considered, the potential for boosting the transition to a green economy as part of a holistic approach to local economic development seems to have high potential. In Pomorskie, greening the local blue economy (water based) sectors could assist the region to raise job quality and retaining talent through contributing to the creation of high qualified jobs. It could also facilitate the transition of workers from traditional sectors in transition (e.g. shipbuilding) to other emerging sectors (e.g. offshore wind) by helping to maintain and upgrading technical/professional skills. In Attica, the green economy agenda could help strengthen the dynamic tourism sector with cascading effects on the construction and waste management sectors.

36. Accelerating the transition to a green economy will not necessarily increase the number of jobs. The European Commission's green employment initiative estimates that 400000 new jobs could be created by improving waste prevention and management and another 400000 jobs by making buildings more energy efficient and implementing the requirements of the energy efficiency directive. A one percent increase in the growth of the water industry could create between 10000 and 20000 jobs. Nevertheless, there is little evidence of the overall impact on job creation at local level. The company survey results show that hiring new employees is not a frequent option taken by companies to green their businesses. Investigating the low-carbon transition in the energy sector, previous OECD work showed that the global energy sector, for example, only accounts for around 1-2% of global employment, so the likely employment effects of restructuring this sector will be small. The number of people employed in carbon-intensive industries is also limited: around 90% of total CO₂ emissions are attributable to 10 industries that account for just 16% of total employment in OECD countries.

37. The transition to a green economy can be better described as a means to anchor some industries at local level and help to maintain and secure jobs. For example, a Flemish study on the socio-economic importance of water showed that 1 out of 6 employees in Flanders is directly linked to "water-intensive" industries. Flanders is known for its intensive agriculture, and it is the largest European producer of frozen vegetables (25% of Europe's frozen vegetables are produced in Flanders). It also houses one of the largest chemical clusters worldwide. However, Flanders is a water-stressed region with limited availability of freshwater. As an increase in water costs can have serious impacts on the competitiveness of this Flemish industry, good water management practices are crucial for maintaining these jobs in the long-term. Yet, there is limited awareness among businesses on this aspect.

38. In Western Cape, the transition to greener practices in the aquaculture sector is also driven by limited freshwater resources as well as numerous power cuts and shortcomings from the national electricity grid. By greening their practices and installing renewable energy sources on-site or nearby, aquaculture firms have access to a stable and predictable source of energy which is vital for their operation.

Limited “green” skills but more technical skills

39. The project confirms previous research that the skills needed for the transition to a green economy are not uniquely “green skills”. They are mainly professional/ technical skills, management and skills for innovation and management of change including communication skills and entrepreneurial skills as well as transversal and generic skills (languages).

40. The question of equipping the workforce with appropriate technical skills is a major issue for the transition to a green economy. A 2010 survey in the Danish clean tech cluster of the Oresund region highlighted that the transition to a low-carbon economy would mean that more specialized engineering skills and interdisciplinary skills will be needed. Similar findings emerge from the Flanders “Boosting skills for greener jobs” case study report. One of the interviewed business representatives from the chemical industry explained that “the transition to a green economy shifts our skills needs towards more integrated science domains. The narrow scientist who has no knowledge about adjacent fields is increasingly being replaced by multidisciplinary profiles with knowledge that concerns a large part of the value chain.”

41. Planning for long term technical skills (so-called STEM science, technology, engineering, and mathematics) supply has already been identified as a critical issue for long-term economic development and innovation. Many EU countries are experiencing recruitment difficulties in technical fields (ICF-CEDEFOP, 2015). To respond to this challenge in Flanders, a STEM action plan in 2012 was adopted to attract graduates in scientific and technical fields of study. A STEM platform was launched in 2014. Since then, one-quarter of the 308 Flemish municipalities now have a STEM academy, which is a network of organisations that organise after-school activities around science and technology for children and youngsters up to 18 years old. Nevertheless, attracting young graduates into STEM may not be sufficient. Additional entry points for pathways into STEM careers outside the higher education systems for example through continuing vocational education and training or apprenticeships are not well developed. This was mentioned as a shortcoming of the current skills systems response by business representatives in Flanders and Pomorskie.

Boosting skills supply and demand: an integrated approach for the green economy

42. Acting on skills supply to boost the green economy transition without fostering skills demand risks creating skills mismatches. In Pomorskie and Attica, the training offer seems to have been boosted by the availability of European Union funding mechanisms to organise training such as the European Social funds or regional funds rather than skills demand and business needs. In both local areas, stakeholders expressed concerns on the quality and usefulness of such trainings. One of the key challenges in those local areas is therefore to better involve businesses in the development of trainings for the green economy transition in closer collaboration with businesses.

43. In Flanders, good examples of close collaboration with businesses were identified. For example, a project called ‘the Academy of the Future’ helped address skills needs in the renewable energy sector (offshore wind energy parks). In 2013, a lack of technical employees was identified by the sector. The academy of the future helped mapping demand and supply with the input from the Flanders’ maritime cluster (FMC), an interest group of large and small companies active in marine or maritime business. It was identified that workers would require specific skills: language (English or German), technical, autonomy as well as on health and safety. A new professional profile linked to offshore wind (e.g. welding for windmills) was created. The Academy collaborated with the Flemish Agency for Entrepreneurial Training (Syntra) and university colleges as well as with private training providers. Trainings were due to start in April-May 2015 provided the overarching policy framework promoting off-shore wind (Plan Stevin) is implemented.

44. Clear strategies for boosting the green economy at local level such as providing a clear investment framework also help acting on skills demand. In Pomorskie, retaining talents by creating job opportunities for highly qualified graduates in the emerging biotechnology related to oceans ecosystems was identified as a key challenge. Biology and biotechnology faculties of the Gdansk University produce high quality specialists that the labour market is unable to absorb. Many of them decide to emigrate abroad where they find employment in the biotechnology sector. Local stakeholders have an important role to play in building broader strategies to enhance the employability of such sectors that could lead the green transition (policy framework but also working conditions, attractiveness).

45. Another important aspect for the skills ecosystems response is to work on career transitions from declining to new emerging sectors. In Western Cape, stakeholders identified possible career transitions for fishermen in traditional fishermen communities as a possible way to address skills gaps in the aquaculture sector. Another area to explore was the promotion of small-scale aquaculture projects for such communities. In Pomorskie, technical skills from the shipbuilding sector could be used for the new emerging renewable energy sector. There are also prospects for Polish shipyards in constructing vessels for off-shore wind power stations such as vessels for wind turbine installation and maintenance.

A question of skills or awareness?

46. A major aspect emerging from the Flanders case study is the need to mainstream sustainability values and knowledge in all curricula, starting with early education. Flemish stakeholders have identified this question as a prerequisite for reinforcing the appropriate mind-set for the green economy among all workers. Beyond the issue of skills, this raises the question of attitudes and values necessary to shape a sustainable future. This is in line with the United Nations principles of the UN Decade of “education for sustainable development” (2005-2014), establishing the overarching concept of sustainable development in all areas of education.

47. The company surveys also highlight that the vision of senior managers is important to drive the green economy agenda in companies. Beyond management or entrepreneurial skills, awareness raising among managers is also crucial to convince of the business case for greening the economy. Environmental challenges are still too often perceived as minor by businesses and in some cases, greener company practices are assimilated to administrative burden.

A test case for local leadership: fostering knowledge-sharing activities

48. In this context, there is a clear role for the public sector to play to accompany the transition to a green economy at local level not only by setting the appropriate policy framework or incentives such as green public procurement. Business sectors can be assisted in developing a vision for sustainability with support for “road-mapping” activities envisaging the future and defining milestones and key activities to move to a green economy. Such activities should also help identifying local labour market impacts as well as skills needs and gaps. In Flanders for example, the construction sector is in the process of reviewing occupation profiles and adding emerging skills for improved energy performance of buildings in such profiles. In the Western Cape province, an audit of skills needs and gaps in the field of renewable energy, water and waste has been realized as part of the Western Cape Green Economy framework.

49. Knowledge-sharing activities within businesses, between businesses and universities and between business sectors can be encouraged by local policy-makers. To this end, the public sector can support a variety of activities ranging from experimentation laboratories and green innovation platforms or cross-sector platforms such as innovation theatres. Innovation theatres are practised in “living laboratory” settings in Finland and by public companies like Bayern Innovativ in Germany (Cooke, 2015). In Flanders, a wealth of such initiatives exists in various provinces (e.g. House of food in West Flanders, Ghent Living

Lab). Nevertheless, these local initiatives are not always aware of each other and may lack the critical mass to make a significant impact, which raises the issue of disseminating good practices. In Pomorskie, dialogue and collaboration within business clusters and between universities and businesses could be stepped up to foster the green economy transition in the ocean and coastal economy sectors. In Attica, due to a lack of trust in the public sector as well as the financial situation, stakeholders insisted that this role of intermediary or promoter of knowledge sharing activities could be played by the private sector itself with knowledge services being provided by a network of specialized consultancies.

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