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THE GREEN LIBRARY

The challenge of environmental sustainability

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Ökologische Nachhaltigkeit in der Praxis

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**The impact of standardization on
responsible library design**

Rereading ISO/TR 11219:2012 from a sustainability perspective

**DE GRUYTER
SAUR**

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Rereading ISO/TR 11219:2012 from a sustainability perspective

Abstract: Standardization is an important part of successful building and construction today. The *ISO/TR 11219:2012. Information and Documentation. Qualitative Conditions and Basic Statistics for Library Buildings; Space, Function and Design* is a standardization document for librarians, architects and other professionals involved in library planning and construction. It provides guidelines and normative references as well as facts and figures concerning all parts of a library building. This chapter is a rereading of the *Technical Report* from a sustainability point of view. Sustainability as defined here is not a simple buzzword associated with environmental protection and resource efficiency, but a complex concept concerning socially, economically and ecologically responsible action. It becomes obvious that the *Technical Report* provides many standards and guidelines connected to the sustainability issue along these lines.

Zusammenfassung: Erfolgreiches Bauen ist heutzutage eng mit Standardisierung verbunden. Der *ISO/TR 11219:2012. Information and Documentation. Qualitative Conditions and Basic Statistics for Library Buildings; Space, Function and Design* ist ein Fachbericht für Bibliothekare, Architekten und andere beteiligte Fachleute im Bibliotheksbau. Er enthält Richtlinien und normative Referenzen sowie Kennzahlen und Daten für sämtliche Bereiche eines Bibliotheksbaus. Dieses Kapitel ist ein Wieder-Lesen des Technical Report unter dem Aspekt der Nachhaltigkeit. Im hier beschriebenen Sinne ist Nachhaltigkeit nicht nur ein einfaches Modewort, das mit Umweltschutz und Ressourcenschonung assoziiert wird, sondern ein komplexes Konzept, das soziale, ökonomische und ökologische Verantwortung in konkretes Handeln umsetzt. Es wird deutlich, dass der Technical Report viele Standards und Richtlinien bietet, die mit Nachhaltigkeit in diesem Sinne verbunden sind.

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1 Introduction

Caused by the discussion about man-made global warming and resource protection, sustainability has become a buzzword over the last decade. Although international negotiations concerning the reduction of the global carbon footprint have not been very fruitful, there are several regional treaties as well as policies on a national, state and communal level. Taking into account different cultural traditions and habits in relation to environmental protection and resource management, a mosaic of regulations, standards and guidelines is presented to the viewer. It is not easy, therefore, for librarians and architects to find a way through this mass of information. On the other hand stakeholders and patrons expect the library to become “green”, and politicians tend to favour projects dealing with the sustainability issue. Owen and Dovey (2008, 16) name the problem of green washing as one of the major challenges to sustainable architecture. Green washing is a popular marketing strategy promoting products and services as eco-friendly which in reality have no considerable impact on the overall ecological footprint of either the vendor or the consumer. But how can librarians and architects contribute to a truly responsible approach to the design and management of libraries? Are there special needs and requirements of libraries that may promote or hinder sustainable design? And is it possible to define best practice for sustainable library design? This chapter tries to answer these questions from the standardization point of view. Based on the proposition that sustainability is more than a concept promoting environmental sensibility but a broader approach to social, economic, and ecological responsibility, I will discuss the possible impact of standardization on the implementation of sustainable design in library building and management. After describing the idea and importance of standardization from a general point of view, I will summarize the goals and contents of *ISO Technical Report 11219:2012. Information and Documentation. Qualitative Conditions and Basic Statistics for Library Buildings; Space, Function and Design* (TR). The main part of this article will consider the TR as a possible tool for responsible library management and design.

2 Sustainability and responsibility

Although sustainability seems to be a concept discussed in contemporary environmental debate, it is in fact much older. For a long period including the pre-industrial era, economy and progress had depended on wood as a source of energy, building materials and tools; it was used domestically, and in ironworking,

food production, and all kind of transport. This resulted in an increasing need for wood, especially in times of population growth and expanding industries. Unlike fossil fuels and mineral ores, wood is a renewable source of energy and raw material. The original idea of sustainability was to secure growth and progress by balancing the amount of wood taken from the forests and the reforestation of cleared areas. It is obvious that sustainability in that sense is a generation-spanning approach without a quick return on investments. However, not only intergenerational but also social and cultural responsibilities are connected with sustainability. Especially since the publication of the Brundtland Report (Report of the World Commission... 1987), the founding document for the contemporary concept of sustainability, it has become sensible to link the concept of sustainability with responsibility in a broader sense. This widens the debate to include issues beyond green building, passive house standards, and roofs equipped with solar panels. Sustainability as responsibility refers to ecological, economic, and social aspects. Bugliarello (2008, 54) defines seven aspects of sustainable thinking:

- education,
- quality of life,
- urban management,
- security,
- health,
- economy and jobs,
- and the environmental and ecological aspects of using resources.

Especially on a global level, sustainability would not be responsible without looking at the context. Otherwise the successful enforcement of ecological standards would be impossible and in many ways senseless. As Blühdorn and Welsch (2007, 193) pointed out, environmentalism is a paradigm driven by social and ethical values, not by transcendent forces of nature. Therefore discussing sustainability and responsibility in times of post-ecologism is a part of the discourse on ecological modernization as described by Blühdorn and Welsch in their critical approach (p. 194). While the 1990s faced the rise of the “politics of unsustainability” (Blühdorn and Welsch 2007, 188), some approaches try to align environmental responsibility and economic progress. Today for many stakeholders sustainability and economy are not necessarily a contradiction any more.

That green washing is still, and indeed more than ever, a problem for sustainable development, it is not inconsistent with the relevance of environmental issues for economic success.

3 Sustainability and building

Architecture is only one part of the sustainability debate. Nevertheless, it is not less important for that. Traditionally the emphasis of the discussion around sustainability in building and construction has lain on green building. It focuses on carbon footprints, passive house standards, solar panels, heat recovery and renewable resources. Therefore, it is no wonder that most literature on sustainable library building lags behind the topics of ecological modernization (see e.g. Edwards 2011; Götz 2012). Bugliarello (2008) as well as Owen and Dovey (2008) call for a more comprehensive concept beyond green building. While Bugliarello uses an engineering approach trying to define and deal with the challenges in growing urban environments, Owen and Dovey are looking at the borders of sustainability and architecture. The latter differentiate between sustainable building by the book, which they call the “textbook approach” (p. 14) and sustainable architecture as a creative process within a broader context. Their study is based on interviews with architects, some of whom seem to feel hindered in their creative processes by regulations and standards concerning green building. As cited above, Bugliarello sees one solution in educating architects and engineers towards sustainable thinking as embedding it in the planning process, not as an intervention by authorities or stakeholders. If sustainability were seen as responsibility for the social, cultural, environmental and economic context of a building project, the integration into the creative process would be much easier. The very idea of modern architectural movements was to be aware of, and to use the influence of architecture on, society. Although those approaches were not necessarily successful, they show the possibility of a responsible architecture. Librarians involved in building projects should start thinking in the same way. For a long time library building was seen as merely the functional process of allocating the necessary space for stacks, administration and user services in a shell designed by the architect. This purely functional library design, promoted for example by Harry Faulkner-Brown (1997), was sometimes characterized by a lack of responsibility for the social and environmental context of a building. In his analysis of planned and recently opened library buildings, Edwards (2011) tries to get to a more comprehensive view; he sees “a new generation of library buildings where public space for gathering and private space for reading is combined with attractive airy structures.” (p. 192). At first sight it does not seem obvious to link the appearance of a building with sustainability. But bearing in mind that sustainability should become part of the creative process, this makes sense. Normally, sustainability is not associated with aesthetics. For Bugliarello, the look and appeal of a building is closely connected to the quality of life as well as the social and economic attraction of its context, be it a city or a campus (Bugliarello 2008, 63). This highlights

the responsibility of architects and librarians to create an attractive space with the social, economic and environmental impact well calculated. Best practice in green building, as outlined for example by Götz (2012), may help to find solutions to single questions associated with environmentalism, but it is definitely no answer to the issue itself. The individual social, cultural and environmental context of an institution must be the basis for a responsible design and management of the library building. Consequently a Technical Report alone could not meet this challenge but it may provide a guideline for architects and librarians as to what to keep in mind when feeling their way to responsible design. Standardization itself can be seen as a sustainable approach, too. Therefore I would like to start with some general comments about standardization before interpreting ISO/TR 11219:2012 in regard to its suitability as a guideline for responsible library design.

4 Standardization in context

In many ways the idea of standardization is much older than the concept of sustainability. In fact, it started at the very beginning of human civilization everywhere people began sharing and trading goods, building communities with a differentiation of labour and raising – or mostly paying – taxes. Just as some of the first libraries included archives of tax rolls, many of the early inscriptions laid down standards and measures. After a first peak of standardization during the Roman Empire, modern standardization was established in the 19th century driven by the industrial revolution. The end of traditional craftsmanship and pre-industrial manufacturing was the beginning of single-item production systems and distributed manufacturing. These efficient and fast forms of production depend on accurately fitting parts, specialized tools and workmanlike processing. Since industrial goods became part of people's everyday life during the 20th century, standardization is now part of our daily life, from the electric toothbrush to the size of our paper sheets. Standardization makes production and distribution of goods easier, comparable, faster, and last but not least cheaper.

“ISO International Standards ensure that products and services are safe, reliable and of good quality. For business, they are strategic tools that reduce costs by minimizing waste and errors and increasing productivity. They help companies to access new markets, level the playing field for developing countries and facilitate free and fair global trade.” (ISO Website)

Although countries, societies, companies and individuals benefit a lot from standardization, the standard bodies themselves and their work are relatively invis-

ible. In many countries the national standard bodies are government authorities or part of a bigger agency, other countries like Germany delegate their standardization work to a registered association funded mostly by the industry itself. On the international level standardization is being coordinated by the International Organization for Standardization ISO in Geneva. ISO has 164 members from all over the world. The standardization is done by 272 Technical Committees (TC) covering topics such as dentistry, graphical symbols or societal security. The participation of each national body depends on economic power, interest in international standardization and the number of experts available for working groups. Countries such as the United Kingdom, France, China, the Republic of Korea and Germany provide experts for more than 700 subcommittees. The need for a new standard has to be approved before a working group within a TC starts to work on it. A draft standard is developed by the working group and this draft goes through a process of examination and revision before it becomes accepted as an official ISO standard. Another important part of standardization work is the evaluation and revision of existing standards in order to keep up with technical developments and progress in engineering.

5 ISO and sustainability

ISO sees itself as an active part of the global struggle for sustainability. “ISO’s current portfolio of more than 19,100 standards provides solutions in all three dimensions of sustainable development – environmental, economic and societal.” (Rio+20 2012, 2). Obviously, ISO adopted the comprehensive approach to sustainability as responsibility as well. Certainly, not all of the 19,100 standards are part of the solution, but ISO highlights some fields and individual standards as especially important for solving the challenges formulated by Rio+20. The traditional strengths of ISO are the international collaboration within the working groups and the participation of governments, business and society in the process. Although there is a preponderance of developed countries and industry interests in most fields, both statements are generally speaking true. Besides the obvious contribution of standardization to economic sustainability through interoperability, innovation and compatability, issues like health care, development and safe food and freshwater supply are mentioned by ISO (Rio+20 2012, 24). Environmental management is regulated by a special set of standards, the 14000s. Besides environmental management, ISO provides standards for emissions, product design and monitoring environmental conditions (see Environmental management, 2). In 1993 ISO founded a TC for environmental management with responsibilities

for the ISO 14000 set of standards. The goal was “to provide a practical toolbox to assist in the implementation of actions supportive to sustainable development” (Environmental management, 4). If a library wants to implement sustainable management, service and supply chains, those standards are the right tools to start with. The forthcoming ISO/TR 14069 on the quantification of greenhouse gas emissions for organizations, for example, may become as important for public institutions as the ISO 9001 on quality management systems is today.

6 ISO/TR 11219:2012

TC 46 Information and Documentation is the most relevant for libraries. It has four subcommittees (SC) and five working groups (WG). Each SC has its own WGs again. The *SC 8 Quality – Statistics and Performance Evaluation* has nine working groups. The code of the working group *Statistical Data for Library Buildings* therefore is *ISO/TC 46/SC 8/WG 8*. The members of the working group come from different countries in Europe, North America and Asia. The full title of *ISO/TR 11219:2012* is “Information and Documentation – Qualitative Conditions and Basic Statistics for Library Buildings – Space, Function and Design”. A *Technical Report (TR)* is defined as an “informative document containing information of a different kind from that normally published in a normative document” (ISO/TR 2012). Therefore a TR is more flexible and comprehensive than a normative document. ISO/TR 11219 is a complete guideline for the process of planning and constructing a new library building, and for extensions and refurbishments of existing buildings. It starts with terms and definitions which are especially important to aid the communication of different parties in the planning process (Eigenbrodt 2009, 89). Chapter 3, entitled “Planning library buildings” goes through the planning process from the first steps such as defining purposes and requirements and choosing a site, to a concise description of different areas within a library building. As the scope of the TR covers all types of libraries not all of the areas are necessary for all projects, but nearly all conceivable functions of libraries are included in this chapter. The space requirements of the usable areas are explained in depth in chapter 5. The collaboration of librarians, architects and experts from government authorities resulted in demand-orientated, experiential and well balanced space calculations for each of the areas defined in chapter 3. Chapter 5 provides guidance for the technical aspects of a library building including storage conditions, load assumptions, logistics, safety and security, acoustic conditions, and lighting. Outdoor space, which has been becoming more important as a usable area of the library in recent years, is explained in chapter 6. Accessibility

and barrier-free construction need a broad perspective beyond simple measurements for ramps or doorways. Therefore chapter 7 deals with multiple aspects of barrier-free design. The TR provides a special chapter on sustainable design. It is mainly focused on green building and more detail is given on this below. Annex A is about renovation and reorganization of existing buildings with helpful guidelines for both extensions and for refurbishment projects. A valuable tool for the planning process complementing chapter 3 is annex B with its list of functional areas and rooms. The sources for the TR are normative documents, best practice, other guidelines and above all national standards, especially *DIN Fachbericht 13* (2009) which is quite similar in its structure but not as comprehensive and far reaching as the TR. Therefore, the TR was an important impetus for the current revision of *DIN Fachbericht 13* and a good benchmark for the integration of ISO normative documents in related standards and guidelines on an international, national or regional level.

7 ISO/TR 11219 and sustainability

7.1 Sustainability as environmental, social, cultural and economic responsibility

Although the TR contains a chapter on sustainability, an approach defining sustainability as environmental, social, cultural and economic responsibility should consider it more deeply. Therefore I will start with a systematic review of the document before discussing the approach delivered in chapter 9. As described above, a normative document promotes sustainability in itself, because it has several aspects connected to a responsible handling of resources.

1. A product or service based on normative standards helps to save energy by avoiding unnecessary transport, travel and communication. Although librarians and other parties definitely should visit other projects to learn and glean inspiration, it is not necessary to compare all measurements and space allocations if you can rely on a statistics- and experience-based guideline.
2. The best mistakes are those we can prevent. Particularly bigger projects are full of challenges and pitfalls. Sometimes the parties involved are quite inexperienced either in a big building project (mostly the librarians) or in the organization and needs of a library building (mostly the architects and engineers). It is definitely not possible to prevent all mistakes, for the individual conditions and context of a building project are neither foreseeable nor calculable. But as all mistakes entail delays, minor or major changes and addi-

tional costs, it is crucial for a responsible building project to avoid these consequences. Clear definitions, exact specifications and supporting guidelines are helpful tools for all parties involved.

3. Most specifications given in the TR are minimum levels of the “should be not less than ...” type. But what sounds like the librarian’s perspective is in fact a question of responsibility, too. Certainly the minimum specifications are in line with requirements of a working library. On the other hand, most negotiations with stakeholders will achieve an agreement including those specifications. Librarians should have in mind that the cheapest spaces are those which are not built unnecessarily. This is true for the investment costs and even more for the maintenance costs of a building, which are commonly part of the library’s budget. A responsible space calculation helps to save building materials and construction space, reduces energy costs, and facilitates the maintenance of the building. Estimating less space than necessary may end in overcrowding, early need for extensions or poor acceptance of the building.
4. An unwanted consequence of using the TR could be the decision to pass up on plans for a new library building because calculations come to the conclusion that the existing space is sufficient for the changing needs of the library, or that an extension would be the adequate solution. This may change a project from building new to refurbishing or extending an existing structure. Although such a shift can be disappointing especially for the initiators of a concept, there is an opportunity to face the challenges of the library in a more responsible way. If the building stock is still maintainable and flexible enough for the changes needed, a refurbishment or even a major gutting of the existing building maybe less consuming of energy and materials and therefore also cheaper than a demolition and new construction. From a social and cultural point of view, a building fitting in to a special neighbourhood and context or being a cultural heritage building itself maybe in the right place even for a library reinventing itself. Buildings from the second half of the 20th century are especially under threat these days because the special qualities of these structures are often concealed behind a functionalist or brutalist façade or disfigured by later changes.

7.2 General guidelines and definitions for planning a library building

Having these general considerations in mind, I will now peruse the TR chapter by chapter starting with chapter 4. As stated above, this chapter provides general guidelines and definitions for planning a library building. The purposes

of planning a new library building are described separately in 3.1.1. Especially the traditional reason for a new library building, that is the growing collection of print materials, is being challenged. Nowadays most libraries tend to have a self-renewing collection and libraries with a legal deposit or other archival goals normally build special storage facilities for their holdings. The latter are easier to maintain, especially in relation to the storage conditions, and they also need less building material and space than premises with public areas; therefore they are cheaper; moreover, sites outside the city centres are generally less expensive. It is obvious, by the way, that collection management is a sustainability question as well. The preparatory steps stated in 3.1.1 help to achieve a responsible project from the outset. The evaluation of service areas and user activities together with the definition of future services (3.1.1, par. 4, a–c) may lead to a process of rethinking a building project as stated above. But the preliminary steps should be more than future-oriented, user-centred, and focused on efficiency, even though the social responsibilities of a building project are being addressed (3.1.1, par. 4, e).

Chapter 3.1.2 deals among other things with the calculability of collection growth. Most guidelines and standards available tend to give fixed numbers here; the TR puts this issue in the context of demographic and technical developments (3.1.2, par. 3).

7.3 The site of a building

The site of a building has a major impact on its function as well as on its sustainability. In chapter 3.1.4 special attention is given to the urban environment and neighbourhood of the library (3.1.4, par. 2, a–e). Public spaces like libraries play a major role within the urban environment: they are prominently located, well visited and too big to be overlooked. Neighbourhood libraries or branches of a university library system may be smaller than other structures around; in this case it is even more important for their social and cultural impact to make them visible and accessible. An inadequate building site is defined not only by the library's impact on its neighbourhood but in a more structural sense by the adequacy of soil, sunlight radiation, the physical impact of surrounding structures and by air quality and noise (3.1.4, par. 2, f–j). All these influences may have major consequences on the building's construction and durability. Special precautions may be necessary for groundwater management, acoustic insulation or shading of a south façade. In this case construction and maintenance of the structure may be unsustainable for both environmental and economic reasons.

7.4 Demographic and population-related issues

Before calculating the space requirements some factors have to be taken into account as stated in chapter 3.2. The demographic and population-related issues as described in chapter 3.2.1 are very closely related to deliberations about social responsibility of a public institution (3.2.1, par. 4, f, g). Special emphasis is laid on the decision for open or closed stacks (3.2.4). As stated above, the collection is not the primary focus of the TR. On the other hand, space for stacks is still a crucial factor in space calculation. The space requirements for open shelving are notably higher than those for closed stacks. Therefore many academic libraries, for example in the USA, tend to move large parts of their former open-shelf collections into automated storage and retrieval systems which are the most efficient and space-saving solutions for storing books, as described below. Since public libraries still promote reading and want to guarantee the fast accessibility of their print collections, they are less likely than other types of library to focus on the more economic and environmentally friendly solution of an automated storage and retrieval system.

7.5 Space calculation

Chapter 3.2.5 defines the users' activities as a factor for space calculation. In particular the role of the library as a meeting place and social hub should be discussed as a contribution to the social and cultural sustainability of the library, including the spaces for citizen's services as described in chapter 3.3.6.1. This topic is connected with the architectural quality of the building (3.2.5, par. 6). As cited above, the relationship between aesthetics and sustainability is not an uncommon approach. After all the TR is presumably the first normative document to assess the social and cultural impact of library space.

Joint facilities for different kinds of public institutions are a strong and efficient tool both for community building and for the responsible use of resources. Chapter 3.4 defines the functions and requirements for such partnerships. Libraries may become the core of such multifunctional facilities if they can provide guidelines and standards for efficient space allocations. Not only the social and economic impact should be considered here; shared facilities can help to save energy, space and resources as well.

The calculation of user places as described in chapter 4.2 includes the responsibility issues concerning space calculations in general as stated above. A system of eight different types of user places brings about a balance between user necessities and a responsible space calculation. Furthermore the TR differenti-

ates the places needed for studying and working in the library and those for informal communication, relaxing and refreshment. This underlines the relevance of social encounter as a new factor in space allocation for libraries as well as the calculations for auditoria and exhibitions defined in chapter 4.3.1.

7.6 Storage and retrieval systems

Chapter 4.7.10 describes the automated storage and retrieval systems (ASRS) mentioned above. Although systems like this are already in use, they are not yet popular in Europe. The capacity and efficiency of an ASRS is much higher than that of conventional shelving; at the same time, the construction itself needs less material although the investment costs may be higher because of the automation technology. The maintenance of such a system requires less energy because the regular operation of the storage itself does not need any staff inside the stacks. Sustainability issues in this case are the environmental and economic advantages of the system as well as the cultural aspects of good preservation conditions for the stored materials.

Storage conditions in general are defined in chapter 5.1. One major responsibility of libraries is the preservation of cultural heritage in different media formats such as print or digital. This task is a sustainability issue itself. Cultural heritage is not only crucial for the cultural identity of a society but may be a foundation for further progress. Just as seed banks preserving vital genetic information are important factors for environmental sustainability, libraries help to guarantee cultural sustainability. Therefore the safety and security standards given in chapter 5.4 are as important as the storage conditions. The definitions in chapter 5.1.1 also include sustainability that incorporates good storage conditions like the longer lifespan of materials (5.1.1, par. 4). Furthermore, environmental issues are addressed by favouring self-regulating systems and reducing the mechanical components (5.1.1, par. 3). The goal is a reliable and effective structure with minimum environmental and economic impact.

7.7 Lighting

One major consumer of the electricity in a library building is lighting. Chapter 5.5 provides detailed data for light and lighting in libraries. By defining the lighting levels for different areas, the TR helps to lower the electricity needed without creating uncomfortable or non-ergonomic conditions within the building. A detailed lighting design plan is essential for the functionality, the comfort and the

overall appearance of the library. Natural lighting, which is addressed in chapter 5.5.3, plays a central role in a well-balanced lighting concept. Edwards (2011, 195) underlines the importance of natural lighting, but his preference for highly glazed façades does not take into account the problems of sun radiation, reflections, glare and external thermal load. Subsequent provisions, and especially the maintenance of a ventilation and cooling system, can be prevented by choosing the right location and orientation of the building and its façades. The information given in the TR is further developed as it factors in those details.

7.8 Outdoor space

Chapter 6 on outdoor space combines three aspects of responsible design. The first is the influence of the building on its surroundings. Green areas around the building or interior courtyards may have an impact on the microclimate around the structure. The second aspect is the accessibility of the library. As stated above, the library should be well located and easy to reach in order to perform its social functions. Mobility is the third aspect. Although parking facilities are defined in depth (6.2.2), cycling and transport are taken into consideration as well.

There are more issues around responsible design included in the first eight chapters, e.g.:

- Learning and education (3.2.6, 3.3.1, 3.3.2);
- Durability of materials (see e.g. 5.7.2);
- Waste handling (4.9.8);
- Building management systems (5.4.2.4);
- Barrier free design (7).

8 Sustainable design

Relative to the wide range of sustainability issues dispersed throughout the whole document, the sustainable design chapter is quite concise. There is one subsection on energy efficiency (8.2) and one on conservation of natural resources (8.3). Although responsible library design in the sense of my paper is a subtext of the TR, the last chapter concentrates on the traditional green building issues. There are other guidelines for sustainable library building such as Sands (2005), that are much more detailed and library-specific than chapter 8. This reflects the difficulty of detaching responsibility in library design from general views on responsible building construction. Furthermore, the broader sense of sustainability

described above is not approached within the TR, except as a citation in the terms and definitions chapter (2.95, note 4). This raises the question whether a normative document with so many good approaches to responsible design and management of libraries really needs a sustainability chapter of its own, or if it would be a better solution to highlight those issues where they appear, more in passing, in the different chapters.

9 Conclusion

Since the majority of the relevant literature concentrates on green building and best practice, only a shift in the discussion about sustainable library design will lead to a broader concept of ecologic, economic, social and cultural responsibility far removed from mere greenwashing of the library. Librarians as well as architects need guidelines helping them in the creative process of planning a new library building and its future operations. It is crucial to avoid a textbook approach of prescribing the one and only way to responsible library design. On the other hand the useful and established format of a normative document like the TR may help all parties involved to contribute to a responsible planning and construction process. A library project raises special questions as to how the needs of such a building differ from other public institutions. Consequently the question of responsible design has to be answered differently as well. Furthermore all projects are individual in their cultural, social and environmental context. It is not possible to provide a best practice for sustainable library building apart from drawing on existing examples. The TR is not very reflective in the way it deals with sustainability issues. In fact the only chapter devoted to this topic is less informative about responsible library design than the rest of the document. But the subtext given in many chapters can be read as a guideline for librarians and architects and a tool for planning and further discussion. Maybe a future revision of the TR will bring these subtexts to the fore as natural issues to be considered in the planning process. A special chapter on sustainability would not then be necessary any more.

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