

Tourism versus the transformation of ksours – Southern Morocco case study

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Abstract. Ksours form a cultural landscape for most of the countries of North Africa. They are an important part of the cultural heritage of the desert areas in Algeria, Libya, Tunisia, Mali or Morocco. They also become an undeniable attraction for tourism. The article looks at the impact of tourism on the transformation of ksours. It is based on comparative field research in the Dadès-Drâa Valley (Southern Morocco), the region of the highest ksour concentration. The results show that despite being very close to most sustainable tourism indicators, the whole impact of tourism is rather negative. Tourism is creating social disproportions, being the first incentive to abandon the ksours by those who are not involved in the sector. This is leading to the destruction of particular houses first, and later to the destruction of the whole village. The revitalization of ksours remains a theoretical solution only; thus the author suggests paying greater attention to social equity in order to stop the transformation of ksours at the 2nd stage of development.

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1. Background

Ksours make a part of the typical desert landscape in most countries of North Africa. Some of them have become famous thanks to science-fiction or historical movie productions (e.g. Matmata in Tunisia for Star Wars); some of them are already on the UNESCO world heritage list (e.g. Ait Ben Hadou in Morocco). In South Morocco, across the whole area between the Ziz and Drâa rivers, there are around 600 ksours and more than 400 kasbahs, forming what is known as the Route of the Thousand Kasbahs (*route de mille kasbahs*). Located in hills close to rivers and oases, built from local mud, they are considered to be one of biggest world tourist attractions (UNESCO, 2007). They are a core product for tourism, for sightseeing and cultural tourism, and an important addition for most other tourist activities such as off road, active holidays and others (Dłużewska, 2011).

Ksours form a group which constitutes a heritage asset for the Sub Sahara region and have to be seen as a symbol of the whole region's identity. Their preservation must then be considered not only as keeping the attractiveness of the area but most of all as keeping regional culture and heritage (El Haj Hmad, 2006). Ksour (from Arabic *qasr*) means royal palace or garrison (Ilahiane, 2001). The first ksours were built as early as the 11th century (Cuperly, 1987).

The indigenous inhabitants of ksour regions (including the Drâa and Dadès Valley in Morocco) are of Berber origin. The inhabitants can be divided into two main social groups: 1) nomads, living from trade or pasturage; 2) those based in the oasis: land owners and *fellahs* (the workers). Both groups were always dependent on each other: Nomads took fruits and corn from the oasis. They paid with meat, animal skins and different products bought in marketplaces in remote villages (e.g. sugar, tea, salt) (Zainabi, 2004; Dłużewska, 2011). Conflicts between both groups occurred when Nomads engaged in uncontrolled pasturage in the oasis, which deprived the inhabitants of their harvest. Or even more intensively during droughts, when the flora in the desert was nowhere near sufficient to feed numerous herds. In this last case the granaries in the oasis were in huge danger from robbery. Such a sit-

uation became the main reason for concluding the defence contracts between particular tribal groups and particular nomad groups, to the opposition of others. The Nomads were supposed to protect chosen ksours, taking the right to pasturage on the land belonging to the oasis and a part of the harvest (Pletsch, 1971; Bounar, Chahid, 2004). However, the settled inhabitants had to deal with other groups' attacks when "their" Nomads were not there. One of the ways to achieve it was to build fortified granaries (Pletsch, 1971; Dłużewska, 2003). As the attack could occur unexpectedly and last for a long period, the ksours were prepared for the "normal" life of their inhabitants. Apart from granaries, and space for living, they all had developed living spaces such as a mosque, market, school, etc. Ksours were divided into three social zones: *qsar* (common area), *le derb* (streets) inhabited mostly by families related on the male side, (brother, cousin uncle), and *ed dar* (private houses). The meeting places, mosque and other sites included in the common area were located close to the external wall, whereas private houses were situated in the central part of the ksour. The *ed dar* (private houses) are always the property of particular families, and even when they become abandoned and destroyed, they cannot be occupied by anybody else (Sebtia, Alkamaa, Ammar, 2013). That is a crucial point for the model of ksour development proposed in this article.

Ksours are built from local mudbricks (walls), trunks and branches of palm trees and tamarisks (roof) (Bounar, Chahid, 2004). The mudbrick is a great insulator limiting overheating of premises in summer and preventing them from extreme cooling in winter, to a much higher degree than any other construction material (Bourgeois, 1988; Mekhermeche, 2013). It was often described as a proof of the "genius of desert people" (Zainabi, 2004; Meca et al., 2012). On the other hand, the mudbrick is very sensitive to water and wind erosion. Ksours need to be repaired immediately after heavy rain. Failure to repair leads to the irreversible destruction of buildings.

The social structure of ksours is very homogeneous – their inhabitants have been related to the place for generations. The houses are inherited only (Chabi, Dahli, 2013). The model of ksour development differs from that of most rural – urban areas, in which there is a possibility to attract new owners

from outside the village, e.g. thanks to landscape values (Prados, 2009). In the case of ksours the transformations are based on indigenous inhabitants only (Zainabi, 2004; UNESCO, policy paper 21-1).

2. Description of methods applied

The choice of research area was related to:

1. Great concentration of ksours in the region – Dadès-Drâa is called *the Route of 1000 Kasbahs*
2. Great attractiveness of the area for tourism – the cultural landscape formed by ksours can be con-

sidered the core product for tourism (UNESCO 2007, UN Strategy Plan, Zainabi, 2004; Dłużewska, 2011)

3. Possibility of ongoing comparative observation (done exclusively or together with other research projects (such as sustainable development, migration etc.)

The research was carried out from 2000 until 2015, in the Dadès - Drâa Valley (South Morocco) starting at Msemrir in the Upper Dadès Valley, until Warzazate, along Kasbahs way, including Ait Ben Haddou, and along the Drâa Valley, starting at Agdz, until Mhamid el Ghoslaine at the Morocco-Algerian border (Fig. 1a, b).

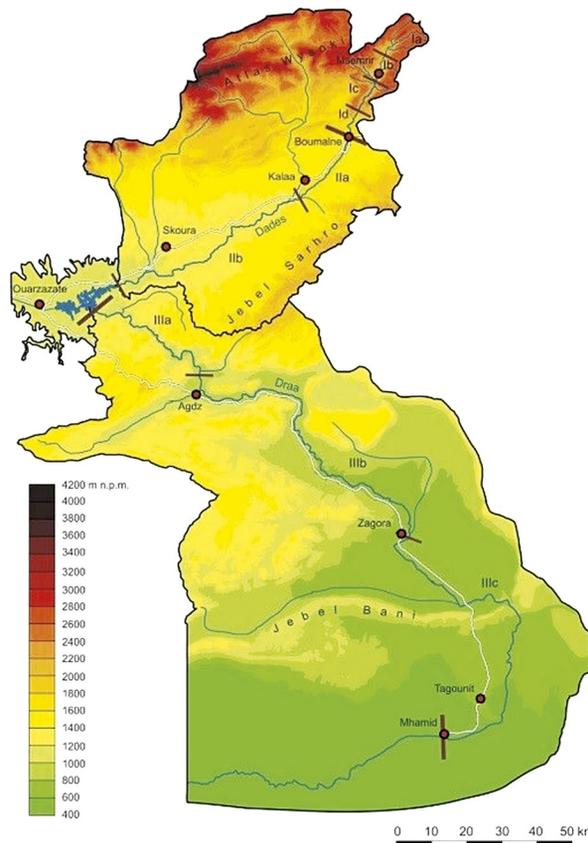


Fig. 1a : The research area

Source: Dłużewska, Dłużewski, Sobczak, 2013, *Tourism impact on ksours transformation. Southern Morocco case study*. IX International Conference “Man-City-Nature”, Integrated development of cities and regions, Toruń, 14-15 October 2013



Fig. 1b: The research area location (marked with the rectangle)

Source: Dłużewska, Dłużewski, Sobczak, 2013, *Tourism impact on ksours transformation. Southern Morocco case study*. IX International Conference “Man-City-Nature”, Integrated development of cities and regions, Toruń, 14-15 October 2013

Regarding the methodology, the Chicago School of Qualitative Research served as a basis for field studies. Participants’ comparative observations (direct and indirect) and qualitative interviews were used (Nash, 1981, 2004; Hammersley, Atkinson, 2000; Phillimore, Godson, 2004). Grounded Theory Methodology (Strauss, Corbin, 1990, 1994; Babbie, 2003) was applied for analysis and interpretation. The methodology is cultural anthropology & ethnography grounded (Hammersley, Atkinson, 2000), thus the results are presented in a descriptive way.

The aim of the research was to observe the transformations of ksours following the occupancy, migrations and life activity of their inhabitants. Particular attention was paid to tourism and sustainability paradigms. The following questions were asked: how can tourism affect such transformations, what are the factors to develop tourism and mostly what is the role of tourism in ksour development?.

Altogether 28 ksours were subjected to ongoing observation. Each ksour was visited at least once

per year. On this occasion in-depth interviews with key inhabitants were conducted.

The analysis of experiences related to the observation of ksours in the period of 15 years allowed the stages of ksour development to be indicated based on contact between the local society and tourists and to see whether the impact of tourism should be seen as positive or not. Still, due to the ethnographic method used and to the fact that the research took place in one country, the results are rather an evocation of existing problems and processes, not a “role model” for all Sub Sahara countries. To confirm the model, research in Tunisia, Mali and other “ksour” countries would be required.

3. Results

Based on the activity of the inhabitants of ksours, their main source of income, 3 stages of ksour development were found:

- 1st stage - ksour as a home and granary
- 2nd stage - ksour as a home and granary + tourism attraction “untouched by modernity”
- 3rd stage A - ksour destroyed and abandoned or
- 3rd stage B - ksour as a tourism attraction after revitalization

Tourism should be seen as one of most important factors in the ksour transformation model (Fig. 2).

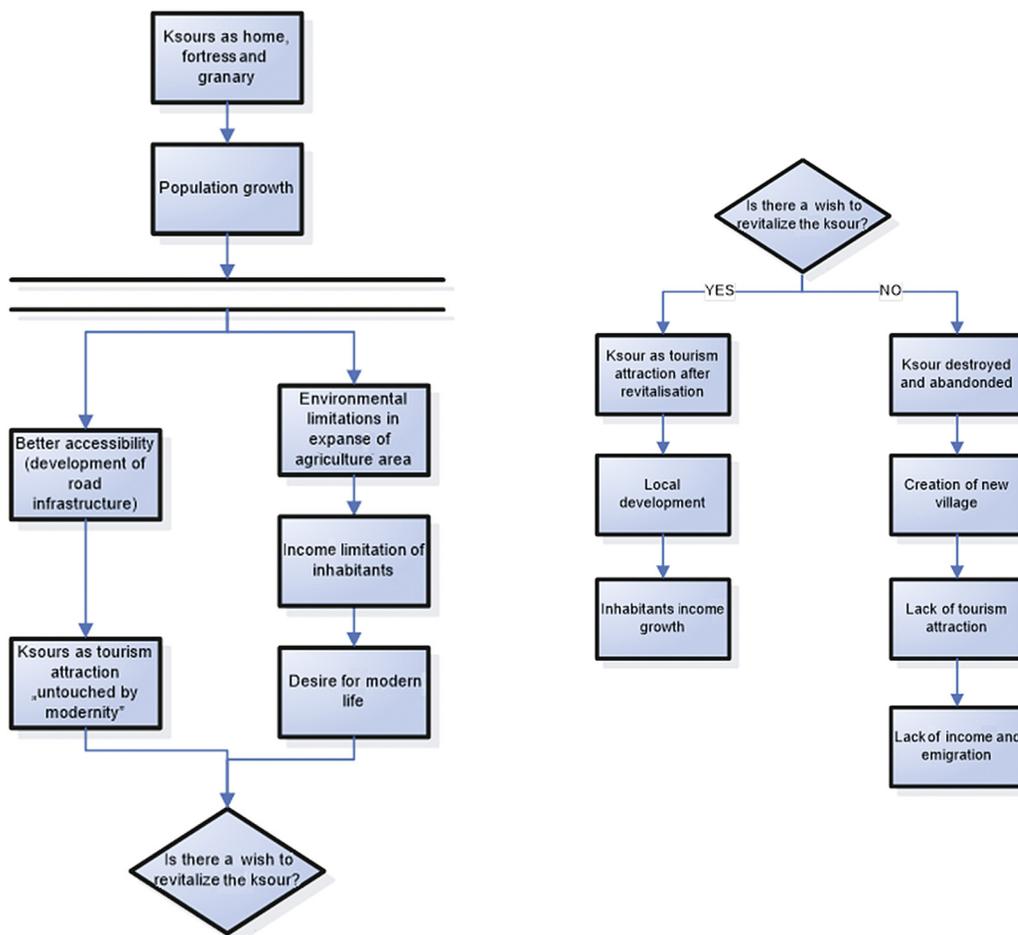


Fig. 2: Model of ksours transformation

Source: Dłużewska, Dłużewski, Sobczak, 2013, *Tourism impact on ksours transformation. Southern Morocco case study*. IX International Conference “Man-City-Nature”, Integrated development of cities and regions, Toruń, 14-15 October 2013

In the 1st stage, the basis of life is agriculture. The occupation of the inhabitants is not related to tourism or tourism's secondary services nor to working in the cities (e.g. industry, constructions). The only source of income is related to the ksour itself. Until recent times (first years of the research) an example of such was the ksour of Mhamid el Ghozlaine.

The infrastructure of ksours at the 1st stage is very weak. There are no mains, no tap water, no sewage system and no driveway, meaning no amenities typical for most new build villages.

1st stage of ksours' infrastructure:

- No mains
- No tap water
- No sewage system
- No driveway

1st stage of ksours' inhabitants' main sources of income:

- Agriculture
- Local services

The 2nd stage is the first moment for tourism to appear. Ksour of this type are located at a close distance to tourism trails so the tour guide, with not much waste of time and means, can show his clients an "unaffected culture". Most such visits are arranged as "extra" and are not officially included in the tourism schedule proposed by the agency. The guide proposes to visit his "relatives", which makes the whole event much more attractive and feel very informal. The visit of the ksour is obviously related with a visit in a particular private house, chosen by the guide. Following the hospitality roles, the traditional Berber tea is served as a welcome. As a sign of gratitude, tourists usually pass to the hosts a small fee. Apart from this there is always a possibility to buy some local handicraft, which is often considered as kind of help to the local population. That is the first mental and economic incentive to transform the host's attitude about the source of income from agriculture to tourism. With time the range of services becomes wider. Also the tourist agencies see profits to include ksours in their official programme. The next type of available services offered in ksours is that of lunch or dinner. Some houses offer rooms for B&B services, but again, most services are provided by particular families with the exclusion of others. Also the production of souvenirs, in a very obvious way is the domain of some, not all the ksour's inhabitants. So, the best possibility to sell products is

through those already receiving tourists and having direct contact with them. The involvement in tourism includes all family members. Despite women (due to culture and religion) having no direct contact with visitors, they provide most of the handicraft and prepare dishes. The division of tasks is rather equal. As a consequence the families related to tourism raise their standard of living significantly. Tourism is not their main source of income (that is still agriculture) but makes an essential addition. A consequence of income increasing for some families is a significant dissection of life level regarding the ksour population as whole. We could talk then about rich families (mostly having profits from agriculture and tourism) and poor ones, having profits from agriculture only. The second group, if they could not become involved in tourism somehow, become reluctant and sometimes aggressive.

The infrastructure of ksours at the 2nd stage is much better compared with the 1st one. There is electricity, a public well and obviously convenient paved road access (necessary for tourists to reach the ksours). There is no sewage system. Better life conditions concern the whole society; nonetheless we cannot consider social life better than before. That is because of social disproportions.

2nd stage ksour infrastructure:

- Electricity
- Public well
- Paved road access
- No sewage system

2nd stage ksour inhabitants main sources of income:

- Agriculture
- Local services
- Tourist accommodation at family home
- Local gastronomy
- Handicraft

The communities basing their life on agriculture are somehow used to an uneven quality of life, coming from weather or water conditions, so depend mostly on each year's yields. Also in South Morocco there have always been "fat years and lean years" when the population was feeling rather wealthy or the opposite, very poor. There has been no significant change in the weather condition, so the sequences of "good and weak yield years" are still there. A noticeable difference is that the poverty of weak years is no longer the share of the whole com-

munity, but just the “excluded ones” so it became all more noticeable and annoying.

When getting poor yields, the families having no benefits from tourism could feel their situation as being much worse (compared with others). In consequence they were pushed to look for income outside of the ksour: in the largest cities of Morocco or, when possible, abroad (Sobczak, 2012).

The first step towards emigration was mostly taken by one family member: an older son or husband, while others stayed in the ksour. However when the emigration was successful, other family members followed the first one and abandoned their living place (ibidem).

As already said, the ksour’s construction material (brick mules and grass) is extremely fragile to water erosion. It has to be repaired after each rainfall, otherwise the construction collapses. Current reparations are possible only when houses are inhabited; the abandoned ones are damaged and destroyed very quickly. When emigration affects many families, the destruction concerns most of the village area. Such a destroyed and abandoned ksour does not look at all attractive for tourists. In consequence tourists cease their visits in this particular place, choosing another one – more attractive, with “unaffected culture” (Dłużewska, 2011; Sebtia et al., 2013).



Photo 1: Oualad Dris, Mhamid Oasis – Ksour destroyed and abandoned

Source: Dłużewski M., 12.03.2012.

In the 3rd stage of the process, the ksour is no longer a place of tourist interest. Families involved in this sector have lost their additional income, and again the only occupation would be agriculture and local services. The important difference compared

with the 1st stage would be the lowering of the standard of living in a partly abandoned, destroyed village (photo 1). Additionally, as most families have left, there is no social and cultural pressure to stay in the ksour. Modern amenities and an easier life become a final argument for moving to a so-called new village and leaving the ksour completely (Sobczak, 2012).

The infrastructure in the new village contains all conveniences, such as electricity, tap water, sewage system, paved road access, paved urban road or urban lighting. Particular houses contain modern amenities. Life conditions for the inhabitants are much easier than in a traditional ksour.

The new village does not have any attractiveness for tourists (architecture, design), so the tourist function will not appear. Destruction and abandonment is the case of most of ksours in the researched area.

3rd stage A (new village) infrastructure:

- Electricity
- Tap water
- Sewage system
- Paved road access
- Paved urban road
- Urban lighting
- Home with modern amenities

3rd stage A (new village) main sources of inhabitants income:

- Agriculture
- Local services in new villages

The only real chance to obtain means for the revitalization is to adapt the ksour for tourism purposes (such as a hotel, tourism centre with restaurants and shops, a museum, etc.). Other options could be theoretically possible, but never occurred in the researched area (Sebtia et al., 2013). The main problem (except the high cost of the revitalization) is the property issue. As already stated, particular buildings in ksours belong to particular families. To get the ksour revitalized, the acceptance and agreement of all owners is needed. In many cases the owners have left for emigration abroad and are not reachable, in others the legal status of the ownership is not clear (like a succession of property by different family members).

The infrastructure in the revitalized ksour must respond to all needs of modern tourism infrastructure, such as electricity, tap water, sewage system,

paved urban road and urban lighting. Houses are transformed into small hotels (B & B or mostly expensive riads) having all amenities typical for a high standard (like a luxury bath room, air conditioning etc.). They all keep the appearance of traditional building: are made from mudbricks, the furniture and carpets are ksour originals or done to look like it (photo 2).

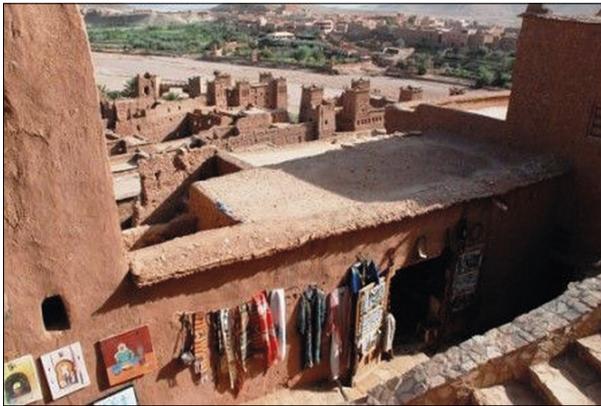


Photo 2. Ait Ben Haddou - Ksour after revitalization
Source: Dłużewski, M., 15.03.2013.

The only source of income for the inhabitants is tourism and tourism related services, such as restaurants, souvenir shops, handicraft production, guiding etc. The agriculture, as less profitable is utterly abandoned.

3rd stage B (ksour after revitalisation) infrastructure:

- Electricity
- Tap water
- Sewage system
- Paved road access
- Paved urban road
- Urban lighting
- Home transformed into bed and breakfast or luxury small riads

3rd stage B (ksour after revitalisation) main sources of inhabitants' income:

- Hotel and riad accommodation
- Restaurants
- Travel agency services
- Handicraft
- Souvenir shops
- Local service

4. Conclusions

Tourism in ksours is based on cultural values, taking advantage of the cultural heritage of the Sahara region. It contributes to the preservation of *cultural richness* but at the same time helps to improve *local prosperity*, and *economic viability*. Moreover tourism gives to locals a possibility to earn money for their traditional activities, with respect for the cultural roles of men and women, but the involvement of both. Due to tourism's exigencies, also a better care for visual cleanliness in ksours' surroundings is observed (that is one indication of sustainable tourism as regards the environment). Tourists interested in this type of values, so called cultural tourists, are commonly considered as "the best ones" – contributing to the highest level of tourism function, and generating the lowest level of tourism dysfunction (UNESCO, 2007; Dłużewska, 2010). *The visitor fulfilment* is then possible with no abuse of local community values.

Theoretically we have to deal with the ideal model that should be considered as an exemplification of "sustainable tourism in practice". In reality, tourism is the first incentive for cultural transformations. It generates social disproportions and the subjective feeling of poverty between those who are not involved in the sector. Paradoxically – despite keeping most sustainable tourism indicators (*such as cultural richness, local prosperity, economic viability and environmental purity*) – the general impact of tourism is mostly negative. As the consequence of lack of *social equity*, the ksour is abandoned by some inhabitants seeing their material situation lower, compared with others (Sobczak, 2012). It leads first to the destruction of abandoned houses, and at a later stage, to the abandonment and destruction of the whole village.

Theoretically the best option would be to achieve the 3rd stage B of the model (ksour after the revitalization); however, such a solution remains more than difficult in regard to obstacles for revitalization. The obstacles are related both to physical- geographic factors and to socio-economic ones. Among the most important are:

- Lack of maintenance and protection against meteorological factors (rain) that results in a high degree of building destruction

- Dynamic of slope and fluvial erosion, Aeolian accumulation
- Lack of funds
- Dispersion of ksours' ownership
- Lack of technical documentation
- Local lack of material for the construction
- Lack of adequate infrastructure (electricity, water supply, sewage system, access road)
- Disappearance of knowledge about traditional methods of building – lowering number of *Maalmin* (local masters)
- Lack of education – low adaptation of local inhabitants to provide tourism services
- Differences in type of culture & religion between local inhabitants and tourists.

Also, as the UNESCO and UN reports stated, only a few of the thousands of ksours have a chance to be revitalized.

It is very hard and becomes rather theoretical to keep the ksours of the 1st stage. The economic development of Morocco, and construction of new asphalt roads in the whole country, made most of the villages accessible, also in the South. The majority of ksours in the researched area are at a distance of about 3-5 km from the main roads. The whole "Route of 1000 Kasbahs" is located along the main tourist trail. The position of each ksour in the proposed model is changing very rapidly. Most of the ksours are reachable by car, which makes them accessible for tourists.

Looking at future possibilities for ksour development, it seems that the only solution to keep the national heritage of the area would be to stop the transformation at the 2nd stage. To achieve this, a crucial task will be to achieve *social equity*. Such a mission should be realized by all actors involved in tourism and in cultural heritage protection.

Notes

- (1) Cultural richness, local prosperity, economic viability, visitor fulfilment, environmental purity social equity – are among the 12 aims of Sustainable Tourism (UNEP & WTO, 2005).

References

- Babbie, E.R.**, 1998: The practice of social research, Vol. 112. Belmont, CA: Wadsworth publishing company.
- Boumar, A. and Chahid, A.**, 2004: Le patrimoine architectural: un heritage millenaire (Architectural heritage : a Millenium Heritage – in French). In: Zainabi, A.T. editor, *Trésors et merveilles de la vallée du Drâa (Treasures and wonders of Drâa Valley)*, Rabat : Editions Marsams, pp. 43-54
- Bourgeois, L.**, 1988: Communal cooling: simulating the underground in a southern moroccan town. In: *Environmental Design: Journal of the Islamic Environmental Design Research Centre*, No. 1-2, pp. 48-51.
- Chabi, M. and Dahli, M.**, 2013: *Le patrimoine: Un référent pour le renouvellement urbain? Cas des ksour du M'Zab (The heritage: arguments for Urban renewal ? Ksour M'Zab case – in French)*, Tizi-Ouzou, Algérie, Département d'architecture, Faculté du génie de la construction, Université Mouloud Mammeri, (Tizi-Ouzou Algeria, Department of Architecture, Faculty of Constructions, Mouloud Mammeri University).
- Cuperly, P.**, 1987: La cité ibadite: urbanisme et vie sociale au XIe siècle d'après un document inédit: le Kitab Talkhîs Al-Qisma et le Kitab Usûl (The Ibadit city : Urban planing and social life in XIXth century, according to an unpublished document: le Kitab Talkhîs Al-Qisma et le Kitab Usûl – in French) . In : *Al-Arâ-dîn d'Abû l'Abbâs Ahmad. Awal*, Vol. 3, pp. 89-114.
- Dłużewska, A.**, 2003: Wpływ ewolucji środowiska przyrodniczego na warunki życia ludności autochtonicznej (Influence of the changes of natural environment on the life conditions of the autochthonous population – in Polish). In: Dłużewski, M. editor, *Współczesna ewolucja środowiska przyrodniczego regionu Coude du Dra (Maroko) i jej wpływ na warunki życia ludności (Contemporary evolution of natural environment of Draa Region (Morocco) and its impact on life conditions – in Polish)*, Warsaw: Dialog, pp.157-175.
- Dłużewska, A.**, 2009: *Společno-kulturowe dysfunkcje turystyczne w krajach Islamu (Socio-cultural tourism dysfunctions in Muslim countries – in Polish)*, Warsaw: Warsaw University Press.
- Dłużewska, A.**, 2011: Kasbahs and ksars of the Dra'a Valley region and the Dade's Valley (Morocco) as a tourist attractions. In: Czerny, M. and Quevado,

- J.T. editors, *Metropolitan areas in transition*, Warsaw: Warsaw University Press, pp. 280–291.
- Hammersley, M. and Atkinson, P.**, 2007: *Ethnography: Principles in practice*. Routledge.
- Ilahiane, H.**, 2001: The Break-Up of the Ksar: Changing Settlement Patterns and Environmental Management in Southern Morocco. In: *Africa Today, Africa and the Environment*, Indiana University Press. Vol. 48, No. 1, pp. 21–48.
- Mecca, S., Baglioni, E., Dipasquale, L. and Cham, K.R.**, 2012: *Cultural landscape of the Drâa Valley, Morocco*. Conference paper available at: https://www.researchgate.net/profile/Eliana_Baglioni/publication/281034779_CULTURAL_LANDSCAPE_OF_THE_DRA_VALLEY_MOROCCO/links/55d229c208ae0b8f3ef77cb3.pdf, DoA: 01 February 2016.
- Mekhermeche, A., Hatia, M., Kriker, A., and Abbani, S.**, 2013: Contribution à l'étude des Propriétés Thermiques des Briques en Terre (Contribution to Study of Thermal Properties of Terrestrial Bricks – in French). In: *Hawliya' al-'Ulūm wa-al-Tiknūlūjiya'*, Vol. 5, Issue 1, pp. 81–89.
- Nash, D.**, 1981: Tourism as an Anthropological Subject. In: *Current Anthropology*. Vol. 22, pp. 461–481.
- Nash, D.**, 2004: New wine in old bottles: an adjustment of priorities in the anthropological study of tourism. In: Phillipmore, J. and Godson, I. editors, *Qualitative research in Tourism: Ontologies, Epistemologies and Methodologies*, London: Routledge, pp. 170–184.
- Noguera Nieto, A., and Ribera de Frias, J.M.**, 2012: Transforming Moroccan adobe Kasbahs into a network of sustainable hotels (Conference paper). In: *Conference of the International Forum on Urbanism*, “6th Conference of the International Forum on Urbanism (IFoU): TOURBANISM, Barcelona, 25–27 January 2012”, Barcelona: IFoU, pp. 1–10, available at: http://upcommons.upc.edu/bitstream/handle/2099/12565/C_124_3.pdf, DoA: 15 March 2016.
- Pletsch, A.**, 1971: *Strukturwandlungen in der Oase Draa (Structural changes in the Oasis Draa –in German)*. Doctoral dissertation. Marburg.
- Prados, M.J.**, 2009: Conceptual and methodological framework of naturbanization. In: Prados M.J. editor, *Naturbanization. New Identities and Processes for Rural-Natural Areas*, CRC Press, Taylor & Francis Group, pp. 11–28.
- Rodríguez-Navarro, P., Fantini, P.F., and Piqueras, T.G.**, 2012: Integrated Methodology for Urban Survey and Representation of the Morocco's High Atlas Earth Architecture. In: Guidi, G., and Addison, A.C. editors, *18th International Conference on Virtual Systems in the Information Society*, Milan.
- Sebtia, M., Alkamaa, D., and Ammar, B.**, 2013: Assessment of the effect of modern transformation on the traditional settlement 'Ksar' of Ouargla in southern Algeria. In: *Frontiers of Architectural Research*, Vol. 2, pp. 322–337.
- Sobczak, K.**, 2012, *Migracje ludności południowego Maroka a zmiany środowiska przyrodniczego (Migrations of South Morocco population versus environmental transformations – in Polish)*, maszynopis rozprawy doktorskiej, Warszawa: WGiSR UW.
- Strauss, A. and Corbin, J.**, 1990: Basics of qualitative research, Vol. 15, Newbury Park CA: Sage.
- Corbin, J.M. and Strauss, A.**, 1990: Grounded theory research: Procedures, canons, and evaluative criteria. In: *Qualitative sociology*, Vol. 13, Issue 1, pp. 3–21.
- UN Strategy Plan “The Sahara of Cultures and Peoples” Towards a strategy for the sustainable development of tourism in the Sahara in the context of combating poverty.
- UNESCO Policies Paper, 2007: Sahara. The “power of culture” in the fight against poverty. Stakes and perspectives. No 21-1, pp. 1–71.
- UNESCO Project Action Sites WILĀYĀT of BÉCHAR, ADRAR, GHARDAĪA, Taghit, Beni Abbès, Timimoun, Guentour, Aghlad, El Atteuf: Towards a strategy for the sustainable development of tourism in the Sahara in the context of combating poverty “The Ksour Route, available at: <http://portal.unesco.org/culture/en/files/32120/11603831343fiche21f.pdf/fiche21f.pdf>, DoA: 15 April 2016.
- Zainabi, A.T.** editor, 2004: Trésors et merveilles de la vallée du Drâa (Treasures and wonders of Draa Valley – in French), Rabat, Editions Marsams.

