Factsheet on hazardous waste and PCB/ PCB waste management

Spain

This factsheet has been prepared as part of the study "Support to selected Member States in improving hazardous waste management based on assessment of Member States' performance" launched by EU Commission, DG ENV. Being the follow-up to the project "Support to MS in improving hazardous waste management based on assessment of MS' performance" conducted in 2015 where screening information and factsheets had been elaborated[1], some information from that project have been used to develop this factsheet. Information sources used were expert interviews with various stakeholders (administration, industry, associations, science, etc.) as well as studies, reports, and websites. Information sources, including the interviews held, are listed at the bottom of this factsheet.

Abbreviations: HW = Hazardous waste; PCB= polychlorinated biphenyl

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[1] All factsheets and screening information of this study are available at http://ec.europa.eu/environment/waste/studies/index.htm

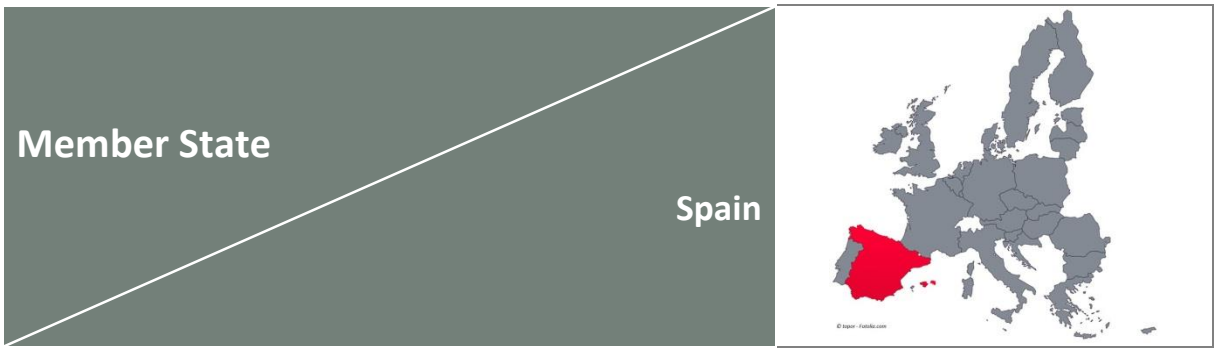
Summary on hazardous and PCB/ PCB waste management in Spain[2]

Policy framework	– Autonomous administrative divisions are responsible of the whole HW managing system in Spain, e.g. they provide authorisations and register to HW transporters managers, and authorisations to treatment facilities as well as to conduct inspections. The National Government establishes the major policies and strategies that must then be further developed and fulfilled through the regional waste management plans. These regional WMPs must include information on the waste management situation and measures to facilitate the implementation of reuse, recycling, valorisation and elimination of waste. Competencies in municipal waste management lie with the local entities (either municipalities or associations).
Key facts on HW management	– According to Eurostat, in 2014 2,985 kt of HW were generated whereby 2,322 kt of HW were treated. – Classification of waste as 'hazardous' takes place in Spain on the basis of the European Waste Catalogue. Specifications of labelling are well implemented and used. Issues regarding misclassifications and labelling exist. – Any natural or legal persons registered at the Registry of production and waste management has the obligation to keep a record with quantities, nature, origin, destination, and treatment methods of waste. Records must be kept for 3 years. – All producers of hazardous waste must be registered in the National Waste Production and Management Registry. The HW transporters, waste operators/dealers and agents must also be registered in the registry. – Waste managers are not allowed to mix different HW, nor with other types of wastes, substances or materials, including dilution. Nonetheless, mixing may be allowed by the Regional Waste Production and Management authorities. – Inspection and control in industries and treatment facilities is carried out by competent bodies. The Spanish government is making efforts to harmonise practices creating a commission to coordinate waste policies implementation in the country.
Key facts on PCB management	– PCB thresholds were implemented and included in [ES PNDEPCB 2001]. It's the Autonomous Communities responsibility to resolve matters of authorisation, inspection and sanctioning. – Spain has a PCB guidance document, the [ES GPNPCB 2001]. It is a guidance manual to facilitate legislation application and development of the [ES PNDEPCB 2001]). The document is divided in 3 chapters. Each chapter is the answer to a basic question regarding PCB management
Major problems encountered in HW and PCB management	**<u>Hazardous waste management</u>** – The cross-cutting challenge for Spain is the harmonisation of waste legislation and its enforcement practices between the 17 Autonomous Regions. – At regional level HW classification can differ. The number of different competent bodies (17 competent bodies, one per region) in some cases causes a lack of harmonisation on waste management criteria (e.g. classification). Also, the waste producer is responsible for correct classification, labelling and packaging. Regions have the obligation to inspect and control producers and waste managers. However, there are no enough resources to establish this control. – Although most of regions have created electronic traceability systems, there is a lack of information exchange between them. As a consequence, traceability for cross regional shipments is hampered. – Permits for HW treatment facilities are issued by the Regional Waste Management Authorities. There is a lack of harmonisation regarding permits and respective criteria. – Inspections: Inspection and control in industries is carried out by competent bodies. The Spanish government is making efforts to harmonise practices creating a commission to

[2] Detailed information including information sources can be found in the following chapters.

Summary on hazardous and PCB/ PCB waste management in Spain[2]	
	coordinate waste policies implementation in the country. However, in cases related with municipalities (e.g. detection of HW in municipal or C&D wastes), the municipal police practically takes over the controlling part. **PCB / PCB waste management** – Ongoing identification and elimination of PCB from 'closed applications' – Identification and elimination of PCB from 'open applications' is not addressed sufficiently across all regions
"Best practice"	– The Register of Production and Waste Management is an electronic register of producers, managers (transporters, dealers, agents), companies that carry out waste treatment and facilities where waste treatment is carried out. This registry is housed in the waste information system (ESIR) of MAPAMA. This system has started to be operational since the end of 2016. – In parallel, work is being carried out within the framework of a working group with the Autonomous Communities in the establishment of a common electronic procedure for all the Autonomous Communities to ensure the traceability of the waste during its transfer.

Factsheet on hazardous waste and PCB/ PCB waste management in the MS



A. Features of the national waste management system	
Waste management planning	[ES WFD 2013] – Autonomous administrative divisions hereinafter "regions" are responsible of the whole **HW managing system in Spain**, e.g. they provide authorisations to HW transporters and managers, as well as to conduct inspections. [ES Law 22 2011] – The National Government establishes the major policies and strategies that must then be further developed and fulfilled through the regional waste management plans. These regional WMPs must include information on the waste management situation and measures to facilitate the implementation of reuse, recycling, valorisation and elimination of waste. Competencies in municipal waste management lie with the local entities (either municipalities or associations). – [ES Law 22 2011] has, by means of various articles, laid down a legal regime to guarantee that the generation, collection, storage and treatment of HW is done under the appropriate conditions indicated in the Waste Framework Directive. – In Spain the following Waste Management Plans are in place: • 1 National WMP, • 17 regional WMPs (representing autonomous administrative divisions), • 2 Autonomous Cities (Ceuta and Melilla). [ES WMP 2016, P.14] – With the approval of the State Framework Plan for Waste Management 2016-2022 (PEMAR), every autonomous community must revise their regional WMP and adapt its structure, targets, validity period and perform an evaluation of their waste management situation. – The existent regional WMP do not present significant information regarding HW, and most autonomous communities refer to HW as a section of industrial wastes. – Besides, several autonomous communities (Aragón, Baleares, Canarias, Castilla y Leon, Cataluña, Extremadura, Galicia, Madrid, Murcia, Basque Country, and La Rioja) and the 2 autonomous cites have outdated/in revision plans that are not being enforced at the moment. – The autonomous communities that already have updated WMP base their HW management on several points laid down by Directive 2008/98/EC: • Prevention of HW production; • Reduction of generated HW on the Autonomous Community (some Communities have a 10% reduction target, based on 2010's HW values – Navarra, Castilla-La Mancha); • Use of Best Available Techniques (BAT) in HW management.
(Hazardous) waste legislation	– HW management in Spain is regulated by Spanish Law 22/2011 of waste and contaminated soils. [ES Law 22 2011], [ES MAPAMA 2016].

A. Features of the national waste management system	
	– The [ES Law 22 2011], incorporated Directive 2008/98/EC (Waste Framework Directive, hereinafter "WFD") into national law. Amongst its new features, it sets the conditions under which waste managers should operate, the communication and permit management system as well as the extended producer responsibility schemes, the Production and Waste Management Register unique at national level. This law provides for the existence of Royal Decrees for specific waste streams that will include detailed characteristics of each type of waste scheme. – In conformity with this law [ES Law 22 2011]: • Art.29 (3) All producers of hazardous waste, no matter the quantity of produced waste, (plus producers of non-hazardous waste generating more than 1000 t of non-hazardous waste per year) must be registered in the waste production and management registry. • Art.29 (2) The HW transporters, dealers and agents must also be registered in the waste production and management registry, in a differentiated way, to make their identification and control easier. • Art.27 (1) (7) The HW treatment facilities must be authorised by the autonomous communities and also registered in the waste production and management registry. • Art.17 (6) HW producers or holders must comply with the established requirements of the HW regulatory procedure; HW producers must prepare and send a minimisation study to the correspondent autonomous community where they compromise to reduce HW production. Designated small HW producers (less than 10 t/year) are exempt from the presentation of the minimization study. • Art.17 (7) HW producers have to present its financial leverage to cover for possible responsibilities that may arise from its activities, according to its potential risks and hazardousness. Designated small HW producers with an annual production of less than 10 t/year are exempted from this. • Art.18 (1) HW must be properly stored for no longer than 6 months (regardless of final HW destination). • Art.18 (2) Different typologies of HW must not be mixed; • Art.18 (3) HW must be properly stored, packed and labelled in its production premises, before collection and transportation; • Obligations of managers of HW are laid down in Article 20 of [ES Law 22 2011]. – Currently the existing system in Spain allows transferring responsibility. The responsibility of waste producer ends when he delivers waste to an authorized treatment facility (also includes storage facilities) or when the waste is deliver to an registered dealer for its treatment. The dealer has to prove the waste has been treated to the producer.

B. Waste management plan (WMP) and specification on hazardous waste	
Title and link	**National Waste Management Plan 2016-2022 PEMAR** (Plan Estatal Marco de Gestión de Residuos) [ES WMP 2016] **Website**: http://www.boe.es/boe/dias/2015/12/12/pdfs/BOE-A-2015-13490.pdf
Specification on HW	[ES WMP 2016] – The WMP does not include a specific chapter on HW. The information on HW has been included in every chapter when information is available. – Chapter 18 on Industrial Waste includes information on HW from industrial sector. – Chapter 11 on waste oils includes information on waste oil.

B. Waste management plan (WMP) and specification on hazardous waste	
Industrial hazardous waste	
Waste amounts and significant waste streams	[ES WMP 2016, p.144] – Total industrial HW generated in **2012: 1,363,438 t** – The industrial sectors that produce the largest amounts of HW in Spain are: metallurgy and metal products manufacturing sector (53%), chemical sector (30%), coking and oil refining (5%). [ES WMP 2016, p.145] – Industrial HW stream amounts (2012): • chemical waste: 380,277 t • acid, alkaline and salt waste: 374,103 t • waste from combustion: 292,836 t • used dissolvent: 124,082 t • used oils: 66,755 t • others : 125,385 t
Waste shipments	[ES WMP 2016] Chapter 22 includes information on hazardous and non-hazardous waste shipments (2012): [ES WMP 2016, p.168] – HW imports: 276,475 t (84% of all imported waste) [ES WMP 2016, p.170] – HW exports: 58,913 t (88% of all exported waste including HW)
Municipal hazardous waste	
Waste amount	[ES INE 2014] – Amount of HW treated (both municipal and industrial): 1,768.1 kt (3.6 % of total generated waste in Spain; -2.7% than 2013) – Amount of Municipal HW: 458.5 kt – (Total) HW final destination: • Recycling: 1,401.8 kt • Landfill: 228.6 kt • Incineration: 137.7 kt

C. Waste Prevention Programme (WPP) and specification on hazardous waste	
Title and link	**Federal Programme for Waste Prevention (2014-2020)** (Programa Estatal de Prevencion de Residuos) [ES WPP 2014] **Website**: http://www.MAPAMA.gob.es/imagenes/es/Programa%20de%20prevencion%20aprobado%20actualizado%20ANFABRA%2011%2002%202014_tcm7-310254.pdf – **Website EEA summary** [ES EEA 2014]: http://scp.eionet.europa.eu/facts/WPP/spain
Inclusion of HW in WPP	[ES EEA 2014] – Sectors covered: Agriculture; Mining, raw material processing; Construction and infrastructures; Manufacturing; Sale, retail, transport; Households; Private Service Activities/Hospitality; Public services – Waste types covered: Food/organic, C&D waste, **HW**, Household/municipal waste, Paper, Packaging waste, WEEE/batteries, Manufacturing waste, Bulky waste, Other

C. Waste Prevention Programme (WPP) and specification on hazardous waste	
Inclusion of waste prevention targets and measures for HW	[ES EEA 2014] – **Overall objectives related to HW:** • reduce the hazardousness of waste • reduce the environmental impacts, as well as impacts on human health – **Quantitative targets related to HW:** • 10% waste-weight reduction target laid down by [ES Law 2011] is also applicable to HW; • Chapter 4 of the Waste Prevention Programme applies to all waste, including HW. – **Measures on prevention related to HW:** • measures for less harmful substances in products and less adverse impacts from waste • strengthen the effectiveness of HW minimisation plans – **Indicators related to HW:** amount of HW/year/industrial GDP (GVA)

D. Core requirements of the Waste Framework Directive on hazardous waste management	
Support and practice of HW classification	– The approval of the 2014/955/EU: Commission Decision of 18 December 2014 amending Decision 2000/532/EC, on the list of waste pursuant to Directive 2008/98/EC of the European Parliament and of the Council Text with EEA relevance, is directly applied in Spain without transposition. The following regulations have been updated: • Order MAM/304/2002 of 8 February publishing waste recovery and disposal operations; • The European Waste Catalogue; and • The National Waste Catalogue. [ES MAPAMA 2016] – The correct classification and labelling of waste with hazardous properties is regulated in Articles 17 and 18 of [ES Law 22 2011]. This regulation is supplemented with the provisions on the matter in Royal Decree 833/1988, approving the Regulation for implementing Basic Law 20/1986 on Toxic and HW [ES WFD 2013, Qu 3]. – According to Article 29 of Law 22/2011, producers of HW (before the start of his activity) must submit a communication to the competent authority indicating, among other information, the LOW code and the hazardous characteristics of the waste it produces. According to Article 17.4 of Law 22/2011, producers of HW must provide necessary information to HW treatment companies to ensure proper treatment. This obligation implies the prior classification and identification of the hazardous properties of a waste. [ES MAPAMA 2017] **Practice of HW classification:** – MAPAMA strongly supports the correct classification of waste, e.g. by **publishing detailed guidance documents** in the MAPAMA website providing guidelines to HW producers and managers, on the following topics [ES MAPAMA classification 2017]: • When does waste is considered hazardous? • How do you determine whether a waste is hazardous or not? • What additional requirements must be met in the production and management of hazardous waste? • Explanatory note of changes that have occurred in the labelling of hazardous waste. (June 19, 2015) • Legislative changes affecting hazardous waste – From the industry perspective the **inadequate classification of HW by HW producers** is a result of the **misinformation from waste operators/dealers** [ES WPROD 2017]. – Additionally [ES WMANAGER 2017], the **price differences between applicable treatments**

D. Core requirements of the Waste Framework Directive on hazardous waste management	
	(prices are proportional to the level of hazardousness of waste) and landfill deposition taxes vary according to the regions. – The number of different competent bodies (17 competent bodies, one per region) may causes a lack of harmonisation on waste management criteria (e.g. classification). So at regional level HW classification may differ in some cases.
Procedures and practice of HW labelling	– As regards to producer obligations on storage, mixing, packaging and labelling of HW, Art. 18 of [ES Law 2011] establishes these for HW producers or HW holders [ES WFD 2013, Qu 11.1]. – According to Art.18 (3) [ES Law 2011] HW must be **properly stored, packed and labelled in its production premises**, before collection and transportation. **Practice of HW labelling:** – The waste producer is responsible for correct classification, labelling and packaging. – Regions have the obligation to inspect and control producers. However more resources are needed to establish more effective control. – MAPAMA supports the correct labelling of waste, by **publishing guidance documents** on its website[3] **providing guidelines** to HW producers on the correct labelling of HW [ES MAPAMA 2016]. – From the industry perspective HW producers – although it is their own responsibility - rely on the information provided by the waste treatment operators in order to properly label HW.
Existence of HW record keeping system	[ES Law 22 2011] – Art.29 (3) **All HW producers**, no matter the quantity of produced waste, **must be registered in the regional waste production and management registry.** – Art.29 (2) The HW transporters, waste operators/dealers must also be registered in the Regional Waste Production and Management Registry, in a differentiated way, to make their identification and control easier. – Art. 39 Lays down the obligation of the Spanish regions to register all communications derived from the [ES Law 22 2011] in the Regional Waste Production and Management Registry. This Registry will contribute to increase transparency in the management of waste and enabling traceability for all wastes including HW. – Art.40 lays down that natural or legal persons registered at the Regional Waste Production and Management Registry has the obligation to **keep a record with quantities, nature, origin, destination**, and treatment methods of waste. Records must be kept for 3 years. The chronological record shall include the information contained in the documents confirming the waste production and management operations.
Requirements and practice for record keeping / tracking system	[ES WFD 2013, Qu 11.2] – To ensure the traceability of HW, Article 25(2) of [ES Law 22 2011] sets out that all shipments of waste must be accompanied by an identification document, for monitoring and control purposes. [ES RD 180 2015], on shipment of waste implements article 25 of [ES Law 22 2011] **Practice of HW tracking:** – Although most of regions have created electronic traceability systems, there is a lack of information exchange between them. As a consequence, traceability for cross regional shipments is hampered. – The Register of Production and Waste Management is an electronic register of producers, managers (transporters, dealers, agents), companies that carry out waste treatment and facilities where waste treatment is carried out. This registry is housed in the waste information

[3] http://www.mapama.gob.es/es/calidad-y-evaluacion-ambiental/temas/prevencion-y-gestion-residuos/notasobreetiquetadoderesiduospeligrosos_tcm7-410819.pdf

D. Core requirements of the Waste Framework Directive on hazardous waste management	
	system (ESIR) of MAPAMA. This system has been designed and has started to be operational since the end of 2016 [ES MAPAMA 2017]. – In parallel, work is being carried out within the framework of a working group with the Autonomous Communities in the establishment of a common electronic procedure for all the Autonomous Communities to ensure the traceability of the waste during its transfer [ES MAPAMA 2017].
Registration/ permit procedure for HW treatment facilities and permitting in practice	[ES WFD 2013, Qu 14] – Waste treatment operations may only be carried out by authorised establishments or undertakings, in accordance with the provisions of Art. 27 of [ES Law 2011] on the permitting of waste treatment operations – Art. 17 of [ES Law 2011] lays down obligations of the producer or other original holder in relation to the management of their waste – **Exemptions from the permit requirements** are laid down in Art. 28 of [ES Law 2011]: • Establishments or undertakings that dispose of their own waste in the place of production or that **recover non-HW may** be exempt from authorisation. • In order to grant the exemptions from permitting envisaged in the paragraph above, general rules shall be laid down, in respect of each type of activity, specifying the types and quantities of waste that may be covered by this exemption, and the method of treatment to be used. • These rules shall ensure that the treatment of the waste shall be carried out without putting the health of persons at risk and without harming the environment. In the case of the disposal operations set out in paragraph 1, these rules must take into account the best available technologies. • The rules envisaged in the paragraph above shall be approved by order of the Minister of Environment and Rural and Marine Affairs, once the draft has been analysed by the coordinating committee, and the European Commission shall be informed of this. – However, the possibility of exemption has not been used since [ES Law 2011] was passed. **Practice of HW permitting:** – Permits for HW treatment facilities are issued by the **Regional Waste Production and Management**. In the Industry perspective, there is a lack of harmonisation regarding permits and respective criteria. [ES ASEGRE 2017]. – Article 29 of Law 22/2011 establishes a legal regime for waste dealers of prior notification of commencement of activities to the competent authority of the Autonomous Community where the trader has its registered office. The Autonomous Communities may limit or deny their registration in the Production and Waste Management Register, if they do not demonstrate that they fulfil the requirements to act as waste dealer. Requirements for dealers include the obligation to keep a chronological file containing amount, type and origin of their purchased waste and their destination after sale. This chronological file must be available to the competent authorities for the purpose of monitoring and supervising the activities of the dealers. In accordance with Law 22/2011, [MAPAMA 2017] clarifies that the responsibility of the producer delivering waste to a dealers ends when the producer is aware that the waste has been accepted in a treatment plant, which has to be confirmed by the dealer to the producer via an identification document signed by the treatment operator or by any other means provided in the legislation (Article 6.6 of Royal Decree 180/2015, which regulates the transfer of waste inside the territory of the state) [ES MAPAMA 2017]. – The presence of aforementioned waste dealers in the Spanish waste market is a problem for HW managers. A dealer approach to a waste producer occurs mainly by “waste auctioning”: the dealer suggests a price for the waste that the producer has in its possession and (since the responsibility is delegated from the producer to the dealer, it’s very appealing for the producer

D. Core requirements of the Waste Framework Directive on hazardous waste management	
	to take deals. Then, the dealer sells these wastes to a HW manager [ES WPROD 2017]. The main problem in this situation is that different types of waste are illegally mixed and HW may be sold as non-HW to a waste manager. There is currently limited control on this and there is no apparent difficulty on obtaining a license to perform this activity. Even though, in several regions dealer operations are limited. However, by obtaining an operating permit from a neighbour region, the dealer is able to operate in non-permitted regions, presenting waste control and waste tracking problems. [ES ASEGRE 2017]. It should be further noted that according to the Directive 2006/123/EC on services in the internal markets, the dealer registration carried out by a region authority, indeed is valid in all the territory of the state. However, all regional authorities technically can check if a dealer is registered by another authority in the National Waste Production and Management Register [ES MAPAMA 2017]. – Also, in the opinion of [ES WMANAGER 2017], waste operators/ dealers represent one of the main problems regarding permitting in Spain.
Legal implementation of ban on the mixing of HW	– The mixing ban for HW is laid down in Article 18 of [ES Law 2011] for HW producers' obligations and in Article 20 for HW managers' obligations [ES WFD 2013, Qu 11.3].
Derogation and practice for mixing ban	[ES WFD 2013, Qu 11.3] – There has been no derogation from the provisions of the Article 18 of [ES Law 2011] which bans mixing. – Article 20.4d) establishes that waste managers are not allowed to mix different HW, nor with other types of wastes, substances or materials, including dilution. Nonetheless, mixing may be allowed by the **regional waste production and management authorities** in the event of: 1. the mixing operation is carried out by an authorised company; 2. does not increase the adverse impacts of waste management on human health and the environment; and; 3. the operation is done according to the best available techniques. – In addition to the obligations laid down in this Article, HW managers shall comply with the requirements defined in the regulatory procedure established for hazardous waste [ES Law 2011]. **Practice of the mixing ban:** – See section above related to the practice of HW treatment permitting.
Requirements and practice for collection and storage of HW	– [ES Law 2011] on waste and contaminated soils has, by means of various articles, laid down a legal regime to guarantee that the generation, **collection, storage** and treatment of HW is done under the appropriate conditions indicated in the Waste Framework Directive [ES WFD 2013, Qu 11.1]. **Practice of HW collection and storage:** – Collection from waste producers can only be done by companies also authorised for storing HW. Household HW are collected in municipal collection facilities. There are Extended Producer Responsibility schemes for WEEE, mineral oil, phytosanitary products packaging, batteries, tyres and consumer packaging. Particular problems occur when producers deposit and mix HW in municipal waste containers, mixing HW with construction & demolition waste in the containers, or deliver HW waters to water treatment plants, where the treatment is mostly dilution, e.g. in a urban wastewater treatment plants or bio-methanisation plants. – Some of these bad practices are possible due to the general lack of control. The problem starts when the producer is able to classify waste as non-hazardous by assigning a mirror entry or by delivering the HW to a transfer station that changes the classification to a non-hazardous entry [ES ASEGRE 2015].

D. Core requirements of the Waste Framework Directive on hazardous waste management	
Enforcement of hazardous waste legislation	
Responsibilities and practice of inspections	– The control and inspection scheme is regulated in Chapter I (Responsibility, supervision, inspection and control) of Title VII of [ES Law 2011]. Art. 43 of [ES Law 2011] lays down the competences and means of supervision, inspection and control and assigns regional competent bodies for inspections who also establish inspection programmes and plans, and implement them [ES WFD 2013, Qu 17]. **Practice of inspections:** [ES ASEGRE 2015] – Inspection and control in industries is carried out by competent bodies. The Spanish government is making efforts to harmonise practices creating a commission to coordinate waste policies implementation in the country. However, in cases related with municipalities (e.g. detection of HW in municipal or C&D wastes). – One of the great challenges regarding inspections is to **act against the informal operators**, which are understood as operators not having an official authorisation. – The industry believes that the econ**omic crisis brought significant cuts in public budgets and public administrations supported industry activity without taking into account environmental issues**. This situation left no resources for inspection and monitoring. – In addition, the **administrative structure of Spain is heavily decentralised** with 17 competent bodies, with different capacities, policies and means. [ES ASEGRE 2015].
Regular inspections and inspection capacities	[ES WFD 2013, Qu 17] – Article 44 of [ES Law 2011] regulates inspection and specifies system of regular inspections and provides details about system of inspections per regions including different implementation criteria. – At the enforcement implementation level, problems occur due to insufficient inspections for all operators in particularly related to classification and traceability for both hazardous and non-HW (e.g. often occurrence of illegal mixing of HW with other waste streams and treating them inappropriately), see Responsibilities and practice of inspections [ES ASEGRE 2015].
Penalties and fines	[ES WFD 2013, Qu 18] – Actions relating to the mixing of hazardous waste or dilution of hazardous waste are classified as infringements and are subject to penalty by the competent authorities – Penalties and fines are imposed by the Autonomous Communities for infringements of the provisions of [ES Law 2011] – Some examples are: • 2012/086D incorrect HW labelling by a waste manager. Serious. Article 22(2) €2,000 • 2012/004D engaging in the activity of HW management without a permit and lack of HW labelling. Serious. Articles 46(3) and 46(3)(j) €18,000 • Dumping of hazardous and non-HW consisting of plastics, packaging, wood, cardboard, asbestos and construction and demolition waste, violation of Article 46(3)(c), and in relation to Articles 17(1) and 46(3)(k), fine: €9,001 – **Neither MAPAMA nor the industry is aware of serious penalties or fines regarding HW management**.

E. PCB management in the Member State

Policy and regulatory framework

Institutional, political and regulatory framework for PCB management in Spain

- **Community Legislation:** Measures to eliminate releases from intentional production and use of PCB (listed in Annex A, in accordance with paragraph 1(a) of article 3 of the Stockholm Convention): Prohibition on: production, all uses, import and export in 2003. Included in the Regulation (EC) No 850/2004 on persistent organic pollutants and amending Directive 79/117/EEC [ES Stockholm PCB wastes, Part B Q.5].
- **National Legislation** [ES MAPAMA 2016]:
  - Royal Decree 1378/1999, which is a transposition of the Directive 96/59/CE. This Royal Decree has suffered modifications by Royal Decree 367/2010, and Royal Decree 228/2006
  - Royal Decree 815/2013, on the approval of industrial emissions Regulation
  - Law 16/2002, on integrated prevention and control of contamination
  - Royal Decree 1254/1999, on the approval of Control measures for inherent risk in major accidents involving hazardous substances
- **Planning** [ES PNDEPCB 2001]
  - Art. 2.2 Ecological objectives - Decontamination or removal of transformers with a volume of PCBs exceeding 5 cubic decimetres and a concentration of more than 500 ppm of PCBs by weight, as well as of other apparatus with a PCB volume exceeding 5 cubic decimetres and elimination of PCBs Contained therein. Transformers whose fluids contain a concentration between 50 and 500 ppm by weight of PCBs may be maintained up to the end of their useful life and subsequently removed or decontaminated under the conditions set out in [ES RD 1378 1999, Art.8, Sec2]. The collection and subsequent decontamination or disposal of all equipment inventoried with a volume of PCBs of between 1 and 5 cubic decimetres and, as far as possible, those containing less than 1 cubic decimetre of PCBs.
  - Art. 2.3 Decontamination and elimination plan - The achievement of the first objective established in the previous section is proposed through a Plan for the preparation of which is based on the following data and hypotheses: Total number of PCBs and equipment to be decontaminated: Average estimate: 116,000 Tm. Liquids: PCBs including potentially contaminated dielectric oils: Average estimate: 38,000 Tm. Solids: Transformers and other contaminated devices: Average estimate: 78,000 Tm.
  - It is a question of optimizing the use of existing treatment infrastructures in Spain, and given the lack of PCB incineration plants in the country, it is necessary to have a certain number of these plants, among other reasons, in application of the principle of self-sufficiency in force at the European Union. Taking into account the quantities of PCB to be disposed of and the deadlines in which these operations must be carried out, Spain needs to have a PCB incineration capacity of at least 4,000-5,000 tonnes / year.
- **Elimination deadlines** [ES MAPAMA 2016]
  - Chapter 15 of the [ES WMP 2016]: Goals established for PCB containing equipment are a) before 12/31/2015 elimination or immediate decontamination of all devices containing PCBs this has been updated on 12/31/2014: before 12/31/2016 immediate elimination or decontamination of all equipment whose PCB content (equal to or greater than 50 ppm) has been identified during the year 2015, with the exception of transformers with PCB concentration between 50 and 500 ppm that can continue operating until the end of its lifetime b) Before 31 December of each year elimination or decontamination of all devices containing PCB identified within the preceding year, with the exception of transformer units with a concentration of PCBs between 50 and 500 ppm can continue operating until the end of its lifetime.
  - PCB elimination/decontamination deadlines depend on applicable international agreements and adjust to establishments from international conventions. In the Spanish legislation, the applicable deadlines are as follows: Decontamination or elimination before December 31, 2010 of a) PCB-containing transformers > 5 dm3 and >500ppm, b) all PCB-

E. PCB management in the Member State

containing equipment with PCB > 5 dm3, and c) PCB withhold within this equipment.

- All PCB-containing transformers with PCB concentrations between 50 and 500 ppm may be kept until their end-of-life phase and should be decontaminated or eliminated right after.
- Collection of all inventory PCB-containing equipment with PCB concentrations between 1 and 5 dm3 for posterior decontamination/elimination.

- **PCB thresholds** were implemented and included in [ES PNDEPCB 2001] for the following [ES MAPAMA 2016]:
  - PCB-containing transformers with PCB concentrations above 500 ppm and volume above 5dm3;
  - Remaining PCB-containing equipment with volume above 5 dm3;
  - PCB-containing transformers with PCB concentrations between 50 and 500ppm;
  - Remaining PCB-containing equipment with volume between 1 and 5 dm3.
- **PCB inventory** [ES MAPAMA 2016]: The PCB inventory is not publicly available, only upon request. Last available information from the National PCB Inventory dated December 31, 2012 and can be found on Chapter 15 of [ES WMP 2016]. Recent updates can be consulted upon request and may be included in the annual waste report issued by MAPAMA.
- **The general strategies for PCB** are the following [ES MAPAMA 2016]: Inventory Annual Update, Spain managing capability analysis, setting costs and optimize management models, national PCB Plan annual revision, provide financial help for the execution of this Plan, create the Collection, Decontamination and Elimination Project, for PCB-containing equipment with volume < 5 dm3, owners List update, agreements between MAPAMA and Large Owners, plan Informative workshops in the Autonomous Communities, act as advisor for PCB-containing equipment owners, create an electronic Database with the Autonomous Communities collaboration, develop R&D programmes.
- **Funding for PCB elimination** [ES MAPAMA 2016]**:** Decontamination and elimination costs must be borne by the PCB-containing equipment owners. Public Administration may co-fund Awareness and Motivational Programmes in order to achieve the Plan's targets.
- **Spain has a PCB guidance document,** the [ES GPNPCB 2001] [ES MAPAMA 2016]: It is a guidance manual to facilitate legislation application and development of the [ES PNDEPCB 2001]. The document is divided in 3 chapters. Each chapter is the answer to a basic question regarding PCB management, e.g. brief summary of all requirements and necessary actions to be in compliance with legislation; guidance on how to implement measures to be in compliance with legislation; guide to all available help that can be supplied to develop this Plan.
- **Special arrangements** in WMP [ES WMP 2016] [ES MAPAMA 2016] are:
  - **Enforcement of Royal Decree 1378/1999 by the competent authorities**: Competent authorities from Autonomous Communities must communicate to PCB-containing equipment holders their obligation to eliminate, as soon as possible, doubtful equipment which may contain PCB or prove through chemical analysis that PCB concentration on their equipment is inferior to 50 ppm (as established by Royal Decree 1378/1999 and its posterior modifications). In case of infraction, the Autonomous Community should apply the correspondent sanction (p.114).
  - MAPAMA and the Autonomous Communities will work with **identified sectors with potential PCB-containing equipment holders,** as well as with PCB management sectors to evaluate the current situation and lay down corrective measures to apply in case of Plan targets infractions (p.122).
  - **Surveillance, inspection and control of all PCB-containing waste production and management activities**, especially regarding the following aspects: a) possible existence of PCB-containing equipment that may arise in a near future, and application of measures for immediate elimination or, if it's the case, for chemical analysis; b) Transformers with PCB

E. PCB management in the Member State	
	concentrations between 50 and 500 ppm, to ensure that these equipment are rightfully and quickly disposed at the end-of-life; c) Metal treatment facilities, with the intent of treatment of all PCB –containing metals in authorized facilities; d) Possible fraudulent or criminal conduct by PCB-containing equipment holders, agents, managers or waste dealers regarding possession or management of such wastes; (p.123f.). • Prioritise alternative treatments which can safely eliminate or decontaminate, towards incineration, especially for PCB-containing fluids. Waste incineration, ferrous and non-ferrous metal production, heat and power generation, production of mineral products, transportation, open burning).
PCB Inventory	– The **National PCB inventory** must be updated annually by MAPAMA [ES PNDEPCB 2001, Art.15.1]. Last update is dated December 31, 2014. The information for 2015 is currently being compiled. [ES MAPAMA 2016]. All information gather until December 31, 2012 is included in the [ES WMP 2016]. The 2013 and 2014 data will be published in the annual waste report that can be consulted upon request. – The inventory includes the latest information provided by **Regional Waste Production and Management Registry**, on an annual basis. Commonly, this Inventory information is referred to the year n-2, n being the current year [ES MAPAMA 2016]. – The inventory does not include information on **PCB in open applications. However it includes** information on equipment with PCB-containing fluid, PCB-contaminated equipment and doubtful equipment which may contain PCB, which are mostly transformers and capacitors with PCB volume superior to 5 dm^3. – **Spain did not produce PCB in the past** [ES Stockholm PCB wastes 2014, Part A Q. 24]. – Spain has developed strategies **for identifying (a) stockpiles** consisting of or containing greater than 0.005% (50 ppm) PCB, through the implementation of regulatory and enforcement policies; Identification of relevant sectors; Database (electronic or paper copy); and Formal communication [ES Stockholm PCB wastes 2014, Part C Q.1]. – Also for **products and articles** containing more than 0.005% (50 ppm) **PCB contaminated through open applications** of PCB (e.g. sealants, cable-sheaths, cured caulk and painted objects) strategies were developed, the elements included are media campaigns, regulatory and enforcement policies, incentives, partnerships with stakeholders, identification of relevant sectors, databases (electronic or paper copy), formal communications, informal communications, door to door searches [ES Stockholm PCB wastes 2014, Part C Q.2]. – As regards **strategies for identifying sites** contaminated by greater than 0.005% (50 ppm) PCB, there is no specific strategy for sites contaminated with PCB, but there is a general strategy to identify sites contaminated, especially for industrial activities. Those activities are obliged to present a site report to the Environmental Authorities [ES ASEGRE 2016]. – There are no reported **sites contaminated** by greater than 0.005% (50 ppm) PCB [ES MAPAMA 2016]. Spain has taken steps to remediate the sites contaminated by chemicals listed in Annex A, B or C, in accordance with paragraph 1(e) of Article 6 of the Stockholm Convention. Remediation is in progress since before 2001 [ES Stockholm PCB wastes 2014, Part B Q.23]
Monitoring, R&D, public information and awareness raising	– **Spain undertook research, development, and monitoring and cooperation pertaining to PCB actions in 2007**, actions included research and development, monitoring, and cooperation. Activities applied are sources and releases into the environment; presence, levels and trends in human health and the environment; release reduction and/or elimination; harmonised methodologies for making inventories of generating sources. [ES Stockholm PCB wastes 2014, Part B Q.30] – Spain also undertook measures to implement Article 10 of the Convention - **Public information and awareness raising in 2008.** This included awareness on persistent organic pollutants among policy and decision makers; provision to the public of all available information on persistent organic pollutants; and training of workers, scientists, educators and technical and

E. PCB management in the Member State	
	managerial personnel [ES Stockholm PCB wastes, Part B Q.29]. – According to Information and awareness Programme Framework of the National Stockholm Convention Application Plan and Directive (EC) 850/2004 on Persistent Organic Pollutants (POP), some workshops and briefings regarding POP were imparted to general public, students, professors, technicians, industrial sector, etc., with a total of 7 workshops in Spain throughout 2015 [ES MAPAMA 2016].
PCB management	**Requirements of the Stockholm Convention (SC)** – The National Implementation Plan for Spain (PNA), according to Article 7 of the Stockholm Convention, was started in April 2005, with the meeting of the National Coordination Group and the establishment of various technical working groups: inventories, substitution, best available techniques and best Environmental practices, Persistent Organic Pollutants (POP) monitoring, food and environment, awareness and information and cooperation, coordination and financial issues. – The document, reflecting the objectives of the Convention and the Regulations, reflects the diagnosis of the situation in Spain in the area of POPs, identifying and outlining the measures to be adopted and transmitted to the Convention in March 2007. In addition, Update its national implementation plan on a regular basis and in the manner specified by the decision taken at the Conference of the Parties. [ES PNACE 2013, p.11] – **Public information, awareness raising and education activities (Art. 10 SC)**: The regions, carry out Information and Awareness Programs and Plans, which reflect a greater concern about environmental issues, for example, Galicia has produced an information page to the user for the promotion and knowledge of the Stockholm Convention, Regulation (EC) No. 850/2004 and the National Plan of Implementation. Some regions, in their Awareness Programs, address issues such as the use of public transportation, awareness of the energy consumption of heating, fire prevention, etc. In general, all regions include waste treatment as one of the major environmental concerns and address the treatment of Waste Electrical and Electronic Equipment (WEEE) that may potentially contain PBDEs and PFOS. Some examples are: Galicia, Murcia, Navarra and Catalonia [ES PNACE 2013, p.90]. – **Measures to prevent releases from intended production and use (Art. 3 SC)**: Article 3 of Regulation (EC) No 850/2004 includes the monitoring of the production, placing on the market and use of the substances included in Annex I. To increase awareness of the situation of the POPs in Spain at a level of autonomy, the efforts made by some Autonomous Communities are remarkable. The Region of Murcia has carried out works of collecting information of POPs, specifically of organochlorine pesticides, PCBs, dioxins and furans and organobromate compounds of industrial use. In its website it has at the disposal of the public documents that include descriptions of uses and inventories of these compounds. Extremadura contributed to the inventory data of analysis of phytosanitary products in vegetables for 2011. Galicia produced a report in 2009 that provided information on POPs of a general and specific nature, providing toxicological and surveillance data and detailing special cases of pollution in Galicia. The Community of Madrid provides data on its emissions inventory for the Period 2007 - 2009 and provisional estimates for the year 2010. Finally, Cantabria also provides information on waste and industrial emissions during 2007 [ES PNACE 2013, p.21]. – **Measures pertaining to the register of specific exemptions (Art. 4 SC):** The measures include Order PRE/473/2004, Order PRE/556/2005, Order PRE/374/2008 [ES PNACE 2013, p.61]. – **Measures to reduce or eliminate releases of substances listed in Annex C (Art. 5 SC):** There are such measures for PCB (but not for all substances) [ES Stockholm PCB wastes, Part B Q.9]. – **Measures to reduce or eliminate releases from stockpiles and wastes (Art. 6 SC)**: There are no such measures [ES Stockholm PCB wastes, Part B Q.15]. – **Measures taken to ensure PCB or products and articles** containing greater than 0.005% (50 ppm) PCB identified as wastes are **managed in an environmentally sound manner** [ES

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	Stockholm PCB wastes 2014, Part C Q.4]. – **Before 2001, Spain conducted the following measures:** • Handled in an environmentally sound manner. • Collected in an environmentally sound manner. • Transported in an environmentally sound manner. • Stored in an environmentally sound manner. • Disposed of in such a way that the persistent organic pollutant content is destroyed or irreversibly transformed, or otherwise disposed of in an environmentally sound manner, in accordance with paragraph 1 (d) (ii) of Article 6 of the Convention. – **Measures to identify and/or label**, where appropriate, **wastes liable to contain** greater than 0.005% (50 ppm) **PCB** where undertaken. It included use of labels for identification; use of screening test for identification; use of laboratory analysis for identification [ES Stockholm PCB wastes 2014, Part C Q.8]. – **Spain took no measures to identify articles** containing more than 0.005% (50 ppm) **PCB contaminated through open applications** of PCB (e.g. sealants, cable-sheaths, cured caulk and painted objects) [ES Stockholm PCB wastes 2014, Part C Q.9]. – **Most of the waste identified (51-99%)** containing greater **than** 0.005% (50 ppm) PCB is **managed in an environmentally sound manner** [ES Stockholm PCB wastes 2014, Part C Q.10]. – Before 2001, **measures to reduce exposures from the use of PCB were promoted**, the measures are not known [ES Stockholm PCB wastes 2014, Part C Q.13].
PCB elimination	**Specific plan for the management, phase-out and disposal of PCB** – Chapter 15 of PEMAR is dedicated to PCB. This Plan must serve as guidance to all Autonomous Communities in their Regional Plan development regarding this type of waste [ES MAPAMA 2016] [ES MAPAMA 2016] – The main findings regarding the **PCB stocks/elimination** are included in Chapter 15 of PEMAR, in the section "Conclusions on the state of management and elimination of PCB in Spain". As established in this section, the main conclusions about PCB management and elimination in December 31, 2012 were as follows: • To this date 1,254 t of PCB-containing equipment were inventoried; it was responsibility of the holders to dispose of such equipment before 1/1/2011. 1,238 t were equipment with volume > 5dm^3 and 16 t were equipment with volume < 5 dm^3. • To this date 1,961 t of doubtful PCB-containing equipment existed. The holders of such equipment should submit the equipment to chemical analysis to sort the equipment into three groups: a) Equipment with negative results, which wouldn't need to be eliminated and could leave the inventory; b) equipment with results stating PCB concentrations between 50 and 500 ppm, which could remain operative until their end-of-life and would stay on the inventory; c) equipment with results stating PCB concentrations superior to 500 ppm, which would remain on the inventory and would be accounted as PCB-containing waste that the holder should have disposed in 1/1/2011. • On December 31, 2012 26,173 ton of PCB-containing equipment (with PCB concentrations between 50 and 500 ppm) was still in use. • In summary, the **total quantity of equipment that should have been removed** from 29/09/1999 to 31/12/2010 is: **110,753 – 26,173 = 84,580 t.** However, only **81,365 t were eliminated,** with 1,239 t of accredited equipment and 1,957 t of doubtful equipment remaining to be disposed of. • On the other hand, there is the possibility of new PCB-containing equipment arise in a near future, due to uncredited equipment, holders unawareness, or unexpected contamination, which would increase the number of PCB-containing equipment that is pending treatment.

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	Anyhow, the holders of PCB-containing equipment who haven't declare their equipment, must be sanctioned as established in Article 15 of Royal Decree 1378/1999. – Spain has **locally destroyed**, in an environmentally sound manner, equipment, liquids, or other wastes containing **greater than 0.005% (50 ppm) PCB** (e.g. transformers, capacitors or other receptacles containing liquid stocks) identified in the country, in total equipment containing PCB of **81,365 metric tonnes** (year 2012) [ES Stockholm PCB wastes 2014, Part C Q.15]. – **Spain has imported equipment, liquids, or other wastes** containing greater than 0.005% (50 ppm) **PCB** for environmentally sound destruction. In total equipment containing PCB <8000 metric tonnes (year 2012) [ES Stockholm PCB wastes 2014, Part C Q.16]. – On the other hand side, Spain has **not exported equipment, liquids, or other wastes** containing greater than 0.005% (50 ppm) **PCB** (e.g. transformers, capacitors or other receptacles containing liquid stocks) for environmentally sound destruction. Liquid PCB need to be send to incinerators located in other EU countries. There is no accurate data [ES Stockholm PCB wastes 2014, Part C Q.17]. – **Future actions - updated elimination plan** [ES EU COM PCB Wastes 2016, Q.5]**:** Spain has a set of goals and orientation guidelines for application in all autonomous communities regarding the achievement of PCB goals. These goals and guidelines are included in the [ES WMP 2016], see also sections above.
Reasons for existence of PCB wastes	– **PCBs not eliminated by the end of 2010:** • When Royal Decree 1378/1999 (and posteriors modifications) was enforced, Spain began to decontaminate and eliminate PCB-containing equipment, in order to achieve the proposed targets. Since 2009, a significant **decline in the rate of elimination of PCB was detected, as a result of the economic crisis** [ES MAPAMA 2016]. • There were **not enough enforcement actions in order that holders met their obligations**. In general holders that declared contaminated equipment met their obligations to manage the waste under the legislation. Main holders were power companies. It can be supposed, there were other holders, which were not enforced enough to meet their obligations, and presumably did not declared the equipment, and is not possible to ensure the proper management in those cases. [ES ASEGRE 2016] – **PCB still in use in applications:** • On 31 December 2012 **26,173 t of PCB-containing transformers were still in use** [ES MAPAMA 2016]. Especially in the PCB-containing transformers, which have a PCB-concentration of 50 to 500 ppm and can be used until its end-of-life. The suspected PCB-containing equipment is also still in use. This equipment should be eliminated in case of chemical analysis confirmation of PCB-containing materials in concentrations above 5 dm^3. [ES EU COM PCB Wastes 2016, Q.4]. • PCB concentrations present in other waste, like paints, isolators, cables, etc. are harder to identify and quantify. Nevertheless, future identification shouldn't pose a problem, but quantification may be harder, and possibly some estimations have to be made. These applications will be eliminated at the end of their life [ES MAPAMA 2016] – **Likelihood that further PCB-containing wastes will be identified in the future** • There may be PCB-containing materials in other waste sources, such as concrete sealants, paints, insulation of different types, wiring, etc. These PCB-containing materials are difficult to identify due to its great diversification amongst a great variety of materials (diffuse sources). Nonetheless, future identification of PCB-containing materials should not present problems. Since these types of PCB-containing materials are hard to keep count, possibly there would be the need of use of estimations [ES EU COM PCB Wastes 2016, Q.4].
Estimation on plausibility of PCB elimination	The total verified quantity of PCB-containing equipment since the establishment of the Royal Decree 1378/1999 until 31/12/2014 [ES EU COM PCB Wastes 2016, Q.1]:

E. PCB management in the Member State	
	– Eliminated PCB- containing equipment: 86,193 t – Existent PCB-containing equipment with PCB concentrations above 500ppm and >5dm3: 1,143 t – Existent PCB-containing equipment > 5 dm3: 12 t – Existent PCB-containing transformers with PCB concentrations between 50 and 500 ppm: 24,667 t

F. Official data on hazardous waste management: generation, composition, treatment, infrastructure, performance & PCB management[4]		
Population [EUROSTAT DEMO-GIND 2014]	ES	EU 28
Population (average number per year and share within EU 28)	46,480,882 (9% of EU 28)	507,618,721
Performance of separate collection	**ES**	**EU 28**
Separate collection of WEEE [EUROSTAT ELEE 2012]		
Amount of EEE put on the market (in kt and share within EU 28)	574 kt (7% of EU 28)	8,794 kt(e)
Amount of WEEE collected separately (in kt and % of total put on the market)	158 kt (28%)	3,672 kt(e)
Separate collection of batteries and accumulators [EUROSTAT Batteries 2013] Separate collection of portable batteries and accumulators [W1606B] *[EUROSTAT WASPB 2013]*		
Amount of portable batteries and accumulators [W1606B] put on the market (in kt)	10.7 kt (5% of EU 28)	207 kt(e)
Amount of portable batteries and accumulators [W1606B] collected separately (in kt and % of total put on the market)	3.7 kt (35%)	76 kt(e)

[4] All data are based on EUROSTAT (the source of the data set is briefly mentioned in square brackets; further detailed information are part of the section "Information sources"

* All recovery and / or disposal rates were calculated based on available amounts of HW treated (national generation plus import minus export). There might be uncertainties compared to the total amount generated and statistically recorded in EUROSTAT, mainly due to different data collection methodologies and reporting obligations (Annex II of the WStatR), amounts of HW treated in on-site facilities and partly storage effects.

** Waste amounts consider the total amount of hazardous waste treated within the country (as explained above) and the amount of hazardous waste exported. The amount is listed under section "Hazardous waste shipments"

*** For selected Member States data for 2014 are not yet available for:

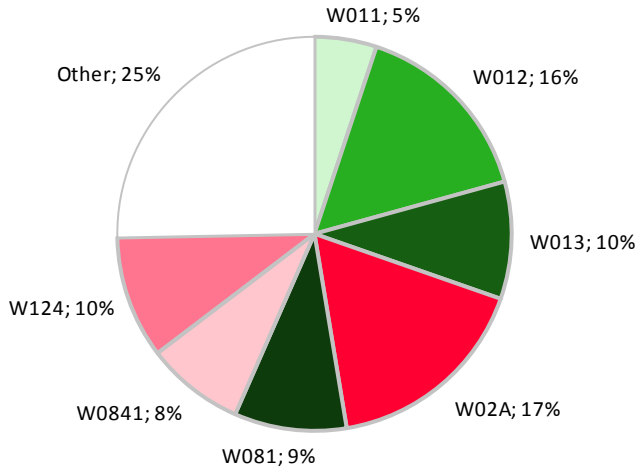
– Waste electrical and electronic equipment (WEEE): Cyprus, Italy (latest data available as of 2013) and Spain (latest data available as of 2012)

portable batteries and accumulators: Greece (no data at all), Spain, Romania (latest data available as of 2012)

The EU 28 average rate was therefore estimated for all Member States with data for 2013. For other countries the respective EU 28 data were given for the latest data available for the MS.

F. Official data on hazardous waste management: generation, composition, treatment, infrastructure, performance & PCB management[4]

Hazardous waste generation and composition [EUROSTAT WASGEN 2014]	ES	EU 28
Total amount of hazardous waste generated		
Total amount of hazardous waste generated (in kt and kg per inhabitant)	2,985 kt (64 kg*inh)	95,550 kt (188 kg*inh)
Composition of hazardous waste generated		
Amount of W02A - Chemical wastes (Top 1 of hazardous waste generated within the MS in kt and % of total amount)	508 kt (17%)	12,350 kt (13%)
Amount of W012 - Acid, alkaline or saline wastes (Top 2 of hazardous waste generated within the MS in kt and % of total amount)	467 kt (16%)	3,140 kt (3%)
Amount of W124 - Combustion wastes (Top 3 of hazardous waste generated within the MS in kt and % of total amount)	300 kt (10%)	11,780 kt (12%)
Amount of spent solvent generated (in kt and % of total amount)	152 kt (5%)	2,360 kt (2%)
Amount of used oils generated (in kt and % of total amount)	287 kt (10%)	5,080 kt (5%)
Amount of other hazardous waste generated (in kt and % of total amount)	1,271 kt (43%)	60,840 kt (63%)



Data with a share of > 5% of total HW generated are presented separately

W011	Spent solvents
W012	Acid, alkaline or saline wastes
W013	Used oils
W02A	Chemical wastes
W032	Industrial effluent sludges
W033	Sludges and liquid wastes from waste treatment
W05	Health care and biological wastes
W071	Glass wastes
W075	Wood wastes
W077	Waste containing PCB
W081	Discarded vehicles
W0841	Batteries and accumulators wastes
W08A	Discarded equipment
W102	Mixed and undifferentiated materials
W103	Sorting residues
W121	Mineral waste from construction and demolition
W124	Combustion wastes
W126	Soils
W127	Dredging spoils
W128_13	Mineral wastes from waste treatment and stabilised wastes
W12B	Other mineral wastes (W122+W123+W125)

Hazardous waste treatment [EUROSTAT WASTRT 2014]*	ES	EU 28
Total amount of hazardous waste treated - data excl. Annex 2 WStatR (in kt)		
Total amount of hazardous waste treated within the Member State (in kt and kg per inhabitant)	2,322 kt (50 kg*inh)	76,200 kt (150 kg*inh)
Total amount of hazardous waste treated within the Member State (in kt and kg per inhabitant)	within MS: 23% (525 kt) Export: 0.05% (0.02 kt)	within EU 28: 49% (37,360 kt)

F. Official data on hazardous waste management: generation, composition, treatment, infrastructure, performance & PCB management[4]		
Rate for depositing HW onto or into land (D1, D5, D12) treated within the Member State or exported to another country (separately in % of total amount of HW treated and kt and in % of total amount of HW exported and kt, respectively)	R1 within MS: 6% (138 kt) R1 Export: 0.5% (0.2 kt) D10 within MS: 0.02% (0.4 kt) D10 Export: 7% (3.0 kt)	R1 within EU 28: 7% (5,700 kt) D10 within EU 28: 6% (4,600 kt)
Amount of spent solvents [W011] treated - data excl. Annex 2 WStatR		
Rate of spent solvents recovered (excl. energy recovery) within the Member State (data excl. Annex 2 WStatR) or exported to another country (separately in % of total amount of spent solvents treated and kt and in % of total amount of spent solvents exported and kt, respectively)	within MS: 75% (115 kt) Export: 90% (3.6 kt)	within EU 28: 37% (650 kt)
Rate of spent solvents thermally treated (R1, D10) within the Member State or exported to another country (separately in % of total amount of spent solvents treated and kt and in % of total amount of spent solvents exported and kt, respectively)	R1 within MS: 19% (28.6 kt) R1 Export: 0% (0.0 kt) D10 within MS: 0% (0.0 kt) D10 Export: 10% (0.4 kt)	R1 within EU 28: 29% (520 kt) D10 within EU 28: 33% (580 kt)
Amount of acid, alkaline or saline wastes [W012] treated - data excl. Annex 2 WStatR		
Rate of acid, alkaline or saline wastes recovered (excl. energy recovery) within the Member State (data excl. Annex 2 WStatR) or exported to another country (separately in % of total amount of acid, alkaline or saline wastes treated and kt and in % of total amount of acid, alkaline or saline wastes exported and kt, respectively)	within MS: 81% (224 kt) Export: 100% (0.8 kt)	within EU 28: 82% (1,690 kt)
Rate of acid, alkaline or saline wastes thermally treated (R1, D10) within the Member State or exported to another country (separately in % of total amount of acid, alkaline or saline wastes treated and kt and in % of total amount of acid, alkaline or saline wastes exported and kt, respectively)	R1 within MS: 6% (17.7 kt) R1 Export: 0% (0.0 kt) D10 within MS: 0% (0.0 kt) D10 Export: 0% (0.0 kt)	R1 within EU 28: 2% (50 kt) D10 within EU 28: 2% (40 kt)
Amount of used oils [W013] treated -data excl. Annex 2 WStatR		
Rate of used oils recovered (excl. energy recovery) within the Member State (data excl. Annex 2 WStatR) or exported to another country (separately in % of total amount of used oils treated and kt and in % of total amount of used oils exported and kt, respectively)	within MS: 99% (171 kt) Export: 0% (0.0 kt)	within EU 28: 85% (2,020 kt)
Rate of used oils thermally treated (R1, D10) within the Member State or exported to another country (separately in % of total amount of used oils treated and kt and in % of total amount of used oils exported and kt, respectively)	R1 within MS: 0.3% (0.6 kt) R1 Export: 0% (0.0 kt) D10 within MS: 0% (0.0 kt)	R1 within EU 28: 10% (230 kt) D10 within EU 28: 4% (90 kt)

F. Official data on hazardous waste management: generation, composition, treatment, infrastructure, performance & PCB management[4]

	D10 Export: 2% (0.001 kt)	

Available information on domestic disposal capacities for hazardous waste

- Data has been submitted by 10 of 14 autonomous communities, so no overall data is available
- For the 10 autonomous communities, 595 hazardous waste treatment facilities with a total capacity of 20,669 kt were reported [EW MAPAMA II 2017]

Key data on polychlorinated biphenyls

Amount of PCB containing waste [W077] [EUROSTAT WASTRT 2014]

Amount of PCB containing waste generated (in t and % of total amount)	2,213 t[5] (0.07%)	42,600 t (>0%)
Amount of PCB containing waste treated within the Member State - data excl. Annex 2 WStatR or exported to another country (separately in % of total amount of PCB containing waste treated and t and in % of total amount of HW exported and t, respectively)	within MS: 146% (3,220 t) Export: 1% (502 t)	within EU 28: 84% (35,600 t)
Rate of PCB containing wastes recovered (excl. energy recovery) within the Member State (data excl. Annex 2 WStatR) or exported to another country (separately in % of total amount of PCB containing waste treated and t and in % of total amount of PCB containing waste exported and t, respectively)	within MS: 99% (3,172 t) Export: 0% (0 t)	within EU 28: 29% (10,400 t)
Rate of PCB containing waste thermally treated (R1, D10) within the Member State or exported to another country (separately in % of total amount of PCB containing waste treated and t and in % of total amount of PCB containing waste exported and t, respectively)	R1 within MS: 1% (48.0 t) R1 Export: 0% (0 t) D10 within MS: 0% (0.0 t) D10 Export: 96% (480.0 t)	R1 within EU 28: 8% (2,700 t) D10 within EU 28: 32% (11,300 t)

Situation of PCB waste by 31.12.2014 [ES EU COM PCB wastes, Q. 1]

Transformers and capacitors

	Transformers	Capacitors
Total equipment containing PCB, number	25,811	
PCB (total), tonnes	25,811	
PCB (total), tonnes: • Used or waste PCB, tonnes • Wastes suspected to contain PCB	1,143 969	

[5] Difference between the PCB generation according to EUROSTAT (2213 t) and data in the PCB inventory (1143t) can be explained that EUROSTAT data (put together by INE) includes three CER-STAT codes (07.71, 07.72, 07.73), while the data provided by MAPAMA for the PCB inventory correspond only to those of the code 07.72. Similar effects occur as regards the reported amounts of PCB treated.

F. Official data on hazardous waste management: generation, composition, treatment, infrastructure, performance & PCB management[4]

		Waste quantity[6] (t)	PCB quantity in waste[7] (t)
PCB equipment still in use	Large equipment containing PCB (> 5 dm3)	25,799	8,600
	• Equipment with PCB content > 500 ppm	1,143	381
	• Equipment with PCB content between 50 and 500ppm	24,715	8,238
	Transformers	24,667	
	Capacitors		
	Fluorescent lighting ballast		
	Power factor correction/Starter		
	Others (please specify):		
	Small PCB equipment (< 5dm3)	12	
	PCB in Products in use (please specify):	8,604 (estimated)	

Additional information regarding PCB containing waste [ES EU COM PCB wastes, Q. 2]

Amounts of PCB wastes owned per holder	**N/A**
Number of sites contaminated with PCB	– According to the available information on contaminated soils, there are no PCB-contaminated soils identified.

Treatment capacities [ES EU COM PCB wastes, Q. 3]

	Facility	Location	Type of treatment	Capacity (t/year)
Treatment capacities	FCC Ámbito (GEMASUR)	Las Quemadas Industrial Estate (Cordoba)	Decontamination and destruction of the equipment, extraction of fluids containing PCB and transfer to the incineration plants of the EU	3,000
	BEFESA PCB management	Cabezo Beaza Industrial Estate (Cartagena, Murcia)	Decontamination and destruction of the equipment, extraction of fluids containing PCB and transfer to the incineration plants of the EU.	7,500
	AGR	La Granda – Carreño (Asturias)	Decontamination and destruction of the equipment, extraction of fluids containing PCB and transfer to the incineration plants of the EU.	15,000
			Decontamination of oils containing PCB (Method metallic sodium)	2,000

[6] Total amount of waste containing PCB in a concentration > 50 ppm

[7] Amount of PCB contained in the wastes contaminated with PCB

F. Official data on hazardous waste management: generation, composition, treatment, infrastructure, performance & PCB management[4]

Hazardous waste shipments [EUROSTAT WASSHIP 2014]	
Total amount of hazardous waste shipped to other EU MS (in kt and % of total hazardous waste exports)	*42 kt (96%)*
Countries of destination (in kt)	Italy: 25 kt France: 10 kt Portugal: 3 kt Other (UK, BE, DE, NL, AT): 3,28 kt
Total amount of hazardous waste shipped out of EU (in kt and % of total hazardous waste exports)	*2 kt (4%)*
Countries of destination (in kt)	n.a.

Existence and quality of hazardous waste generation and treatment data reported to EUROSTAT [WStatR 2014]	
Additional information on HW generation and treatment according national statistics	– Data on HW generated and treated is collected by INE on a sample survey basis. Waste generated by some sectors is estimated by models.
Additional information on HW import and export according national statistics	**N/A**

Further data and information on HW generation/treatment and data gap	**EUROSTAT**	**[ES INE 2014]**
HW waste data available to public	– Data on HW generation and treatment are published by INE (Instituto Nacional de Estadística) and available to the public to a limited extend. – Data publicly available on the website only on an aggregated level as total amount by industry, construction and service sector. – For the industry some detailed data as per sector are given [ES INE 2014].	
Total amount of HW generated (in kt)	2,985 kt	1,866 kt
Total amount of HW treated (for EUROSTAT-data excl. Annex 2 WStatR) (in kt)	2,322 kt	2,322 kt
Total amount of HW exported (in kt)	43 kt	N/A
Total amount of HW imported (in kt)	214 kt	N/A
Difference (Gap, calculated as (GEN - EXP + IMP) - TRT) (in % of generated and kt) Important note: For EUROSTAT-data the not reported amount for Annex 2 WStatR has to be considered	26% (834 kt)	-15% (-285 kt); considering EUROSTAT imports/exports
Explanation(s) of the HW data gap	**[ES MAPAMA 2017]** Differences between the data of HW generation between [ES INE 2014] and EUROSTAT relate to incomplete information published by INE compared to EUROSTAT: Data from INE does not include some economic sectors and only the data from the (manufacturing) industry sector is from 2014, whereas data	

F. Official data on hazardous waste management: generation, composition, treatment, infrastructure, performance & PCB management[4]	
	concerning construction industry is from 2013. There are no differences between data of total amount of HW treatment from [ES INE 2014] and from EUROSTAT. The negative gap between the amounts of waste generated and treated is due to the fact that the amounts of waste stored pending treatment are not counted. It is also possible that double counting may occur in some cases

G. Problems encountered in HW and PCB management and "Best practice" in the Member State	
Challenges and problems in HW management	– **HW classification:** The number of different competent bodies (17 competent bodies, one per region) causes a lack of harmonisation on waste management criteria (e.g. classification). This means that it is possible the same type of waste could be considered to be HW or Non-HW depending on the region where it is classified. – **HW labelling:** The waste producer is responsible for correct classification, labelling and packaging (Concerning this matter, the MAPAMA has published information on its website). Regions have the obligation to inspect and control producers. However, stakeholders state that there are not sufficient resources to establish this control. – From the industry perspective HW producers – although it is their own responsibility - rely on the information provided by the waste treatment operators in order to properly label HW. – **HW record keeping / tracking**: Although most of regions have created electronic traceability systems, there is a lack of information exchange between them. As a consequence, traceability for cross regional shipments is hampered. – – **Permit procedure for HW treatment facilities:** Permits for HW treatment facilities are issued by the Regional Waste Production and Management. There is a lack of harmonization regarding permits and respective criteria. Additionally, there is no permit derogation in practice. Although Article 29 of Law 22/2011 defines requirements for dealer activities, e.g. to keep records of all their activities, including origin and type of the purchased waste as well as the destination of the sold waste, according to industry, the presence of dealer in the Spanish waste market is a problem for HW managers. A dealer approach to a waste producer occurs mainly by "waste auctioning": the dealer suggests a price for the waste that the producer has in its possession and (since the responsibility is delegated from the producer to the dealer), it's very appealing for the producer to take deals. Then, the dealer sells these wastes to a HW manager. The main problem of this aspect is that different types of waste are illegally mixed and HW may be sold as non-HW to a waste manager. There is currently no control on this and there is no apparent difficulty on obtaining a license to perform this activity. Even though, in several regions dealer operations are not permitted, and no permitting is granted to dealers in these regions. However, by obtaining an operating permit from a neighbour region, the dealer is able to operate in non-permitted regions, presenting waste control and waste tracking problems. – **Illegal mixing:** There are cases where waste operators bulk up HW in a way that the content of one drum ('container') of HW is combined within other drums

	containing non-HW. The HW dilution is an illegal practice that has to be attributed to waste manager and it cannot be traced easily by the authorities **Collection and storage of HW:** Particular problems occur when producers deposit and mix HW in municipal waste containers, mixing HW with C&D (Construction & Demolition) waste in the containers, or deliver HW waters to water treatment plants, where the treatment is mostly dilution, e.g. in an urban wastewater treatment plants or biomethanisation plants. Some of these bad practices are possible due to the l lack of control in storage facilities. The problem starts when the producer is able to classify waste as non-hazardous by assigning a mirror entry or by delivering the HW to a transfer station that changes the classification to a non-hazardous entry. – **Inspections:** Inspection and control in industries is carried out by competent bodies. The Spanish government is making efforts to harmonise practices creating a commission to coordinate waste policies implementation in the country. However, in cases related with municipalities (e.g. detection of HW in municipal or C&D wastes), the municipal police practically takes over the controlling part. One of the great challenges regarding inspections is to act against the informal operators, which are understood as operators not having an official authorization. It is generally accepted that best performances are in states that selected the shared responsibility regime among the actors in their legislations. It fosters an auto regulation of the industry because the initial producer and all the downstream holders are responsible of the good treatment, so producers only assign waste management to companies they trust. For that reason, it is very common to audit waste management companies on behalf of the producers. The responsibility regime guarantees a better performance and allows that fewer resources are dedicated to inspection and control. On the other hand, the responsibility delegation among the actors leaves all the control and inspection activity to competent bodies. The industry believes that the economic crisis brought significant cuts in public budgets and public administrations supported industry activity without taking into account environmental issues. This situation left no resources for inspection and monitoring. – In addition, the administrative structure of Spain is heavily decentralised with 17 competent bodies, with different capacities, policies and means.
Challenges and problems in PCB management	– **Identification of all PCB-containing equipment owners**: There were not enough enforcement actions in order that holders met their obligations. In general holders that declared contaminated equipment met their obligations to manage the waste under the legislation. Main holders were power companies. It is supposed, there were other holders, which were not enforced enough to meet their obligations, and presumably did not declared the equipment, and is not possible to ensure the proper management in those cases.
Best practice in the MS (key tools, measures, and management practice)	– The Register of Production and Waste Management is an electronic register of producers, managers (transporters, dealers, agents), companies that carry out waste treatment and facilities where waste treatment is carried out. This registry is housed in the waste information system (ESIR) of MAPAMA. This system has been designed and has started to be operational since the end of 2016. – In parallel, work is being carried out within the framework of a working group with the Autonomous Communities in the establishment of a common electronic procedure for all the Autonomous Communities to ensure the traceability of the waste during its transfer.

H. Other relevant information

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