

# On The Move in Kabul City Region

## Transportation and mobility for effective city region functioning and prosperity

This discussion paper explores urban mobility in Afghan city regions. The paper presents primary data from a traffic survey of the Kabul city region, showing the enormous daily and weekly volume of traffic in and out of Kabul city, especially to the Northern Provinces. Based on this data the paper provides recommendations to improve urban mobility in the coming decade as part of the Urban National Priority Programme (U-NPP).

### Discussion Paper #6, Series Two, March 2016

#### City region mobility: more than inner-city roads

Paper One in this series explained the logic and extent of Afghan “city regions”, highlighting the enormous interlinkages of the major cities with their peri-urban areas.<sup>1</sup> Perhaps the clearest expression of the functional dynamics of Afghan city regions is their transportation and mobility: the daily, monthly and yearly movement of people, goods, and products, which clearly demonstrates the interlinkages of Afghan cities with their peri-urban areas.

No where is this more true than in the largest city region of Kabul. Anecdotal evidence suggests that people commute daily to the central city from surrounding provinces. Agricultural products are packed into trucks and sent to the central wholesale market. Rural dwellers come from peri-urban areas to the city to attend school or university, or access better healthcare. Urban dwellers go for picnics and recreation, visiting friends and family at weekends in the tranquil surrounding provinces.

But what is the nature and real volume of these exchanges? H.E. President Ghani and the National Unity Government (NUG) has a clear and laudable vision to ‘connect Kabul to the surrounding Provinces’<sup>2</sup> to stimulate economic development, however data upon how best to put this vision into reality is currently lacking. This paper aims to fill this gap. It is underpinned by the logic that the ultimate goal of urban transport is to enhance access to destinations, activities, goods and services, - at the Nahia, citywide and city-region scales<sup>3</sup>.

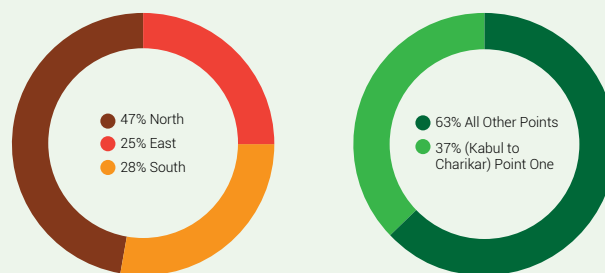
#### Beyond the city

From 28 February to 5 March 2016 a week-long survey of traffic flows in the Kabul City Region (KCR) was undertaken.<sup>4</sup> All traffic was counted at 11 points in the KCR (see figure on page 3), between 06:00am and 07:00pm, by a team of over 80 surveyors. In addition, two points were included in Jalalabad, in an effort to ascertain movement between Kabul, Jalalabad and Torkham. The resulting dataset is a reliable and the most up-to-date dataset of mobility in the region.<sup>5</sup> This paper presents the seven key findings from the survey.

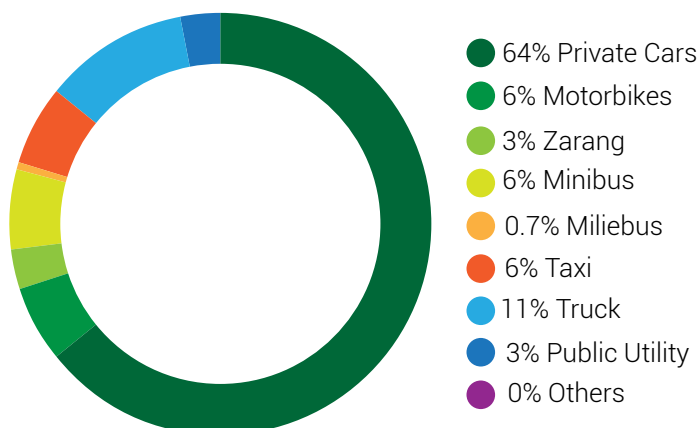
#### Finding 1: Mostly to/from the North on the road to Charikar

Nearly half (47%) of traffic in and out of Kabul City was to/from the North. The South and East accounted for roughly one-quarter each (28% and 25% respectively). The road out of Kabul (A76) to Charikar accounted for over one-third (37%) of all traffic in and out of Kabul city during this week.

*This suggests a dominant functional connection of Kabul to the northern provinces.*



Total share of traffic in and out of Kabul



#### Finding 2: Diverse modal split but private cars dominate

On average over two-thirds of vehicles were private cars (64%), followed by trucks (11%), and 6% each for taxi, minibus (e.g. Toyota Hiace) and motorbike.<sup>6</sup>

As the map opposite shows, the modal split across the various points is quite diverse. For example 80% of vehicles were private cars at Point 1, and only 46% at Point 4. Across all points, public transport with Milliebuses is currently of marginal importance.

*This quantifies the dominance of private cars as the primary daytime vehicle mode, whilst also showing some diversity of modes across the 13 points, reflecting their context and function.*

<sup>1</sup>GoIRA (2016) Breaking the Rural-Urban Divide. Discussion Paper #1, January 2016. GoIRA: Kabul

<sup>2</sup>GoIRA (2015) Realizing Self-Reliance. GoIRA: Nov 2015.

<sup>3</sup>UN-Habitat (2013) Planning and Design for Sustainable Urban Mobility: Global Report on Human Settlements 2013

As part of the Future of Afghan Cities Programme (FoAC), with lead technical assistance by

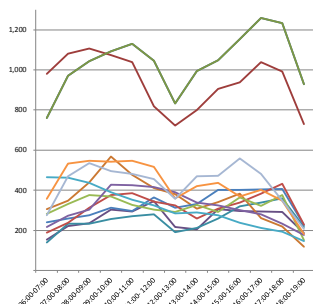
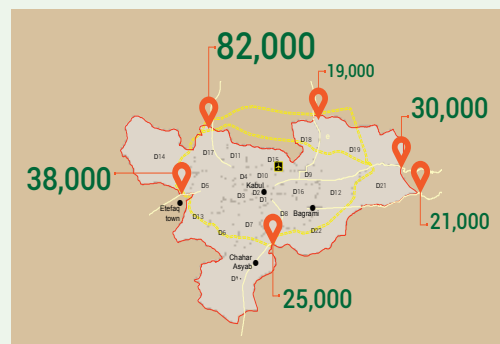
<sup>4</sup>As part of the Future of Afghan Cities Programme (FoAC), with lead technical assistance by UN-Habitat.

<sup>5</sup>The main limitations of this study are acknowledged: a) it was undertaken in winter thus traffic volumes are likely lower than in summer; b) ending the survey at 07:00 pm each day (for security reasons) which means not all traffic is counted so can be considered an under-representation of actual total traffic of the 24 hour, 7 day period; c) ideally the traffic counting should be combined with an Origin-Destination survey to understand where do people come from and go to, and why – to understand the mobility patterns and reasons in the metropolitan area.

## Finding 3: Considerable number of people moving in the city region area

Assuming an average of 3 people per car, 8 per minibus, and 20 per bus (Milliebus) the numbers of people moving into and out of Kabul on a daily basis are significant. Over 82,000 trips are made each day through Point 1, followed by almost 38,000 at Point 10 in Sharak Etifaq and 30,000 at Point 3, Pul-i-Charki.

Overall, this confirms the significant daily commuting patterns into and out of Kabul city, especially along three main routes.



## Finding 4: Daily commuting to/from peri-urban areas

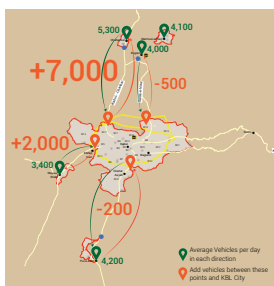
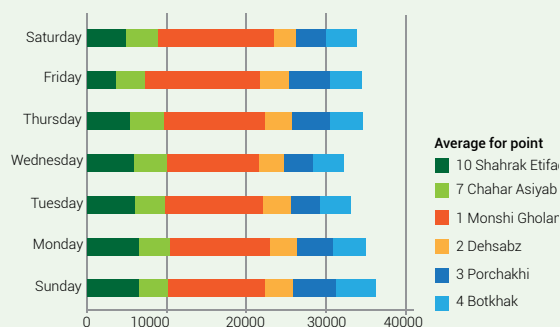
As expected, for key 'long distance' routes such as Kabul to Jalalabad traffic flows steadily drops off after 10am. Similarly, for all routes, traffic drops off from 06:00pm, likely due to impending sunset and poor security conditions confirming anecdotal evidence that passengers and drivers want to reach the destination before darkness. Also of note is the "lunch break lul" on peri-urban commuting routes such as Charikar (Point 1) and Maiden Shahr (point 10) with traffic volume lowering between 11:00am and 01:00pm).

This supports the finding regarding the daily peri-urban commuting on key routes north and south and therefore the daily rush hour traffic in the morning and evening.

## Finding 5: More complex patterns over the week

Weekly patterns for the 6 points into/out of Kabul show interesting findings. First, the Northern points have more traffic on Friday and Saturdays (20% more than weekday average), suggesting weekend 'get-aways'. Conversely, to the South, the weekdays are the busiest, especially on the South-West (Sharak Etifaq). To the East, the notable finding is that Sunday has noticeably higher traffic volume: 22% higher than the weekly daily average. Also interesting, Thursday and Friday have higher than average volumes. This Sunday/Thursday/Friday seems to confirm anecdotal evidence about 'weekly commuting' between the JAL and KBL city regions.

The three zones of Kabul city region have different peak volumes over the week: more traffic in weekends for the north, more in the weekdays for the south, and 'weekly commuting' for the east.



## Finding 6: Commuting within city region, not through traffic.

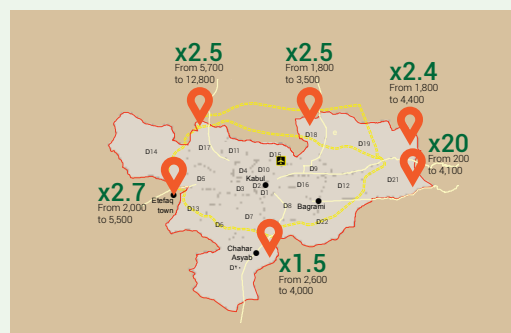
The findings show the considerable volume of traffic that is added to traffic flowing into Kabul City within the city region, as opposed to 'through traffic' travelling through the city region to other provinces. For example, on Charikar-Kabul road, an average of 5,300 vehicles per day passed from Point 12, in Charikar in the direction of Kabul, but 12,300 passed through KBL point. This suggests that roughly 7,000 vehicles per day were added from the intervening area. There are similar proportional increases for the South-West between Maiden Shahr and Sharak Etifaq, but less so on other roads.

This suggests the functional commuting within the city region to Kabul City, not high prevalence of 'through traffic'.

## Finding 7: Traffic seems to have doubled since 2009

Compared with JICA Masterplan study from 2009, the volume of traffic appears to have doubled. On one location, Point 4, Karta Nowe-botkhaak, it has increased 20 times, likely due to road improvement (A1) and fast urbanization of the area around this point. The modal split has also changed, with an increase in private vehicles, from 48% in 2009 to 64% in 2016, and notable decreases in trucks (from 19.6% to 11%) and taxis (from 13.9% to 6%).

This reaffirms the need to take city region transport seriously. If volumes of motorized traffic again double in the next 7 years it will further constrain effective urban mobility.

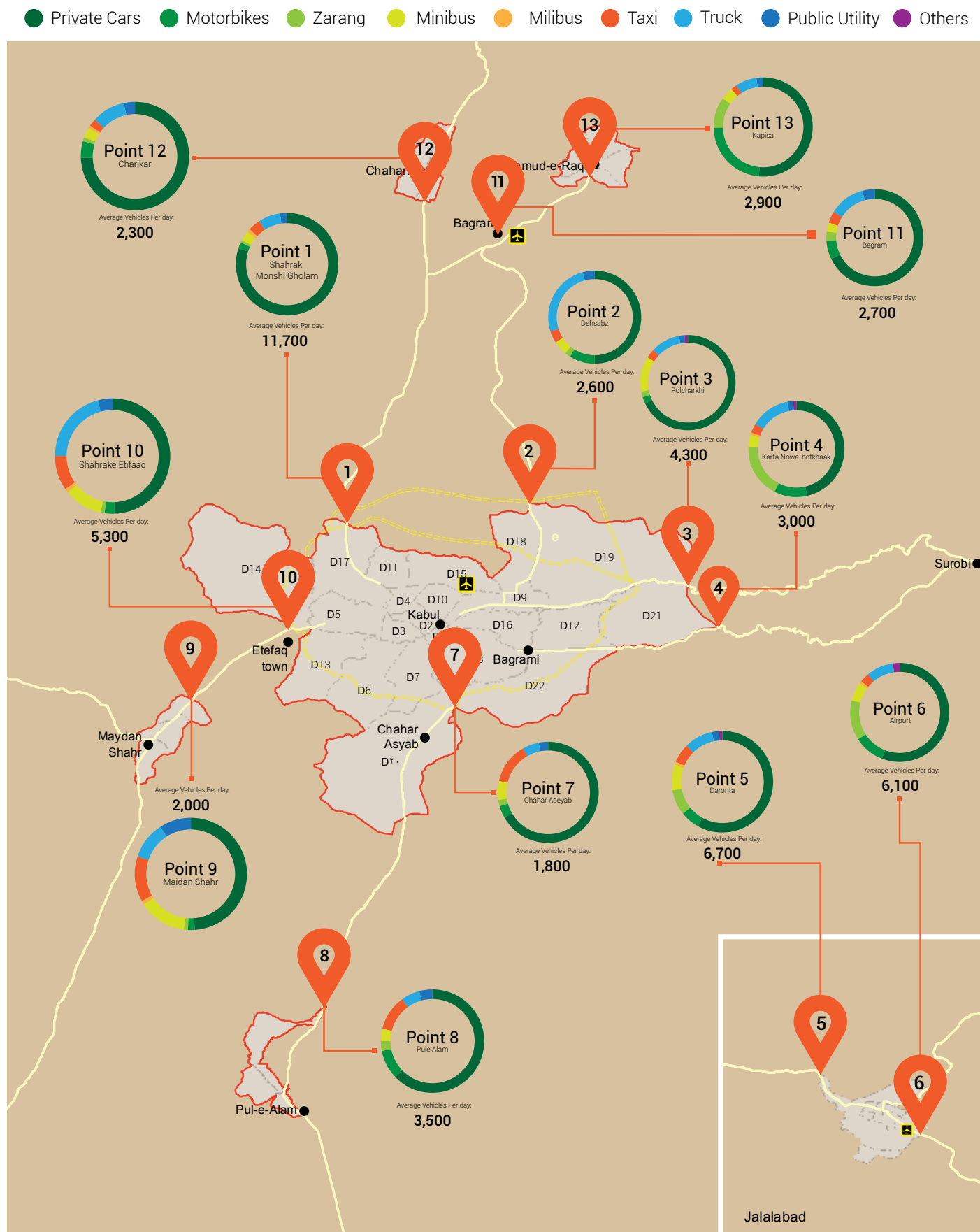


<sup>6</sup>Whilst noting that the figures for trucks is low given that a high number of trucks travel during the night between 8:00pm till 6:00am as Kabul traffic only allows transit and big trucks to enter and cross city during the night.

<sup>7</sup>This Tool can assist this task: UN-Habitat, ITDP and Clean Air Asia (2013) The Tool for the Rapid Assessment of Urban Mobility in Cities with Data Scarcity (TRAM)

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## Mapping movement in Kabul City Region



# On The Move in Kabul City Region

## Beyond the boundary: Kabul City Region

The findings reinforce the importance of the wider “Kabul City Region”, with enormous economic and social inter-linkages. This mirrors experience from other countries which shows how urban mobility is a key underpinning of effective and prosperous urban agglomerations. In particular, the findings show the considerable linkages and exchange to the north of Kabul along the Kabul-Charikar road. This area can be considered the ‘outer suburbs’ of Kabul city. It is likely to be under the greatest urbanisation pressure, and will continue to be so in the coming decade, and therefore is worthy of more detailed analysis, especially in terms of the Provincial and District Municipalities along this route (Charikar, Jebel Siraj, Shakadara and Qarabargh; see Paper #2). Mobility sensitive planning will be required to convert informal and unplanned corridor and ribbon development into a string of nodes with adequate public transport facilities.

## U-NPP

Moving forward, urban mobility should be explicitly included as a fundamental part of the Urban National Priority Programme (U-NPP) under Pillar Three: The Urban Economy and Infrastructure.

Key areas for U-NPP intervention include:

1) Strengthen public and shared transport options, both within cities as well as in the metropolitan areas. This does not require vast investments in complex public transport options. It does require that each city and metropolitan area has a transport and mobility strategy and plan that goes beyond a plan of paving roads. Priority should be given to mobility planning for more efficient accessibility of urban functions by reducing the need for

private motorized vehicles and improving the conditions for non-motorized and public transport.

2) Part of the strategy and plan should be targeted investment in public space improvements at key transit junctions. People are more likely to use shared transport if they can wait for it safely; out of the rain, dust and cold wind, and where shared transport vehicles regularly stop at well designed and managed terminals. Upgrading these junctions will also benefit private sector transport operators with a legitimate and functional area to conduct business.

3) Address the security-related bottlenecks on urban mobility. Overall, improving metropolitan-scale security may allow more flexible travel times, minimising the ‘rush’ to arrive at destinations before sunset which adds extra peak load. More importantly, the check posts add to congestion and require better planning and spatial arrangements.

4) Improve urban mobility for women, girls, youth, disabled people and the elderly. Around the world, public and shared transportation is a key element of economic and educational empowerment for women, girls and youth. Cities like Dubai, for example, have shown that there are ways to meet diverse needs and expand urban access for all that are not an optional ‘add on’ to urban mobility planning and provision.

5) Develop an urban goods transport policy to balance the need to ensuring efficiency of goods transport, whilst minimizing externalities such as congestion, the emission of pollutants, noise and accidents.<sup>7</sup>

## Ways forward

- Undertake planning with a focus on integrated land-use and transport planning in all city-regions and most urgently in the fast growing Kabul metropolis, including the proposed ring road ;
- Considerable investments are still required in urban transportation infrastructure in KCR. Municipal and Provincial authorities should ensure that such investments are made where they are most needed and where they can stimulate better use of metropolitan land for economic development;
- Strengthen the mandate of municipalities for traffic management and coordination with transport, security and traffic authorities for effective city management to reduce congestion;
- Use this type of data for better traffic management. Kabul does not have a traffic problem, it is largely a traffic management problem. For example, deploy extra officers on Sundays on the KBL-JAL road as there are an additional 20% traffic on this day on this road;
- Environment: urban transport is a significant source of greenhouse gas emissions and a cause of ill-health due to air and noise pollution. The traffic congestion created by unsustainable transportation systems is responsible for significant economic and



The Future of Afghan Cities (FoAC), is a government-led programme of MUDA, IDLG/GDMA, Kabul Municipality and ARAZI that focuses on the development of a Urban National Priority Programme (U-NPP) that will set Afghanistan’s urban priorities for the coming decade. To support this, FoAC will also undertake a detailed analysis of five city regions and at least 20 strategic district municipalities to provide key data and recommendations for policy and programme design.

