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**P O L A N D**  
**STATEMENT ON THE WOOD MARKET**  
**REVIEW AND PROSPECTS**

**Ministry of the Environment**

## **1. GENERAL ECONOMIC TRENDS AFFECTING THE FOREST AND FOREST INDUSTRIES SECTOR**

In 2008 the economy of Poland suffered from the first symptoms of a global economic and financial crisis and slump of the key economies in the world. In 2008 the real increase in Gross Domestic Product was 4.9% compared to 6.8% in 2007. It is forecasted that in 2009 this index will be much lower and will not exceed 1%.

Domestic demand and investment outlay are the main factors influencing the level and pace of GDP increase. In 2008 domestic demand rose by 5.5% (in 2007 by 4.7%). It is anticipated that in 2009 the rise of GDP will not exceed 2% (in fixed prices). In the first months of 2009 an increase in real wages and higher welfare benefit stabilised the demand. In 2008 consumption rose by 5.9% in real terms, including individual consumption increase by 5.4%, whereas in the previous year the rise was 4.9%. It is anticipated that in 2009 the index of individual consumption will decrease to less than 3%. The dynamics of investment outlay was also at much lower level compared to 2007. At the same time outlay on machines and tools, means of transport, and fixed assets increased faster than on buildings and edifices (7.1%). The execution of investments is to a great extent supported by the European Union funds and foreign direct investments (however in 2008 the latter dropped to USD 17 billion from USD 23 billion in 2007).

A relatively well situation in the construction sector, which is the main creator of demand for wood materials and products, is important for the forestry-wood sector. In 2008 added value in the construction industry increased by 11% and it was a higher rise than in the industry (3.9%) and market services (5.9%). The construction and assembly production, despite lower dynamics than in previous years, also increased by 10.9% in real terms. 165.2 thou. of dwellings were completed (23.6% more than in the previous year), including 66.7 thou. of dwellings for sale or rent (46.1% more than in the previous year). Over 687 thou. of dwellings were under construction (however it was only 1.4% more than in 2007). It is forecasted that in 2009 the performance of the construction industry will be worse. It is anticipated that the added value dynamics will be lower (less than 4%) and there will be a decrease in the value of building and assembly production. Another disturbing phenomena is a drop in the number of dwellings whose construction was started and of dwellings for whose construction permission were issued.

In 2008 sold production of industry was by 2.5% higher than in 2007 (in fixed prices), and of manufacturing by 2.8%. The situation of all wood industries worsened. The wood industry (20 NACE) recorded a drop of sold production by almost 3%, and pulp and paper industry (21 NACE) by close to 5%. The sold production of furniture industry (36.1 NACE) was at the level of the previous year. The share of all wood industries in sold production of the whole industry is more than 8%, and in manufacturing it is almost 10%. Up to date results for 2009 indicate that sold production of industry as well as of manufacturing has been continuing to decrease. A similar situation is in the wood and furniture industries, whereas pulp and paper industry demonstrates a slight increase in sold production.

In 2008 and the first half of 2009 positive tendencies which had been present on the labour market for few years became weaker. In last months of 2008 the former

decrease in the number of the unemployed was impeded. At the end of the year unemployment rate was 9.5%; in the middle of 2009 it rose to 10.7%. According to forecasts at the end of 2009 the unemployment rate may increase even to 12-13%. While in the whole 2008 the average employment in the economy increased by 3.7%, and in the enterprise sector by 4.8%, in 2009 its systematic decrease is observed. Similar tendencies are present in the wood sector, and in the wood industry employment drop is the fastest (20 NACE, in 2008 an increase in average employment by almost 3%, in the first half of 2009 a decrease by over 10% compared to the corresponding period of the previous year). Stabilisation on the labour market is envisaged for the end of 2009. The share of all wood industries in the employment in industry is close to 12%, and in relation to manufacturing it is more than 13%. 41 thou. people are employed in forestry, including around 26 thou. employees employed by the State Forests National Forest Holding.

In 2008 the value of Polish exports was PLN 405.4 billion (USD 171.9 billion; € 116.2 billion) which compared to 2007 is an increase by almost 7% (in fixed prices, in national currency), whereas the value of goods and services imported to Poland was PLN 497 billion (USD 210.5 billion; € 142.5 billion). In fixed prices Polish imports rose by close to 9% (in national currency). It is estimated that after lower dynamics of export and import in 2009 the situation in foreign trade should improve in 2010. Wood raw material and products of its processing constitute around 10% of the value of Polish exports and over 4% of imports. Contrary to the situation characteristic for the whole foreign trade, wood products generate an active balance of exports and imports.

Fluctuation in prices of consumer goods and services is an unfavourable phenomenon in the economy. In 2008 inflation was 4.2% in relation to the previous year (in 2007 it was 2.5%). In accordance with a preliminary estimate this index will reach the level of 2.7% in 2009 and 2.5% in 2010.

Despite still adverse situation in the external environment of the Polish economy and the lack of knowledge about the depth of the present crisis, its scale and persistence, it is assumed that in last months of 2009 and in 2010 the general economic situation of Poland will stabilise and basic macroeconomic indices will demonstrate an upward trend again.

## **2. POLICY MEASURES TAKEN IN POLAND OVER THE PAST 18 MONTHS, WHICH MIGHT HAVE A BEARING ON TRADE AND MARKETS OF FOREST PRODUCTS OR FOREST MANAGEMENT**

Development policy meant as a set of interrelated actions taken up and implemented to assure sustainable development of the country and social, economic and territorial coherence (at a national, regional or local scale) concerns the forestry-wood sector as well. The fundamental role is played by the *Act of 18. October 2006 "on the principles of development policy"* which defines conditions of implementation of such policy, entities implementing it and the mode of cooperation between these entities. The development policy is implemented by means of the country's development strategy, sectoral strategies as well as executive plans and operational

programmes. “Country’s Development Strategy 2007-2015” plays an imperative role and is the basic document defining goals and priorities of Poland’s social and economic development as well as the factors conditioning it. Among the strategies directly connected with the forestry-wood sector are especially the strategies developed by associations of producers: “Strategy for wood-based panel industry development in Poland till 2013” and “Strategy for paper industry development in Poland till 2013”.

The development policy requires a comprehensive approach and at the same time it has to address challenges of the future. A government report “Poland 2030” was prepared to that aim. The goal of the document was to diagnose social and economic areas which are the most important if Poland and its economy are to gain competitive advantage by 2030. 10 challenges were counted among the priority ones, including climate and energy safety, knowledge-based economy, growth and competitiveness, and vocational activity.

Among the other documents the following two are of great importance: “Strategy of Sustainable Development of Poland till 2025” and “National Coherence Strategy” which sets priorities for using the European Union funds and describes the manner of their implementation. Tools for implementation of the National Coherence Strategy are Operational Programmes (relating to fundamental issues of the country’s development) and Regional Operational Programmes (concerning development of particular regions). A crucial trend, also observed in the forestry-wood sector, is the drive towards building fundamentals of a knowledge-based economy. One of the tools used to achieve this goal is Operational Programme Innovative Economy encompassing the period 2007-2013. This Programme is to support innovativeness and facilitate transfer of modern solutions from science sector to the economy. Projects funded by this Programme are carried out in the forestry-wood sector as well.

The energy policy has had a growing impact on the forestry-wood sector (“Poland’s energy policy till 2030”). This policy assumes growth in production of energy from renewable energy sources (15% in 2020 and 20% in 2030), reduction of greenhouse gases emission, and reduction in energy consumption of the economy. An additional purpose of broader use of renewable energy sources is protection of forests against their undue exploitation in order to obtain biomass, and sustainable use of rural areas. The effective provisions of the economy department assumes that till 2015 wood biomass in total consumption of biomass for energy purposes should be in 100% substituted by agricultural biomass, i.e. biomass from special “energy plantations” (trees, shrubs, and plants of short growth rotation). It means that starting from 2015 the energy from “waste and residues from forest production and also from industry processing forest production products” as a rule will not be considered “green energy”. Waste produced when wood is processed may be used for energy purposes only on the sites where it is created and in production units of electric power lower than 5 MW.

At present the forestry-wood sector and the whole economy alike are influenced by the global financial crisis and slump of the biggest world’s economies. So as to strengthen the stability of the national financial system two packages were introduced in Poland: Regulatory Package and Confidence Package. The Regulatory Package contains *Act on Financial Stability Committee*, *Act on Bank Guarantee Fund*, and *Act on instruments supporting institutions financed by the Treasury*. The Confidence

Package concerns such issues as restoration of financial market efficiency, improvement of liquidity on the national currency market and on foreign currency market. In November 2008 *Stability and Development Plan* was drawn up as well. The goal of this Plan is to strengthen Polish economy in the face of global crisis. The Plan is aimed at increasing consumer demand (through changes in PIT and VAT) and investment demand (inter alia by increasing availability of loans to companies, acceleration of investments co-financed by the Community funds, and supporting investments in renewable energy sources).

Poland's accession to the euro zone should be of importance for the development of the forestry-wood sector, and especially the wood sector. It is one of Poland's strategic goals – due to benefits stemming from participation in a uniform currency zone (elimination of currency exchange rate risk, reduction of transaction costs, and development of foreign trade), increase in inflow of direct investments, and easier access to the Community capital market for Polish companies. With a view to achieving this goal *Roadmap of Poland's accession to euro zone* was developed in 2008. Although due to the current crisis the date of Poland's accession to euro zone will be deferred compared to previously envisaged (2012), actions taken up to this end are strategic for the wood sector for whose development export is of crucial importance (active balance of foreign trade).

### **3. MARKET DRIVERS**

The forestry-wood sector development to a great extent depends on the use the sector will do of opportunities offered by its macro-environment. These opportunities are offered if for instance one is active in the European market. Poland's membership of the European Union makes it possible not only to gain new consumers of wood raw material and products but it also dynamizes entrepreneurship in order to gain and maintain competitive advantage. Better access to information or applying such modern management methods like benchmarking with foreign competitors are some of factors conducive to it. An open common market also offers better possibilities of obtaining capital for investments and of know-how transfer.

Another factor important for the forestry-wood sector development is activity of the state's policy supporting entrepreneurship, competitiveness and innovativeness as well as development of small and medium-sized enterprises (in the Polish wood sector small and medium-sized enterprises are dominant, above all in the following industries: sawmilling, furniture, builder's carpentry and joinery, and packaging). Great possibilities of the forestry-wood sector development are also offered by the European Union programmes and relief funds.

Strengthening cooperation between industry and R&D sphere is also an impulse to develop, look for new technologies or refining on existing ones. In the face of tendencies to create knowledge-based economy and to maintain competitiveness of the whole forestry-wood sector it is necessary that representatives of business and science participate in common initiatives. There are some examples of undertakings stimulating this process, for instance drawing up the Strategic Research Agenda for the Polish Forest-Based Sector (the Agenda was prepared by the Polish Technology

Platform for the Forestry and Wood Sector) and implementation of the project entitled “Foresight in the wood science and industry - research development scenarios in Poland till 2020” carried out within the framework of Operational Programme Innovative Economy 2007-2013.

On the other hand, results of the current global financial crisis have a de-stimulating effect on the development of the forestry-wood sector as well as the whole economy. These results were especially visibly reflected by the economies of European countries. A slump of demand for Polish products, including wood raw material and products, is of significant importance for the forestry-wood sector in which export plays an important role and is a development stimulating factor.

Also the situation of the construction sector considerably influences the condition and development prospects of wood companies. Although slump in the construction industry is less than in the other industries, the downward trend is noticeable. The insufficient demand and difficulties in obtaining loans (also loans for purchase of dwellings) are mentioned among barriers to building and assembly activity.

## **4. DEVELOPMENTS IN FOREST PRODUCTS MARKETS SECTORS**

### **4.1. (A) Wood raw materials**

In 2008 34.3 million m<sup>3</sup> of roundwood was harvested in Poland. Compared to 2007 the amount dropped by almost 5%. The decrease in removals (to the level of 25.5 million m<sup>3</sup>, i.e. by 7%) concerned softwood, whereas harvesting of hardwood increased by close to 2% to the level of 8.8 million m<sup>3</sup>. Around 96% of harvested wood originated from public forests, including 99% coming from the State Forests National Forest Holding. The share of large and medium size wood in the total volume of roundwood had not changed significantly for many years and in 2008 it was 95%. In Poland the structure of harvesting is dominated by softwood species whose share is 74%. Medium-size wood dominates – its share is over 53% (18.2 million m<sup>3</sup>). The share of large-size wood is 41% (14.1 million m<sup>3</sup>), and of small-size wood less than 6% (1.9 million m<sup>3</sup>). Around 89% of harvested roundwood is intended for production. In the case of softwood it is 93%, and in the case of hardwood 78%. In 2008 removals of sawnlogs and veneer logs amounted to 14.1 million m<sup>3</sup> (a decrease by almost 10% in relation to 2007) and of pulpwood to approximately 14.6 million m<sup>3</sup> (a drop by around 1%). Despite the decrease in total roundwood removals, harvesting of fuelwood increased by 10% (to the level of 3.8 million m<sup>3</sup>).

In 2008 Polish exports amounted to 0.4 million m<sup>3</sup> of wood (1% of the harvested volume). Production wood was approximately 85% of exports. Exports of fuelwood amounted to 67 thou. m<sup>3</sup> and it was by 31% more than in 2007. Softwood amounted to 76% of exported raw material for industrial processing and it was mainly pine (65%). In 2008 imports of roundwood decreased (by 10%) to 1.9 million m<sup>3</sup> (from the level of 2.1 million m<sup>3</sup> in 2007). Similarly to the previous year imports amounted to less than 6% of wood removals. Almost all raw material imported to Poland is wood for industrial processing (99.9%). Its structure is dominated by hardwood species (62%), first of all birch pulpwood.

It is forecasted that in 2009 wood harvesting will amount to 34.4 million m<sup>3</sup>,

whereas in 2010 it will be 34.3 million m<sup>3</sup> (in the case of wood for industrial processing it will be 30.6 million m<sup>3</sup> and 30.4 million m<sup>3</sup>, respectively). It is estimated that in 2009 Poland will import 1.9 million m<sup>3</sup> of roundwood for industrial processing, including 68% of hardwood species. On the other hand, exports may amount to 0.3 million m<sup>3</sup> of roundwood, mainly softwood (71%).

#### **4.2. (B) Wood energy, with a focus on government policies promoting wood energy**

In 2007 in Poland the share of renewable energy in total energy production was 6.9%, and in its consumption 5%. Biomass is dominant (91%) in the structure of domestic production of energy from renewable sources. At the same time it should be stressed that the dominant part of this biomass originates from wood (the other part is composed of other biodegradable vegetable and animal substances like, for instance, straw and municipal waste as well).

The European Union subsidies and funds play a significant role in promotion of renewable energy from biomass, including wood biomass. In the regulation sphere of obtaining biomass from agriculture the Common Agricultural Policy is imperative. Among other things, CAP establishes direct payment system as well as supports modernisation of agriculture and enhancement of added value of agricultural and forest products. In Poland mechanisms for support and control of energy plantations were created based on the principles of the Common Agricultural Policy. These mechanisms define conditions of granting subsidies and verification of payment applications and control of their feasibility. However, as a result of the health check of the Common Agricultural Policy in 2008 it is planned to abolish currently functioning payments to “energy” plantations. Therefore the Community funds will be of growing importance. The Rural Areas Development Programme envisages support for project connected with production of energy materials from biomass (“Differentiation towards non-agricultural activity”, “Establishment and development of micro enterprises”). On the other hand, within the framework of the action entitled „Basic services for the economy and population in rural areas” the support is granted to initiatives connected with production or distribution of energy from renewable sources, especially wind energy, water energy, geothermal energy, solar energy, energy from biogas or biomass. Another programme offering subsidies for renewable energy sources (including biomass) is Infrastructure and the Environment Operational Programme (action “Environmentally friendly energy infrastructure and energy efficiency”). This programme supports investments concerning building or modernisation of electric energy production units using biomass, biogas, wind and water energy and also units producing electric energy and heat in combination with renewable energy sources (e.g. combined heat and power plants using biomass). At a regional level there are also initiatives promoting biomass market. Support for these initiatives is envisaged in Regional Operational Programmes as well.

#### **4.3. (C) Certified forest products**

Due to advancing globalisation and opening of Polish companies to foreign markets it is necessary to have certificates. Already now it is obvious that certification is not only procedures and obligations resulting from it, but above all economic

benefits. The effect of certification may be maintenance or augmentation of a market share by a producer, growing ecology awareness of users of certified products or selling certified products at higher prices.

At present in Poland certification of Forest Management (FM) type according to Forest Stewardship Council (FSC) standards encompasses 16 out of 17 State Forests Regional Directorates and 2 Forest Experimental Stations (in Krynica and Murowana Goślina). It means that in the middle of 2009 the total area of forests under certification (new or prolonged certificates) was 7 million hectares, i.e. 77% of the total forest area in Poland. In relation to the area of forests in Europe certified according to FSC standards the area of certified forests in Poland is 13.5%, and in relation to world certified forests it is 6.1%. In terms of forest management certification Poland is third in Europe (after Russia and Sweden) and fifth in the world (after Canada, Russia, the USA, and Sweden).

In mid 2009 431 companies (including their branches it was 544 entities) held certificates of product origin control FSF-CoC (FSC – Chain of Custody) confirming that production of wood materials and products is based on raw material originating from certified forests. Out of this number 404 certificates were active. Over 80% of the total number of companies holding active certificates are wood production companies. The rest of the firms are trade, service, import-export companies, and consultancies. The dominant producers holding FSC-CoC certificates are producers of sawnwood and wooden garden products (166 firms in total, i.e. 51% of the total number of certificate-holding companies); furniture producers are 10%, and wood-based panel producers 7%. In the total number of production companies holding certificates 21 firms, i.e. more than 6%, have certificates of Controlled Wood – FSC-CW. Polish companies which have certificates of product origin control FSC-CoC are 6% of entities holding such certificates in Europe, and 2.9% of such firms in the world.

Till mid 2009 in Poland 15 companies obtained individual or group certificate of product origin control under the Programme for the Endorsement of Forest Certification schemes (PEFC). These firms are mainly companies from the pulp and paper industry (7 firms) and also producers of wood-based panels and wood products (producers of flooring materials, wood panelling, and wainscots). Additionally 7 companies hold the PEFC logo user certificate.

#### **4.4. (D) Value-added wood products**

In Poland furniture is the most important in the group of value-added wood products. In 2008 its production amounted to PLN 25.5 billion (USD 10.6 billion; € 7.3 billion). This result gave Poland the sixth position in the European Union. In relation to the previous year it was an increase by 10% (in fixed prices). Wooden furniture was 61% of it. Approximately 74% of furniture produced in Poland whose value was PLN 18.8 billion (USD 7.9 billion; € 5.4 billion) was exported, of which wooden furniture was 58% (PLN 11 billion). In 2008 Poland imported furniture of the value of PLN 3.9 billion (USD 1.6 billion; € 1.1 billion) which in relation to the production was 15%. Imports of wooden furniture amounted to PLN 1.2 billion.

In 2008 production of builder's carpentry and joinery products was PLN 5.7 billion and was higher by 9% than in 2007 (in fixed prices). Among other things, 13.2 million m<sup>2</sup> of wooden windows and doors was produced (an increase by 2% in relation



to 2007). In 2008 the value of exported products of builder's carpentry and joinery together with wooden prefabricated houses increased by 7% compared to the previous year and reached the level of PLN 2.4 billion. The value of imports of these products rose as well – by 14% to the level of PLN 0.5 billion.

Wooden packaging of the value of PLN 1.7 billion was produced in 2008 as well, of which 73 million pallets. 58% of these packaging products was exported and their value was almost PLN 1 billion. The value of packaging imported to Poland was PLN 188 million (5% less than in the previous year).

In 2008 production of products of secondary processing of paper and paperboard amounted to PLN 16.9 billion (however in real terms it was by 3% lower than in the previous year). The value structure of this production is dominated by paper and corrugated paperboard and packaging of paper and paper board whose share is 39%. The share of paper products for households and sanitary use is 15%, and the share of books, news papers and similar publications is 34%.

In 2008 products of secondary processing of paper whose total value was PLN 7.2 billion were exported and it meant a rise by 8% in relation to 2007. The exports consisted mainly of paper products for households and sanitary use (39%, i.e. PLN 2.8 billion) and printing articles (26%, i.e. PLN 1.9 billion). Among discussed products the highest export dynamics was characteristic of paper products for households and sanitary use. The total value of products of secondary processing of paper and paperboard imported to Poland in 2008 was PLN 4.3 billion and it was by 4% more than in 2007. Packaging of paper and paperboard had the greatest share in imports (27%) and its value amounted to PLN 1.2 billion. In 2008 the value of imported printing articles was PLN 0.9 billion (22% of imports of all paper products) and paper products for households and sanitary use PLN 0.8 billion (18%).

#### **4.5. (E) Sawn softwood**

In Poland production of sawn softwood is dominant. In 2008 this production amounted to 3.3 million m<sup>3</sup> (without sawn semi-products). However in relation to the previous year it was a decrease by 12%. Exports of sawn softwood (including sawn semi-products) dropped to the level of around 359 thou. m<sup>3</sup> (18% less than in 2007). Foreign deliveries were dominated by pine sawnwood (50%), whereas the share of spruce sawnwood was 14%. In 2008 imports of sawnwood amounted to 589 thou. m<sup>3</sup> and it was an increase by 29% in relation to the previous year. Pine sawnwood was 37% of it and spruce (and fir) sawnwood 24%.

It is forecasted that in the nearest future production of sawn softwood will increase only little (3.4 million m<sup>3</sup> in 2010). In foreign trade former trends should stay the same as well. It is assumed that in 2010 imports of sawn softwood will increase by around 22% (in relation to 2008), i.e. to the level of 720 thou. m<sup>3</sup>, whereas its exports may increase to the level of 430 thou. m<sup>3</sup> in 2010 (by 20% in relation to 2008).

#### **4.6. (F) Sawn hardwood**

In 2008 the amount of produced sawn hardwood decreased in relation to the previous year by 25% to the level of 487 thou. m<sup>3</sup> (without sawn semi-products). This amount included 9.5 thou. m<sup>3</sup> of tropical sawnwood (in the previous year it was 7.6

thou. m<sup>3</sup>). In 2008 exports of sawn hardwood (including sawn semi-products) dropped by 5% (to the level of 123 thou. m<sup>3</sup>). The species structure of exported sawn hardwood has remained practically unchanged in recent years. The exported sawnwood is mainly oak sawnwood (54%) and beech sawnwood (22%). In 2008 around 329 thou. m<sup>3</sup> of sawn hardwood was imported to Poland (6% less than in the previous year). Oak sawnwood dominates imports (50%), but beech sawnwood is of great importance as well (19%). The share of tropical sawnwood in the total imports of sawn hardwood was 12%.

It is anticipated that production of sawn hardwood will increase to 510 thou. m<sup>3</sup> in 2009 and to 550 thou. m<sup>3</sup> in 2010 (i.e. by 13% in relation to 2008). Imports of sawn hardwood may increase (by 19%) and in 2010 it will reach 390 thou. m<sup>3</sup>, whereas according to forecasts its exports will decrease by 2% by 2010 (to the level of 120 thou. m<sup>3</sup>).

#### **4.7. (G) Wood-based panels**

In 2008 production of wood-based panels was 8.1 million m<sup>3</sup> (a decrease by approximately 5% compared to 2007). For many years the assortment structure of wood-based panel production has been dominated by particleboards whose share is 63% (5.1 million m<sup>3</sup>). The second place belongs to fibreboards whose share is approximately 31% (2.6 million m<sup>3</sup>). Plywood is around 5% of wood-based panel production (0.4 million m<sup>3</sup>), and veneer production is 1% (82 thou. m<sup>3</sup>). Approximately 12% of wood-based panel production is production of OSB. The production of fibreboards is dominated by dry-process boards whose share is 69% (HDF, MDF, and LDF) whereas the share of insulating boards is 23% (while in 2007 it was 24%).

In 2008 exports of wood-based panels amounted to 2.3 million m<sup>3</sup> (the level was similar to the level of 2007) which was 28% of the total volume of wood-based panels produced in Poland. Fibreboards were the main exports (1.3 million m<sup>3</sup>), of which 41% were wet-process insulating boards, and 37% dry-process boards (type: HDF, MDF, and LDF). Additionally in 2008 0.8 million m<sup>3</sup> of particleboards, 25 thou. m<sup>3</sup> of veneers and 0.1 million m<sup>3</sup> of plywood was exported. In 2008 imports of wood-based panels increased by 10% in relation to 2007 and reached the level of 1.9 million m<sup>3</sup>. In relation to the production it is 23%. Deliveries to the Polish market are dominated by particleboards (1.2 million m<sup>3</sup>) and fibreboards (0.5 million m<sup>3</sup>). Poland also imported 39 thou. m<sup>3</sup> of veneers and 0.2 million m<sup>3</sup> of plywood.

It is anticipated that till 2010 production of wood-based panels will remain at a level similar to the level of 2008 (higher production growth dynamics only in the case of fibreboards, mainly dry-process). No essential changes in foreign trade in wood-based panels are forecasted either

#### **4.8. (H) Pulp and paper**

In 2008 1.0 million tonnes of wood pulp was produced in Poland and it was the level similar to the levels of previous years. The former assortment structure of production remained unchanged. Production of cellulose is dominant (0.8 million tonnes, i.e. 78% of total wood pulp production), mechanical wood pulp is 5% (49 thou.

tonnes) of the volume of wood pulp production, and production of semi-chemical wood pulp is 17% (0.2 million tonnes). In 2008 the deficit of foreign trade in wood pulp became bigger (it reached 0.6 million tonnes). In 2008 in relation to 2007 imports increased by 29% (it was over 0.6 million tonnes) and was 62% of the production. At the same time the volume of exported wood pulp increased to the level of 33 thou. tonnes (by 83% in relation to 2007). In 2008 the share of exports in wood pulp production was only 3%.

In 2008 3.0 million tonnes of paper and paperboard was produced and it was by 1% more than in 2007. It was mainly packaging paper and graphic paper, of which 6% (0.2 million tonnes) was paper for news papers. In 2008 there were no significant changes in foreign trade in paper and paperboard. Approximately 49% of their production is sold on foreign markets – exports amounted to 1.5 million tonnes and was by 4% lower than in the previous year. The main exports was packaging and graphic paper. Imports of paper and paperboard remained at the level similar to the level of 2007 and it amounted to 2.8 million tonnes. Like in the case of exports, packaging and graphic paper dominates the structure of imports. The trade in paper and paperboard still generates passive balance of trade which was 1.3 million tonnes in 2008.

Due to production specificity no significant changes on the wood pulp market in Poland are assumed for the period 2009-2010. No change of former trends in foreign trade in wood pulp is forecasted either. Due to the lack of possibility of considerable increase in domestic production the imports of wood pulp will stay relatively high. In 2010 in relation to 2008 the amount of wood pulp imported to Poland may rise by 6% (to the level of around 0.7 million tonnes), thus the imports may be almost 65% of wood pulp production. It is estimated that exports of wood pulp will still be insignificant and will demonstrate a downward trend. As a result there will still be passive balance of wood pulp exports and imports (it can be 0.7 million tonnes in 2010).

On the other hand, further growth of paper and paperboard production is anticipated in the nearest future. It is estimated that by 2010 their production will rise by more than 5% (in relation to 2008) and reach the level of 3.2 million tonnes. The passive balance of paper and paperboard exports and imports will continue. In 2010 it should amount to 1.3 million tonnes. In 2010 imports will increase insignificantly (to the level of 2.9 million tonnes) and compared to the production volume it will be 90%. Exports is assumed to increase as well – by 4% (in relation to 2008) to the level of 1.6 million tonnes and it will amount to 48% of the production volume.

#### **4.9. (I) Carbon markets in the forest sector**

The forestry-wood sector in Poland consists in vast areas of forests, which play an important role in prevention of climate change through absorption of carbon dioxide from the air, and industries, whose technological processes and manufactured products are highly ecological as a rule. However due to production specificity and energy consumption the wood-based panel industry and pulp and paper industry are characterised by higher emission level.

Poland, as a European Union member state, participates in emission trading

system. The National Administrator of Emission Trading System is the Institute of Environmental Protection. “National plan of CO<sub>2</sub> emission caps allocation for the period 2008-2012 for the EU emission trading system” encompasses 838 installations in 16 industries to which 200 965 240 permits per year will be allocated (the number of permits intended as a national reserve amounts to 7 400 054 per year). The average number of permits per year in the period 2008-2012 is 1 492 088 for the pulp and paper industry, and 1 071 555 for the wood-based panel industry. Moreover, in the wood sector CO<sub>2</sub> emission permits are granted to fuel combustion installations (excluding installations for combustion of hazardous or municipal waste). These installations are mainly in wood-based panel plants, builder’s carpentry and joinery plants and furniture plants (they possess their own dryers, heat-generating plants, furnaces which are installations encompassed by the emission trading system). The present crisis and a slower pace of economic growth caused the situation where granted limits currently are considered sufficient. At present the market prices of CO<sub>2</sub> certificates are also profitable (the surplus of emission permits is sold). In the middle of 2009 they ranged from € 14 to 15 for a permit to emit 1 tonne of CO<sub>2</sub> (at the beginning of 2009 the price was below € 10).

Recently the so-called “emissions flow” has become a disturbing phenomenon. The obligation to reduce greenhouse gases results in an increase in production costs and thus in price disproportions between the producers from the European Union and producers from outside the Community who are not subject to similar constraints. It may lead to loss of competitiveness of some industry sectors, an increase in imports from third countries or moving production outside the Community. The high energy consumption of the Polish economy and above all the dominant share of coal in the structure of primary fuel consumption may cause the situation where some industries in Poland (as a result of allocation of free permits decided upon based on general Community indices) will have difficulties in maintaining former production and price policy and thus their competitive position. Therefore it is extremely important to actively participate in the European Commission works on drawing up a list of sectors threatened by “emissions flow”.

## Economic indicators

Indicator	1995	2000		2004	2005	2006	2007
	% change on previous year						
Gross Domestic Product	107.0	104.3	105.3	103.6	106.2	106.8	104.9
Sold production of industry	109.7	106.7	112.6	103.7	111.2	109.5	102.5
Construction and assembly production	108.1	101.4	101.8	108.0	115.9	112.2	110.9
Dwellings completed	88.2	107.1	66.5	105.5	101.1	115.9	123.6
Dwellings under construction	105.5	105.7	99.0	98.7	103.7	108.2	101.4
Average paid employment							
- total	102.8	97.1	99.9	101.7	101.7	103.4	103.7
- in the enterprises sector	101.0	96.7	99.1	101.9	103.0	104.7	104.8
Registered unemployment rate (at the end of the year) <sup>1</sup>	14.9	15.1	19.0	17.6	14.8	11.2	9.5
Average monthly gross real wages and salaries							
- total	102.8	101.0	100.7	101.8	104.0	105.5	106.0
- in the enterprises sector	103.2	101.3	100.8	101.2	104.2	106.8	106.1
Price indices of consumer goods and services (inflation)	127.8	110.1	103.5	102.1	101.0	102.5	104.2
Investment outlays	117.1	101.4	106.5	107.7	116.8	120.9	108,7
<b>Trade</b>							
<b>millions of PLN, current prices</b>							
Exports	55 515.1	137 908.7	272 102.4	288 780.8	343 779.0	386 555.6	405 383,1
Imports	70 502.3	213 071.8	325 596.3	328 192.0	394 030.0	456 828.4	497 028,3
Balance of trade	-14 987.2	-75 163.1	-53 493.9	-39 411.2	-50 251.0	-70 272.8	-91 645,2
<b>millions of USD, current prices</b>							
Exports	22 894.9	31 651.3	73 781.2	89 378.1	109 584.1	138 785.0	171 859,9
Imports	29 049.7	48 940.2	88 156.4	101 538.8	125 645.3	164 172.5	210 478,5
Balance of trade	-6 154.8	-17 288.9	-14 375.2	-12 160.7	-16 061.2	-25 387.5	-38 618,6
<b>millions of EUR, current prices</b>							
Exports	-	34 373.4	59 698.0	71 423.5	87 925.9	101 838.7	116 243,8
Imports	-	53 084.8	71 354.3	81 169.7	100 784.1	120 389.5	142 447,9
Balance of trade	-	-18 711.2	-11 565.3	-9 746.2	-12 858.2	-18 550.8	-26 204,1

<sup>1</sup> as a ratio of registered unemployed persons to the economically active civil population