



ISOE-Materials Social Ecology 41

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# Tourism in the Zayandeh Rud Catchment



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## **Notice**

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## 1 Method

The sector module ‘Tourism’ developed a resource analysis of tourism in the catchment area of the Zayandeh River. This was based on a literature review and on interviews with key players, with the contacts kindly being supplied by Abbas Assadi from the Isfahan Water Authority. Among the experts contacted were employees from the Isfahan Province Water Authority, advisors of the Water Authority, the deputy director of the city of Isfahan’s Tourist Board and the CEO of the Zayandehrood Construction Organization.

In addition to a study done by Emco (2007), in which the activities in Isfahan Province are represented as being part of the overall activities in central Iran (provinces of Isfahan, Chaharmahal va Bakhtiari, Fars, Kohkiluyeh va Boyer Ahmad and Bushehr), a comprehensive Master’s thesis submitted to a Swedish university on current activities in sustainable tourism in the province of Isfahan (see Karimi 2008) served as basic literature. Relevant studies that were done at the University of Isfahan in recent years were also taken into account. In particular and in addition to existing publications, Master’s theses from the University of Isfahan on regional tourism and/or ecotourism – written in Farsi – were evaluated.

First, the current situation was assessed based on the literature and on initial discussions with experts while exploring the site in Isfahan (November 2011, questions focusing particularly on strengths and weaknesses and on future developments in the area). During the survey, the Institute for Social-Ecological Research was supported by inter3.

After analysing all the available information with the help of a SWOT-analysis, we outlined the foundations for possible scenarios on how tourism in the catchment area of the Zayandeh River might develop in future, during the next 15 years. These considerations were integrated into the next activities of the overall project, especially into the development of a decision-support-tool for Integrated Water Resources Management (IWRM).

## 2 Status review

The idea of developing the catchment area of the Zayandeh River into a tourist area is relatively new, but some key players have been vigorously promoting it since 2004. The plan to promote tourism in the Islamic Republic of Iran was first launched during the administration of President Mohammad Khatami (1997-2005). This is why in 2004, the Organization for Cultural Heritage, Handicrafts and Tourism was established to serve the entire country and the individual provinces (see Arendt 2012). Despite the country’s high potential for tourism, the government attaches relatively little importance to developing the tourism industry. Not just the Alpine region between Chadegan and Fereidan, but the entire belt along the Zayandeh River is considered to be the “centre of tourism” (see Tourist Board 2004). Strategically, the key players in Isfahan have recognised in recent years that the historical heritage as well as the artisan tradition can be particular magnets for tourism; these are currently receiving strong exposure in tourism marketing.

However, this focuses long-distance tourism particularly on the city of Isfahan itself. According to Abyareh (2007), tourist attractions have a direct impact/effect on the attraction of tourists, on the number of people employed in the artisan industry, and on the creation of more job opportunities.

20% of foreign tourists visiting Iran come to the city of Isfahan, totalling more than 50,000 people per year. 10% of domestic tourists visit the city of Isfahan, totalling is about 210,000 people annually (see Zirakbash 2007).

According to the experts we surveyed in Isfahan in November of 2011, the number of foreign tourists increased both in the province and in the city of Isfahan from 2002 to 2006, fell between 2006 and 2008, increased between 2008 and 2010, and has fallen again since 2010. In our opinion, the low water levels of the Zayandeh River with an almost dry river bed may be one reason for this, but international political conflicts may also be playing a role.

According to Shahram Amiri (Head of the Department of Social and Cultural Affairs of the Organization for Cultural Heritage, Handicrafts and Tourism of the city of Isfahan) 3,300,000 domestic and 80,000 foreign tourists visited the province of Isfahan in 2010. With these figures, Isfahan Province achieved the third best place in Iran in 2011 (Irna 2011). Amiri criticises the neglect of natural tourist attractions (nature tourism/ecotourism) in the province of Isfahan. According to him, tours for this type of tourism are rarely offered, and most planned tours have to be cancelled because not enough people sign up for them (Newspaper of the Islamic Republic 2011).

According to Dallalzadeh (advisor to the Water Authority), the higher numbers of domestic tourists between 2002 and 2009 are due in part to growing automobile mobility (because of greatly increased production of automobiles); since 2009, the number of domestic tourists has been falling, due in part to high inflation rates. In a 2007 study done by the advisory engineers Emco Iran on behalf of the Iranian Organization for Cultural Heritage, Handicrafts and Tourism (Zayandeh River's Tourism Development Plan), there are statistics from the Organization for Cultural Heritage, Handicrafts and Tourism on the number of tourists in the province of Isfahan that confirm the experts' statements regarding the long-term trends. Compared to other regions of Iran, the number of tourists in the Zayandeh River catchment area is relatively high; but is put into perspective when seen against the region's high potential for tourism.

Table 1: Development of Tourism in the Province of Esfahan (Source: Organization for Cultural Heritage, Crafts and Tourism)

Province Esfahan	Tourists	1997		2002		2006		Average Development [%]		
		Total	[%]	Total	[%]	Total	[%]	1997- 2002	2002- 2206	1997- 2006
	<b>Iranian</b>	234654	92,07	182294	80,6	248886	84,79	-4,92	8,09	0,65
	<b>From abroad</b>	20203	7,93	43858	19,4	44660	15,21	16,77	0,45	9,21
	<b>total</b>	254857	100	226152	100	293546	100	-2,36	6,74	1,58

The main objectives in the national tourism plan for the province of Isfahan:

1. The possibility to be able to use tourist facilities and services year-round,
2. "Distributing" tourists in the whole region, including smaller towns and cities, and not just in Isfahan,
3. Management for sustainable and long-term development (see Emco 2007).

### 3 Potential analysis

So far, the tourist board of Isfahan Province has focused primarily on making archaeological monuments accessible, and to maintaining and restoring them. In addition to the cultural monuments themselves in cities such as Isfahan, Najafabad, Khomeinishahr, Varzaneh, or Gharizjan, there are also paleolithic sites such as the area around Gavkhuni that have been being excavated since 2004 and are suited to becoming future attractions (see CHN 2005). In addition, nomadic ways of life can be integrated into the region's tourism portfolio, not just for domestic tourists (as an immediate cultural heritage), but probably also for cultural tourists from abroad. In her (as yet unpublished) dissertation "Tourism in Iran and India, A comparative study between Isfahan and Lucknow<sup>1</sup> in historical perspective", Mohebbi comes to the conclusion that for old cultures with an heritage of art and architecture, tourism is the best way to strengthen the regional and also the national economy (see Dev 2011).

Because of its diversity and its unique natural and climatic conditions, and in addition to cultural and historical tourism, the region is also very well suited for other types of tourism, e.g. nature tourism, ecotourism, religious tourism (with the city of Isfahan as the cultural capital of the Islamic world (see Emco 2007)) and sports tourism (see Karimi 2008).

Ecotourism is a responsible, environmentally friendly and sustainable form of tourism which has no negative consequences for the environment and the local population, contributes to the preservation of nature and culture, while economically benefitting the local population (see BfN 2011, Karimi 2008, TIES 1990). However, distinguishing between nature tourism and ecotourism according to various existing definitions is very difficult, which is why in practice there is often no differentiation between these two types of tourism.

Further advantages of the Zayandeh River catchment area are its prime location in the centre of Iran, the relatively good accessibility of the region (international airport, rail link, road network), as well as its proximity to two important and internationally known Iranian cities (Teheran and Shiraz).

<sup>1</sup> A town in Uddar Pradesh, India.

In the whole region, especially in and around the city of Isfahan, the locals' eagerness to receive and/or greet tourists is another positive aspect and/or potential for tourism.

In addition to the advantages mentioned above, many cultural venues such as theatres, cinemas, libraries and museums, as well as green spaces and parks in the city of Isfahan, also offer a varied leisure program for domestic tourists.

Within the relatively small region, both mountains and desert areas can be visited in addition to the cities. A number of different types of tourism and recreational activities are possible due to this diversity. For example, in the western areas these activities include hiking, sailing, fishing, skiing, golf, swimming, biking, camping and picnicking by the water.

The eastern areas are well suited for activities such as observing animals in/at the water, stargazing at night, motocross and dune bugging on the sand hills, flying gliders, as well as camel and horseback riding. According to the analysis of Abdollahi (2007), the Gavkhuni area, where the river ends in a salt lake, is one of Iran's most significant tourist areas. With its many and varied tourist attractions, such as the sand dunes, wetlands, the traditional and historical monuments, the different animal species, the various possibilities for day trips etc., it has much to offer tourists as a holiday destination.

Especially by establishing national parks and offering many of the above activities, including walking, taking photographs and filming, the centre of the catchment area, near the aforementioned cities, could be particularly attractive to a combination of cultural and nature tourism.

Attractions in the western part of the Zayandeh River catchment area are also taken into account when planning tourism projects. In the official lists of attractions in Isfahan not all of the tourist attractions in Isfahan Province are listed; the focus lies rather on those which currently have the potential for nature/ecotourism.

Isfahan Province, with its potentials listed above, also has good prerequisites for further developing tourism, according to the analyses of Karimi (2008) and Abdollahi (2007). Within this context, ecotourism in particular, as a variety of sustainable tourism, is being emphasised in the relevant planning arrangements, which have not yet been anchored in the province's currently valid 5-year-plans (see Karimi 2008), however.

In 2007, 27 villages in the province were recognised as having potential as ecotourism villages (see Karimi 2008:149); in some of these villages, attempts are now being made to develop this ecotourism potential with the help of Capacity Development activities (see SGP: 2007).

Starting from Fereidan in the high mountains, one can reach the city of Chadegan, located at a dam, and the settlement Omran Zayandeh Rud, which both have satisfactory tourism infrastructure (with all essential services); in principle, their high potential for tourism might also be realised for foreign tourists (especially for hikers and possibly also for skiers).

Offers for tourists which have already been realised in the sub-region of Chadegan are being well frequented by domestic tourists. According to the planning office Shahr o Khane, 1,000 holiday homes (villas/apartments) in a 150 ha large area were initially planned here in 1994, in the resort Omran Zayandeh (about 2 kilometres from the city of Chadegan); ultimately, 1,500 holiday homes (on 250 ha) were built. In 2010, the construction planning of another 1,800 houses was initiated and is due to be implemented, strongly factoring in aspects like population and housing density. According to Shahr o Khane, the tourist resort of Omran Zayandeh Rud with its 1,500 holiday homes so far, has had a major impact on the development in this area. The most important aspects within this context are employment opportunities for the local population and their "cultural influencing". The locals themselves rarely take advantage of the possibilities tourism offers, but they benefit indirectly from them, mainly via the income earned from employment. The highest potential for this sub-region lies in its good climatic conditions, the (dammed) Zayandeh River and a quiet atmosphere for rest and relaxation; in principle, the region can also be used for active holidays thanks to the availability of leisure centres such as sports fields, playgrounds, swimming pools and the other recreational activities already mentioned above. According to Shahr o Khane, most tourists, mainly short-term vacationers, prefer activities such as walking in the resort and boating. Tourists usually praise the region's calm atmosphere and natural beauty, Omran Zayandeh Rud management's activities to ensure environmental protection and cleanliness, as well as good supply and disposal infrastructure; but many tourists criticise inadequate recreational opportunities.

According to available statistics, in 2008 the tourist resort was frequented by 440,000 tourists who usually stayed there only one or two days. Initially, tourists usually went there to relax during the hot summer months of July and August, but because the supply systems have been broadened, the region is increasingly in demand during fall and winter, with the summer months representing the main tourist period. Most tourists come here from Isfahan Province, and they are mostly families (children, parents and grandparents). Either villas/apartments are rented from the owners or they are government buildings provided for employees of the public sector and the authorities and/or state-owned factories.

The company Saman Gasht Naghsh-e-Jahan and the Arabian Horse Tourism company organise incoming tours to attract foreign tourists to Isfahan, especially tours from Isfahan's twin cities in various Arab countries (Isfahan SamanGostar Company 2011). For example, Gulf Air offers direct flights to Isfahan three times a week (GulfAir 2010). In addition, Saudi Arabian Airlines and Iraqi Airways also offer flights to Isfahan (Skyscanner 2012, Esfahan Shahid Beheshti International Airport 2012). The above-named flights to Isfahan show that Isfahan is of commercial interest to the Arab/Iraqi world and that the potential for attracting tourists from the Arab world to Isfahan is high.

Since 1999, the company "Development of the sports tourism complex Sepahan" has been building hotels, as well as recreational, tourism and sports centres in partnership with the city of Isfahan, in order to take better advantage of its leisure and tourism potential. Among the largest projects of the aforementioned company in Isfahan are a cable car project and the modernisation of a resort in the Sofeh Mountains to expand tourism and leisure activities.

This leisure centre has green areas, parking lots, bowling centres, coffee shops, a shopping mall, restaurants and parks, playgrounds for children and a historic fortress (Shahin Dezh); many domestic tourists in particular visit it (Isfahan SamanGostar Company 2011).

## 4 Deficit analysis

According to an analysis by Karimi (2008), the province of Isfahan has neither the spatial planning capacities nor the governmental procedures in place to effectively promote various forms of tourism. Similarly, Mohebbi also emphasises that Iran could learn from the failures in India in terms of timely planning. She also states that to promote tourism it would be necessary to create a separate department and laws which foster the development of tourism, which is why Isfahan currently isn't realising its tourism potential (see Dev 2011).

According to Karimi (2008), on the one hand public capital for developmental measures and forms of public-private-partnership for further investment are lacking, but on the other hand the Islamic Republic is also not setting priorities with regard to spatial planning which should be developed in a participatory manner (with the key stakeholders). Thirdly, no appropriate infrastructure (operating organisation, guides, maps etc.) is currently being developed. This infrastructure is necessary not only for eco-tourists, but similarly for individual travellers from abroad with other travel motives.

In terms of the different forms of sustainable tourism, however, it must be questioned how far Iran, because of its policies (e.g. in the field of climate protection), is at all credible when it comes to the increased development of sustainable tourism activities (see Tavassoll 2002). Due to the intense over-exploitation of the water resources of the Zayandeh River it also needs to be discussed whether the existing potential of natural habitats can even be used as strong attractors for ecotourism (see Soltani et al 2009).

For various reasons (in the opinion of the Iranian experts interviewed, probably mainly due to the negative headlines about Iran) foreign tourists are very rarely visiting the region at the moment. The hotels are empty, and despite Isfahan's impressive handicraft tradition and its famous bazaar as a centre of urban life and activities, people are hardly shopping there any more (see Arendt 2012). Mohebbi has drawn attention to the fact that the restrictive dress code for women which must be followed is a deterrent, and that there is no recreational infrastructure such as discos, pubs or "fun clubs" which are customary in Western countries (Dev 2011).

According to the National Development Plan for Tourism (presented in the Emco study (2007)), further deficits are, among other things, the economic disparity and the unequal distribution of services within the region. Similarly, sometimes tourist accommodations are in poor condition, with inadequate supply and disposal systems. There are also not enough trained employees in the industry, due among other things to a lack of training courses.

Further deficits which need to be addressed over the middle to long term through appropriate measures are poor management, poorly functioning collaboration between those involved within the province and with neighbouring provinces, lack of investment (for example: in some cases and especially in rural areas, there is a lack of adequate street lighting and modern lighting systems/techniques at monuments and places of interest), as well as a lack of communications and public relations.

In the opinion of the Iranian experts interviewed, the biggest problem in the development of tourism is that many of the services offered are available only to wealthy tourists and that the possibility for using them is not available to all social classes.

## 5 Constellation assessment

According to Karimi (2008), Erisian (2004), Taghvaei (2011), Shamaei (2011), Qu (2011), Momeni (2011), Abdollahi (2007) and Fazeli (2005), currently too little is known about the capacity for tourism and its demand in the province of Isfahan. The interviews conducted in November of 2011 and further reviews of the literature have also confirmed this impression (also with regard to sub-regions such as Omran Zayandeh Rud/Chadegan).

Two different questionnaires for the Water Authority and the Tourist Board of Isfahan Province were set up to prepare the implementation of a constellation assessment. The responses of the Tourist Board are pending. As discussions with experts in Isfahan during the project have shown, the people responsible, including those at the Water Authority, are aware that realising a sustainable concept for tourism is closely linked to how water of the Zayandeh River is used in the future. Due to the fact that for more than ten years, there has been a drastic decrease in the amount of water in the area around Gavkhuni, leading to the absence of some migratory birds (especially flamingos), it is questionable to what extent this area is still even appealing. On the other hand, however, one must question whether the catchment area alone, with its cultural treasures and its possibilities for alpine-oriented tourists, has sufficiently large potential for intensifying sustainable tourism in the catchment area. The analysis of the interviews with experts and the existing literature has also shown that cultural and political restrictions and prohibitions in particular are seen as major obstacles for the development of tourism.

The following three tables show the classification of hotels, guest houses and hostels of Isfahan Province, divided into the city of Isfahan, the rest of the catchment area, the rest of the province and the entire province of Isfahan, according to tourist and/or gastronomic quality categories (probably not all hotels, guest houses and hostels of Isfahan Province are listed in the tables). It should be noted that in most cases, the classification of hotels, guest houses and hostels does not correspond to the standards of European countries and/or the industrialised nations (e.g. a 5-star-hotel in Iran can be compared to a 3- to 4-star-hotel in Germany (Kerber 2010)). According to Isfahan Province's Organization for Cultural Heritage, Handicraft and Tourism, there are a total of 6,751 available beds in hotels, guest houses and hostels; in the catchment area of the Zayandeh River there are 5,803 available beds, most in the city of Isfahan (5,332 beds). As mentioned above, the tables of hotels, guest houses and hostels of Isfahan Province are probably not complete, so the correct number of beds may also differ from the figures given.

Table 2: Classification of hotels (Source: Organization for Cultural Heritage, Crafts and Tourism)

Hotel classification	Region	Number of hotels	percentage [%]
4-5	City of Esfahan	5	10,87
2-3	City of Esfahan	22	47,83
-1	City of Esfahan	19	41,3
4-5	Other parts of catchment (in the Esfahan province)	0	0
2-3	Other parts of catchment	2	33,3
-1	Other parts of catchment	1	66,6
4-5	Rest of province	0	0
2-3	Rest of province	7	53,8
-1	Rest of province	6	46,2
4-5	Province in total	5	8,1
2-3	Province in total	31	50
-1	Province in total	26	41,9

As shown in the table, about 11% of the hotels and/or 5 hotels in the city of Isfahan are classified as high-class hotels (4-5 stars). Approximately 48% of the hotels (22 hotels) are mid-range hotels (2-3 stars) and around 41 % of the hotels (19 hotels) have a very low quality (not rated to 1 star).

In the other regions of the province, there are no high-class hotels. 2 hotels in the remaining catchment area as well as 7 other hotels in the rest of the province are mid-range hotels (2-3 stars) and 1 hotel in the rest of the province as well as 6 hotels in the rest of the province are of low quality (not rated to 1 star).

Table 3: Classification of guesthouses (Source: Organization for Cultural Heritage, Crafts and Tourism)

Guesthouses stars	Region	Number of guesthouses	Percentage [%]
4-5	City of Esfahan	0	0
2-3	City of Esfahan	20	66,6
-1	City of Esfahan	10	33,3
4-5	Other parts of catchment (in the Esfahan province)	0	0
2-3	Other parts of catchment	5	38,5
- 1	Other parts of catchment	8	61,5
4-5	Rest of province	0	0
2-3	Rest of province	2	50
-1	Rest of province	2	50
4-5	Province in total	0	0
2-3	Province in total	27	57,4
-1	Province in total	20	42,5

Both in the city of Isfahan, as well as in all the other regions of the province of Isfahan, there are no high-class guest houses. About 67% of the guest houses in the city of Isfahan (20 guest houses), approximately 39% of the guest houses of the remaining catchment area and 50% of the guest houses in the rest of the province (outside of the catchment area) are mid-range hotels with 2 or 3 stars. The number of non-rated to 1-star guest houses in the city of Isfahan is 10, and these guest houses make up about 33% of the guest houses in Isfahan. In the remaining areas of the catchment area, about 62% belong to the lowest category, and in the rest of the province 50% of the guest houses do.

Table 4: Classification of guest houses (Source: Organization for Cultural Heritage, Crafts and Tourism)

Guest houses stars	Region	Number of guest houses	Percentage [%]
4-5	City of Esfahan	0	0
2-3	City of Esfahan	5	29,4
-1	City of Esfahan	12	70,6
4-5	Other parts of catchment (in the Esfahan province)	0	0
2-3	Other parts of catchment	11	50
-1	Other parts of catchment	11	50
4-5	Rest of province	0	0
2-3	Rest of province	17	48,6
-1	Rest of province	18	51,4
4-5	Province in total	0	0
2-3	Province in total	33	44,6
-1	Province in total	41	55,4

As with the guest houses there are no high-class hostels within the province. About one third of the hostels in the city of Isfahan are mid-range (5 hostels) and about two thirds (12 hostels) are low-quality and/or were not rated. In the remaining catchment area, half of the hostels belong to the middle class and half to the lower class. In the rest of the province the figures correspond more or less with the figures for the rest of the province (about 49% in the middle class and about 51% in the lower category).

The Zayandehroud basin is an unique area which attracts the domestic and international tourists. For decision makers the economic effects of tourism is considered one of the most important indexes. The water flow in the river and the impact on historical monuments attraction (Seyosepol bridge, Khajoo bridge, other bridges) is important to attract tourists.

## 5.1 SWOT analysis

However, with regard to the entire tourism sector, a SWOT analysis can be carried out based on the evaluation of all the available material and on the interviews with experts. The SWOT analysis is a special type of resource analysis. It can be used to analyse the strengths and weaknesses and the opportunities and threats of various projects to develop the best possible strategies and solutions to achieve the project objectives. SWOT analyses are often performed in the tourism sector, because they very vividly highlight the advantages and disadvantages of various performance areas (e.g. regional portfolios) (see Freyer 2006, pp. 315f).

After evaluating all study findings and according to our own assessment, the strengths, weaknesses, opportunities and threats for the development of tourism in the test area are as follows:

Table 5: SWOT analysis

<p><b>Strengths:</b></p> <ul style="list-style-type: none"> <li>• Cultural heritage, cultural diversity, Traditional arts and crafts,</li> <li>• Diversity of the region (West: mountains; Centre: cities; East: desert)</li> <li>• Good location (centre of Iran), so relatively easily accessible from around the country (airport, rail link, road network)</li> <li>• Proximity to two important and internationally well-known Iranian cities (Teheran and Shiraz)</li> <li>• Relatively good infrastructure compared to other regions of the country</li> <li>• Eagerness of locals to receive and/or welcome tourists due to the history and the long-standing “tourism culture” in the region</li> <li>• In principle there are a satisfactory range of leisure activities, infrastructures and services on offer in some areas (e.g. the Omran Zayandeh Rud holiday resort in the West)</li> </ul>	<p><b>Weaknesses:</b></p> <ul style="list-style-type: none"> <li>• Economic disparity within the region</li> <li>• Uneven distribution of services within the region (e.g. hospitals)</li> <li>• Some accommodations (hotels, motels...) and restaurants are in a bad condition</li> <li>• Lack of skilled workers in the tourism industry</li> <li>• No and/or little training opportunities in the industry</li> <li>• No advertising, lack of communications and public relations to attract tourists</li> <li>• No proper cooperation of responsible persons within the province and with other neighbouring provinces</li> <li>• No management and/or no comprehensive planning of tourism activities</li> <li>• Lack of financial services mainly in rural regions -&gt; especially foreign tourists might feel insecure when they need to carry a lot of cash</li> <li>• Lack of investment in the tourism industry</li> <li>• Strong seasonal fluctuation of supply and demand</li> <li>• No sustainable spatial and/or regional planning</li> <li>• No co-operation between the public and private sectors</li> <li>• No and/or very little cooperation between Iranian and foreign companies in the tourism sector</li> <li>• Lack of supply and disposal systems</li> <li>• Cultural and political restrictions (e.g. no discos, pubs, bars; strict dress codes and sometimes also codes of conduct for women)</li> </ul>
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	<ul style="list-style-type: none"> <li>• Negative publicity about the country of Iran</li> <li>• Sometimes and especially in rural areas lack of adequate street lighting and modern lighting systems/techniques for monuments and tourist attractions</li> <li>• No specific laws/regulations for the development of tourism</li> <li>• No Ministry of Tourism</li> <li>• Some of the attractive tourist activities are only affordable for wealthy tourists</li> </ul>
<p><b>Opportunities:</b></p> <ul style="list-style-type: none"> <li>• Natural diversity and cultural heritage can attract domestic and foreign tourists</li> <li>• Incoming tours to Isfahan from its partner cities</li> <li>• Investment in the tourism sector in the entire region (decentralised) to strengthen the entire region and to avoid disparities within the region, such as: <ul style="list-style-type: none"> <li>- Organisation of travel tours</li> <li>- Using the region to host national and international exhibitions</li> <li>- Offering more artisan arts and crafts</li> <li>- Sustainable water resources management</li> <li>- Job creation</li> <li>- Organisation of sports competitions like skiing in the West and horseback riding in the East</li> <li>- Modern lighting technology and lighting systems, possibly to extend tourists' period of stay and willingness to spend money</li> <li>- Increase the quality of existing instruments and mechanisms in the tourism industry</li> </ul> </li> <li>• Cooperation between Iranian and foreign companies (joint ventures)</li> </ul>	<p><b>Risks:</b></p> <ul style="list-style-type: none"> <li>• Water scarcity and risk of drought periods</li> <li>• Unpredictable natural disasters such as earthquakes</li> <li>• Unpredictable protests by the locals against tourism / ecotourism</li> <li>• Political conflicts (national and international)</li> <li>• Risk of loss of cultural heritage and regional culture through modernisation</li> <li>• Environmental pollution</li> <li>• No clear and transparent planning/positioning of the government with regard to tourism/ecotourism</li> <li>• High inflation rate leading to a drop in tourist numbers</li> <li>• Political and cultural constraints and thus no visits from foreign tourists in particular</li> <li>• Lack of private sector investment in the tourism industry due to the limitations and prohibitions, in spite of the possibility of funding by the public sector</li> <li>• Concentration of investments only in limited areas and/or no local or regional investments could lead to supply and disposal bottlenecks, further inequality and disparity within the region, congestion, pollution, etc.</li> <li>• Problems with payment transactions with foreign customers due to the sanctions, thereby worsening the economic situation of handicrafts sellers (e.g. carpet sellers)</li> </ul>

At first glance, the weaknesses and threats outweigh the strengths and opportunities.

Nevertheless, intelligent management systems and medium- to long-term sustainable investment in the tourism sector can make large contributions to the improvement of tourism in the region. An expansion of tourism activities and the development of other tourist centres in the Zayandeh River catchment area will create scope for economic development, but also poses additional challenges for the development and utilisation of water resources in the catchment area. The implementation of a sustainable IWRM process can play a large role in the positive development of the Zayandeh River catchment area.

## 5.2 Results

According to Shamai/Mosivand (2011), there is no direct link between how satisfied tourists are and the number and/or quantity and diversity of basic existing infrastructure systems in Isfahan Province. This means that the quantity of infrastructure systems is not sufficient for attracting tourists. Most important for tourists is the quality of available infrastructure systems and services. According to Shamai/Mosivand, tourists' satisfaction can be increased by improving quality, thus contributing to a positive development of the tourism industry.

This statement is confirmed in the study by Momeni 2011. According to Momeni, most tourists are satisfied with minimal infrastructure, if the quality of infrastructure and accommodation offered is satisfactory. The study by Taghvaei, Varesi & Doraki (2011) also brings this result into focus: According to a survey of 251 tourists, lighting techniques and lighting systems at monuments and other tourist attractions, just like street lighting, plays a very important role for touristic appeal. The survey asked whether improved lighting technology could have a positive impact on touristic appeal, but also on the subjective well-being of tourists, their travel time and their desire to shop. These questions were answered with "Yes" in 100% of cases. Improving infrastructure by using modern lighting techniques throughout the region and not just in big cities like Isfahan could thus make a positive contribution to the development of the tourism industry.

In addition, a destination's image plays an important role in vacation/tourist destination choice (Baloglu 1999, Beerli 2004). The cognitive, affective and unique image of a destination affects the way tourists behave (Qu, Kim & Hyunjung 2011). A destination's image also has a direct influence on whether a destination is visited again or recommended (Alcaniz & Sanchez Blas 2005; Bigné 2001).

Our SWOT analysis shows that, in spite of existing weaknesses and risks, intelligent management systems and medium- to long-term investment in the tourism sector can make major contributions to improving tourism in the region. Moosavi Nor/Rahmat Shah (2012) confirmed this result with their SWOT analysis.

### Effects of water management

Depending on developments in the future, various trends in the demand for water and effects on water management are conceivable: After discussing the issue with other German partners, the demand for water in the tourism sector was not identified as a stand-alone entity within the sector module, but is defined as part of the sector module 'urban water management'. High-class hotels can be assumed to have a daily water demand of up to 900 litres per occupied bed (see Alamoudi) (guests' personal care and grooming, demand in the kitchen, garden areas, and especially cleaning bed and table linen and towels). If tourism continues to develop and despite more hotels, guest houses, hostels and other tourist infrastructure being built, the water demand per occupied bed is expected to decrease significantly, since – on energy grounds – hotels (including their laundries) can be expected to use water more rationally, especially if the hotel facilities are renovated or newly constructed. New hotels or complete refurbishments (which are pending in most of the better hotels in Isfahan) also make it possible to introduce gray water use for toilet flushing through conversion of the domestic water infrastructure and thus to save water.

Even new tourist complexes (like the enlargement of the Omran Zayandeh Resort) can gear themselves towards the possibilities of novel sanitary technologies and also allow the differentiation of wastewater sub-streams (grey water) and their re-use. Particularly when setting up an ecotourism infrastructure in the east of the catchment area (Gavkhuni area) it might be appropriate to be guided by the luxury segment: Decentralised sanitation and water treatment technology can principally cover supply and disposal in "water-self sufficient" houses.

One of the effective parameters in tourist attraction in the west of the catchment area (Chadegan) is the Zayandeh dam as a lake, which is dependent on the hydrological conditions of the dam especially a suitable volume of water. The development of tourism in the city of Isfahan is highly dependent on the water volume in the Zayandeh River. The (eco)tourism in the eastern part is influenced by the water inflow to the Gavkhuuni Wetland, too; enduring water shortage will damage its ecosystem and obstruct otherwise possible bird watchers' tours in the Ramsar reserve area.

Due to the water shortages there had been economic losses during the last years. It was not the intention of the sector module to assess (or even to quantify) economic losses of the tourism in the catchment area during the last years; the financial resources of the project did not allow to study this question interesting the tourism sector and other stakeholders in the area.

## 6 Conclusions

The analysis of the existing literature and interviews conducted with experts in Isfahan have shown that with regard to the tourism industry (including ecotourism) and in comparison to other industries, very little has been invested in this region in recent years; currently the main focus is on ecotourism which is supposed to attract domestic tourists. However, visits of domestic campers in Isfahan, for example, declined dramatically due to the dryness of the Zayandeh River.

Among other things, it is through the unique cultural heritage, the distinct climatic and natural conditions, the good location and the long-standing “tourism culture” that there is very substantial potential for intensifying the various forms of sustainable tourism in particular; Iran is currently focused only on ecotourism. According to the players interviewed so far, developing the potential inherent in sustainable tourism will not just have risks with regard to the Zayandeh River, but also offer opportunities for sustainable and Integrated Water Resources Management.

Future investments could take the form of public-private-partnerships, for example. Potential investments should be made in the entire region (locally), so that the whole region and not just parts of it can benefit from investments, and so that there are no disparities within the region.

Expanding tourism activities and developing other tourist centres in the Zayandeh River catchment area will create scope for economic development, but also poses additional challenges for the development and/or utilisation of the water resources in the catchment area. The implementation of a sustainable IWRM process, which is currently being prepared by the province’s Water Authority, can play a major role in the positive development of tourism in the river’s catchment area.

However, in order to exploit this potential and in order to plan and implement the development of tourism over the middle- to long term, professional management is needed, as well as cooperation between the key players involved. Within this process, management should make more allowances for the opinions of tourists as “consumers”, and should also factor in the experiences made when developing the tourism industry in other countries and regions with attributes similar to the Zayandeh River catchment area, in order to achieve more efficiency in developing the tourism industry. Services should not only be designed and implemented for wealthy tourists, but all socio-economic target groups should have the chance to take advantage of them. As long as there are cultural and political constraints, economic disparity and an uneven distribution of services within the region, a lack of skilled workers in the tourism industry and in advertising, communications and public relations for the industry, there will be no positive development within the tourism sector. If there are restrictions, both domestic and especially foreign tourists look for other holiday destinations in other countries.

However, making use of the region’s inherent potential and developing sustainable tourism can greatly improve the living conditions of the local population; in addition, the environment and the cultural heritage (as a source of income) can be effectively protected, and domestic and foreign tourists can experience this region – whereas not developing the tourism sector in a long-term and sustainable manner could lead to a decline in the number of domestic and foreign tourists, and thus to a deterioration in the living conditions of the population, and to the destruction of the environment and cultural heritage in the region.

Conducting comparative studies in other regions of the country or in other countries with the same and/or similar characteristics as the Zayandeh River catchment area could provide information, ideas and approaches to improve and optimise the tourism sector. In our opinion there is a further research demand for more investigations. Based on the experiences from other countries, it is possible to calculate the economic losses of the tourism sector in the catchment area which might be carried out by the Technical University of Esfahan and other Iranian institutions. For instance the question was raised by experts, if it is possible to compensate the damages imposed by drought. In our opinion it is urgent to ask for ways of restoring the Gaw Khuni wetlands as a Ramsar reserve. It was suggested by some stakeholders that it might be suitable differentiating domestic and international tourism and suggested that there are separate economic and social effects.

## 7 Outlook

It is possible that during the next phase of the German project Iranian planners, investors and researchers identify, develop and implement joint projects in the touristic field which are in concordance with the necessary integrated water resource management in the Zayandeh Rud region. Examples are the planning and construction of sustainable guest houses with a very low resource consumption and decentral waste water cleaning, in the desert parts of the catchment area even the development and construction of “water autarc” guest houses (with nearly 100 % water reuse). Also it is possible to plan the extension of the Omran Zayandeh Rud Ressort in such a way that a transformed water infrastructure allows distinguishing different qualities of waste water, especially sewage and less used grey water; this is not only a precondition for using of cleaned greywater for toilet flushing and thus saving fresh water but allows semicentral cleansing of the sewage and thus allowing to improve the protection of the Chadegan water reservoir (Zayandeh dam) against growing touristic wastewater emissions.

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