

## Case Study // Round Table SDG 11: Promoting resilient and sustainable cities and human settlements: intersectoral cooperation and evidence-based policies

### Sustainability of urbanized areas

#### Russian Federation

*Levels: national, subnational and local*

#### Summary

The sustainability of urbanized areas includes the study of issues: analysis, assessment and forecast of the risks of natural and man-made disasters; assessment and forecast of the vulnerability of the population, urbanized areas and objects of the technosphere; assessment and development of solutions to the disaster management capacity. The study includes the development of methodology, models and methods for constructing an integral indicator of sustainability based on the above assessments, as well as computational models based on statistical information on disasters, which allows developing effective management decisions to protect the population and urbanized areas from natural and man-made threats.

#### Situation

The Unified State System for Preventing and Eliminating Emergency Situations (EU) operates at the federal, interregional, regional, municipal and facility levels in Russian Federation.

The unified system includes (at all levels):

monitoring and forecasting systems (the National Crisis Management Center, regional Crisis Management Center centers, unified dispatch emergency services in municipalities);  
public information and warning systems - a single service system - 112 has been set up, emergency public warning systems, tsunami warning systems, warning and information systems on transport, etc .;The hardware and software complex "Safe City" is being introduced in the cities in Russia, (while in cities participating in the World Cup in football and also for some Arctic cities);

A software complex of dynamic risk analysis (PC DAR) has been implemented, which has statistics on all emergency situations since 1992 for all municipalities in the country - a database on disaster risks has been generated and continuously updated in the DAR PC. It is realized in the National Crisis Management Center.

All municipalities have constantly updated the safety data sheets of the territories and action plans in case of emergency. The United Nations Global Campaign to Enhance the Stability of Cities is being implemented in the Russian Federation” My city is getting ready”since 2016 in Russian Federation.

Six Russian cities have joined the UN campaign (Kazan, Naberezhnye Chelny, Almeteyevsk, Derbent, Kaspisk, Buinaksk).

In the future, it is planned to bring to 100 cities of campaign participants in 2018, combining the tools of the Campaign "My City Is Preparing" with the APC "Safe City".

The main document regulating urban planning is the town-planning code of the Russian Federation. Territorial planning, development planning of territories, territorial zoning taking into account risks of natural and technogenic character at the national, subject and local levels.

Out of all emergency situations, more than 88% are local and municipal emergency situations. Of 2673 emergency situations of the period 2009-2016 under review in the Russian Federation. A significant part (88.7%) died as a result of man-caused emergencies, the share of deaths in natural disasters was 5.3%, and in biologic-social emergencies - 2.6%.

### Strategy

The approach to the formation of an integrated risk index is being developed at the level of a pilot entity (Krasnodar Territory)

The methodology of constructing an integral risk index based on a set of indicators reflecting: natural and man-made hazards, vulnerability (population, facilities and territories), counteraction potential (forces and means of prevention, response and emergency response, and engineering protection of territories from natural hazards processes).

The aim of the work is to collect, analyze, systemize, use and provide open access to information on the risk of emergencies for the subjects of the Russian Federation and municipalities.

### Results and impact

- About the campaign "My city is getting ready": A series of training seminars on the implementation of the toolkit of the UN Global Campaign "My City Is Preparing" were held with the deputies of city administrations and with the chairmen of the municipal emergency commissions. Translated into Russian and adapted to the Russian realities the toolkit of the UN global campaign "My city is getting ready".. The site "Sendai-Russia" was created to reflect news on implementation of the Sendai program in the Russian Federation. [www.srpsrb.org](http://www.srpsrb.org).
- All-Russian congress of rectors and heads of profile departments of Russian universities will held on the implementation of the Sendai Framework Program, the global campaign "My City Is Being Prepared" and the Global Initiative "Millions of Safe Schools" (February 20-21, 2018 year, 400 participants).
- Work continued on the development of Single duty dispatch service of the EDDU municipalities in the Russian Federation. At the expense of budgetary funds of subjects and municipalities, 2,293 EDDS of municipal entities were created.  
Practical construction of pilot segments of the AIC "Safe City" was launched in Sverdlovsk, Vologda, Arkhangelsk, Astrakhan, Kursk regions and the Republic of Karelia.  
In total, the Russian Federation has developed safety data sheets for 2,754 out of 2,788 municipalities, which is 99%.  
The safety certificates of the subjects of the Russian Federation have been developed in all constituent entities of the Russian Federation.  
On the territory of the Russian Federation there are more than 10,000 potentially dangerous objects.

### Challenges and lessons learned

1. Questions and problems on PC DAR: The disadvantage is the lack of the ability to manage risks, we have only a database and calculations of individual risk for statistical events that took place. Therefore, a tool was needed to take into account the three components of the risk index: hazards, vulnerability and the potential for counteraction.
2. On the implementation of the Campaign "My City Is Preparing": there are some organizational and motivational difficulties in using the Campaign's tools and entering the Campaign "My City Is Being Prepared" of Russian cities. So far, only 6 cities have joined.
3. Software for the "Remote Risk Assessment" software package: - still the initial stage of work, calibration of models is required, approbation at a number of other regions of the Russian Federation.

### Potential for replication

1. APK "Safe City" is intended for use in various cities of both the Russian Federation and the CIS countries in conditions of adaptation and observance of intellectual property rights
2. The methodology and methodology of the Dynamic Risk Analysis Program Complex can be used after adaptation to the national specifics of other countries while respecting intellectual property rights. Similarly, regarding the software package Remote Risk Assessment.

### Contact

Name: Elena Arefyeva

Organisation:

All-Russian Scientific Research Institute of Civil Defence and Emergency Management  
EMERCOM of Russia

Doctor of engineering science, Chief Researcher, [vniigochs@vniigochs.ru](mailto:vniigochs@vniigochs.ru)