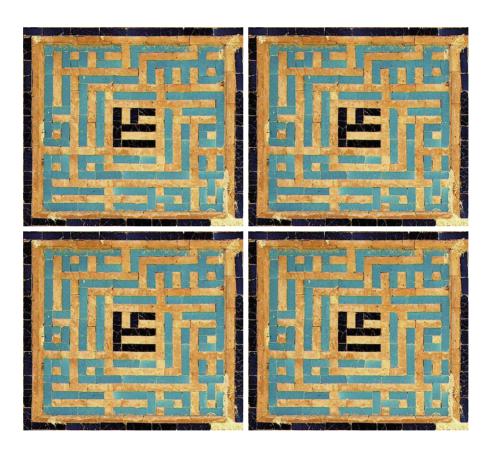
HERAT SUSTAINABLE URBAN MOBILITY PLAN

پلان حمل و نقل پایدار شهری هرات



HERAT SUSTAINABLE URBAN MOBILITY PLAN

پلان حمل و نقل پایدار شهری هرات





Direzione Generale per la Cooperazione allo Sviluppo (DGCS) del Ministero Italiano degli Affari Esteri



ERSITÀ
STUDI
STUDI
ENIZE

SAGAS - Dipartmento si Storia, Archeologia, Geografia, Arte e Spettacolo



LaGeS - Laboratorio di Geografia Sociale



MUDA Ministry of Urban Development Afghanistan







Florentine team:

Mirella Loda – Social Geography/Project coordinator Gaetano Di Benedetto – Urban Planning Manfred Hinz – Intercultural Studies Gabriella Maciocco – Urban Planning Massimo Preite – Urban Planning Mario Tartaglia – Transport planning

With the technical expertise of: Timor Qayoomi Feridun Sarwary

And with the contribution of: Francesco Boschi Ester Macrì

Participants in the workshops at LaGeS: Jami Aziz Ahmad, Ehrari Mohammad Aziz, Hamid Hamidullah, Qhader Abdul Baqi, Nadeem Ghulam Farooq

Participants in the Master in Urban Analysis and Management (2012-13): Mojibulrahman Jami, Pasoon Arefi, Mohammad Es-haq Aslami, Sayed Taha Sadiq, Sayed Baset Samimi

The project has been financed by the Directorate General for Development Cooperation of the Italian Ministry of Foreign Affairs and by the University of Florence

Translation and English Language editing by Helen Glave

www.polistampa.com

© 2015 Edizioni Polistampa Via Livorno, 8/32 - 50142 Firenze Tel. 055 737871 (15 linee) info@polistampa.com - www.leonardolibri.com

ISBN 978-88-596-1524-8

Contents

INTRODUCTION

11	1	THE COOPERATION PROCESS: PLANNING URBAN MOBILITY IN HERAT
12		1.1 Extent of knowledge of the local context
14		1.2 Participation opportunities
17		1.3. Cultural models: mobility and questions of gender

20 1.4 Acknowledgements

PREPARATIONS

23	2	DEVELOPING THE HERAT SUSTAINABLE URBAN MOBILITY PLAN: METHODOLOGY,
		RESOURCES AND DATA
24		2.1 Scope of the plan
24		2.2 The study area
30		2.3 Planning methodology
34		2.4 Surveys and data
34		2.4.1 Land Use Data
34		2.4.2 Roads Survey
34		2.4.3 Household Survey
35		2.4.4 Peak Hour Urban Sections Traffic Survey
35		2.4.5 Peak Hour Border Crossing Traffic Survey
35		2.4.6 Daily Border Crossing Traffic Survey
36		2.4.7 Public Transport Survey
36		2.4.8 Parking Survey
37		2.4.9 Freight Terminals Survey
37		2.4.10 Urban Facilities Survey
37		2.5 Herat traffic zoning
39	3	STRATEGIES, POLICIES AND ACTORS ON THE MOBILITY SCENE
39		3.1 Regulatory framework
42		3.2 Strategies and plans
44		3.3 Key actors and stakeholders
47	4	TERRITORIAL FACTORS AFFECTING MOBILITY
47		4.1 Urban fabric
50		4.2 Population, the mobility generator
52		4.3 Economy, the mobility engine

4.4 Facilities and other mobility attractors

DIAGNOSIS

59 59 63 67 74	5	TRANSPORTATION ASSETS IN A DEVELOPING CITY 5.1 Vehicles 5.2 Roads 5.3 Parking 5.4 The city airport
77 77 78 80 81 82 84	6	Overall Mobility Patterns in the city of Herat 6.1 Main mobility figures 6.2 Reasons for travelling 6.3 The modal split 6.4 Trip generation 6.5 Time characteristics of travel 6.6 Spatial distribution of mobility
87	7	INDIVIDUAL MOTORIZED MOBILITY: THE USE OF CARS AND MOTORBIKES FOR URBAN TRAVELLING
95	8	WALKING AND BIKING, THE ECO-FRIENDLY MODES FOR URBAN TRAVEL
101	9	COLLECTIVE TRANSPORT IN HERAT: NEEDS FOR A MAJOR IMPROVEMENT
113	10	FREIGHT MOBILITY IN HERAT: THE ROLE OF REGIONAL HUB
119 119 121 122 123 124 124 125	11	A SUMMARY OF CURRENT MOBILITY CONDITIONS IN HERAT 11.1 General traffic flow patterns 11.2 A city of pedestrians dreaming of cars 11.3 Gender differences in mobility behaviour 11.4 A road system to adapt to the essence of the city 11.5 Public transport with low appeal 11.6 The role of provincial capital and regional hub 11.7 Strengths, weaknesses, opportunities and threats
	PL	AN
131 131 133 136 138 138 140 142	12	THE CITY EVOLUTION: EXPECTED SCENARIOS 12.1 Urban fabric 12.2 Demography 12.3 Vehicle ownership 12.4 Ongoing and planned projects 12.4.1 Road projects 12.4.2 Railway projects 12.4.3 Projects for Herat airport development
143 145 147	13	MODELLING HERAT'S FUTURE MOBILITY 13.1 Residents' trip generation 13.2 Resident's daily time distribution

148 152 157		13.3 Residents' trip distribution13.4 Modal choice of residents13.5 External trips modelling
161 161 162 162 164	14	MOBILITY STRATEGIES IN THE HERAT URBAN AREA 14.1 The vision 14.2 Goal setting 14.3 Policies and strategic lines 14.4 Action package
167 167 168 170 170 171 172 173 175 178 179 180 183	15	Developing a regional transport hub 15.1.1 Foster the completion of the extra-urban bypasses (Action 1.1.1) 15.1.2 Foster the creation of a new logistics centre (Action 1.1.2) 15.1.3 Participate in planning of the new railway system (Action 1.1.3) 15.1.4 Support the city airport development (Action 1.1.4) 15.2 Enhancing urban transport infrastructures 15.2.1 Implementing roads hierarchy (Action 1.2.1) 15.2.2 Improving roads characteristics (Action 1.2.2) 15.2.3 Designing and building the new half-ring road (Action 1.2.3) 15.2.4 Designing and building new urban roads (Action 1.2.4) 15.2.5 Creating a parking system (Action 1.2.5) 15.2.6 Urban traffic in the Project Scenario
185 185 185 186 187 190 190	16	ENHANCING MOBILITY GOVERNANCE AND MANAGEMENT 16.1 Improving urban transport governance 16.1.1 Coordinating transport planning and management (Action 2.3.1) 16.1.2 Preparing detailed urban traffic management plans (Action 2.3.2) 16.1.3 Developing communication and actions for cultural change (Action 2.3.3) 16.2 Managing urban mobility 16.2.1 Improving traffic monitoring and control (Action 2.4.1) 16.2.2 Reorganizing the freight terminals network (Action 2.4.2)
195 195 197 199 200 202 204 205 205 207	17	FOSTERING SUSTAINABLE TRANSPORT MODES 17.1 Developing public transport 17.1.1 Creating a new Rapid Transit system (Action 3.5.1) 17.1.2 Setting up a new bus network (Action 3.5.2) 17.1.3 Solving the hub of Park-e Farhang (Action 3.5.3) 17.1.4 Reorganizing public transport terminals (Action 3.5.4) 17.2 Promoting bicycle use 17.2.1 Creating a bicycle network for systematic trips (Action 3.6.1) 17.2.2 Creating a bicycle network for sport and leisure (Action 3.6.2) 17.2.3 Adopt guidelines for characteristics and technical aspects of the bicycle network (Action 3.6.3) 17.3 Protecting pedestrian mobility 17.3.1 Creating Limited traffic zones (Action 3.7.1)
213 214		17.3.2 Creating pedestrian areas (Action 3.7.2) 17.3.3 Creating protected pedestrian paths (Action 3.7.3)

219	18 Supporting social inclusion, accessibility and environment
219	18.1 Supporting inclusion in transport
220	18.1.1 Support inclusion through pedestrian and bicycle mobility (Action 4.8.1)
220	18.1.2 Supporting inclusion through improvements to public transport (Action 4.8.2)
221	18.1.3 Analyse the accessibility of weak social groups (Action 4.8.3)
222	18.2 Promoting a green transport system
223	18.2.1 Creation of a traffic emissions inventory (Action 4.9.1)
223	18.2.2 Creation of an urban air quality monitoring network (Action 4.9.2)
224	18.3 Improving accessibility through integration and information
224	18.3.1 Setting up an integrated ticketing system for public transport and parking (Action
	4.10.1)
225	18.3.2 Setting up an integrated users information system (Action 4.10.2)
229	19 IMPLEMENTATION GUIDELINES FOR THE HERAT SUSTAINABLE URBAN MOBILITY PLAN
229	19.1 Adoption
230	19.2 Programming
230	19.2.1 Allocation of responsibilities and resources
231	19.2.2 Creation of an Action Plan
231	19.2.3 Preparation of a monitoring programme
233	19.3 Implementation
234	BIBLIOGRAPHY

INTRODUCTION

1. The cooperation process: planning urban mobility in Herat

The Herat Sustainable Urban Mobility Plan constitutes the first strategic sector plan at the disposition of the Herat administration to handle the dramatic expansion currently underway in the area.

The Herat Sustainable Urban Mobility Plan, together with the Development Plan for District 9 developed in parallel (cf. LaGeS, 2015), brings to an end a long period characterized by an almost total lack of technical urban planning apparatus. It marks an important phase in the overall scheme to restore efficient governance policies to Herat. This scheme consists of a series of cooperation projects supported by the Directorate General for Development Cooperation at the Italian Ministry of Foreign Affairs.

The cooperation initiatives were launched in 2010 as part of an agreement between the Universities of Florence and Herat, and organized by the LaGeS-Laboratory of Social Geography at the University of Florence¹. These initiatives have increasingly involved local Herat authorities with expertise in urban planning, i.e. the Ministry for Urban Development, the Department for the Urban Development of Herat and the Municipality of Herat, culminating in the preparation of the new strategic Masterplan (LaGeS, 2013)², in whose implementation the Herat Sustainable Urban Mobility Plan and the detailed plan for District 9 constitute the first step.

The actions put into effect through the cooperation projects have adopted the strategies outlined below.

- 1. Creation of an up-to-date information base of demographic and social dynamics in Herat. Because of the relatively safer conditions offered by Herat in comparison with other provinces of Afghanistan, the city, even in the Taleban era, underwent dramatic expansion which continued at an accelerated rate in the years to follow. When the Taleban regime fell, the country was deeply transformed but difficult to fathom. Apart from the problem of rebuilding public structures for managing the most diverse aspects of civil life (Loda and Hinz, 2008) there was an almost total lack of data. The creation of an up-to-date database relating to the principal demographic and social dynamics of the urban area was, therefore, singled taking place (cf. LaGeS, 2011).
- 2. Creation of training activities and transfer of knowledge in order to ensure that essential technical skills are locally available to manage ongoing transformation processes. The administrative structures responsible for managing the territory were fragmentary due to prolonged fighting and to the strategy, adopted in the Taleban period, of physically eliminating technical personnel (especially engineers)³. This resulted in the dangerous erosion of the human resources necessary not only for managing changes, but also for understanding the implications of these changes for the future of the city. Numerous training and knowledge transfer activities were dedicated to rebuilding this human capital in the period 2010-2015.
- 3. Creation of effective technical planning instruments. The only point of reference for administrative action to deal with the city's profound physical and organiza-

- 1 http://www.lages.eu
- The new strategic Masterplan was presented in the form of a proposal by the workgroup during a public meeting in Herat on 2 July 2013 and was officially adopted by the Ministry for Urban Development on 9 November 2014 (prot. no. 3510).
- There are numerous articles in the local and international press on the subject, for example:
 - http://www.bbc.co.uk/persian/afghanistan/2013/08/130 828 k02-irc-staff-herat
 - http://www.rescue.org/news/irc-shocked-and-saddened-killing-five-staff-members-afghanistan-16272
 - Public demonstrations were organized in protest, such as that of the Herati engineers in 2013, cf. http://www.bbc.co.uk/persian/afghanistan/2013/09/130902_userphoto_zs_road_workers_protest_herat

tional transformation was an old Masterplan drawn up at central level (by the Ministry for Urban Development of Kabul) in 1963. It therefore became a priority to create urban planning instruments based on a new understanding of the area, and to interpret current dynamics within an overall vision not only of available and potential resources, but also of critical issues. This aim was achieved in 2013 with the creation of the new strategic Masterplan of Herat.

Finally, in order to rebuild the administrative structures, we needed to transform our strategic vision into a definition of the instruments to be used. It was decided to complete this stage with the drawing up of an urban mobility plan and an initial district development plan as a pilot for the other districts of the urban area.

The strategies briefly outlined here are the result of a specific approach to cooperation.

The rationale behind development cooperation policies, as well as their mechanisms and outcomes, has been the subject of wide critical debate. In recent years numerous studies have shed light on the instrumental nature of projects based on an idea of cooperation as a non-opportunistic gift made in a humanitarian spirit. Such studies highlight instead the political importance of such projects in broad terms and, often, the power relations within which they function⁴.

As an alternative to the classical model, which tends to converge with a neo-liberal view of development focusing on technical aspects, we came up with an approach in which cooperation becomes a means to general social development, through the strengthening of institutions and grassroots democracy. In the new paradigm, importance is given to participative practices to facilitate a deeper understanding of the place, its internal dynamics and workings and finally, a process of virtuous change.

In this regard, cooperation can be qualified according to three focal points: extent of knowledge of the local context, the organization of participation opportunities, and the cultural models adopted as a benchmark for action. The following is a brief account of how these were tackled in our cooperation with the city of Herat.

1.1 EXTENT OF KNOWLEDGE OF THE LOCAL CONTEXT

Many projects pay only cursory attention to this aspect⁵, whereas in our case it constituted a significant part of the whole project.

Our approach was based both on geo-anthropological and socio-geographical perspectives. The former involved repeated and extended annual visits by the LaGeS team from 2003 onwards. In this way we were able to gain thorough and on-hands experience of the place itself and to weave a close network of relationships with people from different groups and social classes (based on income, gender, level of education, family history etc.).

Participant observation allowed us a first-hand, multifarious experience of local life, ranging from the routine of family life to community celebrations such as weddings, funerals, the rituals of Ramadan and the Nowruz celebrations. The wealth of observations, impressions and knowledge acquired – reported in a field diary and integrated with focus groups and open and semi-structured interviews – provided us with an essential point of reference, and useful benchmarks for all the projects.

⁵ Cf. Minoia (2015).

⁴ Reflections on the politicostrategic strengths of development cooperation are at the centre of post-development studies. For an overview of the debate on these themes see Minoia (2009 and 2015).

Photo 1.1, 1.2 Household Survey.





Our study of the local context was also broadened through a series of socio-geographical analyses, with the aim of producing quantitative data on critical aspects for which there previously existed no statistical information. The turmoil in Afghanistan from the end of the 1970s had in fact drastically reduced the margins of manoeuvre for research, leading to a grave lack of reliable data on fundamental aspects of the life of the country, starting with the demographic weight of the city and its districts⁶. Our aim was to contribute to fill these gaps in our knowledge, through specific surveys and research on the following aspects⁷.

Firstly, we conducted an analysis on land use in the Herat urban area through satellite image interpretation, thus producing a digital map of the city updated to 2011.

A large sample study was conducted on the conditions of family life (cf. Photo 1.1 and 1.2). The survey, carried out between October 2010 and February 2011, involved a random sample of 3,083 households, totalling 22,102 individuals (51.3% males, 48.7% females) in an area of around 56.5 km². During the survey, data were collected on the composition of the households, socio-economic conditions and living conditions, as well as on the availability of services and the degree of satisfaction with place of residence.

A survey was conducted on the size and conditions of property. This survey, carried out between October 2011 and January 2012, involved a sample of 3,663 buildings. The exact position of each building was calculated by GPS, a form was compiled on the main technical features, and photographs were taken. A form was also compiled for each building containing detailed information on the features of a dwelling considered to be representative of those in the building. All the data collected were organized in a georeferenced database.

A demographic development model was produced which allowed us to predict the population of the city and of each of its twelve districts until 2051.

As regards mobility, a systematic series of surveys was conducted, as illustrated in Section 2.

The creation of this knowledge base demanded continual hard work from all involved. The results, however, were extraordinary. Moreover, the knowledge base triggered an interesting mechanism of self-reflection among our local counterparts. The action was no longer thought of as a one-off event, but was seen instead as a facilitating factor in a virtuous development process involving the local community⁸.

- ⁶ The last census was carried out in 1979.
- For detailed information on methods and outcomes of the surveys cited hereafter see LaGeS (2013).
- For an idea of development as a complex process inherent to the local context see Holmén (2015); from this vision it follows that the role of cooperation is the facilitation of the process through a holistic approach (not extemporaneous) to the local system.

1.2 Participation opportunities

The second point to consider in qualifying the philosophy behind a cooperation project regards the intensity and type of task involving the local counterpart. Dependent upon this point are the opportunities for the counterpart to take ownership of the technical content of the project and above all, the knowhow behind it. This in turn affects the sustainability of the project, i.e. the ability of the local counterpart to be able to independently reproduce content and knowhow in the future.

It is on this point that classical models often fail to deliver⁹. The participatory approach is more promising in terms of activating sustainable projects in the mediumlong term. They allow the counterpart to be systematically involved in the action so that the achievement of technical goals is not just an objective in itself, but is also the means by which the principal goal, i.e. the strengthening of local institutions, is achieved.

Our experience of cooperation in Herat can certainly be termed participatory in that it aimed to increase and improve the active participation of our local counterparts. By these we mean both the institutions directly or indirectly involved in urban planning (technical staff of competent departments, university teachers and students) as well as a wider public of stakeholders and civil society.

This involvement took various forms. As regards urban planning personnel, there were three main ways, each with a different duration and degree of complexity. The most demanding was the actual training, which was achieved by facilitating the participation of 18 students (including 4 women) in the 2012 and 2013 editions of *Master in Urban Analysis and Management* at the University of Florence (cf. Photo 1.3., 1.4. 1.5)¹⁰. This training course allowed us to form a small group of supervisors with sufficient skills to tackle the roles assigned to them. Above all, however, it established a close and ongoing dialogue between participants and teachers and between the participants themselves with regard to the development of the Herat area. This contributed indirectly, on a trickle-down basis, to raised awareness of these themes among wider sections of the population. A significant consequence was the decision by the University of Herat to launch their first degree course in Urban Planning (second in the country) in 2014, and to include in the teaching staff numerous participants who had obtained their diploma in Florence.

The involvement of technical supervisors and university personnel was achieved through regular meetings during which the data emerging from the surveys were inter-

- ⁹ Criticism is directed above all at the custom of involving locals only in manual jobs such as collecting data, cf. Minoia (2015).
- For information see. http://www.lages.eu/eng/pag es/MasterUrbanAnalysisEngLuglio2014.pdf

Photo 1.3, 1.4 Master in Urban Analysis and Management at Florence University.













Photo 1.5 Master in Urban Analysis and Management at Florence University.

Photo 1.6, 1.7, 1.8 Workshop at LaGeS/Florence University.

preted, possible developments discussed and project proposals evaluated. This method, which was extremely effective from a training perspective, had already been experimented in the preparation of the Masterplan, but took on particular importance in the preparation of the Herat Sustainable Urban Mobility Plan (and of the pilot Development Plan for District 9). Three workshops were organized, involving a total of 16 people comprising technical supervisors and university personnel (cf. Photo 1.6, 1.7, 1.8).

Finally, a larger group of people (including a number of students from the Faculty of Engineering at the University of Herat) took an active part in the project, though in the less demanding role of data collection.

Here a separate mention should be made of the initiatives for stakeholders and civil society. Despite restrictions caused by the low level of security in the country, efforts were made to maximize the occasions for informing and listening to citizens, since it was recognized that their participation was an essential condition for the plans to be accepted and actually implemented. Increasing citizen participation in decision-making processes regarding the running of the city is also an objective of Afghan urban development policies (Popal, 2014, in particular chap. 3.5).

By revisiting methods previously used with positive results in the preparation of the Masterplan, whose main themes were discussed in a crowded public meeting¹¹, the aim was not only to take advantage of all the possibilities offered by the local media, press and TV of Herat, but also to create opportunities for public debate in their presence.

As regards the Herat Sustainable Urban Mobility Plan, a public meeting was organized to illustrate the contents at the halfway stage of its conception. The meet-

The event, 'Great Herat – Scenario 2030', was held at the Herat Conference Hall on 2 October 2012.







Photo 1.9, 1.10 Meeting with stakeholders; Herat Municipality Conference Hall 18 April 2015.

Photo 1.11 Conference "Firenze – Herat", University of Florence, 23 April 2015.

ing, coordinated by eng. Feridun Sarwary, was held on 18 April 2015 in the Herat Municipality Conference Hall (cf. Photo 1.9., 1.10)¹².

The Plan was also discussed at a conference held on 23 April 2015 at the University of Florence, attended by a numerous delegation from Herat, including representatives of all the main local institutions involved in the Plan (Municipality, HUDAD, University) (cf. Photo 1.11). The conference offered opportunities for discussion not only of technical aspects but, above all, on the basic choices which would inform the Plan, particularly in relation to the themes of environmental sustainability and social inclusion. From this point of view the interpersonal relationships triggered by the Florence-Herat cooperation tend to mitigate the pessimistic view expressed by some international development workers regarding the possibility to achieve sufficiently effective and transparent governance of urban development¹³.

¹² Following representatives took part in the meeting: the Herat Mayor, Districts Mayors, the Director of Herat National Environmental Protection Agency, the Deputy of Herat University Chancellor, the Director of Herat Transportation Department, a representative of Meli Bus Department, a representative of Private urban Transportation Union/Coaches, a representative of Taxi Union, a representative of Freight Transportation Union, the Director of Public Transportation Terminals, the Director of Herat Urban Development Department, Municipality District's Engineers, a representative of districts development Shura, a representative of Gozars Elders, a representative of Welayat Office, representa $tives \, of \, the \, Herat \, Department$ of Urban Development.

¹³ For a recent example cf. Leslie (2015).

- ¹⁴ In particular one thinks of the historiographic debate on the role of colonial powers and particularly Great Britain in destabilizing the Afghan monarchy (Ahmed-Ghosh, 2003; Barfield, 2010), and of the economic-political debate on the theme of modernization, development (or postdevelopment). For a summary see Sidaway (2007).
- A practical approach to this theme can be found in the plentiful grey literature on the condition of Afghan women produced by various international organizations and cooperation agencies. Of particular interest: Norwegian Agency (2011), Echavez (2012) and Ganesh (2013).
- ¹⁶ For example Chambers (2010).
- The first book specifically addressing this theme is Grieco et al. (1989).
- ¹⁸ In particular, mobility surveys focusing on journey-to-work travel proved to be inadequate when women's daily lives involved more diversified activities and journeys (Law, 1999).
- On the question of gender in Afghanistan and in Islamic countries in general, there is a great deal of literature, focusing largely on the diatribe between cultural relativism and universalism. For a summary of the two positions see respectively Abu Lughod (2002) and Moghadam (2002); for a clear summary see also Winter (2006).
- ²⁰ On the one hand, condemnation of the presumed oppression of women - typically symbolized, in Western eyes, by the burga - has supplied an argument for those seeking to garner approval for military intervention and to mount scenarios shaped by the clash between the West and Islam (Strick van Linschoten, Kühn, 2012, p. 171). On the other, recalling 'colonialist feminism' and fearing the neo-imperialist aim of Western power, the more conservative forces have constructed an effective alibi for perpetuating a dissymmetry of powers between genders which is unpopular with a not irrelevant part of the local population (Spivak, 1999, p. 284).

■ 1.3 Cultural models: mobility and questions of gender

The third focal point to be considered in rating the underlying philosophy of a cooperation project regards the cultural models used as a reference.

With regard to this point, the debate on cooperation becomes particularly heated because of its many historico-political¹⁴ and practical implications¹⁵, leading to harsh criticism of the classical forms of development cooperation.

One of the main objections to the traditional approach is its tendency to project Western models onto the area of the project, thus facilitating progressive cultural assimilation and denying equal dignity to the local cultural context (top down approach). Such critical voices¹⁶ take on a cultural otherness as a value in itself and as a prerequisite of the cooperative relationship, tending to foster procedures which give voice and form to such diversity (bottom up approach). However, the bottom-up approach does not entirely exclude external input, and may even benefit from it. Thus these two approaches, here ideal-typically contrasted, can complement each other. The shift of the pluralistic approach from ideal theory to practical application is not, however, an easy one, particularly in a case such as this one where the objective of the cooperative relationship is town planning, i.e. affecting the fabric of daily life as well as the system of relationships in the entire community.

In this case the outcomes of the project rely on the ability of collaborators to grasp the specifics of the local cultural and to avoid the naïve dichotomy of Western versus local model. It is in this way that they can best deal with a local system which is undergoing inevitable changes, and therefore also with its different component parts and the role that these parts play in the dynamics of transformation. It is also essential to acquire sufficient awareness of how these dynamics are projected spatially, and how taking action on the urban fabric and layout can change the functionality of the existing 'order', thus accelerating or slowing change.

As an example I would like to illustrate how the Herat Sustainable Urban Mobility Plan dealt with the delicate issue of gender.

Gender is not an issue which generally comes to the fore in planning mobility and traffic¹⁷. However, in recent years more attention has been paid to the question because of the differences – not only quantitative but also structural – between genders. In order to analyse these differences we need to reassess traditional research approaches¹⁸.

In Afghanistan this ground is particularly delicate both because of the extraordinary quantity of implications at the most diverse levels of social organization¹⁹, and because it has assumed a highly symbolic value in the geo-political battle on a global level and in local politics, polarizing the debate and the frequent recourse to instrumental arguments on both sides²⁰.

Aware of the importance of the subject, particularly in the eyes of the Western public but also of its extreme delicacy in our relationship with local interlocutors, it was decided not to tackle the issue abstractedly and on questions of principle but indirectly, beginning with practical problems arising during the planning process.

In order to build a knowledge base on the subject, we began by collecting data on mobility and distinguishing it by gender. The lack of this kind of data is, in fact, a serious obstacle to an understanding of mobility choices at an international level (Duchène, 2011, p. 9).

An analysis of the data immediately highlighted a wide quantitative variance

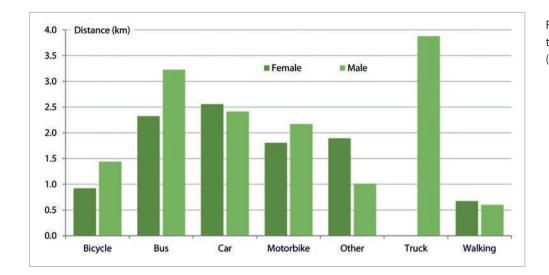


Fig. 1.1 Average distance travelled according to gender (source: author's processing)

and a structural difference between female and male mobility. The sample survey conducted on more than 22,000 people shows that the female population's demand for mobility is much lower than that of the male population and that it drastically decreases after school age (cf. Fig. 6.2), that on average women cover less ground (with the exception of journeys on foot, cf. Fig. 1.1), and that they figure almost exclusively as passengers.

Not unlike other underdeveloped countries (Riverson et al., 2005), this structure reflects a difference in the social roles of the sexes and a different degree of involvement in paid work. Nevertheless, in the case of Herat the variance in mobility between the sexes is wide enough to suggest grave implications in terms of reduced access to urban resources.

Given that, as amply demonstrated in the literature, reduced mobility and reduced use of transport are reflected in limited access to services (markedly education and health services) and greater social isolation²¹, the Herat data induced us to identify in this point one of the critical issues that needed to be tackled. Support for the female mobility demand became a necessary action for increasing social inclusion through the urban mobility system, which constitutes one of the strategic aims of the urban Mobility Plan (cf. Section 14 for organization of plan action and Section 18 for the actions proposed).

The definition of the action guidelines required, however, a thorough understanding of this phenomenon. An analysis of only quantitative data, while essential in delineating the presence of women in mobility flows, did not allow us to observe potential demand, i.e. the needs and motivations of women who do not participate in the process. To shed light on these aspects, it was decided to use data collected through qualitative survey techniques (participant observation and focus groups²²), and to use, as a point of reference and as a guideline for the Plan, the perception of the female population and the needs they expressed.

As can be expected, the reduced mobility of the female population, and in particular the drop in numbers for non-school-age groups is explained by the low numbers of women in the work force. This, as was amply demonstrated by the qualitative surveys, derives in turn from the fact that women identify themselves above all in relation to the household, in their role as mothers and wives²³.

²¹ Mobility is now considered the fourth condition of social integration, after accommodation, health and education (cf. Le Breton, 2005). Fieldwork has demonstrated that mobility is an essential factor in the development and maintenance of social relations: 'Access to social capital networks requires mobility, and transport is the agency by which social capital networks are supported. Mobility is essential to the sustainability of social networks' (Bradbury, 2006, p. 1.

² As regards, in general, participant observation, see the first part of this section. As regards other survey activities, the theme of mobility was dealt with in two focus groups, one which took place in Florence in February 2013 with the participants in the *Master in Urban Analysis and Management*, another in Herat during the summer of 2014 with a group of women aged between 15 and 38.

²³ This is what emerges from an empirical study conducted on a group of women who took part in microcredit programmes, cf. Kabeer et al (2011).

From the interviews, it nevertheless emerges that, at least in part, the reduced mobility is the consequence of objective difficulties in physically getting to work places. The compliance of women with their cultural and social context does not, in fact, exclude a growing demand for a better distribution of rights and responsibilities within the family, and especially the need to handle their own money. Many women, especially among the young population, express favourable views about the possibility of activities which could contribute to the household income, because this would allow them the possibility of independent resources for their own daily needs as well as those of their children. More educated women expressed clear aspirations towards professional fulfilment. The prospect of being able to conduct a paid professional activity is, however, subordinate in all cases to type of work, which must be compatible with the local value system. Thus they orient themselves mainly towards work in the fields of education or domestic economy (sewing or cooking), although there were also references to typical male domains such as law. It emerged that an important condition was that their journey to work should not expose them to the risks of being on the streets for extended lengths of time.

On the one hand, this confirms that women basically identify with a value system which focuses on the household. On the other, new expectations of greater economic independence and professional fulfilment are spreading, especially amongst young people. This picture, which corresponds to what has emerged from research conducted recently in other parts of the country (see in particular Echavez, 2012), suggests the existence of a considerable latent demand for mobility, which will probably grow with the probable further increase in the average level of education²⁴.

As regards the very young, ambitions for autonomy and professional fulfilment are often associated with the dangers and obstacles of the external environment that can come between them and the achievement of their ambitions. External conditions may impede the completion of studies, or attendance at a chosen university; they may also prevent women from taking advantage of work opportunities which are acceptable to them and their families.

As in many other countries in the world, a major issue is the danger of attacks or violence, with the added factor that the mixing of genders is particularly frowned upon in places like Afghanistan which is organized in a strictly homo-social way²⁵. Since it is impossible to rely on the availability of a regular chaperone (typically a mahram²⁶), geographical proximity, for the women of Herat, is a major condition today for accessing their place of study or work.

These results confirm, on the one hand, that support for female mobility is crucial for increasing social inclusion, while on the other hand, they demonstrate the relative narrow margins available for possible action. Considering the structural characteristics of female mobility in Herat (much reduced car autonomy, no use of bicycles, etc. see Sections 5 to 9), action, to be efficient, should concentrate on 1) pedestrian mobility 2) public transport.

While there do not seem to be particular problems regarding cultural models for the former, some reflection is required on public transport.

In the context described above and in the light of the needs expressed by the female population, guaranteeing conditions of safety and gender-segregated transport means (paradoxically, if considered in terms of the Western perspective) achieving a socially more inclusive mobility system which ensures a more equal availability of resources, especially for young women.

- Similarly to nearby Iran, the female population of Herat still enjoy very favourable conditions with regard to education, since they represent slightly less than 50% of all school-goers, compared to an average of 39% in Afghanistan in general (Loda, 2015).
- ²⁵ According to Afsaneh Najmamadi, cited in Kakar (2004, p. 6), the anthropological phrase 'homo-social' adequately expresses the separateness of male and female worlds in Afghanistan, i.e. the custom of men and women to work and socialize almost exclusively with the same gender.
- ²⁶ According to local customs, women must be accompanied outside the home by a male member of the household ('mahram'). In some periods of history especially under the Mujahideen and later the Department for the Promotion of Virtue and Prevention of Vice established by the Taleban regime this custom was enshrined in law, cf. Ahmed-Ghosh (2003, p. 7).

The practical form that these conditions might take depends on a series of technical evaluations and politico-cultural opportunities during detailed planning. The solutions in use in many cities around the world offer numerous examples²⁷, ranging from women-only compartments in commuter and metropolitan trains and trams²⁸, to the introduction of special taxi services and buses²⁹ for school and university, up to the creation of reserved parking spaces which are well-lit and near stairs and lifts leading to buildings³⁰.

Within this wide spectrum, the choice of adequate measures for the Herat context should be the result of an ad hoc commission to be set up at the time of implementing the Plan (cf. Section 19). In compliance with the principle of inclusion and our aim to increase the participation of women, the commission should also include an appropriate quota of women so that this section of the population has a voice in planning mobility³¹.

1.4 ACKNOWLEDGEMENTS

This plan is a joint project of the Florentine team. The texts in this book have been written by the following: Mirella Loda: sections 1, 16.1.3; 17.2; 17.3;18.1; Gaetano Di Benedetto: sections 15.2.1, 15.2.2, 15.2.3, 15.2.4, 15.2.5, 16.2.2, 17.1.3, 17.1.4; Mario Tartaglia, who also prepared all the maps: sections from 2 to 14, 15 (except 15.2.1, 15.2.2, 15.2.3, 15.2.4 and 15.2.5), 16 (except 16.1.3 and 16.2.2), 17.1 (except 17.1.3 and 17.1.4), 18 (except 18.1), 19.

Having reached the end of the journey we would like to thank, above all, the city of Herat, for the extraordinary welcome we received on all our visits. We would like to thank the institutions of Herat which so efficiently cooperated with our University, overcoming geographical distance with such ingenious solutions; we thank Abdul Rashid Mohtasib Zada, Feridun Sarwary and Abdul Baqi Qhader for the Department for Urban Development, Ghulam Ghous Nikbeen, Mohammad Aziz Ehrari and Hamidullah Hamid for the Municipality, Abdul Zahir Mohtasebzadah and Nadeem Ghulam Farooq for the University, Asiluddin Jami for Herat Local Government, Hamid Jalil and Ahmad Shah Hemat for the Ministry for Urban Development.

We thank the Rector of the University of Florence, Professor Alberto Tesi, Florentine University colleagues teaching in the Master's course, the collaborators of LaGeS, in particular Cristina Lo Presti; the office staff, in particular Daniela Orati, Sandra Guidi, Dario Abbate, Orlando Colella for accompanying us on our journey.

We would like to express our special thanks to the Italian Ministry of Foreign Affairs and especially the minister Alessandro Gaudiano, on behalf of *Direzione Generale per la Cooperazione allo Sviluppo* for believing in this undertaking and for generously supporting it. Finally, our thanks go to the operating technical unit for Afghanistan, to engineers Maurizio Di Calisto and Walter Zucconi, to dott. Filippo Alessi and architect Vittorio Roscio, for their invaluable advice and their precious groundwork in the field.

²⁷ For a detailed and up-to-date review see Peters (2013).

- The first example of this kind was introduced in the city of Mumbai in 1992; subsequently the model was adopted by other cities, including New Delhi, Chennai, Calcutta, Tokyo (from 2001), City of Mexico, Rio de Janeiro, Djakarta, Cairo and Kuala Lumpur. In 2005 a similar system was introduced on trains on the Minsk-Moscow line.
- ²⁹ The most famous case of this type was the ATENEA programme in the City of Mexico, which ensures dedicated lines on the main urban routes for the whole day.
- This kind of measure is widespread also in many European cities.
- on the need to give women a voice in the planning of mobility, especially in developing countries, see Peters (2001).