World’s countries are at different stages of socioeconomic development. To-day, difference between more- and less developed regions and countries even is seen more obviously. However, both MDCs and LDCs are obliged to review their perspective social and economic prospects in the context of conception of ‘sustainable development’ affected by environmental, geographic, cultural or demographic factors. Factor of human resources is one of key issues in managing sustainable development of territories to-day.

In contemporary globalized world many labor markets are becoming more dynamic. Postindustrial society completely or partly is being shaped not only in Western countries but also some other regions and countries. Share and significance of tertiary sector grows. Migration of human resources both within countries and internationally is increasing as well. In the meantime, a few dozens of countries are facing depopulation. Many other countries are experiencing low rate of population growth which is demographically and culturally undesirable for them: low rate of natural increase of population may be followed by process of population decline in the next future. Low rate of birth observed in a number of countries turns to be a headache also because of increasing ‘demographic burden’, i.e. growth of share of aged and retired people who depend on people at workable age. Humans in contemporary world are looking for ways of better living conditions, putting forward environmental context of sustainable development whereas for many countries the problem is not only ‘safe energy’ or ‘clean air’ but also humans themselves. How humans will effectively solve their development problem if, for example, people in many regions still continue to be concentrated in territories with less size of area sustainability of which does not allow to ‘give a shelter’ for location of huge number of population. In poor countries of Asia and Africa where demographic policy either is not being pursued or does not work effectively, achieving sustainable development as well as reduction of poverty may be impossible if very high speed of population growth will not be curbed further. Another example: in developed countries and highly-urbanized regions, issues such as ‘reverse migration from cities to rural areas’, ‘high value of urban land’ or ‘demographic loading in recreational areas’ make necessary studying cities’ sustainable development.

In short, sustainable development is interconnected with demographic sustainability of territories. This relation may be studied from different views and contexts.

Looking on issue of ‘population and sustainable development’ on example of Azerbaijan Republic, we give an evaluation of demographic situation in the country on the basis of studying and analyzing quantitative and qualitative parameters of population. Emphasis is laid upon the following issues that have an importance from view of perspective socio-economic development of Azerbaijan:

1) distribution and density of population in the territory; 2) sustainable development of cities and rural settlements; 3) rates of birth, fertility and natural increase of population and their possible influence on provision with human resources; 4) tendency and speed of the process of population ageing in the country and its socioeconomic aspects.

| Years | Popul. number | Years | Popul. number | Years | Popul. number |
|-------|---------------|-------|---------------|-------|---------------|
| 1970  | 5117,1        | 1995  | 7643,5        | 2010  | 8997,6        |
| 1980  | 6114,3        | 2000  | 8032,8        | 2011  | 9111,1        |
| 1990  | 7131,9        | 2005  | 8447,4        | 2012  | 9235,1        |

With a population of 9235,1 thousand people (2012), Azerbaijan is one of relatively more densely-populated countries in the world. For population density (107 people per 1 sq. km), Azerbaijan holds the first place among CIS countries, and is the 6th country among Eastern European countries. The number of people per unit of area in
fact became more after occupation of western part of the country’s territory by Armenia.

Despite the high population density by overall territory of Azerbaijan, in many sparsely populated areas this indicator is very low. Being mostly mountainous territories, part of them also shares border with neighboring countries, including administrative regions like Shahbuz (26 people per 1 sq.km), Dashkasan (32), Kangarli (43), Julfa (44), or Aghstafa (55). Remote positions of these areas and long distance from the capital city create challenges in communicating, especially during winter season. Being economically unfavorable, this situation contradicts to sustainability of regions, and necessitates drawing special attention to development problem because economic lagging of the regions impedes their demographic development.

Distribution of population by Azerbaijan’s territory is uneven. Lowland areas, particularly banks of Kura and other rivers as well as places with fertile soil resources that allow cultivating crops effectively, are more populous in contrast with mountainous territories. While this is related to favorability of natural condition, socioeconomic factor is more influential and obvious. Thousands of migrants have been moving to Absheron, chiefly to Baku, the capital city and its surroundings with hope to find suitable job and improve their level of living. Secondary and tertiary sectors do not meet demand for workplace in other regions of Azerbaijan, and this factor accelerates concentration of population in Baku.

For the present, about 50% of population of Azerbaijan lives in Absheron, the region with relatively small area that covers 6% of the overall territory, and includes the metropolitan area of Baku-Sumgait. Population number of this metropolitan area is about 4.5-5 million people or approximately 2000 people per 1 sq.km. It is hard to define the exact number of de-facto number of population living and working in the territory of Absheron because of unknown share of unregistered dwellers among the region’s population. Significant part of population living in urban settlements near the core city has not official document appointed for permanent residents of Baku-Sumgait metropolitan area. High human density creates challenges for needed social infrastructure, including good living conditions, continuous water supply, qualitative highways, adequate dumps, etc. Absheron has a dry semiarid climatic condition with very hot summer as well as infertile soil cover that is not suitable for natural development of forest landscape. However, despite of realization of State programs on socioeconomic development of peripheral regions, and discomfort demographic and environmental condition in Absheron, population of the mentioned area continues to grow significantly due to administrative function, attractiveness for investments and creation of new workplaces in Baku city rather than others.

As we think, for the purpose of impeding further demographic overgrowth of Baku city, it is advisable to move the function of capital city from Baku to another place located preferably in western or central part of Azerbaijan. This would promote to sustainably developing other regions and cities (2), and curbing migration towards Absheron.

Movement of status of capital city from Baku to Ganja is seen possible. This may allow favorably easier managing regions administratively and economically. Sustainable Development Plan of Western Region by 2030 developed as a pilot project in Ganja includes location of industrial areas in accordance with agricultural and recreational zones as well as urban planning. The function of new capital of Azerbaijan can be performed by other cities as well. They may be located in heart of country’s territory with the condition that the region they locate will have appropriate infrastructure, high-developed transport network, including junction of railway and large airport as well as other areas of social service.

Anyhow, high-speed development of Ganja is necessary: being the second largest city of Azerbaijan, Ganja’s population should be at least 2 times much more than that of to-day for having real demographically attracting power in Western part of Azerbaijan’s territory. Relatively poor structure of Ganja’s economy, particularly the less-developed secondary sector does not correspond to city’s population number (nearly 320 thousand people).

It is also important for Azerbaijan to develop its cities in mountainous areas development of which is usually being impeded by weak infrastructure and insufficiency of number of workplaces. In our views, sustainable development is particularly necessary for cities of Autonomous Republic of Nakhchivan and region of Upper Garabagh as well as cities of Gagagh, Dashkasan, Goygol, Tarter, Guba, Zagatala, Lerik, Yardimly and etc.

Another issue is sustainable development of rural settlements, particularly rural clusters situated in mountainous areas. Some small villages may face a threat of distinction. Necessity of sustainability of rural settlements is demographically beneficial as well as has its economic and cultural importance. Many rural settlements besides with their beautiful natural landscapes are also rich in craftsmanship or have specific living traditions, and these allow to take advantage of their potential of rural tourism. From economic, demographic and sociopolitical points of view, development of rural settlements in administrative regions such as Guba, Gusar, Gakh, Sheki, Ismayilli, Goychay, Lerik, Yardimli, Ordubad, Gagagh and others is necessary.

Intensity of births, rate of natural increase and fertility (3) significantly affect demographic situation. As is known, many countries in the world experience deficiency of labor force influenced by disadvantageous age pyramid of population, i.e. less share of infants and teenagers, and higher share of population at retirement age.

It is not hard to estimate that vital statistics in Azerbaijan are advantageous from view of the country’s perspective demographic and economic development. The rates of birth and natural increase provide a basis to suggest that problem of deficiency of human resources is not expected to take place in the near- and medium future. The following table shows that birth- and natural increase rates of population is relatively higher on the background of corresponding figures in average by the world. As for
death rate, it does not sharply differ than that of developed countries.

The fertility rate in Azerbaijan is 2.4, including by urban population – 2.6, and by rural population – 2.2, which are the highest in the Caucasus region. According to census of population held in 2009, the share of females at 17-44 ages among total female population is 51%. This circumstance, as we think, is favorable for the country from view of prospects of fertility.

Changes expected to take place by age composition of the population is not only a process of demographic significance but also relates to perspective social policy of the country. The regarded process is population ageing (4). Having socio-demographic and economic significance for a nation, the mentioned process turned to be one of key problems for a number of countries as it was noted above. This process is typical not only for developed countries. Many developing countries also have been experiencing population ageing in recent years, and this process is going to-day as well.

Looking theoretically, consistent population ageing in its demographic content can be seen as an origin of decrease of rate of population growth, and from economic point – unequivocally increasing burden for society in the future. However, on the other hand, being an inevitable process (as a result of rising life expectancy and declining fertility), increase of percentage of aged people should not be regarded as a source of high alert. Growth of median age has its positive side, which is disputable however as views on social development may be different (Jan Kunz, 2007). What is obvious that changes by age composition have demographic and economic effect, and influences on development. To-day, population ageing is a problem urging governments to review their demographic policy and development strategy.

The simplest analysis of the economic effects of population aging starts with the notion of age-based dependency: people of some ages produce less than they consume, and are dependent on the rest of society for their support (David N. Weil, 2006). Countries with young populations (high percentage under age 15) need to invest more in schools, while countries with older populations (high percentage ages 65 and over) need to invest more in the health sector.

In Azerbaijan, the share of people at 20-64 ages among the total number has been growing from 52.6% in 1989 to 60.1% in 2009. The share of population at over 64 age is 6.8% in contrast with 4.7% fixed twenty years ago. The difference between percentages by 60 years age and more is much less (7.7% in 1989 and 8.8% in 2009). For comparison of the age composition, it should be noted that the share of persons at 65 years and over among overall population makes 10% in bordering Armenia and 16% in other neighboring country Georgia.

On example of Azerbaijan, the process of population ageing should be reviewed on the background of absolute growth of population number. Thus, the number of population under 20 years age has been reducing from 2995,6 thousand to 2944.9 thousand persons or only by 50.7 thousand persons as less. As for the change by population at 20-54 ages within 1989-2009, the absolute number of this group of population has grown from 3188.5 thousand persons to 4847.8 thousand persons (Pashayev, 2010). Problem of demographic burden is not seen at critical level in the country even taking into account traditional approach suggesting that real problem of population ageing and demographic burden exists if percentage of population older than 60 years age is 12 and more.

The main conclusions of the carried study on demographic sustainability in Azerbaijan Republic may be formulated as the following:

– Uneven distribution of population in the territory as well as particularly overgrowth of the city of Baku makes necessary taking more influential measurements on economic and demographic development of peripheral regions and stopping mass human migration towards the capital city. Movement of status of capital city from Baku to another place is possible and necessary;

– Although birth rate has been reduced since 2000 by 2 times as less compared to 90es, the country is sufficiently supplied with human resources as well as population at working age;

– Analysis of age composition and fertility rates of population provides a reason for estimating that problem of deficiency of workable population is not expected in the country within the next-medium future.

| Coefficients of natural movement of population in Azerbaijan (per 1000 people) |
|---------------------------------|-----------------|-----------------|-----------------|
| Years                          | Birth rate      | Death rate      | Natural increase rate |
| Overall popul.                | Overall popul.  | Overall popul.  | Overall popul.  |
| of which                       | of which        | of which        | of which        |
| urban                          | rural           | urban           | rural           |
| 1990- 1994                    | 24.5            | 6.8             | 17.7            |
|                                | 21.6            | 6.6             | 15.0            |
|                                | 27.8            | 7.0             | 20.8            |
| 1995- 1999                    | 16.7            | 6.2             | 10.5            |
|                                | 14.1            | 6.1             | 8.0             |
|                                | 19.6            | 6.3             | 13.3            |
| 2000- 2004                    | 14.5            | 5.9             | 8.6             |
|                                | 12.6            | 5.9             | 6.7             |
|                                | 16.5            | 5.9             | 10.6            |
| 2005- 2011                    | 17.8            | 6.1             | 11.7            |
|                                | 16.2            | 6.1             | 10.1            |
|                                | 19.6            | 6.1             | 13.5            |
References:

1. David N. Weil. 2006. Population Ageing – Palgrave Encyclopedia of Economics, 2nd edition. the UK.

2. Kunz J. 2007. Population Aging – Problem or Opportunity? Lessons from the Case of Finland., Journal of Sociology. Vol. 1, Issue 1.

3. Hopwood B., Mellor M. and O’Brien G. 2005. Sustainable Development: Mapping Different Approaches. The Sustainable Cities Research Institute, University of Northumbria, Newcastle on Tyne, the United Kingdom.

4. Pashayev N.A., Ayyubov N.H., Eminov Z.N. 2010. Economic, Social and Political Geography of Azerbaijan Republic (in Azeri language).

5. Karimov, R.N. 2011. Demographic and Economic Development of Large Cities in Azerbaijan. - International Journal of Business and Social Science. - New-York., Vol. 2, No. 24, pp. 268-274.

6. Karimov, R.N. 2010. Sustainable Development: International Experience and Azerbaijan (in English) - Transactions of International Conference ‘Processes of Integration and Resistance in Contemporary World’. - Baku., pp. 137-140.

7. Population of Azerbaijan. 2000-2012. Annual Bulletins of Azerbaijan State Statistic Committee. - Baku.

8. Armenia Age structure [Electronic resource], Access mode: http://www.indexmundi.com/armenia/age_structure.html

Information about author:
Rovshan Karimov – Ph.D. of Geographical sciences, Senior Researcher, Institute of Geography, National Academy of Sciences of Azerbaijan; address: Azerbaijan, Baku city; e-mail: rovshan_karimov@yahoo.com

Research Analytics Federations of various countries and continents, as well as the World Research Analytics Federation are public associations created for geographic and status consolidation of the GISAP participants, representation and protection of their collective interests, organization of communications between National Research Analytics Federations and between members of the GISAP.

Federations are formed at the initiative or with the assistance of official partners of the IASHE – Federations Administrators.

Federations do not have the status of legal entities, do not require state registration and acquire official status when the IASHE registers a corresponding application of an Administrator and not less than 10 members (founders) of a federation and its Statute or Regulations adopted by the founders.

If you wish to know more, please visit: http://gisap.eu