GREEN LIBRARIES: LIBRARIES’ CONTRIBUTION TO ENERGY EFFICIENCY

ABSTRACT

This paper describes the foundation of Green Libraries of Energetic Efficiency (or Green EE Libraries) in Croatia, with a special emphasis on the Green EE Library founded at the Law Faculty Library in Osijek. Green Libraries of Energetic Efficiency have been founded as a result of a project “Removing Barriers to Energy Efficiency in Croatia” (EE project) with a goal to disseminate and make visible the information and publications created within the Project to wider Croatian public. The EE project, initiated in 2005, aims at removing barriers for the implementation of economically feasible, energy efficient technologies and measures in residential and public sectors in Croatia while implementing the principles of systematic energy management in the public sector.

An important facet of the project is its focus on citizens, which is evident from media campaigns, multi-media publications, brochures, various lectures and the network of Info points for energy efficiency. Among those Info points are currently ten Green Libraries situated at public and academic libraries in nine Croatian cities (Zagreb, Pula, Osijek, Križevci, Prelog, Sisak, Rijeka, Split, and Zadar). This paper focuses on the everyday education activities, types of customers, their expectations and needs of those Green EE Libraries. The paper also gives the findings of the survey conducted among ten Green EE Libraries in Croatia about their experience in the project as well as the expected impact of the Green EE Library materials on their customers.

Keywords: Green EE Library, libraries, energetic efficiency, EE project, Removing Barriers to Energy Efficiency, Croatia
SAŽETAK

Ovaj rad opisuje osnivanje Zelenih knjižnica energetske učinkovitosti (ZeeK) u Hrvatskoj, s posebnim naglaskom na Zelenu knjižnicu pri knjižnici Pravnog fakulteta u Osijeku. Zelene knjižnice energetske učinkovitosti nastale su kao rezultat projekta „Poticanje energetskih efikasnosti u Hrvatskoj“ (EE projekt) s ciljem širenja i povećanja vidljivosti informacija i publikacija kreiranih u okviru EE projekta. Sam EE projekt, pokrenut još 2005. godine, za cilj ima uklanjanje prepreka za implementaciju ekonomski isplativih, energetske efikasnih (EE) tehnologija, materijala i usluga, kako u javnom sektoru tako i u kućanstvima, a sve kako bi se smanjila nepotrebna potrošnja energije i emisije štetnih stakleničkih plinova u atmosferu.

Izuzetno važna faseta projekta je njegova usmjerenost prema građanima, a to je razvidno kroz medijeske kampanje, multi-medijske publikacije, brošure, razna predavanja i radionice, te kroz mrežu Info-puntova za energetsku učinkovitost. Među tim Info-puntovima nalazi se trenutačno devet Zelenih knjižnica smještenih u narodne i visokoškolske knjižnice u osam hrvatskih gradova (Zagreb, Pula, Osijek, Križevci, Prelog, Rijeka, Split, and Zadar). Ovaj rad svoj naglasak stavlja Zelenu knjižnicu Pravnog fakulteta u Osijeku - na njene svakodnevne obrazovne aktivnosti, vrstu korisnika, njihova očekivanja i potrebe. Istovremeno, rad donosi rezultate istraživanja provedenog među svih devet Zelenih knjižnica u Hrvatskoj na temu njihovih iskustava u projektu, ali i očekivanog učinka materijala Zelene knjižnice na njihove korisnike.

Ključne riječi: Zelena knjižnica, energetska učinkovitost, EE projekt, Poticanje energetske efikasnosti, Hrvatska

1. Introduction

Sustainability and going green seem to be applicable in every context. They focus essentially on the aim of social responsibility and consideration for future generations by reducing the ‘ecological footprint’. The importance of environmental matters can be seen in the fact that in 1998 the United Nations Economic Commission for Europe (UNECE) adopted the Convention on Access to Information, Public Participation in Decision-Making and Access to Justice in Environmental Matters in the Danish city of Aarhus (also called Aarhus Convention). It came into force in 2001 and its primary objective was to protect the right of every person of present and future generations to live in an environment adequate to his or her health and well-being. In order to make this possible, the Convention, among other things, insists on the rights of access to information and public participation in decision-making (Convention, 1998, Article 1).

The phrase ‘green library’, prevalent in information and library science literature, usually refers to a library building that is certified as an environmentally friendly building (e.g. Antonelli, 2008 or Wescott Loder, 2010). This trend implies that it is necessary to have a green library building in order to be considered ‘green’ (Aulisio, 2013, 1). In the USA, the U.S. Green Building Council (USGBD) issues Leadership in Energy and Environmental Design (LEED) certifications and in 2013 there were thirteen LEED certified academic libraries in the United States (AASHE, 2013). However, the green library is not an exclusive club for those fortunate enough to have new, sustainable, library buildings and certificates such as LEED and similar. The phrase ‘green library’ should refer to any library that promotes sustainability through education, operations, and outreach.
Authors Jankowska and Marcum (2010) identified four major areas of environmental and sustainable issues in the library literature: “(1) Sustainability of scholarship and collections; (2) Green library operations and practices; (3) Green library buildings; and (4) Measuring and improving sustainability” (p. 161). In addition, authors Le Ber and Gregory (2004) stress out that librarians can become role models and influence their institutions to start or maintain the greening process (p. 266). There are many ways in which libraries contribute to sustainable practices, one of which is disposal of: packaging (cardboard, polystyrene plastic, plastic) from serials, books, software, computers, etc.; unneeded gifts; wasted materials; office paper waste generated from printing and copying; outdated computers, etc. Additional ‘greening’ activities include utilities such as water, electricity, gas, heating, and cooling; and buildings and grounds (Le Ber, Gregory, 2004, 266). Kathyin Miller in her publication on public libraries stresses out the educational role of public libraries in promoting sustainability and environmental issues (2010, 63-75) while another library manual gives instructions how to become ‘green’ (McBane Mulford and Himmel, 2010, 145-168).

Libraries have found the idea of sustainability to be quite interesting. Therefore, the leading international body representing the interest of library and information services and their users, International Federation of Library Associations and Institutions (IFLA), initiated the publication of a book that mirrors the current efforts of libraries to create sustainability through varied solutions for the particular challenges of library architecture and related services. This book brings examples and case-studies on ‘green’ activities of libraries all-over-the-world (Hauke, Latimer and Werner, 2013).

This paper focuses on libraries in Croatia and their efforts to promote sustainability and energy efficiency among their customers through their main task: ensuring free access to the environmental information.

2. Green libraries in Croatia

In Croatia, libraries are starting to adopt the idea of sustainability and environment protection. The ‘green library’ initiative is still in its infancy, but there are several worthy initiatives that deserve to be mentioned. One of them is the Green Library project of the Library Association of Istria launched in 2011. The goal of that project was to educate the public and to raise the awareness about the environment protection. Up to 2012 the project involved the active participation of nine libraries and fifteen other institutions and it consisted of lectures, workshops, and public discussions. Seventeen educational documentaries were shown to wider public within the project. The project had an excellent reception and all of its programmes were well attended (Kraljević, 2013, 199-200).

The next green project connected with libraries in Croatia is the one regarding the government project Removing Barriers to Energy Efficiency in Croatia” (EE project), which is also the main topic of this paper. The project was launched in July 2005 and is still active. Initially, the partners on this programme were Croatian Ministry of the Economy, United Nations Development Programme (UNDP Croatia), Environmental Protection and Energy Efficiency Fund and Global Environmental Facility (GEF). Today, the new partner is Croatian Ministry of Construction, and Physical Planning. As its name implies, the project’s main goal was removing barriers for the implementation of economically feasible, energy efficient technologies and measures in residential and public sectors in Croatia while implementing the principles of systematic energy management in the public sector. It has developed in three national components: the "Systematic Energy Management in Cities and Counties in Croatia"
(SEM Project) for the local and regional level; the Croatian Government Programme "House in Order" (HiO Programme) for the central government, and systematic informing and education of Croatian citizens (Poticanje). Since 30% of energy consumption in Croatia is attributed to the housing sector, the effect that EE measures can have when they are applied in Croatian households is significant (Informiranje). The educational component of the project is extremely important, and it includes the encouragement for usage of energy efficient products, materials and systems on local and national level. Educational activities include: clarifying the basic concepts of energy efficiency, educating on the ways and the products to save energy, as well as the getting the information directly from energy advisors on a telephone info-line or by 128 info-points in 52 cities and 12 counties in the Republic of Croatia. Among them, there are also schools and libraries.

Within the project, a number of educational and informative materials (leaflets, booklets, publications) were created and they make the Green Library of Energetic Efficiency (Zelena knjižnica energetske učinkovitosti or ZeeK). Although all the materials are available in electronic form, they also exist in physical and as such are available to anyone interested in the increase of energetic efficiency. The goal of EE Library is to make this information accessible to experts, members of academic community, students and citizens. All libraries that house the Green EE Library were donated the shelf together with three packets of all EE materials. The first Green EE Library was launched at the National and University Library in Zagreb in 2012 (Nacionalna). Next to the National and University Library, there are nine other libraries with the Green EE materials. Those libraries are: University Library in Pula, City Library Franjo Marković Križevci, City of Prelog’s Library and Reading Room, Public Library and Reading Room Vlado Gotovac Sisak, City and University Library in Osijek, Faculty of Law Library in Osijek, University Library in Rijeka, University Library in Split, and Public Library in Zadar. The Green EE Libraries at those libraries were founded later, during 2013.

This paper looks into the experience and views of librarians in charge of the Green EE Libraries on usage and outcomes of those libraries and materials on their customers and library in general.

3. Research

3.1. Methodology, instrument and sample

As already mentioned in the previous chapter, there are ten libraries in Croatia with Green EE Library. Our paper is based on the data received from all ten libraries. Due to the size of the sample, we decided on a qualitative research method. We drew up eight tentative interview topics on the foundation of the Green EE Library, benefits for the host library, impact on usage and customers, customers’ interest for the topic, other library’s environmental activities, other environmental projects of the library, the responsibility for educational and promotional activities regarding environmental issues, etc. During March 2014 the ten libraries were contacted by phone and invited to cooperate in the research. Consequently, the librarians in charge of the Green EE Libraries were e-mailed interview questions and asked to set the appropriate time for the phone interviews. Optionally, they were offered the opportunity to write their answers and mail them back to us. Librarians in nine out of ten libraries chose to write the answers and mail them back to us. The only phone-interview was conducted with the librarian from the Zadar Public Library. Content analysis of the answers
was performed and the results are presented in this paper. Libraries were coded (L1-L10) in order to make the analysis easier.\textsuperscript{176}

### 3.2. Results

#### 3.2.1. The way the Green EE Library was initiated

The Green EE Libraries in the sample were initiated in various ways. In one library it was the result of joint efforts of both the library and the UNDP office (L1), in four libraries it was initiated by the library itself (L3, L4, L5, L8), and in the last five it was initiated by the UNDP office (L2, L6, L7, L9, L10). In cases when it was initiated by the library, it was usually the case that the library itself was involved in ‘green’ issues through some other projects. L3 was for instance involved in the 2011 project of the Library Association of Istria entitled ‘The Green Library’\textsuperscript{177} and the launch of the Green EE Library was a logical continuation of that library’s ‘green’ efforts. L5, on the other hand, was involved in the 6-month project of the primary school Prelog. During that project, the library contacted the UNDP office. Yet another library, L8, was involved in the project entitled Deepening University Cooperation Osijek-Pecs (DUNICOP). Within the project, the law faculties from both sides (Osijek and Pecs) analysed various aspects of cross-border development and environment protection (Župan and Vinković, 2013). L8 was involved in the project through EU-info centre service of the library\textsuperscript{178} and the opening of the Green EE Library seemed as a natural continuation of the DUNICOP project and the EU-info centre. In cases when the initiation came from the UNDP office, sometimes it was provoked by some of library’s activities – for instance, when L7 received the energy certificate, it put the billboard with the image of the certificate on the library wall. The manager of the UNDP project was passing through Zadar, saw that billboard and stopped by the library to offer future cooperation. In the case of L2 the initiation came from the manager of the EE office of the city of Križevci. L10 was visited by the UNDP office representatives at the beginning of 2012 (however, it took a whole year to actually launch the EE Library - it was launched on February 19, 2013). They offered the library the project materials, and it was that particular library that actually proposed that those materials were displayed on a specially designed shelf (they initially suggested the form of a tree). The idea of a tree was later abandoned, but the idea of a specially designed shelf was not. Later, all the materials donated to the libraries came together with that specially designed shelf.

#### 3.2.2. Benefits for the library and marketing of the Green EE Library

The launch of the Green EE Library was in all libraries accompanied by extensive media coverage (local and/or national television and radio, tv’s teletext, newspapers, environmental portals, library’s web pages, posters). Two libraries (L4, L7) stressed out that the mayors of those two cities were present at the launch. Two libraries connected the launch with some significant dates (L8 with the Day of Europe, 9\textsuperscript{th} May, and L6 with the Night of books, 23\textsuperscript{rd} April 2013).

\textsuperscript{176} L1 – National and University Library in Zagreb, L2 - City Library Franjo Marković Križevci, L3 - University Library in Pula, L4 - Public Library and Reading Room Vlado Gotovac Sisak, L5 - City of Prelog’s Library and Reading Room, L6 - University Library in Rijeka, L7 - Public Library in Zadar, L8 - Faculty of Law Library in Osijek, L9 - University Library in Split, L10 – City and Public Library Osijek.

\textsuperscript{177} More about the project can be found at Zelena knjižnica, http://www.zk.dbi.hr/, (accessed 29 March 2014)

\textsuperscript{178} In 2011 Paul Vandoren, the representative of the European Commission in Croatia, gave the Faculty of Law in Osijek the status of the European information centre (EU i), and it was positioned at the faculty’s library.
All libraries are convinced that there are many benefits of having the Green EE Library. For some it is the issue of image because the library becomes recognized as environmentally sensitive (L1, L7, L9). L8 stresses out that the Green EE Library, which originally was not intended to be the part of the DUNICOP project, ended up adding value to the overall project’s goals. L10 had some organizational problems connected with EE materials. First of all, the shelf itself was too big and could only be positioned in the library hall. This also dictated the way the materials were used – monographs were catalogued and placed in the reference and lending departments, while the informational materials and leaflets were left unmonitored on the shelf in the library hall. Consequently, this library thinks that the it would have had the benefits if all the EE materials were on one place, under the supervision of the librarian who could also give information about the topic. This library publicized the Green EE Library as long as the new EE materials were coming (they stopped at one point).

3.2.3. Impact of the Green EE Library on library and its services; impact of the Green EE Library materials on customers

Two libraries in the sample reported the increase of the number of library customers as well as the attraction of new customer groups (L1, L2). L1 reports organized customer groups that have been visiting the library especially to get in touch with the Green EE Library materials. L2 points out that many people who were present at the Green EE Library launch immediately became new library customers: entrepreneurs, construction workers, designers, officers of the local town-planning department, craftsmen, etc. These were all new customer groups for this public library. A few academic libraries in the sample confess not to have attracted new customers to the library (L6, L8). In some libraries the Green EE Library’s materials were used more at the Library’s opening (L1), in some the EE materials became popular in time (L4), and some libraries confess that the materials are in general rarely used (L3, L10). Some libraries do not have the data about the usage of the materials because one part of the materials is placed in the area of reading rooms (unsupervised) (L9) or in a library hall (L10).

3.2.4. Customers’ interest for materials on environment protection and energetic efficiency

The type and the interest of customers for the Green EE Library materials depends a lot on the type of the library. Customers in the public libraries are usually experts interested in professional topics, (employed) people interested in learning about the energy efficiency certificates, the retired interested in reducing their energy costs, young couples building their new house, students and schoolchildren for their school assignments. Customers in academic libraries are usually students and university teachers, fourth-year high-school students working on their graduation papers, but also journalists (L1). For L8 customers are experts and professionals interested in energy efficiency, but also teachers from the nearby Faculty of Economy. Also, the customers are kindergartens who borrow educational films on ecology and environment protection. Five of our respondents (L1, L2, L4, L5, L6) monitor the usage and circulation of EE materials, the rest of the libraries do not or only partially (L10).

3.2.5. ‘Green’ activities of the library prior to the foundation of the Green EE Library

Four public (L2, L4, L5, L7, L10) and several academic libraries (L3, L8) report extensive activity on environmental issues prior the launch of the Green EE Library. Public libraries often organize various workshops, especially for kindergarten and primary-school children (L2, L5, L7), but also exhibitions, lectures, public discussions, radio-programmes in which they present the new ‘green’ titles. L5 is also included in the Prelog’s primary school project
Light Saving City of Prelog, while the L2 was part of several projects: “Together for better”, the project of the National Foundation for Civil Society Development; it cooperated with schools in marking the Earth Day; was part of the educational project for children “Orange bin” on waste sorting in cooperation with the Križevci communal services system; organized a workshop on picture-book creation out of recycled paper that took place at the local craft fair, etc. In their activities, the L7 cooperates with several other associations and institutions in Zadar area, e.g. Eko Zadar, and the local communal services system Čistoća. The academic library L3 has been involved in the aforementioned project The Green Library (Library Association of Istria), and ever since 2011 the library organizes two times a month various lectures and documentary film evenings on environmental issues. The project actively involves also students, especially the students of the Faculty of Economy and Tourism “Dr. Mijo Mirković” and some environmental lectures are even integrated into three courses at that faculty. Two libraries reported only the collections on environmental topics as a prior activity – L1 has a collection of official documents (UNDP, EPA, European Commission - The Directorate-General for the Environment, European Environment Agency, and the Croatian Ministry of Environmental and Nature Protection), and the L8 built the collection for the course Environmental law, as well as for the seminar and diploma papers on environment protection and sustainability. Through the local library association’s project The Green Library L3 has made connections and cooperated with over 20 institutions in the area (various institutions, universities, schools, cinemas, associations, etc.) L8 has also been very active in promoting environmental issues – the chief librarian was a member of the DUNICOP project and in 2013 took part in an international scientific conference Law – regions – development with a presentation on the role of information and education in environment protection, with a special emphasis on regional efficiency. Furthermore, this library was invited by the Regional Development Agency of Slavonia and Baranja to take part in a public discussion on the Action plan of the energy sustainable development of the city of Osijek. One of the measures included in this action plan for a reduction of CO2 emission in the area of Osijek is also the Green EE Library. Also in 2013 the library took part in a workshop on a network of renewable energy sources within the CHREN project (Croatian Hungarian Renewable Energy Network) in Osijek. In future, the library is planning to establish the cooperation between the library’s EU-i info centre and the Regional Agency.

L9 reports not to have had any prior ‘green’ activities, while L6 organized workshops on environment protection within the Science Festival a few years ago.

3.2.6. UNDP workshops in the library

Within the project Removing Barriers to Energy Efficiency in Croatia” numerous educational workshops were organized for Croatian citizens. However, only four libraries in the sample (L2, L3, L7 and L10) reported that workshops were organized within the premises of their library. Two libraries organized the workshops at the same day of the Green EE Library’s launch (L3 and L7). L2 has had even two workshops and reported of a great interest of workshops participants for topics connected with solar collection. In some of the libraries workshops were organized for adult customers (L2), in some for children (L7), and in some for librarians (L10). Two libraries made preparations for the workshops, however, they never took place due to some organizational issues within the project itself (L6, L8).

3.2.7. Libraries as agents in promoting environmental issues (education, partnerships, etc.)

Libraries in the sample are unanimous that libraries have a social responsibility and should have a proactive role in promoting socially responsible actions and activities. First of all, the
library’s primary role is to collect, preserve, organize and secure access to all the materials and information in its possession. Besides those primary tasks, libraries also have an educational component which is realized in the organization of various workshops, exhibitions, public discussions, etc. L8 stresses out the importance of partnerships with other institutions and associations, whereas L1 points out that librarians should gain additional knowledge and competences necessary for all the issues connected with environment protection. L10 emphasizes that public libraries are better suited to offer environmental information than other types of libraries due to their openness to various customer groups.

3.2.8. ‘Green’ processes in the library

All the libraries in the sample act in accordance with the environment protection. They are making pro-environment decisions and adopting pro-environment practices: energy-efficient light bulbs, use e-mails instead of the paper, if they need to print, they do it on both sides of the paper, they sort waste, reduce the number of lighting objects in some areas of the building, close windows if the air-conditioner is on, have labels around the building (‘Turn me off’, ‘Save paper’, ‘Save water’, etc). When the L6 library did the reconstruction of their heating system, they installed a new low temperature oil boiler, which can achieve up to 15% of energy saving annually.

Several libraries in the sample have got the energy certificates (L3, L6, L7, L9), while two libraries (L4, L8) complained that they cannot obtain this certificate because they do not own the library buildings and are not even allowed to make any alterations (that would improve the energy efficiency of the building) (L4 in particular).

4. Discussion and conclusions

This paper presents the findings of the interviews with ten librarians in charge of the Green EE Libraries about the way those Green EE Libraries were launched, the impact they had on libraries, the usage of EE materials, and the library’s role in promoting and practicing pro-environment practices.

The initiative for the installation of the Green EE Library shelf in libraries came from both sides – in 40% it was initiated by the library and in 50% by the UNDP officers (in the case of the National and University Library in Zagreb, which was the first library with the Green EE Library, it was the result of joint efforts). In many cases, when the initiative came from the side of the library, as was the case with libraries in Pula, Prelog or law library in Osijek, those libraries had already been involved in some other ‘green’ projects and the installation of the Green EE Library seemed as a logical continuation of libraries’ pro-environment efforts and engagement. In four libraries the UNDP officers delivered a workshop on EE efficiency, usually to the library customers and in one case to librarians.

All the libraries in the sample publicized the launch of the Green EE Libraries and the EE materials that can be accessed in those libraries. Many libraries (in Sisak and in Zadar) invited their mayors to the launch, which also emphasized the significance of the manifestation for the library, but also for the community itself. Public libraries usually think that their image benefited from this new service, while for the law library in Osijek this new service meant the additional value to some of the pro-environment projects it was already working on.

A few libraries in the sample have attracted new customer groups (National and University Library in Zagreb and Križevci public library), but other libraries do not really report about
either the increase or the new customers. It seems that public libraries were more successful in
reaching out to the wider audience, especially because they organized a number of workshops,
lectures, exhibitions, etc. As one respondent pointed out, those libraries cater to the needs of
wider customer groups and are more open and easier accessible to the public than other types
of the libraries. Also, those libraries (e.g. Zadar, Prelog or Križevci library) partnered with
some other institutions, schools, communal services, etc. in trying to communicate the ‘green’
message to their local community. However, some academic libraries were also very active
(e.g. University library in Pula or law library from Osijek), especially in combination to some
other earlier environmental activities of those two libraries (The Green Library project in
Istria, or DUNICOP project, EU-info centre, partnering with the Regional Development
Agency of Slavonia and Baranja of the law library in Osijek).

The EE materials attracted new customer groups such as energy experts, (employed) people
interested in learning about the energy efficiency certificates, the retired interested in reducing
their energy costs, young couples building their new houses, students and schoolchildren for
their school assignments. Unfortunately, the data about the circulation of the EE materials has
only the half of the sample (National and University Library in Zagreb, Križevci, Sisak,
Prelog and Rijeka library). Some libraries either catalog and monitor only monographs (as is
the case with Split or Osijek City and University Library), while the rest of the sample does
not have the information about the usage. We are convinced that the UNDP office would be
very interested to learn more about the impact of the EE materials (e.g. to find out about the
type of customers interested in EE topics as well as the most popular topics for the citizens).
However, most of the libraries have to cope with space and insufficient staff and therefore a
part of those data are lost (especially for the materials, which are only of informative nature
and are neither catalogued nor monitored).

Libraries have traditionally served as vehicles for societal progress within their communities.
Now, in the twenty-first century, libraries have the role of teaching environmental awareness
through library programming and services. Environmental education is yet another way that
libraries help their communities take steps toward the progress This paper gave example of
ten Croatian libraries that have claimed that role and are well aware of their significance in
raising the level of their communities’ environmental sensitivity. Those libraries have also
adopted the pro-environment practices and are themselves role-models for their communities.

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