WATER FOR PEACE IN THE VOLGA RIVER BASIN
MARCH 2003, DRAFT REPORT

The main challenge in the Volga basin is dealing with the legacy of the Soviet military establishment. The Volga basin covers 10% of the total territory of the Russian Federation, contains 39 Republics, some of them autonomous, and has a population of almost 60 million. The biggest problems stem from major industrial complexes, big dams, big cities and maintaining navigability; all of which can be traced back to the military complex of the former USSR. The problem being faced now is that this system and all of the associated infrastructure exists, and, although it is extremely expensive and inefficient, it must somehow be maintained.

Today Russia is in a period of transition; in Soviet times, the different Oblasts were centrally controlled, now they must make their own decisions, including those about water management, and pay for them. The Volga basin includes several large cities, each of which pollutes a reservoir belonging to another further downstream causing a great deal of provocation and some permanent conflict situations. The oblast boundaries were drawn-up arbitrarily and cut across the basin. Formerly, conflicts would have been addressed by the national minister in charge of water, with decentralisation there is no established management system to resolve problems between regions.

The most urgent need is to establish a new system of communication between the different levels of governance – local, state and national – and begin to develop a modern management structure. The problem is finding the funds needed to maintain, de-centralise and diversify the old Soviet system. A clear legal structure linking the local, state and national levels would help guide and regulate decision-making, and once this is done it will be possible to begin to change the system that was originally constructed for military needs into one that will support the movement towards a democratic state and the sustainable development of the basin. This project aims to provide a first step towards the urgently needed transition of the management and legislation of the whole basin, to make people aware of the conflict and environmental disaster potential of leaving matters as they are, and begin to identify clear strategies to resolve existing conflicts in a transparent and regulated way.

BACKGROUND

The Volga river basin covers 1358 thousand km^2, spans 39 subjects of the Russian Federation, some of which are autonomous republics, and two regions of Kazakhstan. The population of the basin is approximately 57 million persons, including 40 % of the total population of Russia. The run-off of the Volga varies greatly from year to year; since 1881 the highest river run-off was registered in 1926 at 382 km^3, and the lowest was 161 km, in 1937. The average Volga run-off near Volgograd is 254 km^3. 2600 rivers supply the Volga and its reservoirs directly. The

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estuary of the Volga lies 28 m below the sea level and the difference in elevation from the source to the estuary is 256 m. The Volga is the main source of water entering the Caspian Sea, the largest internal-drainage basin in the world, and its biodiversity includes 90% of world sturgeon reserves. The Volga-Kama river system is the main transport artery of European Russia and is in the structure of the important Trans-European transport corridors; the volume of traffics reaches 20 million tons annually.

Alongside the many rivers which form the basin water system, and which are the main source of drinking and technical water supplies for this enormous region, are a large number of hydroelectric power stations which provide 13 % of the basin's electric power complex. Hydroelectric stations were constructed on the Volga and Kama with power generation of up to 2,5 million kilowatts (Ivankovo, Uglich, Rybinsk, Gorki, Cheboksary, Kama, Votkinsk, Nizhnekamsk, Kuibishev, Saratov, Volgograd). The large-scale dam building in the Volga basin has radically altered both the hydrological and thermal regimes of Lower Volga and the delta of the river. The creation of a cascade of large reservoirs, especially on Lower and Middle Volga, have led to huge losses in run-off due to additional evaporation from their surfaces. Coupled with the unsustainable water consumption, especially in connection with the development of irrigation, the river run-off is now only 10 % of the natural levels. The dams and reservoirs have also reduced the volume and duration of floods, broken the natural seasonal dynamics of run-off, given rise to winter floods, eliminated stocks of sturgeon and other fish species, and negatively effected conditions for spawning. Overall catches of river fish have been reduced to less than a quarter of the1930 level.

The creation of the artificial lakes cascade on Volga reduced the speed of the stream and increased bacterial pollution by more than 10,000 times. Additional pollution caused by the approximately 450 oil and gas fields in the basin, producing approximately 80 million tons of oil and 40 billions cubic meters of gas annually. This has resulted in a steep rise in the cost of the drinking water, and necessitated the use of new, more power-intensive and expensive methods of water treatment.

Not surprisingly, not one single Volga basin city is currently provided with drinking water which conforms to the standard of the Russian Federation. None of the cities located within the territory of the Volga basin has a storm waters sewerage system to clean surface discharge to normative requirements. According to statistics, 21 km3 of sewage water is discharged into surface waters of the Volga basin annually, including 11 km3 of under-treated and non-treated sewage. `

The dam creating the Cheboksary reservoir is the last of the Volga cascade, situated down-stream of Nizny Novgorod. It is important that the dam is in Chuvash republic – an autonomous subject of the Russian Federation. The construction of the dam began in the1970s but the hydro power station remains unfinished. After the filling of the reservoir, low lying sections of Nizny Novgorod and some agricultural lands were flooded and further rising of the reservoir level was stopped. From the point of view of energy efficiency the reservoir level must be raised, but a lot of land up-stream will be lost. Every spring, Nizny is threatened with floods. The Chuvash republic's interest in "cheap" energy means a loss of territories, rise of ground waters in the epublic Mary-Al, and floods in the Nizny Novgorod area. No legal procedure exists for the resolution of such conflicts, so the relations between Nizny Novgorod Oblast and Chuvash Republic remain very tense.

MAIN PROBLEMS TO BE ADDRESSED

- Absence of the legislative and normative base for sustainable development of the Volga basin and prevention of water conflicts.
- Insufficient maintenance regime for reservoirs, including flood control.
- Non-effective economic mechanism of natural resources management in the Volga basin.
- The lack of an effective system of environmental monitoring in the basin.

- Inadequate public involvement in conflict situations in water consumption sphere; public opinion has little impact on decision making.
- Absence of networking, cooperation, and other public bodies for the control of water consumption by water users or to protect human rights of the local population in water conflict situations.
- The lack of information on the correlation between social and environmental factors, the environmental impact on health of the population, demography, social stability, well-being needed to increase public awareness and interest.
- Poor quality of drinking water in cities and settlements of the Volga basin, absence of systems of a water treatment and sewage systems management in small cities and settlements.
- Poor safety of the existing hydraulic engineering facilities and instability of the coastal zone.
- Environmentally unfriendly navigation (safety, channel-cleaning, sewage management on ships).

CHARACTERISTICS OF THE CONFLICTS

- Conflicts between the subjects of the Federation situated on the Upper and Lower Volga as a result of absence of any water pollution compensation mechanism.
- Conflicts between the subjects of the Federations in the sphere of reservoirs management, in particular, hydraulic power stations maintenance which leads to waterlogging, bogging, loss of residential agricultural land, rising of ground waters in up-stream region.
- Conflicts between the subjects of the Federation regarding fishing zones.
- Potential conflict: the Russian Federation has opened its internal waterways for foreign ships. This will aggravate the existing conflicts.
- Conflicts between municipalities, the power engineering industry and agriculture. Power engineering industry saves money by not following river protection measures. Organic pollution of water is increasing, making drinking water provision more expensive.
- Conflicts between municipalities. Upstream cities discharge waste water without sufficient treatment, as they are not required to pay compensation.
- Conflicts between definite groups of the population and municipalities because of poor quality of drinking water.

PROJECT OBJECTIVES

- Creation of the legal, institutional and social conditions to resolve the existing and to prevent future water-related conflicts in the Volga basin.
- Increasing of political and public awareness and understanding of the issues of integrated water management of Cheboksary and the Kuibishev hydroelectric power stations: facilitate the creation of Citizens Advice Council, organization of scientific contest on Volga water quality among students, organization of public hearings on the problem of hydroelectric power station and reservoir, edition of the special fact sheet, publication of the columns ‘ Water for Peace - water for health ‘ in regional and local mass-media.
- Organization of networking and cooperation public bodies for the control of water consumption by water users and to protect human rights of the local population in water conflict situation.

EXPECTED RESULTS

- An elaboration of draft Federal laws ‘On drinking water supply’; ‘On the protection of the Volga basin’; and ‘On environmental insurance’, in order to create the mechanisms required for the conflicts solution at the Federal level.
- An elaboration of proposals to regulate the corresponding legislative acts of the subjects of the Federation situated in the basin and in the Volga Federal Region in order to resolve the inter-regional conflicts.
- A conception of the legal and institutional basis to resolve water conflicts at the inter-regional level.
- Development of proposals for water-users cooperation and networking in order to balance water consumption and resolve/prevent conflicts at municipal and inter-department level.

- Increased information of the population about the links between social and environmental factors: environmental impact on the health of the population, demography, social stability, and well-being, in order to increase public awareness and interest.
- Working out a model of the legal solution of the conflict linked with Cheboksary hydro-electric power station activity including a change of the flood regime.
- Proposals to create a water resources monitoring network for the Volga basin.
- Environmental risks assessment of the activities of hydro-technical facilities and proposals to create an environmental insurance system in the Volga basin.
- Proposals to create Volga Basin Organisation, necessary for effective water resources management.

ACTIVITIES COMPLETED IN PHASE I – UP TO MARCH 2003

1. Case-study of Cheboksary hydroelectric power station. Economic, social and environmental protection aspects. Hydrological regime, flooding and social impact of hydro station activities. Preliminary researching stage of federal and regional legal basis of water conflicts solving.
2. Carrying out of public-opinion poll in area of Cheboksary reservoir (Nizhniy Novgorod Oblast, Chuvash Republic and Mary Al).
3. Analysis of the social importance of drinking water supply in Volga region and comparative analysis of environmental and social factors.
4. Organization of special section at the international conference 'Great Rivers - 2002' in Nizhniy Novgorod.

1. The dam creating the Cheboksary reservoir is the last of the Volga cascade, situated down-stream of Nizhny Novgorod. It is important that the dam is in Chuvash republic – an autonomous subject of the Russian Federation. The construction of the dam began in the1970s but the hydro power station remains unfinished. After the filling of the reservoir, low lying sections of Nizny Novgorod and some agricultural lands were flooded and further rising of the reservoir level was stopped. From the point of view of energy efficiency the reservoir level must be raised, but a lot of land up-stream will be lost. Every spring, Nizhny is threatened with floods. The Chuvash republic's interest in "cheap" energy means a loss of territories, rise of ground waters in the republic Mary-Al, and floods in the Nizny Novgorod area. No legal procedure exists for the resolution of such conflicts, so the relations between Nizhny Novgorod Oblast and Chuvash Republic remain very tense. Our analysis shows that the federal legal basis are not sufficient for the water conflict solving. The federal legal is contradictory in the key point. The basin principle, legislatively adopted by the 1995 Federal Water Code is not realized in practice, hence, legal solving of the water basin conflict is not possible. Quite a detailed analysis of the regional legislation in such subjects of Federation as Republic Mary Al and Chuvash Republic, Nizhniy Novgorod, Samara and Saratov Oblasts, was carried out. It is necessary to note, that about 100 legal acts are linked with environmental protection in Cheboksary reservoir area, and 15 legal acts are directly concerned reservoir issues. But because of absence of federal appropriate policy this acts are not fully authorized to solve a problem. For example, there was an attempt to solve the conflict in the field of environmental protection between the Government of the Chuvash Republic and the Government of Tatarstan Republic and the draft agreement was approved 'About cooperation in the field of preservation of the environment, use of natural resources and maintenance of environmental safety in adjacent territories '. But the attempt failed because of a lack of necessary tools. The new laws, sub-laws and acts must be prepared.

2. The public-opinion poll has been carried out in the area of Cheboksary reservoir.
Three questions were asked:
- What is your opinion on Cheboksary hydroelectric power station environmental impact?
- What are your proposals for improving the environmental situation in the reservoir coastal zone?
- Is the Public Advice Council (PAC) the best decision-support tool to solve Cheboksary reservoir conflict?

The most important claims were: loss of meadows and pastures; eutrophication of reservoir (ditch-water), transformation of Volga River in 'bog'; decreasing of fishery, vanishing of traditional fish species; intensification of landslips and coastal destruction; deterioration of environmental situation in general. Positive factors were marked only by the inhabitants of Cheboksary and Novocheboksarsk. The answers on the third question about PAC were divided equally.

3. As to results of analysis of the social importance of drinking water supply in the Volga region, absence of the necessary federal law and differences in regional acts do permit the development of effective mechanisms to solve water conflicts linked with drinking water supply. The budgets of all levels (from federal to local) are not oriented to finance social and environmental protection programs.

4. In May, 14-17, 2002 the traditional international conference 'Great Rivers - 2002' has taken place in Nizhni Novgorod. Conference was carried out with support of the Government of the Russian Federation, UNESCO, Administration of Nizhniy Novgorod Oblast, etc. Within the framework of conference with support Green Cross International the special section 'Water in 21 century: water conflicts solving on the basis of partnership in a Volga River basin' was organized.

Partners and stakeholders involved
- Federal level: Committee on Ecology of the State Duma, Regional Department of The Ministry of natural resources for the Volga federal district.
- Regional level: Natural Resources Committees of Chuvash Republic, Mary Al Republic, Legislative Assembly of Nizhny Novgorod Region
- NGOs of Chuvash Republic, local population of 3 subjects of Federation

Main achievements and tangible results

- Performance of new approach in river basin management organization
- 1st relevant case-study of water using conflict around hydropower station
- 1st relevant analysis of existing federal and regional legislation necessary for water conflicts resolving
- First stage of analysis of the social importance of drinking water supply in the Volga region
- Public-opinion poll holding in the 3 subjects of Federation and elaboration proposals for the Public Advice Council by hydropower stations of the Volga cascade
- Proposals for federal law in draft "On protection the Volga river basin"
- Organization of special section at the international conference 'Great Rivers - 2002' in Nizhny Novgorod.

ACTIVITIES PROPOSED FOR PHASE II

1. Federal Law of the Integrated Water Resouces Management of Volga River Basin

- Proposals for drafting the Federal laws 'On drinking water supply'; 'On the Volga basin protection'; 'On environmental insurance'
- Proposals to regulate the corresponding legal acts of the subjects of the Federation situated in the Volga basin and the Volga Federal district
- Development of the legislative and institutional procedures of the water conflicts resolution at the inter-regional level.
- Proposals to create the Volga basin water resources monitoring network.
- Proposals to create Volga Basin Council
- Proposals to create Volga Basin Organisation for effective water resources management.

2. Cheboksary Dam Conflict Resolution

- Development of the procedure of the legal solution of conflicts based on the case study of the Cheboksary hydroelectric power station.
- Organisation of the public hearings on the Cheboksary hydroelectric station conflict.
- Environmental risks assessment of the hydrotechnical facilities activity, proposals for the environmental insurance system.
- The elaboration of proposals for the water-users cooperation in order to balance water consumption, resolve and prevent conflicts at municipal level.

3. Volga River Basin Council

- Elaboration of a proposal for the creation of a mechanism of exchange of information - a certain clearing house for the Volga related activities.
- Creation of a systemic Matrix of activities of all parties involved for co-ordination and consolidation of the efforts.
- Establish productive contacts with main relevant Federal agencies at the senior levels (Ministry of Foreign Affairs, Ministry of Natural Resources, Expert Council of the Government of Russian Federation, relevant Duma Commissions, Association "Great Volga", Ministry of Transport, etc.
- Holding of a high level conference with participation of the Governors of the Republics belonging to the Volga District associated with the representatives of cities administrations and regions the Volga Federal district, Legislative Assemblies, Ministry of Natural Resources, NGOs.

4. Communication

- Organisation of a section 'The Water Use Conflicts' at the international conferences 'The Great Rivers - 2003 ' and 'The Great Rivers - 2004 ' as it was organised in 2002.
- The information of the population about water conflict solution (newspaper articles, video film about conflict situations, a website of the project, brochures and the project report).

EXPECTED OUTPUTS

- Development of the legal and institutional basis to resolve the water conflicts at the inter-regional and municipal levels.
- Establishment of networking, water-users cooperation, public involvement in the water conflicts solution.
- A final legal solution of the conflict at Cheboksary hydraulic power station.
- That the project activity contributes to improving drinking water quality, reducing the river water pollution from bacteria and oil, stabilizing the consumption of water by industry and irrigation, and intensifying the protection of the river bank, and drainage and dredging works.
- Creation of Permanent Volga River Basin Council

FOLLOW-UP

- Realization of a number of measures on progression of Federal laws 'On drinking water supply'; 'On Volga basin protection'; 'On environmental insurance' in the State Duma, with the involvement of all participants concerned (subjects of Federation, administration of the Volga districts, water-users, NGOs).
- The development of the Russian legislation on environmentally friendly navigation.
- Creation of the Volga basin Council.
- Dissemination of the case study of the legal solution of Cheboksary hydroelectric station conflict on other hydroelectric stations of the Volga basin.
- Development of a water resources monitoring network in the Volga basin.
- Inventory of hydraulic engineering facilities of the Volga basin (firstly in the Volga federal district).
- The feasibility report for creation of Volga Basin Corporation.
- of creation of unified managing frame for water resources management in the Volga basin.
- Organisation of permanent section on 'Water Use Conflicts' at the annual international conference 'The Great Rivers'.
- Organisation of a seminar in the Union of Russian Cities on 'Water Conflicts between Cities'. of the final report, two years after the signature of the Protocol.