CITY MAN RISK

RISK REDUCTION

WRITTEN FOR:

EMERCOM Russia
(The Ministry of Russian Federation for Civil Defence, Emergencies and Elimination of Consequences of Natural Disasters)

The IDNDR Secretariat of the United Nations
(The International Decade for Natural Disaster Reduction)

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Dear Readers!

It is perfectly fair to say that modern-day civilization is urban civilization.

The economic and social advantages of living in cities are unquestionable.

At the same time, city dwellers are, to a large degree subject to various types of danger. The fact is that cities develop along social-economic lines – one only has to look at the state of modern industrial technology, the transport industry and the huge construction industry to see that safety factors are often overlooked.

That is the reason why on the edge of XXI Century the scientists worldwide are facing the need to develop quite new approaches to the problem of population protection. The mankind is aware that the real progress is only possible if the balance reached between technical developments and natural environment.

The further development of cities only increases the risk of emergency situation if we continue with the same technologies and infrastructure, as present.

The EMERCOM together with the International Decade for Natural Disaster Reduction have published and are distributing the present booklet which we hope will become a coffee-table book for every family and will help people to be properly prepared in emergency situations.

Sergei K Shoigu

The Minister
of Russian Federation Civil Defense, Emergencies and Elimination of Consequences of Natural Disasters (The EMERCOM)
Protection of Man in the City

Education and public awareness raising – are some of the most important tasks, which the world community has placed upon the International Decade for Natural Disaster Reduction (IDNDR). Each community, city, region and country in general can increase its protection from natural disasters by 15-20 times just by providing the population with information on risk reduction on a regular basis.

The international exchange of experience and knowledge is the most fitting means of accomplishing these tasks in the economic and humanitarian fields. This co-operation is beneficial to all, at the family, business and administrative level.

I am pleased to note that for the past five years the Minister of EMERCOM of Russia Mr. Sergei Shoigu, has been actively involving public organisations and mass media in order to increase the awareness of the population in Russia and CIS countries. The booklet “City, Man, Risk”, which is the Russian contribution to the implementation of IDNDR programmes, is a successful manual on easily understood and concrete assistance for the citizens of cities.

Aspects characteristic of the local city, historical data and, in particular the experiences of native citizens have been selected as examples to broaden the contents of this booklet, which will be useful for teachers and families.

Philippe L. Boulle

Director
International Decade for Natural Disaster Reduction (IDNDR)
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The majority of the population of Russia lives in cities. Modern-day cities have gradually become centres for cultural, scientific, economic and business activities. People come here hoping to get a good education and to improve their standards of living, not to mention to take advantage of the numerous career opportunities that are available in the Arts and Sciences. Consequently, the urban population is constantly growing.

But aside from these everyday advantages, modern cities have also become large industrial centres with a high concentration of industrial facilities which use hazardous technology. Modern day towns also suffer from the negative environmental impact of industry and a high concentration of vehicles and heavy traffic.

There is therefore a high risk of a large scale emergency situation occurring in cities.

Cities General Features:
- Growth of population:
- Collection of cultural centres and economic resources:
- Concentration of potentially dangerous situation.
The answer is easy: it would depend on what sort of an emergency situation.

If you were trapped in a fire it would be firemen; if you fell sick – tell doctors; if you were the victim of a crime – the police; if the water pipes burst – a plumber.

Major industrial plants, factories, energy and scientific facilities, airports and water-treatment plants are usually located in cities.

Accidents at these facilities can give rise to complex emergency situations which may have a considerable impact on the environment.

The problem is that none of the above mentioned emergency services can deal with the consequences of such an accident on their own.

It is therefore specialists from the Russian EMERCOM who must intervene.

### Classification of Urban Risks

**Natural Disasters:**
- Earthquakes
- Floods
- Hurricanes, Storms, Tornadoes
- Landslides, Mudflows
- Avalanches
- Tidal Waves
- Volcanic Eruptions
- Storms at Sea
- Cyclones

**Biological Risks:**
- Epidemics

**Technological Risks:**
- Industrial Accidents
- Accidents at Energy Facilities
- Explosions
- Transport Accidents
- Fires
- Hydro-Dynamic Accidents

The EMERCOM recently carried out R/D for control on emergency situations, analyzing their cause, the risk factors and the extent of the social and economic consequences. This came to the following conclusions for the cities: technological risks make up 64% of all emergencies, next comes biological risks at 7% and then natural disasters at 3%. The remaining emergency situations had no direct link to cities.
EARTHQUAKES

An earthquake is a series of underground shock waves and movements on the earth's surface caused by natural processes within the earth's crust.

In May 1995, an earthquake occurred in the Okhinsky district of the Sakhalin Region which registered 7.9 on the Richter scale and almost totally destroyed the city of Neftegorsk.

In some parts of the world earthquakes occur frequently and are sometimes of great magnitude, cracking open the earth's crust, causing buildings to collapse and claiming human lives.

According to data from the IDNDR and UNESCO, earthquakes claim more lives and cause more material damage than any other natural disaster and are particularly deadly when they occur in built up areas.

The underground point where an earthquake originates is called the hypocentre and the place where the rupture reaches the surface – directly above the hypocentre – is called the epicentre. The magnitude of an earthquake is rated on a twelve point scale.

Earthquake regions in Russia include the Pribaikalie, Kamchatka, Yakutia, Sakhalin, the Caucasus, Primorie, the Urals, Western Siberia, Altai and the Sayans.

**Classification of Earthquakes**

<table>
<thead>
<tr>
<th>Magnitude (Richter scale)</th>
<th>Characteristics</th>
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</thead>
<tbody>
<tr>
<td>1 – 2</td>
<td>Felt by people on the upper floors of buildings</td>
</tr>
<tr>
<td>2.5 – 4.5</td>
<td>Doors open and close by themselves, window panes rattle and ripples appear on water surfaces</td>
</tr>
<tr>
<td>5 – 6.5</td>
<td>It is hard to stay upright, wall plaster cracks and window panes break</td>
</tr>
<tr>
<td>7</td>
<td>Buildings collapse and large cracks appear in the ground</td>
</tr>
<tr>
<td>8</td>
<td>Dangerous deformation of rail and tram lines and of underground pipelines</td>
</tr>
<tr>
<td>9</td>
<td>Buildings are razed to the ground and large crevices appear and swallow up earth. Chunks of land jut out of the ground</td>
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FLOOD

A flood is the temporary inundation of large regions as the result of an increase of water levels in reservoirs, or of rivers or lakes flooding their banks because of heavy rains, high winds or melting snow.

SAFETY TIPS:

- switch off gas, water and electricity supplies;
- move all valuables to upper floors;
- close doors and windows;
- prepare a first aid kit, a three day supply of food, some warm clothing, your documents and money;
- move up to the upper floor of a building or to the nearest high ground;
- look for something buoyant to stay afloat on (tyres, planks of wood, plastic bottles or logs);
- remove your footwear and outer clothing in advance;
- if there is a danger of finding yourself in the water: stuff some light, buoyant objects (balls, plastic bottles) under your clothing.

In Russia, more than 40 cities and thousands of villages are under threat of flooding. Major floods have occurred in Saint Petersburg. Flooding periodically affects the Ural cities of Orsk, Serov, Novotroitsk and Slatoust and Western Siberian cities like Tyumen, Tobolsk, Kemerovo. Flooding of Far Eastern rivers (such as the Amur, the Zeya, the Bureya and the Ussuri) often become disaster areas.

The difference between floods and other natural disasters is that in many cases the time, character and extent of a flood can be forecast. Floods nevertheless rate second only to earthquakes in the number of human lives claimed and are among the top three major natural causes of material losses. Moreover, consequential economic losses from floods are even greater than direct losses.

There are three types of floods. The first is flooding caused by heavy precipitation and melting of snow – flash floods combined with drifting ice are particularly dangerous. The second is floods caused by high winds and the third is floods caused by underwater earthquakes, underwater eruptions and sleeping volcanoes.
HURRICANES, STORMS AND TORNADOES

A HURRICANE —
is a storm with winds that reach a speed of over 30 metres per second and which wreaks great destruction. They usually occur in August and September.

A STORM —
has strong, constant winds that reach a speed of 60-100 kilometres per hour. The storm season is from April to September.

A TORNADO —
is an atmospheric vortex which is spawned in thunderclouds and is produced when cool air overrides a layer of warm air forcing the warm air to rise rapidly. It often touches down on the earth's surface. The tornado season generally occurs between March and August though tornadoes can occur at any time of year.

SAFETY TIPS:
- close all doors and windows on the up-wind side of the building and open them on the down-wind side;
- remove all articles which might be swept away by the wind from balconies and window-ledges;
- if possible, hide in a shelter;
- if caught in an open space lie in a depression, a ditch or a gutter and press yourself firmly to the ground.

Hurricanes, storms and tornadoes are the third greatest natural cause of human loss of life (after earthquakes and flooding) and also cause major destruction. They are meteorological events caused by cyclonic activity in the Earth’s atmosphere. The frequency and destructive power of hurricanes, storms and tornadoes noticeably increase in areas where forests have been chopped down. Please take note of this. Regions in the Volga basin, Siberia, the Urals, the Black Sea coast, the Primorie and Khabarovsk regions, Kamchatka, the Volga-Vyatka region, and the Pribaikalie, Moscow, Yaroslavl and Ivanovo regions are all susceptible to hurricanes, storms and tornadoes.

Aftermath of a hurricane

An approaching tornado.
LANDSLIDES

are slippery masses of rock, earth or debris which move by force of their own weight down mountain slopes or river banks.

In January 1989 a landslide 2 kilometres long and 300 metres wide occurred in the Gissar Valley in Tadzhikistan. It covered an entire village with a layer of earth from between 15 to 20 metres in depth.

SAFETY TIPS:

- constantly monitor soil movement, drainage pipes and the sewerage system;
- prohibit explosions or soil excavation in the vicinity of areas subject to landslides;
- protect trees, shrubs and grass in the area and plant trees here;
- erection of various engineering facilities.

During heavy rains or floods, water saturated clay is eroded from river valleys and carries along with it large quantities of earth together with any constructions or roads which might be in its path. This is a landslide. Landslides rank among the top ten natural disasters in terms of direct material losses. Landslides occur when the natural stability of soil on slopes is disrupted due to natural processes or human interference.

A landslide moves at a speed of dozens of kilometres per hour.

Russian cities which are most susceptible to landslides are: Volgograd, Volsk, Voronezh, Kazan, Kaluga, Krasnodar, Krasnoyarsk, Moscow, Nizhnii Novgorod, Ryazan, Saratov, Sochi, Stavropol, Tver, Ulyanovsk and Ufa.
MUDFLOW

Mudflows occur as a result of the rapid melting of snow and ice, burst water reservoirs, heavy rainfall or of earthquakes and volcanic eruptions. Mudflows can reach speeds of 35 kilometres per hour. Regions which are most susceptible to mudflows are the Northern Caucasus, the Urals, Altai, the Sayans, Pribaikalie, Primorie, Kamchatka and Sakhalin. At present mudflows cannot be predicted. Mudflows can occur gradually or unexpectedly. Cracks or crevices in the ground may indicate a mudflow is imminent and if they are noticed in time it is possible to prepare for this natural disaster and minimize the damage.

SAFETY TIPS:

- Leave the danger zone;
- Leave the building and switch off the gas and electricity supplies;
- If a person is caught in a mudflow all possible efforts should be made to rescue him with ropes and poles;
- Pull him gradually towards the edge of the mudflow but do not pull him against the current;

Special protective structures are built to prevent mudflows and protect cities. These include bulkheads to block the flow of solid sewerage and drainage ditches.
AVALANCHES

An avalanche —
is a mass of loose snow or ice which slides rapidly down a mountain slope.

A
n avalanche can hit you with the force of up to 50 tons per square metre. The force of 3 tons per square metre will knock down a wooden building and the force of 10 tons will uproot trees. An avalanche may travel at speeds varying from 25 to 75 metres per second.

Prevention Tips:
- try not to go into a mountainous region following a heavy snow-fall;
- try not to walk on snow-covered mountains in the morning and even then exercise extreme caution;
- in mountainous areas which are liable to avalanches pay particular attention to weather forecasts and local radio reports.

An avalanche is accompanied by a deafening noise and is preceded by a solid air wave which causes destruction and suffocation.

The most dangerous slopes are those which incline at an angle of over 20 degrees.

Towns in the mountainous regions of the Kola peninsula, the Northern Caucasus, the southern area of Western Siberia, Eastern Siberia the Far East and Sakhalin are all prone to avalanches.

Safety Tips:
- throw away all your things and lie down flat;
- cover your nose and mouth with a glove or scarf to avoid suffocation;
- if caught inside the snow move your arms and legs in a swimming motion to stay on the surface;
- try to clear the snow in front of your face to help you breathe;
- don't panic — have faith that help is on its' way;
- don't fall asleep;
- nurse your strength.
TIDAL WAVES (TSUNAMIES)

Tidal waves are a result of earthquakes, volcanic eruptions, landslides or nuclear explosions. They are immensely powerful and travel at great speed. As it approaches the shore the wave grows significantly bigger and destroys everything on the coastline. A tidal wave can vary in length from 150 to 300 kilometres and can reach up to 50 metres in height as it approaches the shore. The average speed of a tidal wave is from 50 to 1,000 kilometres per hour. They usually occur in the Pacific Ocean. In Russia the risk areas are the Kuril Islands, Kamchatka and Sakhalin.

SAFETY TIPS:
- Seismic monitoring of the ocean bed and coastal areas;
- Warn the public and city authorities of the imminent approach of a tidal wave;
- Evacuate the populace to a safe area;
- Build breakwaters;
- Escort ships out of ports and into the open sea.
VOLCANIC ERUPTIONS

VOLCANOES

occur as a result of geo-physical processes in the bowels of the earth. Active volcanoes in Russia are located in Kamchatka and the Kuril islands.

SAFETY MEASURES:

- on-going monitoring by specialised stations;
- a reliable early warning system for the public and for local authorities;
- prohibit the construction of industrial facilities, living quarters, roads and rail-roads near the foot of volcanoes. Also prohibit the use of explosive devices near volcanoes.

Lava flows, volcanic rock falls, mudflows, flash floods, and volcanic clouds and gases erupting from the volcano all represent dangers.

Large volcanic rocks can be thrown to a distance of several kilometres from a volcano’s crater. Volcanic ash settles up to hundreds of kilometres around the volcano. It contaminates the atmosphere and may even influence the weather and the climate.

Town dwellers who live in the vicinity of volcanoes should be aware of evacuation plans and routes.

On hearing a warning of an imminent volcanic eruption one should immediately quit the building and go to the nearest evacuation point.
THE "EMERGENCY BELT" OF RUSSIAN CITIES

City, Man, Risk 13
ACCIDENTS IN RADIOACTIVELY DANGEROUS PLANTS

The main danger for people in zones of nuclear fallout is from internal radiation – that is the radio-nuclides which enter the body through breathing, eating or drinking.

To reduce the intake of radioactive dust which occurs during inhalation, cover your mouth and nose with handkerchiefs, napkins, towels or bandages.

The damage from external radiation can be limited by clothing, particularly heavy clothing such as coats, jackets and snow-suits.

You should also wrap up in scarves, gloves and boots.

SAFETY MEASURES:

- wear a gas mask or a respirator;
- turn on a radio and listen to information from Civil Defence headquarters;
- close all windows, doors and ventilation valves firmly and insulate the windows;
- try not to go outside;
- take sodium-iodine pills. One dose protects you for 24 hours.

Measuring the concentration of radio-nuclides in farming products
ACCIDENTS IN CHEMICAL PLANTS

SAFETY MEASURES:
- cover your nose and mouth with a damp cloth;
- move quickly but not at a run and do not kick up dust;
- try to reach high ground;
- on entering a contaminated area wear a hat, a heavy coat and rubber boots.

ON LEAVING THE CONTAMINATED AREA:
- breathe deeply several times to clear your lungs;
- rinse your eyes and exposed parts of the body with water;
- drink as much tea, coffee or milk as you can;

INDOORS:
- turn off the electricity supply;
- turn off the ventilators;
- make sure the premises are well insulated;
- move up to the upper floors of the building.

In the event of an accident, factories which produce, or use, chemically dangerous substances are a danger firstly to their own employees and then to the urban population.

Over the past six years almost 400 accidents which resulted in the release of chemically toxic substances have occurred in Russia. Three thousand people suffered in these accidents. Over 90% of these accidents occurred in industrial bases located in or near cities.
INDUSTRIAL FIRES AND EXPLOSIONS

IN THE EVENT OF FIRES OR EXPLOSIONS OCCURRING IN INDUSTRIAL FACILITIES, PEOPLE ARE EXPOSED TO THE FOLLOWING DANGERS:

- shock and heat waves;
- the fire spreading to residential areas;
- combustion of various products;
- falling structural materials or machinery;
- low oxygen levels.

![Image description: Aerial view of an industrial area with text about the most destructive fire ever to occur in an industrial plant.]

The most destructive fire ever to occur in an industrial plant occurred in the KamAZ enterprise. It destroyed over 420 thousand square metres of the factory.

SAFETY MEASURES:

- build solid protective barriers which will hinder the spread of a fire;
- make sure that industrial plants which represent a potential fire or explosive risk are not located in or near built-up areas;
- create a permanent emergency team.

Virtually every Russian city has one or more facilities which manufacture, store or transport explosive or highly flammable materials. Under certain conditions these substances are liable to explode or burst into flames. Such factories include oil and chemical processing plants, pipelines, oil storage tanks, gas stations, powdered sugar factories, flour mills, wood processing plants, etc. Fires and explosions occur most frequently at factories which use large quantities of gases such as methane, ethane, and propane.
ACCIDENTS AT HYDRO-ELECTRIC POWER PLANTS

Dangerous hydro-electric power plants require artificial dams, dykes and other hydro-electrical equipment.

SafetY MeASUres:
- restrict the construction of dams in built-up areas which might be flooded in the event of a dam-burst;
- the erection of earth banks around built-up areas;
- the construction of reliable drainage canals and reinforcement of water reservoir walls;
- reinforcement and water insulation of buildings;

ProTECTive MeASUres:
- work out evacuation routes in advance;
- try to move to high ground;
- when the water begins retreating, stay clear of torn or hanging electric cables;
- drink only clean water;
- use only battery operated flashlights for illumination.
TRAFFIC ACCIDENTS

SAFETY MEASURES:

- Both driver and passengers should tense up before impact;
- Do not leave the vehicle before it has come to a complete stop;
- Do everything possible to avoid a head-on collision;
- Passengers should protect their heads with their arms and roll onto their sides;
- If there is a child in the car, hold it tightly to your body and roll onto your side;
- The driver should push his feet against the floor, hold tightly to the steering wheel and drop his chin onto his chest;
- Stay calm and do your best to stay in control of the vehicle until it reaches a complete standstill;
- If the car is submerged by water – climb out through an open window;
- Drivers and passengers will be up to three times more likely to be killed in a head-on collision if they do not have head rests and seat-belts, and are five times more likely to be killed without them if the car overturns.

Every year the number of cars in cities is growing. The main causes of traffic accidents are the violation of traffic regulations; speeding; drunk driving and poorly maintained cars and roads.

All of these reasons lead to a rising number of road accidents and increased road fatalities.
Various types of dangerous cargoes are transported on rail-roads from oil products, fuel and compressed gas to military weapons and radio-active waste. The most common types of accidents on rail-roads are fires and derailment.

**SAFETY MEASURES:**

- only cross rail-way lines at official crossings;
- at rail-way crossings pay attention to light or sound signals and to the swing-beam barrier.
- while on a moving train do not lean out of the window, do not stand on the steps leading up to the door and do not open the door.
- place your luggage carefully on the upper shelves
- do not pull the emergency stop cord unnecessarily
- do not stop the train on a bridge, in a tunnel or in any other place where evacuation will not be possible even if a fire has broken out in the carriage
- do not smoke in restricted areas
- do not take highly flammable or explosive material on the train
- in the event of an accident, tense up your body
- push your feet against the floor and drop your chin onto your chest
- try to stay calm and collected
AIR ACCIDENTS

SAFETY MEASURES:

DECOMPRESSION.
LOW OXYGEN LEVELS IN THE COMPARTMENT
- put on your oxygen mask immediately;
- fasten your seat belt and prepare for a rapid
descent or a difficult landing.

DURING TAKE OFFS AND LANDINGS
- wear outer clothing and shoes as they will pro-
tect you from burns and bumps;
- remove your tie, scarf, spectacles, hair pins etc.
and make sure you fasten your seat belt;
- assume the ‘safe’ position — bend over so that
your head is as close to your knees as possible and
clasp your arms tightly round your legs. Stretch your
legs out as far as possible (but not under
the seat in front of you) and press your feet
onto the floor. Tense your body as you ap-
proach impact;
- do not leave your seat until the plane has come to a complete stop. Do not panic.

AN IN-FLIGHT FIRE
- remember where the exits are;
- protect your skin by wearing a hat, coat
and blanket;
- try not to inhale smoke. Bend over and
crawl towards the exit on all fours;
- don’t contribute to a crowd situation.
Leave behind your carry-on luggage;
- be decisive and disciplined, assist the
cabin staff and try not to panic.
At present all Russian cities have a centralized early warning system to inform the public of the likelihood of an emergency situation which might put lives at risk. The system is on constant alert. Similar localised early warning systems (LEWS) exist in industrial facilities to warn the employees and local population of the imminent danger.

Electric sirens in cities and factories are most frequently used to signal the 'General Alert!'

Subsequent information is provided to the public via the cable network, radio and television.
More and more bomb blasts are occurring in Russian cities and it is vital to pay serious attention to this new problem. The causes vary from attempts to stir up panic among the populace, to trying to do away with business competitors.

Terrorists place explosive devices in the most unexpected places: on roads, in public places, in residential quarters and on public transport.

At present they might use hand grenades, mines or even home-made explosive devices hidden in any sort of object.

Car bombs are on the increase. Bombs are simply placed inside the car so if you see any odd-looking package or object inside or outside the car, be on your guard and don’t touch anything. If, on opening the car door you see an unfamiliar object or a hand grenade fall out, the first thing you need to do is run away because you will have only three seconds before it goes off! Be wary of objects left on their own in public areas – suitcases, boxes etc. Inform the police or a driver on public transport but do not approach the object yourself and don’t let other people do so.
EPIDEMICS IN CITIES

Various steps should be taken to prevent the spread of infectious diseases in towns. These include finding the source of the infection and liquidating it, also preventing the further spread of the infection and immunizing the population.

SAFETY MEASURES:

- do not leave the house unless absolutely necessary and avoid crowded places;
- if you can take the temperature of all family members;
- wipe all the furniture with a damp cloth every day;
- make sure you wash yourself thoroughly and frequently;
- only use water taken from safe sources and do not drink water straight from the tap;
- rinse fruit and vegetables with boiling water after having washed them;
- wear a lab coat, cap and mask when treating infected persons;
- make sure the infected person has a separate bed and towel;
- disinfect the common patients' room twice a day;
- people who are nursing infected persons must not go out to work or visit other apartments.

Follow the advice of the local health authorities to the letter!
CITY AND ECOLOGY

ECOLOGICAL CONDITIONS IN CITIES ARE AGGRAVATED BY:

- industrial facilities such as factories and other plants;
- road transport;
- the reduction of green areas which help to purify the air.

As a result, the incidence of bronchitis, pneumonia, allergic reactions and blood circulation deficiencies are more common among city dwellers than those who live in the country.

SAFETY MEASURES:

- do not spend long periods of time in factories producing pollution;
- try to stay away from highways;
- don’t walk along city streets in foggy weather – it may be smog;
- don’t swim in water reservoirs where factory waste is dumped;
- do not go outside in rainy weather without a hat;
- boil water before drinking;
- rinse fruit and vegetables in warm boiled water.

More and more people are coming to live in the city. Cities are therefore growing and turning into vast municipalities but the concentration of all sorts of factories and industrial plants together with car exhaust, leads to the pollution of the atmosphere, the soil and the water. Entire regions are now considered ecologically unsafe. The worsening ecological climate poses an increasing threat to public health.
FIRE PREVENTION IN CITY APARTMENTS

SAFETY MEASURES:

- purchase a fire-extinguisher and learn how to use it;
- on leaving your flat make sure that you have turned off all electrical and gas devices;
- don’t plug several devices into one socket and don’t block the socket;
- don’t keep petrol, kerosene or other highly flammable liquids in the apartment or on the balcony;
- do not smoke in bed;
- keep matches away from children;
- put heaters on fire-resistant pads;
- do not block access to water hydrants in stair-wells;
- in the event of a fire call the fire department, provide them with your exact address and the nature and location of the fire;
- remember basic fire safety rules and your evacuation route;
- only leave your flat if you are sure there is no-one left inside;
- crawl along smoke filled corridors on all fours or on your belly – there is less smoke near the floor.

These are just a few of the basic fire safety tips but if you follow them you will save your house and your life.

REMEMBER THE EMERGENCY NUMBER FOR THE FIRE BRIGADE IS 01
EMERGENCY SITUATIONS IN SCHOOL

IN THE EVENT OF AN EMERGENCY SITUATION

Immediately alert the police and the fire brigade and evacuate all the students from the building.

SAFETY MEASURES:

- do not panic;
- use emergency exits to leave the school building;
- do not waste time collecting your belongings – lives are more valuable;
- learn how to use the available fire extinguishing equipment.

IN THE EVENT OF MERCURY BEING SPILLED:

- isolate the spill;
- open all the doors and windows, call the hospital, the police and a representative of the local Emergency Situations headquarters;
- escort the students out of the school building.

IN THE EVENT OF A BOMB SCARE:

- immediately leave the school building;
- inform the police;
- do everything possible to avoid a panic and follow the school evacuation plan.

City, Man, Risk
PUBLIC TRANSPORT

The Metro is a vast underground system. Most accidents happen on the escalator. If you are not holding on to the rail you will be thrown sharply forward when the escalator comes to a sudden stop. A person sitting on the steps of the escalator is likely to find his clothing stuck in the side or between the steps of the escalator or might be thrown forward head-first. If you drop something down the side of the escalator do not try to get it out yourself but tell the escalator attendant.

SAFETY MEASURES ON PUBLIC TRANSPORT:

- do not wait alone at empty bus-stops when it is dark
- do not stand at the front of an angry crowd – you might be knocked under the wheels of the transport you are waiting for
- do not fall asleep on public transport – you not only risk missing your stop but you might be injured if the vehicle comes to a sudden stop or turns sharply
- do not lean against the door and try not to stand on the steps leading up to the door
- keep an eye on your belongings
- avoid empty buses, trolley-buses and trams. Women are advised to sit next to other women
- if a bus or tram inspector asks to see your ticket check his documents thoroughly. Dozens of young people pose as inspectors every day in Moscow in order to make themselves some money
- in the event of a fire tell the driver immediately and do not panic
- in the event of an emergency use the emergency exit. If it will not open then break one of the side windows
- try to put the fire out yourself by using a fire extinguisher if there is one, or by covering the source of the fire with heavy clothing.

IF YOU FALL ON THE RAILS:

- do not try to pull yourself up onto the end of the platform;
- if a train is not approaching run to the beginning of the platform;
- if a train is approaching lie flat between the rails;
- if you are in a tunnel flatten yourself in special niches in the tunnel wall;
- if you leave your belongings in the train try to remember which compartment it is and the number of the train – it is written on the window of the last car;
- don’t investigate bags or suitcases which appear to have been left behind. Call a metro employee.
Traffic Accidents

Characteristics such as rudeness, arrogance and carelessness are simply unpleasant in normal situations but on the road they can be deadly.

Cars often catch fire as a result of a collision. Drivers who see a car on fire should use their own fire-extinguishers to try and put out the flames. Help the victim of a car accident (leaving the scene of an accident and not offering help to victims is a criminal offence and is punishable by law.)

Immediately report an accident to the State Traffic Safety Inspectorate (STSI) and call an ambulance.

Give the victim first aid and then take him to the nearest hospital.

A collision often causes the car doors to jam and the driver cannot get out of the vehicle. In such an event immediately call the rescue services. You should always have a first-aid kit and the number of the STSI and other rescue services in your car.
INJURIES AND POISONING

POISONING

- immediately induce vomiting by giving the patient large quantities of fluids (juice, water, warm milk or raw eggs);

- in the event of chlorine poisoning make a person inhale a mixture of oxygen and alcohol vapour. In the event of ammonia poisoning make him inhale oxygen and drop 30% albuicide solution in his eyes;

- in the event of a dangerous over-dose of alcohol, chemicals or drugs do not offer the person food or drink but induce vomiting by pressing a spoon or your fingers on the base of the tongue;

- if the patient has lost consciousness, put him face down with his head lower than his body and call the doctor.

SLIPS:

- remove the victim from the fire zone as quickly as possible. If their clothes are on fire smother the flames with a blanket or coat;

- dress the burn with a sterile bandage or cloth;

- send the burn victim off to a burn centre as quickly as possible.

FRACTURES:

- try to avoid moving the fractured arm or leg. Fix it securely with a splint;

- in the event of an open fracture and heavy bleeding tie a cord above the wound to stem the flow of blood then dress the wound with a sterile bandage and only then fix a splinter.
DROWNING

- first look for life-saving equipment and call for help
- try to calm the drowning person
- swim up to the drowning person, dive underneath him and taking him from behind (by the hair for example) and pull him back to shore.
- if the drowning person tries to grab you by the neck, arms or legs, dive down and free yourself.
- if the person has already sunk underwater continue your efforts to rescue him.

If you see that a person is drowning, immediately swim up to him and let him know that you are coming. Once you get the person to shore, provide first aid and send someone to call an ambulance.

Firstly you should clean any mud and silt out of the nose and mouth.

Place him face down over a log or your knee so that his head hangs down and press firmly on his back to remove any water from his lungs, airways and stomach.

Turn him over onto his back, push his head back to open the air passages and perform mouth-to-mouth resuscitation.

At the same time massage the heart until the victim is breathing normally. Continue massaging the heart and performing mouth-to-mouth resuscitation until the victim is breathing and if possible get someone else to help you.

Once the victim is breathing, cover him with a warm blanket and give him hot tea.

Keep on giving mouth-to-mouth resuscitation even if the victim does not seem to be reacting until the ambulance arrives.

YOUR ACTIONS COULD SAVE HIS LIFE!
CITY EMERGENCY SERVICES
(Please put your local phone numbers)

CITY INTEGRAL CONTROL SERVICE

- City rescue services
- City electric services
- Hydro-meteorological service
- River port controller
- Railroad controller
- Airport controller
- Municipal services
- Controller of city economic facilities
- Public transport controllers

EMERGENCY SERVICES INCLUDE:

- (01) fire department
- (02) police
- (03) ambulance
- (04) gas service

Apart from the above, there are also many other emergency services available in cities. Each service has its own operator and is open round-the-clock.

A City Integral control Service is being set up in every town at the initiative of the Russian Ministry of Emergency Situations. The service is designed to co-ordinate the activities of the emergency services in the city and monitor information on the activities of said services in dealing with major accidents or natural disasters.

How to contact the rescue service of the Russian EMERCOM:

Moscow city telephone network: 937 99 11
(multiple lines are open to report emergencies.)
Moscow cellular phone network: 007
Radio telephone network ‘Altai’ - 999
Pager for Rescue Services: 974 01 11, 215 70 01, 216 61 01. Number: 911
Scientists from various countries have noticed that many animals and plants can sense an earthquake before it happens. Animals become agitated several hours or even several days in advance. In north-east Italy for example, several hours before an earthquake struck on the 6th May 1976, the birds and animals literally seemed to go mad; dogs howled, cats yowled, cows were lowing in the fields, flocks of birds swirled around in the skies and rats and mice ran out of their holes and went running down the streets. Long-term observation of the behaviour of spotted sheat-fish has shown that they begin to show agitation (swimming rapidly around in their tanks) for up to three hours before an earthquake occurs. Scientists have also discovered that the leaves of flowers, bushes and trees change colour several weeks before an earthquake occurs because of the increased concentration of natural gases in the ground. After the earthquake the colour quickly returns to normal.
WHAT TO DO DURING AN EARTHQUAKE

AT SCHOOL:
- follow the school emergency plan;
- give clear instructions to the students;
- check that all the students have left the premises by checking them off on a list;
- take school and pre-school children directly to a pre-arranged point where parents can collect them.

IN THE STREETS:
- do not use public transport;
- avoid blocked streets;
- stay at a safe distance from buildings, electric cables, tall towers and water reservoirs;
- stay away from fires;
- watch out for falling cables and glass.

AT HOME:
- do not panic;
- hide under a table or near a wall or column;
- stay away from windows and electrical devices;
- move children to a safe place;
- open the doors and stand in the doorway;
- turn on the radio and listen to emergency information;
- do not use the lift or light a match;
- walk down the stairs staying close to the wall;
- if possible turn off the gas and electricity supplies;
- take documents and valuables with you.

IN PUBLIC AREAS:
- avoid crowds;
- do not panic;
- try not to fall over;
- if you are drawn into a crowd protect yourself by crossing your arms.

IN A CAR:
- do not stop under bridges, pipelines or electricity lines;
- drive in the middle of the road at a safe distance from trees.

IN THE METRO:
- be prepared for the electricity to go off in the compartment;
- underground metro stations provide a reliable shelter.
HOW TO ACT IN A CROWD IN THE CITY

It is vital to remember that in any emergency situation you must not panic!

SURVIVING IN A CROWD

If you are preparing to go to a street meeting or a crowded concert or sporting event do not take children with you, do not take any sharp or cutting objects with you, take off any badges and make sure you have some ID on you. Also do up all the buttons on your clothing. If you have been swept into a crowd try not to let yourself be taken towards the middle, avoid all stationary objects which might be in your path – lampposts, vehicles or trees. The main thing to do in a crowd is to make sure you don’t fall over. If you have fallen however, cover your head with your arms and slowly try to get up. Do not approach aggressive groups of people. Try to avoid crowds altogether. Do not try to get closer to the microphone, platform or stage: experience shows that these are the most dangerous places.

Aggressive acts such as throwing stones at windows, overturning cars or wounding others are extremely dangerous when in a crowd.

If you drop something in a crowd never under any circumstances try to pick it up – your life is more valuable.

If panic sets in, try to evaluate the situation rationally and come to a decision. Do not panic!
LEARN HOW TO RELAX IN THE WATER.

First method:
Lie on your back and spread-eagle your arms and legs, close your eyes, put your head back and relax. Breathe in and out deeply.

Second method:
Breathe in, lie face down in the water and clasp your knees to your chest then slowly breathe out into the water before taking another quick breath on the surface.

SAFETY MEASURES

- do not dive in unfamiliar waters;
- do not swim beyond the buoys;
- do not swim in shipping routes and do not approach vessels;
- do not use air mattresses;
- do not play fighting games in the water;
- and do not swim while drunk.

On a hot summer day many city dwellers seek relief from the cracked asphalt, and stifling public transport and buildings by heading for city water reservoirs. However, not everyone is able to swim or knows basic safety rules.

If you get a cramp while in the water you should dip underwater, stretch your leg out and pull hard on your big toe.
The information in this list will be useful for you, your relatives and your friends.

Always keep this information at hand and try to keep it updated.

You can get all the necessary information from the City Department of Civil Defence and Emergency situations or from the City Integral (United) Control Service.

You can also use local branches of these services in your factory, enterprise or housing committee.

**PLEASE FIND OUT THE FOLLOWING DATA AND WRITE IT DOWN IN THE FOLLOWING LIST:**

<table>
<thead>
<tr>
<th>Item</th>
<th>Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Telephones: Officer of the City Department of Civil Defence and Emergency Situations</td>
<td></td>
</tr>
<tr>
<td>City Integral Control Service</td>
<td></td>
</tr>
<tr>
<td>City Rescue Service</td>
<td></td>
</tr>
<tr>
<td>Address and telephone number of the nearest hospital</td>
<td></td>
</tr>
<tr>
<td>Location of shelters</td>
<td></td>
</tr>
<tr>
<td>Telephone number and location of evacuation points</td>
<td></td>
</tr>
<tr>
<td>Address for personal safety equipment</td>
<td></td>
</tr>
<tr>
<td>Place of residence</td>
<td></td>
</tr>
<tr>
<td>Place of work</td>
<td></td>
</tr>
<tr>
<td>Frequencies of local radio programmes</td>
<td></td>
</tr>
</tbody>
</table>

**NECESSARY ITEMS IN THE EVENT OF AN EMERGENCY:**

- Documents and money
- First aid kit
- Food and water
- Flashlight and batteries
- Radio set
- Envelopes, paper and pen
- Set of table-ware
- Suitcase (bag)
Note from the Publisher

At the present time we have received an order for 40,000 copies of the booklet “City, Man, Risk” from virtually every region of Russia, mostly from local authorities, teachers, public organisations and various businesses which develop ecological programmes for small and medium sized enterprises.

With your support we also hope to distribute this booklet to many schools and colleges through Russia and to supply this new, useful material to students of teacher training colleges. This will help public ecological organisations in their educational work, especially on a family level.

This booklet is distributed on a non-profit basis. In spite of a great deal of sponsorship received to help increase the circulation of this booklet, the print run may be insufficient. We therefore kindly ask you to look for local financing of additional orders, again on a non-profit basis, and to refer them to the publishing group “Olita” - please see address below.

Shall you have a local sponsor for an extra print run we will be happy to send you the original lay-out of the booklet under a non-commercial agreement.

© Viatcheslav Korzenko
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