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ROBINWOOD PROJECT

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ROBINWOOD PROJECT
Objectives and goals

The Robinwood project

Robinwood is a European cooperation project (INTERREG III C) promoted by the Liguria Region and by the Regional Agency for Energy (ARE), in association with ther 5 European regions. It aims to **try out and identify new forms of sustainable socioeconomic development in rural and mountain zones.**

Robinwood pursues this objective through an integrated approach to forest resources, combining the socioeconomic aspects with the strictly environmental ones.

In particular, the project aims to: establish good practices **to stimulate forested areas, collectively promoting the correct management of environmental resources available in the territory;** protect the hydrogeological system; provide incentives for business activities in the wood chain; introduce small biomass power stations.

Financing of 7 million Euro for the territory

Liguria is the lead partner (LP) of this project, in partnership with ther 5 European regions - Brandenburg (Germany), Murcia (Spain), Wales (Great Britain), Pomerania (Poland), Eastern Slovakia (Slovakia) -. The European Commission is funding the project through the INTERREG III C (South Zone) community initiative. This funding is for **a total of 7 million Euros**, and 2 million of this has been allocated to Liguria.

Apart from this, the goal of the Robinwood project is to provide a relevant and innovative model for the promotion of development in rural zones that, after the experimental and analysis phase in the various base areas already identified, can become a **broader operative tool for sustainable development in the different European Countries.**

1st operative European project inspired by the Kyoto Protocol

Robinwood is also the **first already operative project** conceived **that has been stimulated by the parameters of sustainable development promoted in the Kyoto Protocol.**

Compared to the present policies of rural development adopted by the various European governments, Robinwood has some particularly innovative aspects and the main thing that stands out is **the intention to promote demographic growth** that can **balance the present concentration of human resources along the coastlines and in the large cities** with the inland zones.

In particular, it would provide incentives and support over time a best practice process that manages to **also transfer to rural and mountain areas a quality standard of living** that combines environmental protection, high level of services and a solid and stable economic structure.

Sustainable socioeconomic development

As far as this is concerned, the operative plan will be structured in the following phases:

- **first phase:** specific study of the territory and experiences in the different Countries;
- **second phase:** promotion, implementation and development of pilot projects in the target territories of the different countries;
- **third phase:** monitoring and verification.

Making the most of the territory

The first effect of an operation structured like this will enable the identification of an economic cycle fully integrated with the territory in rural areas that can **guarantee renewal and exploitation of the available natural and social assets over time.**

Some of the main assets already identified include:

- **clearing woodlands** of dead trees and waste wood, encouraging both environmental conservation and fire prevention;
- **cultivating woodlands** to maximise and improve their productivity, as well as to prevent land instability - the main cause of landslides and flooding;
- **using biomass:** the recovered material (the biomass) is turned into clean, useable energy;
- **exploiting the territory** for resident and tourist demographic development.

ROBINWOOD PROJECT
The operative phases

Focus on the base territory

Robinwood is a project within the INTERREG III C community programme; its objective is to promote socioeconomic development of rural areas by **implementing specific operative projects on the management of forestry resources in the 6 European regions** - Liguria (Italy), Brandenburg (Germany), Murcia (Spain), Wales (Great Britain), Pomerania (Poland), Eastern Slovakia (Slovakia) - **in the project partnership.**

In particular, the Robinwood action aims to provide incentives for socioeconomic development of the various rural and forested areas with coordinated and integrated actions that involve the following activities:

The areas of action

- **forestry resources:** this area is aimed at providing incentives for the **business development of the wood** chain inserted into a broader context of planning forestry assets and of rationally making the most of forestry products, from timber to agricultural products, paying special attention to the natural assets and biodiversity;
- **protection of the soil:** this area involves **identifying and implementing structural actions to manage the complexity of forestry resources,** in order to prevent hydrogeological destruction, restricting landslides, subsidence, flooding and fires;
- **energy:** this area takes in **developing the use of forestry biomasses for power,** as a source of clean and renewable energy.

A development engine at the service of the territory

With the integrated and coordinated management of these areas, and the local involvement of public and private organisations, one goal of Robinwood is to **conceive an articulated outline of socioeconomic and environmental development of the individual rural and forestry areas**, taking into account the **distinctiveness of all of them.**

In particular, we are talking about generating a stable market of quality production for the building and furniture industries, new employment opportunities for the typical professional skills of this area, renewable energy production, territorial protection and preventing hydrogeological degradation.

From this point of view, the first objective of Robinwood is to protect the natural resources of the territory, a key element and link in the chain of sustainable development in rural areas.

ARE territorial observatory

The ARE (Liguria Regional Agency for Energy) Observatory clearly indicates how a well-kept territory makes a strong contribution to the development of an area, while a neglected territory is the main cause of environmental and hydrogeological destruction.

In terms of fires a wild territory is much more vulnerable than a tidy one. Although the majority of fires in Liguria are arsons and for this reason difficult to forecast, is sure that vegetation helps the expansion of fire.

Fires prevention

Statistical data of the last 20 years show that **20% of fires burned 80% of the surface.** It is therefore clear that when a fire rages it expands better in a wild territory.

Territory abandonment makes fire-fighting harder because uneven roads along with the absent of fields beside the forest determine the impossibility to wait for the coming of the fire in a "clean" front in which fire-fighting can be effective. Sometimes, luckily not very often, **a fire can rage for 3-4 days before being extinguished.**

The action of air floats is important: fire-fighting aircrafts can empty its water tanks using more than 5.000 utres of water in 5 to 20 jets. Helitankers are also very used for direct bombing on fires or line-building along the flanks.

The intervention of air tankers and helitankers costs more than 1.000 € /hour for each vehicle. During 2004, there were 345 fires in Liguria (the most significant data during the last 5 years) that **destroyed 1.268 hectares of forestry area.** The conclusion is that in 2004 the costs for the use of air tankers have been very high. Even if those costs cannot be completely cut, it is obvious that a better maintenance of the territory could be an important step towards the reduction of costs related to fires.

Benefits from environmental protection

Moreover, **costs for restoring territory and forestry ecosystems are significant too: about 5.000 € /hectare.** Considering the fact that a fire average area in Liguria is about 8 hectares, this means an average cost of **50.000 € .**

So, the first step in **soil protection** now is to safeguard, protect and develop a rural area. In fact, trees, with their roots, hold down the soil, acting as a real natural barrier against landslides.

On the contrary, abandoned woodland cannot fulfil this function; trees cannot support the weight of indiscriminately growing tree stumps, thus causing dangerous collapses and subsidence of the land.

Less floodings

Well-kept woodlands are also a precious help against flooding. Many natural disasters are caused by the obstruction of watercourses, in turn due to both manmade works, and tree trunks and waste wood blocking up riverbeds. Other triggering factors are hydrogeological destruction, plus instable slopes accentuated by the progressive abandonment of agricultural cultivation and repeated forest fires.

In this case too, an important part is played by the rural exodus and the woodlands being left abandoned due to the cessation of traditional economic activities.

Lastly, clean woodlands are a key tool for prevention in the fight against forest fires, which requires constant watch and regular territorial upkeep, particularly by gathering dried wood, which is the first to go up in flames and that subsequently feeds the fires.

Another decisive factor is the use of biomasses for energy, an important contribution to the **production of clean energy** through the use of poor quality timber.

Smart energy

Biomass energy satisfies power needs and at the same time contributes to environmental protection.

Economically viable and worthwhile alternative for the environment

A small-medium biomass power station produces 12 GW/h of electricity a year, equal to the annual consumption of a town with 2,000 inhabitants. This power is obtained without generating carbon dioxide emissions, fully complying with the parameters set by the Kyoto Protocol, and is also competitive from the economic point of view.

For the same amount of energy, a biomass power station requires between 0.21 and 0.65 € against 0.70 € of methane gas and 0.77 € of diesel (with a per kilo cost of timber that varies from between 0.08 and 0.25 €).

ROBINWOOD PROJECT

Liguria: a long strip of coastline wedged between the sea and large wooded areas

5% of its human resources live inland

More than 70% of the territory of Liguria is covered by **woodlands.** However, both the economic activities and the population are **concentrated along the coastline and less than 5% of the Liguria population lives in the inland zones.**

This has meant that over time **the inland territory and woodlands have undergone a progressive and relentless process of abandonment and degradation.**

Re-launching development

One of the actions of the Robinwood project will be tested out in this Region. Initial funding is for 2 million € and the objective is to revitalise all the human and technical resources available in the territory, in order to stimulate progressive socioeconomic recovery.

In the last 20 years, the wooded area in Liguria has increased from 374,400 hectares in 1985 to almost 400,000 in 2002 (Source: Forest population map). This increase can be put down mainly to the increasing abandonment of agricultural zones, with a subsequent increase in the risk of hydrogeological degradation and fires.

Extent of regional forested area

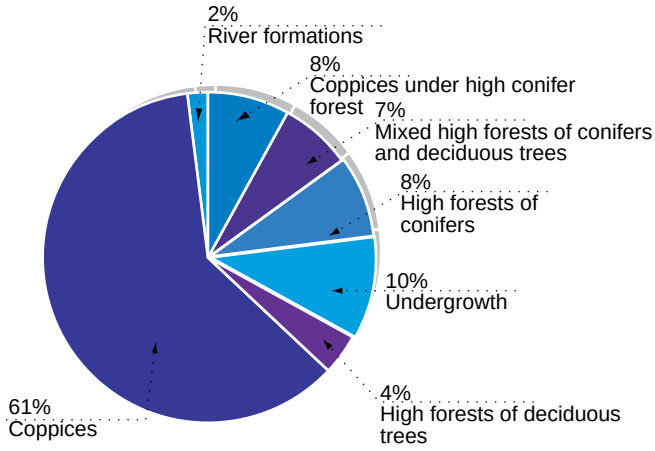
Composition	Surface area (ha)	% Regional Area	% Forested Area
High forests of conifers	32,446.37	5.99	9.16
High forests of deciduous trees	15,407.62	2.84	4.35
Mixed high forests of conifers and deciduous trees	28,059.37	5.18	7.92
Coppices	241,046.01	44.49	68.07
Coppices under conifer high forest	29,880.01	5.51	8.44
Total 1:	**346,839.38**	**64.01**	**97.94**
River formations (*)	7,286.87	1.34	2.06
Total 2:	**354,126.25**	**65.35**	**100.00**
Undergrowth	41,376.50	7.64	
Total woodland	**395,502.75**	**72.99**	

(*) The river formations include the irregular ones present along the river and torrential axes, or directly connecting to these, with different forestry tree vegetation (willows, poplars, alders, etc…) that cannot be defined as being reproduced by either coppice or high forest.

The structure of most of the forested area in the region is ascribable to coppice. Most of the deciduous trees are mixed and there is an extensive presence of chestnuts (about 17% of the whole regional forested area).

The woodland areas are also different according to the province. For example, the province of Savona has more than 77%, with the best ratio between woodland and territorial area, while Genoa has the greatest extent of forested area of all the Liguria provinces. On the other hand, Imperia has the highest territorial incidence of undergrowth with about 11.5%, while La Spezia stands out because it has the greatest extent of river formations.

ROBINWOOD PROJECT
Woodland area - division of the main forms of reproduction



The table below contains the figures of provincial distribution of the forestry surface areas (surface areas in hectares).

Forestry expanses in the provinces

	GE	IM	SP	SV
High forests	24,414.40	23,839.46	15,020.85	11,638.66
Coppices	99,918.53	32,072.66	31,175.95	77,878.87
Coppices under high conifer forest	641.72	4,493.47	8,214.42	16,530.40
River formations	1,420.98	662.83	22,965.98	2,237.08
Total	126,395.63	61,068.42	58,377.20	108,285.01
% provincial area	68.85	52.81	66.24	70.08
Undergrowth	14,008.51	13,271.80	3,138.70	10,957.49
% provincial area	7.63	11.48	3.56	7.09
Total woodland	**140,404.14**	**74,340.22**	**61,515.90**	**119,2242.50**
% provincial area	**76.48**	**64.29**	**69.80**	**77.17**

Going to the next territorial level of municipalities, Bormida (SV) is the one with the highest index of woodlands (0.961). Against this, the Municipality of San Lorenzo al Mare (IM) is the only Liguria municipality basically without woodland.

In the entire region of 158 Municipalities, some 67% has a woodland index of more than 0.5.

ROBINWOOD PROJECT
The wood chain in the European Union and in Italy

The wood chain in the European Union

10% European-made with 3.2 million employees

The wood chain today represents **10% of the European Union manufacturing industry production and directly employs 3.2 million people** (EU-15 data).

EU turnover 75 billion €

The wood chain in Europe generates a **total turnover of about 75 billion €** , and more than half of this is in the furniture sector. In fact, Europe defended its supremacy against the production of two big competitors: the United States and Japan.

The forestry sector is of huge economic importance for the EU.

The timber sector is made up of industries of worldwide, regional and local importance, which range from the big multinationals to the hundreds of thousands of mainly privately owned small and medium enterprises.

A sector of value with lots of sides to it

Industries in the wood chain include: sawmills, timber-based panel manufacturers, factories producing wooden parts for timber construction and packaging, wood pulp manufacture and processing plants, manufacture and processing paper and cardboard plants and the printing and publishing sectors.

According to official statistics, businesses in this sector directly employ about 3.2 million people in all the EU Countries.

A prominent resource for the EU

The EU is the world leader in the trade of forestry products and is second as consumer of these, with a positive overall trade balance. Still, we must remember that the European Union is a net importer of raw materials, particularly roundwood and wood pulp from zones with high growth rates and low wood production costs. For certain sectors, characterised by a particularly abundant internal production, the EU is an important exporter, particularly for products with a higher commercial value.

However, in some zones of Europe, industries in the EU wood chain depend on fragmentary forestry resources that, added to other unfavourable situations, tend to make the timber produced in the EU less competitive than the timber from other parts of the world.

The wood chain in Italy

The wood volume of Italian forests grows more quickly than it is used. In fact, in Italy the use of timber from woodlands is considerably inferior to its biological production, creating a constant increase in wood volume.

A resource that is yet to be exploited

To be sure, Italian forests have more than 1 billion m^3 of wood volume, with an annual growth of 30 million m^3. On average, only a tenth of this biological production is used every year, covering only a minimum part of the need for raw material used by Italian industry.

In terms of quality, Italian production is not particularly high. In fact, 60% of the production is represented by firewood.

As far as the use of the forestry surface area is concerned, the annual percentage of use of Italy is equal to about 1.1 m^3 per hectare. Apart from being an index of the low exploitation of woodland it also demonstrates the poor quality of production: in 2000, only 39.9% was workable timber as opposed to 60.1% of firewood.

Lastly, if we divide it territorially, we can see that **about 75% of workable timber** production **is concentrated in the Northern of Italian Alpine and Apennine areas, 10% in central Italy and the remaining 15% in Southern Italy.**

ROBINWOOD PROJECT
Forestry resources in the European Union and in Italy

Forests in the European Union

In the EU, forests and other woodlands cover some 136 million hectares, approximately 36% of the total; of these, about 87 million are considered useable forest (exploited to produce timber and for goods and services unrelated to timber).

In 2000, the EU set some **objectives** for forestry sector:

Revitalisation plan in 5 points

- promoting sustainable development in the forestry sector;
- protecting the environment and forestry patrimony, encouraging the role of forests and silviculture in the context of ground protection;
- improving sustainable management of forests from the environmental, economic and social point of view;
- supporting competitiveness of the wood chain industries in the EU;
- extending the use of woodland as a source of material and clean energy.

Forests in Italy

In the past 20 years, the Italian woodland area has increased from 8,675,100 hectares in 1985 to 10,528,080 hectares in 2004, equal to about one third of the Italian territorial surface area (figures from the Italian national forestry inventory - 2004).

We must add 145,509 hectares of timber arboriculture plants and 478,331 hectares of so-called logging trees to this (linear woods and forest formations).

Of this surface area, about 70% is made up of high forests, coppices and Mediterranean scrub, and the rest of lesser formations, with a low degree of brush covering, not important economically, but very significant from the environmental point of view.

Even though the degree of coverage of the Italian woodland areas basically reflects the European average, its composition is quite poor, with high forests representing only 43% of the productive woodlands and an amazing third of the total forestry coverage.

Italian woodlands are divided as follows:

- 40% simple coppices
- 20% coppices composed of Mediterranean scrub
- 20% resinous high forest
- 20% deciduous high forest and mixed high forest

The protected areas in Italy cover 10% of the whole surface area (3,014,000 hectares).

ROBINWOOD PROJECT
Outlines of partner regions

LIGURIA

General description

Bounded to the North by the mountainous arc meeting point between the Alps and the Apennines and to the South by about 450 km of coastline, the regional territory of Liguria extends for about 5,400 km^2, equal to 1.8% of the total national area.

65% of the territory is mountain, 34% hills and only 11% plains.

The forests

With an extension of about 355.000 hectares woodlands take up almost 65% of the regional territory. 68% of the forests in Liguria are formed of coppices.

Even with the high environmental, naturalist and landscape value, for decades the hinterland has been marked by a migratory flow towards the coast and has therefore been impoverished by the abandonment of forestry activities and by the degradation of the woodland patrimony.

Even though its forestation rate is the highest in Italy, Liguria does not have enough quality forest to enable the adequate containment of hydrogeological destruction.

The wood chain

Nowadays forestry sector in Liguria has not been developed yet, because most of the population is concentrated among the coastline.

The biomass

In 2004 the energy produced was equal to 32 Gw/h.

Hydrogeology

Due to the geomorphic structure and the rains, Liguria is highly subject to hydrogeological destruction both in terms of the stability on slopes and flooding.

BRANDENBURG

General description

The Land of Brandenburg situated in the Northeast of Germany surrounds the city of Berlin, and with an extension of 29,476 km^2 it is the largest of the new German Länder.

The population of Brandenburg is 2,582,379.

The forests

Half the land of Brandenburg is taken up by forests that extend for 10.867,82 km^2. The woodland patrimony is mainly formed of conifers.

The wood chain

The timber industry in Brandenburg represents 5% of the total industry. The most common timber is Scots pine which represents 85% of the total volume of wood sold.

There are 44 wood-chain related industries in Brandenburg that generate a turnover of 832.5 million € . The flake-board industry has the highest turnover with 532 million € .

The sector employs more than 4,000 workers.

Hurricane Lothar, an Atlantic storm that hit Southern Germany, Switzerland and France on 26th December 1999, had a devastating effect on the woodland area, causing millions of m^3 of conifer woodland to fall. The damage caused by the hurricane still has repercussions for the timber market in eastern Germany in general and in Brandenburg in particular, where many of its companies are in debt.

The biomass

The land of Brandenburg generates 36,021 million Kw of electricity an hour. The biomass generates 21.3 PJ of electricity.

Apart from being the most used energy source, the biomass is also the energy source with the highest technical potential.

Hydrogeology

Brandenburg can lay claim to more water resources than any other German land. Still, its hydrogeological territory has undergone significant changes in recent years. For example, the water tables of Brandenburg have gone down from 1 to 3 cm annually in the last 30 years, and the flow of rivers has decreased by 2.5% per year, which means a 50%reduction in a 20-year period.

MURCIA

General description

The region of Murcia is located in the Southeast of Iberian Peninsula. Its total surface area of 11.314 km^2 is equal to 2.2% of the whole Spanish country, and 1.294.694 people live there. Murcia territory is characterised by its high level of heterogeneity of landscape, with 23% of the ground under 200 meters, 45% between 200 and 600 and the 32% left above 600 meters. This situation shows a huge contrast in the territory with mountains, valleys, beaches, etc.

The forests

In Murcia region wooded area is equal to 486.019 hectares on a total surface of 1.131.012 hectares. Woods are mainly made by Aleppo pine (a typical Mediterranean pine tree).

The wood chain

It is being financed the certification process of FSC (Forest Stewardship Council) and PEFC (Pan European Forest Certification) on the state forests framework. This kind of certification is very popular in the wood-furniture-paper sector because it represents a guarantee on environmental protection against the several cases of forestry heritage destruction.

Nowadays wood-market situation in Murcia is really worrying. Prices are quite low because of cheap wood imports.

Hydrogeology

The region of Murcia has a serious lack of water resources: 60% of its territory has hydrogeologic problems such as the over-exploitation of water tables or the natural alteration of water cycle.

WALES

General description

Wales is a region in Great Britain, situated on the western coast, with a territory of 20,750 km^2; 2,860 of this is covered by forest.

The population of Wales is 2,938,000.

The forests

The state forest area of Wales comprises conifers 98k ha. broadleaves 11k ha, giving a total of 110k ha.

The private forest area is conifers 64k ha. broadleaves 112k. ha, giving a total of 176k ha.

It is hoped that in the coming years a vision for the woodland woodland-based industry will be realised.

There is an already strong secondary wood business (e.g. furniture, joinery, timber structures) from which to launch market growth and pull-through of raw materials and primary processing. More value can be held within the Welsh chain by progressively increasing the connection (use of local materials) back to the forest resource, while extending the primary processing (e.g. sawmilling and panels) into the value added steps necessary for secondary processing and end-uses.

In the context of other industry structures elsewhere, the emerging Welsh forest industry is able to consider, over time, a highly integrated chain from resource to end-user, due to the current strong secondary wood businesses, the opportunity to establish a high value resource, and the proximity to major markets, in particular the UK. This structure will have neither the single focus on secondary wood businesses, such as Danish furniture, nor the predominance of primary processing such as Nordic countries, It will be unique to Wales, emanating from the Welsh Woodlands Strategy.

The wood chain

The wood related sector employs about 4,000 people. With a resource and processing in place in Wales. The businesses within the industry generate a revenue stream of over £ 1.7bn pa (€ 2.4 bn pa). The total number of businesses in the Welsh forest industry is estimated at around 1,750. Within this, there is a large, strong and dynamic secondary processing business of close to 1,500 businesses, which can create demand-pull through the wood chain.

The industry can be an effective agent of change. The vision requires progressive, long term change in the Welsh woodland, some 50 to 100 years, but before and throughout this process there already needs to be a 'thriving woodland based industry', without which the economic foundation for realising the vision is not present.

The process should be evolutionary, as the current resource has a dependent industrial base. From the inside, the industry can provide the milestones, the sequencing and prioritisation for the desired woodlands conversion, ensuring that species and quality change have a market reality

The biomass

Every year in Wales 971,689 tonnes of wood are available for renewable energy production, 19,706 tonnes of wood for arboriculture, 218 tonnes from coppices and 165,783 from by-products (sawdust...). However there remains the challenge of creating a sustainable energy sector to utilise this resource.

Hydrogeology

The territory of Wales suffers from water infiltration problems both regarding agricultural water and drinking water, particularly in the Southern valleys.

With regards to the flood management three points must be stressed about the importance of trees:

- the potential to use trees in the uplands to assist in water infiltration on compacted agricultural land and to "consume" water;
- the use of trees in floodplains to hold up floods and therefore avoid damaging peak flow;
- the need for strategic planning on a catchment level such that benefits can be maximised.

Moreover trees have got the potential to buffer diffuse pollution on agricultural land especially intensively managed agricultural land.

Trees can also buffer runoff from landfill (waste disposal areas) or other man-made sites including mine and mine spoil sites in the South Wales valleys.

We must remember the prevention of erosion: trees can be utilised to buffer erosion runoff, and river bank management can also be improved by using suitable species.

Finally trees are key factor for slope stability: ground cover incorporating trees can be used especially to re-vegetate mine spoil heaps in South Wales.

POMERANIA

General description

Pomerania is a historical region of central Europe, situated in the north of Poland and facing onto the Baltic sea; its total surface area of 18,000 km^2 is equal to 36% of the whole of Poland.

The population of Pomerania is 2.2 million.

The forests

36.4% of the territory of Pomerania is covered by forest (665,400 hectares), making it the third region in Poland in terms of woodland density. The forest in Pomerania is mainly formed of high conifer forests.

The wood chain

The woodland density of Pomerania is relatively high. According to the estimates of the Marshall's Office, Pomerania potentially supplies 271,500 tonnes of wood a year. In 2003, about 246,700 tonnes of wood was collected and sole within the region, with the addition of 181,900 tonnes of wood waste from sawmills.

Overall the potential of wood for generating energy in Pomerania is between 443,000 and 468,000 tonnes a year. This amount can produce from 4.7 to 4.9 million GJ of energy a year (Source: Assessment of resources and potential to extract raw materials for renewable energy generation in Pomeranian voivodship, Spatial Planning Office, Slupsk 2004).

The biomass

The estimate of energy potential from the biomass in the region of Pomerania can be found in the table below.

Estimate of energy potential from the biomass in Pomerania

Year	Straw for energy PJ/year	Energy crops PJ/year	Wood energy PJ/year	Residues energy PJ/year
2000	8.1	5	8	0.7
2005	7.4	18.9	9	1.3
2010	6.3	37.2	10	3.3
2015	5.8	51.1	11	6.7
2020	5.6	59.7	12	8.6

Hydrogeology

The hydrogeological conditions in Pomerania are highly favourable in the East and North, while the central zone is water deficient.

EASTERN SLOVAKIA

General description

The Slovak Republic is administratively divided into eight self-governing regions. The Eastern Slovakia (NUTS II) is composed from two NUTS III level regions, Prešov region and Košice region. The Prešov region is the most populous of all Slovak regions. Prešov is the regional capital and the third largest city in Slovakia. It has area of 8 993 km^2, 789 968 inhabitants, 13 districts and 23 towns. The main economic areas are industrial production, building construction and trade of industrial products. The Košice region represents 14% of the area of the Slovakia, it has more than 766 000 inhabitants, 440 municipalities, 17 cities. More than 1/3 of the population has permanent residence in the capital city Košice.

The forests

About 38% of territory of the Eastern Slovakia is covered by forests making it one of the most woodland density regions in Slovakia. Majority of this is owned by state, operated by the State forest company, the rest by municipalities, forestry societies and private owners including churches. The forests are composed from beech 34%, spruce 20% and oak 18% followed by alder (8%).

The wood chain

The woodland density of Eastern Slovakia is relatively high and it delivered with about 1,800,000 m^3 of wood per year from about 100 mio m^3 of wood potential in total.

The biomass

The estimate of energy potential from the biomass in the region of the Eastern Slovakia can be found in the table below.

Type of Biomass	Energy potential	
	TWh	PJ
Agricultural biomass	4,12	15,4
Forestry biomass	2,39	8,3
Woodprocessing industry	4,16	15,5
Total	**10,67**	**39,2**

Hydrogeology

The hydrogeological conditions in Slovakia are highly favourable in the Eastern part also due to the mild conditions of three main rivers: Bodrog, Hornád and Slaná.

ROBINWOOD PROJECT
Attachments

Attachment 1

INTERREG III C programme

The Robinwood project has obtained funding from the European Union, in coherence with strand C of the INTERREG III community initiative.

The funds allocated by the European Commission within INTERREG III aim at improving the techniques and policies of regional cohesion and development through interregional cooperation.

The interregional cooperation strand is new and joins the traditional forms of cross-border and transnational cooperation.

Objectives of INTERREG III C

There are two general objectives pursued by interregional cooperation:

- improve the effectiveness of regional development policies and instruments through large-scale information exchange and sharing of experience (networks) in the implementation of operations financed by European structural funds,
- extend the area of cooperation of the traditional INTERREG initiatives, crossing geographic borders, encouraging regions without joint borders to work together in common projects and develop networks of co-operation. With INTERREG IIIC, interregional co-operation between regional and other public authorities across the entire EU territory and neighbouring countries will be promoted.

According to the European Commission, the latter goal can be achieved through:

- changes to projects with the introduction of new methods or approaches or by improving existing ones,
- changes to national policies to obtain further development of the institutional structures connected to the regional policies.

ESDP

INTERREG aims to contribute to encouraging cross-regional approaches that improve the balanced and sustainable development of the European territory in conformance with the main directions of the European Spatial Development Perspective (ESDP).

The ESDP aims to define the **political objectives and general principles** of territorial development in the European Union, so as to guarantee sustainable and balanced development of the European area, which reflects diversity. The ESDP is a policy orientation framework aimed at improving cooperation between the community sector policies that have a significant impact on the territory. Its origin comes from the statement that the action of member States is integrated better if based on commonly defined territorial development objectives. This is an inter-government document that provides indications, and is not binding. In conformance with the subsidiarity principle, it is applied according to the most appropriate action and at the discretion of the various protagonists within the spatial development area.

The ESDP is divided into two parts:

- contribution of the development policy of the territory as a new dimension of the European policy;
- the trends, perspectives and challenges of the Union area.

The EDSP is based on the idea that economic growth and convergence of certain economic indicators are not enough to achieve economic and social cohesion. In order to rectify this disparity it is hoped to have joint action on the question of **spatial development** that can mediate some aspects such as: constantly progressing economic integration, the important growth of the role of local and regional groups, the recent enlargement of the European Union towards Central and Eastern Europe and the evolution of relations between the Twenty-five and their neighbours.

Management of INTERREG financing

Categories of cooperation...

Every project selected by the European Union within the INTERREG IIIC framework responds to a topic of cooperation and to a well-defined type of operation; these establish the regulations that must be used in implementing the project.

The five categories of cooperation are:

- exchange of information and experience on the type of projects supported by the Structural Funds "Objective 1" and "Objective 2" programmes;
- exchange of experience and networking among areas where public authorities (or equivalent organisations) are or were involved in current or previous INTERREG programmes;

- the circulation of urban development practice through concrete exchange of experience. This topic is open to all cities and urban areas of all sizes, and is allocated priority where a city or zone has the support of structural funds;

- interregional cooperation between regions involved in one or several of the three themes of the Regional Innovative Actions for 2000-2006:

  a) knowledge-based regional economies and technological innovation;
  b) e-EuropeRegio: the information society and regional development;
  c) regional identity and sustainable development.

  The innovative actions of the regional programme can be based on one of the three priorities or on a combination of these, but does not include networking;

- the Innovative Actions of the European Regional Development Fund (ERDF) are laboratories of ideas for disadvantaged regions. They provide regional actors with the "risk space" needed to respond to the challenges set by the New Economy. The three priorities of the innovative actions for 2000-2006 are;

- other sectors where interregional cooperation is called for: spatial planning issues, maritime and coastal co-operation, insular and ultra-peripheral issues, solutions to natural or man-made catastrophes, alleviating the economic effects of handicaps such as very low population density or mountainous conditions. Initiatives can also be taken in other more general areas: research and technological development, the information society, tourism, culture, employment, entrepreneurship and the environment.

... and types of operations

Three type of operations will be eligible for funding by INTERREG III C:

- **regional framework operations (RFO)** composed of a group of regional authorities or equivalent regional bodies aiming at exchanging experience on methodology and project-based activities. The objective is to produce a clear strategic framework based on a limited number of projects. The new regional framework operations cover the five priority categories of cooperation and benefit from an ERDF contribution of between 500,000 and 5 million € and should represent from 50 to 80% of the funding of each INTERREG III C programme. The content is as follows: the strategy of interregional cooperation, the partners, the objectives and expected results, the sharing of funding amongst partners (no more than 40% for the lead partners), the work plan accompanied by a detailed schedule, the description of a limited range of subjects and relevant criteria of selection, evaluation of the potential impact of the operation on other programmes of structural funds, the main beneficiaries.

This operation is aimed at a group of regional authorities (or equivalent regional bodies) of at least three Countries, with at least two members States; one region cannot participate in more than two operations;

- **individual projects of interregional cooperation** exchanging experience on methodology and project-based activities. Apart from transfer of knowledge, the objective is to set up real cooperation, particularly encouraging the transfer of project results from one region to another, with a clear impact on the beneficiary region. The projects cover the five priority categories of cooperation and associate the partners of at least three countries, at least two of which are member States. They represent from 10 to 30% of the funding of each INTERREG III C programme and benefit from an ERDF contribution of between 200,000 and 1 million € ;

- **network**s that link public authorities or equivalent bodies of various regions inside and outside the European Union on project implementation methods and development related to regional policy topics. The work programmes cover the five priority categories of cooperation, with the exception of any that include the following actions: seminars, conferences, websites, databases, study trips and personnel exchange. The networks represent from 10 to 20% of the funding of each INTERREG III C programme and benefit from an ERDF contribution of between 200,000 and 1 million € .

The **lead partner** is responsible for the proper reporting of progress to the respective Joint Technical Secretariat. The Commission encourages it to conclude a cooperative agreement with other partners that defines the set of financial and legal responsibilities. Depending on the type of operation, there are different financial flows between the lead partner, the other partners and the Paying Authority. In the case of regional Framework Operations, the choice of centralisation or decentralisation of these flows to all partners depends on the parties concerned in the operation. The flows are always centralised at the level of lead partner for individual interregional projects and networks.

Programme management structure

The organizational INTERREG includes a specific programme management structure for the realisation of the projects chosen for funding.

In this sense the following must be set up:

- **A Monitoring Committee (MC)**

  This supervises the implementation of the programme, ensuring the effectiveness and quality of execution of the intervention.

- **A Steering Committee**

  This is responsible for selecting operations and deciding on the spending of funds and the coordinated supervision of project implementation.

- **A Joint Technical Secretariat (JTS)**

  This is responsible for assisting the Managing Authority and Paying Authority in carrying out their tasks, it supports the Monitoring Committee and the Steering Committee as well as providing technical assistance for potential beneficiaries and project applicants.

- **Managing Authority (MA) and Paying Authority (PA)**

  The Managing Authority is responsible for management and implementation of the programme and the Paying Authority makes requests for payment to the Commission, receives payments from the Commission and pays the community contribution.

  Within the framework of the INTERREG III C programme, the role of these two authorities is performed by the Italian ministry of Infrastructures and Transport - INTERREG.

Attachment 2 International definitions

Forest

According to the international standards (FAO Forest Resource Assessment 2000) forests are lands of more than 0.5 ha, with a tree canopy cover of more than 10 percent, with trees that can reach a minimum height of 5 metres. Areas under reforestation or temporarily unstocked areas, resulting from human intervention or natural causes that are expected to regenerate are included. The term specifically includes: forest nurseries; forest roads, firebreaks and other small open areas, windbreaks and shelterbelts of trees.

Other Wooded Land is land with a canopy cover of 5-10 percent of trees able to reach a height of 5 m in situ; or a canopy cover of more than 10 percent when smaller trees, shrubs and bushes are included.

The international standards also include the so-called “Other Wooded Land” that is land with a canopy cover of 5-10 percent of trees able to reach a height of 5 m; or a canopy cover of more than 10 percent when smaller trees, shrubs and bushes are included.

Wooded land

Wooded land is the natural or manmade plantation of trees and shrubs primarily used for forestry purposes and that affect the climate, the soil, the water system, the flora and the fauna.

Wooded land is divided into:

- forest formations: plantations of trees or shrubs with all of the following three requirements: an area of more than 0.5 ha, a tree and shrub canopy cover of more than 10 percent and with of more than 20 m; this subclass includes deciduous, conifers and mixed forests, reforestation, fruit orchards, forest nurseries, rubberwood plantations, shrubs and Mediterranean vegetation commonly known as scrub; in all these cases they are allowed to develop naturally and are not subject to cropping practices but only silviculture actions, like thinning, clearing and chopping for regeneration cropping;

- sparse forest formations: formations of trees and shrubs that have the same nature as the ones above but whose coverage by trees and shrubs is between 5% and 10%; the sparseness of the coverage is not due to operations of use;

- areas temporarily without forest cover: forestry areas that have no cover due to natural or manmade causes, also in this case the areas concerned must be more than the minimum of more than 0.5 ha and width of more than 20 m; included herein are all the wooded lands subject to use where the tree canopy is less than 10%, forests destroyed by natural or accidental causes such as meteors, fire, mudslides and landslides as long as the absence of forestry coverage is presumably temporary.