

ANEC TECHNICAL STUDY TO
INVESTIGATE THE MIGRATION OF
CHILDREN'S PRODUCTS FROM THE
DOMESTIC SECTOR TO THE NON-
DOMESTIC SECTOR

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1 EXECUTIVE SUMMARY

Childcare article is any article designed or clearly intended to ensure and facilitate safe seating, bathing, changing and general childcare, including feeding, sleeping, transportation and protection of young children. Childcare articles are intended for use by pre-school children (up to four years old).

The purpose of this technical study is to determine whether children are at increased risk of serious injury when domestic products are used in non-domestic settings so that ANEC can evaluate whether this type of product requires further standards or requirements.

The point of departure was to determine and characterise the products (children's nursery furniture and child use and care articles) used in domestic settings that are also frequently used in non-domestic settings. Such products include high chairs, prams and pushchairs, cots, children's beds, bunk beds, changing units, etc. Moreover, the non-domestic settings where these products are used were identified.

To accomplish this characterization, various databases were searched (IDB, NEISS, etc.), along with articles, European studies, press reports and other literature in order to obtain information on incidents, the foreseeable use of these products, other products not intended for children but used for this purpose, etc. The available injury data did not contribute significantly to the research because of its nature.

In addition, telematics surveys were conducted to obtain data on child care products in different non-domestic settings (kindergartens, hotels, restaurants, amusement parks, etc.), requesting information on the child care products in use in such locations, safety aspects, incidents, general opinions etc. Moreover, surveys were distributed to other stakeholders (manufacturers, market surveillance authorities, experts) to gain further data on activities using these products and to obtain information from other experts in children's products.

With the results obtained from the research and surveys, conclusions were drawn regarding additional hazards of childcare articles in non-domestic use. This information was supplemented by the technical assessment of an AIJU expert committee which identified the factors that trigger injury in domestic and non-domestic settings, with the aim of discovering additional hazards and completing the matrix "Hazard and risk assessment table" stated in the ANEC Technical Study "The development of the safety

requirements and hazard-based standards for child use and care articles” by product.

Another point identified was the biological hazards produced by the incorrect cleaning of child care products in non-domestic settings. Other hazards were identified that are covered in the current standards for child care products in domestic use, but their use in non-domestic settings could lead to increased risk as follows:

- Entrapment of body (head, neck, fingers, limbs)
- Hazards from inadequate stability
- Hazards from inadequate structural integrity
- Falling hazards
- Inadequate information

Having identified a number of hazards which are not covered by European standards and increased risks due to non-domestic use, a set of safety requirements was proposed and test methods were prepared for these products, including general and specific proposals pertaining to each product.

The study concludes by identifying some child care articles which are more frequently involved in incidents than others, taking into account all the sources of information consulted. These products were: high chairs, baby prams and pushchairs, changing tables, cots, bunk beds and children’s beds. Consequently, the identification of hazards or increased risks and the proposal of safety requirements focused on these products.

Regarding the type of incidents, falls were the most common occurrence and they were also the leading cause of injury in children using child care articles in non-domestic settings. Taking this information into account, some aspects such as stability, structural integrity and durability were identified as points for improving the safety of these products in non-domestic settings.

This study suggests that child care products in non-domestic settings may present additional hazards and increased risks which are not covered by current standards. Therefore, a revision of the standards is proposed in order to include the additional hazards and increased risk that may arise in non-domestic use.

2 INTRODUCTION

Child use and care articles are mainly intended for domestic use, however sometimes these products are used in non-domestic settings as there is a lack of specific products for non-domestic use or difficulty in obtaining them.

The purpose of this technical study is to determine whether children are at increased risk of serious injury as a result of domestic products being used in non-domestic settings, so that ANEC can evaluate whether further requirements or standards are needed for these products.

The initial task was to determine which products from the domestic sector for children's nursery furniture and child care articles are commonly used in non-domestic sectors. Such products include high chairs, wheeled child conveyances, cots, children's beds, bunk beds, changing units, etc.

The use made of the product is an important issue to consider because different situations could arise through misuse, among others these include:

- A lack of durability of these products as a result of being more extensively used than planned in domestic settings.
- The inappropriate and unsafe use of products when they are used by people who might be unfamiliar with them; parents/carers and staff in the non-domestic settings (especially when products are rarely used, such as in hotels or restaurants).
- The inappropriate use of products when they are used without instructions for correct use in non-domestic settings (in domestic use, the carer will have instructions for using the product correctly and safely).

This technical study does not include toys, activity toys and playground equipment because an additional study would be required due to the large product diversity. Likewise, neither are "small" child care products included such as soothers, feeding bottles, etc., because it is understood that these products are used in all settings, but their extensive use is not related to this study. This technical study focuses on children under 5 years of age.

3 OBJECTIVES

As stated above, the main objective of this technical study is to determine whether children are at increased risk of serious injury as a result of domestic products being used in non-domestic settings.

The specific objectives are:

- Provision of an initial inventory of childcare articles commonly used in non-domestic environments and their characterization according to possible uses, locations where they are used, intended age of users, etc.
- Research in scientific articles, databases, etc. in order to obtain information about the use of child care articles in non-domestic settings: incidents, foreseeable use of these products, other products not intended for children but used for this purpose and any relevant information to help us in this study.
- Determination of the real uses of childcare articles in Europe in non-domestic settings, to discover exactly what happens in practice and to ascertain the activities and the different sector information related to products by the different stakeholders (manufacturers, economic agents involved, surveillance authorities, etc.).
- Identification of hazards in child care articles used in non-domestic settings according to the information obtained from initial research and identifying any further hazards should there be any additional risks not detected previously.
- Development of a set of minimum safety requirements for child care articles for non-domestic use, by establishing requirements and tests related to the characteristics and uses of the product.
- A list of reference standards to be taken into account when standards are reviewed/created.
- Identification of needs for further research.

4 DEFINITIONS

- **Child use and care article¹:** product designed or obviously intended to safely ensure and facilitate seating, bathing, changing and general body care, feeding, sleeping, transportation and protection for young children. Child care articles are intended to be used with children up to four years old.
- **Harm²:** injury or damage to the health of people, or damage to property or the environment.
- **Hazard²:** potential source of harm.
- **Risk²:** combination of the probability of occurrence of harm and the severity of that harm.
- **Domestic use:** use at home or relating to the home.
- **Non-domestic use:** use not relating to the home.
- **Intensive use:** intense or highly concentrated use of the product.
- **Extensive use:** use of the product for longer than expected. Both with regards to the daily use and the life cycle of the product.
- **Collective use:** use of the product by a number of children or group, more than one child at the same time.

¹ Business Plan CEN/TC 252 (Date: 2015-10-13)

² ISO/IEC Guide 51:2014 "safety aspects – Guidelines for their inclusion in standards".

5 METHODOLOGY

5.1 INITIAL INVENTORY OF CHILD USE AND CARE ARTICLES IN NON-DOMESTIC USE

As a preliminary task, an initial classification of child use and care articles was made, taking into account the organisation of these products by European Committee for Standardization (CEN) in Technical Committees (TC) and Working Groups (WG) and including the products proposed by ANEC. The Technical Committees that were consulted are:

- CEN/TC 207 Furniture
- CEN/TC 252 Child care articles
- CEN/Project Committee (PC) 364 High chairs

Additionally, other products for children were selected by ANEC; those are children's furniture for older children:

- Children's beds: products used for children to sleep on for ages 3 to 7 years. They are used when a cot is no longer needed and before use of a conventional bed.
- Bunk beds: In principle these products should not be used by children aged under 6 years but we may discover that they are used by younger children in non-domestic settings.

Additionally, specific articles for non-domestic use were identified, some of them for collective use. These categories of products should be studied separately. This study only identifies them but does not analyse them in depth.

5.2 CHARACTERISATION OF CHILD USE AND CARE ARTICLES IN NON-DOMESTIC USE

Once the list of child use and care articles had been established, non-domestic environments where child care articles are used were identified in order to determine the child care products that are commonly used in each environment.

The identification and characterization of non-domestic settings was made taking into account the experience and knowledge of the AIJU experts, and with additional internet research.

Because of the huge variety of children's products used in non-domestic settings, only some of these items were analysed in this study. The first step was to select the most representative products and other products less commonly used in non-domestic settings were discarded justifying why they had been ruled out.

Subsequently, the selected child use and care products in a non-domestic setting were characterised. For this purpose, tables were drawn up for each product, summarising all the information on the product related to non-domestic use:

- Definition of the product
- Constructional features
- Age of intended user
- Age of other potential users
- Commonly used products
- Types of products used in non-domestic settings by organisation, including examples.

This information was obtained through internet searches and from AIJU experts.

5.3 RESEARCH IN EUROPEAN STUDIES, ARTICLES AND DATABASES

5.3.1 Research in European studies and publications

Articles, publications and European studies were researched to obtain information on incidents, foreseeable use of these products, other products not intended for children but used for this purpose, etc. in order to ascertain

the real use of these products in non-domestic settings. In this part of the study qualitative data was collected, including descriptive case studies of identified issues.

Key words for this research were used, using English and Spanish as the search languages, combining words from the two columns such as:

Uses	Products
Non domestic use / uso no doméstico	childcare article / artículo de puericultura
collective use / uso colectivo	child use and care article / artículo de puericultura
intensive use/ uso intensivo	nursery furniture / mobiliario infantil
commercial use / uso comercial	children's furniture / mobiliario infantil

Table 1: Key words

Also, other specific terms were used to obtain specific information about products and incidents, using the words: accident, incident, injury, etc. combined with specific names of products (pushchairs, strollers, cots, cribs, high chairs, etc.).

At a European level, different studies on child product safety were found which contributed data and relevant facts regarding incidents during use, misuse and other factors that affect product safety. Publications related to child care articles were also consulted, such as articles of American Academy of Pediatrics³ or others.

5.3.2 Research in press reports

Additional research was conducted on internet news sites to obtain more information about incidents and inappropriate uses of child care articles in non-domestic settings.

Key words used for this search were the same as the previous search for articles, publications and European studies, using English and Spanish as the research languages. Also, specific words were used (incident, accident, injury, etc.) combined with specific names of products (pushchairs, strollers, cots, cribs, high chairs, etc.).

5.3.3 Research in Databases

Injuries and accidents data in Europe were collected to obtain information on real situations related to non-domestic settings. The European databases

³www.aappublications.org/search

consulted were the Rapid Alert System for Non-Food Products of the European Commission (RAPEX)⁴ and the European Injury Database (IDB)⁵, which requires permission of access in order to obtain data for research purposes.

The RAPEX database enables rapid exchange of information between 31 European countries and the European Commission on dangerous non-food products posing a risk to health and safety of consumers. The search in RAPEX was performed by category "Child care articles and children's equipment" during 2015-2016 and only took into account those cases where an accident or injury had occurred.

The most important tool for obtaining data on incidents in general was the European Injury Database (IDB) co-funded under the EU-Health programme and managed by EuroSafe. The description of the IDB and the methodology used is included in Annex II "Methodology of Injury Database" due to its extension and complexity.

US databases were also consulted, since in that country all the incidents are carefully recorded. The recalls of Consumer Product Safety Commission (CPSC)⁶ were consulted as well as CPSC's National Electronic Injury Surveillance System (NEISS).

CPSC is an independent agency of the United States government that regulates the sale and manufacture of more than 15,000 different consumer products. CPSC also publishes the recalls by product and injury statistics. On the CPSC website, recent recalls were obtained by product type. These recalls include the product name, hazard, description of recall, incidents and injuries, remedy and consumer contact.

CPSC's National Electronic Injury Surveillance System (NEISS) is a national probability sample of hospitals in the U.S. and its territories. Patient information is collected from each NEISS hospital for every emergency visit involving an injury associated with consumer products. From this sample, the total number of product-related injuries treated in hospital emergency rooms nationwide can be estimated. This web access to NEISS allows certain estimates to be retrieved on-line. These estimates can be obtained by setting some or all of the following variables (and an example of each): date, product, sex, age, diagnosis, disposition, location and body part.

⁴ http://ec.europa.eu/consumers/consumers_safety/safety_products/rapex/

⁵ <https://webgate.ec.europa.eu/idb/>

⁶ <https://www.cpsc.gov/en/>

5.4 RESEARCH INTO THE USE OF CHILD USE AND CARE ARTICLES IN NON-DOMESTIC SETTINGS (SURVEY)

A general questionnaire was designed for all organisations and included general and specific questions about all kinds of organisation (kindergartens, hotels, restaurants, etc.). This general questionnaire (see Annex III-a) was divided into four blocks of questions, with the following topics:

- About your organisation: information on the organisation, number of children per day and professional staff.
- About the use of child care products in your organisation: number and type of child care articles in use, frequency of replacement, availability of instructions for use, etc.
- About the purchase of child care products in your organisation: criteria for buying products, place, safety information, etc.
- About the safety of child care products in your organisation: personal opinion about these products, incidents, comments, etc.

A cover letter was written to accompany the questionnaire, (see Annex III-a) briefly presenting the purpose of this study and encouraging people to participate in the survey.

Both AIJU and ANEC used their network to send the survey, by direct delivery to different organisations and also through contact with associations for distribution.

To facilitate the reception of a greater number of responses and data processing, an online professional survey program called "e-encuesta.com" was used to process the data. As a result, graphs to show the statistics of the responses were obtained in yes/no questions and for multiple choice questions.

5.4.1. Site visits

Some site visits were made in order to obtain information on the use of child care products in non-domestic settings and their actual conditions of use. In Spain, site visits were made by members of the AIJU network and in the other countries they were conducted by staff of ANEC member

associations. The ANEC network was also considered in order to carry out site visits in selected countries.

Visits to inspect public places such as restaurants, shopping malls, leisure centres, etc. were aimed at checking the condition of the products in terms of cleanliness, maintenance and use. For other establishments with limited access (hotels, kindergartens, etc.), interviews were arranged to visit the facilities and see how the products were used, if possible.

A site visit consisted of a visual inspection of the facilities in order to identify the child care products in use. Subsequently, the condition of the products was inspected and photographs were taken. With this information, a summary table was completed for each visit.

5.5 ADDITIONAL SURVEYS ON OTHER STAKEHOLDERS CONCERNING CHILD USE AND CARE ARTICLES

A similar methodology as that described above in 5.4 was used in additional surveys involving other stakeholders in child use and care articles.

Three types of questionnaires were prepared: one for manufacturers, one for market surveillance authorities and one for experts (see Annexe III-a) and the same cover letter was used.

To conduct these three surveys, European databases, ANEC's network and AIJU's network, including manufacturers and importers of children's products, sector associations, market surveillance authorities and experts in children's products were contacted.

The same online professional survey program was used ("e-encuesta.com") for processing the data.

5.6 IDENTIFICATION OF HAZARDS

5.6.1 Identification of hazards using the information obtained

Data of incidents involving child care articles in non-domestic settings was collected for each type of product, from the following sources:

- IDB incident data (extracted data and narratives),
- NEISS incident data,
- Internet Press news,
- Product Recalls,

- Studies and articles,
- Surveys from users in non-domestic settings,
- Surveys of other stakeholders (manufacturers, experts, market surveillance authorities and others).

All the information obtained was collected according to product type and the additional hazards were identified according to their uses other than domestic use.

5.6.2 Identification of hazards by AIJU experts

Firstly, the reference documents were studied in order to compile a list of documents identifying hazards. For this purpose, the “ISO/IEC Guide 50:2014 Safety aspects - Guidelines for child safety in standards and other specifications” was considered as it is a recognised document providing guidance to experts in developing and revising standards, specifications and similar publications.

Furthermore, the ANEC Technical Study “THE DEVELOPMENT OF SAFETY REQUIREMENTS AND HAZARD-BASED STANDARDS FOR CHILD USE AND CARE ARTICLES” written by Anne Smith and Mike Hayes (Child Accident Prevention Trust) was considered to take into account the hazard-based standards approach.

Using these documents as a basis, the AIJU experts held workshops expressing their perspectives on child care articles in non-domestic settings. The first meeting consisted of brainstorming to share the different points of view of the experts on the topic “Differences between the use of child care products in domestic settings and in non-domestic settings”. Some questions were raised to create an informed debate:

- Which hazards are present in domestic use and not in domestic use and vice versa?
- Which additional hazards are presented due to non-domestic, intensive and/or extensive use?
- Are child care products more hazardous in non-domestic settings?
- Etc.

These questions led experts to think about the issue and share their opinions and individual experiences.

In subsequent workshops, the AIJU experts focused on each identified child care product, to discover additional hazards or increased risks that these products could present in non-domestic settings.

As a result, the main factors that trigger an injury were identified. Three scenarios were identified for each product: domestic setting, non-domestic setting in a child oriented environment (kindergarten, day care centre, kids club, etc.) and non-domestic setting in non-child oriented environment (for example: restaurant, hotel, amusement park, etc.). This division between child oriented and non-child oriented environments was designed to consider the differences between carers because in child oriented environments there are professional staff that provide active supervision and they are accustomed to use the child care products on their premises.

Two different scenarios for non-domestic settings were considered in this analysis in order to make an exhaustive study and avoid missing any key aspects.

Subsequently, additional hazards were identified, taking into account the hazards obtained in the research and the opinions of AIJU experts.

5.7 ESTABLISHMENT OF SAFETY REQUIREMENTS

Once the additional hazards and the increased risks that could be presented during the use of a child use and care article in non-domestic use were identified, a set of safety requirements for these products was proposed, by establishing requirements and tests related to the product characteristics and uses. Although the analysis in point 5.6 considered two different scenarios in non-domestic settings, the proposal for the safety requirements and tests was made taking into account both scenarios together.

Cleanliness and hygiene are particularly important for non-domestic use of these products, as well as maintenance and durability/age of the product in order to ensure safe conditions of use.

In addition, specific product information was considered as essential to define the use of a particular child care article mainly in a non-domestic environment in order to define its correct use and maintenance.

The safety requirements for future revision of standards should consider as a minimum the requirements included in the five parts of the CEN/Technical Report (TR) 13387:2015 "General Safety guidelines".

To identify these hazards, the ANEC Technical Study "The development of safety requirements and hazard-based standards for child use and care articles" was used to take into account the hazard-based standards approach. This is the new trend in standard development, as all the revision of the standards for child care products have been included in this structure.

For each child care product, the applicable European standard was reviewed in order to propose these new requirements and test methods, for each additional hazard/increased risk identified in non-domestic use. Subsequently the tests to be included in future safety standards were proposed for each hazard identified.

These proposals included different considerations which require in depth study and validation prior to their inclusion in standards. Standards for child use and care articles generally consider a product life of about 2-3 years in order to determine test cycles. When these products are in non-domestic use, they are likely to be used extensively and, therefore, the most unfavourable conditions should be considered for this use.

5.8 REFERENCE STANDARDS

The research into standards looked at national, European and international levels of standards in order to discover whether such standards for child care articles exist for non-domestic use. Research included Standardisation committees (CEN, American Society for Testing and Materials (ASTM), etc.).

At a European level, the standards in preparation were also examined to ascertain whether the new standards will include non-domestic use and whether there are any new standards for child care products that were not previously covered by any standard.

5.9 IDENTIFICATION OF FURTHER RESEARCH REQUIRED

During the course of this study, some topics needed additional research. Some products used in non-domestic sectors were identified that lack specific standards covering this use.

These needs were obtained from the workshops with AIJU experts, but also from the surveys that provided extra information.

6 RESULTS

6.1 INITIAL INVENTORY OF CHILD USE AND CARE ARTICLES IN NON-DOMESTIC USE

The child care articles that have a European standard for their domestic use (or the standard in preparation) were classified by CEN Committees, namely:

CEN/TC 207 Furniture

This Technical Committee is in charge of standardisation of all furniture (including mattresses, excluding transport furniture), considering, where appropriate: terminology; health and safety; test methods and requirements for end products, parts, components, surfaces, surface finishes and furniture hardware; dimensions. Standards for raw materials are excluded. This Technical Committee has a Working group in charge of children's furniture *CEN/TC 207/ WG2 Requirements for children's and nursery furniture.*

CEN/TC 252 Child care articles

This Technical committee is responsible for standardising the horizontal requirements of any product designed or obviously intended to safely ensure and facilitate seating, bathing, changing and general body care, feeding, sleeping, wheeled transportation and protection for young children (excluding baby and child car seats).

The technical committee is divided into seven Working Groups that deal with the following products:

- CEN/TC 252/WG1 Seating and body care
- CEN/TC 252/WG2 Sleeping, relaxation and lying down
- CEN/TC 252/WG3 Wheeled transportation
- CEN/TC 252/WG4 Early learning and protection
- CEN/TC 252/WG5 Feeding, drinking, sucking and similar functions
- CEN/TC 252/WG6 General and common safety specifications
- CEN/TC 252/WG7 Child carriers for cycles

CEN/PC 364 High chairs

This is a Project Committee responsible for only one child care article, namely, high chairs.

The products are listed in Table 2, and include children's beds and bunk beds.

Likewise, during this study, other child care articles for collective use were detected. These products are not covered by the committees above as they are intended for collective use:

- Pushchairs for collective use



- Collective table for babies



There are also other child care products intended specifically for non-domestic use. For example:

- Seats used in shopping carts in supermarkets



- Changing units for non-domestic use



As mentioned, these last two categories of products should be studied separately and this study does not include them. They could be included in the list of needs for further research” (see chapter 6.9).

6.2 SELECTION AND CHARACTERISATION OF CHILDCARE ARTICLES IN NON-DOMESTIC USE

6.2.1 Selection of products

There is a huge variety of children’s products used in non-domestic settings, but only those that are intended for domestic use and commonly used in non-domestic settings were studied. Below, Table 2 lists childcare articles according to CEN group and explains why some of these have been discarded.

CEN group	Initial inventory of products	Selected (yes/no)	Comments
CEN/TC 207/ WG2 Requirements for children’s and nursery furniture	Cots and folding cots	Yes	
	Playpens	Yes	
	Cribs and cradles	No	These products are intended for babies up to 6 months. Although they could be used at day care facilities for younger children, the most popular products at nurseries are the cots because their use overlaps with the crib.
	Mattresses for cots and cribs	Yes	
	Children’s chairs	Yes	
	Children’s tables	Yes	
CEN/TC 252/WG1 Seating and body care	Baby walking frames	No	The use of this product is becoming less common because of their potential risk of accidents. The European Child Safety Alliance and ANEC recommend that parents and caregivers use safer alternatives to baby walkers and urges health care providers not to

CEN group	Initial inventory of products	Selected (yes/no)	Comments
			promote baby walker use. Many European expert organisations have called for bans on baby walkers due to the level of risk and injury they pose to children, combined with their lack of tangible benefit or necessity ⁷ .
	Changing units	Yes	
	Reclined cradles	Yes	
	Infant swings	Yes	
	Chair mounted seats	Yes	
	Table mounted chairs	Yes	
	Bathing aids	No	Products for bathing babies are not normally used in non-domestic settings.
CEN/TC 252/WG2 Sleeping, relaxation and lying down	Carry cots and stands	No	These products are intended for babies up to 6 months. Although they could be used at day care facilities for younger children, the most popular products at nurseries are the cots because their use overlaps with the crib.
CEN/TC 252/WG3 Wheeled transportation	Pushchairs and prams	Yes	
CEN/TC 252/WG4 Early learning and protection	Safety barriers	Yes	No evidence of their use in non-domestic settings has been found.
	Baby carriers	No	
	Slings	No	
	Baby bouncers	No	
	Children's harnesses, reins and similar type articles	No	
CEN/TC 252/WG5 Feeding, drinking, sucking and similar functions	Soothers	No	They are used in non-domestic settings, but not for collective, intensive and/or extensive use.
	Soother holders	No	
	Drinking equipment (teats, feeding bottles, glasses, cups, etc.),	No	They are used in non-domestic settings. The extensive use will be easily recognisable and will be produced by wear and cleaning.
	Cutlery and feeding	No	

⁷European Child Safety Alliance and ANEC joint position statement: Baby walkers

CEN group	Initial inventory of products	Selected (yes/no)	Comments
	utensils (plates, bowls, spoons, forks, etc.)		
CEN/TC 252/WG7 Child carriers for cycles	Seats for cycles	No	No evidence of their use in non-domestic settings has been found.
CEN/PC 364 High chairs	High chairs	Yes	
CEN/TC 207 Furniture	Bunk beds	Yes	
	Children's beds	Yes	

Table 2: Selection of the products to be studied.

6.2.2 Characterisation of non-domestic environments

The environments where childcare articles are used in non-domestic settings were identified and characterised, considering both child oriented and non-child oriented environments. Table 3 summarises the most common childcare article used in different non-domestic settings:

PRODUCTS AND USES	Kindergartens, day care centres	Restaurants	Hotels, camp sites	Airports	Other public places
Cots and folding cots	x		x		
Playpens	x		x		
Mattresses for cots and cribs	x		x		
Children's chairs	x				X
Children's tables	x				X
Changing units	x	x	x	x	X
Reclined cradles	x				X
Infant swings	x				
Chair mounted seats		x	x		
Table mounted chairs		x			
Pushchair and prams	x			x	X
High chair	x	x	x		X
Safety barriers	x		x		X
Bunk beds			x		
Children's beds	x		x		

Table 3: Matrix child care product and uses in different non-domestic settings.

Below, the main characteristics of these settings were identified:

a) Non-domestic child oriented environments:

In child oriented environments, child use and care products are used by trained carers. Specialised staff are in charge of the children and use these products every day. These are:

- Kindergartens and day care centres

In these places, babies and young children spend several hours and perform daily activities such as eating, sleeping, playing or toileting.

Therefore, the use of high chairs, cots, playpens, changing units, reclined cradles, children's chairs, children's tables, etc. is essential for the operation of such centres. Examples of these facilities are shown in the picture below.



Day care centres or “*crèches*” are for babies and toddlers (from 4-5 months until 3 years old) and kindergartens are usually for children aged from 3 years to 5-6 years prior to starting school (pre-school facilities). For the purpose of this study they are considered as the same type of facility for babies and young children.

Pushchairs and prams can also be used, either belonging to the organisation itself or provided by the parents.

- Kids clubs

Kids clubs are organisations where young children spend free time, playing or doing recreational activities. These facilities may be private companies or they may be attached to hotels, restaurants, etc. and children may celebrate their birthday parties or spend 2-3 hours playing in playground.

b) Non-child oriented/non-domestic environments:

In non-child oriented environments, child use and care products are used by parents or other carers that are not accustomed to use these products. The staff is probably not trained to look after children and to use child products. These are:

- Restaurants

To facilitate the care of children, these places may offer equipment for feeding children (high chairs, table mounted chairs, chair mounted seats and even cutlery for children) and toileting (changing units).



These products are made available to their customers, so it is possible that carers use equipment which they might not be familiar with, thus increasing the risk of some incidents.

- Hotels

To accommodate babies and children, hotels may provide children's cots, high chairs, children's beds, bunk beds, etc. These products may be products for domestic use, such as travel cots and folding cots, and also products intended for use in restaurants.



In this category, all types of holiday accommodation or places to stay away from home are included. So, aparthotels, hostels, rentals, holiday parks, campgrounds and others are included.

- Airports

To facilitate travelling with children, airports might have facilities for transporting children (pushchairs and others vehicles to transport babies) and toileting (changing units). Also, they usually include restaurants that

might provide high chairs, table mounted chairs, etc. Examples of airport facilities are shown below.



- Other public places: public buildings, leisure centres, shopping malls, supermarkets, amusement parks, theme parks, etc.

Other public places that are also visited by children, provide facilities for children while they are feeding, toileting or being transported. Usually they have nursing rooms and breast feeding rooms.



Leisure centres and amusement parks are aimed at children, so they usually have facilities, for example to transport small children:



6.2.3 Initial selection of products

The most commonly used child care articles in different scenarios were studied in depth and characterised. Using the information from Table 2 and Table 3 above, the selection of products for this study was as follows:

- Cots with their mattresses
- Children's chairs and children's tables
- Changing units
- Reclined cradles and infant swings
- Chair mounted seats and table mounted chairs
- Pushchairs and prams
- Safety barriers
- High chairs
- Children's beds and bunk beds

Following this first selection of child care products, they were then characterised according to their use in non-domestic settings, by completing the tables for each product included in Annex I.

6.3 RESEARCH ON EUROPEAN STUDIES, ARTICLES AND DATABASES

6.3.1 Research into European studies and publications

Different studies and articles were consulted, and the relevant information is contained in Annex II-b. These studies did not provide specific information about non-domestic use of child care products, but provided general information about the most important hazards with child care products (most injuries associated with child care products occur when children fall from the product) and products that require special attention (bunk beds, changing tables, safety barriers, cots, high chairs, pushchairs).

6.3.2 Research into press reports

The research into press news, blogs and forums provided specific information about child care products in non-domestic settings, some of which concerned incidents and accidents. Annex II-b collates all the information obtained according to product, and below the most relevant information and conclusions are presented:

- High chairs: the number of high chair-related injuries has increased yearly and falling caused most injuries. In some incidents, parts of the product fell or broke, causing the baby to fall.
- Changing units: in some incidents the product, such as a table, folded causing the baby to fall.
- Bunk beds: reported incidents about children falling from the top bunk.
- An incident with a bunk bed that collapsed. The accident happened in a domestic setting but it had been previously used in a non-domestic setting (this raises the problem of second hand products and associated issues – which are not addressed in this study).
- Cots: reported incidents related to entrapments in several cots that resulted in infant deaths.
- Pushchairs and prams: in one case, a baby lost the tip of her finger in a nursery pushchair accident.
- Reclined cradle: an accident was reported where a baby became entangled in the straps and was strangled.

6.3.3 Data base Research

Firstly, data on products recalled due to accidents is presented, followed by the most significant data for this particular study, and special data on incidents in non-domestic settings, is included.

6.3.3.1 RAPEX (Rapid Alert System for Non-Food Products)

The search identified a total of 106 products of which only **6** were caused by accidents or incidents. The complete information is contained in Annex II-b.

The relevant information obtained was:

- Three safety barriers from IKEA presented problems with the locking and closing system
- A baby carrier that had a defective buckle
- A pushchair with a break in a folding handle joint
- A pram cover that presented a small part hazard.

6.3.3.2 CPSC RECALLS

The representative cases of child care articles are shown in Annex II-b, which includes the hazard associated with the product and the injuries/accidents reported.

In conclusion, only 13 child care products were identified resulting from accidents: 5 pushchairs, 3 high chairs, 2 cots and others. Some of these included incidents and associated injuries; but not the location of the incident.

6.3.3.3 NEISS (National Electronic Injury Surveillance System)

Searching by product type (Code 1500: "Child nursery equipment and supplies") during 2015, 2652 incidents were reported involving child care articles. Bunk beds (code 661) and toddler beds (code 4082) are not included in this group, but were also consulted. The collected data relating to the products in question is shown in Table 4 and includes the number of incidents by location including domestic and non-domestic settings.

Products	Code	Number of Incidents					
		Total	Home	Public places	School	Place of recreation	Street
High chairs	1555	359	262	18	4	0	0
Pushchairs	1522	451	85	77	5	13	41
Cots (1)	1543	191	403	2	9	0	0
Cots (2)	1545	257					
Travel cots	1529	5					
Mattresses	1542	6					
Playpens	1513	88	64	0	1	0	0
Changing units	1502	141	101	6	2	1	0
Reclined cradles/Swing	1553	63	48	0	1	0	0
Baby walking frames	1508	56	45	1	0	0	0
Safety barriers	1506	225	179	2	0	0	0
Bunk beds	661	1127	828	155	10	10	0
Children's beds	4082	31	27	0	0	0	0

Table 4: Number of incidents (extracted from NEISS).

Concerning non domestic environments, places of recreation include bowling alleys, amusement parks, sport fields or stadiums, lake, mountain/beach resort, park, beach/recreation area (including water). Public places include restaurants, church, hotel, motel, hospital and others less relevant. School includes children's day care facilities and all types of school (nursery, elementary, high school, college, etc.)

The general conclusions obtained from this data were:

- Products with most reported incidents were: bunk beds, cots, pushchairs and high chairs.
- Incidents related to bunk beds mostly involved adults. In non-domestic settings, only 3 cases involved children under 6 years.
- Most of the reported incidents happened at home.

- For children’s beds, no incidents registered outside the domestic environment.
- For other products (safety barriers, baby walking frames, playpens or reclined cradles) very few incidents were reported.
- Even if in public places and places of recreation, the non-domestic use did not apply, in some cases because they occurred because of products belonging to the user.

Annex II-b contains representative cases of incidents in non-domestic settings along with their literature.

6.3.3.4. IDB

Results of initial research

The results from the previous research, including the overall situation of accidents involving children aged 0-4 years (see Annex II-a Injury methodology database) are included in Table 5.

Place Code	Place Description	Number of incidents	%
1	Home	28264	66.13
2	Residential institution	76	0.18
3	Medical service area	217	0.51
4	School, educational area	4208	9.85
5	Sports and athletics area	810	1.90
6	Transport area: public highway, street or road	2154	5.04
7	Transport area: other	193	0.45
8	Industrial or construction area	74	0.17
9	Farm or other place of primary production	107	0.25
10	Recreational area, cultural area, or public building	2134	4.99
11	Commercial area (non-recreational)	1873	4.38
12	Countryside	623	1.46
98	Other specified place of occurrence	183	0.43
99	Unspecified place of occurrence	1823	4.27
	TOTAL	42739	

Table 5: Number of incidents by place (data from IDB).

42,739 incidents were reported from 2009-2014 involving children 0-4 years old. The majority of the incidents happened at home (66.13%), followed by school (9.85 %). These numbers were expected because children spend most of their time at home often without active supervision.

Considering the places where children could use products in a non-domestic setting (Residential institutions, medical service areas, school and educational areas, recreational areas, commercial areas), there are 8,508

reported cases, that is 19.91% of the total. This is a significant number of incidents which could well corroborate the need for this study.

Research on child care articles in non-domestic settings

In the extended research, 3,420 incidents were obtained related to children from 0-4 years old in non-domestic scenarios (see the filtered places in Annex II-a "Methodology of Injury database") from 2009-2014. Taking into account the child care product involved in the incidents and the scenarios for non-domestic use of the products, the following numbers were obtained.

➤ Analysis according to object

When the child product is the direct object, understood as an object involved in the incident that produces the actual physical harm, the following numbers were obtained:

Object direct Code	Object direct Description	Number of incidents	%
5,0101	Bunk bed	2	10
5,0115	Mattress, sleeping mat	6	30
5,013	Bedrails	1	5
6,0101	Baby pram, buggy, pusher, stroller, carriage	4	20
6,011	Baby exerciser, jumper, or portable swing (home use)	1	5
6,012	Baby or child car seat	0	0
6,013	Cot, crib, baby bed	0	0
6,0145	Playpen, travel yard	0	0
6,017	Changing table	0	0
6,0115	High chair, booster seat	3	15
6,0165	Baby baths or bathinettes	1	5
6,0198	Other specified baby or child article	1	5
6,0199	Unspecified baby or child article	1	5

Table 6: Number of incidents by product, object direct (data from IDB) in non-domestic settings.

When the child product is the intermediate object, understood to be the object implicated in the incident, however with other mechanisms also involved in the incident, the following numbers were obtained:

Object inter Code	Object inter Description	Number of incidents	%
5,0101	Bunk bed	11	26.83
5,0115	Mattress, sleeping mat	0	0.00
5,013	Bedrails	1	2.44
6,0101	Baby pram, buggy, pusher, stroller, carriage	5	12.20
6,011	Baby exerciser, jumper, or portable swing (home use)	0	0

6,012	Baby or child car seat	3	7.32
6,013	Cot, crib, baby bed	7	17.07
6,0145	Playpen, travel yard	2	4.88
6,0115	High chair, booster seat	7	17.07
6,0165	Baby baths or bathinettes	1	2.44
6,017	Changing table	4	9.76
6,0198	Other specified baby or child article	0	0
6,0199	Unspecified baby or child article	0	0

Table 7: Number of incidents by product, object inter (data from IDB) in non-domestic settings.

When the child product is the underlying object, understood as being when the object is involved at the start of the incident, the following numbers were obtained:

Object under Code	Object under Description	Number of incidents	%
5,0101	Bunk bed	5	6.85
5,0115	Mattress, sleeping mat	5	6.85
5,013	Bedrails	1	1.37
6,0101	Baby pram, buggy, pusher, stroller, carriage	23	31.51
6,011	Baby exerciser, jumper, or portable swing (home use)	0	0
6,012	Baby or child car seat	1	1.37
6,013	Cot, crib, baby bed	2	2.74
6,0145	Playpen, travel yard	0	0
6,0115	High chair, booster seat	29	39.73
6,0165	Baby baths or bathinettes	0	0
6,017	Changing table	4	5.48
6,0198	Other specified baby or child article	3	4.11
6,0199	Unspecified baby or child article	0	0

Table 8: Number of incidents by product, object under (data from IDB) in non-domestic settings.

Although it seems that the total number of accidents was not significant, the relative numbers were relevant in ascertaining which child care products were most frequently involved in injuries to children under 4 years old. By collating all the products in tables 6, 7 and 8 and sorting them, the following data were obtained:

Object Code	Object Description	Number of incidents	%
6,0115	High chair, booster seat	36	26.87
6,0101	Baby pram, buggy, pusher, stroller, carriage	32	23.88
5,0101	Bunk bed	18	13.43

5,0115	Mattress, sleeping mat	11	8.21
6,013	Cot, crib, baby bed	9	6.72
6,017	Changing table	9	6.72
6,012	Baby or child car seat	4	2.99
6,0165	Baby baths or bathinettes	4	2.99
6,0198	Other specified baby or child article	4	2.99
5,013	Bedrails	3	2.24
6,0145	Playpen, travel yard	2	1.49
6,0199	Unspecified baby or child article	1	0.75
6,011	Baby exerciser, jumper, or portable swing (home use)	1	0.75

Table 9: Total number of incidents by product (data from IDB) in non-domestic settings.

In view of these numbers, products that deserve special attention are: *high chairs and booster seats and prams and strollers*; as between them, they account for more than 50% of reported incidents. Other products with special interest are: *bunk beds; mattresses and sleeping mat; cots, cribs and children's beds and changing tables*.

In the case of the most frequently represented products, it is important to be aware of the incident narratives in order to determine the use of the product during the incident, the place where it occurred, the associated injury, etc. These narratives were provided, in the official languages of each country, at the express request of the IDB coordinator as it was not possible to obtain them through the EU IDB web-gateway. The relevant information is summarised in Table 10.

PRODUCT	Number of incidents by place	Activity during injury	Mechanism of the injury	Injuries associated
High chair, booster seat	Kindergarten:35 Commercial area: 3 Recreational area: 1	Play: 12 Taking meals:4 Others: 23	Falling/stumbling/jumping/pushed from an unspecified height: 37 Contact with moving object:2	Fracture: 2 Contusion, bruise: 11 Concussion: 7 Open wound: 9 Others: 10
Baby pram, buggy, pusher, stroller, carriage	Day care, kindergarten: 5	Play: 2 Others: 3	Falling/stumbling/jumping/pushed from an unspecified height: 4 Pinching, crushing between objects: 1	Contusion, bruise: 2 Abrasion:2 Open wound: 1
Bunk bed	Kindergarten: 4 Hospital: 1 Holiday park/ campground: 12 Cafe, hotel, restaurant:1	Play: 6 Sleeping, resting: 8 Others: 4	Falling/stumbling/jumping/pushed from an unspecified height: 18	Fracture: 2 Contusion, bruise: 4 Concussion: 2 Open wound: 2 Others: 8
Changing table	Kindergarten: 6 Holiday park/ campground: 1 Cafe, hotel, restaurant:1	Personal hygiene:3 Others: 5	Falling/stumbling/jumping/pushed from an unspecified height: 7 Contact with object or animal:1	Concussion: 4 Others: 4
Cot, crib, baby bed	Kindergarten: 8 Hospital:1	Sleeping, resting: 4 Others: 5	Falling/stumbling/jumping/pushed from an unspecified height: 9	Concussion: 4 Fracture: 2 Others: 3

PRODUCT	Number of incidents by place	Activity during injury	Mechanism of the injury	Injuries associated
Mattress, sleeping mat	Day care, kindergarten: 11	Play:11	Falling/stumbling/jumping/pushed from an unspecified height:9 Others: 2	Fractures: 4, Contusion bruise:3 Others:4

Table 10: Information on the incidents according to product (data from IDB).

For baby pram, buggy, pusher, stroller, carriage there are 32 incidents: 5 at kindergartens, 13 at recreational areas (public parks), 12 at shop/stores and 1 at restaurant/hotel. For the purposes of the study, it was considered that only the incidents occurring at kindergarten could be related to non-domestic use of the product.

➤ Analysis according to location

Another important factor to consider is the place where the incidents happen, when not in domestic use. Table 10 contains these figures.

Code	Place	Number of incidents	%
4	School, educational area	74	55.22
10	Recreational area, cultural area, or public building	31	23.13
11	Commercial area (non-recreational)	25	18.66
3	Medical service area	4	2.99

Table 11: Number of incidents by place (data from IDB).

More than 50% of incidents occurred in educational areas, and specifically at kindergarten and day care centres (code 4.20). Other incidents occurred at recreational areas, cultural areas, or public buildings (amusement parks, theme parks/ holiday parks, campgrounds) and commercial areas (shops, stores/ cafes, hotels, restaurants).

6.4 RESEARCH INTO THE USE OF CHILDCARE ARTICLES IN NON-DOMESTIC SETTINGS (SURVEY)

This survey was sent directly to 436 contacts from the e-encuesta platform and distributed among several European organisations. The response rate was as follows:

- 88 responses, however several were returned blank
- 15 responses with the complete survey, and
- 14 responses with the survey partially answered.

Annexe IV "Results of the general survey" includes the report on the results of this survey. It includes the aggregated results and all the comments

received. The relevant results of this survey were used to identify additional hazards /increased risks.

The information obtained from users was limited and the answers were not very helpful. Some conclusions were:

- Most of the companies provided professional supervision, but the staff did not always receive specific training for the use of child care products.
- The replacement frequency was very variable: from 1-2 years up to 50 years, or only when broken.
- In most cases, they claim to have instructions for use available for the customers and staff.
- Some comments about incidents: swings in kindergartens, bunk beds at home.

Regarding site visits, Annex III-b "Site visits" includes tables containing the results of site visits. In general, child care products were appropriate or good enough, but in some places products were dirty or poorly maintained. Very few products were considered fragile and/or unsafe or to present serious risks (broken parts, absence of restraint system, etc.).

6.5 ADDITIONAL SURVEYS FOR OTHER STAKEHOLDERS CONCERNING CHILD USE AND CARE ARTICLES

Three surveys were sent directly to over 400 contacts (357 manufacturers and 51 market surveillance authorities) and distributed to manufacturers' associations, PROSAFE and CEN experts. But the response rate for the first two groups was very low.

43 manufacturers responded to the survey, but only:

- 8 responses filled in the complete survey, and
- 8 responses only partially answered the survey.

Annexe V "Results of the survey for manufacturers" includes the results report of this survey. This report includes the results in an aggregate manner and all the comments received. The relevant results of this survey were used to identify hazards. Below we provide some conclusions:

- Some respondents apply specific measures for child care products for non-domestic use.
- They did not receive complaints from the non-domestic sector.

- They did not know about accidents/incidents with their products in the non-domestic sector.
- A comment that recommended specific standards for each use (domestic/non-domestic).

For market surveillance authorities, there were 10 entries to the survey, but only:

- 4 responses that completed the full survey, and
- 2 responses partially answered the survey.

Annex VI "Results of the survey for market surveillance authorities" includes the report of the results of this survey. The relevant conclusions of the survey were:

- They did not take any measures to control child care products in non-domestic use, but they thought that additional requirements for these products would be necessary.
- They thought that child care products in a non-domestic setting were unsafe.
- Above all they highlighted changing units, bunk beds and safety barriers.

150 CEN experts responded to the survey, but only:

- 36 responses completed the survey in full, and
- 34 responses partially answered the survey.

Annex VII "Results of the survey for experts" includes the report of this survey result. The relevant conclusions of this survey were:

- The participating experts are involved in standardization activities of child care products, toys and playground equipment.
- They had less experience in child care products in non-domestic settings.
- They thought that child care products in non-domestic settings should be regulated by specific standards, but also agreed that current standards included non-domestic use.
- They provided cases of incidents, accidents, additional comments, personal opinion, etc. that were considered in this study.

6.6 IDENTIFICATION OF HAZARDS

6.6.1 Hazards identified from the information obtained

Information obtained from studies, articles and product recalls is very unusual and practically non-existent for non-domestic settings. Recalls for products as a result of incidents were registered, but the place where the incident occurred was not recorded, nor was the use of the product at that particular moment in time recorded. Therefore, the main source of information was incidents and accidents.

The results of surveys also provided extra information on additional hazards that may not have been identified in the searches performed.

Information on the most important products used in non-domestic settings, is compiled in Annex VIII. In general, the most representative identified hazards presented in non-domestic settings were:

- Entrapment of body parts (head, neck, fingers).
- Hazards from inadequate stability: products overturning due to the presence of other children or people in proximity to the product.
- Hazards from inadequate structural integrity: products collapsed, broke, etc.
- Falling hazards: children getting out of the product and falling.

These identified hazards are also present in domestic settings, but non-domestic use increases the risk due to factors that are explained in 6.6.2.1.

6.6.2 Hazards identified from the AIJU expert reports

6.6.2.1 Discussion of differences between use of child care products in domestic settings and in non-domestic settings

The results of the brainstorming with the team of AIJU experts in child safety “Differences between the use of child care products in domestic settings and in non-domestic settings” and the relevant conclusions are summarised in the following table:

OPINION OF AIJU EXPERTS REGARDING CHILD CARE ARTICLES IN NON-DOMESTIC SETTINGS

Child care products in domestic settings are used by carers and parents who are familiar with the product, have the instructions for use and are accustomed to using the product.

Child care products in non-domestic settings are used extensively, more than had been anticipated. This use affects fixing points, folding mechanisms, restraint systems, wheels, etc. which suffer greater wear and tear.

Carers are not trained to use child care products provided in public places, they do not have instructions for the correct and safe use and sometimes, the product marking is missing.

Child care product in non-domestic settings may be subject to increased wear and tear, poor cleaning and / or maintenance.

Low replacement frequency or only when broken (and breakage is visible).

Product overload: due to being used by more than one child at a time, due to being used by children older and/ or heavier than intended.

In child settings (kindergartens, day care centres, kids clubs, etc.): lack of supervision or non-specialized supervision

Unforeseen or inadequate use of the product. For example: playing in bunk beds, sleeping in high chairs or reclined cradles, etc.

Access to dangerous parts of the environment due to incorrect positioning of the child care product. For example: a cot in a hotel placed near a heat source.

Unsuitable storage conditions of child care products (temperature, humidity, etc.).

The access zones for child care products are intended only for the child inside the product. In non-domestic settings, normally there are children around the child inside the product able to access other parts of the product and affecting the safety of both.

In non-domestic settings, child care products in use might present hazards that a new version of the standards has already considered. Child care products may well have been bought years ago, before publication of a new standard, and they may present hazards that new products on the markets do not have.

Products on the market do not satisfy the needs of each organisation. Therefore, the use is not always appropriate, as child care products are modified, manipulated and misused.

The degree of care of the environment is not the same, since they can be located in areas of walkways more exposed to pushing, falls, etc.

Maintenance could be different in a kindergarten, where professional child care is available, from that provided in hotels, restaurants and other public places.

6.6.2.2 Discussion of hazards and potential injuries by product

The results of the AIJU workshops are summarised in the following tables, focusing mainly on mechanical hazards. Many of the factors included in these tables are theoretical, but they were proposed by AIJU experts because of their knowledge of children's products.

Electric hazards are not applicable to these products because they rarely include electric components, nor were thermal hazards identified in the research, in the surveys, or in the expert meetings, thus, they have not been included. Chemical hazards were not considered in this study, as they require a different approach. The document of reference for chemicals is "CEN/TR 13387-2:2015 Child care articles– General safety guidelines – Part 2: Chemical hazards".

MAIN FACTORS THAT TRIGGER INJURY IN:		
Domestic use	Non-domestic use, child oriented environment	Non-domestic use, non-child oriented environment
CHILD CARE ARTICLES IN GENERAL		
Child alone or with siblings and might be unattended for some time on the assumption that the child is in a safe environment.	More children around the product, who might climb and overturn it. Increased risk due to increased exposure.	More People around the product who might trip over and overturn it. Increased exposure.
	Intensive and extensive use of the product.	Intensive and extensive use of the product.
	Many children who should be watched by a single caregiver.	Low supervision due to parents/carers doing other activities: eating meals, talking, etc.
	Product overload: older or heavier children, more than one child at the same time.	Product overload: older or heavier children.
	Entrapment of body parts of other children around the product. Increased risk due to the increased exposure (more children having access to the outside of the product) in non-domestic use.	
		Ignorance of the use of the

MAIN FACTORS THAT TRIGGER INJURY IN:		
		product. No instructions for use.
	Improper cleaning and maintenance. Hygiene becomes even more relevant in non-domestic use.	Incorrect cleaning and maintenance. Hygiene becomes even more relevant in non-domestic use.
SPECIFIC FOR PUSHCHAIRS AND PRAMS		
	Product in movement: another child might put their fingers/hand/foot in the wheels and crush them.	Product in movement: another child might put their fingers/hand/foot in the wheels and crush them.
Brakes are not used when the product is stopped.		Brakes are not used when the product is stopped.
Movement of the product in dangerous places. For example: slopes, sliding surfaces, etc.		Movement of the product in dangerous places. For example: slopes, sliding surfaces, etc.
		Incomplete deployment due to lack of awareness of the instructions for use.
SPECIFIC FOR CHANGING UNITS		
Changing the child's nappy, the child might be unattended for seconds to reach another nearby object.	Free standing product: More children around the product, who might climb and overturn it.	
		Wall mounted changing tables: incomplete deployment of the table that could fold during use, inadequate anchorage to the wall and maintenance.
	Changing unit with ladder, for older children that can climb up and down them.	
	Changing table for changing more than one child at the same time.	
SPECIFIC FOR COTS		
		Incomplete deployment of foldable cots: product could fold with the child inside.

IDENTIFICATION OF HAZARDS

ADDITIONAL HAZARDS IN NON-DOMESTIC USE (not covered by standard)

Biological hazards: Contamination due to the incorrect cleaning, as product is used by different children.

INCREASED RISK IN NON-DOMESTIC USE (hazard covered by standard for domestic use)

Entrapment of body (head, neck, fingers, limbs) for children around the product.

Hazards from inadequate stability: product overturns due to the presence of other children or people around the product (increased risk due to increased exposure).

Hazards from inadequate structural integrity: due to the intensive use of the product, overload, poor maintenance, etc.

Inadequate information: product information for the safe use in non-domestic settings.

➤ SPECIFIC FOR PUSHCHAIRS AND PRAMS:

Hazards from moving parts (due to the wheels): entrapment of body parts, fingers and/or limbs in parts in movement.

➤ SPECIFIC FOR CHANGING UNITS:

Hazards from moving parts in wall mounted changing tables.

Mattresses are a special case: for these products a new standard is being drawn up that covers mattresses for domestic and non-domestic use: European standard project (prEN) 16890 "Children's furniture - Mattresses for cots and cribs - Safety requirements and test methods". As stated in the scope of this proposed standard *"This draft European Standard specifies safety requirements and test methods for mattresses including mattress bases and mattress toppers, used in children's cots, travel cots, cribs and suspended baby beds, for domestic and non-domestic use. This draft European Standard does not apply to mattresses for carry cots and pram bodies, inflatable mattresses, water mattresses and mattresses used for medical purposes"*.

The most important issues for these products in both domestic and non-domestic settings are included in this prEN:

- Entrapment hazards from gaps and openings (included: Entrapment hazards between the mattress and the sides);
- Firmness;
- Structural integrity.

6.6.2.3 Matrix “Hazards and risk assessment tables”

In the AIJU study and also in the surveys, additional hazards and increased risks were detected when child care articles intended for domestic use were used in non-domestic settings. European standards do not cover this use, so it is important to improve these in some aspects in order to include this use or to create new standards for non-domestic use.

With all the information obtained, the matrix “Hazard and risk assessment table” stated in the ANEC Technical Study “The development of the safety requirements and hazard-based standards for child use and care articles” was completed for each product. The objective is to compile in summarised form all the necessary information for normalization of the same products when considering non-domestic use.

The columns “*Hazards identification*” are marked with “x” if this hazard was identified in the research carried out. The same happens with the column “*Expert opinion*”, which was marked with “x” if this hazard was identified by experts. All the information from these columns is contained in the previous task and in the previous tables (by product) respectively.

These Tables by product are included in Annex IX “Matrix hazard and risk assessment tables” and present additional hazards which are not covered in current standards and the increased risks that are already covered in the current standards, referring exclusively to non-domestic settings.

6.7 ESTABLISHMENT OF SAFETY REQUIREMENTS

In the previous section, the additional hazards and increased risks were determined for each product. As has been seen, some safety aspects were common to all products, therefore the minimum safety requirements that should apply to basically all products in non-domestic use were identified with the following results:

MINIMUM SPECIFIC SAFETY REQUIREMENTS APPLICABLE TO ALL PRODUCTS IN NON-DOMESTIC USE

<i>HAZARD</i>	<i>COMMENTS</i>
Biological hazards	<p>Include instructions for increasing frequency of cleaning and disinfection.</p> <p>Design requirements to facilitate cleaning: no gaps, no difficult holes or joints, washable materials, etc.</p>
Entrapment of body parts (head, neck, fingers, limbs)	Evaluate entrapment of head, neck, fingers, limbs for the whole product (eliminate accessibility zones) to take into account the increased numbers of children around the product.
Hazards from inadequate stability	<p>Requirements for stability tests should be stricter in order to consider the presence of other children or people in or around the product.</p> <p>Increase the slope, or increase the applied load in testing, according to the product.</p>
Hazards from inadequate structural integrity	<p>Requirements for structural integrity should be stricter, due to the intensive use of the product, overload, poor maintenance, etc.</p> <p>Increase the number of cycles in dynamic strength tests or higher loads in static strength tests, according to the product.</p>
Falling hazards	Improve the requirements for restraint systems or barriers, according to the product.
Inadequate information	<p>Include specific information for safe use in non-domestic settings.</p> <p>Additional warnings when the product is in non-domestic use.</p> <p>Include instructions for maintenance.</p>

In addition, for each child care product, the applicable European standard was reviewed in order to consider the relevant requirements and test methods that require modification in order to include the additional hazards/risks determined in the investigation through their use in non-domestic settings.

Below, the following tables summarise the proposals by product. These tables contain all the additional hazards identified in the investigation. In addition, some requirements, modification of tests and/or new tests are proposed for each hazard with justification for the suggested changes.

HIGH CHAIRS		
CLAUSE	COMMENT	PROPOSALS FOR CHANGE
5.2 of EN 14988-1:2006+A1:2012	Entrapment of body parts (head, neck fingers, limbs) should apply to the whole product to take into account the children around the product.	Apply all the requirements to prevent entrapment of head, neck, fingers and limbs in all parts of the product, not only the zones specified in the standard.
6.17 of EN 14988-2:2006+A1:2012	Hazards from inadequate stability: product overturns due to presence of other children or people around the product. One case was reported in a kindergarten where a child fell as a consequence of another child.	Improve stability tests. For example: - Increasing the applied forces 150 N, 25 N, 200 N, or, - Performing the tests on a slope.
5.12 of EN 14988-2:2006+A1:2012	Inadequate structural integrity: due to the intensive use of the product and overload. Several cases of accidents due to the breaking of the product.	Include additional tests for structural integrity: - Static strength, placing a mass of "x" kg in the product for several hours. - Dynamic strength.
5.7 of EN 14988-1:2006+A1:2012	Falling hazards: child gets out of the product and falls. Incidents reported due to the misuse of the restraint system.	In addition to the restraint system, requirements for lateral protection should be stricter, increasing the height and length.
8 of EN 14988-1:2006+A1:2012	Information for the product does not include non-domestic use	Improve product information with information about the additional hazards in non-domestic use settings. Additional warnings when the product is in non-domestic use, such as kindergartens, etc.
COMMENTS		
<p>This standard is under revision by CEN/TC 364 with the version in Formal Vote: Project European standard in Formal vote (FprEN) 14988.</p> <p>This new version is also applicable to high chairs for non-domestic use. The main modifications affecting non-domestic use are:</p> <ul style="list-style-type: none"> • Addition of a dynamic strength test; • Improvement of restraint system requirements to require a passive crotch restraint for products with a horizontal component in front of the baby. 		

PUSHCHAIRS AND PRAMS

CLAUSE	COMMENT	PROPOSALS FOR CHANGE
8.2 of EN 1888:2012	<p>Entrapment of body parts (head, neck, fingers, limbs) should apply to the whole product to take into account the children around the product.</p> <p>A reported accident related to fingertip amputation.</p>	Apply all the requirements for preventing entrapment of head and neck, fingers and limbs to all parts of the product, not just the access zone stated in the standard.
8.9 of EN 1888:2012	Product overturns due to the presence of other children or people around the product.	<p>Improve stability tests, for example, increasing the slope of the test (12° currently).</p> <p>Proposal for a new test for dynamic stability.</p>
8.3.2 of EN 1888:2012	Wheels are moving parts that are accessible to children in or around the product and they can entrap body parts (fingers and/or limbs).	To avoid this hazard, gaps and wheels should be covered so that no fingers or limbs can be trapped.
8.10.3 and 8.10.6 of EN 1888:2012	<p>Inadequate structural integrity due to the intensive use of the product and overload, poor maintenance, etc.</p> <p>Irregular surface and handle strength tests were developed taking into account around 3 years of product use and in non-domestic use this time will be increased.</p>	Tests for structural integrity should be stricter. Increase the number of all these structural integrity tests.
10 of EN 1888:2012	Information of the product does not include non-domestic use.	<p>Improve product information with information about the additional hazards in non-domestic use settings.</p> <p>Additional warnings when the product is in non-domestic use, such as kindergartens, etc.</p>

OTHER COMMENTS

This standard is under revision by CEN/TC 252/ WG3 with the version in Formal Vote (FprEN 1888-1). This standard will be divided into 4 parts:

EN 1888-1 Child care articles- Wheeled child conveyances - Part 1: Pushchairs and prams

EN 1888-2 Child care articles - Wheeled child conveyances - Part 2: Pushchairs for heavier

children

EN 1888-3 Child care articles - Wheeled child conveyances- Part 3: Pushchairs and prams for sport activities

EN 1888-4 Child care articles - Wheeled child conveyances – Part 4: Additional platforms

The FprEN 1888-1 does not include the proposed additional requirements for non-domestic use.

CHANGING UNITS

CLAUSE	COMMENT	PROPOSALS CHANGE
5.1 of EN 12221-1:2008+A1:2013	Entrapment of body parts (head, neck, fingers, limbs) should apply to the whole product to take into account the children around the product.	Apply all the requirements for preventing entrapment of head and neck, fingers and limbs to all parts of the product, not only the accessibility zone .
5.6 of EN 12221-2:2008+A1:2013	Product overturns due to the presence of other children or incorrect position of the child or low supervision.	Improve the test method for the stability test. For example: - A higher applicable force (200 N currently); or - Performing the test on a slope, etc.
5.7 of EN 12221-2:2008+A1:2013	Inadequate structural integrity due to the intensive use of the product and overload, poor maintenance, etc. A reported incident was related to the incorrect fixing of a wall-mounted table.	Improve the strength test increasing the weight (50 kg) and/or the time (30 minutes). For wall mounted table: add instructions about the characteristics of the wall and about installation.
7, 8 and 9 of EN 12221-2:2008+A1:2013	Information on the product does not include non-domestic use.	Improve product information with information on the additional hazards in non-domestic use settings. Additional warnings when the product is in non-domestic use, such as kindergartens, etc.

OTHER COMMENTS:

None

COTS		
CLAUSE	COMMENT	PROPOSALS CHANGE
4.4.2 and 4.4.3 of EN 716-1:2008+A1:2013	<p>Entrapment of body parts (head, neck, fingers, limbs) should apply to the whole product in order to take into account other children around the product.</p> <p>Several incidents of entrapments of head and neck in cot bars.</p>	<p>Apply all the requirements for prevention of entrapment of head and neck, fingers and limbs to all parts of the product, not only accessible parts.</p>
5.2 and 5.12 of EN 716-2:2008+A1:2013	<p>Product overturns due to the presence of other children or the movement of the child inside if there is low supervision.</p>	<p>Improve the test method for stability test. For example:</p> <ul style="list-style-type: none"> - A higher applicable force (30 N currently) and/or a heavier weight (10 kg); or - Performing the test on a slope, etc.
5.7 and 5.8 of EN 716-2:2008+A1:2013	<p>Inadequate structural integrity due to the intensive use of the product, overload, poor maintenance, etc.</p> <p>The standard EN 716 has several tests to evaluate the structural integrity of the product.</p>	<p>Improve the impact test increasing the number of points of impact and the number of impacts (currently 1000 impacts).</p> <p>Improve the test for sides and ends increasing the applied force (250 N currently).</p>
6 and 7 of EN 716-2:2008+A1:2013	<p>Information on the product does not include non-domestic use.</p>	<p>Improve product information with information about the additional hazards in non-domestic use settings.</p> <p>Additional warnings when the product is in non-domestic use, such as kindergartens, etc.</p>
OTHER COMMENTS:		
None		

CHILDREN'S BEDS

CLAUSE	COMMENT	PROPOSALS CHANGE
16, 17, 18, 19, 20, 21, 22 and 23 of BS 8509 :2008+A1:2011	<p>Inadequate structural integrity: due to the intensive use of the product, overload, poor maintenance, etc.</p> <p>As with other child use and care articles, several tests to evaluate the structural integrity should be defined.</p>	The tests to be included in the future standard could be: vertical static strength of bed base edges, vertical impact strength of bed base, durability of bed base, durability of bed edge, strength of side guards and/or safety rails (as stated in BS 8509 :2008+A1:2011).
24 of BS 8509 :2008+A1:2011	Information of the product does not include non-domestic use.	<p>Improve product information with information on the additional hazards in non-domestic use settings.</p> <p>Additional warnings when the product is in non-domestic use, such as kindergartens, etc.</p>

OTHER COMMENTS:

There is no specific European standard for children's beds. The reference standards for this product are:

- EN 1725:1998 Domestic furniture - Beds and mattresses
- BS 8509:2008+A1:2011 Children's beds for domestic use. Safety requirements and test methods

The first step for this product is the development of a specific European standard, taking into account other standards for children's furniture. This standard would be designed to cover domestic use and non-domestic use.

BUNK BEDS		
CLAUSE	COMMENT	PROPOSALS CHANGE
5.4 and 5.5 of EN 747-1:2012+A1:2015	<p>Hazards from inadequate structural integrity: due to the intensive use of the product, overload, poor maintenance, etc.</p> <p>Accidents were reported about the collapsing and breaking of products.</p>	<p>Improve the strength tests, by increasing the applied forces, the number of cycles, etc.</p>
5 and 6 of EN 747-1:2012+A1:2015	<p>Information on the product does not include non-domestic use.</p>	<p>Improve product information with information on the additional hazards in non-domestic use settings.</p> <p>Additional warnings when the product is in non-domestic use, such as kindergartens, etc.</p>
OTHER COMMENTS:		
<p>The standard EN 747-1:2012+A1:2015 "Furniture – Bunk beds and high beds" is also applicable for bunk beds in non-domestic use, as is stated in the scope of the standard "<i>This European Standard specifies requirements for the safety, strength and durability of bunk beds and high beds for domestic and <u>non-domestic use</u>.</i>" The last revision of this standard is very recent, so it is not yet possible to know whether it has had an impact on improving safety and reducing incidents.</p> <p>On the other hand, this standard is not developed specifically for children's bunk beds, although the dimensional requirements are intended for child safety.</p> <p>In terms of age range, although it recommends bunk beds only for children older than 6 years, this age range should be increased.</p>		

6.8 REFERENCE STANDARDS

The first reference standards are the CEN/TR 13387 that provide general safety guidelines for child use and care articles:

- CEN/TR 13387-1:2015. Child use and care articles. General safety guidelines. Safety philosophy and safety assessment.
- CEN/TR 13387-2:2015. Child use and care articles. General safety guidelines. Chemical hazards.
- CEN/TR 13387-3:2015. Child use and care articles. General safety guidelines. Mechanical hazards.
- CEN/TR 13387-4:2015. Child use and care articles. General safety guidelines. Thermal hazards.
- CEN/TR 13387-5:2015. Child use and care articles. General safety guidelines. Product information.

This document does not refer to non-domestic use. For the next revision, this document should specify domestic and non-domestic use, as well as include specific requirements for non-domestic use (see chapter 6.7).

6.8.1 European standards for child use and care articles

The European standards for child care articles have not been specifically developed for non-domestic use. Some of them indicate in their titles that they are only intended for domestic use:

- EN 716-1 Furniture - Children's cots and folding cots for domestic use
- EN1130-1:1996 Furniture - Cribs and cradles for domestic use
- EN 12227:2010 Playpens for domestic use
- EN 12221-1:2008+A1:2013 Child use and care articles - Changing units for domestic use
- EN 1930:2011 Child use and care articles- Safety barriers - Safety requirements and test methods.

Scope: This European Standard specifies the safety requirements and test methods for child safety barriers for domestic indoor use which are designed to be fitted across openings to limit a child's access inside the home and to prevent young children up to 24 months of age passing through. This European Standard does not apply to products designed to be fitted across windows.

Other standards do not indicate the intended use of the product in their titles or scopes, so it could give the idea that they apply to both domestic and non-domestic use:

- EN 1272:1998 Child care articles - Table mounted chairs - Safety requirements and test methods
- EN 1273:2005 Child use and care articles- Baby walking frames - Safety requirements and test method
- EN 12790:2009 Child use and care articles- Reclined cradles
- EN 1466:2014 Child use and care articles- Carry cots and stands - Safety requirements and test methods
- EN 16120:2012+A2:2016 Child use and care articles- Chair mounted seat.
- EN 16232:2013 Child use and care articles- Infant swings
- EN 1888:2012 Child care articles - Wheeled child conveyances
- EN 1930:2011 Child use and care articles- Safety barriers - Safety requirements and test methods.

The standard for bunk beds EN 747 "Furniture. Bunk beds and high beds" that is intended for domestic and non-domestic use is a special case. The scope of this standard states "*This European Standard specifies requirements for the safety, strength and durability of bunk beds and high beds for domestic and non-domestic use*".

6.8.2 New European standards for child use and care articles

There are two standards in progress that will include both domestic and non-domestic use:

FprEN14988 "Children's high chairs - Requirements and test methods"

This is a revision of the standard for high chairs that is in Formal Vote. Within the scope of this standard it indicates "*This European Standard specifies safety requirements for free standing children's high chairs that elevate children to dining table height usually for the purposes of feeding or eating. Children's high chairs are for children up to 3 years of age who are capable of sitting unaided. With the exception of special high chairs for medical purposes, this standard applies to children's high chairs for domestic and non-domestic use. NOTE If a children's high chair has to or can be converted into other functions, additional European Standards may apply*".

This draft European Standard includes requirements for both domestic and non-domestic use. The main modifications that affect non-domestic use are:

- The addition of a dynamic strength test;
- The improvement of restraint system requirements to require a passive crotch restraint for products with a horizontal component in front of the baby.

FprEN 16890 "Children's furniture - Mattresses for cots and cribs - Safety requirements and test methods"

This is a new standard for these products, in Formal Vote. For the moment, children's mattresses do not have a specific standard.

This draft European Standard specifies safety requirements and test methods for mattresses including mattress bases and mattress toppers, used in children's cots, travel cots, cribs and suspended baby beds, for domestic and non-domestic use. This draft European Standard does not apply to mattresses for carry cots and pram bodies, inflatable mattresses, water mattresses and mattresses used for medical purposes.

This draft European Standard includes requirements for both domestic and non-domestic use, highlighting:

- Entrapment hazards from gaps and openings (included: Entrapment hazards between the mattress and the sides);
- Firmness;
- Structural integrity.

But other standards in revision still fail to include non-domestic use, either in the title or the scope:

- FprEN 716 "Furniture - Children's cots and folding cots for domestic use".
- EN 16232:2013/prA1 "Child use and care articles- Infant swings".
- FprEN 1272 "Child care articles - Table mounted chairs - Safety requirements and test methods".
- prEN 1888-1 "Child use and care articles- Wheeled child conveyances - Part 1: Pushchairs and prams".

6.8.3 Other international standards for child use and care articles

- BS 8509:2008+A1:2011 Children's beds for domestic use. Safety requirements and test methods: This is a reference standard for children's beds, but does not include the non-domestic use.
- ASTM F1169 Standard Consumer Safety Specification for Full-Size Baby Cribs: In this standard the non-domestic and/ or domestic use is not specified.
- ASTM F2388. Standard Consumer Safety Specification for Baby Changing Tables for Domestic Use: This standard only covers domestic use.

- ASTM F 2194 Standard Consumer Safety Specification for Bassinets and Cradles: In this standard the non-domestic and/or domestic use is not specified, but normal use is stipulated.
- ASTM F 833 Standard Consumer Safety Performance Specification for Carriages and Strollers: In this standard the non-domestic and/ or domestic use is not specified.
- ASTM F 977 Standard Consumer Safety Specification for Infant Walkers: In this standard the non-domestic and/ or domestic use is not specified, but normal use is stipulated.
- ASTM F 2088 Standard Consumer Safety Specification for Infant Swings: In this standard the non-domestic and/ or domestic use is not specified, but normal use is stipulated.
- ASTM F 1821 Standard Consumer Safety Specification for Toddler Beds: In this standard the non-domestic and/ or domestic use is not specified, but normal use is stipulated.

To conclude, most of the consulted standards do not specify the non-domestic use of the child care product, but some of those under revision are beginning to include non-domestic use.

6.9 IDENTIFICATION OF THE NEED FOR FURTHER RESEARCH

During the study and following analysis of the information provided in the surveys, some topics were detected requiring additional research concerning migration of domestic products to non-domestic settings. The most significant of these were:

- *Use of pushchairs and prams on escalators.*

There are a number of incidents in respect of these products due to incorrect use on escalators.

- *Toys used in non-domestic use (kindergartens, day care centres, schools, etc.)*

At educational centres, several toys are used: some toys that support the weight of the child (tricycles, bicycles, etc.) and others (wooden toys, imitation toys, cars, dolls, etc.). These products are not intended for non-domestic use and additional hazards could be triggered by extensive use.

The issues requiring further investigation include incidents related to the use of toys in non-domestic settings, due to the intensive and extensive use.

- *Activity toys used in non-domestic settings (kindergartens, day care centres, schools, etc.)*

At educational centres, activity toys are used as playground equipment. These products are specifically intended for domestic use; for non-domestic use playground standards apply, and additional hazards could be triggered due to this use.

Issues requiring investigation include incidents related to the use of activity toys in non-domestic settings, due to the intensive and extensive use.

- *Modified or custom manufactured child care products*

During the surveys and site visits, some people mentioned that they needed products that did not exist on the market. Sometimes, they bought commercial products and modified them themselves and at other times, they asked for custom manufactured products. This could create unforeseen hazards/risks.

These products should be investigated in depth in order to discover if there have been any incidents and to carry out a risk assessment designed to develop standards with a hazard based approach.

- *Kindergarten and day care centres*

Incidents in non-domestic environments are more frequent at kindergartens and day care centres. A further study should be conducted in this environment, taking into account the time that children spend there and the supervision by caregivers. Also, in these locations, other products such as toys and activity toys are used in non-domestic settings.

- *Child care products intended specifically for non-domestic use*

An additional study could be conducted to ascertain whether products specifically intended for non-domestic use fulfil any standard.

7 CONCLUSIONS

Child care products intended for domestic use are commonly used in non-domestic settings. Therefore, migration from domestic to non-domestic use is confirmed, as seen in the characterisation of child care products in non-domestic settings carried out (see Annex I).

There are several differences between domestic and non-domestic use. In domestic settings a child care product is used by one child, always the same child and the same product, for a more controlled period of time and parents/carers have access to the instructions for use (and thus are more likely to read them), have installed it and use it regularly so they are trained in the use of the product.

In non-domestic settings, two scenarios are possible: non-domestic child oriented environment, where child use and care products are used by trained carers and specialised staff who are required to supervise large numbers of children and many children together also means increased exposure to the hazards (this can lead to increased risk); and non-domestic non-child oriented environments, where child use and care products are used by parents/carers who are not accustomed to use these products and the staff are probably not trained to look after children or to use child products.

Incident locations are directly related to the time that children spend in a particular place. Therefore, incidents in non-domestic environments are more frequent in kindergartens and day care centres. A further study could be conducted in this environment, taking into account the time that children spend there and the supervision by caregivers (who are not the children's parents). Regarding the type of incidents, the most common are falls, and the leading cause of injuries in children using child care articles in non-domestic settings, which is the same as for domestic use.

Due to some aspects that are present in non-domestic use (many children in proximity to the products, lower supervision, parents/ carers not accustomed to use products, etc.), children may be at increased risk of serious injury as a result of domestic products being used in non-domestic settings. While there are theoretical risks associated with using domestic products in non-domestic settings (drawing on the expert opinions noted in the report), injury data does not provide sufficient support for this statement.

The hazards of child care products in non-domestic use were identified. As a result, an additional hazard was identified which has not been covered in standards for domestic use: the biological hazards produced through contamination due to incorrect cleaning as the product is used by several different children.

Other identified hazards are covered in the current standards for products in domestic use, but their use in non-domestic settings presupposes an increased risk that has not been sufficiently addressed. These are as follows:

- Entrapment of body parts (head, neck, fingers, limbs)
- Hazards from inadequate stability
- Hazards from inadequate structural integrity
- Falling hazards
- Inadequate information

Priorities for action were identified for child care products, taking into account the presence of the child care product in several non-domestic settings and products most frequently involved in incidents, taking into account all the sources of information consulted. These are:

- High chairs
- Baby prams and pushchairs
- Changing tables
- Bunk beds
- Cots
- Children's beds

During this study, despite the lack of available information, it has been demonstrated that child care products in non-domestic settings present additional risks that current standards do not cover. In subsequent revisions of the standards, these additional hazards should be considered in order to include stricter requirements and tests methods to cover non-domestic use.

8 ANNEXES

ANNEX I: CHARACTERIZATION OF CHILD CARE PRODUCTS IN NON-DOMESTIC SETTINGS

ANNEX II-a: METHODOLOGY OF IDB

ANNEX II-b: RESULTS OF THE RESEARCH ON EUROPEAN STUDIES, ARTICLES AND DATABASES

ANNEX III-a: METHODOLOGY OF SURVEYS

ANNEX III-b: SITE VISITS

ANNEX IV: RESULTS OF THE GENERAL SURVEY

ANNEX V: RESULTS OF THE SURVEY FOR MANUFACTURERS

ANNEX VI: RESULTS OF THE SURVEY FOR MARKET SURVEILLANCE AUTHORITIES

ANNEX VII: RESULTS OF THE SURVEY FOR EXPERTS

ANNEX VIII: IDENTIFIED HAZARDS BY PRODUCT

ANNEX IX: MATRIX HAZARDS AND RISK ASSESSMENT TABLES FOR CHILD CARE PRODUCTS IN NON-DOMESTIC USE