"SOME WORDS ABOUT WOOD EXCELLENCE CENTER AS TOP-PRIORITY PROJECT OF CENTRAL BIH"

Ismar Alagić^{1,2}, Darko Petković², Thomas Stautmeister³, Kurt Wüthrich³ REZ-RDA Central BiH¹/University of Zenica, Faculty of Mechanical Engineering ², Bern University of Applied Sciences Architecture, Wood and Civil Engineering, BFH³ Bosnia and Herzegovina^{1,2}, Switzerland³

ABSTRACT

Forests and forestland cover almost 50 percent of Bosnia and Herzegovina (BiH). The role of products from the forest and the companies that process and sell them in BiH is enormous. Nevertheless majority of companies have started to exploit the vast forest resources that region poses. At present stage production orientated companies do not have business techniques and required knowledge for expanding to foreign markets. Second disadvantage of the companies in the region is standardizing of quality of their products with demands of foreign markets. Significant number of companies does have possibility to produce final products (CNC machines and high quality materials) but lack the assistance and even if they do have high quality products there is no possibility to get the certification for it. Closest center for certification of wood products in compliance with EU regulation is in Italy. Necessity of product certification is more than evident and therefore the existence of laboratories or other provider of certification centre is more than necessary. Current situation in Central BiH and the same conclusion could be drawn for whole BiH limits producers from further expansion. Access to foreign markets is multistage process and requires gaining of numerous certificates and achieving standards and other preconditions required by foreign markets.

The Wood Excellence Center (WEC) project in Central BiH aims to increase the chances of export oriented woodprocessing firms in BiH to implement demand driven R&D and advanced testing activities for the BiH wood processing sector. The implementation of first stage of WEC project will be done in collaboration with the local industry, University of Zenica, REZ-RDA Central BiH and backstopped by Swiss partner- BFH. The WEC will be similar to the BFH in CH, act as "motor" for the local wood processing industry. Previous meetings with the local wood processing industry in Bosnia and Herzegovina (mainly SME) showed that their requirements on a WEC are related to the following three spheres: 1) Applied research & development (aR&D). 2) Technology park and test laboratories. 3) Advanced training. This article presents short information about this project because enabling the local producers in BiH to certify its products would open access to foreign markets and would propel the production and most importantly it would improve BiH export ratio.

Key words: Wood Excellence Center, certification, Central BiH, University of Zenica, BFH.

1. INTRODUCTION

Even if the war significantly changed the face of the forest and wood industry, the role of products from the forest and the companies that process and sell them in BiH is enormous. The value of these goods as well as the services and domestic employment provided is important. The wood processing sector represents today about 20% of the country's exports, 10% of the GDP and 15% of total employment [1]. Currently there are about 1500 wood processing SME in the country producing a wide variety of wooden products for the local (40%) and export (60%) market. The strategic importance of BiH's wood industry is internationally recognized. Majority of SMEs in Central BiH region have turned towards either wood or metal processing business. Nevertheless majority of companies have started to exploit the vast forest resources that region poses. In this phase SMEs have

started with production of furniture but as years were passing by the competition on local market have caused the extinction of smaller an unprepared SMEs. At present stage production orientated companies do not have business techniques and required knowledge for expanding to foreign markets. Second disadvantage of the companies in the region is standardizing of quality of their products with demands of foreign markets. Significant number of companies does have possibility to produce furniture but lack the assistance and even if they do have high quality products there is no possibility to get the certification for it. Closest center for certification of wood products (furniture and joinery) is in Slavonski Brod, Republic of Croatia. Nevertheless this center has the ability to certify the products for placing solely on Croatian market. The sole possibility for our producers to penetrate the foreign markets is to close the deals with foreign partner that performs certification in their respective country and than the placement of product is possible.

2. PROJECT OBJECTIVE AND TASKS

As of August 2006, the activities of University of Zenica on establishing of the Wood Excellence Center have been conducted in collaboration with the Bern University of Applied Sciences Architecture, Wood and Civil Engineering, BFH Switzerland. The project aims to increase the expertize of lecturers and researchers of the University of Zenica to implement demand driven aR&D and advanced training activities for the BiH wood processing sector regarding testing techniques. The main project activities involve the adaptation of international methods and materials for the local environment, the training of lecturers and researchers at BFH, and the implementation of the first aR&D and training activities in collaboration with the local industry. Applied research & development as well as training on an international level are big challenges for related institutions in BiH. In this context BFH and the University of Zenica launched at the beginning of 2006 a partnership program to develop a Wood Excellence Centar (WEC) at the University of Zenica. A recent REZ-RDA survey of wood processing firms in the BiH questioned owners and operators about their satisfaction with university graduates they employed. The survey analysts also observed among others that:

- There is no specific institute for wood processing at the university and this has a negative impact on the scientific and research work that could benefit the sector.
- There is a gap between the needs of the wood processing industry on the one hand and the curriculum used in the students' education on the other.
- There is a problem with the furniture testing in line with international requirements.

3. METHODOLOGY

Necessity of product certification is more than evident and therefore the existence of laboratories or other provider of certification centre is more than necessary. Current situation in Central BiH and the same conclusion could be drawn for whole BiH limits producers from further expansion. Access to foreign markets is multistage process and requires gaining of numerous certificates and achieving standards and other preconditions required by foreign markets.

Establishment of Wood excellence center will perform in several steps that could be grouped in following:

1) Assessment of possibilities, capabilities and needs; 2) Establishment and accreditation of Center;

3) Further development and expansion; 4) Commercialization of the Center/self-sustainability. Partners in project implementation are as follows: REZ-RDA Central BiH; University of Zenica; University of Applied Sciences Berne, School of Architecture, Civil and Wood Engineering BFH; Business Humanitarian Forum BHF, Switzerland; Zenica Doboj Canton and Municipality Zenica.



Figure 1. The furniture testing procedure Figure 2. Equipment of WEC- Woodprocessing's working Center

4. PROJECT OUTPUTS

The complete project consisted from following stages:

- a) Analysis of relevant local capacities: This Wood excellence center has its viability based on several analysis and reports performed by REZ RDA and University of Zenica. Furthermore initial screening of capabilities gives the proof that the Central BiH region or more precisely Zenica has the initial human and technical capacities to support development and establishment of such center in Zenica. Parameters that are essential precondition are already met like existence of University with its educated personnel and existence of Institute with long tradition in analyzing of machinery and materials. Nevertheless it is still necessary to perform in depth analysis of human and technical capacities of Institute "Kemal Kapetanović" and University of Zenica. The analysis will have the aim to list the machinery, human resources, structural potentials and other relevant information. This in depth analysis will be the base to define the steps and time schedule of other activities.
- b) Analysis of specific regional and state SME demand for certification: REZ RDA and University of Zenica will perform in this preparatory activity definition analysis of needs of SMEs in relation to wood quality. This activity is needed in order to define several most needed services that Wood excellence center will provide. Quality certification presumes wide range of services but Wood excellence center in its initial phase will start with provision of limited number of services but based of actual needs of SMEs. The analysis will define as mentioned initial needs but will be supplemented with list created by the demands of foreign markets.
- c) Preparation of space for establishment of Center: REZ RDA already has space available for the purpose of wood excellence center. The space is physically located at "Kemal Kapetanovic" Institute.
- d) Construction and/or purchasing of necessary testing equipment : The initial phase of wood excellence center will require establishment of at least one laboratory and management section. This laboratory, that will represent nucleus of future Wood excellence center, needs to be established in second half of project duration. This is due to logic to establish the Wood excellence center in a way to have stage development. This project has an aim to establish the so called first phase of future center. The first phase will requires establishment of laboratory that will perform limited number of testing and issue the certification of quality for those. This in reality needs to be lined with most desired needs of SMEs. Based on this analysis experts of "Kemal Kapetanovic" institute will construct and produce the testing devices. Majority of these devices used in testing process are not wide marketed but produced for specific purpose. Other testing equipment needs to be purchased. This phase will include engagement of eminent staff from BFH, Switzerland that has vast experience in this field. Experience of partners from BFH will be used in order to define the specific equipment to be purchased on one side and assistance in definition of equipment that will be constructed on site at the Wood excellence center. Certain testing devices are to be used with its expendables (chemical solutions, additives or similar) and in this phase sufficient projected quantity of these expendables will be purchased as well with the aim to cover all functioning of Wood Excellence Center. Based on above mentioned project, the European manufacturers will contribute to the WEC by the donation, cost-free leasing of machines, equipment and tools. They may also provide cost-free maintenance of machines, equipment and tools.

- e) Education of initial staff: Project foresees in this initial phase of Wood excellence center engagement of limited number of staff. This staff will be selected from the implementing partner organizations namely REZ RDA, "Kemal Kapetanovic" Institute and University of Zenica. The staff will be educated at relevant institutions abroad (BFH, Switzerland) that have profile of activity divided into four specialized fields of interest.
- f) Certification of center: Wood excellence center needs to get certification by international standards for its laboratories. Required certificate is BAS/ISO 17025. Institute "Kemal Kapetanovic" within University of Zenica has several laboratories for mechanical and chemical testing that are certified with mentioned center. These laboratories will be used for testing of wood products where required. In addition the laboratory of Wood excellence center will upon the establishment request certification as well. The BAS/ISO 17025 certificate can be issued by BATA (Institute for accreditation of Bosnia and Herzegovina) upon the request of relevant organization/laboratory.
- g) Provision of services: Once all the activities above are completed Wood excellence center will be able to go on market offering the services based on step-by-step process. The region of Central BiH alone has 421 wood processing SMEs which opens wide market for Wood Excellence Center [1]. The provision of services will be market driven and will be developed with the time based on needs of wood processing SMEs. Furthermore wood cluster initiative will organize the SMEs in Central BiH region and will enable them to give directions for development of the center accordingly.
- h) Establishment of multilateral business relations with relevant institutions at targeted markets: European markets are most interesting for woodworking SMEs in the region. The credibility of Wood excellence center once it is operational will be enhanced with establishment with partners at targeted countries. REZ-RDA and University of Zenica will play significant role in this phase operating in two directions promotion of Wood excellence center activities within the country and establishing the links with partners abroad through the form of multilateral agreements with Institutions abroad –BFH.
- i) Promotional activities/Branding of Wood Excellence center: Promotional activities will be conducted using media and wide verity of printed materials. This will be important for future functioning of Center and its recognition on the market.

5. CONCLUSION

For the wood processing sector of BiH the results of this project will have the following positive impacts:

- Creation of jobs, more income and value added in the region as improvement of livelihoods.
- Improved collaboration between SMEs and research and training institutions.
- Possibility to carry out applied research and development locally in the country, which will result in innovation and further development or the wood processing sector.
- Possibility to exchange and improve know-how with international partners.

SME will profit from the improved knowledge at WEC what will result in the further development of their business and an additional demand on qualified wood processing specialists. The project partners are aware that during implementation of the projects new questions and challenges will arise. This is recognized as part today's fast changing business and will help us to find future-oriented solutions.

6. REFERENCES

- [1] I. Alagić:" Analysis of the existing level of production technologies in use on the Wood Processing industry and specification of future needs", USAID CCA, REZ-RDA, Zenica, Bosnia and Herzegovina, 2005.
- [2] Prof.Dr-Ing. T. Stautmeister, M.Bieri: "Prozessreorganisation am Beispiel der automatisierten Fenstermontage und -verlebung", Internationale Konferenz zur "Automation in der Holzwirtschaft", Proceeding, pages 1-9, Berner Fachhochschule, Hochschule für Arhitektur, Bau and Holz HSB, Burgdorf, Biel, Switzerland, 12.und 13.October 2006.
- [3] xxx: "Identifying Investment Projects for Sustainable Forestry and Forest Industry Business in Bosnia and Herzegovina", Sector study, Final Report, ÖBf consulting, PÖYRY, EBRD, FIPA, B&H, November 2006.