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Regional
Natural History**Formerly **Bollettino della Società dei Naturalisti in Napoli****Towards an environmental open library in the center of Naples.
The case of the Library of the Società dei Naturalisti in Napoli**Raffaele De Magistris*¹, Lara Liberti², Maria Pia Cacace³DOI <https://doi.org/10.6093/2724-4393/10316>***Correspondence:**lellodemagi@yahoo.com
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Commons Attribution 4.0 International License](https://creativecommons.org/licenses/by/4.0/)**Abstract**

In this work, the strategies of the Library of the Società dei Naturalisti in Napoli to promote environmental awareness are described. They are based on three different actions: 1. Highlighting books and other media on Conservationism through a new section named the open consultation room "Lello Capaldo", from the renowned environmentalist, whose heirs donated his collection of more than 3,000 volumes to the Library, 2. Creating a circulating book selection, the "Biblioteca Diffusa dell'Ambiente" that will circulate among city schools, specifically directed to kids from 6 to 12 years, 3. producing actions that communicate and spread more sustainable practices, that reduce the ecological footprints of the library, contributing to disseminate good practices among citizens.

Keywords: Libraries, environmental-dedicated collections, circulating book collections, ecological footprint**Riassunto**

In questo articolo vengono descritte le strategie della Biblioteca della Società dei Naturalisti di Napoli per promuovere la consapevolezza ambientale. Esse si basano su tre azioni diverse: 1. Dare risalto a libri e altri media sul tema della conservazione attraverso una nuova sezione denominata sala di consultazione aperta "Lello Capaldo", dal noto ambientalista, i cui eredi hanno donato alla Biblioteca la sua collezione di oltre 3.000 volumi, 2.

Creare una selezione di libri circolanti, la "biblioteca diffusa dell'ambiente" che cirolerà tra le scuole cittadine, specificamente rivolta ai ragazzi dai 6 ai 12 anni, 3. Produrre azioni che comunichino e diffondano pratiche più sostenibili, che riducano l'impronta ecologica della biblioteca, contribuendo a diffondere le buone pratiche tra i cittadini.

Parole chiave: Biblioteche, collezioni dedicate all'ambiente, collezioni librerie circolanti, indirizzo ecologico

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Introduction

Public debate on environmental issues as climate changes, water shortage, pollution, loss of biodiversity is often characterized by a general concern not associated to an adequate knowledge about the complexity of the topics. The active participation of people in the most controversial decisions is a crucial point of any political decision to face environmental problems but participation requires, in turn, innovative tools to build up an adequate citizenship awareness: "informed and involved citizens become citizen-experts, understanding technically difficult situations and seeing holistic, community wide solutions (Irvin & Stansbury 2004).

Most of the available information on the present state of the environment comes from the internet, but it can be not easy to draw a well-established framework based on information from the net (Breggin 2000: (Breggin in Environmental Law Institute, 2000). Moreover, the possibility of meeting citizens and having a direct contact is still the best way of transmitting knowledge (Hider et al., 2023).

The public engagement proposal called "reading the environment - an environmental library in the hearth of Naples" has the ambitious goal of creating in the center of the city of Naples the first specialized library open to all citizens, to spread environmental awareness by ensuring open and easy access to all relevant information on sustainable development goals of ONU Agenda 2030 (<https://sdgs.un.org/goals>).

Libraries can represent the most important model for the organization of knowledge and the dissemination of information on the recent issues about the environment (Eusepi 2019; Faggiolani 2019; Morriello 2023). In Italy, at the moment there are few libraries with a special focus on ecology and related issues (see <https://anagrafe.iccu.sbn.it/it/>), but any library can represent a valuable community resource for environmental information, making specialized books available, assisting people in internet navigation, and offering a common place for public discussion (Parlavecchia 2021). But today libraries are gaining new functions, proposing not only free access to information but creating new opportunities of expanding knowledge also outside of the physical space of libraries.

According to Morgese (2019; 2023), the concept of “ecolibrary” encompasses three different aspects:

- a thematic specialization of the collections;
- the promotion of projects, initiatives, services involving people on issues sensitive to environmental issues and ecological values;
- a continuous effort to find architectural, technological, and infrastructural eco-friendly solutions for the spaces of the library.

According to the concept of ecolibrary so far outlined, the Library of the Società dei Naturalisti in Napoli (for the history and evolution of the Society and the Library refer to <https://www.societanaturalistinapoli.it/>) continues the mission it derives from its prestigious past, but at the same time tries to provide an updated and forward-looking range of services. The aim of the new section “reading the environment” is to include all the aspects related to the concept of ecolibrary in one place. In this respect, a new space dedicated to the conservationist Lello Capaldo was established in the historic center of Naples at the Library of Società dei Naturalisti, to provide a hub for the dissemination of environmental culture to civil society. Based on an extensive thematic book collection and managed by expert naturalists, environmental and sustainability technicians, it aims to raise the cultural level and sensitivity to the issues of nature conservation. The involvement of faculty teachers, technicians, students, and recent graduates will create an effective melting-pot in the transfer and dissemination of information.

At the same time “reading the environment” moves out of the library with the second part of the project. The aim is to help schools to

create section of their libraries devoted to environmental topics, starting from a circulating collection of books, belonging to a special fund called “circular environmental library”, set up by the Library of Società dei Naturalisti in Napoli,

Finally, the project takes into consideration some actions, presently in progress, whose aim is to make the spaces of the Library more sustainable, showcasing some examples of environmentally friendly practices.

In this article all the aspect of the project will be briefly described, and their potential importance will be highlighted, describing the first results produced.

The open space of the Biblioteca dei Naturalisti in Napoli: the “Lello Capaldo” environmental section

Libraries are community hubs, meeting places where people can be involved in social activities, that are not limited to simple reading. Today's conception of the public library largely favors open-shelf rooms, where distance is eliminated between books (stripped of their “sacredness”) and users. One of the most frequent activities of library patrons is to browse shelves for books or magazines, having the opportunity of looking at covers and leafing through books. Having in mind these aspects, the “Lello Capaldo” environmental open room intends to be a place where it is possible to study or work, and at the same time fulfil the need of making discoveries about different aspects of nature conservation and protection.

The opportunity of creating such a dedicated space was due to the generous gift by heirs of Lello Capaldo private library. Pasquale (“Lello”) Capaldo was one of the

protagonists of conservationism in Italy (https://it.wikipedia.org/wiki/Lello_Capaldo) and was also a reader with broad interests, ranging from Natural Sciences to anthropology, archeology, ethnology, and local history. The importance of personal collections on the creation of specialized libraries has been frequently debated (Zagra 2004; Ghersetti et al. 2020). This generous gift has represented an opportunity to significantly improve the environmental section of the Library of the Società dei Naturalisti in Napoli, prompting the librarians also to new acquisitions on items dealing with Natural Sciences and Conservationism. The "Sala Capaldo" is a free-access room of the library. Most of the books on the shelves, approx. 58%, fall within strictly scientific subjects, while the humanities cover approx. 42%. The room is currently divided into several thematic sections. In order to make the distinction between the sections more immediate, also visually, different colored marker strips have been placed on the edges of the shelves occupied by each section.

Below are the sections and for each of them the percentage of volumes present out of the total volumes: Zoology: 13%; Botany: 9%; Biology: 4%; Earth Sciences: 7%; Ecology: 6%; Geography and explorations: 10%; Archaeology: 5%; Mathematical, physical, and chemical sciences: 4%; History of science, history, philosophy, folklore, cognitive sciences, etc.: 19%; History and traditions of Naples: 18%; Visual arts: 1%; Urban planning, other arts etc.: 4%.

On the whole, in the Sala Capaldo there are 3500 volumes; 2535 books are now catalogued in the Servizio Bibliotecario Nazionale (SBN), of which 2062 belong to the Capaldo collection and 473 to other

acquisitions. The book collocation follows the Decimal library classification (DDC) (Dewey1886; Crociani et al. 2016; see also https://en.wikipedia.org/wiki/Dewey_Decimal_Classification), but without adopting its subdivision scheme, in view of the quantitative and typological characteristics of the Capaldo collection. The books in each section are divided into internal subsections gradually becoming more specific, according to the level of detail of the topics covered.

In concrete, the classification/location of the volumes consists of the following elements: Labelling of the Room (Sala Consultazione Capaldo); Division into general subjects (e.g., "Zoology"); First subsection (e.g., 'Systematics'), expressed by a numerical notation; Second subsection (e.g., "Cephalopoda"), expressed by a numerical notation (Table 1); The three initial letters of the Author's surname, followed by the first three letters of the Title.

The book collocation on the spine label of each volume is indicated, for example, as follows: S. CAP; ZOO; 2/5540; LIB. MOL.

In order to quickly unravel the numerical notation, the reader can have recourse to one of the many 'legenda' in the Sala, which list the subjects corresponding to each number and allow, among other things, the elimination of any possible uncertainty through the presence of disambiguating expressions (e.g.: 2/5540 = Cephalopoda) and appropriate cross-references and references between entries (such as 'see also'. etc.).

Table 1: An example of classification: the zoological sector of the Lello Capaldo open section.

ZOOLOGY		
1 - GENERAL ZOOLOGY		
2 - SISTEMATICS	1000	General systematics
	2000	Porifera
	3000	Ctenophora
	4100	Placozoa
	4200	Cnidaria
	4300	Xenacoelomorpha
	5100	Phoronida
	5200	Brachiopoda
	5300	Bryozoa
	5400	Nemertea
	5500	Mollusca
	5510	Aplacophora
	5520	Monoplacophora
	5530	Polyplacophora
	5540	Cephalopoda
	5550	Gastropoda
	5560	Bivalvia
	5570	Scaphopoda
	5600	Annelida
	5700	Platyhelminthes
	5800	Gastrotricha
	6100	Rotifera
	6200	Micrognathozoa
	6300	Gnathostomulida
	6400	Chaetognatha
	7100	Nematoda
	7200	Panarthropoda
	7250	Arthropoda
	7251	Chelicerata
	7252	Myriapoda
	7253	Oligostraca
	7254	Multicrustacea
	7255	Cephalocarida
	7256	Branchiopoda
	7257	Remipedia
	7258	Hexapoda
	7300	Scalidophora
	8100	Ambulacraria
	8200	Chordata
	8210	Cephalochordata
	8220	Tunicata
	8230	Vertebrata
	8231	Agnatha
	8232	Chondrichthyes
	8233	Osteichthyes
	8234	Amphibia
	8235	Reptilia
	8236	Aves
	8237	Mammalia
3 - APPLIED ZOOLOGY	1000	Generalia
	2000	Regional fauna
	2100	Anthropozoology
	2200	Wildlife exploitation
	3000	Wildlife protection and management
	4000	Veterinary medicine - zoonoses
4 - ANIMAL BEHAVIOUR	1000	Ethology general concepts

The scattered environmental library: bringing environmental awareness in the schools

The main objective of the project is to help libraries transform their spaces into centers of social aggregation for young people, promoting the dissemination and use of environmental knowledge, open to all citizens, starting from children and teenagers. It is well known that Italy, as many other Countries, is facing a literacy crisis with many adults reading very basic. According to the social transformations that characterize today's age of complexity, the Library of the Società dei Naturalisti in Napoli launched a new service, called "the circulating environmental library".

A new fund of thematic books on the environment has been dedicated to kids from 6 to 13 years. At the moment, this fund encompasses more than 100 volumes. It represents a documentary core to support initiatives and educational projects aimed at raising awareness on environmental issues and sustainable development, to be activated starting from the schools based at the center of the city of Naples, in a network with the libraries of the other subscribers and future partners. Many kids for different reasons can't get access to public libraries, but the "scattered environmental library" gives the opportunity of having books in their neighbourhoods, representing a resource and a service to the community.

But the establishment of the Scattered Library of the Environment is also the starting point for several actions: in collaboration with Legambiente Parco Letterario Vesuvio, the school I.C. Adelaide Ristori, the Annalisa Durante open library, the Association "Mine Creative" and the Associazione Italiana Biblioteche (AIB,

Campanian section), an organic "didactic-educational pathway" for groups of students of the I.C. Adelaide Ristori has been set up. In brief:

- a) the circulating library will act as a flywheel for the promotion and establishment of a school library proper to the Institute;
- b) a program of readings and debates on environmental topics has been defined with the involvement of teachers, animators, authors, publishers, with the consequent elaboration of proposals and planning of active citizenship actions (for example: landscape protection and urban decorum actions, promotion of separate waste collection, small circular economy actions;
- c) some guided tours of historical center of Naples will be performed, to promote the knowledge of historical, artistic, and monumental beauties to be preserved, establishing a network with other cultural enhancement initiatives and sustainable tourism actions;
- d) the aforementioned actions will be shared with the Culture Service of the Municipality of Naples for the acknowledgement of the established *Biblioteca diffusa dell'Ambiente* and its inclusion as a founding nucleus of the "Tavolo Tematico dell'Ambiente", which belongs to the Patto Locale per la Lettura" of Naples City Hall.

Toward a better eco-sustainability of the spaces hosting the Library of the Società dei Naturalisti

Libraries are often based on physical locations that have a historical appeal but lack any modern approach to sustainability of common spaces. This is also the case of the library of the Società dei Naturalisti. As underlined by Kelly Blanks (<https://>

blog.pressreader.com/libraries-institutions/sustainability-in-public-libraries): "Libraries have been around for centuries, and so has their model for loaning and sharing access to resources".

In this respect, the library of the Società dei Naturalisti gives the opportunity of accessing other resources, offering the possibility of using different items, spanning five categories:

- assistive, such as magnifiers, illuminated magnifiers, desktop magnifiers;
- games;
- photography: digital camera, photo-lighting Kits, tripods for cameras, video cameras;
- STEMS: microscopes and stereo-microscopes;
- computers, printers and orbital scanners.

Eco-sustainability of libraries is also evaluated in terms of overall comfort of inner environments, possible presence of airborne particles containing allergens and microorganisms potentially dangerous both for human health and documents preservation, reduced consumption of energy and waste production.

In collaboration with the Department of Industrial Engineering of the University of Naples "Federico II" a check list to monitor the present state of the environmental quality of the Library of Società dei Naturalisti in Napoli has been developed. Temperature and air humidity have been regularly checked. Lighting is provided throughout the library by LED lights, and energy savings guaranteed by the automatic dimming and automatic switching off of the lighting, thanks to a series of sensors for person presence and luminance detection has been programmed. These innovations

should contribute to improving the quality of life and attractiveness of the library as a building and as a place to stay.

Moreover, microbial occurrence in the air of the library has been controlled with the aim of passive samplings and non-destructive technique of sampling have been also adopted to check the presence of microbial communities on the external cover of books and on paper, as proposed by Pasquarella et al. (2012). Samplings have been carried out by a team from the Department of the Biology of the University Federico II of Naples, that ensure a constant monitoring activity in the spaces of the library.

The most critical situation is related to temperature. Turhan et al. (2019) have stressed the impact that climate change could have in Mediterranean historic Libraries, both in term of increased degradation rates of paper materials and thermal comfort conditions. Temperature measurement carried out in the spaces of the Biblioteca della Società dei Naturalisti have evidenced an annual range between 15 and 25 °C, with peaks of less than 12 °C in winter and more than 28 °C in summer. Temperature control adopting eco-friendly solutions presently represents the most complex problem to be resolved.

Waste production of libraries is often related to print activities. In the Library of the Società dei Naturalisti have been adopted the tips suggested by Singh & Mishra (2019), such as prevalent use of digital formats and, when not possible, use of recycled paper, printing on both side of the paper, use of recycled cartridges.

Conclusions

The new environmental open space of the Library of the Società dei Naturalisti in Napoli represents a promising opportunity, but coordination and planning are required. Libraries can promote environmental knowledge in different ways and have the possibility of reaching a large population, but the cooperation with other public Institutions, as Universities and City Halls is of utmost importance. One of the most striking limitations to the emerging role of the libraries as "ecopoints" is due to reduced funds and personnel, necessary to extend the opening times and for new acquisitions. The role of volunteers can be of great importance, but the enlargement of the budget necessarily requires the participation to specific projects at local, national, and European level.

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