


## Case Study “Spreewälder Gurken” (Spreewald Gherkins)

Name of the indication	Spreewälder Gurken	
Country	Germany	
Category	Fruit, vegetables and cereals; sub-category gherkins	
Protection status under Regulation (EC) 2081/92	PGI	

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# 1 The product and its region of origin

## 1.1 Product description

*Spreewälder Gurken* (Spreewald gherkins) are popular in Germany and probably the most well-known of the 67 German products protected as PGI and PDO. The protected indication *Spreewälder Gurken* refers to gherkins that are produced according to traditional recipes on the basis of cucumbers grown in the Spreewald region.

The special taste of the gherkins is due to the spices used (onions, dill, horseradish and herbs) and the specific microclimatic<sup>1</sup>, water<sup>2</sup> and soil<sup>3</sup> conditions of the region. Also, the short distances between cucumber fields and processing positively influence the products' freshness and taste.

Spreewald gherkins have been, and still are, an East-German classic. They strongly contribute to the image and identity of the Spreewald region, which is a popular German tourist destination.



Figure 1 Cucumber Harvest (Source: [www.spreewald-erlebnis.de](http://www.spreewald-erlebnis.de))

## 1.2 History

The production of gherkins in the Spreewald region has a long tradition, and the product was popular in the German Democratic Republic. In the early nineties, however, after the reunification of the two German states, production declined sharply and the gherkins from the Spreewald region were not able to hold their ground in the common German market. Producers in the region suffered from the fact that the indication "*Spreewälder Gurken*" was not protected at the time, since the positive connotation and reputation it enjoyed was exploited by West German companies who used it as a product label, although they neither produced in the Spreewald nor used cucumbers from the region (Sonka et al. 2002).

In defense, the Spreewald producers first had the umbrella trademark "Spreewald" protected under national law (see Figure 6). In 1995, the association *Spreewaldverein*, which is an organisation of regional stakeholders including gherkin producers, submitted an application

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<sup>1</sup> Humid and relatively warm.

<sup>2</sup> Particularly ferruginous water.

<sup>3</sup> Rich in humus.

for registration as PGI under Council Regulation 2081/92, which was granted in 1999. Since 1995, the group also owns the “Spreewald” trademark label.

Following the introduction of the “Spreewald” trademark and parallel to the PGI application process, the Spreewald gherkins recovered and re-gained ground on the market. Large increases in production have been achieved since 1993. Today approximately 40,000 tons of the cucumbers are harvested every year in the Spreewald region (see Figure 3).

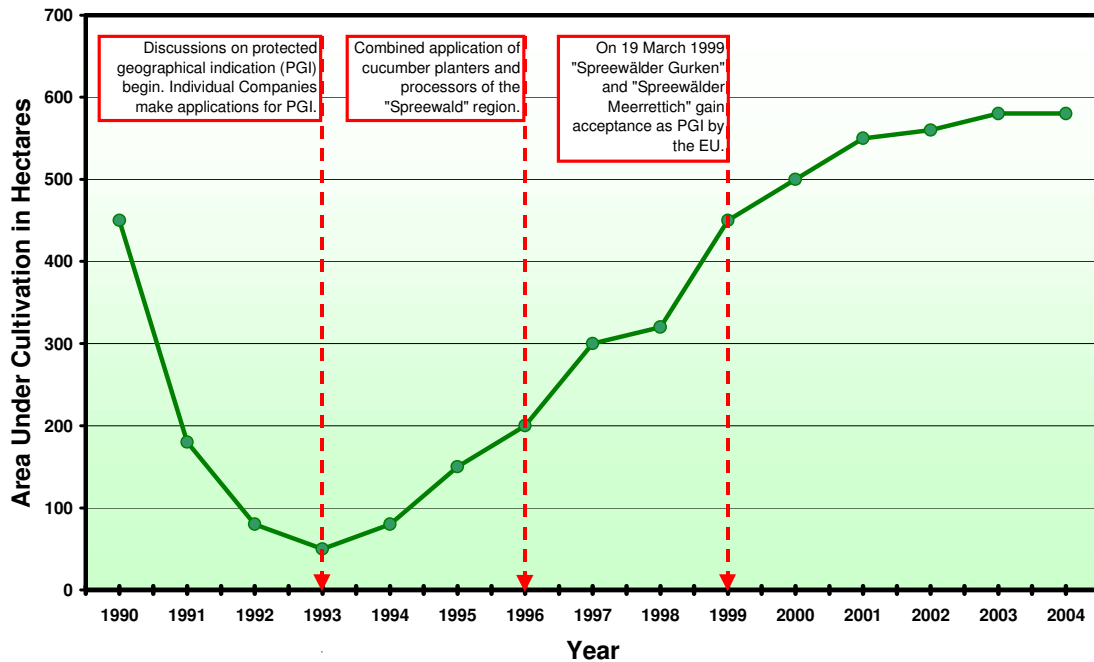


Figure 2 Development of the area under cultivation in hectares 1990-2004 (Source: Spreewaldverein 2004)

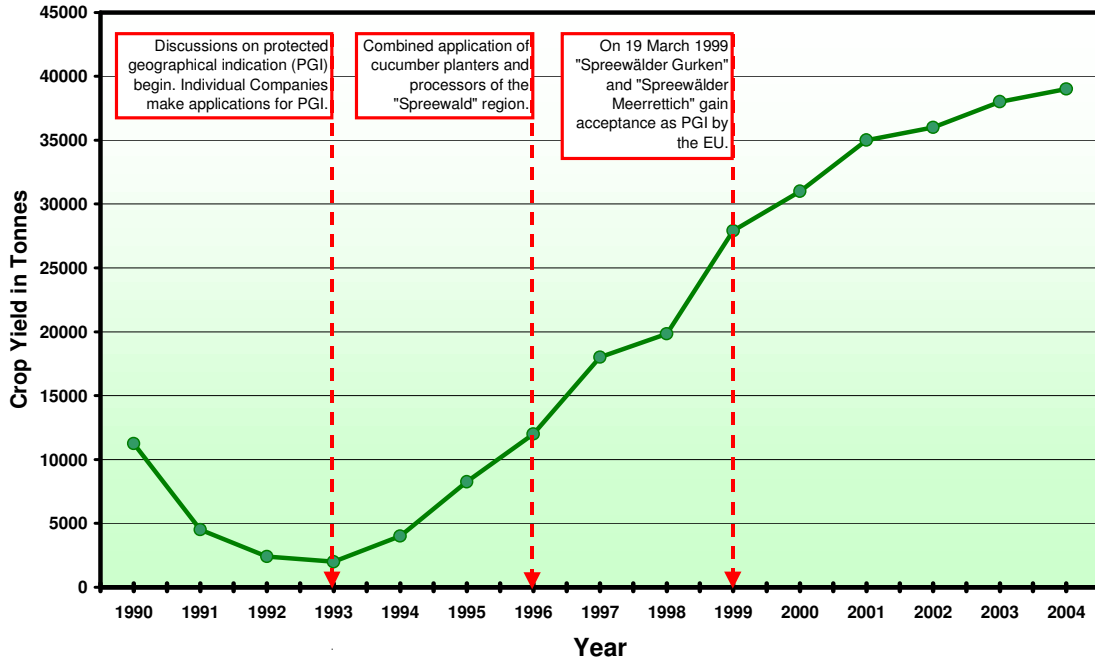


Figure 3 Development of crop yield of cucumbers 1990-2004 (Source: Spreewaldverein 2005)

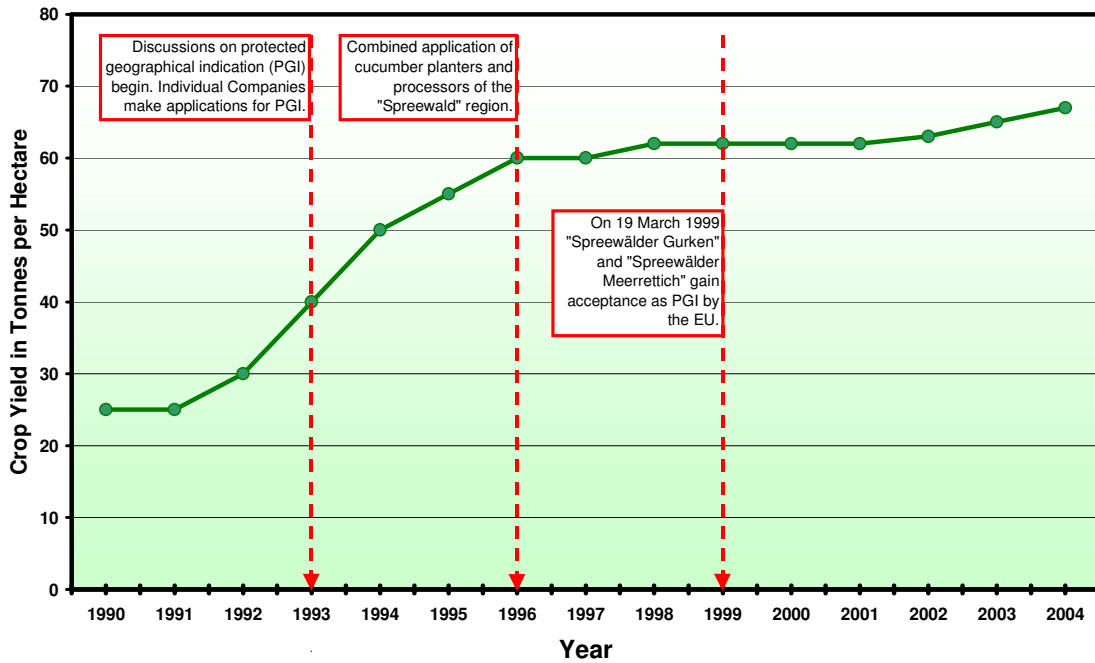


Figure 4 Development of crop yield of cucumbers per hectare 1990-2004 (Source: Spreewaldverein 2005)

### 1.3 Possible substitutes

Spreewald gherkins compete with pickled cucumbers from other German regions. Important areas for the cultivation of cucumbers include Bavaria and North Rhine-Westphalia (Irlbacher 2006).

### 1.4 Area of production

According to the specification, the production of “Spreewälder Gurken” is restricted to the Spreewald region which is situated in Brandenburg, 100 km south-east of Berlin. The boundaries of the region were defined according to geological, geographical, cultural, historical and economic criteria and are not congruent with administrative district borders. Figure 5 shows the Spreewald region. The colours indicate different districts. The Spreewald region, also known as “*Wirtschaftsraum Spreewald*” (economic area Spreewald), is acknowledged as a regional unit by the Brandenburg government and by the EU under the LEADER programme.<sup>4</sup>

The landscape was originally covered with mostly alluvial forests. Human activities have shaped the region for centuries, creating a characteristic mosaic of lakes, water courses, forests, grassland areas and settlements (Jungcurt et al. 2003). Typically, small parcels of land are agriculturally used on the basis of high labour input and special techniques. Agriculture plays an important role in maintaining the landscape characteristics.

The region covers a total area of 3,127 km<sup>2</sup> (including approximately 2,800 km<sup>2</sup> of rural area). Cucumber farming for the production of Spreewald gherkins covers a total area of approximately 6 km<sup>2</sup> (600 ha)<sup>5</sup>.

Total area	3,127 km <sup>2</sup> (approximately 2,800 km <sup>2</sup> rural area)
Population	265,481 habitants (103,228 in rural areas)
Population density	84,9 habitants/km <sup>2</sup> (37 habitants/km <sup>2</sup> in rural areas)

**Table 1** Characterisation of the Spreewald region. Source: [www.spreewald-erlebnis.de](http://www.spreewald-erlebnis.de).

#### Biosphere reserve Spreewald

The Spreewald region includes the UNESCO biosphere reserve “Spreewald”, which is located in the centre of the region (see Figure 5) and comprises of approximately 484 km<sup>2</sup> (Jungcurt et al. 2003). Approximately 53% of the biosphere reserve area (250 km<sup>2</sup>) is in agricultural use.

The aim of the biosphere reserve is to promote solutions in reconciling nature conservation and use of natural resources. It is divided into different interrelated sections for which differential restrictions of human activities apply. Within the “core area” (zone I), which covers roughly 2% of the reserve, no human activity is permitted. Ecosystems are left to develop naturally; trespassing is allowed for research purposes only. The second zone - the

<sup>4</sup> LEADER region DE/BR/09.

<sup>5</sup> In 2004 580 ha were cultivated. (Spreewaldverein 2005).

maintenance zone - covers 18.6% of the reserve's area. Here, activities are organised so as not to hinder the conservation objectives of the core area but rather to help protect it. Therefore, activities take place, but with priority to nature conservation issues. The objective for zone III (development zone) which covers 49.7% is to maintain traditional and sustainable land uses. In contrast to other reserves, the biosphere reserve "Spreewald" also includes a fourth category: the regeneration zone (zone IV, 29.9%). These areas were subject to very intensive cultivation methods in the past that badly damaged the soil, waters and habitats. This zone is to be managed so as to re-develop into zone II or III areas. (Jungcurt et al. 2003). Cucumbers are cultivated in zone III and IV of the biosphere reserve.

### **Environmental and social situation**

The Spreewald region suffers from lasting impacts of former coal mining activities and of intensive agricultural practices. Before 1990 coal mining and associated power plants were the largest employers in the region. The environmental impacts are still visible today. Mining heavily impacted on the water balance of the region, causing water shortages through the lowering of the groundwater. Flooding events may also occur due to the abandonment of pumping stations<sup>6</sup>. Large-scale socialist agriculture also generated environmental problems, through the use of large amounts of fertiliser and pesticides, soil-damaging practices (such as the use of heavy machinery on the fields), drainage, and the removal of landscape elements.

In the years following the German reunification, most coal mining and power generation facilities were shut down. Together with restructuring in the agricultural sector, this led to a significant loss of jobs and high unemployment rates.

From an environmental point of view, efficiency gains and improved production methods in agriculture had beneficial impacts. The traditional farming on small-sized parcels has survived, but is in retreat and depends on financial support (Jungcurt et al. 2003).

Also, the Spreewald region has become one of the centres of organic production in Germany. About 30 % of agricultural area in the region (37,400 ha) is managed according to the principles of organic production. Within the biosphere reserve, more than 60 percent of the agricultural land and every fifth farm (56 holdings overall) meet organic production standards.<sup>7</sup>

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<sup>6</sup> The rewetting of former agricultural is followed by a natural succession and therefore improves the value of the areas from a nature protective point of view. (Jungcurt, Laschewski, Schleyer 2003)

<sup>7</sup> [http://www.grossschutzgebiete.brandenburg.de/br\\_spreewald/regionalentwicklung\\_01.html](http://www.grossschutzgebiete.brandenburg.de/br_spreewald/regionalentwicklung_01.html), 27. January 2006 (Biosphärenreservat Spreewald online).



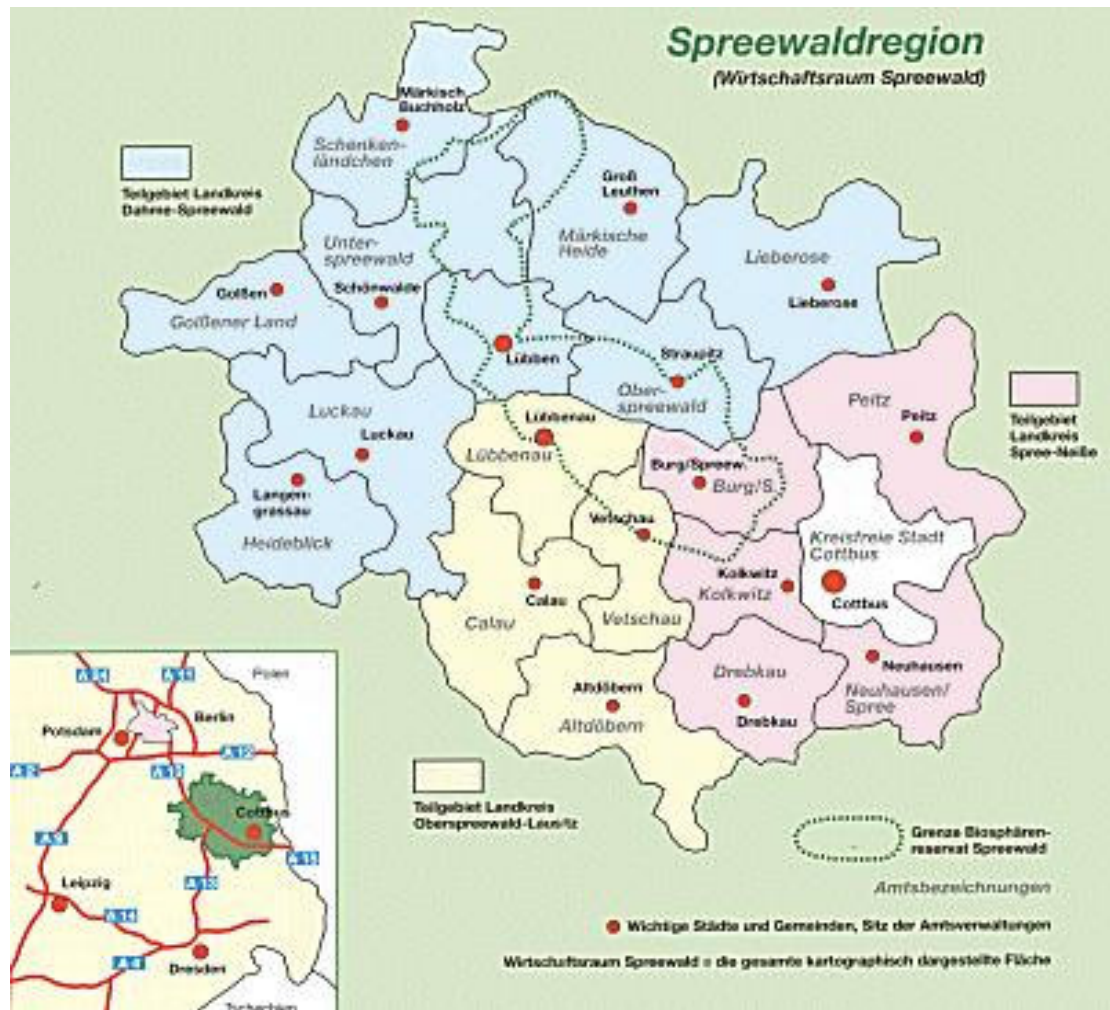


Figure 5 **Wirtschaftsraum Spreewald** (economic area Spreewald), dotted line: biosphere reserve<sup>8</sup>

### 1.5 Alternative Land uses

The land in the Spreewald region is dominated by a relatively high share of both forest and agricultural usage, averaging 42% each (see table below). The agricultural area in the Spreewald region consists of 47% farmland and 53% grassland. Within the biosphere reserve, the share of grassland is higher, up to 95%. The agricultural conditions, in particular the soils, were evaluated as poor in comparison to other regions.<sup>9</sup>

Table 2 **Land use in Germany, the Spreewald region and the biosphere reserve “Spreewald”**

Land use	Germany	Spreewald region	Biosphere reserve Spreewald
Agriculture in %	54 %	41,4	53
Forests in %	29 %	42,7	32,8

<sup>8</sup> Source: <http://www.spreewald-erlebnis.de/>.

<sup>9</sup> Within the ranking of field-values (valuating the soil and other important agricultural conditions) the regional soils only achieve marks between an average of 22 and 27 (on a ranking between 10 (poor) and 100 (optimum)). See MUNR 1998.



Waters in %	2 %	2,9	3,6
Urban areas and transport sector in %	12 %	7,5	7,1

**Source: Jungcurt et al. 2003.**

Cereal production (winter rye, winter barley, summer barley, few oat) plays an important role in the region and makes up around 60% of farm land. In comparison to cucumber production, the cultivation of cereals has less impact on the environment (e.g. with regard to water and fertiliser requirements); it is however also less profitable in economic terms. The actual environmental effects depend on the crop rotation scheme that is applied. On another 10-15% of the farm land winter colza and sun flowers are grown. Farm land for forage legumes, maize crop, potatoes and set-aside areas make up the rest of the share (Petschick 2006).

Regarding different land use activities, agriculture, forestry, fishery, and tourism (gastronomy, boat trips etc.) are the main sectors. Particularly in the core area of the biosphere reserve, different requirements may lead to conflicts impeding development in the region (Jungcurt et al. 2003).

## 2 Legal protection

### 2.1 Status of protection/ Legal Acts

The indication “Spreewälder Gurken” has been protected under Regulation (EC) 2081/92 since 1999, together with Spreewald horseradish which was registered as PGI at the same time.<sup>10</sup> In addition, producers of Spreewald gherkins use the “Spreewald” trademark, an umbrella brand name which initially was used for few products (among them Spreewald gherkins) and today covers vegetables (gherkins, horseradish, onions, carrots, potatoes, celery, cabbage) fruits, meat, fish products, and services, arts and crafts<sup>11</sup>. The trademark is registered in over 30 countries (Sonka et al. 2002).



**Figure 6** The “Spreewald” umbrella trademark label - *Regionale Dachmarke Spreewald*

The use of the trademark label is managed by the *Spreewaldverein*, an association of different regional stakeholders from agriculture and forestry, fisheries, tourism, conservation, communal politics, and business. The trademark is granted to producers who comply with

<sup>10</sup> Commission Regulation 590/1999 of March 18, 1999, supplementing the Annex to Regulation (EC) 1107/96 on the registration of geographical indicators and designators of origin under the established procedure in Article 17 of Regulation (EEC) 2081/92.

<sup>11</sup> For a full list see the pages of the “Spreewaldverein” [http://www.spreewald-erlebnis.de/cms/publicSite/site\\_2/index.html](http://www.spreewald-erlebnis.de/cms/publicSite/site_2/index.html).

product-specific guidelines established by the association<sup>12</sup> which include environmental and quality standards.

## **2.2 Specification**

The specification<sup>13</sup> describes the product, prescribes standards for quality and processing methods, and defines the boundaries of the region of origin in detail (see Figure 5).

The raw material – the cucumbers – is produced according to the principles of integrated production (see section 3). Of the cucumbers used for the end product – the pickled gherkins – at least 70% have to be from the Spreewald region. Processing has to take place within the region and must follow traditional recipes and preservation methods. Basic ingredients apart from cucumbers are fresh onions, dill, spices and horseradish. Up to a volume of 1,700 ml, sugar must be used for sweetening, no artificial sweeteners are allowed. Limit values for total acid and salt content are specified.

The specification also defines the relationship between the quality of the Spreewald gherkins and their origin in the Spreewald region, referring to the special soil and microclimatic conditions and to the long tradition of production.

## **2.3 Monitoring**

The responsible authority is the Brandenburg Ministry for Rural Development, Environment and Consumer Protection (*Ministerium für Ländliche Entwicklung, Umwelt und Verbraucherschutz* - MLUV). It has delegated the responsibility to the agricultural agency of Brandenburg (*Landesamt für Verbraucherschutz, Landwirtschaft und Flurneuordnung*), which in turn commissions independent accredited control institutions with carrying out the control of compliance with the specification.

## **3 Environmental effects**

The cultivation of “Spreewälder Gurken” must be characterised as intensive, because over 60 tonnes per hectare are being produced. Modern techniques are, however, employed which ensure that irrigation and application of plant protection products and root stimulants is efficient and takes soil and weather conditions into account (Petschick 2006).

As prescribed by the specification, production of cucumbers for Spreewald gherkins must follow the principles of integrated production<sup>14</sup>. In comparison to conventional production, these methods aim to achieve the most effective integration of production systems. The use of plant protection products is to be adjusted to the local and temporal needs of the plant and

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<sup>12</sup> [http://www.spreewald-erlebnis.de/cms/publicSite/site\\_2/index.html](http://www.spreewald-erlebnis.de/cms/publicSite/site_2/index.html).

<sup>13</sup> Application for registration: Verordnung (EWG) Nr. 2081/92, Antrag auf Eintragung nach Art. 17; Nationales Aktenzeichen: III B 5 – 9522/1-11 (5)-10 III 4-31 055696, available upon request from the Spreewaldverein.

<sup>14</sup> As laid down in the specification the integrated production (kontrollierter-integrierter Anbau) is carried out according to the Guidelines “Richtlinie über die Gewährung von Zuwendungen zur Einführung kontrollierter-integrierter Produktionsverfahren im Obst- und Gemüseanbau vom 18.05. 1995 des Ministeriums für Ernährung, Landwirtschaft und Forsten des Landes Brandenburg” (Funding for the implementation of integrated production in the fruit and vegetable sector).

to environmental conditions. Compliance with these rules is also subject to frequent inspections.

Up until now, organic farming of cucumbers has not been established in the region. Since the plants are highly sensitive to pests and fungal infestation, studies carried out in the 1990s concluded that farming without the use of plant protection products would not be viable. Since that time, plant breeding has advanced and new species with more resistant seeds are available. Therefore, new studies are planned for the near future, which will also assess possibilities to use organisms for the control of insect pests (Petschick 2006).

### **3.1 Water and Soil**

Although integrated production practices aim at minimising detrimental environmental effects, the impact of cucumber production on the areas concerned is unfavourable when compared to alternative land use options.

**Water demand** for irrigation is relatively high compared to the production of cucumbers in other regions (e.g. Bavaria) since the water is less well retained by the soils of the region. Also, cucumber farming requires more water than alternative agricultural land uses such as cereal crop production (Petschick 2006). However, the efficiency of water use was improved significantly through modern, computer-guided drop-irrigation, which is applied close to the soil and regulated according to the needs of the plant. Today irrigation is based mainly on ground water, while until 1994 surface water was used for irrigation. Compared to that time, water consumption has been reduced by a third (Petschick 2006). The environmentally compatible extraction of water is monitored by the regional environmental authority "Landesumweltamt Brandenburg".

Cucumber production also affects **water quality** through the application of fertiliser and plant protection products. Relatively large amounts of fertiliser are applied (200 – 300 kgN/ha) to satisfy the high need of the cucumber plants for nitrates. The amount of fertiliser applied on a given area over longer time periods depends on the crop rotation scheme. Herbicides are not applied – weeds are allowed to grow since they provide wind shelter for the gherkins and are then removed manually after some time. However, fungicides and insecticides are used in cucumber farming. Due to integrated cultivation guidelines, plant protection product application is likely to be lower than in other regions, where controls are less systematic. Also, the drop irrigation system allows for an exact control and efficient use of the application of plant protection products and other substances (e.g. growth stimulators) (Petschick 2006).

Moreover, farmers who work according to the principles of integrated production can participate in training courses to improve the use of fertilisers and plant protection products (Mathan 2006).

With regards to **soil erosion**, a reduction can be achieved by using a foil covering.

### **3.2 Landscape**

The cucumber fields often cover large areas. This stems from both the history of big sized agricultural co-operatives in the former GDR and the fact that the use of large fields increases profitability.

However, cucumbers are also grown in the inner region of the Spreewald and integrated in the traditional fragmented landscape structure with small parcel size. Here, the production of cucumbers contributes to landscape conservation, mainly on account of the way the regional property market is organised. A very high rate of the land is leased (between 80 and 90%), and fields suitable for cucumber production are not leased individually but together with other land in larger coherent units. Leasing contracts require the tenants to maintain the additional areas (e.g. keeping grassland open). The profits that can be achieved from the cultivation of cucumbers enable the farmers to comply with these requirements (Petschick 2006). Landscape conservation thus benefits from gherkin production. Additionally, there are programs and projects that advise farmers in landscape conservation issues.<sup>15</sup>

### **3.3 Biodiversity**

Cucumber production entails no harm towards species and no negative impacts on biodiversity as compared to alternative methods. The weed that is left to grow for a certain time period (see above) may serve as a place to retreat for some species (Petschick 2006).

### **3.4 Energy/ resources/ waste**

Due to the regionalised production process, there is a reduced use of resources, e.g. in terms of transport. The interval between cucumber harvest and gherkin production is usually less than 12 hours (Petschick 2006). However, the specification allows for the import of cucumbers from other regions up to a maximum of 30%. This possibility is used particularly in the off-season in order to meet the market demand. Cucumbers may come from other regions in Germany, but may also be imported from other countries, amongst others Spain and Poland (Irlbacher 2006).

For cucumber farming a (usually black) plastic foil is used (to reduce weed and warm up the soil underneath) which is removed from the field after harvest. Presently there are efforts to replace this plastic foil with biodegradable materials (Petschick 2006).

### **3.5 Air/Climate**

The reduced transport need is also favourable in terms of greenhouse gas emissions. Given that other gherkin producers may import gherkins from locations as far as India in order to save labour costs, this effect can be considered significant.

### **3.6 Other**

The farmers try to keep the region free of Genetically Modified Organisms via voluntary single farm commitments.

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<sup>15</sup> E.g. Leader-II-projects "Unterstützung der regionaltypischen Wirtschaftsweise in Lehde und Leipe zur Erhaltung und Wiederbelebung der kleinbäuerlichen, spreewaldtypischen Produktionsweisen." and "Anbau und Verarbeitung von Gewürzpflanzen". Responsible body: Spreewaldverein (cited in: GRÜNE LIGA, WWF - Brochure "Nachhaltige Entwicklung im ländlichen Raum", Chapter "Wirtschaftsraum Spreewald" (online: <http://www.grueneliga.de/projekt/nre/start.htm>)).

## 4 Economic data/ effects

### 4.1 Production and costs

Currently, approximately 40,000 tonnes of cucumbers are harvested and processed into Spreewald gherkins each year (Spreewaldverein 2005). Spreewald gherkins hold a large share in the German gherkin market - around 50% of pickled cucumber sales in Germany are “*Spreewälder Gurken*” (Petschick 2006).

There are currently around 10 producers who are supplied by 13 cucumber farmers of the region. There are 3 major producers who supply gherkins to the big supermarket chains and together have a share of 80% in the sales (Irlbacher 2006). The *Spreewaldhof Golßen*, which produces Spreewald gherkins and other vegetable preserves and holds a market share of 11% in the domestic pickled gherkin market, increased its annual turnover from 3.5 Mio. EUR in 1990 to 70 Mio. EUR in 2003. Of the total sales, Spreewald gherkins make up approx. 60%, i.e. around 40 Mio. EUR.<sup>16</sup> Around one million jars are bottled per day (Petschick 2006). Another major producer, the *Spreewald – Feldmann GmbH & Co KG*, today has a sales volume of 35 Mio Euro per year, of which two thirds are attributable to vegetable preserves, and a daily output of 500,000 jars of gherkins. Several companies with smaller production capacities are present in the market.<sup>17</sup> Also, companies which are not based in the Spreewald themselves may sell Spreewald gherkins if they have production facilities in the region or commission others to carry out the production.<sup>18</sup> Since there is no common marketing, aggregated data on overall or average sales, costs and prices for Spreewald gherkins are not available.

Production costs for Spreewald gherkins are likely to be higher than those of many other cucumber preserves that are on the market in Germany. While other German gherkin producers may rely on cheaper raw material (i.e. import cucumbers, for instance from Eastern Europe or Turkey), Spreewald gherkin products are based on cucumbers grown within the region (at least 70%, see specification). Additionally, other producers may use ingredients of lower quality and thus reduce costs. For instance, some other pickled cucumber products contain artificial sweeteners, which are cheaper than sugar and not allowed for Spreewald gherkins (at least not for the usual jar volumes). Costs may also be lower if producers rely on fresh spices to a lesser extent and use more flavouring substances instead.

If the production and bottling of the cucumbers is also done abroad, lower wages may reduce costs further.

### 4.2 Marketing channels

The major share of the Spreewald gherkin preserves is marketed via retailers and supermarket chains. They can be purchased across Germany and are also exported to other

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<sup>16</sup> [www.spreewaldhof.de](http://www.spreewaldhof.de).

<sup>17</sup> e.g. Spreewald Müller, [www.spreewaldmueller.de](http://www.spreewaldmueller.de); annual processing capacity: 1500 tonnes of cucumbers, 27 staff.

<sup>18</sup> E.g. Carl Kühne GmbH & Co. KG, based in Hamburg.

EU countries and overseas.<sup>19</sup> Direct marketing and street sale play an important role particularly for the smaller producers. The share of sales in the region is estimated to be in the range of 10 to 30% (Petschick 2006, Irlbacher 2006).

### **4.3 Prices**

Spreewald gherkins are more expensive than their conventional competitors, reflecting the higher production costs and the special quality. For example, a typical retail price of 0.99 EUR for a jar of Spreewald gherkins compares to approximately 0.79 EUR for a jar of conventional gherkins, which implies a price premium of around 25% (Petschick 2006). Prices may vary between the producers but also depend on the retailers and supermarkets.

A much higher price premium might be achieved by organically produced Spreewald gherkins. The results of test series suggest that a price premium of 100% might be achieved (Petschick 2006).

### **4.4 Supply chain and employment**

The production of gherkins has a substantial employment effect in the Spreewald region. Employment in gherkin production increased in parallel with harvest quantities and cultivated area (Figure 7). In 2004, gherkin production employed 4,450 staff, 3,560 of which in agricultural production and 890 in processing. It has to be noted, however, that the figure includes seasonal workers for harvest support. Many of these come from Poland (Spreewaldverein 2005). The *Spreewaldhof* in Golßen employs 160 permanent employees and between 200 and 250 seasonal workers.

The labour force of the Spreewald region in 1999 consisted of roughly 157,000 people, of which 23,000 (15%) were unemployed.<sup>20</sup> The 4,500 jobs in Spreewald gherkin production thus related to an overall number of approximately 134,000 jobs in the region, which would imply that the jobs in gherkin production constitute a share of 3% of total regional employment. However, it has to be kept in mind that many of these jobs are not permanent, and that many of the seasonal helpers do not come from the Spreewald region. Thus, the actual percentage is considerably lower.

In addition, Spreewald gherkins contribute to securing jobs in related sectors, most importantly in the tourism industry which employs around 5,000 staff (Petschick 2006). The region's attractiveness for tourists depends to a large extent on the preservation of its landscape characteristics and a healthy nature. Agricultural land use, which is greatly supported by the income gains from gherkin production, contributes to the maintenance of these conditions.

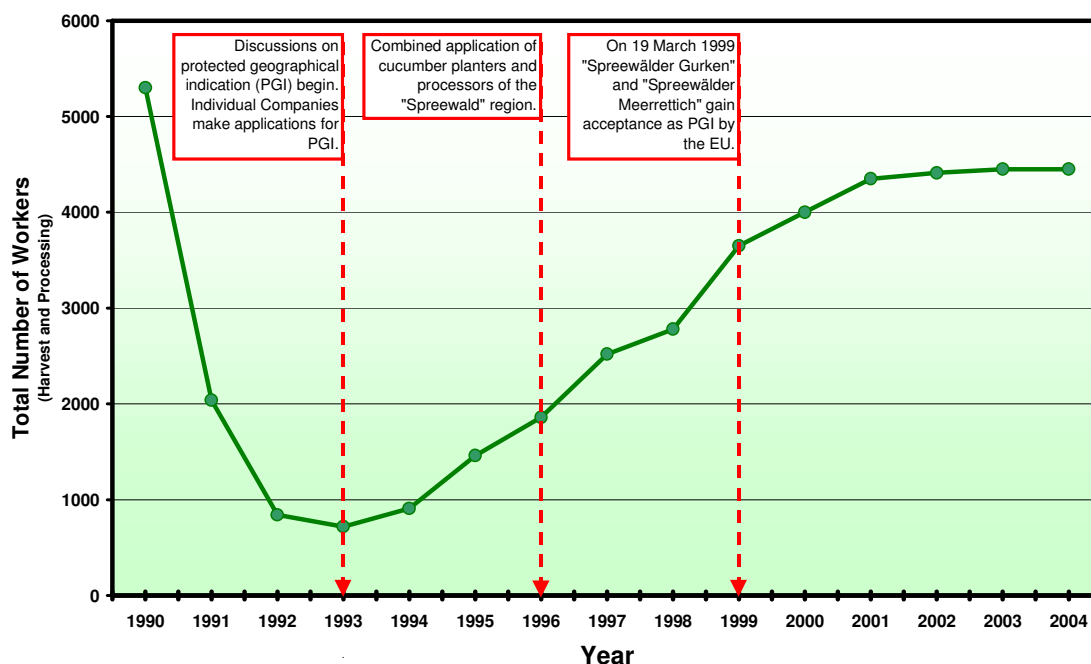
Spreewald gherkin production has a considerable income effect. Cucumber fields cover only between 1 and 2% of the total area used for growing vegetables, but generate 20 to 30% of income produced from this area (Petschick 2006). According to the specification (see section 2.2), both the production of the cucumbers (at least 70%) and the processing must take place in the region. The specification thus exceeds the minimum requirements for a PGI as specified by Regulation 2081/92, which claims that a geographical link must occur in at least

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<sup>19</sup> [www.spreewaldhof.de](http://www.spreewaldhof.de).

<sup>20</sup> Regional development concept for the Spreewald region for the Leader period 2000 - 2006, available at [www.spreewald-erlebnis.de](http://www.spreewald-erlebnis.de).

one of the stages of production, processing, or preparation. This ensures that the largest possible share of value added remains within the region.



**Figure 7** Development of total number of employees (harvest and processing, including seasonal workers) between 1990 and 2004 (Source: Spreewaldverein 2005)

**Table 3** Summary of data on economics and effects on regional development

<b>Production</b>	
Production/year (Q)	39.000 tonnes in 2004; 50% of the German gherkin sales
% Regional GNP	10-15% (rough estimate, Irlbacher 2006)
<b>Costs</b>	
Cost of production (per unit)	Higher than conventional products due to higher costs for labour and ingredients
Sales (Q, EUR)	No aggregated data available, sales of two major companies: 40 Mio. EUR and 35 Mio. EUR (total vegetable preserves) respectively
Sales Channels (%)	Major share: retailers and supermarket chains, minor share: direct marketing
<b>Prices</b>	
Price on producer level (1st sale).	
Price on consumer level	79 cent for an average jar (750 ml) compared to 99 cent for a comparable jar of "Spreewälder Gurken"
Price Premium (if applicable)	Price premium around 25%
<b>Marketing channels</b>	
Sales within territory	Estimates: 10% - 30%
Sales outside territory (national)	Major share



Exports	Large producers export gherkins to EU and overseas
<b>Supply chain and employment</b>	
Number of firms.	10 producers, of which 3 large companies with biggest share of turnover; 13 cucumber farmers
Level of Integration	Relatively low (no common marketing)
Number of employees	4,450 employees (2004) including seasonal workers who may not come from the region
%Total Employment Region	Below 3%

## 4.5 Subsidies

Most of the subsidies do not directly support production, processing, or preparation of Spreewald gherkins. Nevertheless, due to the linkages between cucumber production and regional development, other funds aiming at rural development initiatives, tourism etc. may offer indirect support. The responsibility for the distribution of funding is shared among the different administrative levels:

1. Federal level, sponsor: Federal Agency for Nature Conservation
2. Federal states (*Bundesländer*): e.g. cofinancing of agri-environmental measures, contractual agreements for environmentally friendly land use (*Vertragsnaturschutz*)
3. Districts (*Landkreis*): responsibility for the general promotion of rural development
4. Local authorities (*Kommunen*): e.g. development of strategies and funding for tourism.

The following section presents the most important funding sources relevant for the Spreewald region and the production of Spreewald gherkins.

### 4.5.1 LEADER

The Spreewald region has been participating in the LEADER programme since 1994. The recent funding programme LEADER+ (for the period 2000-2006) replaced the programmes LEADER I and Leader II<sup>21</sup>. Leader+ is one of four initiatives financed by EU structural funds and is designed to help rural actors consider the long-term potential of their local region. Encouraging the implementation of integrated, high-quality, and original strategies for sustainable development, it places a strong focus on partnership and networks of exchange of experience.<sup>22</sup>

The Regional Development Concept for Spreewald region (Spreewaldverein 1999) specifies the focus of projects to be supported by the LEADER resources. The main aims are:

1. Enhance regional products and ease market access for local enterprises through co-operative action. This should include the extension of production and processing capacity and the building up of regional economic cycles, with the aim of creating

<sup>21</sup> Leader I marked the beginning of a new approach to rural development policy, which is territorially based, integrated and participative. Leader II saw the Leader I approach put to more widespread use, with an emphasis on the innovative aspects of projects. (Information taken from the EU Commissions Website (DG Energy and Transport) <http://www.managenergy.net/indexes/l83.htm>, 28. January 2006)

<sup>22</sup> See also [http://europa.eu.int/comm/agriculture/rur/leaderplus/index\\_en.htm](http://europa.eu.int/comm/agriculture/rur/leaderplus/index_en.htm)

optimal conditions for marketing. The Spreewald trademark label should play a crucial role.

2. Improve and make use of the natural and cultural potential of the region. This includes environmentally compatible land use and the maintenance of the traditional agricultural structure with small-sized fields and parcels.

While in earlier LEADER funding periods projects were funded that were specifically targeted to the Spreewald gherkins, e.g. surveys and market analyses (Sonka et al. 2002), today the activities focus on other projects and products which are not yet as well established.

#### **4.5.2 Measures according to Council Regulation (EC) 1257/1999 on support for rural development<sup>23</sup>**

The scope and the budget for rural development measures in Brandenburg for 2000-2006 is described in the Brandenburg Rural Development Concept "*Entwicklungsplan für den ländlichen Raum im Land Brandenburg*" (MLUR 2002). In contrast to the LEADER program, it is not restricted to the Spreewald region only but covers the whole area of Brandenburg. However, the resources made available through the different programmes are relevant for agriculture in the Spreewald region. There are four different programmes, all of which are cofinanced by the European Union.

1. KULAP (*Kulturlandschaftsprogramm*): KULAP mainly includes measures for the conservation of cultural landscapes as well as agri-environmental measures. Participation by farmers is voluntary. Environmental requirements are subject to controls. Measures mainly aim at the extensification of agricultural use and the conservation of rare cultural landscapes.
2. Article 14 of Regulation 1257/1999: Farmers in less-favoured areas may be supported by compensatory allowances. In 2001 the Spreewald-Region benefited from 16.2% of the funding in Brandenburg, receiving 4.2 million Euro (LVL 2002 as quoted in Jungcurt et al. 2003).
3. Article 16 of Regulation 1257/1999: Payments to compensate for costs incurred and income foregone may be made to farmers who are subject to restrictions on agricultural use in areas with environmental restrictions as a result of the implementation of limitations on agricultural use based on Community environmental protection rules (e.g. Birds Directive, Habitats Directive, Water Framework Directive), if and in so far as such payments are necessary to solve the specific problems arising from those rules. Within the biosphere reserve Spreewald this funding is mainly used for the extensification of grassland (LVL 2003 as quoted in Jungcurt et al. 2003). In 2002 the biosphere reserve Spreewald received 670,000 Euro (Jungcurt et al. 2003).
4. Article 20 of Regulation 1257/1999: Less-favoured areas may include other areas affected by specific handicaps, in which farming should be continued, where necessary and subject to certain conditions, in order to conserve or improve the environment, maintain the countryside and preserve the tourist potential of the area. In the Spreewald region, a programme is run for the funding of agricultural land use (including cucumber

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<sup>23</sup> Council Regulation (EC) No 1257/1999 of 17 May 1999 on support for rural development from the European Agricultural Guidance and Guarantee Fund (EAGGF) and amending and repealing certain Regulations.

production) of the typical fragmented and small-sized parcels within the Biosphere reserve. The area around the villages Lehde and Leipe covers 22 hectares. In 2002, agricultural production on 16 ha was funded, 20 small farms receiving more than 125,000 Euro (Jungcurt et al. 2003).

#### **4.5.3 Contractual Agreements for environmentally friendly land use (*Vertragsnaturschutz*)**

Since the main aim of the biosphere reserve is to promote solutions to reconcile the conservation of biodiversity with sustainable land use, contractual agreements for an environmentally friendly land use are particularly found within the Spreewald region. These agreements are made on a voluntary basis between farmers and the responsible authorities in order to protect areas of outstanding value<sup>24</sup>. The contracts define requirements for an environmentally friendly land use that usually lead to an extensification. In return the land users are paid for their activities and (if applicable) income losses. Contracts are concluded with the environmental agencies of Brandenburg,<sup>25</sup> usually for one year. The budget for these measures has been reduced from 6.3 Million Euro in 2002 (MLUR 2002 as quoted in Jungcurt et al. 2003) to 1.8 million in 2004<sup>26</sup>.

#### **4.5.4 Other funding sources**

In addition, the Spreewald region receives funding from national programmes. For instance, a large-scale nature conservation project is run in the region by the Federal Nature Conservation Agency, which aims at maintaining and re-establishing water-related biotopes and biodiversity in the region, mainly via the stabilisation of the water balance.<sup>27</sup> The project has a budget of 12.33 Mio EUR and runs from 2001 through 2013. It includes compensation payments to farmers for the extensive agricultural use of their areas (Jungcurt et al. 2003).

The biosphere reserve also receives funding from the *Allianz Umweltstiftung*, which supports environmental education and information activities.

### **4.6 Marketing/ Consumer perception**

#### **Organisation of marketing**

Co-operation for joint marketing activities is not very well-developed among the producers of Spreewald gherkins. Especially the larger producers may be competitors when tendering for contracts with retailers and supermarket chains. However, some co-ordination of marketing activities is provided by the *Spreewaldverein*. In particular, smaller producers whose resources for marketing and advertisement are limited benefit from such joint efforts (Sonka et al. 2002). Marketing channels differ between the large producers, who supply their products to large supermarket chains, and smaller companies who rely on direct marketing and street sale to a larger extent.

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<sup>24</sup> A major part of the money is spent in order to protect wetlands (Taken from the Website of the "Biosphärenreservat Spreewald" [http://www.grossschutzgebiete.brandenburg.de/br\\_spreewald/regionalentwicklung\\_01.html](http://www.grossschutzgebiete.brandenburg.de/br_spreewald/regionalentwicklung_01.html) , 26. January 2006)

<sup>25</sup> *Landesumweltämter* or *Landesanstalten für Großschutzgebiete*.

<sup>26</sup> Press release NABU on the website of the environmental ministry Brandenburg (Ministerium für Ländliche Entwicklung, Umwelt und Verbraucherschutz (MLUV), 6. November 2004 (online: <http://www.brandenburg.de/cms/detail.php/98572>).

<sup>27</sup> Gewässerrandstreifenprojekt Spreewald, see [http://www.bfn.de/0203\\_spreewald.html](http://www.bfn.de/0203_spreewald.html).

In the *Spreewaldverein*, a wider group of regional stakeholders are organised in addition to gherkin producers. Most of the gherkin producers are members of the association. The promotion and presentation of the Spreewald trademark label is the association's main task, and most of its marketing activities not only promote the Spreewald gherkins but the whole variety of regional products marketed under the common trademark. An R&D project carried out by the Humboldt-University Berlin concluded in 2002 that a closer co-operation of the different producers and an intensification of common marketing efforts would be essential for the development of the Spreewald trademark label, and for producers to be able to successfully compete on the market.<sup>28</sup> As a new instrument to enhance marketing and sales of the certified regional products and to improve market access for smaller producers, the *Spreewaldverein* is currently building up a franchise company called "*Spreewald-Markt*".<sup>29</sup> Until the end of 2006, approximately 14 franchisees will sell Spreewald products. About half of the shops and stands are located in the Spreewald region, the remaining half in Berlin. Up until now, the individual franchise shops have been sufficiently profitable to sustain themselves, and the long-term aim of the *Spreewaldverein* is to establish a total of 30 franchise shops across Germany (Irlbacher 2006).

Among the most prominent events organised by the *Spreewaldverein* is the "Gherkin Day" which is organised every year as a large festival. The centre of the event is a large gherkin market at which cucumber farmers and gherkin producers present and sell their products, together with vendors of other regional specialities and arts and craft.

The *Spreewaldverein* was present at the International Green Week in Berlin in January 2006, supported by LEADER resources.

### **Marketing messages**

Marketing and advertisement for Spreewald gherkins emphasises quality and taste of the products and the freshness of the ingredients. The origin of the product in the Spreewald region plays a key role, and the special conditions and characteristics of the Spreewald region as well as the tradition of gherkin production are highlighted. The control of quality standards is also often mentioned in order to gain consumer trust. While there is no specific environmental connotation of the Spreewald gherkins, reference is made to the biosphere reserve and the integrated development aims for the region.

## **5 Synergies with other sectors**

Spreewald gherkins contribute strongly to the popularity of the Spreewald region and constitute an essential element of the regional image. When asked for connotations of the Spreewald region, consumers most often name the gherkins (Leitow 2005). There are various other aspects that also influence the regional image and development. Tourism plays a predominant role; the unique landscape, the protected biosphere reserve, and the specific culture and traditions being among the main attractions. About 50,000 people live within the biosphere reserve. Many of them are descendants of the first settlers in the Spreewald region, the Slavic tribes of the Sorbs/Wends. They have preserved their traditional language,

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<sup>28</sup> R&D project: "Stärkung des Wirtschaftsraumes Spreewald - Entwicklung der regionalen Dachmarke Spreewald", Humboldt-University Berlin 2000-2002, <http://www.hu-berlin.de/forschung/fober/deutsch/PJ/PJ781.html>.

<sup>29</sup> [www.spreewald-erlebnis.de](http://www.spreewald-erlebnis.de).

customs and clothing to this day. These peoples are the subject of different cultural events. There are museums exhibiting traditional clothing, crafts or cultivation methods. In addition, the biosphere reserve offers various environmental education activities and excursions. Also, there are numerous hunting and fishing festivals, village festivities etc.

Synergies between tourism and regional products are created and promoted through co-operations between the *Spreewaldverein* and the regional tourism association (Sonka et al. 2002).<sup>30</sup>

The *Spreewaldverein* is involved in a range of regional activities. Co-operations for instance exist with research institutions and with projects on the maintenance of culture and traditions of the Sorb minority (Sonka et al. 2002).



**Figure 8** Boat-trip through the Spreewald and cycle track „Spreewald gherkin“ (Source: [www.spreewald.de](http://www.spreewald.de) and [www.wikipedia.org](http://www.wikipedia.org))

## 6 Stakeholder

The stakeholders most directly affected are the individual cucumber farmers and gherkin producers. Together with other regional stakeholders, i.e. farmers, fishermen, rangers, tourism managers, conservationists, local politicians, businessmen, tradesmen and interested citizens, they are associated in the *Spreewaldverein*.<sup>31</sup>

A number of other organisations and institutions are involved in the wider regional development activities of the *Spreewaldverein*, for instance environmental NGOs such as WWF and Grüne Liga,<sup>32</sup> or research institutes such as Humboldt-University Berlin or ZALF (Leibniz-Centre for Agricultural Landscape Research (ZALF), Müncheberg).

The authority in charge is the Ministry for Rural Development, Environment and Consumer Protection, Brandenburg.<sup>33</sup>

<sup>30</sup> See [www.spreewald-erlebnis.de](http://www.spreewald-erlebnis.de) and [www.spreewald.de](http://www.spreewald.de).

<sup>31</sup> Postbautenstrasse 8, 15907 Lübben, Deutschland, <http://www.spreewald-erlebnis.de/cms/publicMember/>

<sup>32</sup> GRÜNE LIGA, WWF 1996 – 2000, Project "EU-Strukturfonds und nachhaltige Regionalentwicklung", Selection of model regions, among them the Spreewald region, see brochure "Nachhaltige Entwicklung im ländlichen Raum", Chapter "Wirtschaftsraum Spreewald" (online: <http://www.grueneliga.de/projekt/nre/start.htm>).

<sup>33</sup> Ministerium für Ländliche Entwicklung, Umwelt und Verbraucherschutz (MLUV), Heinrich-Mann-Allee 103, D-14473 Potsdam, <http://www.mlub.brandenburg.de/>.

## 7 Summary

The Spreewald gherkins provide a case in point of a product for which the protection of its geographical indication is crucial. The development of cucumber yield, cultivated area and jobs in gherkin production over the years clearly shows that the protection of the umbrella trademark and the geographical indication strongly contributed to the success of the product.

In parallel, financial support from EU funds, most notably through the LEADER programmes, has played a key role in helping the Spreewald gherkins to recover and in supporting the development of the Spreewald region in general (Sonka et al. 2002). While cucumber farming on less favoured areas is still subsidised, the support programmes within the region today focus on conservation issues, on development projects and products that are not yet as well established.

The environmental effects of cucumber farming itself are not particularly favourable, since farming practices are rather intensive, fertiliser and pesticide input is considerable, and water demand is high. However, since the total area used for cucumber farming is small and constitutes only a negligible share of the total agricultural area of the region (less than one percent), the overall effect is bearable at the current production levels.

Positive impacts in terms of maintenance of the cultural landscape can be identified when the role of cucumber farming in the regional agricultural structures is taken into account. The income gained from cucumber production enables farmers to maintain neighbouring areas which are less favourable for agricultural production and thus contributes to landscape conservation.

As an economic activity, the production of Spreewald gherkins is successful. It generates considerable income, and sales volumes are substantial. Production costs are higher than those of conventional products due to the higher costs for labour and ingredients, but these costs are compensated by the price premium that is achieved.

While especially the larger gherkin producers organise the marketing of their products individually, the common interests are represented by the *Spreewaldverein*, of which most producers are members. Advertisement for Spreewald gherkins is an important element in the wider activities of the *Spreewaldverein* and benefits from the promotion of the umbrella trademark label.

Spreewald gherkin production creates a significant number of jobs in the agricultural and food production sector. It also helps to secure jobs in tourism and conservation and plays an important supportive role for the economic development of the region. Synergies are exploited between Spreewald gherkins and a range of cultural, tourist and recreational activities. Due to its widespread popularity, the gherkins have large merits in shaping the regional profile and enhancing the positive image of the Spreewald.

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