

TOURISM AND PRESERVATION POLICIES IN KARST AREAS: COMPARISON BETWEEN THE ŠKOCJAN CAVES (SLOVENIJA) AND THE ARDÈCHE GORGE (FRANCE)

TURIZEM IN OHRANJANJE KRAŠKEGA SVETA: PRIMERJAVA MED ŠKOCJANSKIMI JAMAMI (SLOVENIJA) IN SOTESKO ARDECHE (FRANCIJA)

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Abstract

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Mélanie Duval: *Tourism and preservation policies in Karst areas: comparison between the Škocjan caves (Slovenia) and the Ardèche gorge (France)*

This paper presents a comparative study of the Ardèche Gorge Natural Reserve (France) and the Škocjan Caves Regional Park (Slovenia). As major tourist attractions, both these areas have progressively structured their economies around tourism, although they have implemented very different development and karst landscape protection policies. In very simplistic terms, management of the Ardèche Gorge can be described as very laxest, whereas development in the Škocjan Caves is much more strictly controlled. When examined from this preservation/development perspective, the differences in the ways the two sites are managed can be traced through a diachronic approach to the history of their tourism development. *In fine*, this comparative approach illustrates how two processes between tourism and preservation policies structure territories development on karst areas.

Key words: karstic landscapes, preservation, tourism, Škocjanske jame caves, Ardèche Gorge Natural Reserve, France, Slovenia.

Izvleček

UDK 551.44:338.48(497.4+44)

Mélanie Duval: *Turizem in ohranjanje kraškega sveta: primerjava med Škocjanskimi jamami (Slovenija) in sotesko Ardèche (Francija)*

Sestavek predstavlja primerjalno študijo Narodnega rezervata Soteska Ardèche (Francija) in Regionalnega parka Škocjanske jame (Slovenija). Kot veliki turistični privlačnosti sta ti dve območji počasi gradili svoji gospodarski osnovi na turizmu, vendar na različen način in na osnovi različnega pristopa k varovanju kraške pokrajine. Najpreprosteje povedano, Soteska Ardèche je imela zelo proste roke, medtem ko je bil razvoj Škocjanskih jam bolj strogo kontroliran. Če gledamo z vidika ohranjanja/razvoja, opazimo razlike v upravljanju teh dveh znamenitosti na osnovi diahroničnega pristopa k zgodovini razvoja njihovega turizma. *In fine*, ta primerjalni pristop lepo pokaže, kako ta dva procesa, turizem in politika ohranjanja, strukturirata razvoj na kraških območjih.

Ključne besede: kraška pokrajina, ohranjanje, turizem, Škocjanske jame, Narodni rezervat Soteska Ardèche, Francija, Slovenija.

INTRODUCTION

This paper presents a comparative study of the Ardèche Gorge Natural Reserve (France) and the Škocjan Caves Regional Park (Slovenia), thereby illustrating two of the directions tourism development in karst areas can take. As major tourist attractions, both these areas have progressively structured their economies around tourism,

although they have implemented very different development and karst landscape protection policies.

Approaches to these karst landscapes have alternately placed to the fore either the heritage dimension or the tourism dimension of the resource, with the resource being defined as that "which can be capitalised upon,

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conserved or exploited for private or public benefit, a sort of hybrid notion between private goods and public goods. This notion includes the idea of an intergenerational duty of care and responsibility and allows for compromise between the economic exploitation of the resource and its ecological protection and conservation” (Peyrache-Gadeau V., 2004, p.3).

Since tourism began in these two areas, the gradual intensification of the dialectic between preservation and development has led to the creation of two protected tourist areas. Of course, a balance between preservation and development can be achieved in a number of different ways and the approach each area takes to achieve this balance will be governed by that area’s own evolving characteristics. By comparing two similar regions, we were able to elucidate the forms this precarious balance

can take and to present two different ways of approaching the management of tourism in karst areas.

A comparative approach to geographical research presents the major advantage of bringing together different approaches to a problem, thereby revealing explanatory factors and facilitating the analysis of the processes involved. By comparing “protected tourist karst areas” in France and Slovenia from diachronic and synchronic points of view, we were able to highlight the factors behind the methods currently used to manage these two protected tourist sites. Thus, the presentation of the main characteristics of these two sites is followed by a discussion of the factors that have determined the approaches to managing the balance between preservation and development adopted in the Ardèche Gorge and Škocjan Caves areas.

THE VALUE OF A COMPARATIVE REGIONAL APPROACH

The Ardèche Gorge and Škocjan Caves sites show a sufficient number of similarities for a comparative approach to be valid. Both areas are geologically and geomorphologically very similar, as both are karst plateaux dotted with collapse dolines, caves and potholes. One of the first people to have compared the two areas was Martel, who drew parallels between the karst formations at Škocjan and the Saint-Marcel Cave (cave in the Ardèche Gorge that was the trigger for tourist development in the area) in his book *Les Abîmes* (1894, p.83-84).

As with all karst plateaux, the protection and management of water resources is a question that cannot be ignored. In addition to problems related to water quality, both areas have had to deal with concerns over maintaining water quantities. These concerns have been addressed through large-scale water management projects. In Slovenia, a Ramsar convention was signed in 1999 and a Man and Biosphere (MAB) project was set up in 2004. In France, a General Water Development Plan (Schéma d’Aménagement Général des Eaux – SAGE) has been drawn up. By fixing objectives in terms of quality, quantity and environmental protection, these programmes provide frameworks for consultation and dialogue between the parties involved.

Comparisons can also be made between the measures taken to preserve the karst resource and to develop tourism. Both areas are covered by a number of protection measures: the Ardèche Gorge has been a natural reserve since 1980 and the Pont d’Arc has been a listed site since 1982; the Škocjan Caves have been a UNESCO monument since 1986 and a regional park since 1996.

Both areas are aware of the need to promote a sustainable form of development and have set up education-

al programmes for young visitors. Hence, since 1997, the Ardèche Gorge Natural Reserve has been recognised by the French Ministry of Education as an educational site for school groups. At the Škocjan site, a nature trail was opened in 2002 and awareness programmes are carried out in conjunction with local schools.

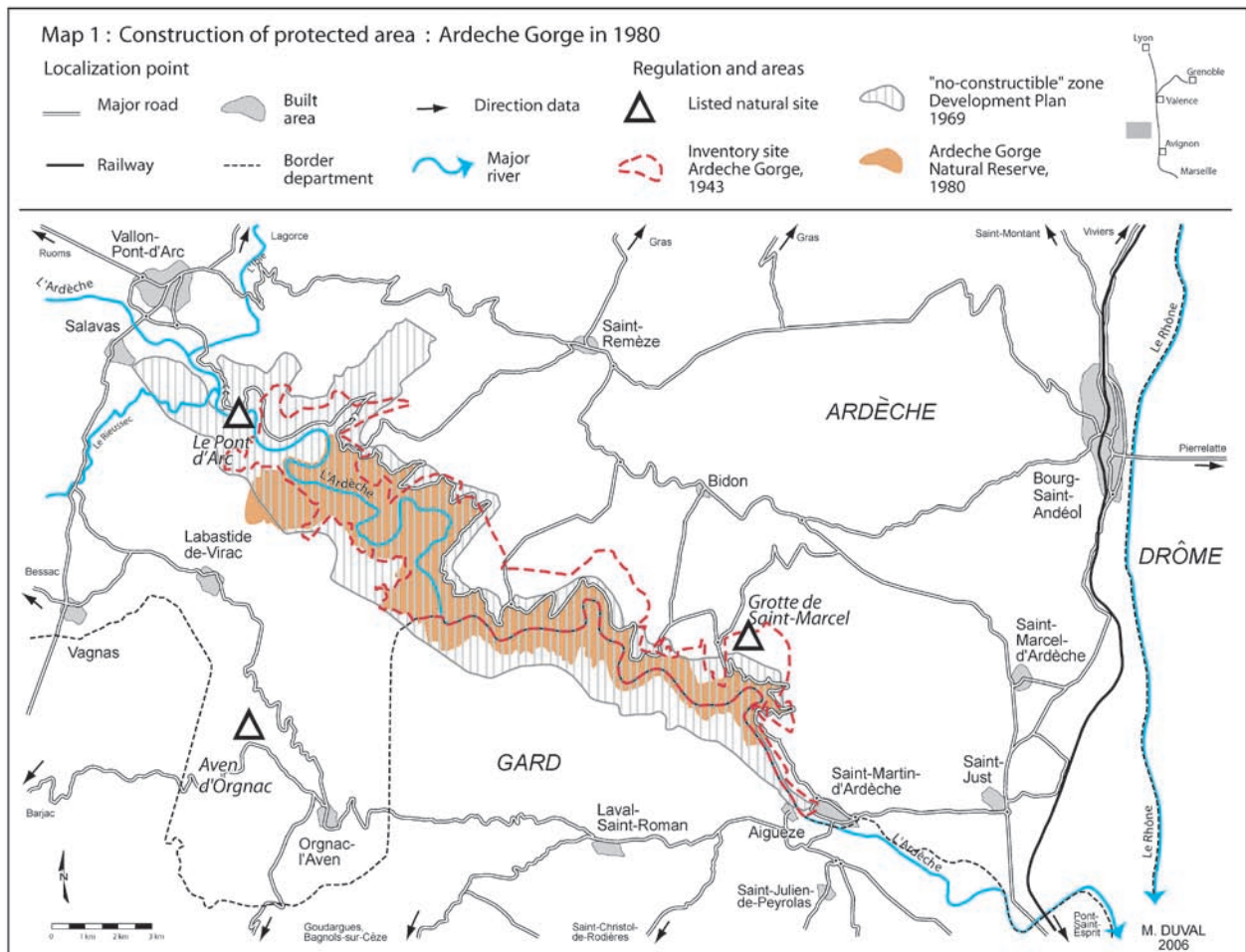
These different protection measures and awareness-raising actions are aimed at developing a more responsible approach to tourism development, which had often been regarded as “anarchic” or “inappropriate” by the authorities responsible for the two areas. In 2004, 89,700 people visited the Škocjan Caves; however, this can only be considered a base figure for tourist numbers, as many people only follow the nature trail to the view points overlooking the collapse dolines: a number that is difficult to evaluate. Visitor numbers to the Ardèche Gorge can be estimated using several different indicators, for example, the number of canoe descents (more than 180,000 per year), the counter on the road through the Ardèche Gorge (245,000 vehicles in 1997, assuming an average of 3 people per vehicle, this gives a figure of 735,000 visitors – according to the reserve management plan, p.21), the number of visitors to the tourist caves (Saint-Marcel Cave: 42,000 visitors per year, Madeleine Cave: 49,000, Orgnac Cave: 125,000 – National Tourism Observatory, 2002). The different government and local bodies generally agree on a figure of 1.5 million tourists per year (‘rural excellence pole’ report). The Ardèche Gorge and the Škocjan Caves are tourist areas in which tourist flow management and protection measures have progressively been implemented.

THE IMPLEMENTATION OF PROTECTION MEASURES¹

The need to protect the Ardèche Gorge area became apparent as early as the beginning of the 20th century. In 1913, Martel proposed the creation of a national park in order to protect the gorge from excessive construction. However, the measures introduced to protect the site only covered specific areas; for example, the Pont d'Arc was listed as a natural monument and a site of outstanding artistic, historic, scientific, legendary or scenic interest on 24th January 1931 and the Saint-Marcel Cave was classified on 26th June 1934. As was often the case at this time, only the natural monuments were protected, i.e. the arch of the Pont d'Arc and the area around the entrance to the Saint-Marcel Cave, and no official boundary to these areas was defined (map 1).

This first wave of legislation was completed on 15th January 1943 by the listing of the Ardèche Gorge in the 'Inventory of Sites'. Under article 4 of the Act of 2nd May 1930 regarding the protection of natural monuments and sites of outstanding artistic, historic, scientific, legendary or scenic interest (Official Journal of 4th May 1930), development work cannot be undertaken without the consent of the authorities. However, checks were infrequent and often took place after the work was finished, so this requirement was often ignored and development continued within the protected area, e.g. the creation of a campsite near the Saint-Marcel Cave in 1965.

A further step was taken at the beginning of 1969 with the drawing up of a development plan (Plan Di-



Map 1: Construction of protected area: Ardèche Gorge in 1980.

¹ A table summarising these protection measures is given at the end of the article.

recteur d'Urbanisme) for the Ardèche Gorge. The immediate perimeter of the gorge was given full protection, being declared a 'no-construction' zone in which building of any nature was forbidden. A few months later, on 23rd September 1969, the 'Commission des Sites de l'Ardèche'

decided to classify the development plan's 'no-construction' zone as a natural reserve.

This project took ten years to complete due to opposition from hunters, the mayors of the towns and villages concerned, owners of land within the reserve and members of the local tourism industry (campsite owners, canoe rental businesses). Several proposals were put forward, with the area covered by the reserve being reduced from an initial 2,389ha to 1,572ha. In order to satisfy the demands of all the interested parties, the objectives of the reserve focused on managing the development of tourism within the gorge. For example, two 250-person bivouac sites were set up on the banks of the river, in addition to the existing campsites (Mas de Serret: 100 pitches, La Châtaigneraie: 200 pitches, The Saint-Marcel Cave: 100 pitches, Les Templiers: 300 pitches, i.e. 1200 pitches in total).

In a strange coincidence, it was also at this time that consideration started to be given to the future of the Škocjan Caves. In 1980, Sezana District Council (which managed the cave) approved a protection order for the Škocjan Caves with the dual objectives of preserving the karst environment and of preventing any inappropriate tourism development in and around the caves (Zorman T., 2004, p.114).

This first protection measure was followed in 1982 by a symposium called "Protection of the Karst on the 160th anniversary of Škocjanske jame". Under the guise of a general symposium on tourist caves, the meeting focused almost entirely on the Škocjan Caves, covering their geomorphological characteristics, problems of pollution in the River Reka, the development of the caves and, above all, their future as a tourist attraction. The participants at the symposium were asked to approve a motion that would foreshadow the direction the management of the site would take. The wording of this motion also provided an indication of the motivation behind the site's bid to be classified as a UNESCO world heritage site. The Škocjan Caves were presented as the birthplace of speleology and karstology, as an outstanding monument of international value to be protected against any form of pollution (particularly pollution in the River Reka) and as a tourist attraction with the potential to become a tourism hub for the surrounding area.

In 1986, an area of 200 ha around the collapse dolines was classified by UNESCO under criteria ii, an eminent example of the development of ecosystems, and iii, a superlative natural phenomena or area of exceptional natural beauty and aesthetic importance.

However, the classification documents differed from the motion approved in 1982, as they highlighted the main threats to the Škocjan Caves site. These threats included industrial pollution in the River Reka and the

"risk of inappropriate infrastructure development in the area around the caves", in particular the building of car parks for tourists, i.e. it had been deemed "necessary to reinforce planning regulations to ensure the 200ha cultural landscape included in the site remain authentic and natural" (p.96). Between the position taken in 1982 and the application for classification in 1986, it appears there was a change in the way the development of the Škocjan Caves was seen, with the regional development perspective being superseded by a strict control over all tourism development.

POINTS OF COMPARISON AND EXPLANATORY FACTORS

Although measures have been taken to protect both the Ardèche Gorge and the Škocjan Caves sites, there are significant differences in the way the preservation/development balance has been approached. In very simplistic terms, management of the Ardèche Gorge can be described as very laxist, whereas development in the Škocjan Caves is much more strictly controlled. These differences can be explained by a number of factors, many of which are variables effecting the preservation/development couplet.

The history of tourism development

Exploitation of the Škocjan Caves and the Ardèche Gorge for tourism purposes began several centuries ago. Louis François Cassas's illustrations of Istria and Dalmatia show people at the bottom of the collapse dolines, indicating that tourists were already visiting the Škocjan Caves site in 1782 (Keckemet D., 1978), and the opening of a visitor book in 1819 shows that tourism in the Škocjan Caves was becoming more organised. At this time the visit involved descending paths that had been built to the bottom of the Velika collapse doline. (Kranjc A., 2002, p.42): a visit that attracted increasing numbers of tourists, with numbers rising to 3,639 in 1903 (Mihevc A., 2002, p.119).

It was during this same period that Albert Du Boys (1842) published his account of the recreational activities in the Ardèche Gorge, which were mostly concentrated around the Saint-Marcel Cave. The visit of these caves, which was depicted in an engraving by Victor Cassien (p.198-199), consisted of following ladders through the first three chambers: "everyone had a torch, which left behind long trails of flame and smoke". A little later in his book, in a chapter on the Pont d'Arc (p.210-216), Du Boys relates how, for the price of "four or five francs per man", the Ardèche boatmen would take tourists up the river from Saint-Martin to Vallon. At this time, visitors did not descend the river; they went up it!

In both cases, tourists came to admire the picturesque landscape of these karst areas. Publicised by the il-

lustrated writings of previous visitors, both areas quickly became tourist attractions but their tourism development would follow very different routes, leading to the Ardèche Gorge becoming “over-run” by tourists.

Accessibility

The extreme popularity of the Ardèche Gorge can be partly explained by its accessibility. The gorge was quickly made accessible, either by water or by land (construction of the first section of the tourist road past the Pont d'Arc in 1887, completion of the Ardèche Gorge tourist road in 1969). The River Ardèche became the hub of the area, concentrating the flow of tourists to its waters and its banks. This accessibility, combined with other factors such as the development of canoeing, social tourism, naturism and the development of mass tourism (Daudé G., 1986), was one of the key factors in the evolution of tourism in the Ardèche Gorge. In contrast, tourism around the Škocjan Caves did not develop as strongly, despite the area's proximity to the Trieste-Vienna railway (opened in 1857). This contrast can be explained with reference to a second element in the notion of accessibility.

In fact, access has to be considered on a smaller scale, i.e. the accessibility of the individual caves rather than the entire karst area. Although the Škocjan site is easy to get to, the area's major attractions, i.e. its collapse dolines, are less easily accessible than neighbouring tourist caves, such as the Postojna Cave, 25 kilometres to the north-east along the same railway line. The topography of the Postojna Cave is more suited to large-scale tourist development and the authorities responsible for Postojna were very quick to set up a system for controlling the flow of tourists: installation of a door to protect the cave from intruders in 1819, creation of a special commission for the cave in 1823, installation of a system of cars pushed along rails in 1872, which was modernised in 1914 with the introduction of petrol locomotives, and in 1959 with electric locomotives. In 1968, the construction of a circular line increased the cave's capacity to 14,400 visitors per day. To give a comparison, in 1980, when the future of the Škocjan Cave was being considered, Postojna received 827,826 visitors, whereas Škocjan only received 37,500, a ratio of 22 to 1!

The politico-economic context

Although visitor numbers for the Škocjan site were relatively “modest” compared with other Slovenian caves and the Ardèche Gorge, new protection measures, such as the UNESCO classification in 1986, focused on this aspect of the site. This apparent paradox was partially the result of the political context surrounding the decision to apply for UNESCO classification. In order to satisfy the political interests of the different republics within Yugoslavia,

the Yugoslav federal committee asked each republic to list potential world heritage sites. Both Postojna and Škocjan were on the list for the Republic of Slovenia. Despite its international reputation, it was decided that the Postojna site was too “built up” and developed and preference was given to the “more natural” Škocjan Caves site.

Thus, distinct approaches to the karst resource preservation/tourism development couplet become apparent. For both the Ardèche Gorge and the Škocjan Caves, the objective of the protection measures that have been introduced is to preserve the fauna, flora, geology and geomorphology of the site. However, in the Ardèche Gorge, these measures have been applied to an area that attracts a large number of visitors and in which river-based tourism is a vital part of the economy. For example, Vourc'h and Natali (2000, p.31) estimated the turnover of the canoeing business in the Ardèche Gorge to be 20 million francs (€3 million). As a result, protection measures were designed to manage the flow of tourists through the area, rather than to reduce the number of visitors. In contrast, the Škocjan site was protected before large-scale tourism existed and the implicit objective of the protection measures was to regulate future development. Although the underlying intention of the UNESCO classification was to structure tourism development for the whole of the Kras Plateau, with the Škocjan site as its hub, precautions were taken to prevent any “unsuitable” development.

This perception of tourism development as needing to take into account the preservation of the entire karst resource can be found in the wording of the protection legislation.

Legislation

The Škocjan Caves are governed by the ‘Škocjan Caves Regional Park’ Act of 1st October 1996. The Act was worded to comply with the recommendations made in the 1986 UNESCO inscription documents, which stipulated: “the possibility of enlarging the regional park would be a welcome initiative” (p.96). This legislation strengthened the protection of the Škocjan Caves, which are considered a national treasure, both for their natural beauty and for their archaeological and anthropological riches. Going beyond the often obsolete and harmful distinction between nature and culture, the management of the park is based on a global and multi-disciplinary approach. Article I of the Act states, “In order to preserve and research its outstanding geomorphological, geological, and hydrological formations, rare and threatened plant and animal species, palaeontological and archaeological sites, ethnological and architectural characteristics and the cultural landscape, and to ensure conditions for adequate development, the region of the Škocjan Caves is hereby declared a regional park called Škocjanske jame”.

Conversely, the legislation creating the Ardèche Gorge Natural Reserve only considers the natural riches of the site, placing the emphasis on the protection of plant and animal species. Moreover, these protection measures do not go very far. For example, articles 3 and 6, designed to limit hunting to wild boar, were strongly opposed by local people and were annulled in 1983. Even though one of the reasons put forward for creating the reserve was to protect the fauna, the legislation protecting wildlife in the park is no stricter than elsewhere. These contradictory currents result in fluctuations between tighter and more permissive regulation.

This is also the case for camping in the gorge, the regulation of which was one of the main reasons for creating the reserve: “as one of the objectives of the reserve is to preserve the natural environment while allowing public access, article 7 of the draft statutory order stipulates that camping is forbidden throughout the reserve; however, two water-sports centres will be set up where visitors may camp for one night” (record 1305W21, ‘départemental’ archives, Privas). As a result, two bivouac sites were set up, draining most of the reserve’s financial subsidies for the first ten years of its existence, with the “light facilities” initially planned being redefined to include giant barbecues, large, marquee-style tents, and over-elaborate sanitary facilities, etc. The planned capacity of 250 campers per bivouac, i.e. a total of 500 people, was often exceeded; for example, the figure of 3,508 campers was reached during the weekend of 26th/27th June 1999 (Consultative Committee Report of 13th July 2004, p.4).

However, during the last ten years the management of this natural reserve has moved in a more environment- and wildlife-friendly direction. The change, which began in 1997 with the drawing up of a LIFE programme for the area, was embodied in the reserve’s 1999-2003 management plan, which included a monitoring programme and significant scientific projects. In 2002 a central booking office was set up in order to regulate visitor numbers and the number of people per night per bivouac has been reduced to 700, with the intention of reducing this number to 500 for the 2006 season.

Preservation areas

In concrete terms, the two approaches to managing the karst resource preservation/development couplet have led to the definition of preservation areas.

The Ardèche Gorge includes two preservation areas: the 1,575 ha Ardèche Gorge Natural Reserve and the 1,040 ha Pont d’Arc listed site (map 2).

Even though French environmental law allows for the creation of preservation areas around natural reserves, such areas have never been defined in law and cannot be opposable to third parties. Furthermore, no

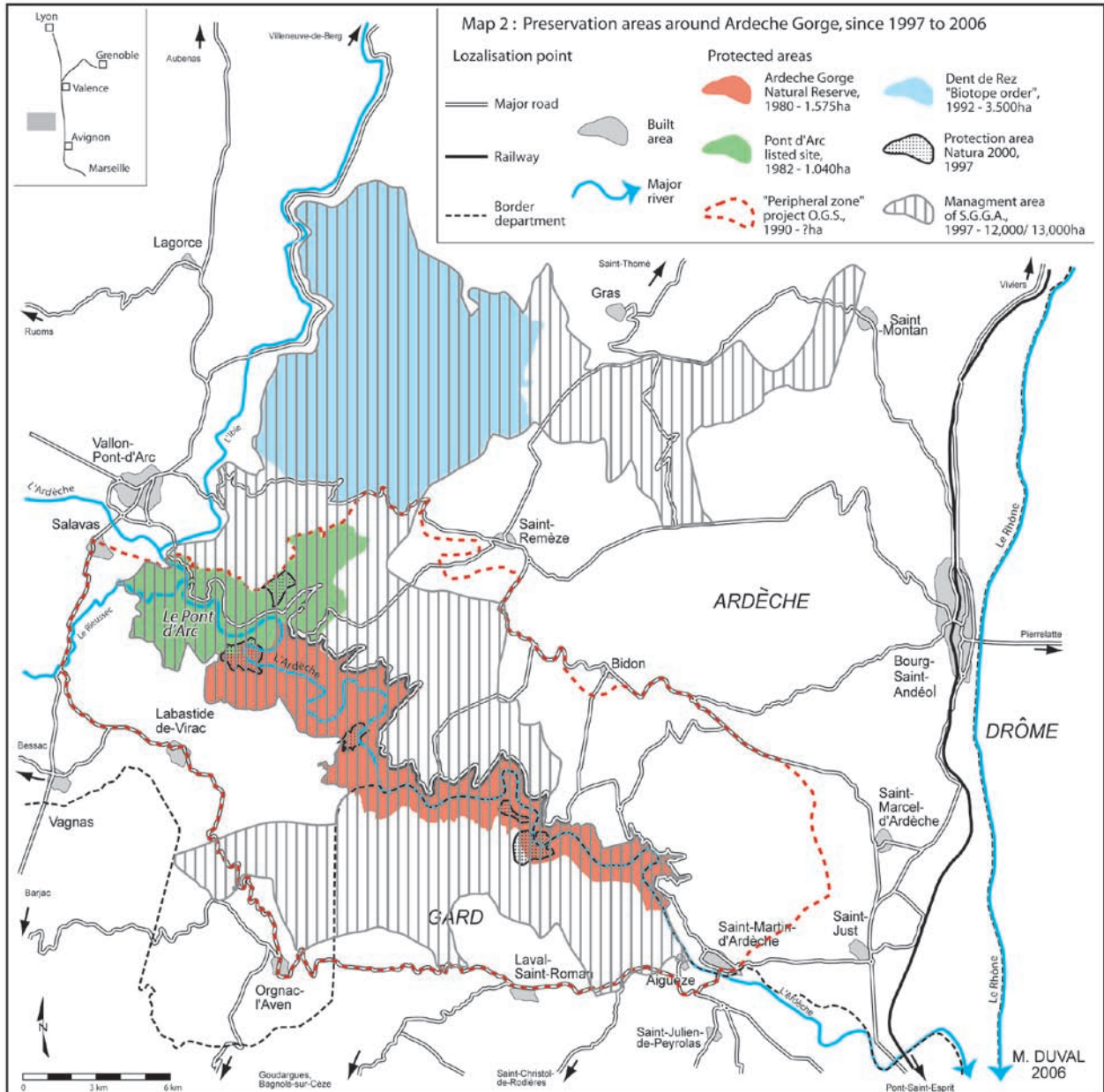
such protection areas have ever been created around the Ardèche Gorge, despite being on the agenda of several consultation meetings, often under the heading of “sensitive zone” or “peripheral zone”.

Nevertheless, two protection measures have gradually been introduced for the peripheral area around the Ardèche Gorge. Firstly, in 1992 a “biotope order” was issued for the Dent de Rez, a 3,500 ha area of land on the left bank of the river, upstream from the gorge. This area covers the ‘communes’ of Gras, Lagorce and Saint Maurice d’Ibie. The ‘Syndicat de Gestion des Gorges de l’Ardèche’ was given responsibility for the management of this area in 1997, together with those parts of the ‘communes’ that fall within the natural reserve, i.e. a total area between 12,000 and 13,000 ha (visual assessment after topographic map).

Secondly, the increase in size of the protected areas has been combined with the extension of the responsibilities of the ‘Syndicat de Gestion des Gorges de l’Ardèche’. Since 2004, the ‘Syndicat’ has taken “full responsibility for the land of the ‘communes’ that falls within areas classified as a natural reserve or as a Natura 2000 site, as well as for an “intervention zone” comprising the ‘communes’ or parts of ‘communes’ belonging to the natural environment of the Ardèche Gorge” (Prefectoral order of 26th March 2004).

The terms under which the ‘Syndicat’ operates and the area for which it is responsible are generally defined by the objectives of the Natura 2000 fauna and flora protection programme. However, there are no real measures for protecting the karst resource itself. Although the protection of species depends on the protection of the environment as a whole, one could perhaps expect that a preservation area would be defined according to geological, geomorphological and karst criteria, taking into account the surface networks to be protected and the preservation of water resources through actions covering the entire drainage basin. None of the protection measures have taken a whole-karst approach to preservation. The karst as a whole has only been considered by other parties, for example through the implementation of a General Water Development Plan, for which the existence of the natural reserve is only a peripheral consideration (map 3). Throughout the Ardèche Gorge area, there is a superposition of preservation areas, which telescope into other programmes without really producing concerted actions in terms of managing the karst resource.

Recently, a regional project based around the Ardèche Gorge natural reserve has started to emerge with the desire to implement a ‘rural excellence pole’ and a new rural development programme, steered by the DI-ACT (inter-governmental delegation for regional devel-

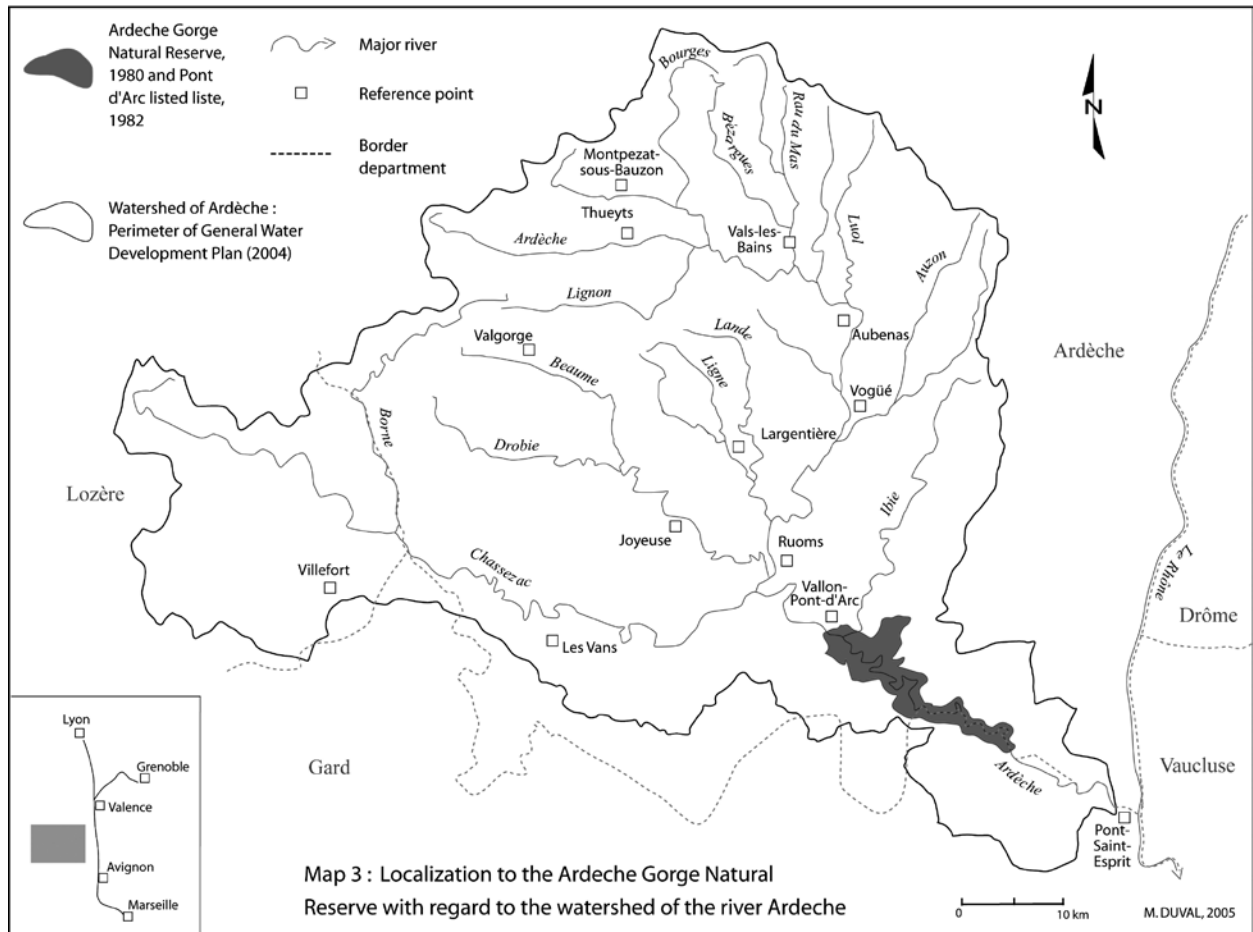


Map 2: Preservation areas around Ardèche Gorge, since 1980 to 2006.

opment and competitiveness, new naming of DATAR). The Ardèche Gorge reserve, as a protected tourist area will form the hub of an 'Ardèche Gorge' region. One of the main objectives of this programme is to renovate the tourism offer provided by the Ardèche Gorge and its surrounding area, by creating a network of local tourism industry players. However, this new programme will be superimposed on top of the measures described above, without any real consideration or explanation of how they will be linked.

The structure of the preservation areas around the Škocjan Caves is evidence of a completely different ap-

proach to the problem. The Škocjan Caves site is at the heart of several preservation areas (map 4), but subject to a global management system, as stipulated under the 1996 Act. The original, 1986 UNESCO site covered 200 ha around the collapse dolines. This area has gradually been increased, with the 1996 'Škocjan Caves Regional Park' Act defining a central zone of 413 ha around the caves that includes areas around exceptional cultural and historical monuments subject to even stricter protection measures. This Act also created a buffer zone covering the 45,000 ha of the Reka watershed upstream from the central area. Unlike the preservation areas in the Ardèche



Map 3: Localization to the Ardèche Gorge Natural Reserve with regard to the watershed of the river Ardèche.

Gorge, this extended zone was defined according to the need to protect the entire karst resource.

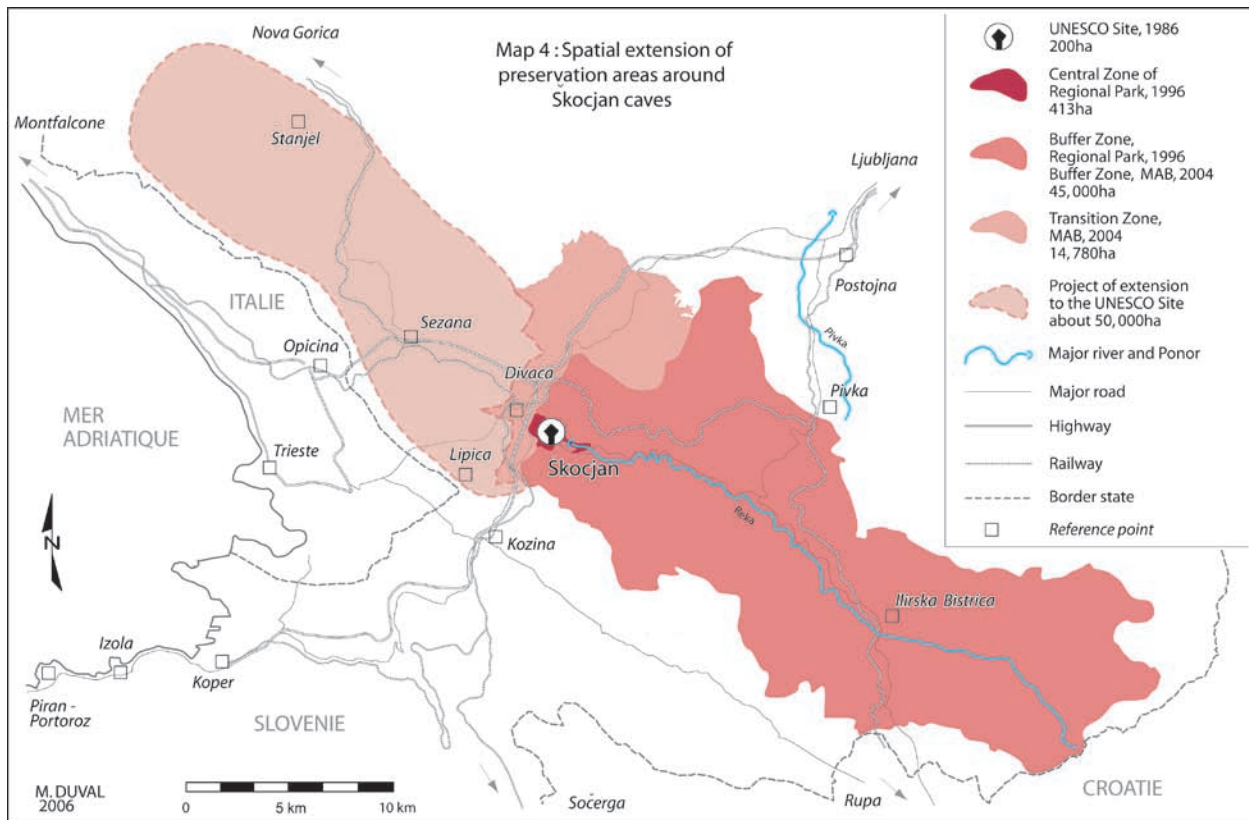
In 1999, the designation of a Ramsar zone around the Škocjan Caves confirmed the authorities' commitment to this 'whole-karst approach'. The Ramsar convention was originally drawn up to protect "wetlands that are important on an international scale, particularly as habitats for water birds", but its terms of application were extended in May 1999 to cover all forms of internationally important wetlands. By providing the means to guarantee the quantity and quality of the water feeding the Škocjan system, the managing body has ensured the protection of the karst resource, at least in terms of its underground waters.

In 2004, this action was completed by the launch of a MAB project, which confirmed the status of the buffer zone on the Illirska Bistrica side as defined by the 1996 Act and which set up a new zoning system with creation of a 14,780 ha transition zone. This zone covers the Divaca district (district that contains the Škocjan Caves following the reorganisation of local authority boundaries

in 1992), which was not included in the 1996 buffer zone. The MAB programme provides the regional park with the means to coordinate efforts to control local hydrological processes, develop sustainable farming practices and preserve the caves by limiting surface water pollution through the controlled use of fertilizers and the management of waste water flows. As a result, the MAB project covers an area of no less than 60,193 ha.

The 1986 UNESCO classification, the 1996 Act, the 1999 Ramsar Convention and the 2004 MAB project cover all the different facets of the Škocjan Caves karst landscape: the natural monument with exceptional karst formations of archaeological, historical and ethnological value, the protection of underground water resources and the sustainable management of infiltration water on the plateau by maintaining traditional farming techniques.

Currently, two projects for extending this protection dynamic are being studied. The first concerns the enlargement of the regional park's boundaries to include neighbouring districts such as Naklo, Brežec, Gradišče. This extension has been sought by the inhabitants of



Map 4: Spatial extension of preservation areas around Škocjan caves.

these districts, who would like to be included within the park in order to benefit from the subsidies available for renovating housing and farm buildings. Little by little the park is increasing its territory.

The second project involves a major extension to the UNESCO site, increasing its area by approximately 50,000 ha, thereby protecting the entire Kras plateau, which the Slovenian authorities consider extremely vulnerable due to its karst characteristics. This new area could be classified as a cultural landscape, combining the caves and other karst features, traditional architec-

ture, the Lipica stud farm with its Lippizaner horses, and traditional forms of agriculture such as wine growing. With an eye on preparing for this classification, several key projects have been, or are being carried out. Most are aimed at developing small-scale heritage, such as nature trails around collapse dolines (Divaca), livestock farming (Pliskovica) and outstanding monuments (Komen, Štanjel). These projects are gradually providing the area with a tourist structure and creating a network of tourist flows, mostly centred round the Škocjan Caves.

CONCLUSION AND PERSPECTIVES

The Škocjan Caves and the Ardèche Gorge present two faces of the karst resource preservation/development dialectic and their comparative study is interesting on several levels. The two sites present similarities in terms of tourism development and the implementation of protection measures: both sites began to be perceived as tourist attractions at about the same time, i.e. during the 19th century, and both benefit from protection measures introduced at the beginning of the 1980s.

Nevertheless, the numerous differences between the sites give an insight into the different ways in which the preservation/development couplet is viewed. When examined from this preservation/development perspective, the differences in the ways the two sites are managed can be traced through a diachronic approach to the history of their tourism development.

The combination of several factors (accessibility, development of water sports, etc) rapidly led to the Ar-

dèche Gorge becoming what some people have dubbed the “Mecca of canoeing”. Although the enthusiasm for water sports was present throughout the 20th century, its development was facilitated by the completion of the Ardèche Gorge tourist road in 1969. Today, the Ardèche Gorge accounts for 2/3 of the ‘département’s’ tourism business, whether it is measured in terms of the accommodation offer, the number of bed-nights, or the turnover of the different sectors of the tourism market. As this thriving tourism industry already existed when the Ardèche Gorge Natural Reserve was created, the reserve’s statute had to take into account the interests of all the affected parties. As a result, the reserve appears to be a very flexible compromise between tourism and preservation. To a large extent, this historical and economic context explains the difficulties in setting up the reserve and, most notably, the fact that a management plan was not drawn up until twenty years after the reserve was created!

The context in which the protection measures for the Škocjan Caves were introduced was very different. Confronted with major pollution problems from the industry in the Reka basin upstream from the caves, but benefiting from the Yugoslav Federal Committee’s strong desire to obtain UNESCO classification for certain sites within the Yugoslavian Republics, the Škocjan Caves were inscribed on the list of world heritage sites in 1986. This protection measure was then reinforced by a specific law creating the Škocjan Caves Regional Park in 1996.

Tourism in the Škocjan Caves areas is viewed very differently to the way it is seen in the Ardèche Gorge. Firstly, the Škocjan area receives far fewer visitors; hence the economic stakes are much lower. Furthermore, at the beginning of the 1980s tourism development around the Škocjan Caves was carried out with two contradictory objectives: become a structuring tourist attraction for the whole of the Kras region but, at the same time, prevent any “anarchic” development. This dual position led to the drawing up of the 1996 Act, which gave the park’s managing body the means to implement a global development programme. The 1996 Act, together with the Ramsar Convention and the MAB programme, enable the Škocjan Caves Regional Park to carry out actions concerning different aspects of the karst resource:

natural heritage, cultural heritage, preservation of water resources, maintenance of traditional agriculture, awareness-raising and educational programmes for the general public, etc. Gradually, the Škocjan Caves area is positioning itself as a model site, a shop window onto the principles of sustainable development.

On a more general level, the differences between the two sites are also due to their different approaches to the management of karst resources. A comparison of the general legislation relating to environmental protection in Slovenia and in France shows that Slovenia has taken specific measures to protect karst areas, whereas France considers karsts to be just another part of the natural environment, alongside coastlines and mountain areas. In Slovenian law, specific protection has been given to karst areas both by the Environmental Protection Act of 1999 and by the Nature Conservation Act of 1999. For example, article 4 of the 1999 Nature Conservation Act defines karst phenomena as being part of Slovenia’s national heritage and therefore worthy of special protection.

Slovenia’s specific approach to karst landscapes could be ascribed to the extent of such formations in Slovenia: more than 44% of the country is composed of karst phenomena, ranging from alpine karsts to dinaric and pre-alpine karsts. As a result, 75% of the protected areas in Slovenia, whether they are national parks, regional parks or other types of protected area, are karst landscapes. However, the extent of karst landscapes is not sufficient to explain Slovenia’s readiness to protect this type of resource. In fact, the proportion of karst landscapes in France is similar to that in Slovenia (“karsts account for between a third and a quarter of the land area of France”, Nicod J., 1995, p.21), but France’s karst resources are not subject to specific protection measures.

In contrast, since 2003, Slovenia has reinforced the protection given to karst areas through a new law governing the protection of caves. The law’s objective is to classify Slovenia’s 8,726 known caves into three categories: caves open to visitors, caves that are semi-closed and monitored, and caves that are only open to scientists. An approach that has got certain French karstologists dreaming...

REFERENCES

- Daudé G., 1986: Tourisme et nature: à travers l'exemple des Gorges de l'Ardèche, in *Revue Géographie Lyon*, pp.409-440.
- Du Boys A., 1842: *Album du Vivarais*, éd. Ch. Vellot and Cie, 271p.
- Habe F., 1984: International Symposium "Protection of the Karst on the 160th anniversary of Škocjanske jame", Lipica 7th-9th October 1982, 112p.
- IUCN, 1986: Documentation sur les biens (naturels) du patrimoine mondial, les grottes de Škocjan, non paginé.
- Kečkemet D., 1978: Louis François Cassas et ses illustrations de l'Istrie and de la Dalmatie (1782), in *RAD Jugoslavenske Akademije znanosti i umjetnosti*, éd. Jugoslavenske Akademije znanosti i umjetnosti, Zagreb, pp.198-200.
- Kranjc A., 2002: Historical Overview and description of the Caves, in the Škocjan Caves Regional Park, pp.42-54.
- Martel E. A., 1913: *Montagne*, CAF revue, n°8, pp.433-457.
- Martel E. A., 1894: *Les abîmes, les eaux souterraines, les cavernes, les sources, la spéléologie, explorations souterraines effectuées de 1888 à 1893 en France, Belgique, Autriche et Grèce*, éd. Librairie Charles Delagrave, Paris, 576p.
- Mihevc A., 2004: Development of the tourist pathways in Škocjanske jame, in *International Show Caves Association, International Congress "Use of modern technologies in the development of caves for tourism"*, pp.117-120.
- Nicod J., 1995: Carte géomorphologique des karsts de France, notice d'une maquette au 1/ 3 000 000 environ, *Karstologia* n°25, pp.21-34.
- Office National du Tourisme (ONT), 2002: *Les sites touristiques en France métropolitaine. Fréquentations 1994-2000*, coll. *Analyses and perspectives du tourisme*, n°74.
- Peyrache-Gadeau V., 2004: Ressources patrimoniales – Milieux innovateurs, Variation des durabilités des territoires, Actes du colloque : La notion de ressource territoriale à l'occasion des 10 ans du Cerrosem, 14th and 15th October 2004, Domaine Olivier de Serres, 15p.
- "Syndicat de Gestion des Gorges de l'Ardèche", 1999: *Plan de gestion des Ardèche Gorge*, document interne de la réserve, 139p.
- Vourc'h A. and Natali J.-M., 2000: Sites naturels: contribution du tourisme à leur gestion et à leur entretien, éd. AFIT, 139 p.
- Zorman T., 2004: Škocjanske jame in the past and today, in *International Show Caves Association, International Congress "Use of modern technologies in the development of caves for tourism"*, pp.111-116.

LEGISLATION

In France:

Statutory order n°80-27 of 14th January 1980 creating the Ardèche Gorge Natural Reserve (Ardèche and Gard 'départements')

Statutory order listing the area around the Pont d'Arc as an area of outstanding natural beauty 24th February 1982.

Order relating to the inscription of the Ardèche Gorge in the Register of Listed Sites, 15th January 1943.

Order relating to the classification of the Saint-Marcel Cave, 26th June 1934.

Order relating to the classification of the Pont d'Arc, 24th January 1931.

Act n°76-629 of 10th July 1976 relating to the protection of the natural environment

Act of 2nd May 1930 relating to the protection of natural monuments and sites of exceptional artistic, historic, scientific, legendary or scenic interest, Official Journal of 4th May 1930.

In Slovenia:

Škocjan Caves Regional Park Act, 1st October 1996.
Environmental Protection Act, 1993, The Republic of Slovenia

Nature Conservation Act, 1999, The Republic of Slovenia

Objects	The Škocjan Caves	Ardèche Gorge
Object(s) covered by the protection	The caves and the collapse dolines+	The gorge and surrounding karst plateaux
Current management body	Public Agency for the Škocjan Caves	'Syndicat de Gestion des Gorges de l'Ardèche'
Beginning of tourism	1782: Cassas' engravings	1842: "Album du Vivarais" by Albert du Boys
Number of visitors	89,700 visitors in 2004	1.5 million visitors for the gorge and the surrounding karst plateaux in 2005
Protection measures	1980: Protection order passed by Sezana council 1982: motion adopted during the international symposium "Protection of the Karst on the 160 th anniversary of Škocjanske jame" 1986: UNESCO inscription 1996: 'Škocjan Caves Regional Park' Act	1931: classification of the Pont d'Arc 1934: classification of the Saint-Marcel Cave 1943: listing of the Ardèche Gorge 1969: adoption of a development plan: the gorge is classified as a <i>no-construction</i> zone 1980: order creating the Ardèche Gorge Natural Reserve 1982: classification of the area surrounding the Pont d'Arc 1992: biotope order for the Dent de Rez
Protected areas	200ha: UNESCO area 1986 413ha: central zone of the regional park 1996 45,000ha: buffer zone of the regional park 1996 14,780ha: transition zone of the MAB programme 2004 50,000ha: project for UNESCO classification	1,575 ha: area of the natural reserve 1980 1,040 ha: area surrounding the Pont d'Arc 3,500 ha: biotope order for the Dent de Rez 1992. Placed under the responsibility of the SGGA in 1997 13,000 ha: area of neighbouring 'communes' 1997
Related programmes	1999: Ramsar Convention 2004: MAB	2004: General Water Development Plan (SAGE) 2006: 'rural excellence pole'?

Table 1: Comparison between the Škocjan Caves and the Ardèche Gorge.

TOURISME ET MESURES DE PRÉSERVATION À L'ÉCHELLE DES AIRES KARSTIQUES : COMPARAISON ENTRE LES GORGES DE L'ARDÈCHE (FRANCE) ET LES GROTTES DE ŠKOCJAN (SLOVÉNIE)

RÉSUMÉ

Cet article a pour objectif de présenter deux des orientations que peut prendre le développement touristique d'espaces karstiques, présentement la Réserve Naturelle des Gorges de l'Ardèche (France), et le Parc Régional des Grottes de Škocjan (Slovénie). Support de flux touristiques majeurs, ces deux espaces se sont progressivement structurés autour d'une activité touristique, tout en étant le théâtre de politiques d'aménagement et de protection de la ressource karstique.

Depuis les débuts de la mise en tourisme de ces deux espaces, un processus dialectique s'est progressivement institué entre préservation et valorisation, amenant à la création de deux espaces touristiques protégés. Pour autant, entre préservation de la ressource et mise en valeur de cette dernière, force est de constater qu'il n'existe pas UN équilibre mais que chaque espace concerné s'auto-régule selon des caractéristiques qui lui sont propres et qui évoluent. Cette approche comparative nous amène ainsi à envisager les formes que peut prendre cet équilibre précaire et à présenter deux manières différentes de considérer la gestion d'espaces karstiques touristiques.

L'intérêt d'une approche comparative en géographie est de pouvoir porter des regards croisés sur un même objet, en vue de faire ressortir des éléments explicatifs et de porter notre réflexion sur des processus. En ce sens, force est de constater que ces deux sites offrent des similitudes tant du point de vue de leur développement touristique que de la mise en place de mesures de protection : tous deux ont commencé à être perçus comme des curiosités touristiques à peu près à la même période, soit courant du 19^{ème} siècle ; tous deux ont bénéficié de mesures de protection au début des années 1980.

Pour autant, nombres de différences peuvent être constatées, lesquelles permettent d'explicitier ce rapport au couple préservation/ valorisation touristique. Dans ce registre, une approche diachronique de l'histoire de leur mise en tourisme permet de comprendre en partie les différences de gestion de ces deux sites. La combinaison de plusieurs facteurs (accessibilité, développement des pratiques sportives d'eaux vives, etc.) ont rapidement conduit les gorges de l'Ardèche à devenir ce que certains appellent la « Mecque du canoë-kayak ». Cet engouement manifeste tout au long du 20^{ème} siècle s'est alors confirmé suite à la construction de la route touristique des gorges de l'Ardèche en 1969. Dans cette perspective, la création

de la Réserve Naturelle des Gorges s'est sur-imposée à une activité touristique importante. Ménageant les intérêts de chacun, cette réserve apparaît comme un compromis très souple entre activité touristique et préservation de la nature. Ce contexte historique et économique explique alors en partie les difficultés que la Réserve a rencontrées lors de sa mise en place, et notamment le fait qu'il s'est écoulé pas loin de vingt ans entre sa date de création et la rédaction d'un plan de gestion !

Comparativement, la mise en place des mesures de protection à l'échelle des grottes de Škocjan s'inscrit dans une logique différente. Confrontées d'une part à des problèmes de pollution industrielle importants en amont du bassin versant de la Reka et se situant d'autre part dans le contexte politique d'une inscription Unesco des Républiques de Yougoslavie porté par le comité fédéral Yougoslave, les grottes de Škocjan sont inscrites en 1986 sur la liste du patrimoine mondial ; cette première mesure se doublera par l'adoption d'une loi singulière portant création du Parc Régional des Grottes de Škocjan en 1996.

L'interprétation de la dimension touristique est ici différente de celle constatée à l'échelle des gorges de l'Ardèche. Dans un premier temps, ce site connaît une fréquentation touristique moindre et les enjeux économiques ne sont pas du même ordre que ceux observés à l'échelle des gorges. Par ailleurs, en terme de développement touristique, deux orientations contradictoires sont formulées au début des années 1980 : devenir un site touristique structurant pour l'ensemble du Kras et en même temps, se prémunir de tout développement « anarchique ». Ce double positionnement conduira à la rédaction de la loi de 1996, laquelle donne les moyens à la structure gestionnaire du Parc de conduire une politique d'aménagement globale. Ce dispositif, complété par la suite par la convention Ramsar et le programme MAB, permet aujourd'hui au Parc Régional des grottes de Škocjan de conduire des actions sur les différents volets de la ressource karstique : patrimoine naturel, culturel, préservation de la ressource en eau, maintien d'une agriculture traditionnelle, programmes de sensibilisation et d'éducation à l'encontre d'un large public, etc. progressivement, les grottes de Škocjan se positionnent en tant que site référent, espace vitrine de l'application des principes du développement durable.

