

# UN MILLENNIUM DEVELOPMENT GOALS AND TRANSPORT POLICIES: HOW RISK ASSESSMENT AND MEASURES FOR ROAD SAFETY COULD PLAY A REWARDING ROLE FOR REGIONS WITH ECONOMIES IN TRANSITION

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## ABSTRACT

In some countries geographical, environmental and morphological facts itself, even before the economic whereabouts present a challenge for infrastructure development and hence for the thriving of any subsequent transport policy and road safety strategy.

It is well known that some regions of the World experience a meteorological and hydrological variability having harsh and severe consequences, e.g. due to extreme swings in precipitation, long drought spans, harsh climate changes. All mentioned factors contribute to make cumbersome and expensive the deployment of a valuable road network, making also difficult the further cost control of infrastructure services and maintenance, the transport logistic and the related transport and safety policies. If the mentioned environmental factors do not hamper the feasibility, it can maybe contribute to make new endeavors of road Administrations riskier both in terms of investments and benefits.

Furthermore, cities and economic industrialized areas are scattered along vast regions where available mobility options, road connecting corridors, multimodal opportunities are underdeveloped or, more often than not, do not represent still a worthy chance.

In the Millennium Development Goal (MDG) Framework set by UN Institutions, the action of starting to think and act to eventually make infrastructure available, safe and effective would also mean the synergic improvement of other existing services and utilities (pipes, sewerage and electricity).

This way, cities, outskirts and rural areas can afford a coordinated program of economic development.

In the case of economies in transition it is of utter importance to identify a quick win context, such as the transport one could be, to stimulate growth- and development –chain mechanism

This paper is rooted on the experience of the main author (Luciana IORIO) in cooperating with UN institution and aims at providing a view and some references for action planned or to be undertaken in line with the UN plan for a better sustainable life through a sustainable transport network development.

*Keywords: Risk Management, Development, Road Safety*

## CONCEPT

Inter-Parliamentary Union and United Nations (UNISDR - International Strategy for Disaster Reduction) in September 2010 published a paper upon “Disaster Risk Reduction: An Instrument for Achieving the Millennium Development Goals” [1.]. The general secretary of UN opened the publication using the following statement: “*Reducing disaster risk and increasing resilience to natural hazards in different development sectors can have multiplier effects and accelerate achievement of the Millennium Development Goals*”. This paper is working on the subject, briefly analyzing the case of risk assessment and measures for road safety, defining a background and some thoughts on how they could play a rewarding role for regions with economies in transition.

### 1. BACKGROUND: YEARNING FOR ROADS AND OTHER INFRASTRUCTURES

Some ten years ago, in September 2000, building upon a decade of major conferences and summits organized by United Nations, world leaders came together at United Nations Headquarters in New York to adopt the United Nations Millennium Declaration, committing their nations to a new global partnership to reduce extreme poverty and setting out a series of time-bound targets - with a deadline of 2015 - that have become known as the “Millennium Development Goals” (MDG).

The UN Summit on the Millennium Development Goals (20-22 September 2010) concluded with the adoption of a global action plan to achieve the eight anti-poverty goals by their 2015 target date and the announcement of major new commitments for women's and children's health and other initiatives against poverty, hunger and disease.

*“The world possesses the resources and knowledge to ensure that even the poorest countries, and others held back by disease, geographic isolation or civil strife, can be empowered to achieve the MDGs.”<sup>1</sup>*

When the Millennium Declaration setting the development goals was signed, world leaders were undoubtedly driven by the common vision of opening a new era for developing countries.

The memorandum was not intended to merely scale up the major problems, or to sketch emergency measures, but rather it tried to exploit a new methodological approach to offer consistent operative models for durable and sustainable development.

Notwithstanding the omission of the transport issue from the priority list of MDG, it goes without doubt that the transport issue lies across and beneath all the Millennium actions. By way of an example, a recent UNICEF report<sup>2</sup> stated that the efforts to achieve the objectives are thwarted by the lack of infrastructure, of safer roads connecting dot-to-dot the distant villages and towns, of safe transport modes availability.

More specifically, sub-Saharan countries faces efforts to improve physical infrastructure and expand basic services to the poorest areas, struggling at the same time to keep pace with rapidly expanding urban populations. In addition, the fast expansion of the urban areas leave the rural settings left behind, toiling with even fewer economic and market opportunities and with more isolation.

Again an example (related to different kind of infrastructures): if we consider Indonesia, only 1.7% of people have access to network sewerage; only 16% have access to piped water at the household level. There are still about 50 million people without access to treated water, 90 million without electricity, and close to 200 million without direct access to a phone line or sewage network.<sup>3</sup>

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<sup>1</sup> UN Secretary General Ban Ki-moon, Foreword to the MDG report 2010.

<sup>2</sup> Achieving the MDG with equity, Number 9, September 2010.

<sup>3</sup> Sources: Various World Bank, ADB, and Asian regional press reports. Infrastructure policy in Asian developing countries, Peter McCawley, Crawford School of Economic and Government, Journal, Canberra, Australia, 2010.

A reasonable level of infrastructures, including a safe and efficient transport network is an absolute quintessential element to cope with the achievements of the objectives, being evident, by inference, that health, educational and social related objectives cannot be achieved if the transport issue is not dealt with. Only when the current dramatic striking lack of infrastructure networks and efficient mobility management system will be addressed in a winning approach, then sanitization, education, ante-natal, maternity, and child care , the whole societal improvement of the quality of life, will be made possible.

Sustainable and accessible development, which includes access and trade and availability of food resources, agriculture cycles management go together with mobility policies, infrastructure deployment and transport management. They all are conditional prerequisite for economic growth and social welfare which are the core ideals of the MDGs. Lack of infrastructure and inadequate mobility options impair the economic diversification and the productive system, lessening the number of development opportunities.

In terms of road policies and infrastructure, this means to look at projects involving important straight forward plan to invest and maximise any resource to take underdeveloped remote regions, land-locked areas, out from isolation and from socio economic constraints.

The dimension of the challenge to accomplish the MDG could sometimes appear off putting since the onset, given the economic and societal gap to be filled optimizing middle and long term plans and resources investments.

**Comparison of Asian infrastructure quality with the world, selected countries 2008**

<b>Region/country</b>	<b>Road</b>	<b>Rail</b>	<b>Ports</b>	<b>Air</b>	<b>Electric power</b>	<b>Overall</b>
<b>Country groupings</b>						
World	3,8	3,0	4,0	4,7	4,6	3,8
G7	5,7	5,4	5,4	5,8	6,4	5,7
Asia	3,7	3,6	3,9	4,6	4,1	3,8
<b>Asian regional averages</b>						
East Asia	4,7	4,8	4,8	5,1	5,3	4,6
Southeast Asia	4,2	3,2	4,3	5,1	4,7	4,2
Central Asia	3,1	3,6	3,2	4,2	3,6	3,5
South Asia	3,1	2,8	3,4	4,2	2,8	2,9
<b>Selected countries</b>						
Singapore	6,6	5,6	6,8	6,9	6,7	6,7
Hong Kong	6,4	6,2	6,6	6,7	6,7	6,3
Malaysia	5,7	5,0	5,7	6,0	5,8	5,6
Korea	5,8	5,8	5,2	5,9	6,2	5,6
Taipei, China	5,6	5,7	5,5	5,7	5,9	5,5
Thailand	5,0	3,1	4,4	5,8	5,5	4,8
Brunei Darussalam	5,1	n.a.	5,0	5,6	5,4	4,7
China	4,1	4,1	4,3	4,4	4,7	3,9
Azerbaijan	3,7	4,0	4,2	5,2	3,9	3,9
Kazakhstan	2,5	3,6	3,2	3,7	4,3	3,5
Georgia	3,5	3,5	3,9	4,2	4,4	3,2
Tajikistan	2,6	3,3	1,6	3,5	1,7	3,2
Pakistan	3,5	3,0	3,7	4,2	2,5	3,1
Cambodia	3,1	1,6	3,4	4,2	4,2	3,1
India	2,9	4,4	3,3	4,7	3,2	2,9
Philippines	2,8	1,8	3,2	4,1	4,2	2,9
Indonesia	2,5	2,8	3,0	4,4	3,9	2,8
Vietnam	2,6	2,4	2,8	3,9	3,2	2,7
Bangladesh	2,8	2,3	2,6	3,4	1,9	2,2
Nepal	1,9	1,3	2,9	3,5	1,7	1,9
Mongolia	1,4	2,1	2,4	2,7	2,9	1,7

**Scores:** 1 = underdeveloped; 7 = extensive and efficient by international standards.

Source: ADB and ADBI (2009).

Table 1 – Quality of infrastructures

Still, this framework highlights the urgency in a number of countries with economies in transition to consider how to make transport facilities projects sound and rewarding following rigorous economic, administrative and social parameters so to foster new investments by granting the ROI, and avoiding waste of financial assets and of international grants. In this frame, risk assessment of road project can play an interesting role, integrating of course the other financial and technical assessment taking to a feasible and effective infrastructure design and construction. The following table compare the quality of the infrastructure in selected countries giving a view of the yearning for roads and other infrastructures experienced by several Asian countries<sup>4</sup>.

## **2. THE IMPACT OF RISKS AND THE PROCESS OF RISK MANAGEMENT**

The impact of extreme events across the globe is enormous, continues to handicap the advancement of the struggling developing societies and threaten most industrialized countries alike<sup>5</sup>. People and societies are becoming more vulnerable to natural disasters due to their own activities that lead to increasing poverty, population growth and urban density, environmental degradation and climate change. Although natural and other risks threaten every society, in practice they are proportionally more disruptive in developing countries where they tend to harm, most of all, the poor. In fact poorest regions are naturally hampered from investing in protection measures and infrastructures. Disaster reduction measures are essential component of sustainable development policies and programs.

To this purpose not only the infrastructures but also the information systems have a major role to play in ensuring the envisaged integration. The wider circulation of relevant information and data has the potential to inform and involve worldwide local communities transforming individuals into actors of change in their own society.

*“The process of risk management does not aim to remove completely all risks from a project. Its objective is to develop an organized framework to assist decision makers to manage the risks, especially the critical ones, effectively and efficiently” (Perry and Haynes, 1985).*

Projects based on risk assessment evaluation could motivate policy makers, economic stakeholders and private investors to enter the network and build up capacities.

In the MDG framework, administrations are often called to deal with vast and sparsely populated territories, or geopolitical hindrances where any factual link connecting the dots is not only compromised by the poor basic infrastructure, or by the absence of them, but also by random events which could affect the outcome.

## **3. ROAD SAFETY: ASSESSMENT AND MEASURES**

The preventive policies should not be limited to risk assessment but have to focus on two different but interrelated criticalities, build and boost up a reliable transport capacity and then rule the factual mobility through consistent road safety policies.

In the set of growing road networks or in a fast urbanization, safe mobility policies have the opportunity to play a role which could really make the difference, bringing rewarding results or a poor delusional outcome not even partially paying-back the public investments devoted to road safety.

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<sup>4</sup> Sources: Various World Bank, ADB, and Asian regional press reports. Infrastructure policy in Asian developing countries, as from Peter McCawley, Crawford School of Economic and Government, Journal, Canberra, Australia, 2010.

<sup>5</sup> Background Paper to the World Summit on the Information Society (WSIS) of the International Strategy for Disaster Reduction (ISDR) is a strategic framework, adopted by United Nations Member States.

Road safety could be an important asset in term of societal development. In fact reliable, appropriate infrastructures and safe mobility imply lessening health services and post trauma care social costs which quite often could be a significant portion of the GDP of developing countries, when the number of fatalities is high or when the transport network does not allow a seamless risk-assessed journey, exposing both goods and person to unnecessary hazards and threats. The cost of traffic deaths and injuries in econometric terms, could also raise in the range of 1% of gross national product (GNP) in low-income countries (developed countries reach even higher rates<sup>6</sup>). In order to give an idea of the overall social cost we can consider that in Kenya, for example, more than 75% of road traffic casualties are among economically productive young adults<sup>7</sup>.

Setting road safety policies is always a very challenging effort, moreover in some difficult scenarios also the political instability, the inflation and the sudden economic downturn make difficult (if not impossible) to rely on a sufficient share of the State budget devoted to road safety purposes.

In developing countries, the rate of fatalities involving vulnerable road users, and specifically pedestrians, and among them children, is sadly high. This is also a consequence of the fact that, in developing countries, a high proportion of pedestrians, cyclists, motorcyclists and other vulnerable road users share a common road space with faster road users. For instance, according the World Bank<sup>8</sup>, in Sub-Saharan Africa, between 62 and 82 thousand lives were estimated to be lost in road crashes in 2000. Although all types of road users are at risk, the vulnerable road users such as pedestrians and two-wheeler users are assessed by them at a greater risk: combined they account for approximately 80% of all road crash fatalities.

In addition to mentioned issues, in many developing countries, the costs of prolonged medical care, the loss of the family breadwinner, the cost of a funeral, the loss of income due to disability can push families into poverty. In Mexico, the second commonest cause of children being orphaned is traffic crashes<sup>9</sup>.

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<sup>6</sup> Estimating global road fatalities, Goff Jacobs Amy Aeron-Thomas, Global Road Safety Partnership, 2000 - Social Cost of Road Traffic Crashes in India, Dinesh Mohan, Proceedings First Safe Community Conference on Cost of Injury, Viborg, Denmark, October 2002, pp 33-38.

<sup>7</sup> World report on road traffic injury prevention, World Bank, WHO, 2004.

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<http://web.worldbank.org/WBSITE/EXTERNAL/COUNTRIES/AFRICAEXT/EXTAFRREGTOPTRA/EXTAFRSUBSAHTRA/0,,contentMDK:20711827~pagePK:64168445~piPK:64168309~theSitePK:1513930,00.html>.

<sup>9</sup> World Report on Road Traffic Injury Prevention, WHO, 2004.



Figure 1 - Tanzanian roads bearing mixed traffic, unshouldered pedestrian crossing, markets and dwellings<sup>10</sup>

In rural settlements where paved roads or mobility facilities are not always available, mobility and even precarious means of transport are the only given perspective to live and to survive. Market stalls, water sources, primary schools, worship place, are scattered in wide areas, often crossed by main corridors or fast lanes connecting dot-to-dot.



Figure 2 - Young pedestrian extreme vulnerability on the rural African road<sup>11</sup>

In these circumstances, crossing the road, or walking along the carriageway is more than an hazardous journey for everyone. Adverse weather conditions (monsoon downpours or dazzling sun) can easily raise the vulnerability of road users, by affecting road surface quite dramatically. So far, safety policies and standards need to be promoted and

<sup>10</sup> <http://www.theworld.org/2010/09/20/tanzania-traffic-deaths/>.

<sup>11</sup> <http://www.roadsafe.com/magazine/2008summer/vipview.htm>.

measures deployed taking into consideration the existing conditions of, meaning that projects should be cast in the local mould, rather than using modelling structure from industrialized countries.

Nevertheless planners and engineers used not to incorporate measures for these vulnerable users. The problem is further aggravated by the poor vehicle maintenance or the condition and skill of the driver himself. Whilst all these factors need to be tackled, much can be done to improve the road design so that vulnerable road users can interact in a safe manner with the faster more motorized traffic. Moreover, by considering the development of road network according to safe and technically reliable standards, the boost up of the economy will follow by consequence. In some African developing areas where unsurfaced roads left places to road networks, this kind of policy has allowed the better marketing for the agricultural products and natural resources<sup>12</sup>, fostering by consequence further major investment on other transport infrastructures, and breaking the isolation of agricultural areas from the exchange hubs.

In this context, the World Bank and other aid agencies co-finance projects which show a clear policy devoted to safety parameters demand safety audits so to have road network protecting the the needs of all road users (e.g. checking for the adoption of measures on the design/construction such as: a wide flat area for slower moving traffic and pedestrians, segregated paths that track the road alignment and do not deviate too far from the road edge, etc.).

The achieving of MDG, by the way, involve facing different multifarious scenarios. For instance, fast growing and fast motorized economies, such as several developing countries in Asia and Latin America, have been facing a sharp increase of two wheel traffic, and by consequence a rise in casualties affecting or involving this category, well known to be characterized by high rates of accidents, injured and fatalities. The two-wheel is not only a basic fast mode of urban transportation, but also represent a fitting solution to wide range of the mobility criticalities. In this case, the educational call will become more effective through the enforcement and control joined with a training and information aiming at giving drivers a realistic perspective of risks consequent to the two-wheels driving.

Relevant on this specific point of the two-wheels driving we need to remark that developing countries experience a younger population, then a higher proportion of young and inexperienced drivers.

Moreover, if we consider the socio demographic two wheelers targets, we know that they are characterized mainly by the “productive belt” age group, young, workers, students, they all often drive fast and they need to move hectically around.

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<sup>12</sup> The Africa Report, Africa in 2011-Brighter spot in a changing world, Paris, 2010.





Figure 3 - Growing two wheeled traffic in industrializing Vietnam<sup>13</sup>

Of course a trustworthy and widespread action of enforcement is a good complimentary action to the education, forcing down the concept of the risk of losing the capability of driving, being banned for a time, as a side risk of being injured and risking to affect the social life and the role of bread winner or any earning capacity, could make the difference in cutting down hazardous behaviour and related casualties.

Targeted actions devoted to cast the risk perception in a different mould, bringing into the educational path extensive analysis of the felt and proved risk perception, anthropological risk analysis and evaluation and following risk response, hazard attitude, and related events judgment, post event behavior and self explanatory justification often embedded in a determinate cultural environment.

Road safety is an inherent element of any strategy aiming to accomplish the MDG, since there is no possibility of dealing with child mortality, health care, and education without granting a safer, reliable efficient mobility. Metaphorically, we could say that the accomplishment of the goals pass through “a road” linking the strategic plan to the visible operative action. The plan to eradicate the scourge of extreme poverty, the action for the prevention and care of pandemic diseases, the efforts to eliminate hunger and societal inequalities, the promotion of universal primary education, maternal health screening and care, all these targets will be achieved only through sound transport policies and safe mobility opportunities.

The key element of the MDG success is to bridge the needs with the potential, by breaking the isolation of critical areas and offering new opportunities to cluster resources, market and trade around a reliable transport hub. Building by the rule should be the objective – with full regard for proper infrastructure network, prescribing driving training, enforcement, and also setting regulation to protect vulnerable users. All these factors will offer a beneficial rewarding mobility and avoid casualties and serious injuries, which affect the social and economic asset of a country.<sup>14</sup>

<sup>13</sup> <http://www.guardian.co.uk/global-development/poverty-matters/2010/dec/23/vietnam-development-middle-income-trap>.

<sup>14</sup> Improving Global Road Safety, Setting Regional and National Road Traffic Casualty Reduction Targets, UNDA Account, UNECE, 2010.



#### 4. RISK PERCEPTION AND HUMAN BEHAVIOUR

The economic growth and by inference the achievement of the MDGs is not only weightily linked to the lack of proper transport infrastructure but also to other minor but crucial factors which if ignored bring to a careless planning, and not appropriate transport policies management, including strategies for safer mobility.

If policy makers and stakeholders undervalue the prominence which should be given to risk perception and its entwining interaction with the society and the cultural environment, the planning itself and any regulation or policy could result quite weak or ineffective.

Even though it is known that risk is indeed embedded in the same life path, and that risks of any sort could be spot in every situation, it is also well known that not all risks affect everyone or even better, not all risks are seen as such or acknowledged by everyone: according to personal, socio-historical background, the attention focuses selectively on specific risks, leaving others to be completely neglected and just considered as unavoidable facts of life. Quite often than not, these underestimated or neglected risks are exactly the ones which can suddenly become visible as a consequence of specific extreme events or media campaigns.

If we use this evaluation clue to prove that, in order to improve the quality of life and a safe profitable movement of goods and persons, a sound well targeted transport planning is utmost necessary, we could as well highlight that the perception of risk has two major consequences in the context of mobility management:

1. In the field of infrastructure strategies: Road Authorities and Operators need to make choices and investments that are able to differentiate between hazards which have a reasonably high probability and those which carry other risks. The perception of risk and the social reaction appraisal to major events can have an impact on the assessment process, bringing the overall action to unpredictable results in terms of assessment or provisions or development of risk-plans, foster investments and avoid waste of financial resources.
2. In the field of human behavior: This is all about the perception of risk by road users. Of course, without such insight it can be very easy for road users to underestimate the risks associated with driving – and poor insight inevitably tends to result in poor driving skills. But since risk perception and human behavior may inevitably vary as between developed and developing countries, it is imperative that we should take account of these differences in order to devise a coherent and meaningful approach to the development of road safety policy on a global scale.

Bearing all these factors, the daily action and life in a disadvantaged socio economic frame lead inevitably to uncertainty and precarious situational demeanour, and road-related risks are, quite often than not, are misperceived or undervalued.

If we thread in this challenge, our risk assessment to promote mobility will include low incomes societal background, poor infrastructure, the presence of mixed traffic, roads often carrying a wide range of users, from heavy good vehicles to bicycles and pedestrians without any separation, mixing up slow-moving and vulnerable non-motorized road users, as well as motorcycles, and fast-moving, motorized vehicles, and bearing at the same time rural settlements, or with market stalls along the main traffic junction.

If we apply the risk behavioural studies to the mobility policies which could curb the casualties, it is clear that the context of action is of fundamental importance.

Most critical psychological skills and several underlying psychological abilities are involved in road behaviour at the same time<sup>15</sup>. The ability in crossing a road and detecting the presence of traffic involves a range of basic processes including selective attention; visual search; resistance to distractibility; co-ordination of visual and auditory information; and the

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<sup>15</sup> Child development and the aims of road safety education: A review and Analysis - James A Thomson, Andrew Tolmie, Hugh C Foot, Brian McLaren, Road Safety Research Report No.1, Department of Transport, UK. 1996.

perception-judgement of crossing locations as safe or dangerous (in terms of the opportunities they afford for detecting approaching traffic); the coordinated capacity of holding several information, and the evaluation-perception of the risk and subsequent responsive action.

Psycho-behavioural studies about risk perception, grounded on the 'cultural approach', mainly developed by sociologists and anthropologists offer the key to set the right policy for mobility by acting locally, even if the safety values are globally felt and shared. Holistic as it could sound, risk perception could indeed differ as an effect of cultural and environmental influential motion.

Further results show that the psychometric paradigm can be applied in a developing country to characterize perceived risk, with relative success to assess the behavioural choice in mobility given a specific environment characterized by other precarious elements, as it was proved for Santiago<sup>16</sup>.

The influence of the risk perception and the perceived likelihood of events could also use as derivatives for policy modelling relevant epidemiological variables, while also taking into account the diverse structure of the population, as far as ethnic origin, religion, education, and cultural diversity<sup>17</sup>.

Kouabenan's (1998) research carried out on causal attributions of traffic accidents in The Ivory Coast (West Africa) proved the importance of culture in risk taking and accident prevention 553 people (18-55 yrs old), with different religions, occupations, and beliefs, were evaluated on their fatalism and their perceptions of risks and accidents.

The results indicated that fatalistic beliefs and mystical practices influenced the perception of accidents and consequently incited one to take more risks and neglect safety measures<sup>18</sup>.

Road safety training programs should be not handed down if not carefully customized on this analysis and on the emotional process really permeating the local culture and social network, so that both the educational motion (involving families and next of kin, religious references or local social actors) and the planned advocacy to raise the awareness of the potential risk and the likelihood of casualties would enter the spirit and mould the behavioural pattern. Risk judgement, likelihood of consequences of hazardous behaviour, physical long lasting impairment should be the key words of an effectual policy.

In this framework, it is of utmost importance for emerging economies to analyze and formulate policies which take into account the hazardous factors and the developments and reaction at social level.

The evaluation of the risky likelihood when setting some infrastructure deployments, or the identification of some strategies of governance and methodologies to curb setbacks and the use of the risk perception of the user's when planning safer mobility measures are expected to be a valuable tool to create a new culture of transport policies, by enhancing multi disciplinary actions, and by creating a innovative winning framework for the transport infrastructure and mobility.

Hereinafter some key points to be assessed into this kind of process:

- Perception of risks related to road management and road safety, with a main focus on the impact of different cultural environments.
- Use spear case studies and standardized set of best practices to be used when possible as examples of critical situations that could be improved.
- Pathways strategies that could support National Authorities in policy formulation for the field of risk management for road infrastructure towards the sustainable transport deployment targeted by Millennium Development Goals.

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<sup>16</sup> Risk Perception in a Developing Country: The Case of Chile, Nicoláas Bronfman and Luis A. Cifuentes, Risk Analysis review, 2003.

<sup>17</sup> Fatality risk assessment and modelling of drivers responsibility for causing traffic accidents in Dubai, Ibrahim M. Abdalla, Journal of Safety Research, UAE, 2002.

<sup>18</sup> Lennart Sjöberg, Bjørg-Elin Moen, Torbjørn Rundmo, Explaining Risk Perception. An evaluation of the psychometric paradigm in risk perception research, Rotunde, Norway, 2004.

- Promote the capacity of decision makers (National Authorities, Road Authorities and Operators) to use risk assessment processes when assuming decisions related to the governance of the mobility, including, building standardized requirements, drivers training, education communication strategies.

## 5. CONCLUSIONS

So, risk assessment and risk analysis can contribute to break the uncertainty boundaries of the efficacy of mobility policies in economies in transition, fostering budget allocation and choice in public investment which will undoubtedly strike the right balance between social infrastructure and support to the productive capacity, including the agricultural sector. Furthermore, rural areas need better roads and storage facilities to minimize the current prohibitively high transport costs and harvest wastage (Kubis, Executive Secretary UNECE)<sup>19</sup>.

By the improvement of social life fighting inequalities, building social economical benefit in a society open through a safe mobility to new opportunities will become a factor of growth and achievement itself.

The Achievement of Millennium Development Goals is essentially bridged to the creation of a safe and reliable way of making real the accessibility of markets, schools, goods, energy and water resources, health care and social services. Connecting through reliable dot-to-dot networks by building the capacity of moving safe, will indeed fight inequalities, promote the gender equal opportunities, and bring welfare available through a fast but more balanced growing economy.

We indeed want to state these momentum as the winning factors of the complete achievement of the objectives of the Millennium.

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