



# National Position Paper On Horizon 2020 Societal Challenges AFGHANISTAN

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## Acronyms

ADB	Asian Development Bank
ANDS	Afghanistan National Development Strategy
ANDMA	Afghanistan National Disaster Management Authority
ANSFs	Afghan National Security Forces
ANA	Afghanistan National Army
ANP	Afghanistan National Police
APTTA	Afghanistan Pakistan Trade and Transit Agreement
ANEPA	Afghanistan National Environment Protection Agency
BCM	Billion Cubic Meters
CSO	Central Statistics Organization
CAR	Central Asian Republics
CARD	Comprehensive Agriculture and Rural Development program
DFID	Department of International Development
DM	Disaster Management
DRR	Disaster Risk Reduction
ECOTA	Economic Cooperation Organization Trade Agreement
EU	European Union
GDP	Gross Domestic Product
GW	Gegawatt
IWMI	International Water Management Institute
ICAO	International Civil Aviation Organization
ISAF	International Security Assistance Force
Kwh	Kilowatt hour
LCD	Least Developed Country
MoLSAMD	Ministry of Social Affairs, Martyrs and Disables
MoE	Ministry of Education
MDGs	Millennium Development Goals
MAIL	Ministry of Agriculture, Irrigation and livestock
MW	Megawatt
MOI	Ministry of Interior
NCSA	National Capacity Needs Self-Assessment
NAPA	National Adoption Programme of Action
NDMP	National Disaster Management Plan
NRVA	National Risk and Vulnerability Assessment
NEPA	National Environment protection Agency
NATO	North Atlantic Treaty Organization
NSDP	National Skill Development Program
SNAP	Strategic National Action Plan
SAFTA	South Asia Free Trade Area
TVET	Technical and Vocational Education and Training
UN	United Nations
UNEP	United Nations Environment Program
UNDP	United Nations Development Program
UNAMA	United Nations Assistance Mission in Afghanistan
UNICEF	United Nations International Children's Emergency Fund
USGS	United States Geological Survey
USAID	United States Agency for International Development
WHO	World Health Organization

## **1. Executive Summary**

### **1.1. Background**

The people of Afghanistan face considerable challenges due to a long history of war and political instability. Many of the core institutions and infrastructure of the country is in the development stage and is slowly rebuilding its shape. Along with the greater achievements since 2001, the country still faces a high number of challenges which are critical for the country and need due attention to be addressed. This paper gives a clear identification of the societal challenges and the current position of each of the thematic fields in Afghanistan, identified under the Horizon 2020 societal challenges. The paper also describes the availability of national policies about each of the societal challenges; it also highlights the necessary recommendations in order to address these challenges.

The work carried out in this paper is the output of CASCADE project co-funded by the European Community's Programme for International Cooperation under the 7th Framework Programme for Research and Technological Development (2007-2013).

### **1.2. Methodology**

A combination of methodologies was adopted for this study. The first was a content analysis approach on available policies that address issues relevant to the 07 societal challenges. Secondly, 20 semi-structured interviews were carried out with experts in each of the societal challenges areas. Finally 01 focus group with thirteen (13) participants was conducted with experts who had the knowledge and experience in one or more areas of the societal challenges.

### 1.3. National priorities

*The following priorities are highlighted for each thematic challenge.*

#### **Health, demographic change and wellbeing**

- Development of integrated health policy based on the accurate data and real needs of people
- Transfer of knowledge and effective research work for diagnosis and prevention of diseases
- Restoration and upgrade of health care facilities, including expanded provision of services to rural areas
- Strengthened health information system through awareness amongst rural and urban population
- Training of health workers for sectors where shortage is acute (e.g. midwives, female nurses)
- Strengthened capacity of national authorities in emergency preparedness and response, mainly for recurrent natural disasters.

#### **Food security, sustainable agricultures, marine and maritime research and the bio-based economy**

- Increased agricultural production and productivity; improved physical infrastructure and market development; the allocation of higher budget; and international collaboration in the sector.
- Agricultural development should be driven by local consumer and market demand, adapting to Afghanistan's changing conditions, agro-ecological, social, and cultural diversity.
- Agricultural and animal husbandry interventions are to be so designed to minimize negative environmental impact and enhance the natural resource base
- Identification of new crops with a good income to prevent farmers from cultivating poppy crops
- Introduction of new technologies for sustainable agriculture
- Development of need based policies, build strategic marketing systems for agricultural products
- Develop irrigation system to bring more land under cultivation

#### **Clean and efficient energy**

- Exploitation of the huge potential of hydro power and fossil fuels for energy production through foreign investment
- Increased operating efficiency through rehabilitation of current old infrastructure and introduction of smart technologies
- Investments in transmission and distribution (use of smart grids) to reduce losses
- Increased institutional capacity (strengthen higher education institutions) and increase private sector involvement
- Moreover it is important to focus on efficient use of energy by developing specific awareness programs through media, community development councils and social networks.

## **Smart, green and integrated transport**

- Development of integrated transportation strategy to address the development of all modes of transportation
- Improve and upgrade air transport through foreign investment
- Development and expansion of environment friendly means of transport to minimize environmental impacts
- Development of the traffic management system and awareness of people about traffic regulations in major cities to reduce congestion and enhance better mobility
- Increased private sector involvement and enhanced coordination between line ministries on transport related issues.

## **Climate action, resource efficiency and raw materials**

- Engagement of experts with wider regional and international planning and development bodies to ensure that best practice climate assessments, adaptation approaches and low carbon development strategies developed elsewhere can be applied in Afghanistan.
- Establishment of metrological stations in the country which can further help in the development of early warning systems.
- Encouraging low carbon growth through use of new technologies.
- Integration of national and international environmental standards in development strategies.
- Encouraging environment friendly innovations in the new private sector especially industry which can bring the latest technology and a socially responsible business culture to the country.
- Stop deforestation, preventing the cutting of green and most valuable agricultural areas from residential and commercial construction and incorporating a green culture in new cities.

## **A changing world: inclusive, innovative and reflective societies**

- Reform and update the education system so a new generation of professionals can have political, social and economic leadership of the country without reliance on international assistance
- Strengthen relationships with foreign universities to exchange lecturers and students
- A major problem is the lack of research and evidence based policies, which should be given due priority
- Engage people in social, religious and development activities
- Engage women in community development councils to reflect their voices and needs.

## **Secure societies: protecting freedom and security of the country and its citizens**

- Accelerate peace talks and the peace building process with anti-government armed parties
- Developing regional security agreements to secure out-border threats
- Strengthen border management with high-tech protection tools and introducing E-governance
- Cooperation between government, private sectors and international community to build an effective proactive capacity in the country for disaster management
- Developing useful information and data analysis capacity with the equipped early warning systems to enable authorities to make pro-active plans

- A meaningful combat against corruption by growing the culture of responsibility, accountability and rule of law.
- Strengthen civil society through awareness and media, increase literacy and education levels in the whole society, increase employment opportunities.

#### **1.4. Opportunities of mutual interest for collaboration with the EU**

International cooperation and collaborations can be a very important input to address and tackle common global societal challenges. A variety of opportunities of mutual interest for collaboration exist in every thematic field of the horizon 2020 societal challenges, however the following are considered the most significant.

- Exchange of science and technology in the health sector is considered a key area of mutual collaboration. The transfer of knowledge will help south Asian countries to adopt new technologies used for diagnosis which can help in the early mitigation of diseases and by taking early steps through preventive measures.
- In the agriculture sector a key area of mutual collaboration is to hold extensive research activities on the introduction of good income crops for farmers which can help in the elimination of poppy cultivation, further minimizing the drug import to international markets. Another potential area for collaboration is in the conservation of natural resources and waste management. Collaboration and cooperation in post-harvest management is considered to be a key element for elimination of poverty and food insecurity.
- Extensive research activities on energy consumption and the efficient use of energy, exchange of science knowledge on the use of smart technologies used in the energy sector for improving efficiency and security, introducing environmentally friendly technologies for producing energy.
- Cooperation in the field of rail transport would enable Afghanistan to link to the EU through the Central Asian republics further enhancing trade opportunities, special collaborations in the field of traffic management for lowering congestion, noise and air pollution, and developing and expanding environmentally friendly means of transport to minimize environmental impacts.
- Research activities on the rapid increase of global warming and air pollution in the southern Asian region, encouraging low carbon growth through the use of new technologies, introducing cost-effective and innovative climate change adaptation methodologies, developing disaster management systems through early warning systems, the efficient use of material, waste management and recycling, encouraging environmentally friendly innovations in the new private sector.
- Cooperation in the education system reform through introducing modern teaching technologies, updating curricula and education system management, strengthen relationships with foreign universities to exchange lecturers and students, extensive studies on how to strengthen commercial connections to regional and global economies, research activities to gather accurate data on the labor market to provide research- and evidence-based policies, strengthen governance system
- Collaboration in the field of smart technologies for civil registration, to strengthen border management with high-tech protection tools and introducing E-governance, extensive research on the causes and consequences of city crime which could help in developing the policies for crime control, strengthen cyber security, cooperation in the field of electronic governance systems for increasing efficiency and strengthen civil society.





## **2. Introduction**

This national position paper is a brief summary of Afghanistan's policy and interests concerning the seven thematic societal challenges identified under the EU's Horizon 2020 research programme. The paper contains a clear statement of Afghanistan's position on the topic and clear reasoning, also suggesting priorities for action concerning the issues under consideration.



### 3. Context of this position paper

#### 3.1. CASCADE project

This national position paper is an output of the CASCADE project (Collaborative Action towards Societal Challenges through Awareness, Development, and Education) that aims to provide the foundation for a future International Cooperation Network programme targeting South Asian Countries, which will promote bi-regional coordination of Science & Technology cooperation.

The EU, whilst representing only 7% of the world’s population, is responsible for 24% of world expenditure on research, 32% of high impact publications and 32% of patent applications, making it a world leader in research and innovation. However, over the past few decades, new key players have emerged within the international landscape shifting the previously dominant position held by the EU towards emerging economies.

The EU recognise a need to strengthen internationalisation through strategic policy action. The need for linkages with Asian countries has been highlighted given the region’s rapidly growing research and innovation capacities and the urgency to address global challenges. South Asia in particular is home to more than 40% of the world’s absolute poor, but will contribute nearly 40% of the growth in the world’s working-age population in the coming decades.

CASCADE is an opportunity for raising awareness of the potential for EU-Southern Asia cooperation and stimulating regional and international participation. With the active contribution of South Asian countries, the endeavour will be to pave the way for more advanced, inclusive and innovative societies.

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#### 3.2. Horizon 2020

The project coincides with the launch of Horizon 2020, a Europe 2020 flagship initiative aimed at securing Europe’s global competitiveness. Running from 2014 to 2020 with a budget of just over €70 billion, the EU’s new programme for research and innovation is part of the drive to tackle global societal challenges, and create new growth and jobs. International cooperation in research and innovation is an essential element for meeting the objectives of Europe 2020. Recognising the global nature of producing and using knowledge, Horizon 2020 builds on the success of international cooperation in previous framework programmes and is fully open to participation from third countries.

The 18 month CASCADE project is led by the University of Salford from the UK but targets and has the participation of all seven South Asian countries specified in the call: Afghanistan, Bangladesh, Bhutan, Maldives, Nepal, Pakistan and Sri Lanka.

During the project, the team will:

1. Compile a regional position paper that identifies global challenges and research priorities
2. Map and develop an inventory of national and regional stakeholders related to global challenges
3. Raise awareness on research & innovation priorities for fostering cooperation and towards building mutual understanding on how to address common global societal challenges.

### **3.3. Methodology**

The work carried out as part of the development of this national paper was divided into two phases. Phase 1 consisted of a policy analysis and Phase 2 of the study was carried out using semi-structured interviews and focus groups. During phase 1, a content analysis approach was carried out to analyse available policies in each area of societal challenges to identify the current context, gaps and key informants. During the 2<sup>nd</sup> phase of the project, 20 semi-structured interviews were carried out with experts in each area of social challenges. In addition, one focus group was conducted with thirteen (13) experts from all 07 areas of societal challenges. All the interviews and focus group conducted were recorded and analysed to come up with the overall findings of the project. The experts chosen for the aforementioned approaches were from the relevant government organizations, ministries, provincial directorates concerning the topic, academia and nongovernmental organizations. To maintain consistency with the approaches adopted, guidelines and templates were used for all these approaches, i.e. policy analysis guidelines/template, interview guidelines/template and focus group guidelines/template.

## 4. Thematic societal challenges

### 4.1 Health, Demographic Change and Wellbeing

#### Background

Afghanistan's health indicators are near the bottom of international indices and are far lower in terms of health conditions than any other country in the region, due to three decades of war and internal conflict.

- In 2003, maternal mortality rate was 1600/100000 the highest in the world, but in 2010 it fell to 327/100000. Live births are almost at the target for 2016. Similarly, under five years of age mortality rates declined from 260 to 97 per 1,000 and live births and infant mortality rates have fallen from 165 to 77 per 1,000 births.<sup>1</sup>
- Malaria, acute respiratory infectious diseases, diarrhoea, and malnutrition are the major causes of morbidity and mortality whereas HIV/AIDS (Human Immunodeficiency Virus Infection/ Acquired Immune Deficiency Syndrome) and NCDs (Non Communicable Diseases) are emerging diseases. Communicable diseases are a high burden and eradication of polio is still a regional problem<sup>2</sup>. Life expectancy was 44 in 2003 and 49 in 2014. Mental health still remains an important problem, It is estimated that over two million Afghans suffer from mental health problems due to the long periods of conflict in Afghanistan. One million people are drug addicts who need immediate health care. 40% of them are returned refugees<sup>3</sup>.
- The health sector mainly depends on foreign assistance. The government spent 9.6% of GDP Gross Domestic Product in 2009-2013, while funding from donors rose from 1.8 million in 2002 to 169 million in 2012<sup>4</sup>.
- The health, wellbeing and demographic change are among the main challenges in the country. These issues have a direct impact on society and indirectly affect the productivity and economy of the country.

#### Current position

- The main problems and issues in the health sector challenging the country are: a lack of security, insufficient skilled human resources, poor access to remote areas, donor dependency, weak implementation of national standards / policies and strategies, high mother and child mortality, political instability, increase of population, drug addiction, poor governance in health facilities at the top level, low rates of literacy, a lack of capacity throughout all levels of health organizations, a lack of modern healthcare facilities in hospitals and rural areas, poor public awareness about health issues, extreme poverty, air pollution in cities, poor utilization of preventive measures, import of lower quality medicines, nonexistence of pharmaceutical industries, poor access to potable water and sanitation systems, and use of traditional methods for health care in rural areas.
- The lack of security causes human casualty and also prevents the health service providers from having free access to areas for implementation of projects to provide health services. The poor human resources affect the quality of services, especially wherever female staff are required. Most of the health services are provided by donors, the government budget for health is very low and this strategy is dependent (at 80-90 percent) on foreign aid.
- Extreme poverty indirectly affects health since families are not able to spend on healthcare and poverty itself causes malnutrition as families cannot afford adequate food.

<sup>1</sup> CSO Central statistics Organization yearbook 2010-2012. Central statistics organization. Kabul, Afghanistan.

<sup>2</sup> Country cooperation strategy for Afghanistan 2013, World Health Organization.

<sup>3</sup> UNODC United Nation Organization for Drug Control country program in Afghanistan 2012-2014

<sup>4</sup> Dalil, Sorya *et al.* 2014. Aid effectiveness in rebuilding the Afghanistan health system *J, Global health*. S,117 available on <http://dx.doi.org/10.1080/17441692.2014.918162>

- There is poor utilization of preventive measures in healthcare. The government provides some measures but the main problem is with the utilization of services. The health providers' personal behaviour and skills are also a problem; commonly the health care provider aims to use their knowledge as a tool for their personal business gain, which causes a loss of trust between health providers and health seekers. Therefore, the patients go out of the country for health issues.
- In the main, these problems affect society in terms of life expectancy, loss of productivity due to human power loss which affects the economy and causes loss of resources and jobs. There is a low literacy rate, low GDP, and low commitment from higher authorities, which compound the problems affecting society, especially with women and children because they are in need of service. The most affected areas are the remote areas in the central and southern region of the country because they have little access to services and health awareness is poor.

### **Actions taken by the Government**

Many up-to-date health related policies, standards and strategies have been developed and are getting revised accordingly to address the issues raised in the National Strategy on Healthcare Financing & Sustainability (2009-2013) the HFP (Health Financing Policy) 2012 – 2020, the ANHP (Afghanistan National Healthcare Policy) the HNSS (Health and Nutrition Sector Strategy) 2007 / 08 – 2012 / 13, the Strategy on the Prevention and Control of Vitamin and Mineral Deficiencies in Afghanistan 2009–2013, the Comprehensive Multi-Year Plan for Immunization Program 2011-2015 and strategic plans for the Ministry of Public Health 2011-2015. However, the implementation phase in many of these policies seems to be critical due to a lack of awareness and lack of stakeholders' engagement during the process. In addition, security problems, corruption, dependency on foreign assistance, lack of coordination/collaboration amongst different sectors in the provision/promotion of healthcare, low staff knowledge, low support of government and unsustainability cause gaps in the implementation of the policies.

Many actions have been taken by the government and international parties, which are worthy of note:

- The government has focused on primary health services
- Mother and child deaths have decreased due to policy development.
- Strategies and policies have been developed by policy makers
- Chances are given for the donors and donors are involved in policies.
- Provided multi diminution opportunities.
- Problems are prioritized.
- Health services are free of charge in public hospitals.
- The private sector is given opportunities to be involved in healthcare activities.
- Health indicators have improved.

### **Recommendations**

- Donor coordination with the government at local and central level
- Capacity building of health workers
- Equipping of hospitals and health centres with modern health facilities with skilled, trained staff
- Establishment of research centres and standardization of medical colleges and faculties
- Inter-ministerial coordination - MoPH (Ministry of Public Health), MOHE (Ministry of Higher Education) and implementation of health policies
- Stop import of low quality drugs and establish standard pharmaceutical industries.
- Development of new policies for emerging health challenges and where policy is lacking

## 4.2 Food Security, Sustainable Agriculture, Marine and Maritime Research and the Bio-based Economy

### Background

Afghanistan has an agrarian society and is one of the poorest countries in the world. Furthermore, three and a half decades of war and drought have depressed agricultural activities and added to the degradation of the natural resource base. More than 85% of the population is dependent on agriculture and its related activities for their livelihood. The agriculture sector contributes 27 percent to the country's Gross Domestic Production (GDP). About 12% of the country's total land is arable; 3% is under forest cover; 46% is permanent pastureland, and the remaining 39% is mountainous or used for habitation. Approximately 38 percent of all households in Afghanistan (which constitutes 1.4 million households) own some irrigated farm land. The majority of the land owners (58 percent) have a farm the size of less than 4 jeribs (0.8 hectares) whereas the median and mean irrigated land size is 3 and 6 jeribs (0.6 and 1.2 hectares) respectively.<sup>5</sup>

Years of conflict and subsequent neglect have left most of the country's rural infrastructure in a bad state, with a degraded environment, and has forced most of the rural population into subsistence agriculture. The people are often in a state of extreme poverty and their food supply is totally insecure. The proportion of the food-insecure population increased from 28 percent in 2007-08 to 34 percent in 2011-12.<sup>6</sup>

As Afghanistan is landlocked, mountainous and under developed, marine and maritime based research and the bio-based economy aspects are not the critical issues for the country. So, the Government has not developed any policy or strategy in relation to this issue.

### Current position

The country cannot produce enough food to meet its needs. Moreover, farmers in insecure regions increasingly rely on opium as a cash crop to support their families. Most farmers are engaged in subsistence or near subsistence farming systems, often on plots of less than 2 jeribs (0.4 hectares). This condition results in risky livelihoods often combined with huge amounts of debt for a large number of farming families. The Government of Afghanistan is not capable of providing quality agriculture inputs (seeds, fertilizers, insecticides, and pesticides), suitable machineries and demand driven agricultural extension services to the farming communities. The main causes for these issues are: the lack of basic agriculture infrastructure, poor quality agriculture inputs, lack of quality hands-on capacity building programs, weak research institutions, the poor link between research and extension, the weak tie between extension facilitators and farmers, and the existence of illicit poppy cultivation in the country.

Food insecurity is one of the critical issues. It mostly affects the poor and vulnerable people in the country. Overall, an estimated 7.6 million people or 30.1 percent of the population are very severely insecure in terms of food. In general, the highest proportion of food insecure people is reported in the North-eastern region (46 percent), followed by the central highland region (39 percent)<sup>7</sup>. Limited coordination between the Government and the international community has impeded progress, especially in the area of food security. Government funds are channeled through highly centralized ministries for many national programs. Furthermore, the donor-funded projects are being conducted on an ad hoc basis with little involvement from the Government.

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<sup>5</sup> Agriculture & Rural Development Sector Strategy, 2008-13, Afghanistan National Development Strategy

<sup>6</sup> Afghanistan Living Conditions Survey, National risk and vulnerability assessment, 2011-2012, Central Statistics Organization (CSO), Government of the Islamic Republic of Afghanistan

<sup>7</sup> Afghanistan Living Conditions Survey, National risk and vulnerability assessment, 2011-2012, Central Statistics Organization (CSO), Government of the Islamic Republic of Afghanistan

The United Nations Environmental Assessment report (UNEP, 2003) post-conflict environmental assessment indicates that in the eastern region (where most of the vegetation occurs) 50 to 80 percent of the wood lands have been deforested between 1977 to 2002.<sup>8</sup>

As the dominant factor in the economy is food security, livelihoods, sustainable natural resources and national security, so agriculture will be a critical factor in the future of Afghanistan.

### **Actions taken by the Government**

Despite this gloomy picture, measurable progress has been achieved since 2003 in improving rural livelihoods.

- The core policies and strategies (2005 - Agriculture Master Plan, 2006 - Interim ANDS, 2007 - MAIL Ministry Strategy, Jan 2008 - ARD Sector Strategy, Mar 2008 - ANDS, 2009 - NADF) are developments over the last five years to substantially reduce poverty, improve the lives of the Afghan people, and create the foundation for a secure and stable country.
- In October 2008, the ministry of agriculture and livestock developed the four key programs namely: 1 - Natural Resource Management, 2 - Agriculture Production and Productivity, 3 - Economic Regeneration, 4 - Program Support and Change Management.
- The CARD represents the Government's approach to providing diversified income sources, through income support, direct provision of assets, skills training and market opportunities and is crucial to providing alternatives to producing narcotics.
- Substantial and sustained efforts are underway to restore Afghanistan's livestock herds, rehabilitate orchards, restore grazing lands, increase cereal production, restore and develop new markets for rural products and increase value-added agriculture-based rural industries.
- Afghanistan's seed sector has been reestablished with the assistance of the international community. Projects include the renovation of agriculture research stations and seed testing laboratories and seed enterprise development.
- Afghanistan National Seed Organization was established to provide improved wheat seed to the farming community. Capacity building projects are also in process which is more focused on agricultural extension and research. MAIL conducts research trails on cereals, industrial crops, leguminous crops, vegetables, fruits fodder and experiments in the fields of agronomy, irrigation, soil and crops, pests and diseases.

### **Recommendations**

Considering all the above challenges, the specific recommendations must be given priority for ensuring food security and sustainable agriculture in the country. They are as follows:

- Increase agricultural production and productivity; improving physical infrastructure and market development; the allocation of more budget; and international collaboration in the sector
- For ensuring food security and enabling economic regeneration, sustainable and efficient management of the natural resource base is the foundation for increasing agricultural production and productivity.
- Efficiency and sustainability in the Agriculture sector require that agricultural development should be driven by local consumer and market demand, adapting to Afghanistan's changing conditions and agro-ecological, social, and cultural diversity.
- To enhance environmental sustainability, all agricultural and animal husbandry interventions are to be so designed to minimize negative environmental impact and enhance the natural resource base.

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<sup>8</sup> Post conflict environmental assessment, 2003, ISBN 92-1-158617-8, United Nations Environment Programme (UNEP).



### 4.3 Secure, Clean and Efficient Energy

#### Background

According to ANDS energy, an abundant and cost effective supply of energy is a very important input in the sustainable development of Afghanistan. Afghanistan is located between the oil and natural gas reserves of the Caspian Basin and the Indian Ocean, which has long been mentioned as a potential energy route. This includes power transmission via high tension lines or eventually a gas pipeline. Afghanistan is well positioned to be a transit route for electricity produced in CAR countries and exported to South Asia and perhaps eventually it might also become a net exporter of power produced from its own hydro, natural gas, and coal resources.

Afghanistan has great potential for developing about 23000 MW of hydro generating capacity, it also has significant solar resources, averaging 300 days of sunshine per year<sup>9</sup>. Wind resources in Afghanistan also represent a significant potential of wind electricity. The lowland areas in the south and west have around 120 windy days per year with average velocities of four meters per second, it is estimated that there is a theoretical potential of 158 GW of wind electricity production. Afghanistan also has substantial hydrocarbon resources that may lead Afghanistan into social and economic development. The December 2011 study by the US Geological Survey (USGS) estimated that Afghanistan is endowed with potentially exploitable reserves of 1596 billion barrels of oil and 36.462 trillion cubic feet of natural gas<sup>10</sup>. Development of this great potential requires large capital investment and significant private sector participation to reach fruition. Taking into account the huge potential of energy in Afghanistan there is a hope that this will be able to be exported in the future.

#### Current position

Afghanistan's energy resources have remained untapped due to the country's long history of conflict. Afghanistan has evolved from being an energy exporter exporting natural gas to the Soviet Union in the 1970-80s, to a country that imports the majority of its energy needs from the neighbouring countries.

The total electricity coverage for Afghanistan is (33-40) % of its total population which is considered a large improvement considering that historically, Afghanistan's power coverage has never exceeded more than 22% of its population<sup>6</sup>. According to a survey by the (USAID) it is estimated that 27 million people, mostly the rural poor, have no access to reliable modern forms of energy and instead rely on self-supplied energy sources using wood gathered from forests and sometimes also using waste plastic and rubber as fuel. Animal dung is also used in 85% of rural homes and in about 15% of urban homes. A 2010 report by the ADB says less than 10% of the population has intermittent access to power provided from a public grid.

Energy in Afghanistan is primarily provided by hydropower, however the frequent energy shortages and blackouts caused by insufficient or dilapidated infrastructure oblige Afghans to rely on electricity produced by costly diesel generators, which are only used for a few hours at night for lighting purposes. Energy produced by diesel generation costs almost forty US cents per kWh compared to six US cents per kWh imported over transmission lines from the neighbouring countries.

Energy supplied by diesel generators is both expensive and environmentally hazardous. The energy sector is also a major source of air and noise pollution in major cities with high rates of toxic gas emissions endangering the health of the population. Despite the availability of power, the existing transmission network is inadequate in handling the available supply from neighbours like Uzbekistan and Tajikistan further noting that supporting infrastructure would allow Afghanistan to import up to 900 MW of power from the neighbouring countries<sup>11</sup>.

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<sup>9</sup> Prof. Dr. Abdul Rahman ASHRAF (senior advisor to president Karzai for mines and energy), November 10 and 11, 2009, International Conference on "Renewable Energy in Central Asia".

<sup>10</sup> Katerina Oskarsson, November 2012, Sustainability of Energy Supplies in Afghanistan, civil-military fusion centre, Afghanistan

<sup>11</sup> Katerina Oskarsson, November 2012, Sustainability of Energy Supplies in Afghanistan, civil-military fusion centre, Afghanistan



The poor economic situation, insecurity, old and poorly maintained infrastructure, institutional capacity constraints, corruption, poor governance and interference of neighbouring countries on construction of power dams all pose serious obstacles to energy supply sustainability in Afghanistan. Security concerns, particularly in the south and east of Afghanistan, endanger the development and sustainability of the energy sector and it also prevents contractors from investing in the energy sector. Besides the challenges described earlier, the poor institutional capacity is still considered a big challenge for the energy sector due to the lack of universities and institutions specializing in this field.

Afghanistan has huge potential for economic development in the rural areas. The electricity supply to rural areas stimulates economic development, particularly through the use of electricity for production in mini and small businesses. If the challenges faced by the energy sector are addressed this will positively affect the country in economic development, secure a better labour market and increased income which will foster a stable and secure environment in the medium to long term.

### **Actions taken by the Government**

The Government, with the help of international aid, has made considerable achievements in the energy sector; this includes the power purchase agreements with Iran, Turkmenistan, Uzbekistan and Tajikistan; the upgrade and rehabilitation of some current power grids and development of the national strategy for energy sector. At present only the electricity policy exists, which is the only policy under the energy sector but some others are in the process of approval by relevant ministries. New power purchase agreements are being negotiated for increased power imports. Efforts have been made to improve the supply of natural gas, increase availability of hydro-electric generation, rehabilitate and expand electricity transmission and distribution systems, develop renewable energy resources in rural and remote areas, and improve the capability of energy sector institutions.

At present, with support from the ADB and the World Bank, the four countries of Tajikistan, Kyrgyzstan, Afghanistan and Pakistan are actively exploring construction of a high tension line that would transmit 1300 MW of power from Central Asia through Afghanistan to Pakistan with Pakistan receiving 1000 MW and Afghanistan gaining 300 MW<sup>12</sup>. The Government is also looking at increasing foreign investments to fund the expansion of the use of renewable energy such as those from micro-hydro, solar, and wind sources.

### **Recommendations**

To overcome the challenge in the energy sector the following steps are considered essential to address the needs of both households and industry.

- Engagement of experts with international bodies to exchange knowledge on the use of renewable energy resources, environmentally friendly energy and smart grids
- Exploitation of fossil fuels for energy production
- Develop steps for increased operating efficiency through rehabilitation of current old infrastructure
- Investments in transmission and distribution to reduce losses
- Increased institutional capacity and increased private investment
- Raised awareness amongst public on efficient use of energy
- Strengthened educational institutions through updating curricula and establishment of energy departments to specialize in the energy sector
- Clear focus on efficient use of energy and the enabling policy.

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<sup>12</sup> Energy sector strategy, 2007/08-2012/13, Afghanistan national development strategy, Islamic republic of Afghanistan.

## 4.4 Smart, Green and Integrated Transport

### Background

Afghanistan is situated in a highly strategic location, being the land bridge connecting South Asia with Central Asia and the Middle East. Transport in Afghanistan is limited and in the developing stage. Much of the nation's road network was built during the 1960s but was left to ruin during the 1980s and 1990s wars.

Modern infrastructure, which is essential for a strong transport sector, is limited. In Kabul, the road system is estimated to accommodate only 25,000–35,000 vehicles a day, which is not sufficient for the rapidly increasing number of vehicles<sup>13</sup>. Airports are limited and a few air carriers provide domestic air services, which is insufficient to fulfil the needs of the high population. Railway lines are almost non-existent. The poor infrastructure is also a major contributor to air and noise pollution, with traffic jams, and slow vehicle movement in major cities. The weak capacity, inefficient institutional organization, and lack of financial resources are the major obstacles to reach the set goals within a reasonable timeframe. Complex organizational structures lead to waste, excess fees and gaps in services for the people. An integrated transport sector strategy on a regional level is missing, and there is a need for improvements in roads, airports and rail infrastructure.

### Current position

Public transport services to rural, provincial and urban populations are mostly provided by the private sector and the government's contribution is weak and underfunded. It is estimated that the private sector accounts for over 90% of mass transportation services provided to the public<sup>14</sup>. The public bus system, called Millie bus, currently provides low cost transportation services with 900 buses in 32 provinces. In Kabul alone, the 601 Millie buses provide transportation services to four million citizens; it is publicly owned and funded by the government<sup>15</sup>. The situation has worsened since 2007, now most of these buses are not operational and need intensive repair and maintenance.

There are 51 airports and airfields on record, a few are actually usable for commercial purposes. None of these airports meet the international standards and practices required by the International Civil Aviation Organization (ICAO). Air transport in Afghanistan is provided by the national carrier Ariana Afghan Airlines which is slowly rebuilding its international fleet and re-establishing regional and European services, and a small number of other international airlines are currently serving Kabul. The institutional framework and capacity of staff in the civil aviation sector is at an unacceptably low level. Certain critical functions (e.g. air traffic control) are currently performed by NATO and other military personnel. The air transport safety and security functions as well as their regulatory oversight are sorely inadequate and this raises the risk profile of air services in Afghanistan and discourages most international air carriers to operate there.

The railway line, which is an inexpensive means of freight transport, is almost dilapidated to nothing, there is only a 75 kilometre railway line between Uzbekistan and the northern city of Mazar-i-Sharif.

Air and noise pollution in major cities is a product of transportation and the energy sector. It is estimated that there is a total of 46,338 kilometres of road network in the country, 76.34% of which are unpaved which is a large contributor to suspended dust<sup>16</sup>. The transport sector also faces challenges of illegal import of used vehicles. The continued use of very old and poorly maintained vehicles (some vehicles are more than 60 years old), passenger and cargo overloading of vehicles, poor quality transport fuel, and limited road capacity lead to severe air pollution.

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<sup>13</sup> A. J. Habibzai, S. Habibzai and C. Sun, 2010, Overview of Transportation in Kabul City, Afghanistan.

<sup>14</sup> Zabih Ullah Safi, May 2011, Vehicles Traffic Problems In Kabul Afghanistan, Research Unit-Afghanistan Institute Of Rural Development, MRRD.

<sup>15</sup> Ministry of transport and civil aviation strategy, May 2007, Ministry of transport and civil aviation.

<sup>16</sup> Country synthesis report on urban air quality management, December 2006, Asian Development Bank and the Clean Air Initiative for Asian Cities (CAI-Asia) Center.

Lack of access to facilities contributes to poor health, further reducing earning potential. Well maintained and better transportation infrastructure would enable the rural population to have access to markets which would help in reducing poverty, and this is notable for areas around the ring road (regional highway system). A better and well maintained transportation sector is essential for employment creation, income generation, regional development, poverty reduction, and increased security in the country. A well built and maintained road network would serve to strengthen regional ties and help establish Afghanistan as the regional trade hub between the Central Asian Republics and Pakistan, Iran, China, and India.

The challenges and problems in the transportation sector are diverse. The lack of modern infrastructure, low investment and the weak economic situation of the government, the lack of capacity, complex organizational structures, overlapping responsibilities between different ministries, lack of integrated strategies for the energy sector, and the poor security situation are among the major challenges for this sector. The unstable security situation in certain parts of the country, especially in southern and eastern parts, constitutes a major obstacle to the implementation of development activities.

### **Actions taken by the Government**

The government has recently developed the Transport and Civil Aviation Strategy 2007/08 - 2012/13, which covers the short and long term development projects and acts as a guiding tool for the relevant departments. However, specific policies addressing the challenges faced by this sector are still not developed. Afghanistan has also obtained membership of several international transit organizations and has established transit agreements with neighbouring countries. This includes the South Asia Free Trade Area (SAFTA – 2007), Afghanistan Pakistan Trade and Transit Agreement (APTTA – 2010), Economic Cooperation Organization Trade Agreement (ECOTA), the Trade and Transit Protocol between Afghanistan and Tajikistan in 2007, the Trade and Transit Protocol between Afghanistan and Turkmenistan in 2008.

Considerable achievements have also been made in the infrastructure, an estimated 12,200 kilometres of roads have been rebuilt, improved, or newly constructed, including segments of the ring road system, national highways, provincial roads, and rural roads. Kabul International Airport has been extensively reconstructed and new facilities have been added.

### **Recommendations**

In order to overcome the challenges facing the transport sector, the following are suggested.

- Develop an integrated transportation strategy to address all modes of transportation
- Improve and upgrade the air transport through foreign investment
- Develop and expand environmentally friendly means of transport to minimize environmental impacts
- Develop a traffic management system and raise awareness about traffic regulations in major cities to reduce congestion and enhance safe mobility
- Increase the private sector involvement and enhance coordination between line ministries on transport related issues.

## 4.5 Climate action, resource efficiency and raw materials

### Background

Afghanistan presents a number of specific challenges in terms of climate change assessment. Climate projections for Afghanistan require significant refinement due to the lack of availability of reliable historic meteorological records. Complex topography in Afghanistan also means that local variations in response to global warming, particularly precipitation, are likely to be large and many areas may vary from the regional trends. The most likely adverse impacts of climate change in Afghanistan are drought related, including associated dynamics of desertification, land degradation and air and water pollution<sup>17</sup>.

Nearly 80% of Afghan people rely on the country's natural resources for their livelihood<sup>18</sup> however, due to the poor environmental policies and natural resources management, many livelihoods are under threat of alarming environmental degradation caused by multidimensional factors. Furthermore, the country is rich in untapped minerals, water and other natural resources, which is under observation from major domestic and foreign investors, in case the stability and investment conditions improve.

The economy is still functioning in a traditional way which is dominated by services (48% of GDP) and agriculture (27% of GDP) followed by industry (21% of GDP). Industry is beginning to recover from an almost total collapse and it is mostly concentrated in Kabul and few other major cities due to the poor infrastructure and instability concerns. It seems that the key to long-term economic development of the country may lie in natural resources and many other known mineral deposits (estimated at more than US\$ 3 trillion) which are still untapped due to political and economic instability. Similarly, sustainable water resources (estimated at 75 billion cubic meters of which 55 BCM is surface and 20 BCM is groundwater<sup>19</sup>), mineral resources, and having the well positioned geographical location for trade and business creates attractive opportunities and potential for economic development in the future.

### Current position

Beyond security concerns, there are other fundamental issues that further compound the challenges in the country; the poor infrastructure, lack of skills, capital, legitimacy, the poor institutional system and the weak intention of involved parties made a situation where the country has not been able to take essential steps, such as: 1) To exploit, transport and process its mineral resources in an efficient way. 2) To develop efficient management and strong infrastructure for surface water. 3) To act against climate change and develop reliable natural and man-made disaster management systems. 4) To grow a responsible, resource-efficient and technology leading industrial sector.

The country is facing both opportunities and challenges in the medium and long run: on one hand, a huge deposit of mineral resources, availability of over average per capita surface water, strong geographical position for business and trade and potential access of new mining and industrial sectors to an innovative and up-to-date technology are the main opportunities. On the other hand, security and political instability, the weak financial position of the government, the poor infrastructure, higher level countrywide corruption, social barriers, natural and man-made disasters and lack of a skilled workforce are considerable challenges in front of sustainable and environmentally friendly economic and social development.

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<sup>17</sup> Matthew Savage et al. 2008 Socio-Economic Impacts of Climate Change in Afghanistan, DFID (department for international development).

<sup>18</sup> National Environment Protection Agency, 2009: NCSA & NAPA final joint Report,

<sup>19</sup> Qureshi, Asad Sarwar, (2002): Water Resources Management in Afghanistan: the issues and options. IWMI working paper S. No 49.

Degradation of the environmental quality is due to consumption because the country is still not heavily industrialized. The air quality is mainly affected by dust and vehicle emissions in urban areas especially the capital, Kabul<sup>20</sup>. Loss of natural resources are a continuous problem i.e. the annual deforestation rate has grown from 2.25% to 2.92% in 2005<sup>21</sup>. According to the Greenhouse Gas inventory of Afghanistan 2004/5 data, total emissions for 2005 were 28759 CO<sub>2</sub> equivalents where the contribution of key sectors was agriculture 52.6%, land use change 32.8%, energy 13.1%, industry 1% and waste merely 0.5%<sup>22</sup>.

Climatic hazards are another challenge which causes human and economic losses, the most frequent hazards are floods which bring the biggest economic damage followed by earthquakes contributing to 49.9% of loss of human life. The most vulnerable sectors from climate hazards are water resources, agriculture, forestry, rangeland and health.<sup>23</sup>

### **Actions taken by the Government**

After a long history of conflict, the country is slowly recovering its shape and it has taken some major steps in the form of developing institutions and strategies (ANDS, NEPA, Environment Law and Sectorial laws) towards sustainable development and the integration of environmental issues into development strategies and industrial policies. The new environment law (NEPA, 2007) makes a base for environmental governance to protect the living environment in the country; ANDS (environment strategy) has been developed in an attempt to incorporate climate change and environmental issues into development plans as a cross cutting issue. There are other fragmented laws and regulations made recently in the country, such as clean air regulation, national environment action plan, waste management policy as well as some sectorial laws i.e. mines law, hydrocarbon law, forest law etc. (some of them are still in the process of development). However, there is no overall regulatory framework and policy targets in practice for efficient and environmentally friendly management of natural resources specifically addressing climate change.

In practice a few projects financed by international donors are the only achievement of the country during the last decade, furthermore, there was some progress in paper work (developing regulations, standards, legal framework and programs for awareness). All these real facts show the future importance of this challenge and expose the gap between expectations and the reality on the ground.

### **Recommendations**

- Engage experts with wider regional and international planning and development bodies to ensure that best practice is achieved through climate assessments, adaptation approaches and low carbon development strategies, similar to those developed elsewhere.
- Establish metrological stations in the country which would further help in the development of early warning systems
- Encourage low carbon growth through use of new technologies
- Create an effective water management system
- Integrate national and international environmental standards in development strategies
- Encourage environmentally friendly innovations in the new private sector especially industry which would bring the latest technology and a socially responsible business culture to the country.
- Stop deforestation, preventing the cut of green and most valuable agricultural areas from residential and commercial constructions and incorporating the green culture in new cities.

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<sup>20</sup> Environment Strategy (2008), Afghanistan National Development Strategy, Islamic republic of Afghanistan.

<sup>21</sup> National Environment Protection Agency, Afghanistan Initial National Communication (to the UN on climate change).

<sup>22</sup> Ibid.

<sup>23</sup> Ibid.

## 4.6 Inclusive, Innovative and Reflective Societies

### Background

The people of Afghanistan have been living in a protracted state of conflict and instability for three decades. In addition to an uncertain security, the poor economy, poor infrastructure, extreme mountainous terrain and harsh climate all make it difficult to access education and basic services. Years of war have resulted in total or partial destruction of core institutions of the state, extreme poverty, high levels of illiteracy, a poor labour market and almost complete disintegration of gender equity.

Afghanistan faces the challenges of a very young and rapidly growing population. Among other things these challenges emerge in high and increasing demand for education, health services and basic infrastructure, as well as in growing numbers of youth entering the labour market. Widespread poverty and inadequate educational opportunities drive many households to send their children looking for work. In total, 1.9 million Afghan children aged 6-17 (21 percent) are employed, of these children at least 1.2 million (13 percent) are performing child labour endangering their health or development<sup>24</sup>. Labour migration is another frequent coping mechanism to escape from poverty. Afghanistan's labour market is dominated by the agricultural sector and performs poorly in providing productive employment and decent work. The most notable characteristic of the employed population in Afghanistan is that most workers, 81 percent, work in a vulnerable setting, characterised by informal work arrangements and insecure employment, unstable and inadequate earnings, and low productivity<sup>25</sup>.

Gender inequality is a major issue in Afghanistan; women are disadvantaged in every development field compared to men. This situation is generally less pronounced in urban areas. Women participate less in economic activities. Literacy of women is less than one-third of that of men and large gaps exist in school enrolment rates. Representation of women at community level in Community Development Councils is low, at 36 percent against 68 percent for men.

### Current position

In spite of the large amount of assistance by the international community, this sector still faces a number of serious issues and a great lack of resources. Insecurity, the lack of reliable data and information systems, the lack of long-term thinking, poor hard and soft infrastructure, weak economic governance, weak commercial connections to regional and global economies and a lack of qualified professionals are all considered to impede this sector.

The overall indicators of education and literacy reflect an education system that has performed very poorly. The adult literacy rate is 45 percent for men and 17 percent for women. The improvements in literacy between 2005 and 2011-12 are particularly observed in the youth literacy rate, which increased from 20 to 32 percent for female youth and from 40 to 62 percent for male youth<sup>26</sup>. Along with primary and higher education the technical and vocational training centres in the country also perform poorly and face the challenges of poor infrastructure and human capacity. The current public TVET system has nearly 20,000 trainees and is earmarked for considerable expansion. There are some 60 public TVET institutions/schools offering technical vocational education across the country.

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<sup>24</sup> A profile of Afghanistan, National risk and vulnerability assessment, 2007/08, Central Statistics Organization (CSO), Government of the Islamic Republic of Afghanistan

<sup>25</sup> Afghanistan Living Conditions Survey, National risk and vulnerability assessment, 2011-2012, Central Statistics Organization (CSO), Government of the Islamic Republic of Afghanistan

<sup>26</sup> Afghanistan Living Conditions Survey, National risk and vulnerability assessment, 2011-2012, Central Statistics Organization (CSO), Government of the Islamic Republic of Afghanistan



There is neither nationwide data on employment, nor reliable information on skill supply and demand which clearly undermines the adequate assessment of the current situation. Programs are often characterized by short-term initiatives, which are conducted with limited involvement of key institutions for sustainability and are overly dependent on donors' funding cycles. The country's hard infrastructure, including roads and reliable supplies of water and power, is inadequate to support rapid and sustained economic growth. The corresponding soft infrastructure, which includes the human and institutional capacity necessary for an economy to function, is also extremely limited. Afghanistan's commercial connections to regional and global economies are severely disrupted, which could be redeveloped by introducing a competitive private sector to access foreign markets and develop viable export activities.

The Afghan labour market currently faces an acute demand for skilled and semi-skilled people in order to cope with the rapid pace of reconstruction in the country. However, unemployment remains high among young Afghans because many do not have the technical skills that are urgently needed for reconstruction efforts as well as the overall economic development of the country. Currently a high number of workers from other countries work in Afghanistan due to the absence of sufficient local skilled labour which also results in high wages going out of the country.

### **Action taken by the Government**

Since 2001, both the government and the international community have invested a huge amount of money and human capacity in rebuilding and strengthening the educational system, bringing about social development and tackling gender issues in Afghanistan. The government has developed the national strategy for education, religious affairs, gender and some updated policies for child labour and youth policy were drafted and published for public consultation. A major achievement of the government in the last decade was the introduction of new and updated curricula for primary and high schools.

In 2004, the president of the Islamic Republic of Afghanistan announced the National Skills Development Program (NSDP) in Berlin, Germany. NSDP, along with the Ministry of Labour, Social Affairs, Martyrs and Disabled (MoLSAMD) and the Ministry of Education (MoE) are working together on the development of a National TVET Strategy in which the mandate of each entity will be clear. It is expected that non-formal training will mostly be facilitated by MoLSAMD, while the formal vocational training will be mostly provided through the MoE. Over the past few years significant efforts have been made in the education sector, new public and private education institutions have been established, and the number of teachers and students has increased. The gender inequality has also significantly reduced with the new government setup and introducing equal rights for men and women in its constitution.

### **Recommendations**

In order to overcome the current challenges and reach an inclusive, innovative and reflective Afghan society the following are recommended.

- Reform and update the education system so that a new generation of professionals can take the political, social and economic leadership of the country without reliance on international assistance.
- Strengthen relationships with foreign universities to exchange lecturers and students.
- Allocation of funds for skill development of lecturers, standardization of teaching.
- A major problem is the lack of research and evidence-based policies which should be given due priority.
- Engage people in social, religious, and developmental activities
- Engage women in community developmental councils to reflect their voices and needs.

## 4.7 Secure societies - protecting freedom and security of the country and its citizens

### Background

Afghanistan is a post-war country, experiencing the poorest living conditions in the world, and has been so over the last four decades. It was the battlefield of the cold war during Soviet Union occupation (1979-1989) followed by civil armed conflict. The war and conflict has taken nearly two million lives, caused one million disabilities and millions of refugees<sup>27</sup>. During this hard period Afghanistan lost all its infrastructure and opportunities to move towards sustainable development and prosperity; consequently, the country is considered as the poorest in Asia and the Pacific region; categorized as a Lesser Developed Country by the UN. Further, it ranks at the bottom of the list of 187 countries in terms of human deprivation, characterized by short life expectancy, lack of basic education and lack of access to public and private resources<sup>28</sup>.

Afghanistan is continuously threatened by numerous conflicts, crises, violence and natural disasters. Such regular emergencies, present tremendous challenges to achieve peace and resilient development in the country. Since 2001, the Government (with the strong support of the International community) has been struggling to rebuild society, institutions and infrastructure in order to improve living conditions and provide safe livelihoods. Despite the huge international support for stability, socio-economic development and democratic reform that has been established since 2001, the country is still considered to be in a “fragile state” and has the most vulnerable community<sup>29</sup>.

Overall unrest and insecurity is still the most critical challenge and multi-dimensional issue in Afghanistan; insurgency and rioting by anti-government elements, illegal armed warlords, the weak judicial and legal system, widespread corruption and systematic crime are the common roots of continuous instability. Therefore, security has been considered as the first priority at national and international level since 2001, because it disturbs all development efforts and demolishes the existing progress; therefore, nearly 50 countries, including the USA, have been involved in NATO’s peace keeping military mission called ISAF, side by side with Afghan National Security Forces (ANSFs) which concluded with a total estimated cost of 17184 Afghan and foreign troop fatalities<sup>30</sup>. Furthermore, the armed conflict has seriously affected the economy and society which resulted in 7973 civilian deaths and 13615 injuries since 2009<sup>31</sup>.

### Current position

Afghanistan has always suffered from man-made and natural disasters. Decades of armed and political conflict, poor economic conditions, broken infrastructure and environmental degradation has increased the vulnerability of the whole community. Furthermore, long and open borders of the country for harmful interference of neighbours and other interested parties, are the basic reasons for the current state of insecurity and instability. The most vulnerable and affected groups of society are the younger generation, women, disabled people and the poorest members of the community, because they are in a poor socio-economic position and have less access to resources.

According to the recent figures, civilian death and injury has been increased by 17% and 28% respectively in first six months of 2014 compared to 2013; in which child and women casualty increased by 110% and 61% respectively; most civilian deaths were caused by ground engagement (39%), explosive devices (30%), suicide attacks (12%) and targeted killings (9%), while the most affected areas in the country were southern and south eastern regions.<sup>5</sup>

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<sup>27</sup> Alim, Abdul Khabir, Shobair, S, Sharif. 1997, Drought and human suffering in Afghanistan. UNICEF/WHO.

<sup>28</sup> Multidimensional-poverty-index MPI, 2013, UNDP. Retrieved : <http://hdr.undp.org/en/content/multidimensional-poverty-index>

<sup>29</sup> SNAP for Disaster Risk Reduction DRR towards peace and stable development, 2011, ANDMA

<sup>30</sup> Livingston, Lan S and O’Hanlon, Michael: 2014. Afghanistan Index. BROKINGS institute

<sup>31</sup> Midyear report on protection of civilians in armed conflict, 2014, UNAMA.



Furthermore, Afghanistan suffers frequent natural disasters, which cause human and property losses, slowing down reconstruction and further impacting on the environment. Thus, the country was ranked 5<sup>th</sup> in 2006 amongst the most frequently hit nations by natural disasters<sup>32</sup>. During the last five decades, the country has experienced 118 large disasters, which brought about a total estimated human loss of 22000 and has affected 11 million people. Earthquakes, flooding and landslides are the most frequent and harmful natural hazards for the country while the prolonged drought and agricultural pests are still out of control issues. The north-east and north-west regions of the country are at a high risk of natural hazards: 4 provinces from earthquake, 10 provinces from flooding, 17 provinces from drought and 4 provinces from landslides<sup>33</sup>.

Relatively secure cities are facing other different social and environmental insecurities such as an increasing crime rate, air pollution, and limited fresh water. The recorded data shows an overall increase in total crime incidences during the last 3 years, while serious crimes were the cases of murder, assault, traffic accidents, kidnaping and robbery, which have mostly happened in big cities. Moreover, the limited provision of safe drinking water, regular deforestation, desertification, soil degradation and water and air pollution make a way for a serious environmental crisis in the country.

### **Action taken by the Government**

Apart from international military assistance based on bilateral agreements, the most significant achievement was the establishment of the security sector. The size of Afghan Security forces (ANP and ANA) grew from 6000 in 2001 to 338153 in 2013 of which 185817 ANA and 152336 are ANP forces; moreover, there are 30000 local Afghan police in action for local security<sup>34</sup>.

Concerning natural disasters and environmental management, a number of policies, strategies and plans have been made by ANDMA and ANEPA, which show good progress on paper, such as: Disaster Management law, Strategic national action plan, Sectorial Disaster Management plan, climate change policy and strategy. However, there is considerably low level implementation due to a line of reasons including the lack of physical, intellectual and financial resources; moreover, there is no systematic and institutional commitment in the area of vulnerability and multi hazard assessments, together with no early warning system to give information to the communities under threat and officials to undertake necessary precautionary steps. Consequently, the current system is only responding after disasters and hazards occurred.

### **Recommendations**

The following crucial actions are recommended to address the challenges.

- Accelerate peace talks and the peace building process with anti-government armed parties
- Develop regional security agreements to secure out-border threats
- Strengthen border management with high-tech protection tools and introduce E-governance
- Encourage cooperation between government, private sectors and the international community to build an effective proactive capacity in the country for disaster management
- Develop useful information and data analysis capacity with the equipped early warning systems to enable authorities to make pro-active plans
- Generate meaningful combat against corruption by growing the culture of responsibility, accountability and rule of law
- Strengthen civil society through awareness and effective media, increase literacy and education level in society as a whole and increase employment opportunities for all.

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<sup>32</sup> National Disaster Management Project document (2009-2011), UNDP.

<sup>33</sup> Data provided by ANDMA, department of natural disaster prevention,

<sup>34</sup> Livingston, Lan S and O'Hanlon, Michael: 2014. Afghanistan Index. BROKINGS institute

## 5. Summary

*This paper gives a clear identification of the societal challenges and the current position of each of the thematic fields in Afghanistan identified under the Horizon 2020 societal challenges. The paper also describes the availability of national policies about each of the societal challenges; it also highlights the necessary recommendations in order to address these challenges.*

*The poor security situation, food insecurity, poor health facilities (both in terms of human capacity and infrastructure and energy) are among the major challenges for the country. Poor security is considered as an impediment to development projects throughout the country especially in rural areas. This has also resulted in a high number of the population living in extreme poverty. The long history of conflict, extreme poverty and food insecurity has also resulted in a high number of diseases such as depression, mental disorder, maternal mortality, respiratory infectious diseases, cancer and other health issues. Energy as the main accelerator to the economy is scarce and limited. Two thirds of the population have no access to modern forms of energy and instead rely on the self supplied energy sources using wood gathered from forests and sometimes also using waste plastic and rubber as fuel.*

*International cooperation and collaboration is considered to be a very important input on how to address the common global societal challenges. The following areas are considered the most significant.*

- *Exchange of science and technology in the health sector is considered a key area of mutual collaboration. The transfer of knowledge will help South Asian countries to adopt new technologies used for diagnosis which could help in the early mitigation of diseases and by taking early steps through preventive measures.*
- *In the agriculture sector, a key area of mutual collaboration is to hold extensive research activities on the introduction of good income crops for farmers which could help in the elimination of poppy cultivation, further minimizing the drug import to international markets. Conservation of natural resources and waste management is another area of potential collaboration. Collaboration and cooperation in Post-harvest management is considered a key element for elimination of poverty and food insecurity.*
- *Extensive research activities are needed on energy consumption and the efficient use of energy, exchange of science on the use of smart technologies used in the energy sector for improving efficiency and security, introducing environmentally friendly technologies for producing energy.*
- *Cooperation in the field of rail transport would enable Afghanistan to link to the EU through the Central Asian republics further enhancing trade opportunities, special collaborations in the field of traffic management for lowering congestion, noise and air pollution, developing and expanding environmentally friendly means of transport to minimize environmental impacts.*
- *Research activities on the rapid increase of global warming and air pollution in the southern Asian region, encouraging low carbon growth through the use of new technologies, introducing cost-effective and innovative climate change adaptation methodologies, developing disaster management systems through early warning systems, the efficient use of material, waste management and recycling, encouraging environmentally friendly innovations in the new private sector.*
- *Cooperation in education system reform through introducing modern teaching technologies, updating curricula and education system management, strengthening relationships with foreign universities to exchange lecturers and students, extensive studies on how to strengthen commercial connections to regional and global economies, research activities to gather accurate data on the labour market to provide research and evidence-based policies, strengthening the governance system, are all important recommendations.*
- *Collaboration in the field of smart technologies for civil registration, strengthening border management with high-tech protection tools and introducing E-governance, extensive research on the causes and consequences of city crime, which would help in developing the policies for crime control, strengthening cyber security, and so on, would help to address the*



*challenges. Cooperation in the field of electronic governance for increasing efficiency and strengthening civil society would also contribute.*