

Wood promotion under conditions of its limited supply

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INTRODUCTION

In Poland, forests are so far the most significant source of renewable wood raw material. Several years ago, a demand for wood was significantly below the annual growth of forests. In recent years, despite a much higher level of harvest, Poland is running out of wood.¹ Although this situation has created better prospects for timber producers and society, it also creates conflicts between different groups of purchasers of wood raw material.

Forest and wood should be an important area of activity of not only foresters and employees of the forest-based industries, but they should also be affected by the government and particular ministries. It is especially here where ecology and economy are intertwined so these issues create special challenges, and are thus particularly important. The question here is whether the aim of such an activity is to protect the living space, or to supply the market with more and more important renewable raw materials such as wood. Another important question is what to do in the future to make better use of the properties and advantages of wood in all forms of ownership in Poland.

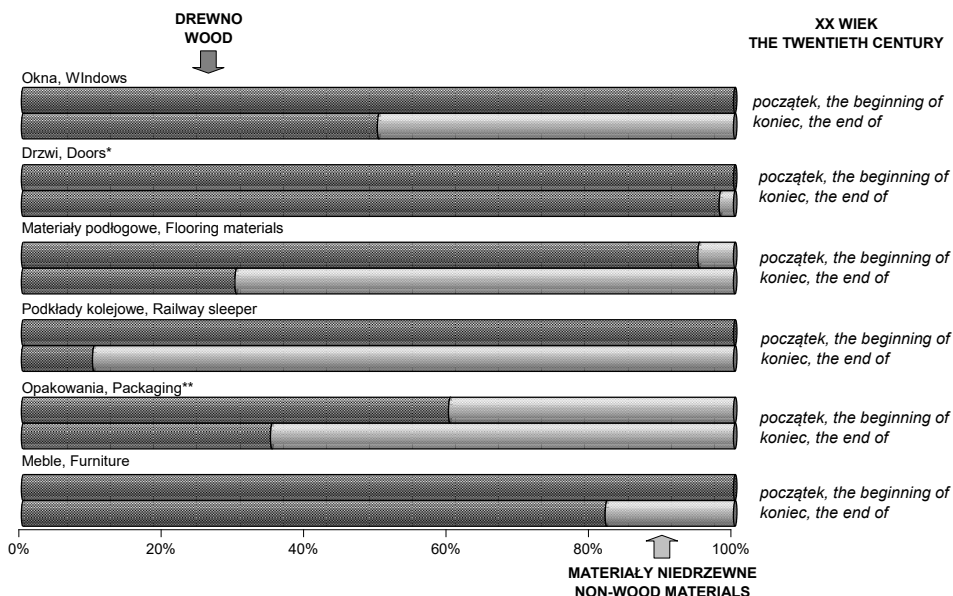
It is worth noting that renewable raw materials, due to the persistence of social development, are considered of central importance, which is reflected in the fact that both the resource and energy industries have a growing demand for wood.

WHY IT IS NECESSARY TO PROMOTE WOOD

In the EU, wood is increasingly replaced by wood substitutes², which causes various reactions of potential users of wood. In the past, when wood was pushed out of certain areas, there were still others where it was used. One can see it when visiting archaeological museums, both in Poland and in other countries. The progressive processes of pushing wood out of the manufacture of major products are illustrated in the figure below.

¹ The harvest of wood (without shelterbelts) increased from 32.7 million m³ in 2004 to 37.9 million m³ in 2013. The Central Statistical Office in Poland (CSO), Warszawa 2014.

² *The Competitive Climate for Wood Products and Paper Packaging: the Factors Causing Substitution with Emphasis on Environmental Promotions*, a study performed by the Subgroup Substitution Project of the Joint FAO/ECE Team of Public Relations Specialists in the Forest and Forest Industries Sector with the overall objective to promote increased international co-operation within the sector, eds J. Burrows, B. Sanness, Oslo 1998, and also Hofer (2005), pp. 29-38.



* – internal

** – paper and paperboard

Fig. Percentage of wood that was pushed out of the market in Poland

Source: E. Ratajczak, A. Szostak, G. Bidzińska, A. Galecka: *The Analysis of Conditions for the Implementation of Wood Promotion Strategy in Poland*. The work has been prepared for DGLP. Poznań 2002, p. 8.

In the last fifty years, the main wood substitutes were cement, steel, glass, aluminium and, more recently, plastics.³ As it turns out in practice, the broadest spectrum of substitution possibilities is within the construction industry.

- Competition between steel and wood is present in the construction and individual industries.
- **Cement and brick** limit the use of wood in construction, transport and the construction of roads and bridges.
- **Aluminium** is more widely used in the manufacture of packaging, furniture, construction and joinery.
- **Plastics** are increasingly used in packaging, construction, carpentry, flooring materials, insulation materials, finishing materials, pallets, furniture and others.

The experience of mainly the economically developed countries suggests that the major processes of wood promotion are implemented through:

³ “Competitors with wood as a building material have used the image of deforestation and forest degradation in an attempt to discredit the use of wood and to promote their own product. For example, the US steel industry had a concerted advertising campaign using the slogan <<build your house with six used cars and not one acre of trees>>. The American Plastics Council used the slogan <<save a tree – use PVC>>.” See Sands R. (2007) *Forestry in a Global Context*, CABI Publishing, Wallingford, p. 87.

- the creation of lobby to increase the use of wood by:
- the intensification of information campaigns concerning the properties of wood,
- modification of the old regulatory provisions and development of new ones:
 - the adaptation of provisions, norms and standards to those in force in the EU countries
 - the liberalization of regulations that limit the use of wood in different branches and applications
- public education at all levels, concerning the properties and applications of wood.

It is true that producers of many wood substitutes use aggressive promotion. This applies especially to the US and the EU. The need to promote wood has been noticed also in Poland, as a result of which the Wood Promotion Foundation “Teraz Drewno” was established in 2004.⁴ Speaking of wood promotion, one should refer to the surprising results of research conducted by Swiss experts on the threats to wood products as seen through the eyes of their manufacturers. It has turned out that for many manufacturers of wood materials, other wood products seem to be more serious competitors than other substitutes, such as steel, cement, brick or plastic. For example, some lumber producers fear competition from modern engineered wood products more than from steel beams and steel construction frames.⁵

For several years, there have been new engineered wood products in the EU market, mainly in Germany. They are characterized by:

- improved properties compared to conventional lumber as a result of the breaking and further bonding of wood, which gives more uniform material,
- the use of side products of lesser value,
- increased efficiency in the woodworking process.

In order to present the prices of selected, commonly used wood materials, wood products and their substitutes, their prices were randomly studied. The comparison of prices of similar materials or products can be used only to identify trends, and to determine whether wood is indeed pushed out of the market. Such a direct dependence has taken place for a few years in the area of wooden pallets which have been effectively substituted by plastic pallets.⁶ However, more durable trends can be seen in the attached figure.

In recent years, pallets have become one of the Polish export specialties in the forest-based industry. Their production increases or decreases, depending largely on fluctuations in the euro exchange rate, which determines the profitability of exports. Taking into account the viability of wooden pallets and plastic pallets, it can be assumed that the market price reflects their strength. However, each of these two types of pallets has its limitations. In fact, there is more complementarity than substitution here.

Based on the analysis of prices of selected wood products and their various substitutes, there is no basis for the unambiguous statement that wood is pushed out of the market as there are no specific preferences for non-wood products as their substitutes.

Answers to this question can be found in sales statistics, supported by relevant analyses of the effectiveness of substitution.

Wood is a raw material whose characteristics are desirable both from social and individual points of view. Proper wood promotion meets relevant functions. The effects of such promotion can be seen in the EU where wood consumption increases per capita. The numerous

⁴ Unfortunately, the foundation eventually ceased to exist for many reasons, but mainly due to the lack of genuine interest.

⁵ P. Hofer (2005), *Market Effects and Wood Promotion*, in: *Forest Products Annual Market Review, 2001-2002*, “Timber Bulletin”, vol. 1 LV, p. 38.

⁶ The CSO Statistical Yearbook, Warszawa 2014.

advantages of wood can be specified using a life cycle analysis (LCA) of wood materials and their substitutes, and the advantage of the former is clearly visible.⁷

In a free market economic system, the needs of the market are the result of personal preferences (needs that manifest themselves in individual purchase decisions). These needs are articulated substantially at the level of the end user of wood. Therefore, a forestry undertaking as the first manufacturer in the forest and wood chain should recognize the needs of the end user. Certainly, today, wood no longer wins the competition with plastics, steel and cement only by means of price and quality. Here, the question is how forestry affects the structure of the needs of the end user during the “production” of wood and in relation to the market. Tilo Diltthey made an interesting and still valid statement. Namely, he claimed that in general, we can accept the existence of a far-reaching separation between forest and its products in human consciousness, which can be summarized as follows, “yes to forest, no to wood” (Diltthey, 1991). In fact, forestry undertakings do not take this into account, and they have not taken much effort so far to change the “image” of wood in the assessment of the end user.

From the perspective of sustainable development, wood has many desirable characteristics, although the social perception of wood products is sometimes unfavourable. It is popular to say: “people love wood but hate chainsaw”. Thus, wood promotion should present not only wood as a product, but also a philosophy behind its manufacture. In this way, it can be sold as the best form of production and use. This is where we should look for the advantages of wood over steel, plastics and other manufactured substitutes.⁸

The promotion of both primary and secondary production in the forest-based industry is by far poor in resources and limited compared to other industries. The philosophy of product and production should all the more be used in promotion. Wood has so many non-contested and specific advantages that they should convince the enlightened society of the twenty-first century to use it. The problem still boils down to how to convince them effectively? Or maybe it is reasonable to form moral pressure groups, and to make citizens and authorities aware of the role that forest and wood play and the place they occupy in the development of modern society.⁹

Against the background of the above statements, we can try to answer the question of why to promote wood? Marketing reasons are not taken into account here, but it is worth noting that wood and wood products have distinct advantages which result from the small share of fossil primary energy carriers in wood harvesting and woodworking and a closed CO₂ cycle. A low weight of wooden structures and a small mass of waste after thermal utilization of wood at the end of its lifetime are further advantages in comparison with other materials. Wood promotion should perform several tasks depending on the level of generality at which the problem is examined.

Wood promotion is a joint operation of forest-based enterprises and local industry units in order to achieve favourable effects for the forest-based sector in the market [HOFER P., 2002].¹⁰ However, the primary objective of wood promotion, particularly under conditions of its limited supply, is to attract buyers who know the characteristics of wood, make use of it and at the same time rationally bear the costs of its restoration. Promotional activities should be undertaken when the market situation is considered unfavourable to a particular entity. In Poland, the need for wood promotion results from:

- the observed climate change that requires all available means to prevent it,

⁷ Such an analysis was conducted at the Institute of Wood Technology. See: Strykowski et al. (2006).

⁸ The most important aspect is disregarded here, namely the substitution of wood with materials such as steel, cement and plastics, the manufacture of which requires large amounts of energy from limited fossil resources.

⁹ See: *Wood – a Strategic Raw Material?*, The 4th European Economic Congress, 14-16 May 2012, Katowice, Poland.

¹⁰ P. Hofer, op. cit.

- the lack of well-established habit to treat wood as a raw material of high performance parameters and environmental character,
- the observed increase in the importance of wood and its new applications in the European and world economies. In Poland, the actual level of wood consumption, particularly of wood products (furniture), after deducting exports, is dramatically low.

POLISH SOCIETY AND WOOD

The attitude of the Polish society to wood was formed in a historical process. In Poland, the condition of forests was largely affected by such phenomena as deforestation (since the mid-nineteenth century), as well as an oversupply and low prices of wood. These processes resulted in low profitability of forestry, often a reduced supply of standing timber and a withdrawal of capital from wood processing which was instead invested in more profitable sectors. Low prices were not conducive to saving wood, which was largely used in construction before the war.

Decision-makers of that time generally accepted the rule: “small cost, high profit, and let’s leave concerns for the distant future to later generations” (STUDNIARSKI, 1937).¹¹ In other words, the society did not develop habits and needs of rational wood management before the war. Therefore, the rank of wood and its importance in social perception were correspondingly low. Also, after World War II, the wood economy was not very rational – central distribution and relatively low prices of wood lasted for years,¹² which was not conducive to rational consumption, and confirmed the conviction that this resource was in abundance. In fact, people were not prepared for sustainable wood management and treated wood (and perhaps still do) as a second-class raw material. A typical example is the post-war construction in which, despite the pre-war traditions of wooden buildings, the use of wood was much limited or even eliminated.¹³ Brick, steel and others were much more valued materials. Overall, in the social perception, wood is a material that has more disadvantages than advantages. Also, laws related to the use of different materials, particularly in construction, did not prefer wood but, quite the contrary, imposed more stringent conditions on its use. After all, wood substitutes are much more often used than wood itself, particularly in construction.

The level of wood consumption per one thousand inhabitants in Poland has greatly increased in recent years.¹⁴ Nevertheless, the consumption of sawn softwood, hardwood and plywood is far from the one in the EU.

Against the background of the above statements, we can try to answer the question of why to promote wood. Marketing reasons are not taken into account here, but it is worth noting that wood and wood products have distinct advantages which result from the small share of fossil primary energy carriers in wood harvesting and woodworking and a closed CO₂ cycle. A low weight of wooden structures and a small mass of waste after thermal utilization of wood at the end of its lifetime are further advantages in comparison with other materials. (Strykowski, 2006).

¹¹ S. Studniarski (1938): *Podstawy i zadania polityki leśnej*. Księgarnia Uniwersytecka, Poznań.

¹² See: Strykowski et al. (2002) *Środowiskowa ocena cyklu życia (LCA) wyrobów drzewnych*.

¹³ Poland takes one of the last places in the world in the construction of wooden houses, because as little as 5% of real estates in Poland are built of wood. In Finland, this figure is 15 times higher. This is related to the lack of promotion and the belief that wooden construction is less durable and degrades the environment. See: Jackiewicz F. 2006, “Gazeta Przemysłu Drzewnego” 2006, No 6, p. 3.

¹⁴ Wood consumption per capita in Poland increased from 0.86 m³ in 2004 to 0.97 m³ in 2013, the CSO Statistical Yearbook 2015.

Wood promotion is a joint operation of forest-based enterprises and local industry units in order to achieve favourable effects for the forest-based sector in the market [HOFER P., 2002].

Promotional activities should be undertaken when the market situation is considered unfavourable to a particular entity. In Poland, the need for wood promotion results from:

- objective requirements to increase the demand for wood products that meet high demands,
- the lack of well-established habit to treat wood as a raw material of high performance parameters and environmental character,
- the observed increase in the importance of wood in the European and world economies.

The recent experience of the forest-based sector indicates that substitution has become a major threat to wood, not only in terms of creating added value and thus maintaining competitive advantage in specific markets, but also in terms of closure of plants which are not able to cope with competition from substitutes.

The necessity of promotional activities also results from the current organization of the forest-based sector – forestry concentration and large dispersion of wood-based industries, especially the sawmilling and furniture industries.

It can be assumed that the effectiveness of the promotion of wood and wood products can be achieved through a close collaboration of companies from the forest-based sector at a given time.

Developing a social image of wood as a highly useful, human- and environmentally friendly resource is a process that requires constant education of society – starting from the kindergarten.

It is necessary to spread and accept the idea that sustainable use of wood helps to preserve forests in the proper condition, as they have to satisfy more and more different functions, in addition to wood production, in the post-industrial era.¹⁵

The implementation of wood promotion objectives requires considerable financial resources. It appears that in Polish conditions, where The State Forests National Forest Holding is the major producer of wood raw material, they should come with a mandatory fund created from the sale of wood. Similar solutions are applied in some countries in which a small amount is charged for each cubic meter of timber sold and then credited to such a wood promotion fund.¹⁶ This idea seems justified in conditions where nearly all domestic wood processing industry is based on raw material sourced from the state forests since this aspect will be taken into account in successive phases of wood processing as part of the price of processed products having increasingly higher added value.

At this point, I will say a few words on the promotion of wood applications in the economy, not only for climatic reasons, by referring to the experience of the leading countries in this area. There are national, international and regional initiatives, such as: “Plan Bois-Construction – Environment” and the accompanying “Charter” in France, “Wood for good” in the UK, “Centrum Hout” in Holland, “Promo Legno” in Austria and Italy, “Wood Focus” in Finland, “Centre Interfederal d’Information sur le Bois” in Belgium, “Nordic Timber Council” in the Nordic

¹⁵ A new EU Forest Strategy: for forests and the forest-based sector, the European Commission COM (2013) Brussels 20.09.2013, 659 final.

¹⁶ For example, in Baden-Württemberg, in the nineties, they created a special promotional fund for the use of wood in construction. Forestry companies credited 2% of their income to this fund from the sale of timber, and sawmills donated 2% of the value of processed wood. See: Grub (1991), p. 77.

countries: Finland, Norway and Sweden and “German Timber Promotion Fund” in Germany. These countries can also see that science should play a big role in creating new wood products, lifting controlled efficiency, and contributing to an increasingly wider use of wood products due to their advantages (high energy insulation, efficiency and minimum emissions, reuse of wood, etc.).

One of the essential conditions for effective wood promotion is close co-operation between wood manufacturers, operators and users. In other words, it is about creating a lobby in the society for a wider and rational use of wood in the economy as one of the most attractive materials and components that are currently available to mankind. The philosophy of product and production should all the more be applied in promotion. Wood has so many non-contested and specific advantages that they should convince the enlightened society of the twenty-first century to use it. The problem still boils down to how to convince them effectively?

Upon closer examination, it appears that none of these earlier models of wood promotion can be directly adopted with success in the Polish wood-based market.

In Western countries, in addition to specialized agencies which professionally deal with wood promotion, an important role is played in this regard by research institutions which have the knowledge, information and accredited laboratories, and carry out the certification of wood products. The participation of these units in wood promotion affects its credibility in the public perception. These experiences should be used in our country in which researchers have been largely promoting wood products for several years through certification, research, publications and dissemination of their results.

The analysis of wood promotion strategies in Western countries allows for a conclusion that none of the wood promotion patterns that are used in these countries can be directly transposed to the Polish wood market. The main limitations are in the organizational and legal solutions which require careful study and determining what form will best allow for reaching the assumed goals of a wood promotion strategy in Poland. Based on the experience in wood promotion gained by Western countries, selected components of such ventures can be used and adapted to the needs and specifics of the Polish market in order to create a strategy for wood promotion in Poland.

HOW TO PROMOTE WOOD UNDER CONDITIONS OF A LIMITED SUPPLY OF THIS RAW MATERIAL

In many countries, wood is promoted regardless of the abundance of forests and the level of wood harvest. This shows that a shortage of wood in a country should not limit or even cancel promotion. This statement seems obvious though not always and not for everyone.

Wood promotion under conditions of its limited supply is connected with another problem, namely what forms and techniques of promotion to select.

Wood promotion, e.g. through exhibitions and direct marketing, has an important function in the forest-based industries, especially for individual companies, associations and trade associations which have been promoting their products for many years.

This activity has intensified in the last decade, and is now becoming more effective than simple announcements and marketing. Most well-organized and coordinated wood promotion campaigns are carried out in North America and most EU countries. Industry associations in many emerging economies are intensifying their promotional activities. In many cases, such initiatives are developed as specific projects initiated by forest-based associations or groups of associations. Relevant agencies may be involved also in the case of state forests.

Most initiatives that are taken in response to the public demand for balance go ahead of the traditional promotional activities in the area of trade, product literature and business trends. The

focus is on how wood products can be divided into more and less friendly, and how they can affect our lifestyle etc. in contact with nature, including wood.

It can be assumed that the use of wood should be promoted using a wide range of information technology solutions and resources including:

- examples of projects related to sustainable development with aspects of the use of wood products,
- information on the environmental aspects of the manufacture of wood products,
- tools and models that show environmental effects of wood consumption,
- seminars and trainings on the use of wood,
- technical standards and information regarding wood products.

The question of wood policy, which has already been absent in the Polish resource policy, is important for projects, the aim of which is to develop a mechanism for the promotion of wood as an important renewable raw material.¹⁷

¹⁷ “The Resource Policy of Poland”, KGHM Polska Miedź, Krakow 2015, is a document that was developed on the initiative of and edited by prof. Jerzy Hausner. The resource policy which takes into account a long-term perspective should contain a set of reasonable steps within the competence of the minister of environment as a trustee of natural resources, the economy minister, who is responsible for long-term state policy, and the minister of treasury as the owner of resources. It must be noted with regret that the document does not deal with wood policy, although it is one of the most important renewable raw materials.