

**Final report on**  
**the Assessment of the**  
**Geographical BSE-Risk (GBR)**  
**of the**  
**PRINCIPALITY OF ANDORRA**

**5 December 2002**

**NOTE TO THE READER**

Independent experts have produced this report, applying an innovative methodology by a complex process to data that were supplied by the responsible country authorities. Both, the methodology and the process, are described in detail in the final opinion of the SSC on "the Geographical Risk of Bovine Spongiform Encephalopathy (GBR)",

6 July 2000 and its update of 11 January 2002. These opinions are available at the following Internet address:

**<[http://europa.eu.int/comm/food/fs/sc/ssc/outcome\\_en.html](http://europa.eu.int/comm/food/fs/sc/ssc/outcome_en.html)>**

This report, and the opinion of the SSC based on it, is now serving as the risk assessment required by the TSE-Regulation EU/999/2001 for the categorisation of countries with regard to their BSE-status. The final BSE-status categorisation depends also on other conditions as stipulated in annex II to that TSE-Regulation.

## 1. DATA

- The available information was sufficient to carry out the qualitative assessment of the GBR.
- Sources of data

Country dossier (CD) consisting of information provided from the country's authorities in 2002.

Other sources:

- EUROSTAT data on export of "live bovine animals" and on "flour, meal and pellets of meat or offal, unfit for human consumption; greaves" (customs code 230110), covering the period 1980 to 2001.
- UK-export data (UK) on "live bovine animals" (1980-1996) and on "Mammalian Flours, Meals and Pellets", 1988-1996. As it was illegal to export mammalian meat meal, bone meal and MBM from UK since 27/03/1996, exports indicated after that date under customs code 230110 should only have included non-mammalian MBM.
- Export data from Cyprus, the Czech Republic, Estonia, Hungary, Lithuania, Romania, Slovenia and Switzerland.

## 2. EXTERNAL CHALLENGES

### 2.1 Import of cattle from BSE-Risk<sup>1</sup> countries

Table 1, below, provides an overview of the data on live cattle imports, as provided in the country dossier (CD) and the corresponding data on relevant exports as available from BSE risk countries that exported to Andorra. Only data from risk periods are indicated, i.e. those periods when exports from a BSE risk country already represented, according to the SSC opinion on the GBR method of January 2002, an external challenge.

According to the CD for the period 1992-2001 live cattle have been imported from Spain (1,859), France (583), Germany (506) Austria (30), Ireland (80) and Italy (166).

According to Eurostat export data for the period between 1981-2001, France and Spain are the two main exporters of live cattle to Andorra. These two countries exported 44,234 and 12,675 cattle to Andorra respectively. Another supplier was Germany (334).

The differences over time between the CD and Eurostat and other data are explained (CD) by the fact that no statistical data of the Andorra customs were available before the EC-Andorra agreement was signed in June 1990. The Andorra customs could only start collecting data efficiently as from 1992 when more appropriate technical means became available.

According to Eurostat from 1981-1991, a high number of cattle were imported from France and Spain (i.e. 8,443 cattle from France in 1985) which is high compared to the current

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<sup>1</sup> BSE-Risk countries are all countries already assessed as GBR III or IV or with at least one confirmed domestic BSE case.

livestock population of Andorra (1,909 cattle). These animals were imported into Andorra, fattened for a short period and re-exported. After 1991, due to less space available this import/export ceased.

According to the CD, for the period 1992-1998, cattle imports were used for the beef breed quality improvement of the cattle herd of Andorra. These cattle were slaughtered at the end of their reproductive life. Both healthy slaughtered cattle and fallen stock are tested for BSE since 2001.

For the period 1999-2001, cattle were imported to improve the national herd but also for slaughter within 24-48 hours after import.

The CD also provides data on live cattle exports for 1992-2001. A total of 4,919 cattle were exported to Spain for slaughter. All animals exported were born and raised in Andorra. In 1999, Andorra constructed a slaughterhouse and therefore the export figures declined since then.

## **2.2 Import of MBM<sup>2</sup> or MBM-containing feedstuffs from BSE-Risk countries**

As no commercial feed producers exist in Andorra, commercial feed and pre-mixes have to be imported. All imports before 1999 could originate from any company in Spain but as from 1999 onwards all imports came from one company in Lleida, Spain. Import of feed containing MBM was banned on 20 December 2000 for all species.

According to the CD (1992-2001), Andorra imported only small amounts (300-900 kg) of MBM annually. Andorra claims that the MBM import data given in CD for 1997-2001 (1095 kg) were miscoded pet food imports. However, this statement was not substantiated and it is thus assumed that farmers imported small quantities for on farm mixing of feed.

Feed imports are given for 1992-1994 as total yearly amounts and since 1995 in a more detailed way. Yearly feed imports range from 950 to 1892 tons.

The country has re-affirmed that the imports of MBM in 2000 and 2001 were misquoted and were imports for the pet food industry and supermarkets respectively.

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<sup>2</sup> For the purpose of the GBR assessment the abbreviation "MBM" refers to rendering products, in particular the commodities Meat and Bone Meal as such; Meat Meal; Bone Meal; and Greaves. With regard to imports it refers to the customs code 2301 10 "flours, meals and pellets, made from meat or offal, not fit for human consumption; greaves".

Country:	Data	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	0	1	Total	
Austria	CD																						30		30
	other																								0
France	CD													126	44	64	3	1	5	19	9	266	46		583
	other	422	3994	3390	4581	5278	8443	6118	1880	4028	3236	1759	1177	100	71	63	3	1	5	16	9	40	42		44656
Germany	CD														163	40	55						239	9	506
	other									56	35			157	37	49									334
Ireland	CD																						80		80
	other																								0
Italy	CD																						166		166
	other																								0
Spain	CD													175	177	47	4	110	7	38	289	549	463		1859
	other						2585	2776	2262	370	776	939	427	191	164	30	4	71	7	30	351	1256	436		12675
Switzerland	CD														1										1
	other																								0
UK	CD																								
	other																								
TOTALS																									
non UK	CD	0	0	0	0	0	0	0	0	0	0	0	0	301	385	151	62	111	12	57	298	1330	518		3225
	other	422	3994	3390	4581	5278	11028	8894	4142	4398	4068	2733	1604	291	392	130	56	72	12	46	360	1296	478		57665
UK	CD	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	other	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

**Table 1: Live cattle imports into Andorra (CD) and corresponding exports from BSE risk countries. Source for export data: Eurostat and UK export statistics and, where available, export statistics from other BSE risk countries. Note: Only imports in Risk periods (grey shaded) are taken into account for assessing the external challenge. Risk periods are defined according to the SSC opinion of January 2002.**

Country:	data	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	0	1	Total	
France	CD																						0,31		0
	other		50				24	25																	99
Spain	CD														0,32	0,29	0,94	0,9	0,02	0,02		0,75			3,54
	other																								0
UK	CD																								0
	other																								0
Totals																									
non-UK	CD	0	0	0	0	0	0	0	0	0	0	0	0	0	0,32	0,29	0,94	0,9	0,02	0,02	0	0,75	0,31		3,54
	other	0	50	0	0	0	24	25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		99
UK	CD	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	other	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

**Table 2: MBM imports into Andorra (CD) and corresponding exports from BSE risk countries. Source for export data: Eurostat and UK export statistics and, where available, export statistics from other BSE risk countries. Note: Only imports in Risk periods are taken into account. Risk periods are defined according to the SSC opinion of January 2002.**

### 2.3 Overall assessment of the external challenge

The level of the external challenge that has to be met by the BSE/cattle system is estimated according to the guidance given by the SSC in its final opinion on the GBR of July 2000 (as updated in January 2002).

Since most of the animals and animal feed imported into Andorra came from Spain, the external challenge to Andorra corresponds to the internal challenge of Spain which was high and growing until 1994 and remained constant since then.

- Live cattle imports:

In total the country imported over the period 1980-2001 a total of 57,665 live cattle (Eurostat and other data) from BSE-risk countries, of which none came from the UK. Broken down to 5-years periods the resulting external challenge is as given in table 3. This assessment takes into account the different aspects discussed above. Since no cattle can be rendered in Andorra, this implies that, if the BSE-agent was present in the imported cattle, it could not have entered the feed chain and reach the domestic cattle. Therefore, the imported animals do not represent any challenge to Andorra's domestic cattle.

- MBM imports:

In total the country imported over the period 1980-2001 a total of 99 tons of MBM from France (Eurostat and other data). No MBM was imported from the UK. According to the CD approximately 3.5 tons of MBM were imported from Spain in the 1990s. It is further assumed that the feed imports (about 15,000 tons for the whole period) also represent a significant source for MBM reaching cattle in Andorra based on the fact that cross-contamination of ruminant feed was common in Spain. Broken down to 5-years periods the resulting external challenge is as given in table 3.

<b>External Challenge experienced by <u>ANDORRA</u></b>				
<b>External challenge</b>		<b>Reason for this external challenge</b>		
<b>Period</b>	<b>Overall Level</b>	<b>Cattle imports</b>	<b>MBM imports</b>	<b>Comment</b>
<b>1980 – 1985</b>	Significant*	Negligible	Very low	
<b>1986 – 1995</b>			Low	
<b>1996 – 2000</b>			Moderate	
<b>2001</b>	Negligible			

**Table 3:** External Challenge resulting from live cattle and/or MBM imports from the UK and other BSE risk countries. The Challenge level is determined according to the SSC-opinion on the GBR of July 2000 (as updated in January 2002).

\* A reasonable worst case assumption. As the amount of MBM imported yearly (most of it from Spain) although small, could have been sufficient to expose a large proportion of the cattle population in Andorra.

On the basis of the available information, the overall assessment of the external challenge is as given in the table above. It is not excluded that the BSE agent reached domestic cattle already in the early 80s, if imported in MBM from France.

### 3. STABILITY

#### 3.1 Overall appreciation of the ability to avoid recycling of BSE infectivity, should it enter processing

##### Feeding

- There is no commercial feed mill in Andorra. All imported compound feed and pre-mixes are prepared by only one licensed company situated in Lleida (Spain) and the feed is directly delivered by the company to the farmers according to their needs. It is however assumed that farmers partly mix their feed themselves, the import of pre-mixes and the small amounts of MBM in the 90s seem to indicate this.
- The need for supplementary feed for dairy cattle was always low because only a very little number has been kept in Andorra. Until 1999, beef cattle were exported to Spain for fattening. Some complementary feeding might have been used to cover specific situations, i.e. the period around calving or at the beginning of the lactation. Since 1999, when a special label for Andorrian beef was established, beef cattle are also fattened and slaughtered in Andorra. However, very restrictive rules for feeding exist.

##### Feed ban

- In June 1999, the rules to be respected by cattle keepers who are joining the specific beef label (BOPA n°23 of 9 June 1999) were published. According to these rules, the use of MBM in feed for cattle is prohibited. As 100 % of the cattle keepers belong to this label this regulation is equal to a MBM ban for cattle.
- In December 2000, a law (BOPA n°79 of 21.12.2000) was published implementing a total feed ban. According to this, import and export and trading of feed containing animal protein and of MBM was banned for all species.
- It is stated that the Department of Agriculture officially controls feeding rules laid down for the specific beef label, which includes examinations for the absence of MBM. However, the only official results provided refer to 7 feed samples examined (all of them free of MBM) in the second half of 2001. It is assumed that the absence of MBM was not controlled before.

##### Potential for cross-contamination and measures taken against

- Due to the fact that compound feed is imported from Spain, the level of cross-contamination of compound feed used in Andorra is on the same level as in Spain, where cross-contamination was a problem until the end of 2000.
- On farms, where feed is mixed for own use cross-contamination or cross feeding is likely to occur whenever cattle and non-ruminants are kept together.

##### Rendering

- No rendering plant exists in Andorra and until 1999 also no animal waste was processed as there was also no slaughterhouse in operation. All animal waste was submitted to a household waste incinerator, which operates since the end of 1980. Since 1999, when the only slaughterhouse was opened, all animal waste, independent of the origin of the animal and all SRM if removed from carcasses is incinerated. Since December 2000, also all fallen stock is incinerated there. However, whenever fallen stock can not be brought to the incinerator veterinary services also authorise burial. Incineration of animal waste and fallen stock is carried out separately from household waste and the ashes produced go to landfill. In 2001, a total of 184 tons of animal waste and 22 fallen stock (>12 months) was incinerated. Burial was authorised for 12 fallen stock.

**SRM and fallen stock**

- Since December 2000, SRM as defined by Community legislation is removed and incinerated as well as fallen stock, if it is possible to bring them to the incinerator.

**Conclusion on the ability to avoid recycling**

- As there is no rendering industry in Andorra, recycling and amplification of the BSE-agent, should it have entered the territory of Andorra, would not have happened in the country.
- Andorra is fully dependent on feed imports from Spain, and these feeds carried a certain risk of having been contaminated with the BSE agent. Due to cross-contamination in the feed mill and during on-farm mixing and cross feeding, it can not be excluded that the imported feed stuffs and/or MBM could have reached domestic cattle.

**3.2 Overall appreciation of the ability to identify BSE-cases and to eliminate animals at risk of being infected before they are processed****Cattle population structure**

- The total cattle population of Andorra is (November 2001) 1.909 cattle with 35 % younger than 12 months and 55 % over 24 months. The majority of the cattle older than 24 months (95 %) are beef cattle, 1 % dairy cattle (10 cows) and 4 % (40) are dairy/beef cows. They are raised in extensive production systems, based on pasture. There are 51 farms in Andorra with the majority (58%) keeping 15-50 cattle. 35 of these cattle holdings also keep other species mainly for home consumption. These include pigs, chicken and guinea fowl.
- Before 1999, young beef cattle (5 – 10 months of age) were exported to Spain for fattening. If any supplementary feed was given it was done irregularly (e.g. around calving and beginning of lactation).
- The CD did not comment on the high yearly imports of live cattle between 1980-1991. Compared to the national herd these imports are high but it is assumed that part of the imports were pure breeds, young cattle from Spain for grazing or cattle in transit.

**BSE surveillance**

- BSE is notifiable since June 2000 while any epidemic or zoonotic disease had to be notified already since June 1998.
- On 21 December 2000, Andorra published an active surveillance system based on Commission Decisions 2000/764/CE and 2000/766/CE.
  - Samples are tested in the same way disregarding the origin of the cattle and all are taken by the official service and sent to the Departemental Laboratory of Haute-Garonne in France and tested using the “Prionics” test).
  - Since February 2001: healthy slaughtered cattle older than 30 months are sampled .
  - Since November 2001: fallen stock older than 24 months are sampled.
  - From February 2001 to September 2002 a total of 323 samples were tested. All were negative for BSE (233 healthy slaughter, 71 sick slaughters, 10 emergency slaughters, 9 fallen stock). No BSE suspects were tested.

### 3.3 Overall assessment of the stability

For the overall assessment of the stability, the impact of the three main stability factors (i.e. feeding, rendering and SRM removal) and of the additional stability factor surveillance, has to be estimated. Again, the guidance provided by the SSC in its opinion on the GBR of July 2000 is applied.

#### Feeding

Feeding MBM to cattle was legally possible until December 2000. Theoretically the feedstuffs from Spain should have been void of mammalian MBM since 1994 but this condition was only ensured since the second half of 2001. It is hence assumed that feeding was "**not OK**" until 1998. Since 1999, when the situation in Spain improved and the rules for the specific beef label were introduced, it was "**reasonably OK**", and since 2001, following the control of the "total feed ban" it is considered "**OK**".

#### Rendering

As no rendering plant operates Andorra the BSE agent could not enter the feed chain. However, all feed is imported from mainly Spain, and it can not be excluded that the BSE-agent reached the cattle population via cross-contamination of ruminant feed with MBM, therefore "**not OK**" until 2000. Since the feed ban was in place it follows the situation in Spain and France, therefore "**OK**" as from 2001.

#### SRM-removal

SRM was not removed in Andorra before 1999 since there was no slaughterhouse. Up to then all animal waste has been incinerated. At the start of operation of the slaughterhouse SRM was not removed. As all feed is imported from Spain, the Spanish situation as regards SRM-removal has to be taken into account as well. Therefore, SRM-removal is considered "**not OK**" until the end of 2000. Because Andorra decided to follow the EU regulation on SRM removal and the situation in Spain improved as well, it is considered "**OK**" since 2001.

#### BSE surveillance

Active BSE surveillance, including testing of fallen stock only started in the middle of 2001. Before the surveillance system would not have been able to detect a low BSE incidence.

Stability of the BSE/cattle system in <u>ANDORRA</u> over time					
Stability		Reasons			
Period	Level	Feeding	Rendering	SRM removal	BSE surveillance
1980 to 1998	Extremely unstable	Not OK	Not OK	Not OK	↓
1999 to 2000	Very unstable	Reasonably OK			
2001-	Optimally stable	OK	OK	OK	→

**Table 7:** Stability resulting from the interaction of the three main stability factors and the BSE surveillance. The stability level is determined according to the SSC-opinion on the GBR of July 2000. It should be noted that the BSE/cattle system of Andorra is closely interlinked with the BSE/cattle systems in France and Spain and the risk factors have to be assessed as in these countries.



On the basis of the available information it was concluded that the country's BSE/cattle system was **extremely unstable** from 1980 to 1998, **very unstable** between 1999-2000 and **optimally stable** since 2001. A feed ban was implemented in 2001 and improved the situation, but the available data are not sufficient to assume that the feed ban is fully effective. Apart from controls in Andorra it also depends on the situation in the feed exporting countries which became "OK" in January 2001.

#### 4. CONCLUSION ON THE RESULTING RISKS

##### 4.1 Interaction of stability and challenges

In conclusion, the stability of the Andorra BSE/cattle system in the past and the external challenges, the system had to cope with are summarised in the table below.

From the interaction of the two parameters "stability" and "external challenge" a conclusion is drawn on the level of "internal challenge" that emerged and had to be met by the system, in addition to external challenges that occurred.

In the case of Andorra the specific situation exists that the recycling, if at all, will most probably have happened within the Spanish and French BSE/cattle systems where cattle from Andorra were exclusively slaughtered until 1999. Andorra therefore imported the same risk as it existed in the exporting countries, mainly Spain, from where feed was imported. The existence of infected domestic cattle in Andorra therefore depends on the risk that cattle were exposed to potentially contaminated imported feeds. It is also theoretically possible that cattle, imported from BSE risk countries (mainly Spain and France) and still alive in Andorra could currently be incubating the BSE agent.

INTERACTION OF STABILITY AND EXTERNAL CHALLENGE IN <u>ANDORRA</u>			
Period	Stability	External Challenge	Internal challenge
1980 to 1998	Extremely unstable	Significant*	Likely and growing
1999 to 2000	Very Unstable		
2001- at current	Optimally stable	Negligible	Likely and decreasing

**Table 8:** Internal challenge resulting from the interaction of the external challenge and stability. The internal challenge level is determined according to guidance given in the SSC-opinion on the GBR of July 2000.

\*Reasonable worst case hypothesis: assuming that feed imports from neighbouring countries, mainly from Spain, were potentially contaminated with BSE.

The feeding system is of utmost importance in this context. If it could be excluded that imported, potentially contaminated feed stuffs reached cattle, such imports might not lead to an internal challenge at all.

In view of the above-described reflection the registered external challenges could have led to an internal challenge in Andorra from the early 80s onwards, i.e. the time when there was a certain risk that feed mainly from Spain could have carried the BSE agent. This internal challenge could not have been recycled within Andorra but it could have contributed to the challenge the BSE/cattle systems of France and Spain had to cope with. The continuous

imports of feed indicate a certain risk that at any time during the last 22 years one or several domestic cattle in Andorra could have been carrying the BSE agent.

#### **4.2 Risk that BSE infectivity entered processing**

Until 1999 there was no processing in Andorra. A certain risk existed since the middle of the 80's that BSE-incubating cattle from Andorra were processed in France or Spain. Since the middle of 1999, when all cattle are slaughtered in Andorra, BSE-incubating domestic cattle, if existing, could not enter processing for feed anymore.

#### **4.3 Risk that BSE infectivity was recycled and propagated**

Recycling and propagation of BSE is impossible within the BSE/cattle system of Andorra because there is no rendering and amplification. However, a certain recycling might have happened via French or Spanish animal waste rendering plants that processed all the cattle including old cows from Andorra and produced feed from it. This feed might have come back to Andorra, thus recycling of the BSE-agent, if it was already present in the country.

### **5. CONCLUSION ON THE GEOGRAPHICAL BSE-RISK**

#### **5.1 The current GBR as function of the past stability and challenge**

The current geographical BSE-risk (GBR) level is **III**, i.e. **it is likely but not confirmed** that domestic cattle are (clinically or pre-clinically) infected with the BSE-agent.

- It should be noted that the very small cattle/BSE system of Andorra is most appropriately regarded to be a sub-system to the French or Spanish BSE/cattle system, which is known to have been incorporating and recycling the BSE-agent.
- In view of the very small cattle population in Andorra and of the level of BSE-prevalence registered in France, Spain and most other European countries, it may take several years before a single BSE case is identified in Andorra, even with a very efficient surveillance system.

#### **5.2 The expected development of the GBR as a function of the past and present stability and challenge**

- As in Spain and France the GBR of Andorra will decrease over time as the possibility of new BSE cases born after the ban of December 2000/January 2001 is regarded to be very small.
- The GBR of Andorra should be decreasing at the rate by which cattle born before the total feed ban leave the national system (slaughter, cull).

#### **5.3 Recommendations for influencing the future GBR**

- The careful control of the feed ban ensures that no new exposure can occur and that the GBR decreases as rapid as possible. These controls should be extended also to on-farm mixers.