

Table 1.- Summary of the different Instruments

Instrument	Description	Level of deployment	Situation/Impact on the furniture sector at EU level
Legislative Instruments			
Circular Economy Package of the EC	Circular Economy Action Plan (COM (2015) 614) aims to boost the implementation of Circular Economy in Europe. It includes revision of some regulations (e.g. framework on waste) and other actions to promote circularity (e.g. plastic strategy).	5 All the 54 proposed actions have been completed or they are in the implementation phase (SWD(2019) 90 final).	3 {SWD(2019) 92 final, includes the furniture products as priority product category for the circular economy.
The European Green Deal	The European Green Deal (COM(2019) 640 final and Annex) is the EU roadmap for making the EU's economy more sustainable, with actions to: <ul style="list-style-type: none"> • boost the efficient use of resources by moving to a clean, circular economy • restore biodiversity and cut pollution The objective is that EU will be climate neutral in 2050, making the transition just and inclusive for all. This will require action by all sectors of EU economy, including: <ul style="list-style-type: none"> • investing in environmentally-friendly technologies • supporting industry to innovate • rolling out cleaner, cheaper and healthier forms of private and public transport • decarbonising the energy sector • ensuring buildings are more energy efficient • working with international partners to improve global environmental standards 	2 In its point 2.1.3. Mobilising industry for a clean and circular economy, it announces that the Commission will adopt an EU industrial strategy and publish a new Circular Economy Action Plan as pillars of this EU Green Deal (done in March 2020). The Annex of the Communication on the European Green Deal defines the Roadmap and Key action, from 2019 until 2021. These key actions are classified in the following aspects: <ul style="list-style-type: none"> • Climate ambition • Clean, affordable and secure energy • Industrial strategy for a clean and circular economy • Sustainable and smart mobility • Greening the Common Agricultural Policy / 'Farm to Fork' Strategy • Preserving and protecting biodiversity • Towards a zero-pollution ambition for a toxic free environment • Mainstreaming sustainability in all EU policies • The EU as a global leader 	3 There is not a specific mention to furniture sector in the European Green Deal. However, the EU Industrial Strategy (which will address the double challenge of the green and the digital transformation, as key enablers for reaching the Green Deal objectives) and the New Circular Economy Action Plan (see below) are transversal transformative instruments that will affect all sectors. Additionally, the focus on biodiversity and forest preservation will affect to the wood used as raw material, for example the new forest strategy, which aims helping to increase the absorption of CO ₂ , reduce the incidence and extent of forest fires, and promote the bio-economy.



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		<ul style="list-style-type: none"> Working together –a European Climate Pact 	
<p>New Circular Economy Action Plan for a Cleaner and More Competitive Europe</p>	<p>The New Circular Economy Action Plan (COM(2020) 98 final and Annex) announces initiatives along the entire life cycle of products, targeting for example their design, promoting circular economy processes, fostering sustainable consumption, and aiming to ensure that the resources used are kept in the EU economy for as long as possible.</p>	<p style="text-align: center;">1</p> <p>The Plan indicates in its Annex the timing for the proposed initiatives, from 2020 until 2023. The key actions are classified in the following aspects:</p> <ul style="list-style-type: none"> A sustainable product policy framework Key product value chains Less waste, more value Making circularity work for people, regions and cities Crosscutting actions Leading efforts at global level Monitoring progress 	<p style="text-align: center;">3</p> <p>Priority will be given to addressing product groups identified in the context of the value chains featuring in the Action Plan, such as electronics, ICT and packaging, but also furniture is mentioned as priority. However, this action plan does not fix specific initiatives for this product group. Materials that can be used in furniture, such as plastics and textiles, are taken into consideration with more details, and different initiatives are included in this new action plan.</p>
<p>Waste Electrical and Electronic Equipment Directive (WEEE)</p>	<p>The Directive 2012/19/EU enquires the establishment of collection schemes (free of charge for consumers) in order to increase the WEEEs re-use and/or recycling.</p>	<p style="text-align: center;">5</p> <p>The former WEEE Directive entered into force in 2003. In 2017 the Commission adopted the “WEEE package”, and in 2018 a final report on WEEE compliance promotion exercise, examining the implementation in each EU country.</p>	<p style="text-align: center;">2</p> <p>Furniture products, containing electrical or electronic components could enter in the “open scope” of WEEE. These discussions are based on the change in wording regarding when an item requires electric currents or electromagnetic fields in order to fulfil its basic function to enabling it to work properly.</p>
<p>Restriction of use of hazardous substances in Electrical and Electronic Equipment (ROHS)</p>	<p>Directive 2011/65/EU was amended by the Directive (EU) 2017/2102, reviewing the scope for some group of products and facilitating to encourage a more circular economy in the Union by promoting the secondary market operations for EEE, which involve repair, replacement of spare parts, refurbishment and reuse, and retrofitting.</p>	<p style="text-align: center;">5</p> <p>The former ROHS Directive entered into force in 2003. It was reviewed several times to modify the exceptions and their deadlines.</p>	<p style="text-align: center;">2</p> <p>It does not apply directly to furniture products, but should be taken into account when electric & electronic equipment are integrated on them. The “open scope” mentioned above for WEEE may be considered also for ROHS, based on the strict interpretation of the definition of Electrical and Electronic Equipment and the generic category 11 indicated in Annex I of ROHS Directive (17. <i>Other EEE not covered by any of the categories above).</i></p>



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Energy related Products Directive (ErP or eco design)	The Directive 2009/125/EC is the framework to define Ecodesign requirements for products that use energy or which are energy related (i.e. they do not consume energy directly, but can provoke the use of additional energy, such as windows).	4 EC publishes Working Plans to identify priority family products and future strategies. The latest working plan covers the period 2016-2019 and gets more attention to resource efficiency, analysing the possible application of additional “product-specific” requirements on matters such as durability, etc.	2 Nowadays there is not a regulation, under the Ecodesign Directive, that directly affects the furniture products but it is possible that some components used on them would be affected (for example LEDs, displays, etc.). The Circular Economy Action Plan also includes a commitment to examine new options under the Ecodesign Directive, beyond energy-related products (e.g. furniture and textile). The Nordic Council of Ministers analysed possible eco-design requirements for non-energy related products, using textiles and furniture sector as example.
Extended Producers Responsibility (EPR)	The Extended Producer Responsibility (EPR) is “an environmental policy approach in which a producer’s responsibility for a product is extended to the post-consumer stage of a product’s life cycle”.	4 Existing directives at EU level for some specific products (WEEE, batteries, end-of-life vehicles, packaging, etc.). At national level, EPR schemes for other products.	3 Only France has implemented two ERP schemes for domestic and commercial furniture. The Commission is analysing to increase the ERP schemes to other products (including furniture).
Hazardous substances / REACH Regulation	REACH Regulation (EC 1907/2006) has the objective of improving human health and environment protection by identifying the hazardous properties of chemical substances used in EU. Both manufacturers and importers have the responsibility to collect information on the specific and critical properties of chemical substances they use.	3 REACH is fully operational but it is lagging behind initial expectations. Some identified problems are among others the lack of compliant information in the registration dossiers or the need of simplification of the authorisation process.	4 Some substances used in the furniture sector could be included as restricted or candidates for authorisation. Furniture manufacturers could be considered as “downstream users” and they should comply with the associated obligations.
Formaldehyde emissions	The formaldehyde produced and imported at European level is used mainly for manufacturing resins used for manufacturing of wood-based panels. The exposure to formaldehyde emissions is an important issue for consumers (emissions from articles) and for workers (occupational exposure).	2 At European level, there is not a common legislative requirement, but there is a voluntary industry agreement of the members of the European Panel Federation (EPF), which produce only class E1 wood-based panels. Some EU Member States have adopted national legislations.	4 This issue could be important for wood-based panels manufacturers and producers that use them, especially for entering into the market of these EU countries that have specific legislation and into US (TSCA Title VI compliant).



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EU's rules on end of life waste criteria	The Waste Framework Directive 2008/98/EC indicates that some specific waste shall stop to be considered normal waste if it has undergone through a recovery process (including recycling) and if it complies with specific criteria developed in line with certain legal conditions. The objective is to remove the administrative burdens of waste legislation for safe and high-quality waste materials, in order to facilitate their recycling.	3 At European level, the criteria have been defined for 8 types of waste, but there are specific regulations for iron, steel, copper and aluminium scrap and for glass cullet.	2 Regarding the furniture sector, wood waste stream (partially from furniture) has been analysed as stream that may be in line with the principles, but not specific criteria was defined due to doubts about the current situation of wood recycling in EU.
Flame retardants	Some furniture products use flame retardants to fulfil the variety of flammability standards for furniture. Some of these standards require compliance with open flame tests, forcing the use of flame retardants. Some type of substances used for flame retardants are regulated under the Regulation (EU) 2019/1021, which recast the Regulation (EC) 850/2004 on persistent organic pollutants (POPs).	3 The use of flame retardants are not directly regulated at European level. Indirectly, it is regulated if the used substances are considered as hazardous (e.g. via REACH or POPs Regulation). The mentioned regulations are well deployed, and new substances are under study.	4 Regarding the furniture sector, some countries regulate the flammability requirements for some type of furniture (e.g. UK and Ireland). The Alliance for Flame Retardant Free Furniture in Europe, which involves different type of organisations, aims to stop the use of flame retardants in furniture products, supporting safer alternatives.
Renewable energy Directive (RED II)	In December 2018, the revised renewable energy directive 2018/2001/EU entered into force, as part of the Clean energy for all Europeans package. It establishes a new binding renewable energy target for the EU for 2030 of at least 32%, with a clause for a possible upwards revision by 2023. The Renewable Energy Directive sets out biofuels sustainability criteria for all biofuels produced or consumed in the EU.	4 The Directive is deployed and more ambitious targets for renewable energy are under consideration. Regarding biofuels sustainability, companies can show they comply with the sustainability criteria through national systems or so-called voluntary schemes recognised by the European Commission.	2 Regarding the furniture sector, the biofuels industry is analysing the potential use of raw materials for second-generation biofuels in agricultural residues, forestry-based biomass and different waste streams, including wood stream from municipal waste.
Illegal logging and illegal timber trade	The Regulation (EU) No 995/2010 defines the obligations of operators selling or distributing timber and timber products. It is known as the EU Timber Regulation or EUTR, as part of the EU Forest, Law, Enforcement, Governance and Trade (FLEGT) Action Plan.	5 These regulations and Action Plans are deployed at EU and international level. New action plans to protect forest are published, for example COM(2019) 352 final about "Stepping up EU Action to Protect and Restore the World's Forests", proposing	5 These regulation and schemes apply to timber harvested in both the EU and internationally, obligating businesses to assess and mitigate any risks that the timber in their products has come from an illegal source.



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	Another scheme is the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES).	the creation of an EU Observatory on Deforestation and Forest Degradation.	
Voluntary Instruments			
Green Public Procurement (GPP)	Green public procurement incorporates environmental criteria in the specifications of a public tender, involving the integration of the environmental components into public procurement decisions. These environmental criteria could cover different aspects of the products during their life cycle. GPP can foster the creation of a critical demand mass of more sustainable goods and services, which otherwise would not be easy to get in the market.	3 The level of real implementation is different in each EU country. The European Commission and several EU countries have prepared different guidelines for GPP processes, in the form of national GPP criteria. The main challenges are to ensure compatible GPP requirements between different EU countries and to foster more public sector bodies to adopt these criteria.	3 An updated version of the EU GPP criteria for furniture has been published in August 2017, in parallel with the revision of the EU Ecolabel criteria for this type of products. It covers criteria at raw material and product level. Several examples can be found at EU level about the application of GPP criteria for furniture, for example the procurement of refurbished school furniture in Aalborg - Denmark.
Environmental management in organizations	An environmental management system (EMS) can help organizations in the identification, management, monitoring and control of their environmental aspects in a "holistic" manner. At European level there are two main certified Environmental Management Systems, which are EMAS and the ISO-14001:2015.	4 Different revisions of the ISO and EMAS schemes have been published. They are consolidated schemes, but partially implemented in the business sector. At EU level, 3,728 organizations have EMAS certification (April 2019) and 111,133 ISO-14001 certifications (2017).	3 EMAS and ISO-14001 can be applied to the furniture sector, however there are only 35 EMAS registered organisations (2019) related to the furniture sector (NACE code 31), most of them in Germany (24 organisations). Regarding ISO-14001, in 2017 there were 541 organisations certified classified as "manufacture of wood and wood products".
Eco-design methodology	Eco-design is defined as "the integration of environmental aspects into product design and development with the aim of reducing adverse environmental impacts throughout a product's entire life cycle" The UNE-EN ISO 14006:2011 provides guidelines to assist organizations in establishing, documenting, implementing, maintaining and continually improving their management of eco-design as part of an EMS.	3 The last revision of the ISO 14006 was in 2011. The standard indicates that it is not intended for certification purposes, which make difficult to know the real level of implementation in the market. In any case, it is assumed that this implementation is much lower than ISO-14001.	2 ISO-14001 can be applied to the furniture sector, but it was not possible to find information about its impact in the furniture sector at EU level. In any case, its affectation is lower than the ISO-14001.



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	There are other standards related to eco-design, such as UNE-ISO/TR 14062:2007 or IEC 62430:2019		
Eco labels (Type I, II, and III)	The ecolabels try to give information to the customers, about the environmental characteristics of a product. There is a huge amount of different ecolabels, but all of them could be included in three main types of ecolabels (i.e. I, II and III) and they are regulated under the ISO 14020.	4 The different ecolabel systems are well developed, and are broadly used in some type of products (e.g. consumer products). However, some additional work is needed to better inform the consumer about the real meaning of these ecolabels to avoid misunderstanding.	3 There are different types of ecolabels that have fixed criteria for furniture products (e.g. EU ecolabel, Blue Angel, Nordic Swan, NF Environment, or EPD System). However, the acceptance in the sector at EU level is low (e.g. only 2 EU ecolabel licences regarding furniture sector in March 2019).
Chain of custody certification (FSC / PEFC)	Timber supply Chain of Custody certification provides evidence that the certified product originates from certified, well managed forests. It verifies and ensures that these products are not mixed with other products from non-certified forests at any point along the supply chain, except under strict controls when percentage (%) labelling is being used. There are currently two independently accredited chains of custody programmes operating in the Timber Industry: The FSC (Forest Stewardship Council) and the PEFC (Programme for the Endorsement of Forest Certification) schemes.	5 These two schemes are well developed and demand for chain of custody certification has grown dramatically in the last three years, to the extent that, for many companies, the ability to prove that a timber product has been derived from a well-managed source is now a key factor in the specification of timber and paper products.	5 In August 2019, there were 19,434 Global FSC Chain of Custody certificates in Europe. Regarding PEFC, in 2018, there were 9,310 PEFC Chain of custody certificates. Therefore, the affectation to furniture sector, at EU level, is high.
Green building certification (BREEAM / LEED)	There are two main green building certification schemes: The Building Research Establishment's Environmental Assessment Method (BREEAM), which was the first green building rating system developed in the UK, and the Leadership in Energy and Environmental Design (LEED) developed lately in the U.S. by the Green Building Council (USGBC).	4 These two schemes are well deployed at EU level. For example, 19,542 BREEAM assessments are certified in EU Countries (most of them in UK) and 3,766 LEED certified projects. There is an increasing demand of this type of certification, but it is still a small part of all buildings sector.	3 This type of certification does not affect directly the furniture sector, but it can have a certain effect because the use of "green" furniture can give additional credits to obtain the building certification. Some wood-based products manufacturers use this as a marketing strength.
Other Instruments and Policies			
Cascading use of wood	Cascading use of biomass resources, such as wood and agricultural products, means an efficient use of these resources from the point of view of natural resources, materials	2 The European Commission has published two relevant publications on this issue,	3 An adequate eco-design and collection and recovery operations could facilitate more cascading use of solid wood by increasing



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	and land consumption. It gives priority to higher value uses that allow the reuse and recycling of products and raw materials, promoting energy use only when other options are not feasible.	including Guidance on cascading use of biomass. Until the date, there are no other requirements associated to this topic.	availability of secondary wood materials of suitable quality. Equally important to enhance cascading use in furniture material is the development of loop solutions for wood-based boards that are the most frequently used wood component in furniture.
EU industry policy for Forestry	The EU Commission adopted the EU Forest Strategy in 2013 (COM(2013) 659 final), which aims to help forests and the related sector to tackle current challenges. The Strategy provides a framework to respond to the increasing demands put on forests and to deal with societal and political changes. The EU forest strategy 2014-2020 was developed to provide a coherent framework for both EU forest-related policies and the national forestry policies of the individual EU countries.	4 In 2018 the Commission delivered the report "Progress in the implementation of EU forest strategy" (COM(2018) 811 final) reviewing this strategy. The review highlights that the EU forest strategy is achieving its objective to foster a more sustainable forest management at EU and global level.	3 The EU strategy proposes a new approach, "going out of the forest", dealing with aspects of its value chain, i.e. the methods through which forest resources are utilized to produce goods and services, which strongly affect forest management.
Forest Based Industries Blueprint	In 2013, the European Commission published the Blueprint for the EU forest-based industries (SWD(2013) 343 final). This document accompanied the EU Forest strategy and it highlights the challenges that the forest-based industry has to address to remain competitive.	3 Some actions have been identified to address these challenges for the timeframe 2014-2020. A group of organisations have presented their shared strategic vision and agenda towards 2050 for the Forest-Based Industries.	4 These strategies and action plans affect directly the wood-based furniture products. However, the real effect on the sector could be limited depending on the real implementation of the proposed action plans.
Bioeconomy	The goal of Bioeconomy is a more innovative and low-emissions economy, integrating demands for sustainable agriculture and fisheries, food security, and the sustainable use of renewable biological resources for industrial purposes, while ensuring biodiversity and environmental protection.	3 The European Commission has set a Bioeconomy Strategy and action plan, published in 2012 and revised in 2018. This update designed an action plan including 14 concrete actions to be launched in 2019. Moreover, the Commission works on ensuring a coherent approach to bioeconomy through different programmes and instruments (e.g. Horizon 2020, BBI, etc.).	2 The real effects on the furniture sector nowadays is low, but could be more relevant in the future because the strategy covers all economic and industries sectors that use biological resources and processes to produce bio-based products (i.e. wood).

