Country Report and Guidelines on Social Dialogue

SPAIN

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PRELIMINARY CONSIDERATIONS

This report will not refer to the concept of "green construction" but rather that of "sustainable construction," as the latter concept encompasses a broader dimension and is more accurate in its depiction of the phenomenon in question. Sustainable construction is a model, which involves a commitment to the proper management of assets, the efficient use of energy and adaptation to the environment, the necessary environmental protection, and balanced urban development.

Throughout this report sustainable construction is conceived as a reflection of all the steps of its "operation:" conception through urban planning, the embodiment of the idea in project plans, the execution of work, the use and operation of the building and, finally, the end of its useful life, or Life Cycle Assessment (LCA).

Related to this concept, it is essential to link sustainable construction to the idea of the Circular Economy, whose objective is for the value of products, materials and resources (water, energy...) to be maintained in the economy for as long as possible, thereby minimising waste generation.

1. THE SUSTAINABLE CONSTRUCTION SECTOR: MAIN FEATURES

Today everyone is talking about sustainable construction. The term, however, is an adjective that has been attached to all kinds of construction-related activity. There is, to date, no clear, specific and comprehensive definition of what "sustainable construction" is in Spain, since it does not go beyond the promotion of certain environmental issues, such as energy savings, improved energy efficiency, and/or the use of renewable energies. In this sense, it is true that this promotion is having an increasing impact on our public administrations, which are implementing it at the funding level and, in very few cases, at the tax level.

The construction sector in Spain

Excessive growth in the sector in the years preceding the major recession, largely based on residential building, generated distortionary macroeconomic impacts evident in the Spanish production model during this boom period, and magnified the negative effects triggered by the international financial crisis.

One of the reasons for the severity of the economic crisis in Spain was the generation in the years leading up to it of a financial bubble fuelled by an expansionary housing market in an environment characterised by abundant credit extended on the international

markets. Among other factors, this bubble was responsible for the aggravation of traditional imbalances in the Spanish economy, particularly the external deficit (via an increase in domestic demand as a result of so-called "wealth effect," and a shift in investment flows towards real estate activities, producing a decrease in the production of other goods and services to satisfy that demand)and the limited growth of productivity (also, among other reasons, due to this shifting effect), incompatible with the maintenance of a competitive position.

Though a readjustment was necessary, the data on the current situation show that the size of the sector is now actually below what could be considered normal levels, viewed in terms of its long-term evolution and as compared to the major economies in the European sphere. This makes it possible to argue that if the construction sector is not reactivated it will be difficult to recover previous employment levels, and that the development of another speculative bubble should be avoided.

The key question facing us now is to ascertain what the recovery of the construction sector in Spain will be like: will competitiveness in the sector be improved? Will there be investment in social infrastructure? Will there be a commitment to jobs? What seems clear is that if the sector banks on sustainable construction it will be much more likely to emerge from the crisis reinforced, but this is a decision that must be broadly supported, as construction's push and pull effects are so important that the commitment to sustainable construction and reconstruction must be jointly supported, and cannot lie only within the sector and its players.

2. NATIONAL POLICY FRAMEWORK FOR SUSTAINABLE CONSTRUCTION

2.1. Overview of policies and the relevant legal framework

The development of a sustainable economy in Spain remains stuck at a more theoretical level than a practical one. While the foundations of what "sustainable development" should be in the future are being laid, emphasis is only being placed only on the environmental aspect of the country's economic development, while the social aspect is being passed over, this being great forgotten factor in the entire legislative and regulatory package currently surfacing.

The directives coming from Europe are growing more and more rigorous and demanding, and their transposition into Spanish law forces our industry to demonstrate efforts made by the sector and to report on its strict compliance with the European regulatory

framework to optimise production processes through the sustainable use of natural resources and waste reduction.

However, there is a lack of coordination between the different levels of Public Administration when it comes to developing the regulatory framework governing sustainable construction. Spain's Autonomous Communities (or regions) are responsible for implementing environmental legislation passed at the national level, but there is no coordination between them when they draft their own legislation, which gives rise to a series of bureaucratic obstacles and administrative burdens placed on companies that operate throughout the country.

Therefore, while efforts have been undertaken to address the environmental aspect, with varying degrees of success, the same cannot be said with regards to the social aspects: industrialisation has the potential to promote, directly or indirectly, a variety of social objectives, such as job creation, the eradication of poverty, gender equality, labour standards, and increased access to education and health care. In this regard the policy objective should be to promote these positive effects, and to limit or eliminate the negative effects of industrial activities on social development.

As for the regulatory sphere, exclusively, in Spain there is a massive volume of legislation – national, regional and provincial, and local – governing various areas that it is impossible to reproduce here. However, one of the issues that was highlighted with the greatest interesting during the day for the dissemination of results was the need to evaluate this abundance of legislation regarding sustainable construction in Spain, and not only to verify compliance with it.

2.2. Relevant institutional initiatives in support of sustainable construction

Below are indicated the most important initiatives at the national level in support of sustainable construction. There is an enormous number of regulations related to this issue, but their implementation is not coordinated at the different governmental levels, which represents a significant barrier to achieving the uniform development of sustainable construction in Spain.

2014-2020 National Energy Efficiency Action Plan

This plan features measures such as the Efficient Vehicle Incentives Programme (PIVE), Programme for the Energy Retrofitting of Existing Buildings in the Residential and Hotel Sector (PAREER), the *PIMA Aire* Environmental Promotion Plan, for the acquisition of commercial vehicles; the *PIMA Sol* Plan for the energy retrofitting of hotel facilities, and

the State Development Plan for Housing Rentals, Building Restoration and Urban Regeneration 2013-2016.

2011-2020 Energy Savings and Efficiency Plan

As a result of the obligations set down in Art. 4 of Directive 2006/32/EC on the efficiency of the final use of energy and energy services, and the *2020 Strategy*, the Ministry of Industry, Tourism and Trade has drawn up this Plan, which includes an annex quantifying the energy savings obtained in 2010 as compared to 2004 and 2007, in accordance with the European Commission's methodological recommendations on the measurement and verification of savings.

The IDAE (Institute for Energy Diversification and Savings), attached to the Ministry of Industry, Energy and Tourism, handled 413 million euros in aid for Energy Efficiency between May 2015 and May 2016 as an entity managing subsidy plans supported by the National Energy Efficiency Fund and the Building Energy Retrofitting Programme (PAREER-CRECE).

The IDAE has taken stock of this 12-month period, and concluded that the programmes are proving successful. In total, the budget managed comes to 413,216,421 euros.

National Energy Efficiency Fund

Lines of action and Grants:

- Municipal outdoor lighting grants
- SME and large industrial company programme
- Modal shift and transport mode support programme
- Subsidy programme for energy efficiency actions in the railway sector
- Subsidy programme for energy efficiency actions at desalination plants.
- Contributions to the National Energy Efficiency Fund.
- "Energy Efficiency 2015" Communication Campaign

These programmes will allow Spain to meet the savings targets set down by Energy Efficiency Directive 2012/27/EU, at the same time providing an important stimulus for investment and employment.

The funding of these programmes proceeds from the National Energy Efficiency Fund and the 2015 General State Budget, and may also be co-financed by the European Regional

Development Fund (ERDF) under the 2014-2020 Operational Programme for Sustainable Growth.

3. MAIN TRENDS IN THE SUSTAINABLE CONSTRUCTION ECONOMY

3.1. Economic trends in the construction sector

Current situation: below normal activity levels

In 2016 the construction sector represents 4.45%¹of Gross Value Added (GVA) over the GDP in the first quarter, representing a variation of -0.23% with respect to the same quarter last year. These figures constitute a decrease compared to 2015, when it stood at 5.03%. This last data shows only the most recent developments in the sector; after the relative weight of its GVA in the last two decades peaked in 2006 (11.7% of the total), it has seen a sharp and continuous drop in the wake of the economic crisis.

In fact, construction has been the economic sector hardest hit by the crisis. Since 2007 approximately 1.4 million jobs have been lost in this sector, including those corresponding to auxiliary industries, along with some 250,000 companies, over 30% of those existing in that year.

A long-term analysis of the sector's figures in terms of GVA and employment makes it possible to trace what would be normal levels of construction activity: around 7-9% of GVA, and around 7.5 -10.5% of employment. In both cases, the current data is below normal, especially with reference to employment, which in 2013 saw the lowest figure in the entire EPA (Encuesta de Población Activa, or Survey of the Working Population) series: 5.8%.

During the 2007-2014 period Spain suffered a 2.5% rise in unemployment each year. During this period 58% of the employment destroyed was in the construction industry.

Another example illustrating this drop is cement consumption, which at the close of 2015 stood at 11,408,287 tonnes,² 5.3% more than in 2014. In 2016, however, cement consumption in Spain has fallen by 3.3%, measured in April, coming in at 946,329

¹Source: Data provided by the CNC (Confederación Nacional de la Construcción), the employers association for the construction sector.

²Source: Data provided by the Fundación CEMA, a joint organisation at the state level and of a tripartite nature, comprised of the cement industry employers' organisation, OFICEMEN; and the sector's two major unions: CCOO de Construcción y Servicios and UGT-FICA, Federación de Industria, Construcción y Agro.

tonnes, 32,478 tonnes less than a year ago. As noted, we are at the same cement consumption levels as in 1965.

Figure 1 – Cement consumption trend. 1965-2016 (Tonnes)

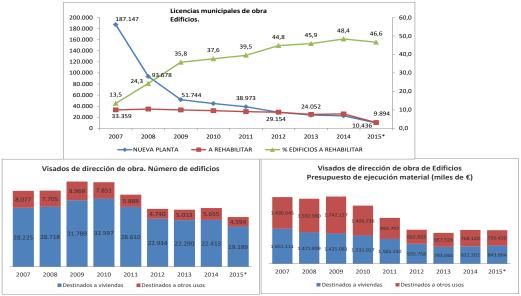
Source: OFICEMEN

Building and civil works

In 2014 the building subsector represented 78% of the total nominal value of construction production, while civil works accounted for the remaining 22%. Within the building subsector during that year refurbishment and maintenance were those accounting for the greatest percentage of the total (32%), followed by residential and non-residential building, at 27% and 19%, respectively.

The rehabilitation and refurbishment segment, of both buildings and housing, has seen the least decline within overall construction activity. It also constitutes one of those with the greatest potential to resuscitate activity, given the demographic trends in Spain and the need for it to adapt its housing and facilities to new environmental, energy and social demands.

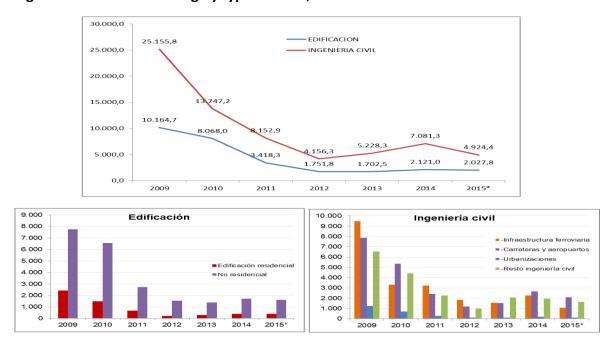
Figure 2 – Building permits and rehabilitation activity licenses



Permits: data until May 2015. Licenses: data until September.

Source: Report 02/2016 on "The role of the construction sector in economic growth: competitiveness, cohesion and quality of life." Economic and Social Council of Spain, (CES). 2016.

Figure 3 – Official tendering by type of work, 2009-2015 *



^{*} Data until October

Source:Report 02/2016 on "The role of the construction sector in economic growth: competitiveness, cohesion and quality of life." Economic and Social Council of Spain, (CES). 2016.

Characterisation of the business community

In 2015 the number of companies engaged in Construction in Spain stood at 405,849. During the crisis years, since 2008, the drop in this number for construction was the most dramatic of all classes of Spanish companies: 37.8% vs. an average decline of 8.9% in the number of companies in Spain. Thus, construction companies represented 13% of Spain's entire business community in 2015, as compared to 18% in 2008.

In 2015 the number of companies in Spain rose, but the number of construction companies fell again, by 0.5%.

The destruction of the business community affected to varying degrees the different construction-related branches, and did not affect businesses of different sizes in the same way.

Table 1 – Construction companies by size*, 2008-2015 (number and percentage)

Total Construction Companies Total 622,096 405,849 100.00	100.00		
Total 622,006 405,840 100,00	100.00		
10tal 022,030 403,843 100.00		-34.8	-0.5
Small 616,938 404,655 99.2	99.3	-34.4	-0.6
Microbusinesses 574,633 393,192 92.4	93.4	-31.6	-0.5
Medium-sized 4,424 1,014 0.7	0.6	-77.7	3.3
Large 734 180 0.1	0.1	-75.5	-7.2
A) Building Construction			
Total 359,563 223,476 100.00	100.00	-37.8	-1.3
Small 356,630 223,106 99.2	99.4	-37.4	-1.3
Microbusinesses 331,951 218,423 92.3	93.6	-34.2	-1.3
Medium-sized 2,518 329 0.7	0.6	-86.9	4.8
Large 415 41 0.1	0.0	-90.1	-2.4
B) Specialised Construction Activities			
Total 245,063 168,639 100.00	100.00	-31.2	1.1
Small 243,369 168,068 99.3	99.4	-30.9	1.1
Microbusinesses 226,816 162,257 92.6	93.2	-28.5	1.1
Medium-sized 1,495 486 0.6	0.6	-67.5	4.7
Large 199 85 0.1	0.1	-57.3	-3.4
C) Civil Engineering			
Total 17,470 13,734 100.00	100.00	-21.4	-6.9
Small 16,939 13,481 97.0	97.5	-20.4	-6.9
Microbusinesses 15,896 12,512 91.0	91.2	-21.3	-6.8
Medium-sized 411 199 2.4	2.0	-51.6	-2.5
Large 120 54 0.7	0.5	-55.0	-15.6
Total Companies (CNAE)			
Total 3,422,239 3,186,878 100.00	100.00	-6.9	2.2
Small 3,391,471 3,164,380 99.1	99.2	-6.7	2.2
Microbusinesses 3,219,393 3,053,761 94.1	94.5	-5.1	2.2
Medium-sized 24,303 17,431 0.7	0.7	-28.3	2.7
Large 6,465 5,067 0.2	0.2	-21.6	0.6

^{*} An effort was made to follow European Commission Recommendation 361/2003 to classify companies by size based on their numbers of workers, but large companies were considered to be those with more than 200 workers (not 250) because the DIRCE (Central Business Directory) does not provide this information.

Source: Report 02/2016 on "The role of the construction sector in economic growth: competitiveness, cohesion and quality of life." Economic and Social Council of Spain, (CES). 2016.

The innovation of processes and products as key to the sector's permanent competitiveness

Despite some progress in recent years, the data on R&D show a lower weight of these activities in the construction of that they have in the whole economy. According to the INE's R&D statistics of 2014 (Instituto Nacional de Estadística - Statistics National Institute), in that year the branches of activity within the construction sector would have contributed 3% of the companies to the Spanish total in R&D, 2.8% of the staff and 1.9% of expenditure. Such contributions are below the weight of the sector in the economy.

The materials and related industries would, on the other hand, be above the total in these same parameters, although of course with considerable margin to increase them.

It is not a question of the lack of research and innovation in construction activity, but the intramural R&D activity of firms in the construction sector is less frequent than that of the total productive sectors.

In the innovative activity of companies, construction also shows values lower than those of the economy as a whole, and especially those of the manufacturing industry.

The main indicators of technological innovation of the companies in Spain indicate a delayed position of the construction. And the weight of new and improved products in the sector's total turnover was lower than in industry and services. Finally, the total expenditure on innovation would be about 30 times lower than in industry and services, which gives a full idea of this delay.

These indicators vary according to the size of the enterprise, so that both the weight of innovative firms and the intensity of innovation are greater in the companies segment of more than 250 workers.

In non-technological innovation, the weight of innovative firms in construction is as low as in the case of technology, and differences in behavior by size are also seen.

However, the process of internationalization of the Spanish construction industry would not be viable without a high technological capacity and high productivity capable of sustaining that position in competitive markets. In this sense, we can speak of signs of positive change in the sector in terms of innovation.

There is ample room for improvement in innovative construction activity, which must assume major challenges for the future, almost all of which require a high level of innovation and application of new technologies.

The factors that may be limiting greater innovative intensity are basically structural, associated with the characteristics of the sector and the very nature of the activity. Construction is a heterogeneous and fragmented sector, which includes many professions, with high dependence on economic cycles, relatively less skilled labor force and high mobility and work in external conditions, among others.

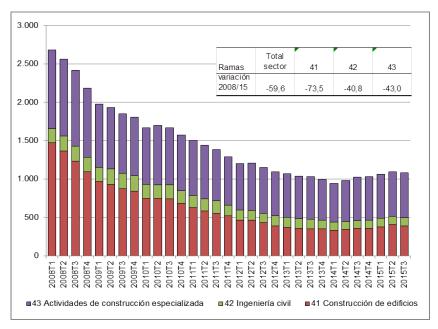
3.2. Employment trends in the Construction sector

The employment trends in the Construction sector depend upon the activity or specific sub-sector in question. Activities related to the construction of buildings, and also specialised construction require large numbers of employees, and feature a greater number of temporary jobs associated with the work, and jobs requiring little or moderate skill levels, with a clear predominance of small businesses and a greater frequency of self-employment. In contrast, civil work activities require less employment, and structures more often featuring permanent jobs, along with a prevalence of technical occupations requiring intermediate or advanced skill levels, and larger companies. The presence of self-employment, meanwhile, is nominal.

The employment trend in the sector has been sharply downward in the three areas, but especially in the case of Building Construction, which in 2015 had 73.5% fewer jobs than in 2008.³ In the Civil Engineering field there was a 40.8% decrease, and in Specialised Construction the drop was 43%.

³ The omission of the year 2007 in the series and the reference to the 2008-2015 period is explained by the change at the CNAE (National Classification of Economic Activities), which limits the comparability of data prior to 2008 in the case of different activity branches.

Figure 4 – Construction employment by area of activity, 2008-2015 (Thousands of people, quarters; % variations in the overall period)



Source: Report 02/2016 on "The role of the construction sector in economic growth: competitiveness, cohesion and quality of life." Economic and Social Council of Spain, (CES). 2016.

Professional profiles

Although given the current situation in the sector it seems that all occupations, in general, will undergo modifications in order to boost production and enhance professionalism, these arethejob profiles most affected in terms of energy savings, according to the Report on the Status Quo of Build Up Skills:⁴

- Roofer
- Insulation installer
- Roofer and storm water network installer
- Construction worker
- Joint sealer
- Quality and environmental control technician
- Aluminium carpentry and PVC fitter
- Authorised hot water and climate control systems installer
- Photovoltaic solar installations fitter

⁴ Build up Skills is a strategic initiative under the auspices of the Intelligent Energy Europe (IEE) programme, which was launched in 2011, but which is still in force through Build up Skills *Construye 2020* (Build 2020). More information at www.buildupskills.eu

However, the occupations with the greatest need for modernisation in this area are:

- Foreman
- Construction worker
- Plumber
- Heating, hot water and climate control installer
- Gas fitter
- Quality and environmental control technician
- Electrician
- Insulation installer

3.3. Qualification and training needs

The Build Up Skills project identifies the following occupations as those most in need of training in the Energy field:

- Joint sealer
- Aluminium carpentry and PVC fitter
- Solar heating systems installer
- Construction worker
- Installer of heat generation systems harnessing geothermal energy
- Installer of heat generation systems drawing upon biomass combustion
- Plumber
- Photovoltaic systems installer
- Authorised hot water and climate control systems installer
- Roofer and storm water network installer

It also identifies the skills with regards to Energy Efficiency and Renewable Energy most in need of development through training:

- Aluminium carpentry and PVC: mainly the replacement of exterior carpentry
- External walls: isolation and the removal of thermal bridges
- Roofing: Insulation
- Partitions: insulation
- Hot water installations
- Plumbing installations
- Air conditioning installations
- Gas installations
- Electrical production equipment

- Electrical installations
- Electricity production

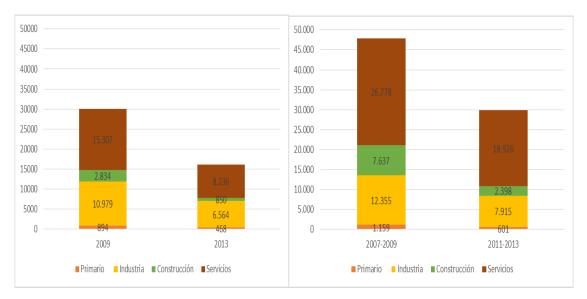
The progressive introduction of innovations in products and materials is altering the construction process, introducing new and greater requirements with regards to training and, in general, qualifications and professional skills in the sector.

Concern over the disappearance of jobs in the sector is due not only to the number of jobs lost, but also the fact that most of these jobs cannot be recovered, due to the high degree of specialisation. Job loss also entails the loss of technological knowledge. Moreover, during the period of maximum expansion in the construction field, the former idea of the general worker gave way to that of the specialised professional, making the training of workers during this period very specific. At present, however, companies are once again looking for workers with more general and versatile profiles.

3.4 Changes and innovations in the sustainable construction economy

In line with the decline in activity and the sheer number of companies due to the crisis, which was concentrated in some branches, the largest decreases in technological innovation, in relative terms, correspond to construction, at 79%.

Figure 5 – Innovative companies in Spain, 2009 and 2013. (Technological innovation, years, non-technological innovation, trienniums)



Source: Report 02/2016 on "The role of the construction sector in economic growth: competitiveness, cohesion and quality of life." Economic and Social Council of Spain, (CES). 2016.

Material industries and other related ones are, however, making more investment efforts.

In Spain the links between universities and technical schools and businesses have traditionally been very tenuous and, despite progress in recent years, continue to be weaker than those boasted by neighbouring countries.

Public-Private Partnerships

The development of the sector requires access to alternative funding sources, for which there are, essentially, two channels:

- Government taking on a more active role as a direct funder of projects
- More streamlined instrumentation, and with greater security for investors, for access to capital markets as an alternative and complementary funding source.

A Public-Private Partnership project must demonstrate conditions of safety and profitability that are difficult to achieve without the presence of strong public guarantees.

Life Cycle Assessment and Environmental Product Declarations: where the sector is headed, and where it should be.

The evaluation of products and services from a life cycle perspective is a growing demand by both public and private clients. The signals given by legislation, such as that of the European Commission and private clients, indicate that communications regarding environmental performance based on Life Cycle Assessmentsare a necessary tool for organisations seeking to compete in increasingly demanding markets.

Environmental Product Declarations (EDPs) represent a benchmark for public and private purchasing at the global level.

The European Commission is moving in the direction of considering environmental aspects based on Life Cycle Assessments to establish the purchasing criteria for the initiative of a Single Market for Green Products, featuring several Product Environmental Footprint (PEF) pilot projects. The PEF methodology uses an approach similar to that of the EPDs (Environmental Product Declarations), based on the same ISO 14025 standard, international LCA standards, and the International LifeCycle Data Reference System - ILCD) published by the Joint Research Centre (JRC).

With regards to **the cement industry**, in recent years Spain has invested heavily in R&D to produce different high-quality cementsdelivering great added value, internationally recognised in this regard. A very important role in this function has been played by the Instituto Español del Cemento y sus Aplicaciones (Spanish Institute for Cement and its Applications), or IECA.

3.5 Obstacles and barriers to the development of sustainable construction

Given that there is no clear definition of what sustainable construction is, as stated at the beginning of this document, actions being taken towards its development have a limited impact on key areas, such as reducing CO₂ emissions in the different sectors, and returns on investment. As a positive and significant effect, worthy of mention is the improved comfort enjoyed in homes and enhanced quality of life for those residing in them.

As for the incorporation of environmental aspects into the products used in the construction sector, there is much still to be done. Initiatives in this regard are scarce, and only through verified environmental information, based on the full Life Cycle Assessment of the building or project is it possible to have an accurate assessment of the building's environmental performance during its construction, use and end of life (waste generation) phases. This statement needs two points of support for its full development: one is technological, which through BIM (Building Information Modelling) technology can make possible a comprehensive calculation of the building's environmental performance over the course of its life cycle; and, secondly, the political or administrative aspect: governments, through current and developing legislation (public procurement, implementation of the CTE [Technical Building Code], market surveillance, etc.) can publicise this environmental performance.

Three types of barriers to the development of sustainable construction in Spain have been identified: economic, administrative and cultural.

Economic barriers

- Scant public investment: it has gone from 4.6% of the GDP in 2007 to 2.1% in 2014.
- The credit crunch has led to a decline in public investment, which impedes the development of major infrastructure for residential areas or neighbourhoods.
- The limited effectiveness of the Juncker Plan: government investment entails the calculation of increased deficits.
- The promotion of green purchasing through specific methodologies: fomenting BIM (aforementioned) and LIM technology.

- Construction projects in Spain today, by their very nature, and the jobs linked to them, will not be able to generate as many jobs as those that were destroyed.
- Most companies in the sector in Spain are small businesses, which struggle to obtain funding and boost their workers' skills and qualifications.
- The limited demand for energy retrofitting by end customers (that is, owners), who must cover at least part of the investment with their own funds. Due to the trying economic situation, the lack of private funding, deficient environmental awareness, etc., there is only investment in those elements for which there are subsidised programs.
- Spanish companies will see reduced profits if the economic dynamic remains this way, and they will continue to take only those actions mandated by EU legislation.

Administrative barriers

- The lack of coordination between the various actors and authorities charged with responsibilities in the area of construction, in general, and sustainable construction, in particular. The role of all the public authorities involved and the various actors engaged in the sector is key, but difficult to coordinate.
- The need for genuine state viability plans for refurbishment and investments in infrastructure and public works.
- There are administrative barriers between EU countries: national regulations are not coherent, which means that there may be problems in the marketing of certain products depending on which EU countries one is dealing with. It would be desirable to establish a minimum requirement for them, and for them to be consistent, entailing proven levels of effectiveness and efficiency.
- Barriers have also been detected in the sector when Spanish workers go to work in other EU countries. In order to resolve this situation in the sector, the Fundación Laboral de Construcción maintains collaboration agreements with agencies and community organisations from other countries so that Spanish workers in the sector can train and work in other European nations.
- The limited access of SMEs to training: a significant portion of SMEs in the sector are unaware of the channels to obtain training subsidies, and many small and medium-sized companies do not know what their needs are or the direction in which they are headed. Access to training is limited by the insufficient dissemination of plans, as well as a lack of adaptation to their needs.
- A lack of guidance: there is not enough demand for training by the least skilled workers, and, when there is training, it is inadequate. The main problem is reaching out to the least skilled and qualified workers, because they do not know what the sector is demanding, how it is evolving, or where to find information.

- As a result of the crisis, many workers have been out of the construction sector, and during these crisis years two important directives were transposed via the Technical Building Code and its revision in 2013. Therefore, they are not accustomed to working in accordance with the new requirements introduced.
- Little government support: the measures taken to heighten consumer awareness have had a limited impact, and the economic measures have been weak.

Cultural barriers

- In the construction sector there is a clear polarisation amongst workers: on one side, a group of highly skilled and trained professionals and, on the other, workers lacking in these areas. Therefore, it has been suggested that it would be desirable to require training in energy efficiency, above all to reach out to the workers with the least training, who, for different socio-cultural reasons, often fail to receive it.
- Motivation: Although training makes it possible for one to improve his qualifications and acquire new skills, this is often not enough to motivate workers to make the effort required. Hence, the mandatory accreditation of qualifications stands out as an important driver of progress.
- The languages of immigrant workers: The construction industry employs many foreign workers. While many of them knowSpanish, there is a significant proportion of workers who do not, hindering their access to training offered.
- The myth that the most sustainable construction means lightweight construction, or the myth that construction employing materials or products obtained via processes free of CO₂is the same as the most sustainable construction. To overcome this barrier it is necessary to make the use of Life Cycle Assessments widespread as a reliable sustainability evaluation tool. In this regard Environmental Product Declarations play an important role, as discussed above.
- Not making incomplete comparisons between materials. There must be a newfound stress placed upon architectural plans, on comprehensive construction solutions.
- Deficient ecological awareness in the country in general (shared by other countries).
- A lack of market demand for sustainable construction: end customers are unaware of the benefits entailed by sustainable construction, and are mainly motivated by property prices.
- It is very important to promote smart urban approaches consonant with the concept of the Smart City as an integrative way to address sustainable construction in

urban development, thereby meeting the real estate sector's demand for properties and enhancing citizens' quality of life.

4. SOCIAL DIALOGUE AND SUSTAINABLE CONSTRUCTION

4.1. Employment relations systems in Spain (in general, and for the Construction sector)

Unlike the scenario characterising much of the Spanish employee relations system, the construction sector features a well-defined model, which began in 1988 with the Interprofessional Framework Agreement for Construction (AMIC), and has continued to be developed in successive accords and general collective agreements in the sector. The AMIC was structured around three elements:

- A general agreement at the national level, of a permanent nature;
- A State agreement, of a dynamic and flexible nature, containing the specific application of inter-confederal agreements on collective bargaining and other specific matters agreed to in the framework of inter-confederal social or industry dialogue;
- Provincial or Autonomous Community agreements, featuring the specific implementation of higher-level agreements, as well as matters peculiar to the territorial scope they affect.

Business organisations

In the field of construction and its related activities the creation and consolidation of business entities has been shaped by the negotiation of General Agreement I governing the Construction Sector (I CGSC).

This process made possible:

- The consolidation of the state construction employers association as a representative of the industry's businesspeople, with the entity being assigned certain prerogatives in this capacity.
- It also gave rise to other business formulas and the creation of new collective bargaining forums.

At first the employer associations formed part of the Confederación Nacional de la Construcción (CNC). The signing, in April of 1992, of the 1stCGSC marked the beginning of a new era in labour relations. Numerous business entities linked to the sector decided

that they did not feel represented by the CNC, concluding that their interests in negotiations with the CGSC had not been taken into account.

This process gave rise to Oficemen, the employers association for the industries of cement and concrete and their by-products; gypsum, lime, plaster, tiles and ironwork. However, shortly after all the business organisations had broken away from construction, they once again regrouped. Thus, in 1991 the **Confederacion Español de Asociaciones de Fabricantes de Productos de Construcción**(National Confederation of Construction Product Manufacturers), or **CEPCO**, was formed. CEPCO is, in turn, part of the CNC.

The **Confederación Nacional de la Construcción (CNC)** constitutes the umbrella organisation of the construction sector in Spain, comprising the vast majority of business organisations in the sector. Founded in 1977, it aims to represent the sector before public authorities and other national and international, public or private entities.

There was, moreover, the **Confederación Española de Empresas de la Madera**, or Spanish Confederation of Wood Businesses (**CONFEMADERA**), a non-profit organisation founded in 1977. This was the business organisation responsible for representing, promoting and defending the professional interests of the associations and federations that made it up and, by extension, the entire set of businesspeople in the wood sector. Due to the effect of the economic crisis on the wood and furniture industry, this association disappeared, which hinders collective bargaining processes in these industries, as it is necessary to negotiate with different employer associations defending individual interests.

Joint industry entities

Perhaps the most novel element that collective bargaining has yielded, along with the extension of State Conventions to all subsectors, has been the constitution of joint entities arising from it.

At present there are three sectors (Construction, Wood and Cement) that have created a Labour Foundation, relying on its specific collective bargaining efforts. This is a model that is being imitated in other productive sectors of our country, as it is considered a useful element in the democratisation of employee relations and for the achievement of new union objectives.

The Fundación Laboral de la Construcción (FLC)is a joint, non-profit body based on a culture of consensus and made up of the sector's most representative entities:

Confederación Nacional de la Construcción (CNC), CCOO de Construcción y Servicios, and the Federación de Industria, Construcción y Agro (FICA-UGT).

The Fundación Laboral de la Construcción harbours has its ends the creation and management of one or more funds – sustained by contributions from businesspeople, employees and third parties – to provide services such as vocational training, occupational risk prevention and the promotion of employment for the benefit and enjoyment of those who provide services or belong to the general Social Security system in this sector, at the workplaces of the companies that fall within the scope of the General Agreement for the Construction Sector (CGSC).

Its primary purpose is to create a framework of stable and fair labour relations and to provide services to workers and businesses.

To meet these goals the Foundation supports various activities, including:

- All types of training activities, the implementation of training plans, contracts/programmes, as well actions complementing training actions.
- Assistance in the development of procedures for the validation, accreditation and certification of training.
- Collaboration with the corresponding State and Autonomous Community entities for the methodological and operational determination of qualifications and their content with reference to skills.
- Collaboration with the government to structure the different training, guidance and employment promotion initiatives in the construction sector.
- The issuing and monitoring of a professional identification document for all construction sector workers.
- The organisation and tracking of visits to worksites to improve prevention efforts by businesspeople and workers.

<u>The Fundación del Cemento y el Medio Ambiente</u> (Cement and Environment Foundation), or (CEMA), was constituted in late 2005 under the auspices of the Agrupación de Fabricantes de Cemento de España (OFICEMEN, or Spanish Cement Manufacturers Association) and the unions FECOMA-CCOO and MCA-UGT (currently CCOO de Construcción y Servicios and the Federación de Industria, Construcción y Agro (FICA-UGT).

The initiative to establish this foundation arose from the Energy Reclamation Agreement signed in 2004 between the cement employers association and the major unions to

promote this environmental practice, as the cement industry considers the environment a strategic variable in its management and the use of waste as the best option to reduce CO₂emissions.

The first Energy Reclamation Agreement lasted four years (from 2004 to 2008), and was extended for another. In December of 2010 the three organisations agreed to sign a new Agreement for the sustainable use of resources, environmental protection, public health, and the Spanish cement sector's improved competitiveness.

In general terms, the purpose of the Foundation is to pursue actions aimed at raising awareness and creating a culture reconciling economic and social progress with a respect for the environment and natural resources, ensuring the health of workers and citizens and improved quality of life for both the present and future generations.

<u>La Fundación Laboral de la Madera y el Mueble</u> (Labour Foundation of Wood and Furniture), or FLMM

The 3rd State Convention on Wood (2007-2011) called for the creation of a working group to study the founding of a Labour Foundation to feature a set of core actions: training, occupational risk prevention and promotion of the wood sector itself.

This work was completed in 2012 with the signing of the 4th State Convention, which stated that: "The FLMM is the sector's joint body, its purpose being to ensure the provisioning of services to workers and businesses within the scope of the State Convention, affecting all of Spain, and governed by its own statutes."

The Foundation's objectives include:

- Promoting vocational training in the sector
- Research, development and actions to improve occupational health and the prevention of occupational hazards.
- Bolstering employment
- The growth of competitiveness and the development of the sector through improved working conditions
- The taking of actions aimed at the personal, professional and social development of workers in the wood sector.
- The promotion of the wood and furniture sector as an industry important to the country's economy

Another significant initiative in the field of sectorial social dialogue is the <u>Foro del ciclo integral de la construcción</u> (Comprehensive Construction Cycle Forum). The employers association and unions from the construction sector created the Forum in 2013, which is made up of the social agents representing the construction sector in Spain: the CNC (Confederación Nacional de la Construcción) employers association, CCOO de Construcción y Servicios, and the Federación de Industria, Construcción y Agro (FICA-UGT).

The Forum decided to join forces with the aim of proposing solutions to the crisis and achieving a reduction in unemployment, in the short and medium term, and generating wealth for the Spanish economy so that it can meet the commitments it has undertaken with both the European Union and Spanish society. The Forum considers it essential to safeguard the competitiveness of what remains of the construction sector in Spain, not only with a view to economic growth and employment in general, but also to ensure the sector's sustainability.

The Forum holds that "with the support of the appropriate policies to stimulate demand and promote investments, Construction could significantly contribute to the creation of jobs, increasing its activity in the field of infrastructure and other promising areas like rehabilitation, regeneration and urban renewal."

In conclusion, it can be said that in Spain the Social Dialogue in the Construction sector constitutes an example of good performance, as illustrated by the aforementioned experiences. However, it represents a bipartite social dialogue between the sector's employer and business organisations, with little support by the Public Administration (or the different governmental levels: national, regional, provincial and local).

4.2. The role of social dialogue in support of the sustainable economy and sustainable construction

Sustainable construction is one that, throughout its life cycle, addresses in a balanced way the three dimensions – social, economic and environmental – of sustainable development.

Social agents play a dual role in the development of sustainable construction: firstly, through their participation at the technical level, in the legislative tools and technical codes that define sustainable construction, and, secondly, as guarantors of respect for ethical standards, viable social environments, citizens' participation, occupational health and safety, innovative financial models, the improvement of environmental conditions,

and the dissemination of knowledge in the academic, technical and social spheres. It is in these latter areas where the role played by social partners is even more important than in the former.

Training for sector workers is vital, as is the recognition and certification of this training being carried out in Spain. A sustained commitment must be made in this area.

Social agents, meanwhile, continue to support and promote actions so that sustainable construction plays an important role, facilitating the sector's restructuring.

An example of a good practice undertaken by the sector is the <u>Observatorio Industrial del Sector de la Construcción</u> (Construction Sector Industrial Observatory), created on May 7, 2009 through the signing of a collaboration agreement by the la Fundación Laboral de la Construcción, the Federación Española de Entidades de Innovación y Tecnología (Spanish Federation of Innovation and Technology Entities), or FEDIT, and the Ministry of Industry, Tourism and Commerce. As a result of this initiative various studies of the Construction sector were completed, in 2009, 2010 and 2011.

This initiative, unfortunately, has been discontinued. It represented, nevertheless, one of the most important tripartite social dialogue efforts undertaken in Spain on behalf of the construction industry.

The employer and union organisations that have contributed to the drafting of this report believe that it is impossible to make a clear commitment to sustainable construction in the country without governmental support. Ephemeral examples, as mentioned, like the Observatorio Industrial del Sector de la Construcción, lead them to conclude that this is the right approach, but these organisations do not know how to involve and engage the government in the social dialogue necessary to promote sustainable construction.

It is imperative for these organisations to create forums for debate and dialogue with the country's different Public Administrations, in order to effect a commitment to Sustainable Construction. The greatest challenge is to verify what governmental authorities are willing to cooperate, and how stable coordination between them can be achieved. It is also essential to create discussion forums in order to foster the cohesive development of Sustainable Construction in Spain.

4.2.1. Other supports for the sustainable economy

Sustainable Economy Strategy and Sustainable Economy Law

In Spain we have a **Sustainable Economy Strategy**, approved in November 2009, which articulated an extensive program of reforms, whose main objectives are: increased investment in research, development and innovation; the promotion of activities related to clean energy and energy saving; the transposition of the Services Directive.

The sustainability pursued is of three types:

- Economic, based on improving competitiveness, innovation and training;
- Environmental, taking advantage of the essential rational management of natural resources to promote new activities and new jobs, and
- Social, pursuing equal opportunities and social cohesion. Much of its content will appear in other legal and regulatory texts.

The **Law of Sustainable Economy** of March 2011 is one of the most important pieces of this Strategy as it addresses many of the changes that are necessary to achieve those objectives. This Law aims, as a fundamental objective, to lay the foundations for the implementation of a model of development and growth of a more sustainable economy.

The Law of Sustainable Economy is based on three main pillars: improving the economic environment by establishing a stable and predictable regulatory framework with low administrative burdens, boosting competitiveness; and the commitment to environmental sustainability.

According to an opinion on the Draft Economic Law of the ESC (Economic and Social Committee of Spain), the objectives of the Law of Sustainable Economy are positively valued as the desire to seek a short, medium and long term horizon .

The ESC understands that the implementation of a law as ambitious as this one should have management, monitoring, control and supervision instruments in the presence of public authorities and economic and social actors, as well as the resources that are necessary, beyond the necessary coordination between Administrations, all in order to facilitate the assessment of impacts on the business fabrics and on the greater efficiency of Public Administrations.

In the opinion of the ESC, sustainable development must be a genuine State policy, it must have the explicit support of a large majority of the groups that make up the Spanish political landscape, the social partners and the citizens. Sustainable development policies are medium and long term and require broad integration.

The Economic and Social Council wants to draw attention to the practically null development of the social dimension of the growth pattern that the Law aims to promote. Thus, although the definition of sustainable economy included in the text establishes that the development model, in addition to economic growth and environmental sustainability, should promote quality employment, equal opportunities and social cohesion, there are no more than sporadic mentions of these objectives throughout the article. In addition, the text should specifically address, and set out guiding principles, strategies and measures, in areas crucial to achieving long-term social sustainability, particularly in relation to the social protection system, improvement of the education system, with the strengthening of the health system, the articulation of demographic policies, the creation of quality employment, the promotion of rural and territorial development and agriculture as a strategic sector, and the promotion of equal opportunities and social inclusion .

The Council also considers that it is necessary to include the impetus for industrial development and a model of agriculture and food that is sustainable from the social, economic and environmental point of view, which generates employment and which helps the balanced settlement of the population in rural areas, among the principles that inspire this Law, in a coordinated and articulated way with horizontal actions.

In environmental matters, the opinion notes that there is an absence of aspects relating to waste management and water resources, as well as the agricultural sector, taking into account the importance of this sector in the environmental field. The ESC also understands that no energy technology should be discriminated against at the outset and that the economic and social debate should be deepened on the basis of the appropriateness of each one.

Finally, in the area of housing, the Council considers that the approach should be more ambitious and address a more comprehensive approach through a sustainable urban rehabilitation law that regulates all relevant aspects to improve the sustainability of urban and rural environments, including dimensions such as social cohesion and emission reductions. In addition, in the opinion of the ESC, all public administrations should redouble their investment efforts in the area of housing rehabilitation and consolidated urban fabric.

Environmental Delegate and the Environment Commission

In Spain there is the environmental delegate, who is the subject of rights and obligations in environmental matters in the company or work center, which is a member of the works council or delegate of staff. In the event that this designation is not possible, the delegate of prevention with environmental competencies may be provided.

The competencies and faculties of the delegate of the environment are:

- Information: receive environmental information and documentation.
- Advice: receive external advice to the company.
- Inspection: of workplaces, procedures and records and communication of results to workers.
- Monitoring: compliance with environmental obligations, objectives and targets.
- Prior consultation and in good time of the significant actions and commitments undertaken by the company.
- Training: specific and provided by the company.
- Communication: with the company and with the workers.
- Time credit system
- Guarantees against reprisals or discrimination in the exercise of their functions.
- Proposal: to adopt measures to prevent environmental risks and improve environmental performance.
- Complaint: before the competent authorities in this matter.
- Work stoppage or suspension of activities: in case of serious and imminent risk to the environment.

In companies with sufficient volume and resources, an environmental commission can be created. It is a joint body with representation of workers and of the company for environmental issues. Its functions will be:

- Promote the improvement of the environmental performance of the company.
- Participate in the identification and evaluation of environmental risks.
- Participate in the development and evaluation of environmental policies and action plans.
- Participate in the implementation and operation of the measures adopted for the environmental sustainability of the company.
- Participate in the implementation and regular operation of environmental management systems.

- Report on new techniques and technologies in relation to their environmental effects.
- Report on training plans.
- Access the necessary information and documentation.
- Propose the presence of experts outside the company.

An example of good environmental practices in the construction sector is the II Agreement for the sustainable use of resources, protection of the environment, health of people and improvement of the competitiveness of the Spanish cement sector.

This agreement was signed on January 14, 2014 by the Cement Manufacturers Association of Spain, OFICEMEN, on behalf of the companies in the sector, and on the other hand, by MCA-UGT and FECOMA-CC.OO. on behalf of the workers concerned.

The signatory parties consider it a priority to make economic and social progress compatible with respect for the environment and natural resources and with the guarantee of workers' health in order to improve the quality of life. The main objective of the Agreement is to collaborate jointly in the development of initiatives that promote the sustainable use of resources, the protection of the environment and human health, thus achieving a continuous improvement of the competitiveness of the Spanish cement sector.

4.3. The position of social agents with respect to the economy and sustainable construction

Government is not making a commitment to Sustainable Construction through the instrument of Social Dialogue. Although it is managing the European funds allocated for its development and undertaking other kinds of initiatives that encourage it, it is employing its own approach.

The stances of union and employer organisations involved in the development of Sustainable Construction in Spain centre on promoting Life Cycle Assessments and Environmental Product Declarations.

For these organisations the evaluation of products and services from a life cycle perspective is a growing demand, and one that promotes the development of Sustainable Construction. In addition, the disclosure of environmental performance based on Life Cycle Assessments is a necessary tool for organisations seeking to compete in increasingly demanding markets, as it is the direction in which Sustainable Construction is headed.

EPDs (Environmental Product Declarations) present the environmental profile of a product or service through quantified environmental data, in accordance with the applicable European and international standards. These statements provide, in a transparent and verifiable manner, information on products' environmental performance throughout their life cycles. In addition, DAPs make it possible to highlight products that respect the environment, offering relevant, transparent, comparable and verified information.

In addition, as stated above, employer and union organisations consider it essential to create forums for debate and dialogue with the different Public Administrations. The main challenge is twofold: first, to ascertain how it is possible to organise stable coordination between the different Public Administration entities; and, secondly, to create fields of discussion for the coherent development of Sustainable Construction in Spain.

4.3.1. Drivers and barriers for the social dialogue

The main drivers for social dialogue in construction sector are in Spain are:

- A well-defined model of labour relations which began in 1988, meaning an example for other sectors in Spain.
- Creation and consolidation of business entities, which also gave rise to other business formulas and the creation of new collective bargaining forums.
- The constitution of joint entities for different issues in the sector: Training and H&S; Cement and Wood. This model is being imitated in other productive sectors in Spain, as it is considered a useful element in the democratisation of employee relations and for the achievement of new union objectives.
- The dual role that social agents play in the development of sustainable construction: firstly, through their participation at the technical level, in the legislative tools and technical codes that define sustainable construction, and, secondly, as guarantors of respect for ethical standards, viable social environments, citizens' participation, occupational health and safety, innovative financial models, the improvement of environmental conditions, and the dissemination of knowledge in the academic, technical and social spheres.
- Social agents support and promote actions so that sustainable construction plays an important role, facilitating the sector's restructuring after the crisis.

The main barriers for social dialogue in construction sector are in Spain are:

- The disappearance of an employer organization (as Confemadera) undermines the functioning of the model, in a so well-defined model of sectoral labour relations.
- The Social Dialogue in the Construction sector constitutes an example of good performance. However, it represents a bipartite social dialogue between the sector's employer and business organisations, with little support by the Public Administration (or the different governmental levels: national, regional, provincial and local).
- It is impossible to make a clear commitment to sustainable construction in the country without governmental support. There is a need to know how to involve and engage the government in the social dialogue necessary to promote sustainable construction.

It is imperative for the organisations participants in this project to create forums for debate and dialogue with the country's different Public Administrations, in order to effect a commitment to Sustainable Construction. The greatest challenge is to verify what governmental authorities are willing to cooperate, and how stable coordination between them can be achieved. It is also essential to create discussion forums in order to foster the cohesive development of Sustainable Construction in Spain.

5. GUIDELINES FOR SOCIAL DIALOGUE IN SUSTAINABLE CONSTRUCTION

5.1 Tools to bolster social dialogue

Social partners play a dual role in the development of sustainable construction, both through their participation at a technical level in the legislative tools and technical codes that define it, and by guaranteeing respect for ethical standards, socially viable environments, citizen participation, occupational safety and health, etc.

One issue that is affecting the general collective bargaining system in Spain and in other countries is a clear effort to decentralise it, transferring it from the national/industry scope to businesses. The problem is that greater flexibility may undermine suitable working conditions for workers. In addition, it could lead to the results of lower-level negotiations deviating unfavourably from the protection afforded by higher-level collective agreements, or even existing legislation. Good bipartite social dialogue practices in Spain have allayed the negative effects of the decentralisation of collective bargaining in some sectors.

This move to undercut collective bargaining has the effect of reconfiguring whole areas of the European social model - labour law, collective bargaining, social dialogue, wage formation systems, etc. - which had been effective during the crisis in preventing the deterioration of the economy and the labour market. In fact, the countries experiencing the lowest unemployment rates in the wake of the crisis are those with the strongest labour relations and collective bargaining associations.⁶

In Spain, bipartite social dialogue (between employers and trade unions) is highly developed, but there are almost no areas of social dialogue with the Public Administrations, as there is practically no forum for social dialogue at the national level between the government and Construction-sector employer associations and trade unions.

⁵ La crisis y las reformas de las legislaciones laborales nacionales —Un ejercicio de análisis. (The Crisis and the National Labour Law Reforms - A Mapping Exercise). Stefan Clauwaert and Isabelle Schömann. Instituto Sindical Europeo. (European Trade Union Institute) 2012. Available at: https://www.etui.org/Publications2/Working-Papers/The-crisis-and-national-labour-law-reforms-a-mapping-exercise

⁶Source: The Euro crisis and its impact on national and European social policies. Christophe Degryse, Maria Jepsen and Philippe Pochet. 2013. ETUI (European Trade Union Institute). Available at: http://www.etui.org/Publications2/Working-Papers/The-Euro-crisis-and-its-impact-on-national-and-European-social-policies

There have been positive efforts involving tripartite social dialogue, which have addressed good practices for sustainable construction in Spain, although only one of them is still active. The employer and union organisations participating in this project believe that it is impossible to make a clear commitment to sustainable construction in the country without Public Administration support. The difficulty lies in engaging the Administration in social dialogue for sustainable construction.

It is imperative for these organisations to create forums for debate and dialogue with the country's different Public Administrations to bring about a commitment to sustainable construction. It is also necessary to overcome the challenge of administrative decentralisation, as social dialogue at sub-national levels features limitations. One alternative is the use of public-private partnerships as an instrument. However, knowledge of municipal social dialogue is still in its infancy, and further research is needed.

As for bipartite social dialogue, it is a strong point in the case of Spain. As a good bipartite social dialogue practice in Spain we can cite the creation of joint industry entities. At present there are three sectors (Construction, Wood and Cement) that have created a *Fundación Laboral*, charged with specific collective bargaining efforts. This is a model that is being replicated in other productive sectors of our country, as it is considered a useful element in the democratisation of employee relations.

In conclusion, bipartite Social Dialogue in the Construction sector is an example of a sound practice, but sustainable construction receives little support from the Public Administration (or the different governments: national, regional, provincial and local).

5.2 Scope of action

5.2.1 Policies and legal framework

As for the regulatory field, in Spain there is a wide range of national, regional, provincial and local regulations in various areas that it would be very difficult to comprehensively enumerate. However, the organisations participating in this project have underscored the need to evaluate all the regulations on sustainable construction that we have in Spain, and not only to verify whether they are complied with or not.

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⁷Source: The Construction Action Programme of the International Labour Office – A View of On-going Implementation and Implications for Research. Edmundo Werna. 2006. Available at: http://web.usm.my/jcdc/vol11 1 2006/4 Edmundo%20Werna(p.53-72).pdf

In Spain there is a Sustainable Economy Strategy and Sustainable Economy Law. However, according to an ESC (Economic and Social Committee) statement analysing the latter, the development of the growth pattern's social dimension, which the Law aims to promote, is not addressed; no mention is made of promoting quality employment, equal opportunities or social cohesion; it does not establish strategies or measures to achieve long-term social sustainability; nothing is specified about waste management or water resources; and the sustainability of the urban and rural environment is not covered, including dimensions such as social cohesion and emission reduction.

The Government, meanwhile, has proposed a Climate Change and Energy Transition Law, whose main objective is to facilitate Spain's compliance with its international and European commitments regarding climate change and energy. Debate has already begun in this regard, but the Alianza por el Clima (Alliance for the Climate), a coalition of more than 400 environmental, union and civic organisations that have begun to discuss the Law, have been very critical of the participatory process to approve this Law.

The Government has also proposed the development of a strategy for decarbonisation by 2050 through a Roadmap of the various sectors involved, through 2030, and the promotion of Climate Projects and the Environmental Promotion Plans. These measures have not yet materialized.

As for the Circular Economy, the Government has promised the development of a Circular Economy strategy for Spain. Within this strategy the development a Circular Economy Law seems viable, but nothing has materialised to date.

Meanwhile, as a good practice in Spain there is the figure of the delegate for the environment and the environmental commission, a holder of rights and obligations regarding environmental matters at the company or workplace, and a member of the company's board. Falling within his or her purview is information, guidance, inspection and the monitoring of compliance with environmental obligations, proposals for the adoption of measures to prevent environmental risks, etc.

Another example of good environmental practices that exists in the Construction sector is the II Recovery Agreement for the Spanish Cement Sector (2014), whose objective is collaboration in the development of initiatives that promote the sustainable use of resources, and the protection of the environment and people's health, thereby augmenting the competitiveness of the Spanish cement sector.

By way of conclusion, it can be said that the political context acts as a major driver of initiatives geared towards a more sustainable economy. Social dialogue and projects promoted by social partners can complement national or international policies.

5.2.2 Work conditions and new skills

Social Dialogue, in addition to the democratic basis on which labour relations are based, is an important tool for achieving more and better social cohesion and endowing workers with rights. Social Concertation is understood not as a mere forum through which to consult organisations representing workers, but one to produce contractual power and furnish said associations with real clout.

It is necessary to add to the concept of sustainable construction that of social sustainability, favouring housing models with shared spaces that facilitate the life of users regardless of their situations and social and/or economic needs — which could have been promoted by taking into account that rehabilitation and refurbishment constitutes the subsector that has seen the smallest declines in overall activity and, in addition, is one of those boasting the greatest potential to reactivate activity, given the demographic evolution in Spain and the need to adapt to the new environmental, energy and social requirements impacting housing and its facilities.

In addition, the fact that some companies are well positioned in some technologies that will act as drivers of the sustainable construction market in the coming years (such as measurement and control systems, water treatment and supply, solar energy, the recovery of thermal and natural resources, and sustainable and accessible building and rehabilitation), opens up a range of possibilities, including the generation of new jobs in both environment-related sectors and emerging activities in which our positions are more tenuous, such as ecodesigns for products and material efficiency.

The synergies of these initiatives to improve and modify the current residential model, based on a hypermarketed one, should feature important synergies with the strategy for the development of residential and community social services (currently scarce) to improve quality of life for all people, in all their diversity, in community settings.

From this perspective, training for sector workers is vital, as is the recognition and certification of this training being carried out in Spain. This should be an area in which to continue making a commitment, along with retraining and bolstering the employability of long-term unemployed workers.

The policy of promoting the evaluation and accreditation of skills across all professional categories can greatly enhance processes for the orientation and relocation of people who lose their jobs.

Social dialogue can facilitate the improvement of training in sustainable construction issues: many workers can receive training related to sustainable construction methods, with the resultant positive effects on employment and efficiency in the use of resources. Both companies and trade unions are interested in ensuring that employees have the appropriate qualifications to carry out their work in accordance with the needs of companies, and that they are able to comply with the most advanced European standards governing sustainable construction.

5.2.3 Technology, Knowledge, Production Process Innovation

Despite some advances in recent years, the data on R&D in Spain shows that it plays a lesser role in construction activities than it does in other areas in the economy. The materials industry and others related to it boast better figures, though there is still much room for improvement.

These indicators vary according to the company's size, with more innovative companies and those with the most intense innovation being those with more than 250 workers.

The optimum process for the internationalisation of the Spanish construction industry, however, would not be viable without the kind of great technological capacity and high productivity capable of sustaining that position in competitive markets. In this regard we can speak of signs of a positive change in the sector in terms of innovation.

The factors that may be limiting greater innovative intensity are structural, associated with the characteristics of the sector and the very nature of the activity.

Refurbishment and energy efficiency constitute a unique opportunity to promote R&D in the industries that supply construction-related products and services. Social dialogue with Public Administrations should play an important role in this regard.

It is also very important to establish where the sector is and the direction it should move in: the analysis of the Life Cycle and Environmental Product Declarations.

The evaluation of products and services from a life cycle perspective is a growing demand by both public and private clients. The signals given by legislation, such as that of the European Commission, and by private clients, indicate that communications regarding

environmental performance based on life cycle assessments are now a necessary tool for organisations seeking to compete in increasingly demanding markets.

Environmental Product Declarations (EPDs), meanwhile, represent a benchmark for public and private purchasing at the global level.

The European Commission is moving in the direction of including environmental aspects based on Life Cycle Assessments to establish the purchasing criteria in the Single Market initiative for Green Products, featuring several Product Environmental Footprint (PEF) pilot projects. The PEF methodology uses an approach similar to that of the EPDs (Environmental Product Declarations), based on the same ISO 14025 standard, international LCA (Life Cycle Assessment) standards, and the International Reference Life Cycle Data System - ILCD) published by the Joint Research Centre (or JRC).

As for the cement industry, in recent years Spain has made major R&D investments, turning out different cements of high quality and delivering major added value, this being internationally recognized. A very important role in this regard has been played by the IECA (Spanish Institute of Cement and its Applications), which has published the EPDs of national manufacturers' cements.

5.2.4 Cultural dimension

For social dialogue to be successful, those involved in it must possess social dialogue structures through which they share objectives and vision of what sustainable construction should be. The cultural dimension directly influences these stable structures.

Existing bipartite social dialogue instruments should reserve a place in their work programmes for sustainable construction, reaching agreements on policies, measures, initiatives and specific actions that allow for the real development of such construction. For this, it is imperative that bipartite social dialogue be expanded to *tripartite* social dialogue (including Public Administrations). Thanks to this transformation, certain tools could be created to foster cooperation by all parties.

Awareness-raising should play a key role as a precondition for the achievement of these co-operation agreements, as sharing the same concerns, perceiving and interpreting issues related to sustainable construction in the same way, and being willing to contribute to environmental protection constitute important preconditions for the achievement of responsive social dialogue.

It is crucial to share the same vision of the need to adopt sustainable construction policies in the country and to raise the awareness of the workers and agents involved in the expansion of the environmental culture, all so that social dialogue works.

It is also necessary to assess the ecological and social impact of any measure to be taken. It is difficult to measure the success of sustainable construction initiatives with regard to ecological and social effects, such that the effective tracking of initiatives to improve sustainable construction is needed in order to gauge their contribution to the achievement of objectives, such as the EU's 20-20-20, and the improvement of working conditions and competitiveness. This monitoring will also facilitate the early detection, for example, of possible conflicts between environmental and social objectives, and will allow for the introduction of appropriate changes in order to achieve more satisfactory results for all.

5.3. Guidelines for Social Dialogue at the European level

In order to firmly institute strong sustainable construction activity in the EU it is necessary to establish an institutionalised Tripartite Social Dialogue model based on a dedication to permanence and that allows for the definition, coordination and monitoring of the initiatives to be undertaken in favour of sustainable construction. There also must be forums for debate and dialogue to achieve a European commitment to sustainable construction.

This Social Dialogue must be entirely dedicated to:

- Promoting public investment in sustainable construction, which will boost its growth and have an immediate impact on economic activity and employment, encouraging the creation of new, specialised jobs and a vocational training system in line with the new needs in this regard.
- Bolstering mechanisms for public-private collaboration by facilitating legislation governing contracting and the raising of capital that is attractive to investors
- Implementing a coordinated housing policy adapted to people's needs and that complies with European legislation.
- Rendering the public policies of EU member countries more coherent with reference to urban planning, housing and land.
- Promoting R&D into both products and processes in the EU that improve competitiveness and represent a commitment to sustainable construction models. The creation of forums or industrial observatories on sustainable construction would be a good working tool.

• Bringing about a cultural change to make sustainable construction a real demand in European society. Consumers need to be encouraged to choose sustainable construction in their decisions.

The success of these efforts will depend, to a large extent, on the existence of a regulatory framework that truly guarantees legal security, and a fiscal policy that encourages and favours the development of sustainable construction.

Employers' associations and trade union organisations can also play an important role in the development of sustainable construction by reaching agreements on vocational training, occupational hazard prevention, and the promotion of employment. Social dialogue and projects promoted by social partners can also complement European policies on sustainable construction.

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