

**DIGITALISATION AND CIRCULAR ECONOMY:  
forestry and forestry based industry implications**

12<sup>th</sup> International Scientific Conference WoodEMA 2019

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**THE SYMBIOSIS PROSPECTS  
FOR THE E-COMMERCE BUSINESS  
AND WOOD-BASED SECTORS  
– THE CASE OF POLAND**



Leszek Wanat,  
Leszek Majchrzak  
Elżbieta Mikołajczak  
Sylwia Klus



# The idea of research

- For the creation of industrial symbiosis, the e-commerce and wood-based industry actors must possess an identity and be active as well as other typical creative economic structures.
  - There is a tendency in Poland to create economic societies of pro-ecological targeting, the so-called "green business parks" that are also created in the virtual space.
  - Industrial symbiosis is an opportunity for the development of small and medium-sized enterprises in forestry and wood-based sectors in Poland.
  - This study is devoted to scientific research into the development and competitiveness of industrial symbiosis actors: the Polish wood industry and e-commerce business.
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# Why?

- This study analyses the selected examples of existing and possible symbiotic relationships in forestry and wood-based sector with entities and tools typical for electronic economy. Both the selected case studies that have been analysed and referred to.
- In particular, the following examples of symbiotic links between electronic management and forest and wood resources were selected for analysis:
  - Forest Data Bank;
  - Forest and Wood Portal.
- In addition, an attempt was made to assess the possibility of developing economic symbiosis relations for a selected branch of the wood industry (furniture) with the entities of the e-commerce sector.


# Forest Data Bank in Poland

- The Forest Data Bank (Bank Danych o Lasach, BDL) was established on the basis of the provisions of the Forest Act (Ustawa..., 1991) in the period of 2010-2014.
- The Forest Data Bank (BDL) shall be composed of the following: (1) a data warehouse with a spatial information system (GIS) storing all source and aggregated data, (2) of the calculation module, (3) reporting module, (4) a web portal, (5) a set of services making data available to external recipients.
- The Forest Data Bank shall store all available data on forest areas in Poland.
- They include as follows: descriptive and spatial source data from forest management plans, simplified plans, inventory of forest condition, including large-area inventory and national park protection plans.
- In addition, the database (BDL) collects additional information from areas related to the condition of forests: meteorological, hydrological, geological, nature protection, biotic, abiotic and other data.

# Forest Data Bank website <https://www.bdl.lasy.gov.pl/>



BDL Reports Forests on maps Publications Data access Help

Sign In 

Forests now available!  
Metadata  
Data access



## Forests in Poland

Area: **9,242 thousand hectares** (without areas connected with forest economy)

Standing volume: **2,587 million m<sup>3</sup>**

Average standing volume: **280 m<sup>3</sup>/ha**

Average stand age: **59 years** in the forests of SF NFH

Forest area per capita: **0.24 hectares**

Forest cover: **29.6 %**

According to: "The Report on the State of Forests 2017"

# Forest and Wood Portal (PL-D)

- Currently, IT tools for internet auctions and forest-wood portal are used to handle the sale of wood. The Forest and Wood Portal is available at a separate Internet address in the domain of State Forests, i.e. <http://drewno.zilp.lasy.gov.pl>.
- Wood is currently being sold via web applications and will be sold in the years 2020-2021. Under the basic procedure, a monopolist (PGLLP) offers entrepreneurs a monopoly:
  - sales in the Forest and Wood Portal (PL-D), taking into account the current volume of wood purchase (making 80% of the pool available),
  - sale in system auctions in the "e-drewno" ("e-wood") application (making 20% of the pool available).
- Additionally, in the sales plan for entrepreneurs, the so-called separate sales will be conducted in the "e-drewno" application (providing access to wood raw material, which at the moment of creating the sales offer the State Forests cannot direct to the basic procedure (e.g. small masses, dispersed wood species and assortments)).

# Portal Leśno-Drzewny

<http://drewno.zilp.lasy.gov.pl/drewno/>



## Portal Leśno-Drzewny

small text normal text large text

 search

[home](#) [news](#) [members](#) [często zadawane pytania](#) [archiwum](#) [normy](#) [komunikaty](#) [projekty pul](#)

you are here: [home](#)

### navigation

- [Home](#)
- [Archiwum](#)
- [Pomoc](#)
- [Wydarzenia](#)
- [Normy](#)
- [Komunikaty](#)
- [Projekty PUL](#)

### aplikacje portalu

Informujemy, że dla aplikacji PLD codziennie w godzinach 20 do 21 zostało przewidziane okno serwisowe.

Moduł Klient LP

klient

## Witamy w Portalu Leśno-Drzewnym

W najważniejszym miejscu dla wszystkich osób zainteresowanych handlem drewnem.

**UWAGA!!** Informacji marketingowych dotyczących sprzedaży drewna udzielają właściwe RDLP i nadleśnictwa. Odpowiedzi na często zadawane pytania znajdują się [tutaj](#).

[Formularza Zgłoszeniowy dla Przedsiębiorców do rejestracji w aplikacji Portal Leśno-Drzewny i aplikacji „e-drewno”](#)

[Formularz rejestracji i zmiany danych dotyczących punktów przerobu](#)

Wszelkie komunikaty oraz informacje zamieszczane na stronie internetowej Portalu Leśno-Drzewnego publikowane są w oparciu o akceptację Dyrektora Generalnego Lasów Państwowych lub upoważnionej do tego osoby.

## Sprzedaż drewna na 2019 rok

**Zarządzenie Nr 44 Dyrektora Generalnego Lasów Państwowych z dnia 28 czerwca 2018 roku w sprawie sprzedaży drewna w Państwowym Gospodarstwie Leśnym Lasy Państwowe**

**Decyzja Nr 137 Dyrektora Generalnego Lasów Państwowych z dnia 28 czerwca 2018 roku w sprawie wartościowania ofert oraz regulaminów poszczególnych procedur sprzedaży drewna w PGL LP**

**Zarządzenie Nr 66 Dyrektora Generalnego Lasów Państwowych z dnia 7 września 2018 roku w**

« September 2019 »

Mo	Tu	We	Th	Fr	Sa	Su
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30						

[e-drewno.pl](#)

# E-drewno website

## <https://www.e-drewno.pl/stock/>



# e-drewno.pl

Państwowe Gospodarstwo Leśne  
Lasy Państwowe  
Dyrekcja Generalna Lasów Państwowych  
ul. Grójecka 127  
02-124 Warszawa



Sign in >

Home

Announcements ▾

Auctions ▾

Dictionaries ▾

Registration

Help

Go to Auction numl

You are in:  
17:50:53 e-drewno » giełda »

## FAQ

What is e-drewno?

Security and privacy

How to buy?

Regulations

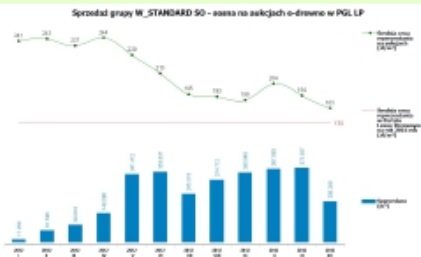
Lost your password?

Contact

## Reports

Sales report PGL LP

Cyclic sales report



Instructions for clients - providing reports

## Welcome

### Welcome to e-drewno portal!

We would like to invite you to participate in internet wood auctions which are organized on e-drewno portal periodically. In order to buy you need to **register** first.

Registration and use of the portal are free of charge. User manual can be downloaded as PDF file at **Help** tab.

If you have any questions or need any help, please contact our sales department in your parent forest district.

This site uses cookies technology. For more information go to "Cookies and safety policy."

Choose auction type

Normal auctions ▾



# E-commerce in the wood-based sector

- Can one therefore speak about similar prospects for the e-commerce market in the wood-based sector? Analyzing the example of furniture industry, it was noticed that the market of furniture and interior design products is one of the fastest growing e-commerce sectors in the world. At the same time, furniture and large-size equipment is one of the most difficult products to sell online. A potential consumer moves smoothly between an online shop and a showroom.
- Despite general cautious tendencies, the importance of the Internet as a place to buy furniture is constantly growing. Every third respondent surveyed by IKEA buys furniture online. An even greater percentage, 41% of Poles, consider buying furniture online in the near future. It seems that a similar trend also applies to other wood products, especially small products and wood haberdashery, interior furnishings and elements of the garden programme. As a result, it may turn out that online shopping will become a common form and traditional shopping will have to be classified as luxury and elite forms of spending free time.

# E-furniture website (1)

<https://www.yourfurniture.priv/>

The screenshot displays the homepage of the TWOJEMEBLE.PL website. The header includes the logo '15 LAT TWOJEMEBLE.PL', a 'MENU' button, a search bar with the text 'Jakich mebli szukasz?', a search icon, a 'Kontakt' dropdown, and icons for user profile, heart, and shopping cart. Below the header, two furniture collections are featured in a grid. The first collection, 'Nappa', shows a grey tufted sofa and armchair in a modern living room setting, with the brand 'sweetsit' at the bottom. The second collection, 'Velvet', shows a large wooden dining table and sideboard set in a living room, with the brand 'szynakameble' and a '60 lat' anniversary logo at the bottom. A dark blue button with the text 'ZOBACZ WSZYSTKIE KOLEKCJE MEBLI' is centered below the grid. At the bottom of the page, there is a search bar with the text 'Jakiego mebla szukasz?' and a 'Zapytaj konsultanta' button.

15 LAT TWOJEMEBLE.PL

MENU

Jakich mebli szukasz?

Kontakt

Nappa

sweetsit

Velvet

szynakameble | 60 lat

ZOBACZ WSZYSTKIE KOLEKCJE MEBLI

Jakiego mebla szukasz?

Zapytaj konsultanta

# E-furniture website (2)

<https://www.yourfurniture.priv/>

The screenshot displays the homepage of the TWOJEMEBLE.PL website. At the top, there is a navigation bar with the logo '15 LAT TWOJEMEBLE.PL', a 'MENU' button, a search bar containing the text 'Jakich mebli szukasz?', and icons for 'Kontakt', user profile, heart, and shopping cart. Below the navigation bar, the main heading reads 'Jakiego mebla szukasz?' followed by the text 'Sprzedajemy meble od 15 lat. Możesz liczyć na fachową poradę!'. The central area features a grid of 12 furniture categories, each with an icon and a label: 'Narożniki', 'Sofy i kanapy', 'Fotele', 'Komody', 'Łóżka', 'Regały', 'Stoły', 'Krzeseła', 'Biuorka i stoły biurowe', 'Meblościanki', 'Szafy', and 'Witryny'. A 'Zapytaj konsultanta' button is located in the bottom right corner.

**15 LAT TWOJEMEBLE.PL** MENU Jakich mebli szukasz? Kontakt

### Jakiego mebla szukasz?

Sprzedajemy meble od 15 lat. Możesz liczyć na fachową poradę!

- Narożniki
- Sofy i kanapy
- Fotele
- Komody
- Łóżka
- Regały
- Stoły
- Krzeseła
- Biuorka i stoły biurowe
- Meblościanki
- Szafy
- Witryny

Zapytaj konsultanta

# Conclusions (1)

On the basis of the analyses carried out, the following conclusions were reached:

- 1) The ability to initiate economic symbiosis relations between traditional entities and services of the wood-based sector and entities and services of the electronic economy sector is constantly growing.
- 2) The trend towards digitisation concerns not only those markets that are easy to adapt to e-commerce, but also those where participants have so far preferred only traditional forms.
- 3) The potential of e-commerce is an opportunity to diversify forestry services. In a situation where on average 90% of revenues from the use of forests comes from the sale of wood, the still unused resource is the digitalization of the service sector, which may concern information (on the basis of the Forest Data Bank), the wood electronic exchange (on the basis of the Forest and Wood Portal) and the sale of finished products, as well as optimization of other forest services (transport, storage, etc.).

## Conclusions (2)

- The process of economic symbiosis usually starts with the mutual exchange of surplus resources and the integration of management systems.
- Market participants imitate nature in this way: nothing is waste within it, and every element is continuously processed and useful.
- Therefore, it is natural to take measures aimed at using the stream of all wood materials: primary materials, semi-finished products, including those of lower quality, and finally waste, i.e. at every stage of the "product life", still wood, as a reusable raw material.
- The system of symbiotic connections is therefore developing, transferring natural models to the anthropogenic world, and nowadays more and more often to the virtual world.

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- **Благодаря за вниманието!**
- **Thank you for Your attention!**

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