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SMALL SACRAL CHRISTIAN ARCHITECTURE IN THE CULTURAL LANDSCAPES OF EUROPE

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Though often overlooked due to its scale, small sacral Christian architecture has a significant importance in cultural landscapes in Europe and beyond. It represents a shared international cultural heritage and is significant in its diversity, distribution and abundance across cultural landscapes. The tradition of the artistic depiction of the cross in Christianity dates back to the 4th century AD. The first monuments in the form of crosses were placed in open landscapes in Scotland in the 7th century. The most important period for the spread of small sacral architecture of Catholic origin in eastern Europe was during the Baroque, thus most of the preserved small sacral monuments date back to the late 17th,18th and 19th centuries. They are often accompanied by monumental single trees or a compositionally organised group of trees and create a sacred composition of nature and culture. They have become important landmarks, indicators of place and landscape features of spatial organization, representing a significant historical legacy and cultural heritage for future generations. This article elaborates on the origin, historical development and landscape values of small sacral Christian architecture, as well as their relation to separate natural monuments or natural features that create part of the sacral composition, such as memorial trees growing around them. This article introduces the topic of sacral architecture and its contribution to the character and identity of European cultural landscapes.

Keywords: cultural heritage; history; landscape; sacral architecture; trees

Sacral architecture has been an inherent component of European cultural landscapes for centuries, if not millennia. Religious structures and features of different scales and sizes have co-formed the traditional visual character of European landscapes, becoming an important cultural heritage shared by many regions and ethnical groups across and beyond Europe – from standing stones to more recent Christian expressions of rural churches that dominate wide open rural landscapes, calvaries in designed landscapes or cathedrals in historical urban centres (Fekete and Van den Toorn, 2018). However, there is another significant cultural heritage, though small in its size, but significant in its presence and distribution in the landscape – small sacral architecture.

Small religious monuments are mostly of local importance as individual objects, but when perceived as a collective heritage across regions, their importance becomes internationally significant. They are small visual manifestations of shared cultural and historical values, with a significant religious and spiritual legacy, which impart meaning to the landscape. Compared to large monuments, small sacral monuments spread the historical legacy of everyday life of "little people" as suggested by Braun (2013). They have survived many landscape changes across decades and even centuries and today are part of the visual character of the landscape (Sedláček et al., 2016) with a high potential in contemporary rural development and restoration of rural landscapes (Tóth and Feriancová, 2016; Supuka and Billiková, 2018) as well as for tourism and local economic development. They should be therefore documented in land consolidation projects as small-scale cultural monuments and sites, in order to preserve them in the landscape (Muchová and Leitmanová, 2016). As a network of important cultural monuments and sites, their preservation is considered of critical importance in international documents such as the Venice Charter (ICOMOS, 1964), and the European Landscape Convention (Council of Europe, 2000).

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In many regions and local communities, where Christianity is still very vivid and actively practiced, small sacral monuments maintain a significant religious importance and symbolic meaning. In some places new elements of small sacral architecture are erected and consecrated, particularly in rural areas. In other regions, the understanding and recognition of religious meaning is declining. In those areas, where the monuments have become "disconnected heritage," Katzberger (1998) suggests that it should be replaced by reverence, respect and understanding for the values perceived by past cultures and for their importance to local landscapes and their identity.

Small sacral monuments, whether or not registered as cultural heritage in the landscape, deserve the attention of professionals as well as laypeople, with the aim to protect, maintain, restore, preserve and adequately present them in their landscape settings (Vošková et al., 2014). This special issue of Acta Horticulturae et Regiotecturae dedicated to Christian religious architecture in diverse cultural landscapes across Europe recognises their heritage value and historical legacy. The aim of this issue is to put the subject of small sacral architecture on the international cultural landscape agenda and pursue cross-border and inter-regional cooperation in research, preservation and sustainable use of small religious monuments and sites.

Material and method

This paper relies on an extensive review of the literature on small sacral architecture. The literature review work was conducted mainly in university libraries at the Slovak University of Agriculture in Nitra, Vienna University of Technology and RWTH Aachen University. Most of the literature has local or regional coverage and was written in national languages, especially German, Slovak and Czech. The methodology of the work consisted of:

1. a thorough review of the existing literature noting gaps in the research;
2. field mapping in Slovakia, Austria, Germany, Hungary, Czechia and Poland;
3. analysis, interpretation and evaluation of the findings;
4. international knowledge exchange;
5. review and editorial work on the papers submitted to this special issue.

The selection of the six European countries used as reference regions is based on their cultural, historical and religious similarities. Austria, Hungary, Slovakia and Czechia, as well as parts of Poland were part of one empire (the 'Habsburg Empire' of different designations from 1526 to 1918) and there are linguistic and other cultural similarities between Germany and Austria.

Considering regional diversities, it is necessary to highlight the fact that small sacral monuments are common in traditional Catholic regions in Europe. For instance, in Austria, Slovakia and Poland, the Catholic population has a strong representation in all administrative regions, while in Germany Catholics are mainly concentrated in Southern and Western parts of the country. In Hungary, Catholic regions cover most of Western and Central part of the country, while in Czechia, they appear throughout the country, a dominance which reflects the seat of the Holy Roman Emperor in Prague as well as the primacy of Catholicism throughout the regions of Bohemia and Moravia during the Habsburg reign. Eastern parts of Poland, Slovakia and Hungary have also been marked by Orthodox culture and traditions, which has had influence on the overall style of Christian sacral architecture, including small monuments in the landscape. Beyond these areas, the most important architectural styles, as well as the Christian religion and culture have had a pan-European spread and importance.

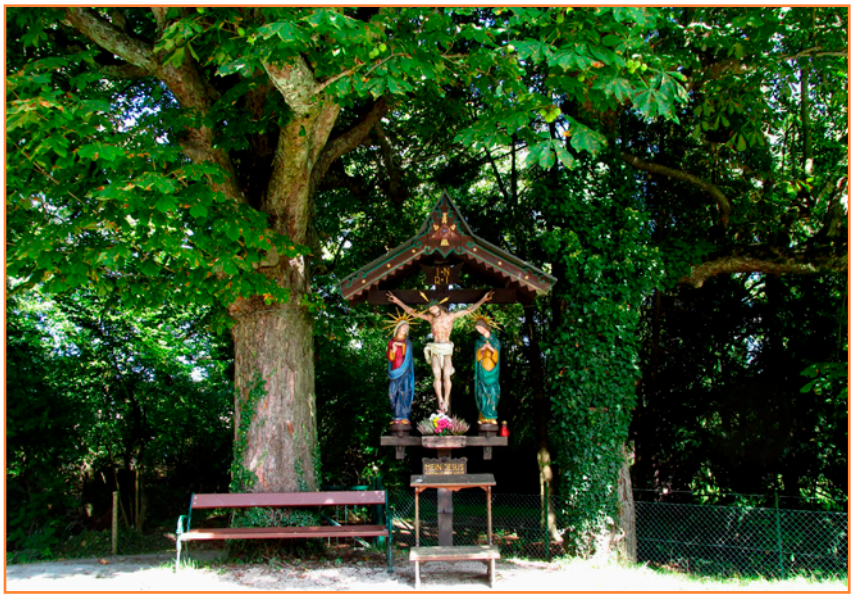

Figure 1 A wayside cross in Gmunden (Austria) framed by two horse chestnuts (*Aesculus hippocastanum* L.)
Source: Tóth, 2017

Results and discussion

The results and discussion consist of four main chapters dedicated to:

1. the origin and historical development of Christian fine art and religious architecture in Central European cultural landscapes;
2. the landscape aspects of small sacral architecture;
3. the linkage between natural and cultural monuments in the form of sacral monuments and trees;
4. a brief overview of the papers in this issue of Acta Horticulturae et Regiotecturae.

When and where has it started? A brief history of Christian small sacral architecture in Europe

The cross as the symbol of Jesus Christ's crucifixion was not depicted in the first three centuries AD. It has occurred in Christian symbolism approximately since the 4th century, when the liturgical worshipping of the cross started in Catholic services. The cross was also used as a symbol in late ancient and medieval battles.

According to a legend, the Roman emperor Constantine I (272–337) marked his soldiers' shields with a cross-like sign (Chi-Rho or Labarum) in the Battle of the Milvian Bridge (312 AD). Labarum has been used since then in Christian symbolism as a reference to the crucifixion of Christ. In the Early Middle Ages, the cross was depicted on crowns and orbs of Christian rulers and it became a symbol of victory, power, and reign, which was also used in the Crusades.

One of the first common uses of the cross as a symbol was on rooftops of church towers. The first crosses in open spaces or open landscapes occurred in Scotland and Ireland, and date back to the 7th century. Later they appeared also on the European continent, mainly as border crosses. They became more abundant since the 14th century, especially in the form of wooden or stone crosses for atonement, remembrance and protection (Beckers, 1981). In the Middle Ages, the architectural typology of small sacral monuments in the landscape became more diversified.

In addition to crosses, other forms such as small wayside shrines and columns occurred in towns, villages and open spaces throughout the landscape. In the Gothic period of the High Middle Ages, another Christ interpretation appeared. Instead of salvation and victory, it started to focus on Christ's suffering, crucifixion and death. This shift from the transcendental glory to the more tangible pain and suffering caused humanisation of faith. Depictions of Pieta from the Late Middle Ages show the pain and suffering of Christ and make the crucified Christ look more human and closer to people suffering at that time from plague outbreaks (Langen and Cormann, 1988). In Late Middle Ages, during the counter-reformation, the occurrence of small sacral monuments significantly increased (Liszka, 2007). According to Katzberger (1998) their abundance was further enhanced by governmental decrees, which ordered their construction as a symbolic celebration of military victories (e.g. the recapture of the Hungarian Raab Fortress from the Turks in 1598) or as a commemoration of acts of reconciliation (e.g. the Peace of Westphalia in 1648). However, there were also reversals, for instance during Napoleon´s reign when the Rhineland was under French occupation (1794–1814), and it was ordered to remove all small sacral monuments to the left of Rhine during secularisation that started in 1803 (Braun, 2013).

The Baroque period (late 17th through mid-18th centuries) made one of the most significant contributions to Christian art and also small sacral architecture. Baroque as a style became a visual expression of counter-reformation in religious architecture. Crosses were richly decorated and became common elements in Baroque cultural landscapes that were used as stations for religious pilgrimage, liturgical rituals or harvest processions (Löw and Míchal, 2003; Kopeček et al., 2015). The Baroque period also brought a new form of Christian art expression in the open landscape – figural monuments – such as sculptures and reliefs placed on the top of wayside columns and shrines or in their exposition niches (Langen and Cormann, 1988, Katzberger, 1998). The significant Marian-cult (Immaculata or Pieta) and veneration of saints provided manifold motives for figural expressions in outdoor spaces.

In regions with consolidated Catholic faith after the Thirty Years' War (1618–1648) the century between 1680 and 1780 is considered the peak of the creation of small sacred architecture in the landscape (Breuing, 1985). The 18th century was characterised by the euphoria from the victory over the Turks and the Plague outbreaks. Saint John of Nepomuk, whose statues were placed mainly on riversides and bridges (Liszka, 2007) became the most common and widespread singular figural motive in Austro-Hungarian Monarchy (Katzberger, 1998). Another abundant motive was represented by plague columns crowned with statues of the Holy Trinity, which were raised on squares in village and town centres as a gratitude for the end of the plague outbreak in 1713 (Katzberger, 1998). Baroque-style crosses were created even in the first half of the 19th century,

Figure 2 A commemorative wayside cross in the municipality of Emsbüren (Germany) erected after World War II for the memory of a soldier killed in action during the war. The cross is accentuated by a red-leaved common beech (*Fagus sylvatica* L.). Both, the cross and the tree survived land consolidation in the 1990s
Source: Tóth, 2018

e.g. from blue or shelly limestone, as stonemasons were trained in the style of the Baroque period and did not change their style until Classicism, although the ornamental decoration became gradually simpler.

The mid-19th century brought a significant change in the style of village, field and roadside crosses. Historicism, including the neo-Gothic style, broke through. Small sacral monuments were traditionally constructed mainly from locally available materials (e.g. wood, sandstone, limestone, travertine) or materials imported from nearby regions. Metals (e.g. cast iron or tin plates) started to be used in the mid-19th century. In regions where there was no natural source of stones, wood remained the main material for constructing small sacral architecture. Neo-Gothic crosses were constructed until the beginning of World War I.

After World War I, a new change of style followed – the modern cross with its simple, sober form. This change brought also a new material – concrete; however, sandstone, wrought iron and wood remained in use. The modern cross depictions were strongly influenced by the experience and suffering in the world wars. New religious monuments were placed in the landscape also in the second half of the 20th century. In some cases it was old cemetery crosses that were re-used in public open spaces as monuments. Some small religious monuments were moved to other locations due to urban development, construction of motorways, or destruction of settlements for brown coal mining (Langen and Cormann, 1988) or due to construction of water reservoirs that required flooding of large areas. Many valuable small sacral monuments are concentrated in old cemeteries. One of the most remarkable Slovak architects – Dušan Jurkovič (1868–1947), founder of Modern Architecture in Slovakia who integrated vernacular architecture into his projects, designed 32 cemeteries in 1916 and 1917 for soldiers fallen in World War I in Galicia. These cemeteries are full of crosses with excellent and very specific artistic representations and they are protected by law under the Act on Monuments (Dulla, 2002).

Small sacral architecture in cultural landscapes

Small sacral architecture in the landscape, such as wayside crosses, columns, shrines, small bell towers, small chapels, statues and figural compositions are religious evidences of the Christian faith. They are objects of remembrance, prayers, atonement, gratitude, procession or mission (Matáková, 2012; Kopeček et al., 2015). Besides their obvious religious function and meaning, small sacral sites have served also as guideposts and way-markers, especially in flat landscapes with no or few trees, where they were visible for pedestrians and carters. Thus, the multifunctionality of these sites was much more a rule than an exception (Langen and Cormann, 1988; Braun, 2013).

Small sacral Christian monuments, such as wayside crosses, shrines, tabernacles, columns, chapels, figural monuments and other architectural forms from the Gothic, Renaissance, Baroque and later periods are witnesses of the piety of the local population throughout the last eight centuries. They have become integral features of cultural landscapes and have co-formed their visual characters and features (Katzberger, 1998; Matáková, 2012; Pluta, 2018). Small religious monuments and structures occur in diverse spatial settings – in open and built-up/in rural and urban/in everyday and exceptional landscapes (Tóth and Verešová, 2018). In the open landscape they were placed at significant points: at crossroads, at municipal borders and field boundaries (Türk, 1979), at the edges of villages and towns, on small hills, in vineyards, forests and at boundaries of arable fields or family farms (Creutz, 2005; Verešová and Supuka, 2013). Some monuments located on or at family farms in rural landscapes were originally gravestones in cemeteries that were later moved to the property (Türk, 1979). In built-up areas, small sacral monuments were raised mainly on squares and streets, in churchyards and cemeteries (Halajová and Kubišta, 2015; Halajová et al., 2016) or on walls of buildings and in their small niches (Langen and Cormann, 1988) and currently they are present also in public green and open spaces (Trojanowska, 2018). They were used for instance in Corpus-Christi Processions or in Summer Field Processions for good harvest and protection against bad weather (Braun, 2013). Crosses exposed in agricultural landscapes also gained another function – they were supposed to keep away bad weather, especially hailstorms, from the arable land or to defend the villages against evil spirits and demons. Thus faith and superstition were often very close to each other or even interwoven (Langen and Cormann, 1988). In some

Figure 3 A roadside shrine in Spišská Belá (North-Eastern Slovakia) with 3 small-leaved limes (*Tilia cordata* Mill.) and a Norway maple (*Acer platanoides* L.)
Source: Tóth, 2017

cases, small religious monuments were used to divide long pedestrian routes between two settlements into smaller segments and served as rest and prayer sites in the open landscape (Katzberger, 1998).

Small sacral architecture present distinctive accents in impressive landscape sceneries (Kitlitschka, 1987) and reflect traditional architecture, arts and crafts of a region (Štěpánková and Feriancová, 2011). They spread the spiritual message of churches and chapels into the open landscapes and thereby form a continuous spiritual legacy and identity of local cultural landscapes (Kopeček et al., 2015). Schneeweis (1987) refers to them as Jewels of the Danubian Sacral Landscape, which according to Katzberger (1998) decorate and revive the landscape – be it hilly regions with vineyards or wide open flatlands with fertile arable land. Burggraaff and Kleefeld (1998) define them as point elements in cultural landscapes of religious and cult character.

Joint monuments of nature and culture

Trees, given their longevity and impressive spatial presence, have always been perceived, adored and worshipped by people as natural monuments in cultural landscapes (Rózová et al., 2015) and have become important features of historical landscape structures (Supuka et al., 2015). They were planted as solitary trees, at sacral monuments, as tree roundels or as lines of trees and alleys (Semanová, 2015). Trees were often planted as complementary compositional elements next to sacral buildings and small sacral monuments.

In Roman and Early Gothic periods, sacral structures were normally stand-alone landmarks without trees. The first solitary trees were presumably planted at the end of the Gothic period (Semanová, 2015). In Slovakia, it was mainly lime (*Tilia* sp.). At the beginning of Renaissance, solitary trees were still very common, but later stages of this period brought symmetrical compositions of two trees. The Baroque period brought a significant enhancement of trees at sacral architecture and the 19th century was specific for a marked enrichment of tree species diversity (Semanová, 2015). Trees emphasised small monuments in the landscape, while forming a peculiar connection between earth and sky. There are usually one or two trees at a monument, but also more complex compositions with 3, 4 or 5 trees occur (Assmann, 1979; Tóth and Verešová, 2018). A tree or a group of trees situated directly at a small religious element not only harmoniously integrates it into the landscape, but at the same time enhances its visibility from a distance (Katzberger, 1998). Some of the most common tree species planted at small sacral monuments are limes – *Tilia cordata* Mill. and *Tilia platyphyllos* Scop. and horse chestnuts – *Aesculus hippocastanum* L. (Tóth and Verešová, 2018), but also other genera such as oaks – *Quercus* sp. and ashes – *Fraxinus* sp. or black locust – *Robinia pseudoacacia* L. occur (Creutz, 2005, Semanová, 2015).

The selected tree species usually had an important cultural and symbolic meaning. Especially oaks and limes have a strong cultural and symbolic meaning. *Quercus robur* L. for instance is known in Germany as the Deutsche Eiche (German Oak) and it was also the most worshipped tree in Slavic mythology and plant cult. Limes were planted on important sites, such as open-air courts or village squares, which might explain their use to highlight important sites and elements in the open landscape. Horse chestnut was introduced to Central Europe in the Baroque period as one of the first exotic species (Löw and Míchal, 2003) with impressive blossoming, which could explain why it is so commonly used at small sacral monuments from Baroque and subsequent periods (Tóth and Feriancová, 2015; Semanová, 2015; Tóth, 2017). In many cases the tree is the main landmark and, in Germany, it has inspired the local name of the site – e.g. "Lindenkreuz", "An der alten Linde", "An den drei Lindchen" and similar – all related to limes (lindens)/ *Tilia* sp. (Langen and Cormann, 1988).

The Acta Horticulturae et Regiotecturae thematic issue on sacral architecture in cultural landscapes

This thematic issue focuses on the linkage between small sacral architecture and the cultural landscape. The introductory paper discusses the origin, historical development, landscape features and heritage values of small sacral architecture in cultural landscapes with a particular focus on Europe (Tóth et al., this issue). Calaza-Martínez et al. (this issue) elaborate on sacred landscapes in Galícia (Spain), with a particular focus on small religious architecture and its symbolical character. Stara and Tsiakiris (this issue) explore the

Figure 4 A neogothic roadside cross in Balatonszentgyörgy (Hungary) with a monumental common oak (*Quercus robur* L.)
Source: Tóth, 2017

relations between trees and urban open spaces, with a particular focus on oriental plane (*Platanus orientalis* L.) as well as other threatened monumental trees that grow in central squares and churchyards in North-Western Greece, while highlighting their sacred and emblematic features. Christianity, its traditions, art and architecture have not only shaped cultural landscapes in Europe, they were also "exported" to the "New World" – former European colonies – and have influenced architecture and fine art overseas. Heavers (this issue) elaborates on the impact of imported trees and medieval European sculpture that has marked sacred ground at the Washington National Cathedral (USA). Lubiarz et al. (this issue) bring us back from USA to Europe and target our focus on small roadside sacral structures in Borzechów Commune (Lublin Region, Poland), while highlighting their dendroflora. Halajová et al.; Bihuňová and Michalica; and Fusková and Fuska (this issue) present some of the first findings of field mapping conducted within the research project VEGA 1/0371/18 SacralArch (2018–2020) coordinated by Tóth at the Department of Landscape Architecture at SUA Nitra. They focus on the Spiš (North-East), Senica (North-West) and Tríbeč (West) regions in Slovakia. The collection of articles is concluded by Netsch and Gugerell (this issue) who elaborate on one of the possible ways of preserving sacral architecture in European cultural landscapes – through the re-use of churches in Dutch urban and rural landscapes that has had a significant tradition in the Netherlands recently.

Small sacral monuments as part of a wider phenomenon – outlooks for further research

Small sacral monuments can be considered from two different points of view: firstly, there are the artefacts themselves, which are perhaps what the historic monuments conservation discipline is primarily concerned with, but secondly there is the fact that they can often be said to be something else, too – markers of special places in the landscape. Places where they are found may often in some way be just as significant as the artefacts themselves. These may either be places of memory relating to a relatively recent event, or they may be located at places in the landscape which have an older significance.

Christian monuments are more recent and perhaps a particularly European expression of an older phenomenon. One can think, for example, of 'standing stones' in Western Europe (from Stonehenge downwards) or 'rune stones' in Scandinavia. More recently, 'land art' and environmental sculpture have also tried to give special meaning to places or to respond to the existing, innate character and atmosphere of special places in the landscape. The 'New Milestones' project of the UK environmental charity Common Ground represents a particularly interesting example of this approach (Common Ground, 2019).

Thus, there is a great potential of expanding the topic of this article, while including also other forms of marking special places in the landscape. This may be a forward look towards new research questions and joint initiatives.

Conclusion

This paper contributes to the internationalisation of the scientific knowledge in the field of (small) sacral architecture in cultural landscapes. It makes an effort to put together national, regional and local knowledge mostly presented in different national languages and aims at generalising the findings in order to enrich the European state of the art in this field. This thematic issue of Acta Horticulturae et Regiotecturae has collected and linked knowledge from diverse regions of Europe (Slovakia, Germany, Austria, Hungary, Czechia, Poland, Spain, Greece, the Netherlands) and beyond (USA, North America). Our aim for the future international exchange is to achieve a more robust geographic and also cultural coverage, while reaching further out within and beyond Europe and covering not only Christian, but also other religious cultures that have left an important footprint on cultural landscapes of diverse regions.

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SACRED LANDSCAPES IN GALICIA: SMALL RELIGIOUS ARCHITECTURE AND SYMBOLISM

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Cultural landscapes are multi-layered entities that constantly endure changes and transformations, especially in Europe due to its ancient history and anthropized nature, which reveals itself not only in physical elements, but also through immaterial heritage. This paper aims to analyse the connection between sacred landscapes, small religious architecture and folklore, focusing on the origin and transformations of several places in Galicia (northwest of Spain). Galicia is defined by its rich flora and fauna, a management of its land based on smallholding and the social idiosyncrasy of its people, defined by strong symbolism and the religious tradition that is reflected in a great amount of small sacred architecture. All this provide a paradigmatic territory for this research, allowing an approach to the case studies from the point of view of landscape architecture, assessing the small sacred architecture elements, their background, symbolism and associated vegetation. It is worth mentioning that, although vegetation had a very strong meaning and symbolism in the sacred history of Galicia, nowadays it only appears in 26% of the analysed case studies.

Keywords: small sacred architecture, cultural landscape, immaterial heritage, Galicia, trees

The European territory is immensely rich in terms of cultural landscape, due to the fact that it has been inhabited since ancient times. Anthropization reaches every place, given the great number of civilizations that have lived and transformed this territory over time, adapting it to their advantage in order to survive. This phenomenon has been addressed by some authors referring to it as rewriting landscape (Pracero et al., 1998). Consequently, from a landscape architecture point of view, territory is often explained as a palimpsest that is made of many layers, both physical and intangible. These layers create the *genius loci* of a place, which is highly related to cultural heritage (Norberg-Schulz, 1980; Roger, 1997). The identity of places is thereby influenced by the way people see them, thus creating the immaterial landscape of each territory that reveals itself in memory and folklore, and is frequently linked to physical elements such as small sacred architecture.

Then again, it is possible to identify common patterns in the way some spaces are associated with certain symbolisms, which appear all over Europe. This leads to the thought that there might be some sort of special condition that imbues specific landscapes, making them more capable of inspiring or reaching human subconscious. In fact, some well-known sacred places are spaces with exceptional landscape qualities as the Mont Saint Michel (France) or Stonehenge (UK). Some of them remain, as the latter, pretty unchanged, but others have been constantly modified, making it more difficult to read the past layers, but at the same time enriching the landscape experience.

Among all the agents that have transformed and modified landscapes over the years, Christianity is perhaps the one that has most influenced the physical space as well as the immaterial heritage. The Christianisation phenomenon involves a change of meaning, adding old beliefs and traditions to a new socio-ideological order (Pracero et al., 1998). Frequently, a connection can be found between landscape, sacred symbolism and Christianity in religious architecture. For example, in the Iberian Peninsula many places of pilgrimage to the Virgin are related to landmarks linked to pre-Christian sacred places, like the Virgin of Covadonga (Spain) or the Virgin of Fatima (Portugal). The study of these places has been so far approached from very different points of view, from a historical to an archaeological or architectural perspective. However, in landscape architecture, it is very important to study the different layers that create a specific landscape, both material and immaterial, getting to know its past in order to plan its future. That also applies to some of the spaces surrounding small sacred architecture, where the historical and present symbolisms are frequently linked to the physical remains. This paper aims to provide insight on this matter, studying places where the connections between landscape, symbolism and sacred architecture are most enhanced.

To that purpose, the connection between physical spaces and immaterial heritage needs to be addressed, taking into account that Christian ideas are part of a syncretism where other ingredients appear, such as beliefs, superstitions, magic, myth, ritual and symbol (Lisón, 1974), and amongst all of them, death is a central subject. Death is a mystery that has always caused all sorts of superstitions and beliefs in all cultures, especially in some areas due to the idiosyncrasy, the spatial configuration of landscape or other cultural facts such as Celtic origins.

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This is the case of Galicia (*Finis Terrae* by the Romans), a region with isolated and dispersed small villages along hostile valleys where these beliefs were strengthened, providing a paradigmatic territory in terms of connection between landscape, sacred symbolism and Christian worship.

Material and methods

In order to analyse small sacred architecture in Galicia (northwest Spain) from a landscape architecture perspective, based on the study of both physical context and immaterial heritage, it was necessary to select case studies that represented this connection between landscape, symbolism and sacred architecture in different areas of the Galician territory. Every case study selected was classified according to its spatial location, parish and province, typology of the sacred architecture, original configuration of the surrounding landscape, symbolic meaning of the place and vegetation associated. All the information was contextualized in a map (Figure 1) and collected in a table (Table 1), thus making it possible to establish similar patterns in the way Christianization modified sacred places throughout the studied territory, and how the different historical layers can still be read in the existing landscapes.

One of the most interesting facts of small religious architecture is that it brings the spiritual message to open spaces and to the landscape (Toth, 2018). The case studies of small architecture range from chapels, churches or small monasteries located in singular places, to architectural or sculptural sets with several elements that configure the space of cult. Some of these elements are repeated throughout the Galician territory and appear generally linked to the same spatial typology, as it is the case of cruceiros and petos de ánimas. These are two paradigmatic elements of small sacred architecture in Galicia that will appear in most of the study cases, therefore a further and more accurate description is needed.

Cruceiros (High cross): legacy of the prehistoric menhirs, the Roman milladoiros and the crosses of the evangelized Ireland of the 6th and 7th centuries. In the classical era they honoured Mercury, protector of travellers, by placing stones in strategic places to form milladoiros. With the arrival of Christianity they were adapted by adding crosses on top.

Petos de ánimas: material manifestation of the cult to the dead. Usually they are small and simple monuments of popular piety associated with the idea of Purgatory. According to the Galician belief, the dead live, awaiting in another place that occupies a different dimension from the world of the living, where time does not pass (Vaqueiro, 2011). Thus, petos de ánimas were built as places to offer alms to these souls of Purgatory, being their temporary punishment and allowing them to reach Heaven. In return, the liberated souls would intercede for those who made the offerings (monetary or agricultural products). These are elements that have been widely studied, usually from a descriptive perspective, both in Portugal (Gonçalves, 1959), and in Spain (Bas, 1980; Menor, 1983). Its origin can be found in the Counter Reformation, being the oldest ones from the 17th century, although the most frequent examples date back to the 18th century. They are made of stone and usually have a cross with images of the souls in the fire of Purgatory and a figure that keeps vigil such as a saint, king or bishop.

Results and discussion

The study seeks to reveal the importance of landscape as the spatial framework where religious architecture elements appear, taking into special consideration the transformations of these sacred places endured along Christianisation. On that account, landscape transformations have a dual physical-symbolic nature that implies the apparition of religious architecture elements and the construction of a narrative, or the modification of a previous one, that justifies the sacred character of the place. These changes imply an intention to transmit a symbolic message (the Christian message), easy to interpret, with teaching purposes (Burgoa, 2000), directed to imprint itself in the idiosyncrasy of Galician people, generally ruled by the importance of family, the self-sufficient environment and the limited and difficult communications with the outside world. These conditions created a compendium of beliefs, most of them related to the interweaving of live and death, strengthened by the great connection between people and their land, a bond that reaches the highest level with the death when they are buried and merge into the ground (Pellón, 1997). Being that so, the Christianization process slowly

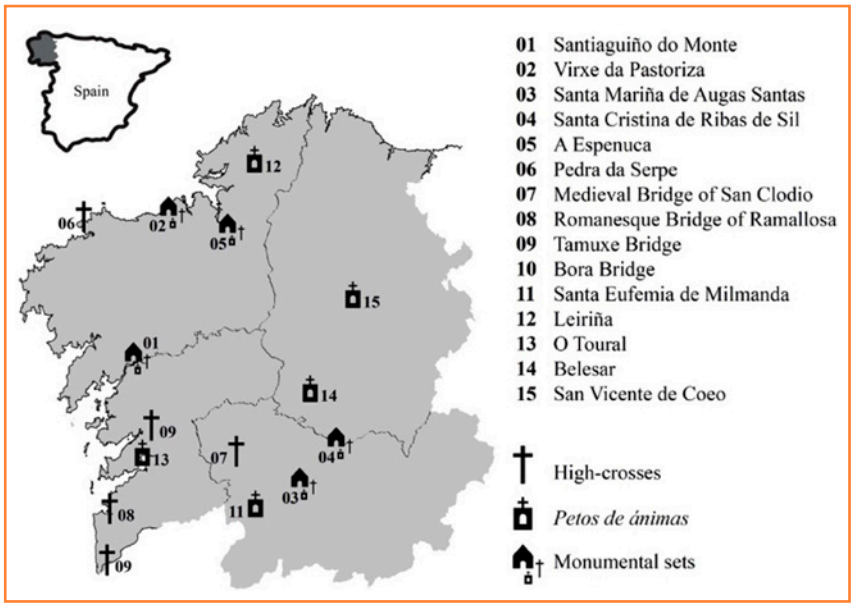

Figure 1 Spatial distribution of the case studies. Galicia (northwest Spain)
Source: made by the authors

Table 1 Elements of small sacred architecture in Galicia (Spain)

N	Element	Typology	Location	Original Landscape configuration	Original Symbolic meaning	Small sacred architecture elements	Vegetation	Social/ religious Impact
1	Santiaguiño do Monte	Sacred place with multiple elements	Padrón (C)	Singular rock formation	Cult of the stone Cult of the water	1. High cross 2. Sculpture of apostle 4. Shrine 5. Miracle water fountain 6. Apostle rock bed	NLE	CC, DP, F1
2	Virxe da Pastoriza	Sacred place with multiple elements	A Coruña (C)	Singular rock formation	Cult of the stone Fertility rituals	1. Virgin statue 2. High cross 3. Sanctuary 4. Virgin cradle	NLE	CC, DP, F2
3	Santa Mariña de Augas Santas	Sacred place with multiple elements	Augas Santas, Allariz (OU)	Three water springs with healing powers	Cult of the water	1. Santa Mariña mausoleum and chapel 2. Forno da Santa 3. Three fonts 4. Stone statue	ST QR (Lost)	CC, TI, F3
4	Santa Cristina de Ribas de Sil	Sacred place with multiple elements	Parada de Sil, Ribeira Sacra (OU)	Magic forest of Merilán Viewpoint	Cult of the trees	1. Monastery 2. Cloister	ST CS	CC, TI, F4
5	A Espenuca	Sacred place with multiple elements	A Espenuca, Coirós (C)	Espenuca mountain Viewpoint	Cult of the mountain	1. Sta Eulalia Chapel 2. High cross 2. Small bell tower	NLE	CC, LV, F5
6	Pedra da Serpe	Cruceiro	Corme, Ponteceso (C)	Singular rock with old snake carving.	Cult of the snakes	1. Stone cross on top of the existing stone	T QR woods (Lost)	CC, TI, F6
7	Medieval Bridge of San Clodio	Cruceiro	San Clodio, Leiro (OU)	Bridge	Preborn Baptism	1. Cross	–	CC, TI, F7
8	Romanesque Bridge of Ramallosa	Cruceiro	Nigrán (PO)	Bridge	Preborn Baptism	1. Cross 2. Sculpture of St. Telmo	–	CC, TI, F8
9	Tamuxe Bridge	Cruceiro	O *Rosa*l (PO)	Bridge	Preborn Baptism	1. Cross	–	CC, TI, F7
10	Bora Bridge	Cruceiro	As Pontes (PO)	Bridge	Preborn Baptism	1. Cross 2. Peto de animas (near).	–	CC, TI, F9
11	Peto de ánimas de Milmanda (1)	Peto de ánimas	Celanova (Ou)	Crossroads	Cult of the dead	1. Peto de animas	NLE	CC, TI, F10
12	Peto de ánimas de Leiriña (2)	Peto de Ánimas	Parroquia de Ferreira. Moeche (C)	Crossroads	Cult of the dead	1. Peto de animas	T QR	CC, TI, F10

Continued by Table 1

N	Element	Typology	Location	Original Landscape configuration	Original Symbolic meaning	Small sacred architecture elements	Vegetation	Social/ religious Impact
13	Peto de ánimas de O Toural (3)	Peto de ánimas	Vilaboa, parroquia de Figueirido (Po)	Crossroads	Cult of the dead	1. Peto de animas	NLE	CC, TI, F10
14	Peto de ánimas de Belesar (4)	Peto de Ánimas	Chantada (LU)	Crossroads Bridge	Cult of the dead	1. Peto de animas	NLE	CC, TI, F10
15	Peto de ánimas de San Vicente de Coeo (5)	Peto de Ánimas	Coeo (LU)	Crossroads	Cult of the dead	1. Peto de ánimas	NLE	CC, TI, F10

Vegetation: NLE – not linked to small sacred element; T – tree/s; ST – singular formation of trees/monumental tree; QR – quercus robur; CS – *Castanea sativa*. Social/religious Impact: CC – *Castanea sativa* Christian Cult; DP – destination of pilgrimage; TI – touristic interest; LV – landscape viewpoint; F – folklore, legends and immaterial heritage. F1 – legends of the apostle (Santiago) referring to the different elements; F2 – legends of miracles performed by the Virgin; F3 – legends of Santa Mariña's martyrdom referring to the different elements; F4 – offerings still appear in the chestnut old tree; F5 – pagan legends of witches and Christian legends about Santa Eulalia; F6 – pagan legends of snakes and an old oak forest that disappeared; F7 – folklore of Preborn Baptism rituals; F8 – legends of St. Telmo's Miracle; F9 – folklore around a historic battle in 1809; F10 – folklore around the cult of the dead and the souls in the purgatory, that can be read in the details of the sculptures, as presented in the descriptions below

Description of Petos de Ánimas: 1 – Bigest "Peto de ánimas" in Galicia, from 1883, made of serpentine. It contains three niches and a Christ figure on top of them. 2 – Monumental element of 3 × 2 meters. It contains a piety flanked by Saint Antón and the souls in the purgatory, and in the upper side a figure of Christ Crucified. 3 – The frontal altarpiece consists of two bodies with abundant symbolic iconography. In the upper side an unusual Inferno is represented, presided by Lucifer watching over several Purgatory souls burning in flames, including a crowned king and a mitred bishop, while several figures of demons and monsters appear below. 4 – Small rectangular construction from the 7th Century, with a sculpture of the souls in the purgatory represented among the flames. 5 – From 1872, it has a semi-circular arch with a niche containing alms for the blessed souls and St. Antonio

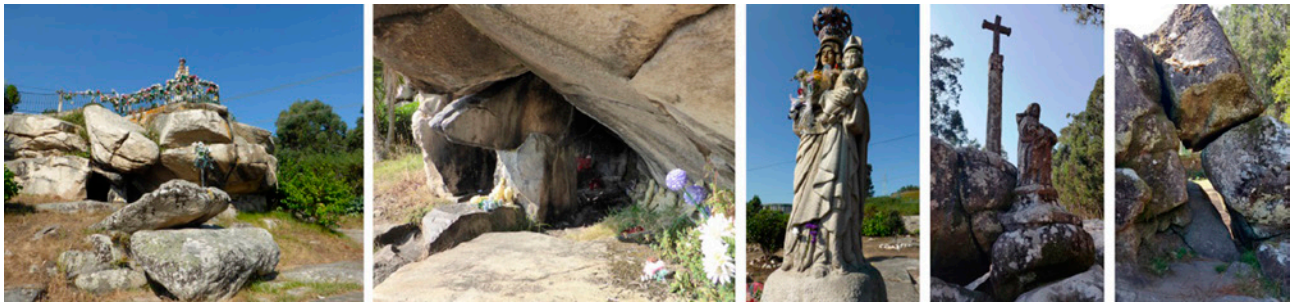

Figure 2 Monte da Pastoriza (to the left) and Santiaguiño do Monte, 2018
Source: made by the authors

Figure 3 Examples of Petos de ánimas in Galicia, 2018
Source: made by the authors

adapted the pagan sacred places and the folklore around them, taking into account that the presence of the dead in Galician traditional life has been an element of prime importance, with spatial-temporal constraints (Menor, 1983). The use of small architecture elements, very common in Galicia, provides structure to a landscape with a character and identity that blend perfectly with the vegetation and the territory morphology.

The classification of the case studies, presented in Table 1, allows us to identify common patterns in the way sacred places were managed all over the Galician territory. Three different typologies were identified: sacred places with multiple elements that create a monumental set, Cruceiros (High crosses), and Petos de Ánimas. The original landscape configuration and meaning columns collect both physical remains and symbolic interpretations extracted from folklore. They provide evidence on the sacred character of each case study, previous to the arrival of Christianism. The small sacred architecture elements column refers to the physical process of Christianization, usually by adding stone crosses, while the social religious impact column collects the symbolic transformation, recording the folklore legends, as well as the interest (touristic, pilgrimage…) of each place. The vegetation column registers the existence of certain trees and plants linked to small sacred architecture, so important from the landscape architecture point of view, but also for its sacred meaning and symbolism.

Every case study shows the transformation of both physical and symbolic landscape dimensions through the Christianization process. This way, in Monte da Pastoriza, there are traces of old singular rock formations that, according to popular legends and ethnographical studies, are related to ancient fertility rituals and pagan cults to the stones. The Christianization process implied the creation of a narrative about the apparition of the Virgin, and the construction of a temple and a sculpture. The same thing happens in other places of pilgrimage, some of them in The way of St. James, as in the case of Santiaguiño do Monte in Padrón, a singular space with rock formations and water springs considered magical for its medicinal properties, which indicates the existence of ancient cults to the divinities of water and rocks. The Christianization is carried out by the construction of a High-cross and a statue, assuming this was the altar where St James used to preach.

This sort of monumental sets articulated through a legend are very frequent, as in the case of Santa Mariña de Augas Santas, where the whole village is built around the legend of the martyrdom of the saint. "The legend of Santa Mariña adheres to the territory like a mantle of narrative that covers it and gives it meaning" (García Quintela, 2014). Thus, the place awakened a touristic interest through the visits to the different elements such as the three miracle springs or the disappeared Carballo da Santa, an old oak tree that takes part in the tale, representing perfectly the symbolism of some tree species regarding sacred spaces. "When the Christian missionaries undertook the conversion of the pagan peoples, one of their first actions was to prohibit the worship of trees and destroy the sacred forests" (Fischesser, 1995). This phenomenon is evident in Santa Cristina de Ribas de Sil where an ancient chestnut tree contains offerings hanging from their branches, due to the ancient pagan cult that still remains. Many places linked to pre-Christian rituals were converted to Christianism by adding a Cruceiro or peto de ánimas. That is the case of Pedra da Serpe and many high-crosses located on bridges where the traditional ritual of bautismo anticipado[1] used to take place. The same occurs with petos de ánimas located in crossroads where, according to folklore, the veil between this world and the

1 Bautismo anticipado (in English preborn baptism) is a traditional Galician ritual that was performed before the birth took place, in order to guarantee its success. For this purpose, the family members should go to the designated bridge and wait for a person to cross it. Then, they had to convince him (it had to be a man) to help them with the ritual, and if he agreed and everything went as it was expected, he would become the godfather of the child.

supernatural drops, allowing phenomena such as the Compaña[2] to manifest. Small sacred architecture appears to Christianise these places.

Conclusion

Galicia is a region with a clear historical relation between landscape, religion (pre-Christian and Christian cults) and society, and houses a large number of small sacred architecture. The analysed case studies show how the process of re-writing landscape (Pracero et al., 1998) over the years has resulted into complex spaces where many layers of history can be read. As it was demonstrated, the apparition of small sacred architecture elements is usually linked to the existence of a singular landscape imbued with a previous sacred meaning that can still be read through some remaining natural elements as well as the folklore around them. However, these landscapes endured a great change with the arrival of Christianity, which modified both its physical form through the construction of architecture and sculpture elements, and its symbolic narrative, adapting the existing myths, legends and tales to the Christian doctrine. Trees and all sorts of vegetation have also been sacred elements of veneration, as well as elements of accompaniment to some sacred religious structures. The arboreal vegetation that was identified consists mainly of *Quercus robur* and *Castanea sativa*, and its use linked to sacred elements has continued until our time. Yet nowadays, it appears only in 26% of the case studies (4/15), indicating that small sacred architecture in Galicia is based in the direct lecture of the anthropic religious constructions, independently from the linked vegetation.

The evolution of sacred landscapes through the different eras has changed the meaning and use of these spaces, maintaining sometimes its religious character, as is the case of the many destinations of pilgrimage, but they also bear a cultural and touristic interest nowadays. The study of the these multi-layered spaces from a landscape architecture point of view is essential to guarantee their conservation and ultimately preserve the identity and the *genius loci* of every one of them, for they are a fundamental part of the European cultural heritage.

2 Compaña, also known as Santa Compaña, is one of the most famous folklore myths in Galician territory, linked to the mystery of Death. The multiple accounts of sightings of Compaña refer to it as a procession of dead spirits carrying a candle, that usually appear in crossroads and other sacred places.

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ORIENTAL PLANES *PLATANUS ORIENTALIS* L. AND OTHER MONUMENTAL TREES IN CENTRAL SQUARES AND CHURCHYARDS IN NW GREECE: SACRED, EMBLEMATIC AND THREATENED

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Trees often offer meaningful metaphors of and for society, connecting symbolically social and cultural life and creating specific bonds between nature and culture. We studied central squares and churchyard trees in the mountainous villages of Epirus, NW Greece, recording tree species and measuring their characteristics in the field, using also ethno-ecological tools for valuing their importance in the local community. The most common trees are monumental oriental plane trees (*Platanus orientalis* L.) which provide a focal point for community life and serve locally as symbols of community origin, reunion and inter-generational continuity. Such plane trees are also highly appreciated nationally for their aesthetic qualities and historical value. Recognition of the conservation importance of monumental trees should be a high priority, so as to secure the future of emblematic trees and the cultural landscapes they create, especially as invasive pathogens are spreading worldwide threatening their existence.

Keywords: cultural landscapes, sacred natural sites, North Pindos National Park

Trees are vital elements of the landscape providing visible symbols of social process and collective identity. Especially long-lived trees are natural symbols of strength, fertility and genealogical connections. Also, the vitality and regenerative power of trees make them amenable symbols of life (Rival, 2001). In modern Greek landscapes, very old trees are interrelated with the churches or iconstands that they accompany, in a way that allows locals to consider ancient trees as emblems of the sacred (Kyriakidou-Nestoros, 1989). In places of worship, trees are often deliberately planted and chosen species differ from native vegetation aiming at the construction of landscape aesthetics and separation of everyday routine, work and survival from community life, festivities and worship (Hobhouse, 2004; Nitsiakos, 1997). Especially 'veteran' trees are of interest aesthetically, culturally and biologically, as objects of respect or religious reverence and valuable habitats for other creatures. However, it is the processes of becoming ancient and not the actual age of a tree, that is of interest (Parker and Lewington, 2012; Rackham, 2006).

Our aim is to present data about ancient trees in sacred and public places inside villages in Pindos National Park, NW Greece and discuss conceptualizations and related conservation issues. The objectives are:

1. to elaborate on the species diversity in sacred sites inside villages;
2. to present data from two mountainous municipalities in NW Greece;
3. to comment on perceptions of monumental trees;
4. to examine why certain species serve as emblematic;
5. to discuss conservation priorities.

Material and methods

Our research took place in 48 villages in the municipalities of Zagori (37 villages) and Konitsa (11 villages), in the Epirus region of NW Greece. The area is well recognized because of its traditional architecture, rich biodiversity (North Pindos National Park, 11 NATURA 2000 sites) and geological value (UNESCO Geopark) (Pindos National Park, 2018), Figure 1. Field visits were realized in 2008, 2012–2015 and 2018. We recorded trees inside villages related to church yards and squares. In each site we selected 1–5 (maximum) trees with girth <50 cm and we documented tree species, form (maiden or shaped), *gbh* (girth at breast height, 1.3 m), associated artifacts (e.g. bells, benches attached to the trees etc.) and tree health (crown condition categories: 1–4; dying tree categories: 1–5 (Wong, 2005). We also interviewed local people about species uses and value and we collected narratives (Stara et al., 2015a). In this paper we analyze data related to tree species inside villages and their contribution to landscape character.

Results and discussion

We have recorded 133 trees in 72 different sites (1–3 in each village), related to central churches and village squares. Often the churchyard serves as the village square or is placed nearby. Recorded trees belong to 26 species. The majority of the trees recorded have been oriental

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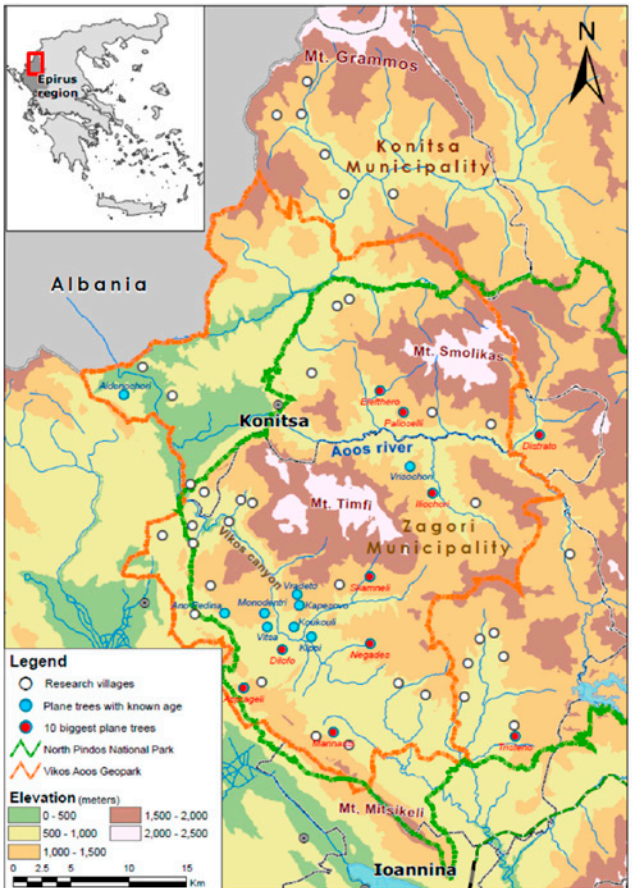

Figure 1 The study area and location of *Platanus orientalis* L. with known age and maximum girth at breast height recorded (see Table 1)
Source: made by the authors

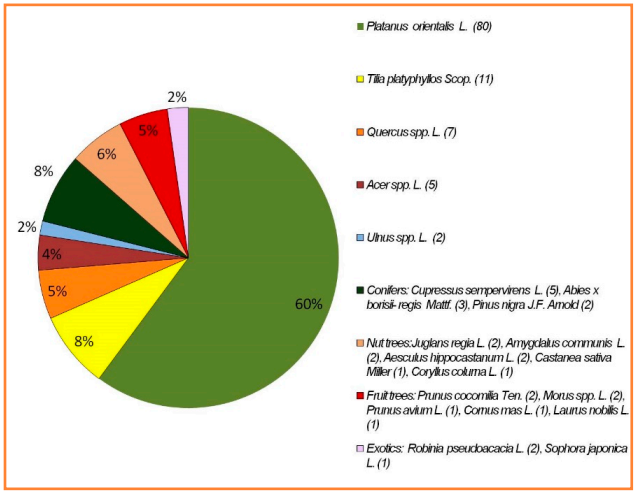

Figure 2 Tree species composition (n = 133 trees) in churchyards and central squares
Source: made by the authors

plane trees (*Platanus orientalis* L.), followed by large leaved limes (*Tilia platyphyllos* Scop.), oaks (*Quercus pubescens* Willd., *Q. coccifera* L., *Q. dalechampii* Ten.), maples (*Acer monspessulanum* L., *A. platanoides* L. *A. pseudoplatanus* L.), native evergreens (*Pinus nigra* J.F. Arnold, *Abies* × *borisii-regis* Mattf.) and planted trees typical to churchyards (*Cupressus sempervirens* L., *Lauris nobilis* L.). We have also recorded few rare forest trees (*Aesculus hippocastanum* L., *Corylus colurna* L., *Ulmus* L.), wild fruit or edible seeds trees (*Cornus mas* L., *Prunus cocomilia* Ten., *Juglans regia* L., *Amygdalus communis* L., *Morus* L., *Castanea sativa* Miller, *Prunus avium* L.) and exotics (*Robinia pseudoacacia* L., *Sophora japonica* L.), Figure 2 and 3. Except of exotics, and *Cupressus sempervirens* L. and *Lauris nobilis* L., native in Greece but not in mountainous inland Epirus, all trees are native in the region.

The *Platanus orientalis* L. is one of the largest and longest-lived trees of Greece and is the most representative of Greece's riparian forests. Impressive dimensions, great longevity, a huge leafy crown and the association with water rationalize its association with human settlements in the Eastern Mediterranean from prehistoric times (Grove and Rackham, 2001), while the idea that plane trees were gifts from the gods explains deliberate plantations in public and sacred places during the classical antiquity (Baumann, 1993). Certain monumental trees referred as alive from antiquity including those associated with Aristotle's peripatetic school in the area of Naoussa (384-322 BC) or Hippocrates, father of Medicine (460-377 BC) on the island of Kos, while the Cretan evergreen variety (*Platanus orientalis* L., var. *cretica*) was thought of as the offspring of the tree that hosted the sacred marriage of Zeus and Europa (Baumann, 1993). However, most of the historic plane trees of Greece are related to the national legend of heroic struggles for Greek independence (1821); under the shade of Agia Lavra's monastery plane tree the war of independence was blessed and began; plane trees hosted local heroes or became

Figure 3 Examples of trees in central church yards and squares in Zagori, NW Greece
Photos: K. Stara
Description: (left) belfry prickly oak in the churchyard of Elatochori; (middle) large leaved lime in the church yard of Doliani; (right) downy oak in the churchyard – old square of Kipi

Figure 4 Examples of *Platanus orientalis* L. in their natural habitat and village squares
Photos: K. Stara
Description: (left) Aoos riparian forest in Konitsa; (middle) the second biggest plane tree in Zagori in front of the school of Dilofo; (right) characteristic shaped for shade plane tree in Vitsa, Zagori

Figure 5 Examples of *Platanus orientalis* L. and their association with the sacred
Photos: K. Stara
Description: (left) outlying icon-stand by a chapel plane tree in Krystallopigi, Thesprotia; (middle) belfry tree in Pades, Konitsa; (right) stone inscription in the church entrance of Koukouli, Zagori, indicates the plane tree's planting date (1813)

gibbets for others, generally symbolizing the ending of the Ottoman Occupation (Loukatos, 1971; Tsitsas, 2005). Consequently, from the 39 monumental trees that are listed to the catalogue of Greek Nature's Monuments belonging to 10 different species, 23 are plane trees, included mainly because of their historic value and relation to the war of independence (Stara and Vokou, 2015).

In our study area, few plane trees grow naturally inside villages, while most of them were said to be transported from riverbanks nearby, Figure 4. Even if *Cupressus sempervirens* L. and *Lauris nobilis* L., seem to have started to dominate orthodox sacred sites recently, in mountainous rural Greece we can definitely associate oaks and maples with outlying churches, plane trees with central squares or churches and evergreens with cemeteries (Stara et al., 2015). Inscriptions concerning planting dates of plane trees in nearby churches confirm the species' relationship with the sacred. Great dimensions support their use as bell towers, while hollowed trunks give opportunities for their use as tree chapels, Figure 5. Symbolic lore heritage accords to the species a protective character for community life. Old plane trees are thought of as haunted guardians of their villages, protecting them from malevolent natural or supernatural powers. Accordingly, in villages where recurring calamities were happening, ritual reestablishments required the scarification of animals, over the burial place of which plane trees magically grew, further enhancing the protective supernatural power of the species (Alexakis, 2001; Politis, 1994).

Because of their conceptualization as protectors, plane trees are symbolically placed in the centre of the village, along with the central church, public buildings, i.e. schools and fountains providing a focal point for community life and symbolically access to common goods, such as the water, for all community members (Arapoglou, 2005; Nitsiakos, 1997). Their presence is so emblematic that people often replace the word tree (δέντρο) with the word plane tree (πλάτανος), regardless of the species when referring to huge trees. Indeed, the very presence of these trees in village squares is associated with the community's history, strength and vitality. Hence, plane trees embody the nostalgia of people from Diaspora, who return to their ancestral villages in Greece for annual summer festivals taking place under the plane tree (Stara et al., 2015a), Figure 6.

In an effort to construct a community's history, narratives refer to plane trees as having been planted by village founders. However, contrary to oral traditions that suggest villages and their plane trees as coeval and date them back to the 16th–17th century, or even before, inscriptions suggest that many plane

Figure 6 Illustrations of *Platanus orientalis* L. and their special role in social life and history
Source: Mylonas (2006); Farsakidis (1979); George de la Poer Beresford (1855);
Description: (left) annual celebration in Laista, Zagori; (middle) announcements posted in the trunk of a plane tree in Zagora, Pilio; (right) the "withering" gibbet plane tree of Ali Pasha in Arta, one of the Natural Monuments of Greece (1976)

trees in the villages of Zagori were planted in the 19th century, often replacing older broadleaved or prickly oaks and maples, Table 1. Except of plane trees we have known indications of age for very few other tree species. Characteristic examples are: a *Quercus pubescens* Willd., in a church yard in Aristi village, *gbh* =115.8 cm and an *Ostrya carrinifolia* Scop., by an outlying ikonstand in Laista village, *gbh* = 154.5 cm. According to the legend the species mentioned above existed when St Kosmas the Aetolian accomplished his missionary journeys in the region (1714–1779). Apart from their age, it is the maiden form which differentiates sacred from secular (or "working", e.g. coppiced, pollarded or shredded) trees, as cutting taboos and the fear of supernatural punishments discourage people to use the wood of sacred trees (Stara et al., 2015). Accordingly, sacred trees have a maiden form or, as in the case of plane trees, these are often deliberately shaped, as to give a wider shade or for safety reasons, because of their close proximity to buildings. Furthermore, some of these trees serve as belfry trees, are surrounded by stone wall enclosures usually covered by wooden boards, hold loudspeakers, electricity cables or spotlights, while announcements or advertisements are often posted in the trunk with pinches, Figure 6.

Interviews with villagers describe in a unique manner the bonds between locals and the plane trees of their village: "I value you as a plane tree in my yard", "There is no village without a plane tree", "Our village without the plane tree is a nothing", "Plane trees are immortal", "The old plane tree knows a lot, generations of generations passed though him", "I am 85 years old, since I have known the world it is there, neither falls nor dry. It offers shade and coolness", "The heroic plane tree, it has been shouted, injured, wounded".

Legal institution does not always assure the protection of monumental trees; while until very recently the procedure of declarations was particularly slow (e.g. 23 years for the declaration of the plane tree of Sevastiana, West Macedonia in 2017). Things have improved after changes in the law (3937/2011 FEK 60A), which simplify the procedure, while all at once initiatives from the private sector, i.e. the Association of Cretan Olive Municipalities (ACOM), declare ancient olive trees as monumental aiming to protect them as living monuments of cultural heritage and promote them as tourist attractions (Tsantakis, 2017). During this research we have lost the *Acer monspessulanum* L. of the central church of the famous touristic village Mikro Papingo in Zagori. This loss along with other cases of monumental trees that are cut or suffering by

Table 1 *Platanus orientalis* L. with known age according to narratives or inscriptions and girth at breast height (*gbh*) of the 10 biggest plane trees recorded

Trees with known age			The 10 biggest trees	
Village	**age (y)**	***gbh* (m)**	**Village**	***gbh* (m)**
Koukouli – Zagori (Fig. 4)	205	5.54	**Iliochori – Zagori**	9.99
Ano Pedina – Zagori	199	5.60	**Dilofo – Zagori (Fig. 3)**	8.42
Monodentri – Zagori	159	3.86	**Skamneli – Zagori**	8.01
Kapesovo – Zagori	152	4.18	**Mannassi –Zagori**	7.65
Vrisochori – Zagori	120	5.73	**Distrato – Konitsa**	7.44
Vitsa – Zagori	118	2.53	**Tristeno – Zagori**	7.22
Aidonochori – Konitsa (cut)	94	4.74	**Aspragеli – Zagori**	7.21
Vradeto – Zagori	79	2.63	**Palioseli – Konitsa**	7.21
Kipoi – Zagori	41	2.27	**Elefthero – Konitsa**	7.1
			Negades – Zagori	7.02

modern inadequate management has been our inspiration to create an educational package on the value of ancient trees that has been distributed to schools, public services and associations of the region (Stara and Vokou, 2015). However, recently a new peril has been added to the list of threats to monumental *Platanus orientalis* L. The lethal invasive pathogen *Ceratocystis platani*, a fungus causing canker stain disease, is expanding rapidly after its first appearance in the country in 2003; it has already assumed epidemic proportions along several rivers in Epirus, where eradication is impossible (Tsopelas et al., 2017). The disease is spreading by accidental anthropogenic contamination (e.g. pruning and cutting tools) and therefore especially shaped trees are of immediate threat of infection. It has already killed emblematic plane trees in our study sites in Konitsa: Aidonochori (plane tree planted in 1924) and Melissopetra as also in the traditional Syrrako village in the nearby area of Mt. Peristeri (Tzoumerka, Acheloos, Agrafa and Meteora National Park). In addition to *C. platani*, plane trees in Greece are under constant pressure from leaf mining insects such as *Phyllonorycter platani* (Lepidoptera, Gracillariidae) and *Corythucha ciliata* (Hemiptera, Tingidae) that significantly weaken their physiology, rendering the trees vulnerable to secondary pests and diseases (Toth and Lakatos, 2018; Tzanakakis, 1988).

Conclusions

- Among the twenty six tree species recorded inside villages in the mountainous municipalities of Epirus in NW Greece, planted *Platanus orientalis* L. dominate.
- These giants of the Greek flora, along with other species of an old age are very much appreciated as a living heritage and a link with ancestors and the past. Moreover, modern views conceptualize emblematic trees as landscape elements, special places for inspiration and particular habitats for biodiversity.
- Inadequate management, lack of awareness and unintentional damage in conjunction with global spread of new lethal tree diseases are threatening their existence, worldwide and Greece is not an exception with *Ceratocystis platani* to be evaluated as a lethal threat for *Platanus orientalis* L. that can result in the complete elimination of the species.
- However, planted monumental trees can contribute to ex situ species conservation, as sacred and public places inside settlements can provide a safe protected shelter for the most 'social' trees of the Greek flora.

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MARKING SACRED GROUND THROUGH IMPORTED TREES AND MEDIEVAL EUROPEAN SCULPTURE AT THE WASHINGTON NATIONAL CATHEDRAL

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The landscape of the Washington National Cathedral contains a variety of sacred objects imported from Europe and Asia. They include stone sculptures and living flora. Many of the stone objects came from the collection of George Grey Barnard, an American sculptor, trained in Paris, who travelled Europe in the early 20th century purchasing medieval antiquities (Weinberger, 1941). How do we understand these displaced pieces incorporated into this new context? On the one hand, their use in the landscape brings it significance, a physical and tangible connection to the roots of Christianity. On the other hand, they remind us of the relative youth of this sacred landscape and the question of what makes places sacred. Is a place sacred because of something inherent to it or do we mark ordinary ground with significant objects to sanctify it? Largely, the Washington National Cathedral landscape seems to demonstrate the latter approach. Imported objects mark and validate the sacredness of the site from medieval stone archways to significant pairs of trees.

Keywords: Washington National Cathedral, sacred ground, George Grey Barnard, sacred trees, medieval sculpture

The project of the Washington National Cathedral commenced in the 1890s. Its construction coincided with a period of considerable American interest in Europe architectural precedents, especially the Gothic (Clark, 1973). It is the work of the private Protestant Episcopal Cathedral Foundation with no government funding. The intent was to create a great cathedral for the nation, a freestanding masonry structure that took 83 years to complete and is now undergoing repairs after a 2011 earthquake. Preceding and during its construction, a variety of smaller monuments and plantings around its grounds set the stage for the century long project. A natural amphitheatre in an oak grove, a peace cross, a baptistery and a small sanctuary, all preceded the laying of the cathedral's cornerstone in 1907 (Satterlee, 1901). These objects and buildings began to mark the landscape as a sacred ground. Frederick Law Olmsted Jr. laid out the overall landscape, including the Bishop's Garden to the south of the cathedral and a native oak grove, which he preserved at the core of the site (Figure 1). Into these spaces the All Hallows Guild, a group of volunteer women, and the cathedral staff, added various medieval artefacts, along with religiously significant plants, to build associations between the place and Christian traditions (Bratenahl, 1929). By staking out the hilltop with medieval objects, the cathedral's creators made the place sacred, turning a hilltop farm and woods into a sanctuary and a site of pilgrimage. This method of sanctifying the land supports J.B. Jackson's claim that in America we shape and add to places in order to make sites sacred (Jackson, 1980). This is in contrast to the older European way, which understood places as sacred first with their *genius loci* (Nilsson, 1948). Of course, the cathedral grounds and its groves had a special quality and were understood by some as sacred (Heavers, 2018), as evidenced by Christian gatherings among its oaks. However, the dominant means of establishing sacredness was to add imported objects, creating exterior spaces of devotion. The objectives of this study are to:

- inventory the imported objects (trees and sculptures)
- analyse how they mark the grounds
- explain the extent to which they shape sacred space

Material and methods

The situation and materials of the cathedral landscape

The Washington National Cathedral landscape is 23 hectares on a wooded hill about 100 m above sea level overlooking the city. It is in the Piedmont region of the East Coast of the United States and in the Potomac River watershed. The focus of the study is on the south side of the cathedral grounds, including the enclosed Bishop's Garden, the Pilgrim Steps, the outdoor amphitheatre, and the Olmsted Woods (Figure 1). The natural situation, the ridgeline of the hilltop, was suitable for the construction of a cathedral, but the emphasis here is on the materials imported or brought to the site. The landscape and its artefacts are a living collection and perform as an outdoor history museum. History museums were increasingly popular cultural institutions in late 19th and early 20th century America (Wallace, 1981). It was typical for institutions like the National Cathedral to underscore their identities with historical collections.

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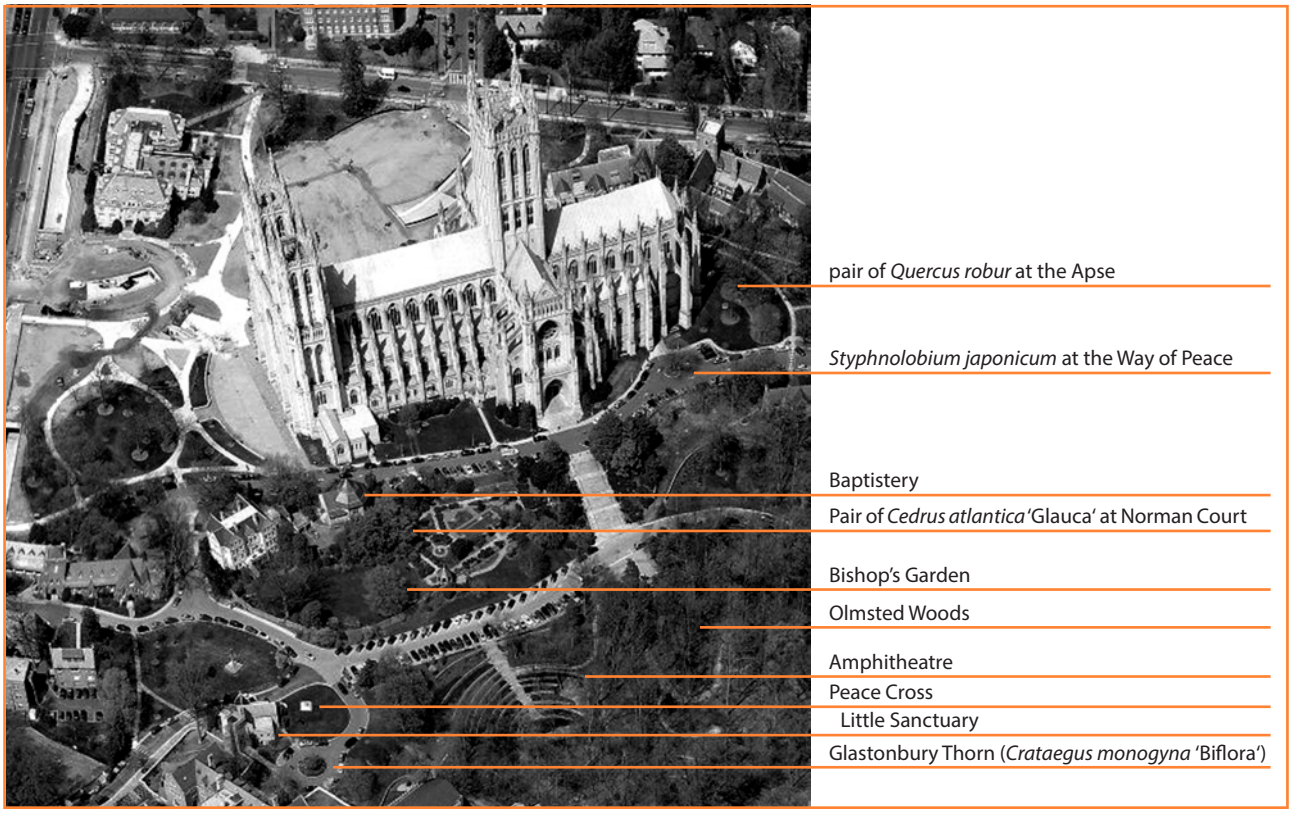

Figure 1 The landscape to the south of the Washington National Cathedral designed by Frederick Law Olmsted Jr. Base image from Bing aerials
Photo: by author

Figure 2 Pair of *Cedrus atlantica* 'Glauca' from Palestine planted in 1902 before cathedral cornerstone
Photo: by author

Historical analysis of the grounds

The historical portion of this study interprets available maps, plans, photographs, letters, and pamphlets from the Cathedral Archives, the Smithsonian Institution, and the All Hallows Guild. This research draws on the approach of material culture studies, as exemplified by James Deetz (1977), who used artefacts to interpret history. Several useful texts cover the history of the construction of the cathedral, beginning with Satterlee's The Building of a Cathedral (1901). Florence Bratenahl's A Cathedral Hillside and its Gardens is the most significant historical publication for this analysis because it documents the George Grey Barnard sculptures in the landscape.

Current analysis of artefacts in the cathedral landscape

Field study and inventory in conjunction with historical records are the methods of analysis. The elements analysed include imported (non-native) trees that have sacred meaning and medieval architectural stone fragments from the collection

of George Grey Barnard (All Hallows Guild, 2018). Important to this study are the relationships between the imported fragments and the overall design and layout of the cathedral and its gardens. The emphasis is on how in particular the artefacts mark the grounds to create sacred space. The study reveals three types of marking:

1. single trees and pairs of trees in partnership with important buildings and structures on the grounds,
2. standalone stone objects in the landscape, such as crosses,
3. architectural fragments incorporated into the landscape's walls.

Results and discussion

While there are numerous memorial trees dedicated to significant individuals across the cathedral's grounds, four specific plantings serve to illustrate how imported trees mark out sacred ground. 1) A pair of *Cedrus atlantica* 'Glauca' grow in the Bishop's Garden (Figure 2). Henry Yates Satterlee, the founding Bishop of Washington, had two trees brought from Palestine by steam ship to represent cedars of Lebanon (Washington National Cathedral, 2016). Planted in 1902, they pre-date the cornerstone of the cathedral, and exemplify one of the first acts of differentiating this ground from ordinary land. 2) A few years later, as construction began on the apse, two *Quercus robur*, English oak, joined the cedars. Growing alongside the flying buttresses, these two European trees witnessed the importation of gothic architecture to America, and mediated between it and the native oak forest. 3) Southwest of the cathedral, in front of St. Alban's School, is another European import, grown from a cutting of the Glastonbury Thorn (*Crateagus monogyna* 'Biflora'). Legend has it that the original tree grew from Joseph of Arimathea's staff, which he drove into Wearyall Hill in Glastonbury, England. It blooms twice annually – once thought to be a miracle. Just as Joseph of Arimathea brought Christianity to England, this tree symbolizes spreading the gospel to America. 4) Along the south side of the cathedral, near the Way of Peace entrance is a *Styphnolobium japonicum* or Japanese pagoda tree named for its association with Asian temples. One might interpret it as a reminder of the idea that the national cathedral is "a house of prayer for all people," and opens its doors to visitors of all faiths. Together these trees represent some of the ancient stock of sacred plants with associations to Christian, Jewish, and other religions. Using these and other species as key features of the landscape increased its connection to religious traditions thereby sanctifying the landscape.

Similar to the trees, there are now numerous sculptures, plaques, and memorials throughout the cathedral grounds. However, the collection of pieces from George Grey Barnard, acquired in the 1920s and 1930s (Bratenahl, 1929), stand out because of their age and the way that they give religious authenticity to the grounds. These additions strived to make significant an otherwise very new project and not long sacred site. There are two sorts of medieval pieces used – those that mark garden rooms, acting as focal points in the design and those incorporated into walls, framing rooms.

Of the focal point type, there are two that are chief components of the Bishop's Garden – the Wayside Cross and the Carolingian Font (Figure 3). The Wayside Cross is an early Christian marker of the sort used to guide pilgrims throughout Europe. It rests at the centre of the garden. The 9th century Carolingian Font, a baptismal font, comes from the Abbey of St. Julie in the Aisne. It sits in the middle of the Hortulus, an herb garden of European plants from Charlemagne's plant list. In line with the Wayside Cross, the two pieces demarcate the main axis of the garden. Other standalone objects include two 13th century capitals – one Cluny from used as a birdbath, and the other from a monastery near Rheims now a sundial. Other medieval pieces are set within the walls of the garden and form important entrances. The main entrance to the garden is a copy of a 12th century Norman arch. The original deteriorated so much between 1928 and 1978 that a replica in Indiana limestone replaced it. A second 12th

Figure 3 Norman Court (left), Carolingian Font (middle), and Wayside Cross (right)
Photo: by author

century Norman Arch in its original state creates a portal into the Norman Court (Figure 3) between and under the pair of *Cedrus atlantica* 'Glauca' planted in 1902. Embedded in the local sandstone walls of the open-air court is a 15th century bas-relief sculpture of Christ with Mary and John. Three other bas relief sculptures give spiritual weight to a long retaining wall above a perennial border, including the figure of St. Catherine above a small pool on the west end of the border. On the east end of the Bishop's Garden, near where the 2011 earthquake shook a pinnacle from the central tower, the Finial Garden room contains that artefact. It strangely continues the precedent of including fragments in the garden, but this time the artefact is from the 20th century cathedral itself.

The combination of tree plantings and medieval stone fragments incorporated in the landscape mimic the type of small sacred spaces found along the wayside on pilgrimage routes in Europe and the Holy Land. While the whole project seems to borrow somewhat too deliberately, trying to make a place sacred with historic sculpture and important trees, it is a universal practice to re-purpose past works and ideas. Furthermore, it is noteworthy how the Washington National Cathedral uses artefacts as though made for that landscape, taking some preservation measures, but the stones, like the trees, are part of a whole and gradually changing composition.

Conclusion

As these Christian markers age and the Washington National Cathedral acquires its own patina, they remind visitors of the significance of small gestures on the land and their potential to connect people through ideas and faith across continents. If we understand the trees and imported stones as markers, incorporated into a foreign setting to give it sacred value, this is a universal practice. However, the practice is distinctive in the context of establishing a cathedral in America and it shows how much deference the cathedral's creators and benefactors had for European medieval architecture and pre-Reformation Christian traditions. One might also view the Washington National Cathedral as a nationalistic project. Even though it did not receive government funding and, in principle, the United States has a separation of church and state, it supports state ceremonies and therefore promotes an Anglican version of Christianity. Not surprisingly, this version of Christianity promotes the use of objects as religious symbols, supporting the thesis that these imported objects aimed to sanctify the ground, though we may debate how successfully and to what ends.

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SMALL ROADSIDE SACRAL STRUCTURES IN THE BORZECHÓW COMMUNE (LUBLIN REGION) AND THEIR DENDROFLORA

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Trees and shrubs significantly increase the visual value of roadside crosses and shrines. The paper presents results of the inventory of small roadside sacral structures in Borzechów Commune (Central-Eastern Poland). The species composition and the age status of dendroflora surrounding small roadside sacral structures were examined. We have inventoried 94 small roadside sacral structures in Borzechów Commune. Only 68 of them were surrounded by trees and shrubs that represent 39 species. The most common deciduous species are small leaved lime (*Tilia cordata* Mill.) and common lilac (*Syringa vulgaris* L.), but the most common coniferous species is northern white-cedar (*Thuja occidentalis* L.). In the research area the most common small roadside sacral structures are crosses. Shrines and statues of saints are very rare.

Keywords: dendroflora, small roadside sacral structures, landscape of Borzechów, cross, shrine

Small roadside sacral structures represent an important element of the cultural landscape of Poland. Alongside other displays of religious cult, they create a sacral or religious landscape, and are the spiritual and cultural legacy of the nation. They constitute a material expression of devotion of the local people, as well as a part of broadly understood sacral space (Przybylska 2005; Myga-Piątek, 2012; Plit, 2012). Roadside crosses and shrines dominate the landscapes of all regions across Poland, as evidenced by the results of studies to date. Since 1990's, the number of roadside crosses in Poland has rapidly increased, exceeding fourfold the number of shrines and statues (Przybylska and Czepczyński, 2016). The majority of studies regarding small religious structures in Poland is inventory in character, with special focus on typological, historical, cultural, and artistic aspects (Seweryn, 1958; Gauda, 1987; Janicka-Krzywda, 1991; Białczak, 2002; Pawelec, 2004; Golonka-Czajkowska and Maj, 2006; Fortuna-Antoszkiewicz and Kimic, 2007; Kozaczyńska, 2007; Kondraciuk and Urbański 2008; Garbacz, 2009; Kozaczyńska, 2010; Mełges, 2010; Frąckiewicz, 2011; Czerwiński, 2012; Rembiś et al., 2012; Antolak and Szyszkowski, 2013; Rydzewska and Wilkaniec, 2013; Pukowiec and Pytel, 2013; Hernik et al., 2013; Holly 2012; Kulesza and Lubiarz, 2013; Kuprjaniuk, 2014; Hochleitner, 2014; Kijowska, 2015; Kulesza et al., 2017a). Only a few studies undertake the issue of vegetation accompanying the objects, especially their evaluation from a natural viewpoint (Borcz and Czechowicz, 2003; Majdecka-Strzeżek, 2003; Pudelska, 2011; Lubiarz and Kulesza, 2013; Kulesza et al., 2017b; Gorączkowski and Bykowska, 2018). However, the authors highlight the great value of trees and shrubs that grow near crosses and shrines. Due to this vegetation, roadside crosses and shrines become more visible within the landscape, thus increasing their sacral expression in terms of space (Antolak and Szyszkowski, 2013). Especially significant are tall, old trees that form a connection between the earth and the heaven. They express the divine and earthly elements alike. What is more, the span of their crowns demarcates a safe space for the sacral objects, highlighting their religious aspect (Cała, 2007). Thus far, studies suggest that the most dominant deciduous trees are lime trees (*Tilia* sp.), while among coniferous – *Thuja* sp. (Cała, 2007; Pudelska, 2011; Lubiarz and Kulesza, 2013; Kulesza et al., 2017b). Despite the fact that roadside sacral structures are increasingly becoming the subject of interest of many fields of study, there still are not enough studies dedicated to the vegetation that surrounds them. Therefore, it is important to extend analyses and supplement the present state of research.

The Borzechów Commune was established in 1973, however, the area it consists of has a complicated history. Before 1474, the administration of the Borzechów Commune area belonged to the Sandomierz Voivodeship. Between 1474 and 1795, the territory was a part of the Lublin Voivodeship, the Urzędów County to be exact. Only after 1830 and entering this region to the Kingdom of Poland did the area become a part of the Lublin County. After regaining independence by Poland in 1918, the territory that presently belongs to the Borzechów Commune was a part of Niedrzwica Duża and Wilkołaz Communes. Following the Second World War, in the years 1955–1972, the areas that comprise this commune were under the jurisdiction of Gromada National Councils, i.e. the smallest administrative units of the country, which usually encompassed a few villages (Kozłowski, 2013). Parish membership also underwent significant changes.

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Villages originally belonging to this area belonged to the Wilkołaz and Ratoszyn parishes. In 1930 the parish of Kłodnica Dolna was established and is still operational. In 2006 a new parish in Borzechów was founded (Kozłowski, 2013).

The oldest villages of the Borzechów Commune aree: Borzechów, Kłodnica Dolna, Kłodnica Górna, Łopiennik (all originated in the 15th century), as well as Kępa dating back to the 16th century. The remaining villages are from the 19th century. Only three villages –Dobrowola, Kolonia Łopiennik, Majdan Radliński – were founded at the beginning of the 20th century (Słownik Geograficzny Królestwa Polskiego, 1880–1914).

Material and methods

The field research was carried out across the span of the Borzechów Commune (cadastral area), rural in character. The commune is situated in the Lublin Voivodeship (middle-eastern Poland), and its area equals 67.73 km^2. This commune was sellected for our study due to the fact that its area previously belonged to historic settlement units. What is more, Borzechów adjoins other communes with high historical value. The study includes all roadside sacral structures (crosses, shrines, statues) located within the administrative boundaries of the commune. Observations and measurements were performed in July and August, 2018. We determined the types of sacral structures, as well as species composition of the accompanying vegetation using the method of dendrological inventory based listing all observed trees, shrubs, and prostrate shrubs. Botanical nomenclature for the dendroflora was adapted from Seneta and Dolatowski (2017). In the case of trees, we also carried out a dendrochronological analysis, using the measurements of diameter at breast height (130 cm from the ground), as well as a tree age table by Majdecki (1986). Detailed photographic documentation was prepared as well.

Results and discussion

Despite its rich history, the Borzechów Commune is somewhat forgotten. One of the reasons is that it was founded relatively late – in the second half of the 20th century – by merging different administrative units. Therefore, it has been insufficiently studied in terms of its value as a cultural landscape, especially when considering sacral structures – in comparison to the neighbouring communes (Niedrzwica Duża, Wiklołaz), that have been thoroughly studied (Biegalska, 2000; Janczarek et al., 2014; Kosidło, 2015).

The Borzechów Commune is located far from vital communication and pilgrim routes, especially the Lublin section of the Way of Saint James leading through Kraśnik to Sandomierz (Mróz, 2014ab). In the past, however, it used to belong to Via Regia leading from Vilnius, through Lublin to Cracow (Kozłowski, 2013). That ensured its rapid economic and demographic development. The register of monuments of the Lublin Voivodeship from 2018 indicates that curatorial protection encompasses only three architectural complexes: the wooden parish church with historic tree stand in Kłodnica Dolna, the manor-park complex in Kłodnica Dolna, as well as the historic manor and park in Łopiennik (Kopciowski, 2018).

As a result of the research carried out across the Borzechów Commune, 94 roadside sacral structures were found. Among those are: 5 statues, 3 shrines, 84 crosses, and 2 crosses with cabinet shrines (Fig. 1). It is important to note that, in comparison with other communes from Lublin Voivodeship and the rest of the country, this commune is filled with roadside sacral structures, since in the Mełgiew Commune (area of 95.64 km^2) there were 84 sacral structures (Lubiarz and Kulesza, 2013), in the Trzydnik Duży Commune (104.73 km^2) – 73 structures (Kulesza et al., 2017b), and in the Nakło nad Notecią Commune (186.97 km^2) only 23 such structures were found (Gorączkowski and Bykowska, 2018).

Roadside sacral structures in the Borzechów Commune are scattered unevenly. The higher concentration of these objects was noted in Kłodnica Górna and Kłodnica Dolna situated in the south-eastern part of the commune. Numerous crosses can be found in Łopiennik (South-West) and Majdan Skrzyniecki (North-West). The area of the village of Łopiennik is dominated by metal crosses, whereas in Majdan Skrzyniecki one can find metal crosses, as well as old, wooden, often dilapidated ones (Fig. 2).

The majority – 89 objects are situated in the direct vicinity of roads, where 31 crosses and 1 statue were found

Figure 1 A cross in Łączki-Pawłówek
Photo: Magdalena Lubiarz, 2018

Figure 2 Crosses in Majdan Skrzyniecki
Photo: Magdalena Lubiarz, 2018

Figure 3 Crosses in Kępa Borzechowska
Photo: Magdalena Lubiarz, 2018

at crossroads or forks in the road. What is more, 2 crosses and 2 statues are on private properties, and 1 cross is situated in the manorial-park complex in Kłodnica Dolna. The landscape of the Borzechów Commune is dominated by roadside crosses. Among them, over 53 are made from metal, 26 from wood, 5 from stone, and 1 from concrete.

The results of our analyses indicate that none of the inventoried roadside sacral structures is under legal protection, despite the fact that some of them visibly show historical and cultural value. Few objects have a date of their construction, information about the founder, or any inscription related to their origin. Four of the inventoried objects show clear historical value. The oldest is the wooden cross from 1906 in Kępa Borzechowska, with the inscription: "GOD ALMIGHTY, ACCEPT THE SIGN OF YOUR CROSS, WHEN THE POLISH NATION IS NEARING FREEDOM, WE, POOR FARMERS, WORSHIP YOU, MERCIFUL GOD, HAVE MERCY ON US" (Fig. 3). The origin of the cross needs to be linked to the edict of tsar Nicholas II of Russia from 1905, and peasants' movements, which were the result of the document in this area. The cross is accompanied by two over-one-hundred-year-old small leaved limes (*Tilia cordata* Mill.). Around 1908 Józef Sokalski founded a brick shrine in Kępa Wały. It is surrounded by new plantings of Chinese juniper (*Juniperus chinensis* L.) and nothern white-cedar (*Thuja occidentalis* L.). The interior of the shrine, however, does not show high historical value, possibly due to the damage sustained during two World Wars, and following renovation. Situated in Kłodnica Dolna is a statue of Christ carrying a cross from 1909, founded by Mr and Mrs Modzelan. Next to the statue there is a single specimen of an approximately seventy-year-old small leaved lime with three trunks, as well as one, approximately one-hundred-year-old common hornbeam (*Carpinus betulus* L.), with three trunks as well. Situated in Ludwinów is a stone cross from 1922, founded by the local people. The cross has a small niche, housing a new picture of Our Lady of Fatima, of no historical value. Perhaps there used to be a work of art with higher historical value. Growing next to the cross there are two, nearly one-hundred-year-old specimens of small leaved lime.

Among the inventoried roadside sacral structures in the area of the Borzechów Commune, 68 are accompanied by higher vegetation. The inventoried deciduous plants represent 25 genera from 18 families, whereas among coniferous plants there were 7 genera belonging to 3 families. The majority of identified taxa are of foreign origin, since among deciduous plants they constitute over 71%, and among the coniferous – 55%. The remaining taxa represent taxa of the native flora.

Within the area of the Borzechów Commune among the vegetation accompanying the roadside sacral structures 36 species were found, including: 8 species of deciduous trees, 9 species of coniferous trees, 16 species of deciduous shrubs, 2 species of coniferous shrubs, and 1 species of

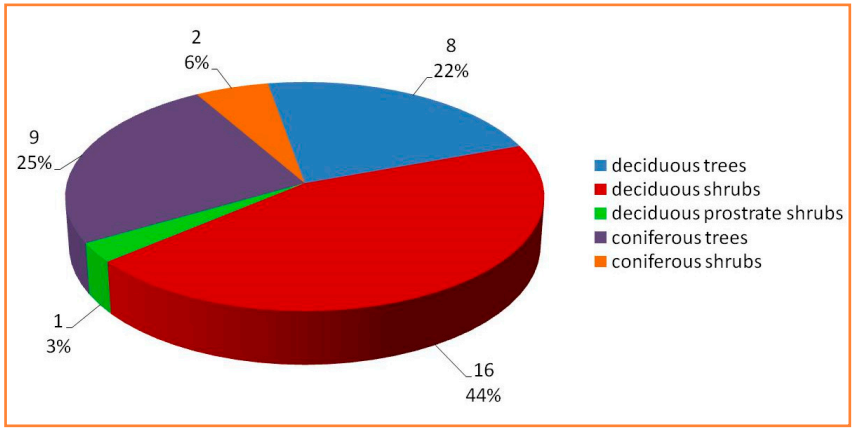

Figure 4 Number and percentage share of deciduous and coniferous species of trees, shrubs and prostrate shrubs
Source: own study

a deciduous prostrate shrub (Fig. 4). 16 specimens of plants were identified only as far as the level of genus. These are representatives of the *Paeonia* genus (4 specimens), *Rhododendron* (6 specimens), and garden roses (*Rosa* sp. – 6 specimens). Similar results were obtained in the Mełgiew Commune, where 34 species of accompanying 84 roadside sacral structures were found (Lubiarz and Kulesza, 2013). In another commune in Lublin Voivodeship – Trzydnik Duży – 42 species of dendroflora were found at 73 objects (Kulesza et al., 2017b). Pudelska (2011) noted that 28 species of trees and shrubs were found alongside 31 sacral structures in the area of the Przeworsk County.

The highest species percentage share is represented by deciduous shrubs (44%), followed by deciduous trees (22%), coniferous trees (25%), coniferous shrubs (6%), and deciduous prostrate shrubs (3%) (Fig. 4). A similar structure of domination of individual groups of dendroflora in the Trzydnik Duży Commune was identified by Kulesza et al. (2017b). Within the area of the Borzechów Commune, deciduous plants accompanying crosses and shrines are represented by 25 species (which constitutes 69% of the inventoried species), whereas coniferous ones – by 11 (equal to 31%). Similar observations were presented in the case of the Trzydnik Duży Commune, where 76% of the identified dendroflora belongs to deciduous species (Kulesza et al., 2017b). In the Mełgiew Commune, however, only 19% of the species were coniferous (Lubiarz and Kulesza, 2013).

In the Borzechów Commune area the majority of identified species belonged to the Cupressaceae family, which is represented by 7 species from 4 genera. Among deciduous plants, the highest number of species was inventoried within the *Rosa*ceae family – 3 species from 2 genera, as well as the aforementioned garden roses which were identified only as far as their genus. Similarly, in the area of the Trzydnik Duży Commune, the most numerous genera belonged to the following families: *Rosa*ceae, *Cupressaceae* and *Oleaceae* (Kulesza et al., 2017b).

There were 273 specimens of plants, including 164 specimens of trees, 96 specimens of shrubs, and 13 specimens of prostrate shrubs inventoried in the area of the Borzechów Commune. Deciduous plants have the greatest number of representatives, since there were 52 trees, 88 shrubs, and 13 prostrate shrubs. Coniferous plants are represented by 112 specimens of trees, and 8 specimens of shrubs inventoried (Fig. 5).

The most often occurring deciduous tree species is *Tilia cordata* (28 specimens), whereas among deciduous shrubs it is *Syringa vulgaris* (28 specimens). *Tilia cordata* accompanies 16 crosses and 2 figures, whereas *Syringa vulgaris* – 12 roadside crosses. It is a sign of a continuing trend of planting vegetation at sacral objects that originated at the turn of the 19th and 20th centuries (Majdecka-Strzeżek, 2003). Similarly, in the area of other communes of the Lublin Voivodeship, the most numerous deciduous species was *Tilia cordata* (Lubiarz and Kulesza, 2013; Kulesza et al., 2017b). However, in the Kuyavian-Pomeranian Voivodeship, the most numerous species were *Picea abies*, *Tilia cordata* and *Acer platanoides*, and among the shrubs, *Buxus sempervirens* was the most dominant (Gorączkowski and Bykowska, 2018).

The most numerous coniferous plant is *Thuja occidentalis* (66 specimens), present at 20 objects, including 19 crosses and 1 shrine. There is an increasing popularity of using coniferous plants alongside sacral structures. Such observations were made earlier, in the areas of the Trzydnik Duży and Mełgiew Communes situated in the Lublin Voivodeship (Lubiarz and Kulesza, 2013; Kulesza et al., 2017b). Gorączkowski and Bykowska (2018) have also found that the most numerous coniferous taxon

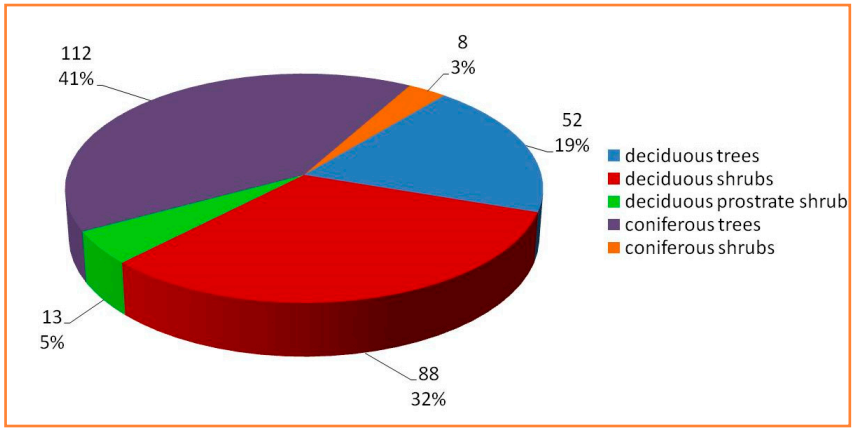

Figure 5 Number and percentage share of plant specimens in individual groups of dendroflora
Source: own study

in the Nakło nad Notecią Commune is *Thuja* 'Smaragd'. Pudelska (2011), on the other hand, reports that *Thuja occidentalis* occurs individually near crosses and shrines of the Przeworsk County.

The most numerous genus in our research is *Juniperus*, since there were 4 species belonging to this genus (*Juniperus communis*, *Juniperus sabina*, *Juniperus scopulorum*, and *Juniperus chinensis*). Similar data was obtained by Kulesza et al. (2017b) in the area of the Trzydnik Duży Commune, as well as Gorączkowski and Bykowska (2018) in the Nakło nad Notecią Commune, which confirms that coniferous plants are used more often as a supplement of roadside crosses and shrines, most probably due to them being evergreen.

Near certain objects, trees and shrubs were planted symmetrically, creating a framework for the cross or shrine. However, in many locations in the Borzechów Commune ambiguous compositional settings were observed. It is sometimes due to the fact that trees were cut down at one side of the object, as evidenced by stumps left behind by the removed specimens. It was observed that large deciduous trees are replaced with coniferous species, especially from the *Thuja* and *Juniperus* genera.

At 28% of the roadside sacral structures inventoried in the area of the Borzechów Commune there are no trees or shrubs. Identical results were obtained in the area of the Trzydnik Duży Commune (Kulesza et al., 2017b). In the case of the Mełgiew Commune 24% of objects lack dendroflora (Lubiarz and Kulesza, 2013). As in other regions of Poland, within the studied area there often was ornamentation present on roadside crosses and shrines, made from flowers produced using synthetic materials (Frąckiewicz, 2011; Pudelska, 2011; Antolak and Szyszkowski, 2013 Lubiarz and Kulesza, 2013; Kulesza et al., 2017b; Rydzewska and Wilkaniec, 2013).

Measurements and calculations show that the majority of tree specimens is not older than 20 years, and the size of only 3 small leaved limes (*Tilia cordata*) suggests age above 100 years. Two such specimens of small leaved lime were found at two crosses in Kępa Borzechowska, where there is located a wooden cross from 1906 (Fig. 3). One specimen of lime tree grows at a cross situated on an earth mound in Kłodnica Dolna.

The obtained results are similar to those from earlier studies carried out in the Lublin Voivodeship, in the Mełgiew and Trzydnik Duży Communes (Lubiarz and Kulesza, 2013; Kulesza et al., 2017b). The dominant form of sacral structures in the three communes is a cross. As in the Mełgiew and Trzydnik Duży Communes, in the Borzechów Commune, deciduous plant species were more numerous (Lubiarz and Kulesza, 2013; Kulesza et al., 2017b).

Conclusions

There were 94 roadside sacral structures found in the area of the Borzechów Commune, among which crosses were the most numerous. The remaining forms were rarely present. Unfortunately, none of the roadside sacral structures was entered into the register of monuments, despite the fact that the statue of Christ from 1909 in Kłodnica Dolna definitely deserves such protection. The majority of roadside sacral objects (as many as 72%) are accompanied by trees and shrubs, both deciduous and coniferous. Species composition of the dendroflora confirms the results of previous research regarding the vegetation near roadside crosses and shrines in other parts of the Lublin Voivodeship, since the most often observed genera are *Tilia*, *Syringa* and *Thuja*. As in previous studies, there is a visible tendency of replacing old specimens of deciduous trees with coniferous plants, especially of alien origin. Our analyses show that in many places people care for roadside sacral structures, however, there are spaces, where crosses were left without care, slowly degrading. Therefore, it is important to continue in carrying out inventory types of studies in order to preserve, even if only in photographs, some of the forgotten roadside objects.

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SMALL SACRAL ARCHITECTURE AND ITS GREENERY IN LOWER SPIŠ REGION IN SLOVAKIA

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Small sacral structures are significant elements of Spiš cultural landscapes (North-East Slovakia). This paper presents results of the field mapping of small roadside sacral objects and their greenery along a 66-kilometre long road section connecting North and South of Lower Spiš and the municipalities of Levoča, Spišská Nová Ves, Hnilčík, Mníšek nad Hnilcom, Smolník, and Úhorná. This road was an old trade route and has an important historical legacy in Lower Spiš – a traditional mining cultural landscape with a characteristic hilly topography, wide forest landscapes and rich mining history. The presented mapping was conducted within the research project VEGA 1/0371/18 "SacralArch: Preservation of the Historical Legacy and Architectural Diversity of Small Sacral Structures in Cultural Landscapes of Slovakia", based on the methodology elaborated by Tóth (2018), which includes localisation, spatial context, technical or health condition and an overall description of the sacral element and the woody plants in its direct surroundings. In total, 13 small roadside sacral objects were mapped, while the most prevailing elements are crosses. The most common cross type is wooden cross without pedestal. The oldest and aesthetically most valuable elements are metal crosses on stone pedestals, made of travertine. The most valuable element is a registered cultural monument – a Baroque roadside chapel of St. John of Nepomuk from 1726 in Smolník. Woody plants accompany only roadside crosses in the study area. The oldest and most significant in terms of landscape value are individuals of small-leaved linden trees (*Tilia cordata* Mill).

Keywords: cultural landscape, heritage, monument, small sacral structure, tree

Small sacral objects arose emerged in our landscapes as symbols of Christian culture and they are abundant especially in traditional Catholic regions (Kyselka, 2014). A high number of small sacral objects in cultural landscapes of Central Spiš can be seen as an evidence of the spiritual richness, belief and religiousness of the inhabitants. Small sacral objects are located in built-up areas or open landscapes (Tóth and Verešová, 2018), they are very abundant in cemeteries (Halajová and Kubišta, 2015) and occur also within or around historical estates and their landscape gardens (Tóth and Feriancová, 2016). Small sacral objects are defined by Matáková (2011) and Dohnálová et al. (2015) as specific architectural objects (e.g. chapels, wayside shrines, little bell towers, architectural and figural compositions), including simpler forms (e.g. crosses, statues of saints, and pictures on trees). The main functions of these objects are:

1. cult (religious) – as symbols of Christian belief;
2. memorial – as commemoration of historic events or persons;
3. votive – as gratitude for God´s answer to prayers;
4. warning – conciliation crosses;
5. protection – located on safe sites at crossroads;
6. representation – manifesting the social status of the donor;
7. administrative – marking field boundaries or property borders (Matáková, 2011).

Sacral objects are linked to theplaces where they are located, while creating its their identitiesy. They were not randomly placed, quite the opposite, they were located on important ritual sites that where linked to the life of local inhabitants, on places with good visibility, accessibility, as well as symbolic significance (Kopeček, 2015). In the landscape of Spiš, especially Gothic and Baroque urban structures and architectural objects prevail (Tomaško, 2000). These were strongly influenced by German culture and architecture. Pilgrimage as a phenomenon developed especially in the period of Baroque. Pilgrim routes that led to important pilgrim sites were normally accompanied by small sacral objects, which functioned as stops reminding the meaning and spirit of the journey. Spiš, especially Central Spiš landscape around Spiš Castle is an outstanding example of designed Baroque sacral landscape in Slovakia (Tomaško, 2000; Jančura, 2011; Supuka and Štefunková, 2014). At the vicinity of Spišská Kapitula (cathedral and chapterhouse), a symbolic landscape with seven Passion stops was created in the 17th century. This "Spiš Jerusalem" is the only recorded implementation of Calvario Jerusalem in Slovakia. The spatial setting of these objects copies the Jerusalem Calvary and its elements in an almost identical scale (Jančura, 2011; Jančura and Bohálová, 2001). The cultural environment of Spiš is characterised by the cult of Virgin Mary. The Marian Hill in Levoča, with the gracious statue of the Virgin Mary is a famous pilgrim site of national importance. Small sacral objects and designed cultural landscapes of Central Spiš

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are important features of the UNESCO cultural heritage site "Spiš Castle and the associated cultural monuments" that were assessed among others by Tomaško (2000), Kraková (2004), Felberová (2010), and Jančura (2011).

Woody plants are naturally linked to small sacral structures. Trees were significant sacred symbols in pagan cults, as well as in Christian religion. Especially linden trees were planted to protect sacral buildings, for which there is extensive evidence in Bohemia, Moravia and Slovakia. The number of trees is related to the numeral symbolism – one as the unity of God – the creator; two as contrast and bipolarity; three/triangle as trinity of God (omne trium perfectum); and four as symbol of the world and universe (Biedermann, 1992).

Material and methods

The Spiš cultural region is located in North-Eastern Slovakia. In the past, Szepes (Hungarian) / Zips (German) / Spiš (Slovak) / Scepusium (Latin) was an autonomous Royal County of the Hungarian Kingdom and later Austro-Hungarian Monarchy. Its cultural and historic centre is the Spiš Castle. This region is usually divided into three main parts – Lower Spiš (Spišská Nová Ves and Gelnica districts), Central Spiš (Levoča and Poprad districts and the main part of Kežmarok district) and Upper Spiš (Stará Ľubovňa district and the North-Western part of the Kežmarok district – Zamagurie). There are two UNESCO cultural heritage sites:

1. Spiš Castle and the associated cultural monuments (municipalities of Spišské Podhradie, Spišská Kapitula and Žehra);
2. the historic town Levoča.

The area of Central Spiš has already been studied for its cultural monuments and landscape heritage. Therefore, we decided to focus on Lower Spiš with an important mining heritage, hilly topography and a high share of forest land use, which makes it different from the designed landscapes of Central Spiš around Spiš Castle with a prevailing agricultural land use. This paper presents the outcomes of the mapping of small sacral architecture objects along B-road II/533 from Levoča to Gemerská Poloma, on the section Levoča – Spišská Nová Ves – Hnilčík; and B-road II/549 from Mníšek nad Hnilcom to Krásnohorské Podhradie on the section from Mníšek nad Hnilcom to Úhorná. These roads pass through the whole area of Lower Spiš, from North to East, and the whole section is 66 km long (see Figure 1), thus it can be considered a representative research sample of Lower Spiš.

The landscape between Levoča and Spišská Nová Ves consists of agricultural areas (Hornád River basin), hills and forests (Volovské vrchythe Volovec Mountains / Slovenské rudohoriethe Slovak Ore Mountains), deep brook valleys (Železný potok, Hnilecký potok, Smolnícky potok), and a water reservoir (Úhorná). In the hilly forest landscape of Volovské vrchythe Volovec Mountains, there was an important purple-copper-ore mining area with mining settlements that flourished mainly in the 14th and first half of the 15th century. The studied road used to be an important trade route for transporting copper from Spiš to Poland in the 12th century. An old settlement Mníšek nad Hnilcom was named after the monks (mních / mníšek) who lived in Jasov and had hermitages in the area (Vencko, 2018) and who co-formed the sacral character of the Spiš landscape.

The field mapping presented in this paper is one of the main objectives of the research project VEGA 1/0371/18 "SacralArch: Preservation of the Historical Legacy and Architectural Diversity of Small Sacral Structures in Cultural Landscapes of Slovakia". The field mapping methodology was elaborated in a unified way for the whole research project and for all studied areas by Tóth (2018) and consists of the localisation, spatial context and description of the sacral element and woody plants around it, their photographic documentation, and searching for evidence in historical maps.

The overall technical condition of the object and the degree of damage is classified as follows: 0 – good technical condition/no damage – 0%; 1 – negligible damage – 1–10%; 2 – low damage – 11–25%; 3 – medium damage – 26–60%; 4 – heavy damage – 60–69%; 5 – considerably damaged or destroyed – 70–100%.

Trees and shrubs were assessed individually. We focused on their number, species and spatial composition. We measured the trunk circumference [m] at the height of 1.3 m, the width (m) and height [m] of the woody plant. We evaluated the age phase (1 – young; 2 – outgrown; 3 – adolescent; 4 – mature; 5 – old woody plants) (Šimek,

Figure 1 The mapped road section in Lower Spiš (Levoča – Spišská Nová Ves – Hnilčík – Mníšek nad Hnilcom – Smolník – Úhorná) as research sampling area
Source: https://zbgis.skgeodesy.sk

2001); the landscape value (1 – low; 2 – below average; 3 – average; 4 – above average; 5 – extraordinary) (Machovec, 1987); and the overall health condition and degree of damage (0 – healthy, 0% damaged; 1 – negligible damage up to 10%; 2 – low damage up to 25%; 3 – medium damage up to 60%; 4 – heavy damage up to 69% and 5 – excessive damage 70% to total damage 100%) (Juhásová, 2009 amended according to Annex No. 35, Decree No. 24/2003 of the Act No. 543/2002 on Nature and Landscape Protection). For shrubs, we documented the number, species, height and composition. Herbaceous plants were documented by text descriptions. The historical evidence in maps was documented based on the 1st (18th century – 1782–1785), 2nd (19th century – 1819–1869) and 3rd (1869–1887) Military Survey of the Austro-Hungarian Monarchy (Tóth, 2018).

Results and discussion

Along the 66 km long road section from Levoča to Úhorná, we mapped 13 roadside small sacral objects. These are located in two districts and 7 municipalities – Spišská Nová Ves District/Harichovce (1), Spišská Nová Ves (1), Hnilčík (4); and Gelnica District/Nálepkovo (2), Švedlár (1), Smolník (3), Úhorná (1). Eight of these objects are located in built-up areas, five in the open landscape (see Table 1).

The prevailing typology is represented by crosses (11). Two of them are located on crossroads. There are two roadside chapels with niches, located in important settlements – Spišská Nová Ves and Smolník. The most common cross type in terms of material is wooden cross without pedestal, with round tin roof (6) and grey-painted-metal-cast (4) or polychrome-tin (2) Corpus Christi. Eight crosses are surrounded by a simple wooden fence. The oldest and aesthetically most valuable are two metal crosses on stone pedestals and one stone cross, all located in Hnilčík and made of travertine, in combination with cast-metal Corpus Christi. There are some similarities between the studied area and the area of Central Spiš, mainly in terms of object typology and material, while in Lower Spiš common crosses prevail. This can be explained by the fact that there are not such historically significant towns and cities as in Central Spiš, where Kraková (2004) identified 67 small sacral objects in 12 municipalities around the Spiš Castle – common crosses (23), memorial crosses (11), chapels with niches (13), roadside shrines (12) and chapels with an inner space (8). Here, the number of chapels is significantly influenced by the Spiš Jerusalem. Similarly to Lower Spiš, the memorial crosses are mostly made of travertine. Common crosses are made of wood or metal, with a tin roof, a cast-metal or tin Corpus Christi and they are normally surrounded by a small ornamental garden.

It is important to highlight travertine as a regional specificity of Spiš, which was extracted here in the past for sculpture and stonemasonry purposes. This had an impact also on the material character of many small sacral objects all over Spiš. According to Felberová (2010), travertine is the most common material of stone crosses in Spiš, while sandstone crosses occur mainly around Levoča and Spišské Podhradie.

The oldest and aesthetically most valuable cross (No. 4) in the study area is located on the crossroad of II/533 (Levoča – Gemerská Poloma) and II/546 (Hnilčík – Prešov), at the edge of a spruce forest (see Figure 2). This cross dates back to 1907 and it was obviously raised on the site of a previous cross, which is documented in the 3rd military survey (1869–1887).

Figure 2 Blac-painted metal-cast cross (No. 4) on a white stone pedestal made of travertine located on the crossroad of B-road II/533 (Levoča – Gemerská Poloma) and B-road II/546 (Hnilčík – Margecany)
Photo: Halajová, 2018

Table 1 Inventory of small sacral structures along the road section Levoča – Spišská Nová Ves – Hnilčík – Mníšek nad Hnilcom – Úhorná

No.	Localisation					Sacral object									Military map		
	municipality	road	GPS	m.a.s.l.	spatial context	object type	material	surface finish	ornamental decoration	height/width	dating	damage	fencing	monument protection	1st 1782–1785	2nd 1819–1869	3rd 1869–1887
1	Harichovce	II/533	48.95796, 20.58285	452	built-up, roadside	cross	wood, tin roof	brown paint	cast-metal Corpus Christi	6/1	n/a	0	metal fence	no	no	no	yes
2	Spišská Nová Ves	II/533	48.93438, 20.55368	480	open land, roadside	chapel with a niche	brick	white/grey plaster	statue of Virgin Mary with Jesus, two pictures	3/1.6	n/a	0	none	no	yes	yes	yes
3	Hnilčík	II/533	48.87885, 20.53265	823	open land, roadside	cross	metal cross, travertine pedestal	black paint (cross)	cast-metal Corpus Christi	2.35	1940	1	none	no	no	no	yes
4	Hnilčík	II/533	48.87580, 20.52153	816	open land, crossroad	cross	metal cross, travertine pedestal	black paint (cross)	cast-metal Corpus Christi, statue of Virgin Mary, inscription medallion	3/0.35	1907	1	metal fence	no	no	no	yes
5	Hnilčík	II/546	48.87615, 20.52667	797	built-up, roadside	cross	wood, tin roof	brown paint	cast-metal Corpus Christi	5/1	n/a	0	none	no	no	no	yes
6	Hnilčík	II/546	48.87606, 20.53427	768	built-up, crossroad	cross	travertine	none	cast-metal Corpus Christi	2.6/0.45	n/a	0	none	no	no	no	no
7	Nálepkovo	II/546	48.84836, 20.59774	572	built-up, roadside	cross	wood, tin roof	brown paint	cast-metal Corpus Christi	4/1	n/a	0	metal fence	no	no	no	no
8	Nálepkovo	II/546	48.83887, 20.62514	518	built-up, roadside	cross	wood, tin roof	brown paint	cast-metal Corpus Christi	4/1	n/a	0	wooden fence	no	no	no	yes
9	Švedlár	II/546	48.81099, 20.72066	470	built-up, roadside	cross	metal cross, concrete pedestal	brown paint	cast-metal Corpus Christi	3/1	n/a	0	concrete fence	no	no	no	no
10	Smolník	II/549	48.73304, 20.74979	535	built-up, roadside	chapel with a niche	brick	light plaster	statue of St. John of Nepomuk, two angel statues	9/5	1726	0	none	yes	no	no	yes
11	Smolník	II/549	48.72667, 20.71878	558	built-up, roadside	cross	metal cross	silver paint	cast-metal Corpus Christi	2/1	n/a	0	wooden fence	no	no	no	yes
12	Smolník	II/549	48.70881, 20.69486	644	open land, roadside	cross	wood, tin roof	brown paint	painted-tin Corpus Christi	3/1	n/a	0	metal fence	no	yes	yes	yes
13	Úhorná	II/549	48.70431, 20.66765	752	open land, roadside	cross	wood, tin roof	brown paint	painted-tin Corpus Christi	2/1	n/a	2	none	no	no	no	no

It can be assumed that there was a former wooden cross that was replaced by a then popular and long-lasting black-painted metal-cast cross on a white travertine pedestal. The handcraft detail of the cross is very elaborate and detailed – rays symbolise Resurrection; plant motives like vine, clover and laurel symbolise life after death. The writing INRI (Iesus Nazarenus Rex Iudaeorum) is a biblical reference to Jesus from Nazareththe Nazarene, as King of the Jews. Below the Corpus, there is an inscription medallion (with the date 1907 and a reference to the donors) and a metal-cast relief of Virgin Mary with elaborate plant-motive decoration. The cross is surrounded by a simple metal fence and a group of common lilac (*Syringa vulgaris* L.).

The oldest preserved crosses documented by Felberová (2010) in Central Spiš date back to the 19th century. These are mainly metal crosses created by the technology of die-casting. They are aesthetically very valuable pieces of art located mainly in cemeteries, but also in open landscapes of Central Spiš.

The roadside Baroque chapel of Saint John of Nepomuk from 1726, located at B-road II/549 (Mníšek nad Hnilcom – Krásnohorské Podhradie), at the entrance to villageSmolník (Figure 3) is was registered as a cultural monument since in 1963. It features a typical mining symbol with two hammers at the dating, which represents a symbolic linkage between everyday life and work of locals with their spiritual values. The chapel was built during the reign (1711–1740) of Charles VI (1685–1740) whose name is linked to some of the most spectacular Baroque buildings in the region, in the period when the cult of Saint John of Nepomuk (canonised in 1729) was rising. The development of Smolník continued under the reign (1740–1780) of Maria Theresia (1717–1780) when one of the three mining schools in the Hungarian Kingdom and a mining inspectorate were established.

Roadside chapels and shrines often refer to the patrociny patronage of the municipality in which they are located. The patrocinypatronage was usually selected based on local, religious, cultural, economic, and social characteristics. According to Felberová (2010), the patrociny patronage of Saint John of Nepomuk significantly prevails in Central Spiš. This cult was still vivid in the interwar period, when sung litanies where celebrated at small sacral objects of Saint John of Nepomuk in May.

In the studied area, there were woody plants only at roadside crosses – solitary trees at six objects and shrubs or groups of shrubs at three objects (see Table 2). Out of the 14 documented trees, ten 10 individuals are small-leaved lindens (*Tilia cordata* Mill.), 2 individuals are northern white-cedars (*Thuja occidentalis* L.), while Norway spruce (*Picea abies* (L.) H. Karst) and European larch (*Larix decidua* Mill.) are represented by one individual each. Trees were planted mainly in groups of two, framing the sacral object from both sides (3 samples), there was one object with a group of four trees (two pairs on both sides of the object) and one object with a group of three trees (one tree on both sides of the object and one behind it). The oldest trees with the highest landscape value are small-leaved lindens (*Tilia cordata* Mill.) – two at the object No. 1 in Harichovce (see figure 4), and two at the object No. 11 in Smolník (see figure 5), all four in the age phase of old/senescent trees that need immediate arborist intervention, in order to be preserved. Shrubs are represented by common lilac (*Syringa vulgaris* L.), flaky juniper (*Juniperus squamata* Buch.-Ham. ex D.Don) and box tree (*Buxus sempervirens* L.). These findings support the results of Kraková (2004), one of the few authors who mapped also vegetation as a part of small sacral monuments and sites, and documented the presence of woody plants at 32% of small sacral elements in the study area of Central

Figure 3 A characteristic Baroque chapel in Smolník (No. 10) with a niche featuring a polychrome statue of Saint John of Nepomuk and decorative mining symbols around the dating
Photo: Halajová, 2018

Table 2 Inventory of woody plants at small roadside sacral structures along the road section Levoča – Spišská Nová Ves – Hnilčík – Mníšek nad Hnilcom – Úhorná

No.	Localisation					Object type	Woody plants								
	municipality	road	GPS	m.a.s.l.	spatial context		number	composition	species	stem circumf./ surface	age phase	canopy width	height	landscape value	health condition
1	Harichovce	II/533	48.95796, 20.58285	452	built-up, roadside	cross	2	on both sides	*Tilia cordata*	450	4	15	18	4	2
									Tilia cordata	270, 330	4	15	20	3	3
3	Hnilčík	II/533	48.87885, 20.53265	823	open land	cross	1	unintentional, on one side	*Picea abies*	71	4	6	15	3	3
4	Hnilčík	II/533	48.87580, 20.52153	816	roadside	cross	group	behind	*Syrina vulgaris*	10 m^2					
5	Hnilčík	II/546	48.87615, 20.52667	797	open land	cross	shrub	behind	*Juniperus squamata*			1	1		
6	Hnilčík	II/546	48.87606, 20.53427	768	crossroad built-up,	cross	2	on both sides	*Thuja occidentalis*	more stems	2	1	1.8	3	healthy
									Thuja occidentalis	more stems	2	1	1.8	3	healthy
9	Švedlár	II/546	48.81099, 20.72066	470	roadside built-up, crossroad built-up	cross	4	2 on both sides	*Tilia cordata*	87	2	1.5	3	3	healthy
									Tilia cordata	87	2	1.5	3	3	healthy
									Tilia cordata	68	2	1.5	3	3	healthy
									Tilia cordata	63	2	1.5	3	3	healthy
11	Smolník	II/549	48.72667, 20.71878	558	roadside built-up, roadside	cross	3	on both sides and behind	*Tilia cordata*	332	5	12	18	4	3
									Tilia cordata	170	5	7	9	3	4
									Larix decidua	235	5	7	20	3	3
12	Smolník	II/549	48.70881, 20.69486	644	open land, roadside	cross	2	on both sides	*Tilia cordata*	255	5	10	20	3	healthy
									Tilia cordata	180	5	10	20	3	healthy
13	Úhorná	II/549	48.70431, 20.66765	752	open land, roadside	cross	group	behind	*Buxus sempervirens*	1 m2					

Figure 4 A wooden cross framed by two small-leaved linden trees (*Tilia cordata* Mill.) in Harichovce (Object No. 1)
Photo: Halajová, 2018

Figure 5 Metal cross in Smolník with two small-leaved linden trees (*Tilia cordata* Mill.) and a European larch (*Larix decidua* Mill.) behind the cross (Object No. 11)
Photo: Halajová, 2018

Spiš. In her study, the number of trees per object ranged from one to four, while *Tilia* (linden) as genus prevailed. Regarding the species composition in our study area, it is important to mention that the planting of non-native species like *Thuja occidentalis* L. in open landscapes with important cultural values is to be observed critically, as it changes the traditional character of the landscape.

Conclusion

Roadside crosses, mainly wooden crosses, are the most common small sacral elements in the observed area of Lower Spiš. Metal crosses on stone pedestals made mainly of travertine show valuable and very elaborate art and handcraft details. Results of the mapping have confirmed that the most common tree genus at objects of small sacral architecture in Spiš is linden (*Tilia*), while the most represented species is small-leaved linden (*Tilia cordata* Mill.), mainly in the age phase of mature and old trees. New plantings are rare, while often unsuitable species (e.g. *Thuja occidentalis* L.) are used. We consider *Thuja* and other non-native species as unsuitable because they negatively impact the traditional cultural landscape, its visual character and aesthetic values. Their planting shows the lack of professionality and sensitivity in planning and design. When planting trees in rural, especially open landscapes, native tree species should always be preferred. Lower Spiš is widely forested, thus objects are often located on edges of coniferous forests, where sacral elements stand with no additional plantings or they are highlighted with a different species than the prevailing forest species. The most valuable small sacral object is the protected cultural monument of the Baroque roadside chapel of Saint John of Nepomuk from 1726 in Smolník, which reflects the crucial importance of mining tradition in this region during the Baroque period, as well as the popularity of dedicating villages and sacral monuments to this saint. Small sacral objects are part of the mining cultural landscape of Lower Spiš, which are still important elements in the everyday life of local inhabitants. This is reflected by their good technical condition and ornamental decoration with seasonal flowers and candles.

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ASSESSMENT OF SMALL SACRAL OBJECTS IN THE SENICA REGION, SLOVAKIA

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The sacral objects have great meaning in the cultural landscape in Slovakia. There are several types according to the significance, size and location, which could be identified in the countries, where the major religion is Christianity. The paper deals with the assessment of the sacral objects from architectural and urban point of view and also according to the presence of greenery accompanying the object. The surveyed area was the Senica region, located in the western part of Slovakia. The hidden symbolism and meaning of these objects could be find in their formation and precise placement. The greenery, which was planted by them – the type and number – has also significant meaning. The group of trees draws attention to a small sacral object, which could be noticed from distance, they protect it and support it. There are descriptions and explanations in stories and memories. Obviously, in the past, these objects did not have only symbolic meaning, but also a concrete spiritual significance for society. The field survey was carried out in 2017. Several criteria were evaluated: the location of the objects, the architectural background and the trees inventory.

Keywords: small sacral objects, cultural landscape, Senica, Slovakia, assessment of greenery

In Slovakia, Christianity dominates, which results in a significant occurrence of sacral architecture and Christian elements in the landscape, in both urban and rural areas. The sacral objects have an important liturgical function. They have not been created in random places, but in the places that play important roles in the human life and everyday rituals of the local population. During the development of the society there were changes in the used materials, shapes, proportions and decorative elements (Kopeček a i., 2015). The main reason for building the objects of small sacral architecture was human belief that the patrons, who were figured, would protect them. For example, placing such objects on bridges, by streams or lakes, meant faith in protection against natural disasters. Sacral objects built at road intersections should protect the people against the evil and the dangers (Lukáčová, 1996). Sacral objects were also often built as a commendation or as a monument (Rozehnálová et al., 1995).

Small sacral objects are represented by: chapels, sculpture(s), crosses, wayside shrines, bell towers, column, etc. The spiritual memory of the place is emphasized by the placement of any religious object/picture/symbol. The place where the small sacral objects were built, had a special meaning. Besides religious significance (a place of thanks and prayers), it was also a memorial to the natural disaster and human tragedy or any significant historical incident. The builders left certain testimonies about the lives of people of that time (Košík, 1996).

Felberová (2003) points out that in the past, the main function of sacral objects was to promote and demonstrate Christian religion and to highlight the values of life. The other functions are: border landmarks, localization points, authentic art sculpture. Nowadays, we can say that these places also have a high aesthetical, landscaping, orientational and recreational function.

Small sacral object is a type of a small building that does not have a residential function. It is located inside or outside an urbanised area or in the open landscape. It represents a religious object with no big scale (Rozehnálová et al., 1995; Kopeček a i., 2015).

Crosses are probably the oldest objects belonging to small sacral architecture. They have appeared since around 9th century. The original crosses were wooden, at the end of Middle Ages they were made of stones. Iron forged crosses appeared in the 15th century and from the 18th century cast iron crosses on a pedestal with a crucified Christ were constructed (Kyselka, 2001). The history of raising up the crosses by the roads, cross-roads and in the peri urban areas is linked to the time of Christianity acceptance in the Slovak territory. The people had respect and fear of cross-roads in the past, so the cross built on the crossroad symbolized the protection from the dark forces. Crosses that were built in the field and by the road could have a grateful, apologetic or protective meaning (Nádaská, 2013).

The wayside shrines are usually in the form of a column, built from stone or brick. They could also have the shape of quadruple walled and carved pillar with a heel, shaft and head. On the top there is a case in which there is a painting (picture of a saint), a sculpture of a saint or embossment. There is often a shelter and a cross at the top. The wayside shrines are a type of chapels. They were built from 15th to 19th century in Slovakia (Botík and Slavkovský, 1995).

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The sculpture(s) of saints were placed in the boundaries, fields and by the paths on stone or concrete bases. They were 1–2 meters high. The statues were made of wood or stone and were painted. There is a huge range of saints figured. In the small chapel or wayside shrines there used to be placed: St. Joseph with the Baby Child, St. John of Nepomuk, St. Anthony of Padua, St. Mary Magdalene, St. Wendelin, Archangel Michael, St. Christopher, Guardian Angels, St. Anna, St. Catharine, St. Barbara, St. Urban. Particular attention was paid to the statues of Holy Mary and the Pieta. Most often they were made of sandstone. Sculptors were mostly unknown (Buganová et al., 2005).

Column – Marian pillars occur most often as for columns, followed by plague columns and Trinity columns. They were built due to belief of protection against disasters and diseases, or as type of gratefulness for ended of the worse (heavier) periods. The plague columns are widespread and significant type of small sacral objects. These columns originated mainly during the black death epidemics (Križanová, 1995).

Chapels are the youngest type of small sacral objects, dating back to the 17th century. The symbolism plays significant role based not only in the architectonical design of a chapel, but also in the chosen place of location. The older chapels are with niches, where a painting or a statue of a saint was placed. The other, newer chapels are larger, and accessible to come in.

Bell towers were mainly located in urbanised areas of villages and cities and were used when the fire danger has appeared.

The inherent part of sacral objects is greenery. Many authors point to the symbolism hidden behind the planting of tree species by the objects. For example, Buganová et al. (2005) describes how and why these trees were planted. Usually the trees were purposely placed on four geographical sides (North, South, West and East). Sobotka (1879) studied the symbolism of the individual species of trees which were planted by the objects of the small sacral architecture.

At the beginning, only deciduous trees were planted by the sacral objects, because the Slavs have attributed them many symbolic aspects. The coniferous trees have appeared by the sacral objects only during the inter-war period. The reason for planting of evergreen woody plants was, that they remain green even during the winter period and their maintenance is less demanding and simpler than in the other types of greenery (Buganová et al., 2005).

Material and methods

The first written reference on Senica appeared in 1256 in documents by the King Bela IV. The original and first name of Senica was Scinze. By centuries, the name of the town evolved and changed and finally in 1920 the name Senica was used. Nowadays, Senica is a town with approximately 21,000 inhabitants. The district of Senica is rich in folk traditions, whether in the form of folk costumes, carpentry, chicory, blacksmithing and other crafts. Also, the ceramics of Sekul is world-famous in its colour (the colour of sand). (Garbierova et al., 2001) The Haban culture brought new insights and knowledge into the craft, the economy and the land use of the society. Before the Haban have appeared, the land and estates were devastated and burned by the Hussites. The industrial expansion and many reforms were secured by the government of Maria Theresa and Joseph II. The Senica region is rich in all types of the small sacral architecture objects: crosses, chapels, sculptures, columns, wayside shrines, columns.

The aim of the research was to evaluate and register all existing objects of small sacral architecture in the Senica region. The assessment has consisted of a field survey, following previous map data studying, websites of villages and towns and reading the relevant publications. Architectural assessment was completed by the inventory of greenery. The results were recorded in the tables and graphically processed in the posters.

Evaluation of small sacral objects

The following data were evaluated:

- serial number;
- localization (intravilan/extravilan);
- type of a monument: cross, wayside shrine, chapel, statue(s), bell tower, etc.;
- the year of origin;
- accompanying greenery: the number of accompanying trees, and their specification: deciduous trees, coniferous trees, shrubs;
- sccessibility or inaccessibility: The possibility to get to the object. In the case of chapels, it was possible to enter the object either anytime or only during special events;
- dimensions of the objects: in meters. Chapels and bells were specified by height × width × length. The height was specified in other types of objects. Current state of the monument: Range of damage was determined by the visual analysis in the following scale: Damaged up to 30%, Damaged between 30–70%, Damaged over 70%, Restored. Material: The material the small sacral object was made of was specified.

The accompanying greenery was inventoried according to the methodology of Machovec (1982), Juhásova (1990) and Pejchal (1997) published in Supuka, Feriancová et al. (2008).

Results and discussion

Based on the field research we have found that 79% of the mapped small sacral objects were located in the urban environment of the towns or villages and only 21% were located in the open landscape. There were assessed 181 units of small sacral objects in total, spread in 31 cadastral areas of towns and villages. In the Senica region, crosses dominate (41% of the objects), 28% was represented by statue of a saint or sculptures of saints, 15% of all objects were chapels, 6% wayside shrines, 5% statues of Pieta, 3% of bell towers and 2% was represented by Calvaries.

St. John of Nepomuk, St. Florian and also the Virgin Mary have been figured on the statues. Statues of the Holy Trinity and Pieta could also be seen.

Table 1 An example of small sacral objects assessment

No.	Type	Year of origin	Greenery (numb. of trees)			Accessible/ Inaccessible	High (dimension) in metres	Condition				Material	Urban Environment /Landscape
			deciduous	coniferous	shrub			damaged up to 30%	damaged 30–70%	damaged over 70%	renovated		
Kúty (village)													
1	cross	–	0	0	0	P	4	X				metal	UE
2	cross	1906	2	0	0	P	2.4	X				concrete	UE
3	cross	1898	0	1	0	P	4.5	X				concrete	UE
4	sculptural group	1893	0	0	0	P	3.5	X				concrete	UE
5	calvary	–	4	2	0	P	2.5 (x14)	X				concrete	UE
6	sculpture of Virgin Mary	–	0	1	0	P	3.5	X				concrete	UE
7	chapel of St. Anna	1852	0	0	0	N	3.4 × 4 × 4		X			concrete	UE
8	belfry	1826	0	1	4	N	3.3 × 3,3 × 8			X		concrete	UE
9	cross	1850	0	1	4	P	4	X				concrete	UE

Source: Michalica, 2017

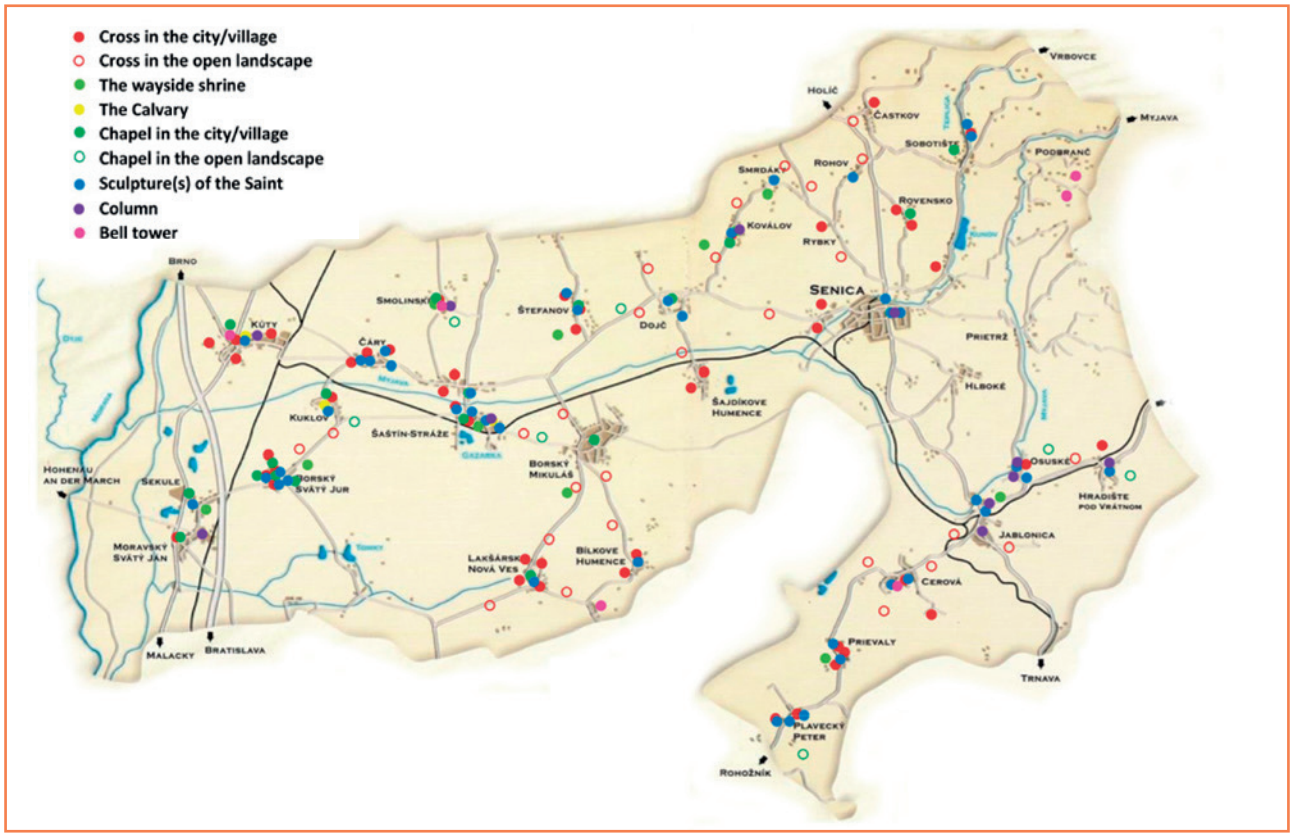

Figure 1 Localisation of assessed small sacral objects in the Senica region
Source: Michalica, 2017

Most of the chapels were dedicated to the Virgin Mary. We could suggest that the reason of great number of the small sacral objects dedicated to the Holy Mary is due to close location of Šaštín-Stráže, which is called the National Shrine of Slovakia. The one of the most important basilicas in Slovakia was built there, because of the statue of the Virgin Mary of Seven Sorrows from 1564. After the canonical examination, the statue was declared to be miraculous, confirmed by the Pope Urban VIII. In 1736 the church and monastery were built in the town. In 1764, the church was consecrated at the presence of the Empress Maria Theresa and Emperor Francis I. of Lorraine.

Renovated small sacral objects form 36% of all evaluated units. 34% of all mapped objects were damaged by 30%. 23% of the objects were damaged in the range of 30% to 70%. Objects damaged in more than 70% represent 7% of the total. Many renovations of small sacral objects were performed and according to the interviews and dialogues with locals, we have found out that many renovations are prepared in the near future.

Based on the field survey in 2017 and the detailed inventory of the trees, we have recorded 244 pieces of woody plants. Small sacral objects were mostly accompanied by deciduous trees, which is 84% of all trees. Coniferous trees represented 11% of the inventories species and 5% belongs to the shrubs. The most represented species is *Aesculus hippocastanum* L. (45%) and on the second place there is *Tilia cordata* Mill. 36%. *Cerasus avium* Moench., *Acer pseudoplatanus* L., *Syringa vulgaris* L., *Sophora japonica* L., *Fraxinus excelsior* L. occurred occasionally.

Thuja occidentalis L. represents the biggest group of coniferous trees inventoried. The other occurring species were *Picea abies* L. (16%), *Platycladus orientalis* L. (16%), *Picea glauca* Voss. (13%), *Taxus baccata* L. (11%), *Pinus nigra* Arn. (10%), *Juniperus communis* L. (10%), *Pinus silvestris* L. (3%), *Abies alba* Mill. (3%).

Conclusion

The landscape is created and modified not only by natural processes, but also by human activities. Society cultivates and enriches the environment which it is identified with and perceives it as a part of life. (Kopeček et al., 2015) Small sacral objects have been and always will be parts of our cultural landscapes. Every one of them has its own history and message. They are important elements, reminding of historical and cultural development, values and religious background of the society. Small sacral objects are integral parts of our landscape and could create the *genius loci* of the place. They are mainly related to the belief of people. Respect and peace is what these objects bring. It is important to pay attention to them also in the present time and consider them as a cultural heritage on the national and regional level.

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OBJECTS OF SMALL SACRAL ARCHITECTURE AND LANDSCAPE – CASE STUDY OF THE COMMUNE OF ŽIRANY

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This study aims to analyse existence, technical condition, origin and history of objects of small sacral architecture in the area of the Tribeč Mountains, specifically as a case study in the commune of Žirany. It defines different types of objects, mostly small chapels and crosses and specific phenomenon of small boxes with sculpture of saints installed on the front facades of residential houses. The study also focuses on the relation between small sacral architecture and existence of elements of greenery. As a result, the work presents a detailed description of the individual mapped elements and an overview map showing the objects in the cadastral area of Žirany.

Keywords: small sacral architecture, landscape, chapel, sculpture, cross

Small sacral architecture (SSA) forms specific roles in the Slovak country; it is a part of the cultural heritage, it co-creates and completes visual concept of most landscape structures, acts as a landscape accent and orientation point (Kotalík, 2004; Hájek a Bukačová, 2001) and it is also a form of sacral art as the means of expression of its inhabitants. From a historical point of view, the emergence and building of SSA is related to the Catholic Church; Holy Trinity and Virgin Mary are the most exquisite objects (Kleinová, 2017). An important element with respect to SSA is the presence of greenery. Tóth and Verešová (2018) mentioned the relation and interconnection of these elements in a whole, where the greenery (especially trees) completes the spiritual dimension of sacral elements. Every region has its specifics, SSA can differ in forms, shapes, materials, location of sacral objects and this study aims to show the examples of one of them.

Material and methods

Map and software material

A field survey was started by search of locations of SSA objects using the Basic Map of Slovakia in a form of the map client. The existence of these objects was subsequently verified in the field, objects were marked into personal google maps and by export of the data in a form of KML/KMZ data were elaborated in the software QGIS to form a final map of locations.

Analyses of sacral objects were processed according to the Methodology of mapping of elements of small sacral architecture – methodology of project VEGA 1/0371/18 (2018). This methodology and the analysis procedure include definition of individual mapped elements by:

1. Location – cultural region, administrative region, city, cadastral area, street/road, GPS.
2. Spatial context – rural zone/residential zone of city/edge between.
3. Photo documentation – photo of whole object and its surroundings with spatial context or interesting views, photo of sacral object itself, photo of details.
4. Sacral objects – type of object, material, sizing, writing/signs, fence and arrangements of surroundings, technical condition and degree of damage (0. perfect condition/well maintained / reconstruction, damage 0%; 1. damage 1–10%; 2. damage 11–25%; 3. damage 26–60%; 4. damage 60–69%; 5. damage 70–100%).
5. Greenery – 1. Trees – number, composition, taxon, trunk circumference (cm), age defined by Šimek (2001), crown width (m), height of tree (m), landscape-architectural value (Machovec, 1987), health condition and degree of damage (Juhásová, 1999), notes; 2. Shrubs – number of shrubs/definition, composition, taxon, height in metres, notes.
6. Evidence in historical maps – using Maps of Europe – Europe in 18th and 19th century.

Results and discussion

In total, ten SSA objects were mapped and analysed; five chapels, three crosses, small sacral boxes and a Lourdes cave were observed. According to methodology, all objects are located in the cultural region Dolná Nitra, Nitra region, commune Žirany, cadastral area Žirany.

Chapel of St. John of Nepomuk was built in 1843, foundation charter by Jozef Szórád is still preserved (Municipality of Žirany, 2010). It is situated in the edge

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Figure 1 Chapel of St. John of Nepomuk
Photo: Fusková, 2018

Figure 2 Chapel's interior
Photo: Fusková, 2018

between rural and residential zone of the village on the premises of the Agricultural farm of the Slovak University of Agriculture (Fig. 1). Chapel's interior contains a small sculpture of St. John, small vase with flowers, cross and candles (Fig. 2). This object is built of brick, it is newly reconstructed and in perfect condition (value 0 for technical condition), with new painting, roofing and window. It is one of smaller chapels found in the area; it has 1.2 × 1.2 m size in base and 1.6 m in height. The object is simple, painted in light yellow colour without any writing or decorative ornaments; its surrounding is also simple, without fence. In respect to greenery, this object stays without any, there are few trees newly planted, but they are part of the farm greenery without any historical context. Evidence in historical maps can be seen in the Map of Third Military Survey (Fig. 14) and the Military Survey of Hungary (Fig. 16).

Chapel with Pieta is situated in front of the residential house number 82 on the main road in the old residential area (Fig. 3). The object is built of brick, the front side of the chapel is lined with limestone, behind the pale-yellow metal doors there is a sculpture of a gracious appearance – Mother with dying Jesus (Fig. 4). The chapel is in good condition, it has no damage (value 0 for technical condition), the internal sculpture decoration is highlighted at night. In respect to sizing, the object has 1.6 × 1.2 m in base and 2 m in height. There are no writings or ornaments, the chapel forms a part of the fence. There is no evidence of greenery and historical maps do not register the object. The estimated origin of this monument is the second half of the 20th century.

Chapel of St. Wendelin was built in 1912 by Molnár family (Municipality of Žirany, 2010). It is situated in the yard of a village grocery store in the central zone of the residential area. The surrounding of the chapel is simple, it

Figure 3 Chapel with Pieta
Photo: Fusková, 2018

Figure 4 Detail of chapel's interior
Photo: Fusková, 2018

Figure 5 Chapel of St. Vendelin
Photo: Fusková, 2018

Figure 6 Detail of small box
Photo: Fusková, 2018

faces the street, and both sides of the chapel are planted with *Yucca*, sp. (Fig. 5). The chapel is built of brick, painted in white colour, with roofing and dark brown wooden door. It has 1.5 × 1.5 m in base size and 2.2 m in height. There is one-line writing on the light orange line: 'Isten. Dicsőségére. Épitette. Özv. Molnar. Ilona. 1912' (God. Glory. Built. Widow. Molnar. Ilona. 1912). Above writing there is an ornament painted in the same colour and more above a small wooden box with the statue of Virgin Mary (Fig. 6). Behind the door there is a sculpture of St. Wendelin dressed as a shepherd along with sheep. The object is well maintained, without any sign of damage (value 0 for technical condition). Only greenery presented is the yucca plantation mentioned above. According to the data mentioned on facade, there cannot be any evidence in historical maps from 18th and 19th century, it was not also marked during the Hungarian Military Survey in 1941.

Chapel of St. Andrew the Apostle built in 1895 by Michal Dubnický (Municipality of Žirany, 2010) is situated in the rural zone in the Žirany cadastral area on the crossroad Jelenec – Kolíňany (Fig. 9). The object is oriented towards the landscape with a view line on the Tribeč mountain range. It is built of bricks, with cement plaster, roofing and green metal doors. It has 1.5 × 1.5 m in base size and 2 m in height. Its technical condition is not perfect, but it does not show significant signs of damage, except of graffiti on one side of the object, rather it may be a partial neglection resulting from the locality and high traffic pollution (value 2 for technical condition). In respect to greenery, this object is interesting as it is the only one adjacent to the growing tree. *Tilia cordata*, Mill. which grows at the right side of chapel has 272 cm in trunk circumference, 12.5 m of crown spread, 20 m in height, it represents value 5 (veteran) for its age by Šimek (2001), value 4 for its landscape-architectural value by Machovec (1987). According to Juhásová (2009) it represents 2nd degree of health condition and degree of damage. The record of the chapel in

Figure 7 Chapel of St. Andrew the Apostle with tree *Tilia cordata*
Photo: Fusková, 2018

Figure 8 Detail of Chapel
Photo: Fusková, 2018

Figure 9 Chapel nearby main road
Photo: Fusková, 2018

Figure 10 Detail of sculpture
Photo: Fusková, 2018

Figure 11 Example of small boxes with sculptures
Photo: Fusková, 2018

Figure 12 Lourdes cave
Photo: Fusková, 2018

Figure 13 Small sacral box in residential garden
Photo: Fusková, 2018

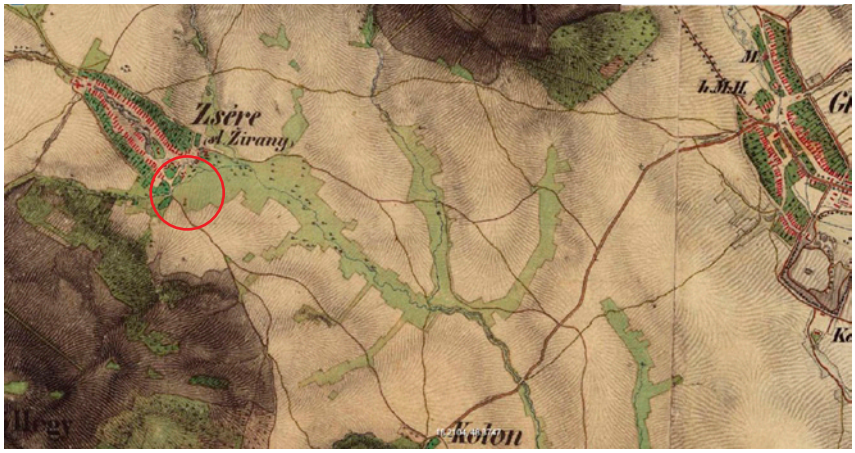


Figure 14 Second Military Survey of the Habsburg Empire (1819–1869)
Source: Maps of Europe, Europe in 18th and 19th century

Figure 15 Third Military Survey of Habsburg Empire (1869–1887)
Source: Maps of Europe, Europe in 18th and 19th century

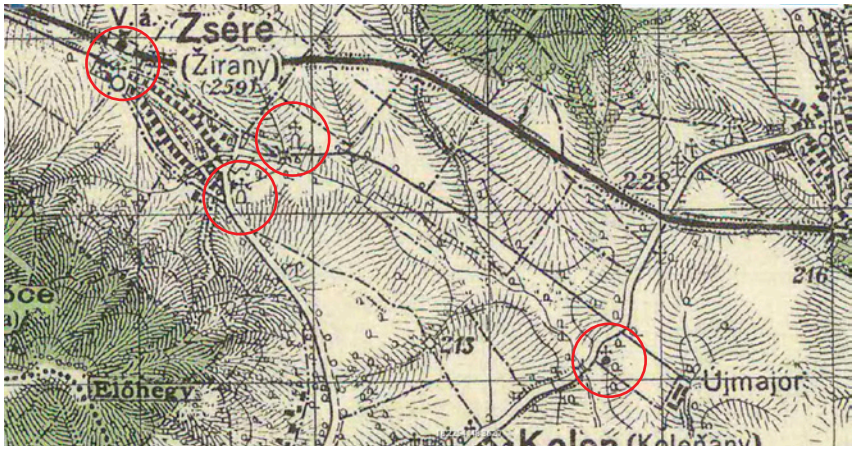


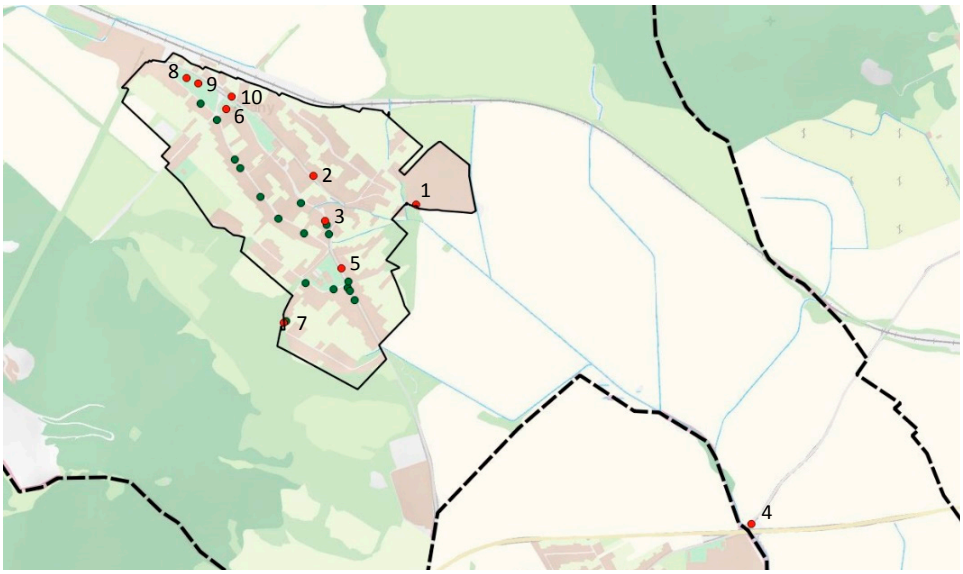
Figure 16 Military Survey of Hungary (1941)
Source: Maps of Europe, Europe in 18th and 19th century

historical maps is visible at the map of the Military Survey of Hungary (Fig. 16).

Chapel situated near the main road (Fig. 9) has not any evidence in municipality chronicle. Deducing from the outlook, which the sculpture depicts inside the chapel, this one is also dedicated to the Mother with dying Jesus – Pieta (Fig. 10). It is a part of the private land property, facing towards the main road from which it is separated by a low green fence. This small chapel (1 × 1 m in base, 1.2 m in height) is built from bricks with vaulted roof and has no writing or ornaments at plaster. The technical condition is poor, the white plaster is much damaged, the bricks are visible in many places (value 3 for technical condition, damage tends to be 50%). There are no trees tied to the object, a pair of fruit trees on the left side belongs to the neighbouring land. Evidence in historical maps shows that the chapel was marked during the Second Military Survey of the Habsburg Empire (Fig. 14) as well as later at the map of the Third Military Survey of Habsburg Empire (Fig. 15) and Military Survey of Hungary (Fig. 16), so it could have been constructed by the end of the 18th or the beginning of the 19th century.

According to the municipality chronicle there is also the Chapel of St. Urban in rural area in village vineyards built in 1795 (Municipality of Žirany, 2010). This chapel is not marked in the Base Map of Slovakia, there is also no evidence in historical maps, thus the object was not analysed.

Another sacral object – a Lourdes cave is located next to the church, it was built in 1927 by Valent Gál and his wife Carolina (Municipality of Žirany, 2010). Technically, it is in good condition, its interior contains sculpture of Virgin Mary of Lourdes. The object is built of stone, which also forms its exterior tiling, the base has dimensions of 2 m and height about 4 m (most of the building is massively covered by the plant *Hedera helix*, L.). There are three tables with writing in Hungarian, one speaks of the founder and the date, and others are the tables of gratitude of the Virgin Mary. The value for technical condition is 0, in surroundings, *Thuja occidentalis*, L. is present. The trunk circumference is about 50 cm measured 20 cm above the ground, its age is valuated as 5



Legend:
Cadastral area
Residential zone
SSA
Small facade boxes
Small sacral architecture:
1 – Ch. of St. John of Nepomuk
2 – Ch. with Pieta
3 – Ch. of St. Wendelin
4 – Ch. of St. Andrew
5 – Ch. near the main road
6 – Lourdes cave
7 – Small box in garden
8 – Cross at cemetery (1)
9 – Cross at cemetery (2)
10 – Cross in parish court

Figure 17 Map of small sacral architecture objects of village Žirany
Source: made by the authors

(veteran), crown width is 1.6 m, height of the tree is 8 m. Landscape-architectural value is 3 and health condition and degree of damage is 3, as a notice – the crown is wide and in upper parts starts to divide in more segments. The object was not marked during the Military Survey of Hungary in 1941.

Another type of SSA presented in the village is a cross. There were found three exemplars – the cross at the cemetery built in 1899 by Ján Vanyo (Municipality of Žirany, 2010), the cross at the cemetery from the first half of the 20th century by Leopold Kupecsek – these crosses are marked at the Third Military Survey Map (Fig. 15) – and the stone cross from 1823 situated in the parish court near the main road. The last mentioned one has a writing table showing the data of origin and initials J.K.E.N – Josephus Kluch Episcopus Nitriensis (Joseph Kluch, bishop of Nitra). Originally, it stood between the church and the cemetery, in 1870 it was reconstructed by Ján Leopold (Municipality of Žirany, 2010). This cross is in average technical condition (value 3), the writing is hardly readable, the statue of Jesus is partly destroyed by weather conditions.

SSA in form of small boxes with sculptures of saints as a part of front facade of residential houses is one of the local specificities (Fig. 12); these objects were not found in neighbouring villages in such abundance and so many different shapes. In the Jelenec commune, there were 2 small facade boxes, in Hrnčiarovce only one object, in Beladice two small objects. There were mapped 18 objects of sacral facade boxes of different shapes and materials, predominately with sculptures of Virgin Mary or Jesus. The boxes were situated in central parts of facades between windows of the houses build in 1960's. The size of the window with the statue is almost the same as the windows on both sides of the box. One of the boxes (Fig. 13) was found in a residential garden in the form of a metal box 0.4 × 0.4 m sized in base and 0.5 m in height, standing on two thin metal pillars 1.3 m above ground.

The analysis process according to the methodology of the VEGA project (2018) resulted in creation of the Map of small sacral architecture objects of the Žirany commune (Fig. 17) based on GPS of its location. One of the facts that can be discussed is that SSA objects mapped in the area (except one case) are not accompanied by greenery. Tóth and Verešová (2018) mapped SSA in relation to old trees and mentioned their cultural and spiritual value. In our territory, the missing presence of trees can be caused by location and its lack of space for greenery. Front yards of residential houses where chapels were found did not provide space for plantation. On the contrary, the chapel on the way to Jelenec acts as a landmark on the cross-roads; it is a part of the countryside thanks to the outlook axes. Along the road, an alley of trees was planted later, although it is assumed that the lime tree next to the chapel is older due to its growth compared to other alley trees. Small boxes with statues of saints mounted in the facades of residential homes remain a question. These elements were not found in any of the surrounding villages in the same form and number as they were in Žirany. The small altars of Virgin Mary and Jesus in houses of the 1960s related to the dedication of the dwellings, and huge number of objects incomparable with the surrounding area could be related to the numerous citizens of Hungarian origin in Žirany.

Conclusion

The methodology used in the analysis process allowed to verify and evaluate the condition of the SSA located in the cadastral area of Žirany. Mapping of objects revealed that there are 10 SSA objects; their origin was confronted with the help of the Municipality chronicle. The methodology allowed checking their technical condition and determining the type and condition of the greenery (trees) that form a single unit with objects of SSA.

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REUSE OF CHURCHES IN URBAN AND RURAL DUTCH LANDSCAPES

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European churches are confronted with the challenge of finding new uses for their church buildings. Due to a lack of members and income, the maintenance of their buildings cannot be ensured in the future; therefore, new applications and users are to be found. This task poses a considerable challenge, especially in a to a certain extent provincial and conservative country like the Netherlands, where people, even irreligious ones, perceive the church as a building that belongs to them. Besides having to deal with the building in an architectural way, there is a wide range of possibilities for reusing it; for example, community-based or mixed uses, commercial or residential ones. The eventual solution is mainly based on the church's building type, the influence of the neighborhood, the owner's financial possibilities, and the location. One of the present study's main results suggests that uses which serve the community are more likely to be found in rural areas, consequently reflecting the importance of those buildings there.

Keywords: reuse, adaption, ecclesiastical buildings, churches, the Netherlands, cultural landscapes

Churches in Central Europe are facing substantial challenges: worshipping and church activities are decreasing due to society having become increasingly secularized (Vries, 1990); thus, the role and position of the church within society is transforming and impacting on the decline of regular worshippers and the number of members in general – a problem that two of the major religious groups, Catholics and Protestants, are confronted with. Though the number of worshippers and members is constantly decreasing, that of churches remains the same. Since 1990, both churches have lost about 13 million members, dropping from 58 to 45 million individuals, while the number of churches with 44.000 has remained almost the same (Katholische Kirche in Deutschland, Evangelische Kirche in Deutschland 2018).

Owing to less baptisms and constantly dropping membership numbers, it is expected that the latter will continue to shrink throughout Europe. One consequence will be that the imbalance between potential users and available church buildings will increase; consequently, the risk that even more buildings that require comparatively intensive and costly maintenance will become underused will increase, too, – resulting in turn in a shrinking membership and church tax. Especially in rural areas, local communities are experiencing considerable difficulties with those changes: while churches play an important role in a cultural landscape's-built heritage and in local community life, they also cause those communities serious trouble (Fisch, 2008). The situation generates a discussion about adapting, changing or reusing church buildings. In Europe, countries like the United Kingdom and the Netherlands show a wide range of reused churches that are exemplary for other cases throughout Europe (Krämer and Kuhn, 2008). Academic discourse addresses the main concepts of reusing buildings based on their cultural and substantive building value, commonly referring to the conceptual work of Riegl (Riegl, 2010).

Reuse entails not only changes in use, but also structural changes of the building, ranging from adaptations to the facade to extensions by adding new parts to the main building. In academic discourse, the terms reuse and adaptation are often used interchangeably. Wong (2017) presents a systematic overview of both concepts; according to her definition, adaptation describes changes that structurally alter the building's capacity, function and performance, while extension addresses the enlargement of the building, including "[e]xpanding the capacity or volume of a building, whether vertically by increasing the height/depth or laterally by expanding the plan area" (Douglas, 2006).

A more nuanced, but at the same time vague discussion comes with the terms maintenance, refurbishment and renovation: all three focus on the structural and technical condition of a building (without changing e.g. its functions): maintenance and renovation aim at a suitable constructional condition of a building, while refurbishment concentrates more on modernizing it (Douglas, 2006). However, adaptation and extension are related concepts since both focus on the optimization and extension of usable space. Other recurrent terms in this field are transformation, conservation, remodeling, restoration, etc. – all concepts that refer to the structural design of buildings and

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therefore share a similar connotation, i.e. maintenance and preparation of an existing building to maintain its usability. Their conceptual nuances depend on the type and extent of the structural intervention in the building stock: while the aim of renovating a building is to establish a building's utility value, modernizing it includes upgrading the existing building stock. The location of a church building usually has a spatial impact and supports the orientation within a settlement pattern (Cramer and Breitling, 2007. Especially in rural areas, the church is a prominent landmark, which helps people distinguish places. By inhabitants, churches are perceived as a public area – one of the last places in rural sites where the community meets (Beste, 2014). In light of this prime purpose of a church building, the danger of having vacant structures in rural settlements is not higher than in urban ones; however, the societal impact is.

Churches play a significant role in building and supporting communities both in their sense of belonging and social capital (Putnam, 2007). The distinctive location, appearance and historic role turn churches into focal points in neighbourhoods (Shopsin, 1986). The building serves as canvas for religious and social practices and is a physical manifestation of memories (Clark, 2007). Hence, closing or reusing churches might disrupt the established social and religious practices and consequently result in local conflicts. Clark (2007) stresses that the type and style of reuse impacts not only on the individual, but particularly on the religious memory associated with the building. Reuse and adaptation might preserve the building as built memory or heritage, but religious practices and memories will be substituted by other uses.

While practises of reuse and adaptation are still relatively modest in Germany, the Netherlands show a considerable amount of different types of reusing church buildings and have introduced an established practice of how to do it.

Material and methods

The present research is based in the Netherlands due to its long-standing practise of reuse, which started after WWII. This rich experience enables reflection on different practises, challenges, enablers and barriers, which have been studied by focusing on four aspects:

a) use-related,
b) structural,
c) urban,
d) governance-/process-related characteristics.

The present work follows a mixed-methods approach, combining different mapping techniques to assess spatial and structural characteristics, a policy analysis and semi-structured interviews to further explore the governance and institutional dimension.

The policy analysis and interviews illustrate the importance of the legal an institutional situation of churches. Most sacred (consecrated) buildings are protected heritage, therefore making not only structural interventions but reuse projects in general ambitious enterprises. Consequently, financial instruments based on membership fees, taxes or funding play a crucial role when it comes to financing or supporting the development of reuse concepts, implementation, operation and maintenance of church buildings.

The sample includes an initial exploratory mapping of 110 reused churches, sampling:

a) types of reuse,
b) denomination,
c) building date and time period that the church converted into monument status,
d) spatial embeddedness in the urban or rural landscape.

Based on this mapping, 35 cases were selected for an in-depth study. The selection of these cases was based on the recurring types of reuse (e.g. mixed uses, housing, healthcare facilities, etc.) or were outstanding examples, i.e. extreme cases.

In a second step, 13 semi-structured interviews were conducted with Dutch experts: three architects, three real estate agents, three church representatives, and four NGOs. The range of stakeholders ranges from heritage ministries, church institutions, architects and planners to specialized foundations. The interviews were taped, transcribed and a content analysis based on Mayring (2002) was performed. Field works were taking place between 2013 and 2015.

Results and discussion

From the 1970s, transforming and converting church buildings became part of the Dutch planning practise (Rijksdienst, 2011). The exact number of reused or demolished churches is unknown. Nevertheless, the strategic plan (Bisdom van Haarlem-Rotterdam, 2008) reports 900 churches that have switched from ecclesiastical to civic use since 1975. In 2011, the Ministry of Heritage corrected the number to an estimated 1,340 churches that have been converted since 1975 (Rijksdienst, 2011).

Type I: Community-Based churches are characterized by the delivery of community services to the surrounding urban or rural communities (table 1). Different community services are bundled into and complemented with social and health services, offices etc. that are supplying the local community with goods and services. They are situated in central locations and therefore easily accessible and connected to public transport (PT) services. The building stock and the plots provide space for structural adaptations, e.g. extending the building by using outdoor spaces and by doing so creating (temporary) parking lots. Two main structural changes of the churches stand out: i) developing a flexible room layout and space options within the church; ii) extending the usable surface area. Structural changes range from freestanding structures to vertical partitions of the building. Those changes often require additional changes such as window openings, additional entrances or sanitary installations. The sacred character and former use of the church do not play a role anymore as far as the reuse design is concerned; instead, the focus is on providing community services and generating enough turnover in order to maintain the building stock and operate the building. The distribution of costs and the revenue from various users increase the risk. However, the focus is on maintaining the church and providing community services

and not on making commercial profit (fig. 1).

These examples share their spatial program: the flexible use focuses on the needs of the local community and permanent gastronomic use. Uses in the field of the hospitality industry generate the necessary financial basis for maintenance and operation. However, strong interventions and structural changes of the building are impacting the sacred character of the churches. For this type, the sacred character and its community value play only a modest role in reuse. In rural areas, where the church still plays an important role in local culture, this re-evaluation often conflicts with the community's perceptions and expectations. In such settings, the church is still considered a community place where people meet, and events and community festivities take place. Hence, they play key roles in building local community and identity. Reuse mixes that are restricting or revoking public access are lowering social and public acceptance to a different degree and raise the question if reuse types that are revoking public access are to be considered appropriate solutions in general.

Type II illustrates Mixed Uses, consisting of two or more permanent or temporary uses (e.g. case 22, 24; see also table 1). Churches of this type are entirely repurposed into non-religious uses: the sacred purpose is entirely replaced by a mix of different (also commercial) activities (fig. 2). Most mixed-use churches are located in urban and peri-urban landscapes and are well connected to PT; however, there is no direct link between spatial conditions and implemented uses. Implementing those uses is linked to structural changes: horizontal and/or vertical partition and additional entrances are the most common structural changes. One significant structural change is the implementation of additional entrances. Those entrances are crucial for the accessibility of the building and its new internal utilisation to ensure a conflict-free operation (fig. 2). Also, for this type the sacred character of the building only plays a minor role in repurposing, compared to spatial and operational requirements, which leads to rather pragmatic structural solutions. Some uses such as cafés, theatres or museums still allow public access and experiencing the church at least temporarily.

Churches of the type Commercially-Utilized Churches (Type III) are repurposed into permanent utilisations such as retail, supermarkets, cafés, restaurants, hospitality, recreation and sports, or offices. Location-based factors (e.g. centrality or high population density) play an important role in decision-making regarding their reuse: while for some repurposes such as bookshops, cafés, retail or shops central locations endowed with high customer and pedestrian frequency are important, for destination activities such as sports or recreation they are less. The adaptation to commercial, sports and recreational activities leads to a full 'clearing' of the church's furnishings and embellishments, which are then replaced with gym or sports equipment (e.g. skateboard ramps, trampolines) (fig. 3), retail shelves, technical appliances such as refrigerating facilities, lightning, or labels and posters are put on the façade of the church.

Additionally, the spatial organisation and implementation of storage rooms, lavatories or the delivery of goods are posing organisational and structural challenges. Utilisation for hospitality industry demands technical interventions such as including kitchen facilities, lavatories and a compliance department with safety regulations. However, the cases show different types of facility management

Figure 1 Community focused uses of Mixed-Use churches in Den Horn (21) and Klein Wetsinge (23). The churches are also facilitated for community activities, flea markets, concerts, neighbourhood cafes, etc.
Photo: authors

Figure 2 Creating an additional entrance of the Remonstrantse Kerk (Groningen) was necessary to provide a functional access to the office wing, used by the 'Stichting Oude Groninger Kerken' (case 19)
Photo: authors

Figure 3 Removable installation for sport activities: skate park in the St. Josephskerk in Arnheim (left image, case 10) and trampolines for recreational activities in the Martelaren van Gorkumkerk (Den Haag, case 29)
Photo: authors

in sacred heritage and built stock: one interesting case (24) illustrates the reuse as a bookstore, which preserved the building stock and included the sacred character and ambience in the re-design by maintaining structural characteristics and the original structural composition (e.g. building height, zoning, internal organisation) – thus preserving the *genius loci* in the adaptive reuse concept and design. The present research illustrates that especially organisational and structural adaption for retail or recreational activities shows a very pragmatic and straightforward approach when it comes to repurposing and structural interventions, where the building's cubage is considered valuable and is the main factor for decisions on repurposing. Since adaptions are rather costly, repurposing is considered a permanent conversion.

Figure 4 The re-utilisation of the St. Jospehskerk (Hilversum) with apartments required structural changes of the façade necessary to provide sufficient lightning and ventilation of the apartments and open spaces (case 35)
Photo: authors

Type IV illustrates repurposed churches for Residential Use. In contrast to the previous types, the ownership structure plays an important role here, because most churches belong to private owners or in some cases to housing. What both have in common is that due to the residential use, public access is mostly restricted or impossible.

The type Residential Use is found evenly in rural and sub-urban landscapes. A common characteristic is the need for enough space for possible expansions of the building and parking lots (on the property or street parking). For repurposing the building, significant structural changes are necessary: vertical partition, implementation of new or additional storeys, provision of technical infrastructure and significant alterations of the building envelope are necessary to ensure appropriate lightning and ventilation in the apartments. As a rule, the appropriation of churches for residential use leads to the utilisation of the entire building volume. This utilisation also includes static and structural changes since the building was designed for representation and church services and changes and structural inserts of such extent were not part of the initial design plan. The comprehensive utilisation of the building volume is due to high expenses and necessary investments that project developers try to compensate by significant floor space development. The major investments and significant structural changes of the building might query if conversions for residential purposes are reversed. The privatisation of the building also alters its public accessibility which in most cases is revoked. From a cultural perspective, structural alterations of the building composition, building envelope and façade are obliterating the sacred character and therefore considered significant (fig. 4).

Public accessibility and community value of reused churches

Churches are part of the traditional urban and rural landscape and used as publicly accessible community

Table 1 Mapped characteristics of re-used church buildings and adjoining plots

		Type 1: Community-Based Churches													Type 2: Mixed Use Churches										Type 3: Commercially-Utilized Churches							Type 4: Residential Use				
		1 - O. L. V. van Altijddurende Bijstand, Breda	2 - St. Gertrudis van Nijvelkerk, Heerle	3 - Pastoor van Arskerk, Eindhoven	4 - Haaseltse Kerk, Tilburg	5 - Dorpskerk, Amstelveen	6 - Noorderkerk, Haarlem	7 - Maarten Lutherkerk, Weesp	8 - Sacramentse Kerk, Gouda	9 - Leonarduskerk, Helmond	10 - St. Jospehskerk, Arnheim	11 - Kampwegkerk, Doorn	12 - Hart van Jezuskerk, Hengelo	13 - Danielskerk, Nijmegen	14 - Henricuskerk, Ammersfoort	15 - Oranjekerk, Amsterdam	16 - Pnielkerk, Amsterdam	17 - Fatih Moskee / De Zaaier, Amsterdam	18 - Posthoornkerk, Amsterdam	19 -Remonstrantse Kerk, Groningen	20 - Janskerk, Haarlem	21 - Kerk van Den Horn, Den Horn	22 - A-Kerk, Groningen	23 - Kerk Klein Wetsinge, Wetsinge	24 - Broerenkerk, Zwolle	25 - St. Bernadettekerk, Helmond	26 - Maria Minor, Utrecht	27 - Jopenkerk, Haarlem	28 - St. Jospehskerk, Amsterdam	29 - Martelaren van Gorkumkerk, Den Haag	30- St. Anna, Breda	31 - Vredekerk, Bussum	32 - Elbakerk, Haarlem	33 - St. Vituskerk, Bussum	34 - Zuiderkerk, Groningen	35 - St. Jospehskerk, Hilversum
Religious Denomination	Roman-Catholic	x	x	x	x				x	x	x			x	x			x								x	x			x	x	x		x	x
	Protestant					x	x	x				x	x			x	x		x	x	x	x	x	x	x	x			x				x			
	Construction year	1954	1862	1929	1898	1867	1923	1819	1932	1939	1928	1910	1955	1961	1908	1903	1954	1929	1860	1883	1318	1862	1492	1840	1466	1955	1863	1910	1952	1956	1905	1914	1907	1884	1901	1936
	Year of Re-Use/Adaptation	2008	2012	2002	2005	2011	2005	2010	2008	2007	2011	2008	2010	2007	1998	2000	2002	1981	1987	2004	2005	2011	2007	2015	2013	1996	2007	2010	2016	2014	2002	2011	2000	2003	1985	1997
Monument Status	National Monument Protection	x	x				x	x		x								x	x		x	x	x	x	x	x	x		x		x	x	x	x	x
	Municipal Monument Protection			x		x			x		x			x	x	x	x			x																
	Without Monument Status				x							x	x																x		x		x				
Location	Urban															x		x	x	x	x		x		x		x	x						x	
	Suburban	x		x	x		x		x	x	x		x	x	x		x									x			x	x	x		x			x
	Rural		x			x		x				x											x		x							x		x		
Plot	Detached church building; inluding available plot	x	x	x	x	x	x			x	x	x	x	xx	x					x		x		x		x			x	x	x	x	x	x		x
	Detached church building; without available plot							x	x								x						x													
	Built-In Church, including available plot															x																				
	Built-In Church, without available plot																	x	x		x				x		x	x						x		
Structural Intervention	Without structural changes																	x				x	x		x		x		x	x						
	Einbauten	x	x	x	x			x		x	x			x										x	x	x	x	x	x	x	x					
	Use adjoining rooms																																			
	Vertical Division	x													x	x			x													x				
	Horizontal Division					x			x	x		x	x		x	x	x			x					x			x			x	x	x	x	x	x
	House in the House' Principle						x						x																							
	Preserve visual relationships					x													x																	
	Complete extension of the building																															x	x	x	x	x
	Extension (addtional parts) of the building	x		x																x	x														
	(Partial)Demolition																																			
	Changes regarding access					x									x	x	x	x	x	x	x											x	x	x	x	x
	Changes regarding lightning	x	x		x				x	x				x	x	x										x		x				x	x	x	x	x
Organisation	Extension of usages																																			
	Partial Use															x																				
	New Utilisation	x	x	x	x	x	x	x	x	x	x	x	x	x	x		x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Owner	Private					x	x	x							x											x	x	x	x	x	x	x		x	x	x
	Housing Assocication		x	x					x			x		x			x																x				x
	Foundation										x					x			x	x		x	x	x													
	Municipality (secular)	x			x					x			x								x																
	Community / Parish																	x																			
Longer Vacancy Rate	Yes			x				x	x	x									x				x						x	x	x		x		x	
	No	x	x		x	x	x				x	x	x	x	x	x	x	x		x	x	x		x	x	x	x					x		x		x	x
Service Life	Permanent	x	x	x	x	x	x	x	x	x		x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
	Temporary										x																											
Spatial-Functional Significance	Yes	x	x	x	x	x	x	x	x	x	x	x	x				x	x								x	x										
	No													x	x	x			x	x	x	x	x	x	x			x	x	x	x	x	x	x	x	x	x
Public Access	Yes	x	x	x	x				x	x	x	x					x				x					x	x	x	x								
	No												x	x																			x	x	x	x	x
	Limited					x	x	x							x	x		x	x	x		x	x	x					x	x	x						

places, despite their legal status as private property of the Catholic Church or the local protestant community. Either the church authority or the local community can decide on access rights and access times. Sharing access rights with the local community and the wider public in order to enable them to utilize the building outside church service hours as community home, for festivities or cultural services has become a common characteristic and practise of type I. Maintaining public access is an important factor for social and public acceptance as far as reuse designs are concerned. Access rights can take different forms or depend on different circumstances: permanent or temporary; for different audiences or related to the type of implemented use, such as cafés or hospitality services. Though hospitality services provide access to the building, their relatedness to consumption and commercial imperatives is restricting public availability. Termination of public access, as with type IV Residential Use, is the most contested option not only from a societal but also from a religious point of view. In the end, experiencing the church is limited to the exterior parts of the building, such as the building envelope, the façade and the open spaces surrounding the building (e.g. the cemetery). This experience might be additionally affected by structural alterations or adaptions of the plot, such as replacing the surrounding Kerkhof with a parking lot (fig. 5).

Figure 5 Providing a sufficient number of parking lots is an important question in the re-utilisation of churches (case 14)
Photo: authors

Reuse concepts that are neglecting the community and cultural dimension of the building were questioned in the expert interviews: "For many residents in the surrounding neighbourhood, a church is still part of their direct urban surrounding, even if they are not using the church building in any way" (Peter Breukink). Especially in rural areas, the church still plays a significant role in traditional community life, since it is often the last operating 'public' community building. Developing reuse concepts for such buildings is difficult and evokes collective feelings and reactions, since the building is loaded with individual and shared memories (Bisseling et al., 2011). Consequently, reuse type I, Community-Based Churches, focuses on providing various services that are deemed suitable solutions retaining accessibility and availability for the local community and the wider public. The challenge is to develop suitable and financially viable mixes of public and commercial activities in order to fund necessary adaptations (structural, technical facilities, infrastructure such as lavatories, kitchens etc.), operation, management and maintenance in a long-term perspective.

Building volume vs. historic-cultural characteristics

The artistic and structural design of churches is based on its permanent, sacred use for worshipping, church services and representation. It created:

a) a massive building (in relation to its surrounding),
b) cultural and artistic value.

Based on this fact, we extracted two main narratives as far as the reuse of the analysed cases is concerned: i) the church's value is based on its building volume, and ii) the emblematic use; the representative and sacred character of the building.

Narrative i) highlights the importance of the building volume, since it seems to optimise or even maximise the potential floor space. This narrative is especially relevant to the residential (type IV) and commercial (type III) (supermarkets, sports) reuse types. Maximum utilisation of the floor space is mainly resulting from a strong real estate approach with straightforward cost accounting, targeting the highest possible revenue to finance the conversion of the building, operation and maintenance. Private developing also includes suitable revenue for business owners in the cost, which puts even more pressure on the utilisation of the building volume. In such repurposing narratives, motives such as sacred character, embellishments, historic-cultural or community values play a subordinate role and are not valorised in the re-design and conversion of the church.

The second narrative plays an important role in type II, Mixed Used Churches: the narrative revolves around the *genius loci* and the sacred and historic value of the church; those values are focal points for the decision-making process regarding the selection and combination of types of reuse and their translation into the building and structural design. The building's identity (e.g. artistic and historic characteristics) and sacred atmosphere (e.g. silence, contemplation) play a guiding role in staging and valorising the sacred building. Consequently, structural interventions (e.g. in the building envelope) remain rather minimal, are thoughtfully implemented, and are often achieved

as freestanding 'building-blocks' that are completely removable in case a re-adaptation for traditional church utilisation would take place. Another important motive is the perception of sacred buildings as Gesamtkunstwerk ('all-encompassing work of art'), demanding a respectful handling and integration of different religious and artistic components, such as pulpits, embellishments, church pews, or other furniture and décor. Developing reuse concepts following that narrative is putting the church and its historic, artistic and sacred value in the centre of attention when it comes to developing potential reuse concepts. In such cases, targeted 'match-making' by linking different parties, institutions (e.g. heritage) with a fitting church building and its community appears especially important.

Appropriate types of reuse?

Repurposing narratives are linked to debates on appropriate (re)uses of sacred buildings. The common understanding of 'appropriateness' is subject to change over time: the present research shows that public and community acceptance has shifted over the last decade, moreover, it illustrates that not only communities but also church representatives have become more reserved and cautious when it comes to reuse and re-develop churches: "In the last decades, the acceptance of reuse solutions has changed. Society and church representatives are less open to new solutions, which could be reasoned by unsatisfying examples." (Mickey Bosschert) Those shifts are linked to social and planning practises with the re-development and implementation of reuse concepts and its subsequent community and public acceptance. Experimenting with new combinations of potential uses and openness towards possible project developers has diminished due to contested practises (e.g. major structural interventions) and the concern about the potential loss of 'their' community building; paired with concerns about 'inappropriate' uses neglecting the contemplative, sacred character, the general attitude towards repurposing churches appears to be rather negative. Reuses such as case 25 which implement commercial uses (e.g. supermarkets) were considered inappropriate, owing to insensitive handling of the community's memories that are linked to the building (e.g. weddings, funerals, community festivities, etc.); these were recurrent arguments in the interviews. Despite an increasing number of projects being considered successful by the experts (e.g. case 24 bookshop), a change in the public and community perception could not be achieved yet.

Thus, civic involvement and participatory processes including the church community in an early stage of the re-development process might be a way to overcome that challenge. Nevertheless, the data show the urge for a public debate, exploring the future societal valuation of churches and their future role in community and public life. Declining numbers of church members and attendees of church services will result in an oversupply of churches compared to the demand of regular attendees of church services and actual members. This oversupply will put church leadership (Catholic) and church communities (Protestant) under significant financial and decision-making pressure regarding the operation and long-term maintenance of their buildings. Therefore, it is to be expected that conversion to residential (type 4) and commercial (type 3) reuse will be increasing in the future, despite concerns and hesitations on the part of local communities.

Embeddedness in the landscape

Due to their size, building volume, artistic expression, location and embeddedness in the surrounding rural or urban landscape, churches are prominent landmarks. Being either integrated in the urban fabric or freestanding solitaire buildings, churches are spatial units that are unique and recognisable (Marcos, 2008). Embeddedness also refers to embeddedness in the local community landscape: churches are often focal points of community life and have created memory that goes beyond the traditional uses of churches. They carry individual and collective memories and stories and are closely related to local narratives. Consequently, conversions and reuse concepts that are advocating and implementing community services (Type I) and new mixes of use (e.g. mixed use that still provides the opportunity to enter the building) that still allow community members to access, enjoy and experience the sacred building in its local community context, seem to be the most successful and accepted ones.

Conclusions

Reuse and repurposing of churches pose a planning challenge for urban and rural communities. In the rural context, the debate seems more significant due to lower population and customer density, turning reuse types emphasizing commercial utilizations into contested re-development approaches:

1. An economically viable operation of rural churches through commercial re-use options is more challenging than in urban settings: this challenge is related to a smaller population and necessary catchment areas to secure the necessary utilisation and financial turnover providing the financial funds for the maintenance of the building.
2. Urban churches are more prone to demolition: urban church buildings and/or the plots they are built on are more in the focus of property development and real estate interests. Hence, in urban settings, higher rates of economic utilisation and economic interest are driving re-use approaches stronger than in rural ones.
3. Churches in rural landscapes play an important role for the local community: often, churches are the last remaining community buildings providing a focal polit for community life; thus, rural communities have a stronger interest to preserve its community character and public accessibility.

Hence, the research illustrates that there are no standard solutions for reusing sacred buildings in urban or rural contexts are existing, since every repurposing type is strongly related to the quality of the church building, its location and the needs and aspirations of the local parish and civic community. However, our work confirms that all types of reuse are either adding or replacing religious narratives and memories with secular ones. Those changes of narratives indeed result from the preservation of the building structure, although isolated from its initial religious meaning and practice. Though converted to secular

uses, there is a potential role to serve and support local communities in building their social capital.

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