



Main Highlights

On-Farm Water Management



Civil works contracts for tertiary canals in four communities within the frames of Irrigation Project were signed in January and commenced in February. They will provide stable irrigation water for 460 hectares of cultivated land. The four communities are anxiously waiting for the rehabilitated water canals by means of which they hope to cut huge losses of irrigation water.

[See page 2.](#)

Water-to-Market Activity Trainings are in Progress



It has been one year that training courses for farmers in the framework of the Water-to-Market activity of the program are underway. As of April, 8 461 farmers in different marzes of Armenia passed on-farm water management training and 527 farmers received training in high value agriculture.

[See page 3.](#)

Credit Program Will Start Soon



The objective of the credit program is to provide long-term agricultural loans to the primary beneficiaries of the MCA program – the farmers. The accessibility of credit resources will help them to boost their production using the knowledge they had gained from the Water-to-Market training courses, for example, installing more efficient irrigation technologies and cultivating higher value agricultural products.

[See page 4.](#)

Environmental and Social Assessment of MCA-Armenia Program

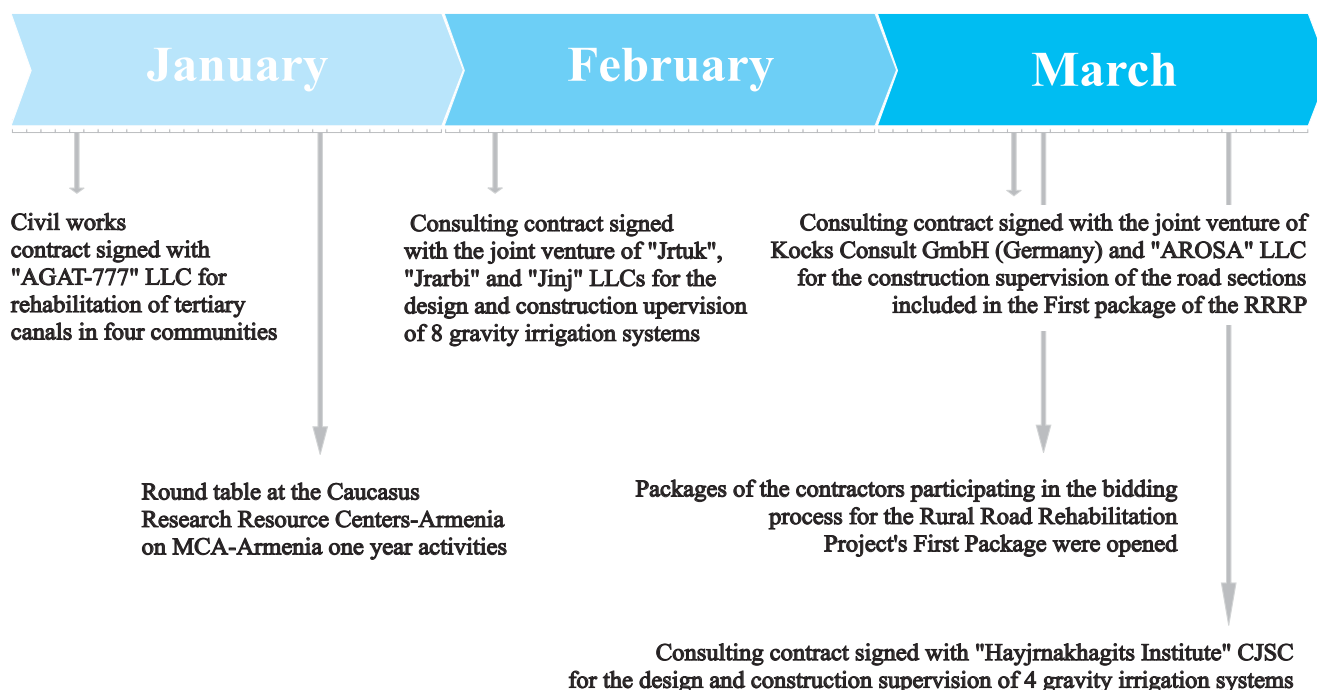


The rehabilitation and construction of rural roads and new irrigation infrastructure will have a significant impact on the Armenian economy. Their environmental and social impact is going to be significant too, and it is important to ensure a good planning since as with any public construction works, there is also the potential for environmental damage during and after construction. This is why a process of environmental and social impact assessment is desirable and, indeed, is a required condition of the MCA-Armenia Compact.

[See page 7.](#)



MCA-Armenia Activities in January – March 2008



New Tertiary Irrigation Systems in Lanjazat, Abovyan, Arevshat and Griboyedov Communities

The population of the Griboyedov village, Armavir marz, is 2,100 people, 95 percent of them being water users. Everyone in this village is aware that tertiary canals are being rehabilitated with the MCA-Armenia funds and they hope that the beginning of this season will mark the exploitation of the new system. Around 60-70 percent of the village population will directly benefit from the improved irrigation system. The total length of the pipeline to be repaired in this community is 3,300 meters.

Mr. Sos Gabrielyan, Head of Griboyedov community – The problem of irrigation water in our community is very serious. Can you imagine an average water loss of about 70 percent which is the case in our community? There are areas of land that are not irrigated at all, and people have lost any hope that this would be ever changed. Having a land without possibility to irrigate it is like having no land at all. I am sure that after the repair of the tertiary system with your help we will not face water losses any more. Our farmers are planning now to cultivate grain and alfalfa because people are confident that they will have water during this irrigation season.

Grapes and fruit orchards are the main tree types in

Griboyedov. Grain, greens and alfalfa is also grown in the community. The existing irrigation system has been deteriorated having a 40 years history. There are areas where there is no irrigation system at all and water flows through earth bed.

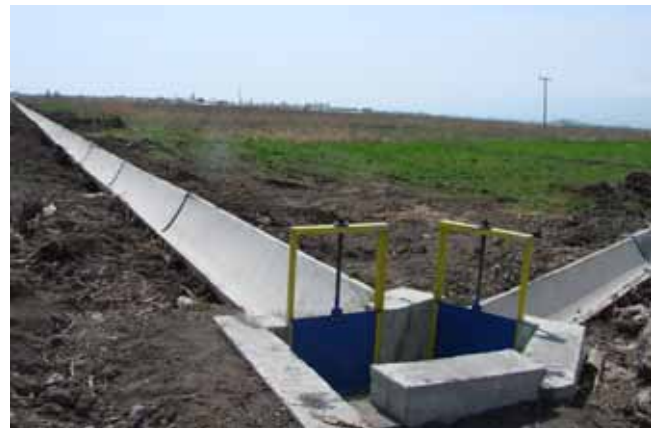
Norik Amirjanyan is leading the irrigation construction works in the Griboyedov community. He represents the construction company AGAT-777 that has been contracted by MCA-Armenia in January 2008, after coming as the winning bidder in the procurement. According to the contract the company is responsible for the rehabilitation of irrigation systems in all of the four communities.

Mr. Norik Amirjanyan, AGAT-777 Ltd. – We started to work in February, with purchasing new full-length and half pipes, dismantling the old ones and when the earth was not frozen we started digging and installation works. We had very tough schedule in order to finish the works by irrigation season.

Lanjazat village is in Ararat marz. Soon this village will also have a new tertiary irrigation system. 1,700 meters of tertiary system will be rehabilitated in this community,



Griboyedov tertiary canal before rehabilitation



Griboyedov tertiary canal after rehabilitation

which will ensure that 100 percent of the community land areas located in the upper sections of the village are properly irrigated.

Mr. Hrayr Hakobjanyan, Head of Lanjazat community – 40 percent of our lands are irrigated by reservoir water and 60 percent of upper sections of the village are either not irrigated at all or irrigated by drinking water, which is extremely expensive and unprofitable. MCA-Armenia funding will be focused on construction of tertiary system specifically in that area. Peaches, apricots, apples and strawberries are the main varieties grown in the village. The location of the village and earth quality is not favorable for cultivating vegetables.

The Mayors of Griboyedov and Lanjazat informed that they had learnt about the possibility to participate in the MCA-Armenia program, as well as about the condition of 15 percent community co-financing, from their local Water Users' Associations (WUA). Basically, all communities, selected as beneficiaries of tertiary system rehabilitation component, are obliged to participate in construction works with 15 percent co-financing, after a discussion and approval by the village Council and WUAs. The final applications are then submitted to MCA-Armenia for approval.

The current Contract stipulates AGAT-777 to repair in total of 6.5 km of tertiary pipeline in the aforementioned four communities. The works will be completed in June.

The Training of Farmers is in Progress

The farmers are so far positive about the training provided by ACDI/VOCA and their local partner VISTAA Plus – this has come up as the main result of regular visits of the MCA-Armenia SNCO staff members to the ongoing training courses in the marzes. In many communities the number of people willing to participate in training is such a high figure that six, seven and sometimes 10 groups are formed in the communities. A group mainly consists of 20-25 farmers. The trainers from VISTAA make sure people in communities are well informed about the training opportunities as well as many of farmers are involved as possible. Posting announcements on the village municipality board, passing information by word of mouth, asking the Mayor to help in organizing courses and be the first point of contact with the interested farmers – these are the simple tools trainers use the quickly and efficiently set up their work.

fifth group was nearly composed for on-farm water management training courses. According to village Mayor Andranik Papikyan, it is the evidence that farmers are pleased and satisfied with the material presented to them.

- There are a lot of people wishing to participate in training courses, mostly people are interested in water measurement, because it appears to be the biggest problem in this village,- says **Mher Haroyan, the trainer representing VISTAA**, - people wish to enter the legal sphere from the point of view of relations with WUAs. A farmer has right to know the volume of water WUA takes from Water Supply Agency (WSA), as well as how the relations between WUA-WSA and WUA-farmer are regulated. A farmer should know how to calculate water losses, figure out the volume of irrigation water necessary for each season, as well to know the most efficient alternatives for his orchard.

In Aragatsavan community of Aragatsotn marz the

In Bazmaghbyur community of the same marz the group of farmers, which has completed training in on-farm water management, has started the other training course – transition to high value agriculture. Vegetables, apricots, peaches and apples are mainly grown in Bazmaghbyur.

In one of the rooms of village Municipality the trainers were explaining the farmers and the village Mayor how to have higher quality yield and higher income.

Mr. Meruzhan Karapetyan, farmer – These training courses are important for farmers. There were a number of things that we had no idea about, for example the portion of fertilizer for one hectare, the types and the portion of fertilizer for each crop variety, the way to treat trees, crops. But the main problem of our village is agricultural machinery, presently we have no machinery for cultivation. We rent machinery from neighboring village and the fee is increasing every year. It is indeed a vital problem for us, but there are situations when knowledge is more important. People do not know how to use fertilizers, how to form patches. We are taught here how to spend money to have higher net income and high yield. There are people willing to install drip irrigation. For example, after this training course I decided to install plastic green house on at least 200 square meters of my land area. I will spend about 1000 USD, I can afford that. I will have higher yield in this case.

During high value agriculture training courses the farmers are being presented information about high value agricultural products with higher profitability not only in Armenia, but also using the examples of other countries. The

farmers are also presented with the methods of applying new technologies, their accessibility in local market, pest management, etc.

Mr. Khosrov Harutyunyan, Head of Bazmaghbyur community – Before the land privatization the villagers were instructed by specialists and agronomists of collective farms what to do and how to do. After the privatization, 99 percent of villagers had no idea how to cultivate land and that was the reason of their low income. If these kinds of training courses were 10 years ago, it would have been better. We do not pay for training but we come with interest, actively participate and, most importantly, learn practical things.

The village Mayor also mentioned that the presented technologies were entirely applicable and some of the farmers that participate hope to use some of them in near future.



*Training of high-value agriculture
in Bazmaghbyur community*

The First Beneficiaries of the Credit Program Will Soon Be Identified

The MCA-Armenia through open competitive tender has already selected and signed contracts with two banks and two universal credit organizations (UCOs) which will provide agricultural loans to beneficiary farmers during the coming year. The selected companies are Converse Bank, Armbusinessbank (ABB), “Farm Credit Armenia” UCO and “Nor Horizon” UCO.

The total budget of the credit component is up to USD 8.5 mln, with maturity period of up to 7 years. The minimal limit of the credits to be provided is AMD 340,000 and the maximal limit is AMD 8,500,000. The base rate, stipulated for partner financial institutions is 4 %. When providing credits to farmers, financial organizations will add to the 4% base

rate their interest rate. “Converse bank” has announced 6% interest rate, the interest rate of “Armbusinessbank” is 5%, in case of “Nor Horizon” the interest rate is 6,5% and 7.5% and in case of “Farm Credit Armenia” – 2.5%, 2.9% and 3%.

The selection of beneficiaries for credit component will be carried out by financial organizations and they will bear the full lending risks. Financial organizations will carry out the selection of beneficiary farmers based on specific criteria, as set forth in the contract signed with the MCA-Armenia. Eligible borrowing entities include only:

- individual household based agricultural businesses;
- agricultural production, processing, marketing and

service enterprises;

- farmers associations, business cooperatives, partnerships;
- input suppliers, irrigation equipment wholesalers and dealers; and
- agriculture-related private enterprises or agriculturally oriented small or medium-sized enterprises; and
- farmers who have (a) completed at least 75 percent of the Water-to-Market project classroom training, and (b) attended at least one practical, on-farm demonstration through the Water-to-Market project.

The credits will be provided only to beneficiaries living outside of Yerevan with the purpose of intensifying primary agricultural production, modernizing equipment, expanding orchards and vineyards, purchasing tree stock and root

stock, purchasing livestock, developing machinery contracting and other service businesses that support smallholders, agri-business marketing and export services, establishing or expanding consolidation centers and developing or expanding small-agro processing factories or processor out-grower schemes.

“Rural Finance Facility Project Implementation Unit” State Institution (RFF), responsible for credit component monitoring, pursuant to contract signed with MCA-Armenia in October 2007, will bear the binding obligation within the framework of credit component between financial organizations and MCA-Armenia. This means that RFF will register and account for resources provided in the framework of the credit program, monitor the selection criteria of credit organizations, their compliance with the objectives and requirements of MCA-Armenia credit program and the submitted bids, as well as will recommend on providing credit resources to banks and credit organizations.

MCA-Armenia Governing Council Approved Tender Results of the First Package of the Rural Roads Rehabilitation Program

The MCA-Armenia Governing Council called its last meeting with the former composition, chaired by the incumbent Prime Minister Serzh Sargsyan, on the 28th of March 2008. Among other items on the agenda, perhaps the most important was the discussion and approval of the results of the First package of construction bidding under the Rural Roads Rehabilitation Project (RRRP).

The six lots of the First rural roads package include roads repair and rehabilitation contracts for total length of 272 km. As the usual procurement rules and procedures apply, the MCA-Armenia had formed an evaluation panel with RRRP project manager, Armenian Roads Directorate and two representatives of the civil society. The bids were opened on the 12th of March in MCA-Armenia office, in attendance of evaluation panel members, representatives of the bidding companies and other observers. The tender arouse quite high interest that is natural for such caliber of project: 19 companies either applied directly or as part of joint ventures or subcontracting arrangements.

The Governing Council discussed in great detail the process of selection. The GC members unanimously approved the results of the tender. The package has been sent to MCC for review and no objection. Given the high caliber of the project, the review process will be thorough and may take longer than usual. In any case, the construction



Rehabilitation works on H17 Armavir-Isahakyan-Gyumri road

works for these 272 km of rural roads are planned to start this year.

Meantime, MCA-Armenia has already launched the repair works on the H-17 Armavir-Isahakyan-Gyumri road section, with the total length of 24.5 km. The contract with Dorozhnik Ltd. was signed in October, immediately followed by mobilization of the workers and equipment. After the winter period, the works are now fully underway. The completion date of rehabilitation works of the mentioned road section is planned for December 2008.



Road Sections to be Rehabilitated Under the First Package of RRRP

Lot 1.

M-1 - Agarak - Byurakan - Antarut
km 0+000 - km 8+650

M-4 - Balahovit - Mayakovski - Aramus -
Katnaghbiur - Akunk- Zar- Sevaberd km 0+000 -
km 6+800

M-4 - Balahovit - Mayakovski - Aramus -
Katnaghbiur - Akunk- Zar- Sevaberd km 6+800 -
km 15+300

M-4 - Balahovit - Mayakovski - Aramus -
Katnaghbiur - Akunk- Zar- Sevaberd km 15+300 -
km 23+100

Mayakovski - Nor Gyugh - Kotayk -
Kaputan - Hatis - Zovashen km 0+000 - km 19+800

Aramus - Kamaris - Geghashen km 0+000
- km 6+300

Lot 2.

H-17 - M-9 Arteni - Aragats - Getap km
25+940 - km 38+000

H-17 - M-9 Arteni - Aragats - Getap km
38+000 - km 49+350

Mastara - Dzoaragiugh - Zovasar -
Garnahovit km 2+000 - km 8+000

Mastara - Dzoaragiugh - Zovasar -
Garnahovit km 8+000 - km 11+240

M-5-Amasia-Nalbandian-Janfida-Pshatavan
km 0+000- km 14+450

Armavir - Noravan - Lukashin - Khandjian
km 0+000- km 6+600

T-3-33 Bambakashat - Jrashen - Nor Artages
km 2+206 - km 7+810

M - 5 - Nor Kesaria - Shenavan - Getashen
km 0+000 - km 6+700

Lot 3.

Chinari - Aygedzor - Artsvaberd - Verin
Karmir Aghbyur- Berd km 0+000 - km 32+505

Berd - Navur - Itsakar km 32+505 - km
43+570

Lot 4.

Ddmashen - Zovaber - Hrazdan km 6+555
- km 12+093

M-10 Lchashen km 0+000 - km 1+700

M-10 Artsvakar district - Gavar -
Karmirgyugh km 0+000 - km 9+200

T-4-16 Gavar - Noratus km 2+560 - km
4+700

M-10 - Nerkin Getashen - Verin Getashen
- Madina km 0+000 - km 10+185

M-3 - Metsavan km 0+000 - km 8+534

Lot 5.

Idjevan - Gandzakar km 0+000 - km
6+970

Antaramech - Dzoravank - Dprabak - Aygut
- Martuni - Getik - Ttujur - Chambarak - Aghberk -
M-14 km 15+240 - km 32+020

Antaramech - Dzoravank - Dprabak - Aygut
- Martuni - Getik - Ttujur - Chambarak - Aghberk -
M-14 km 32+020 - km 48+800

Lot 6.

Agarak - Karchevan km 0+000 - km
4+040

M - 2 - Zaritap km 0+000 - km 5+800

Vosketap - Vanashen - Vedi -Dashtakar -
Urtsadzor km 0+000 - km 17+830

MCA-Armenia: Progress in Environmental and Social Context

Armine Simonyan, as an Environment and Social Impact Officer joined MCA-Armenia in September 2006. Before becoming an MCA-Armenia staff member she worked as an Environmental Specialist at the Water Sector Development and Institutional Improvements PIU, which was implementing projects funded by the World Bank. Since June 2005 she was a member of the MCA-Armenia program Working Group and actively participated in the due diligence of the Proposal presented by the Government of Armenia to the MCC. As the Environment and Social Impact Officer, Armine Simonyan is in charge of overall management and coordination of all environmental and social activities of the MCA-Armenia program, ensuring their compliance with relevant national legislation and international agreements, as well as with appropriate environmental and social guidelines and policies.

Armine Simonyan is a graduate of the Yerevan State University, Faculty of the Chemistry, Department of the Nature protection. She holds degree of a Doctor of Engineering in field of water management. Armine also has a rich scientific background and is a participant of numerous international trainings and conferences, including the Course on the Principles of Environmental and Social Assessment organized by the MCCU; Training of trainers on Strategic Environmental Assessment organized by UNDP; etc.



*Armen Bodoyan, MCA-Armenia ESA specialist,
Armine Simonyan, MCA-Armenia ESA Officer,
John Craig Wakefield, MCC ESA Program Officer*

The MCA-Armenia program, while moving ahead rapidly, is being prepared with full attention provided to protection of the environment and the socio-economic integrity of the communities that are affected by the program's canals, gravity schemes, reservoirs and pumping stations that are being constructed, rehabilitated, or in some cases, decommissioned.

In September 2007, MCA-Armenia signed a contract with UK firm Mott MacDonald to provide an Environmental and Social Assessment and Oversight consultancy services. Mott MacDonald is required to examine each component and scheme in the Irrigated Agriculture Project of MCA-Armenia Program to identify potential environmental and social impacts, both positive and negative, recommend measures needed to eliminate potential negative impacts or decrease them to a level acceptable.

Mott MacDonald mobilized a team of international and local experts and has established an office in Yerevan, and has already carried out a range of studies. The ESAOC team

visited potential reservoir sites included in MCA-Armenia Program to investigate environmental and social conditions. Team members also surveyed the situation land ownership in project areas. It is expected that based on these investigations and field visits Mott's experts will provide MCA-Armenia with solutions to the environmental and social issues uncovered.

Once the environmental and social impact statements are drafted, the findings, conclusions and recommendations will be posted on the MCA-Armenia web-site and made available to interested organizations and public. Mott MacDonald is also preparing an electronic database that will be combined with the GIS. This combined database/GIS will be shared with the public over the Internet.

Other duties of the ESAOC include the "oversight" (review) of the environmental and social studies performed by other MCA-Armenia Consultants, such as MWH Americas Inc, consultant for Environmental/ Hydrological Study of Wetlands in Ararat Valley.

Environmentally Friendly Drainage Rehabilitation

- How the wetlands have been formed in Ararat valley and when the drainage network has been constructed?

Armine Simonyan - The wetlands of the Ararat Valley have been formed as a result of both natural conditions and anthropogenic processes. Prior to the 1920's, small natural wetlands existed, mostly along the river. In Soviet times, cotton and other cash crops were grown in the valley under irrigation. The irrigation activities raised the water table, resulting in water-logging and salinized soils. To control these impacts, drainage works were initiated in the 1950's and 60's, so by the 1980s the command area of the Ararat Valley irrigation and drainage system occupied around 80,000 ha. This situation remained almost constant until the early 1990s, when budgets for operation and maintenance of the irrigation and drainage system were drastically reduced as a result of economic crisis following the collapse of the Soviet Union. The lack of maintenance of the drainage canals resulted in an increase in the area of wetlands. So, currently there are about 17,000 hectares of wetlands in the Ararat valley.

- Has any improvement happened to drainage network before the MCA-Armenia Program and what is included in MCA-Armenia program?

Armine Simonyan - Starting from 1998 the Government of Armenia began to allocate funds to rehabilitate the drainage system. Under the World Bank Irrigation Rehabilitation Project, tube wells were rehabilitated and installed along with the cleaning of 310 km of drainage collectors. Due to these efforts, by 2005 the dimensions of waterlogged and salinized land had been reduced to around 20% of the command area, respectively. The MCA-Armenia program plans to recover around 24,000 ha of arable land within the framework of Irrigated Agriculture Project by rehabilitating the Ararat Valley drainage infrastructure. The Ararat Valley has undergone significant ecological changes in the last 50 years, owing to the expansion of irrigated agriculture and other human activities. Thus, it is critical that the rehabilitation of drainage systems proposed under the MCA-Armenia Irrigated Agriculture Project avoid negative impacts upon ecosystems. To address this issue a special comprehensive study was envisaged to be carried out at an early stages of the project aimed at providing the baseline data on existing situation in Ararat valley, revealing the hydrological, ecological, or economic characteristics

of the wetlands, investigating the technical condition of drainage infrastructure and assessing the likely impacts associated with the rehabilitation of the drainage system.

- What has been done through the study?

Armine Simonyan - The study is being carried out by MWH Americas Inc. which signed a contract with MCA-Armenia in July 2007 and since then MWH has collected a huge amount of data for the various components of the project. Several deliverables of the study already available includes: Stakeholder Consultation Plan, GIS Spatial Decision Support System, and Annotated Bibliography. Meantime the policy, legal, and administrative study; social and health assessment as well as economic assessment are in development.

- What are the further steps?

Armine Simonyan - MWH will continue field research and analysis of the ecology of the Ararat Valley in order to determine the value of wetlands, effect of drainage system rehabilitation upon groundwater levels, as well as possible impacts of drainage system rehabilitation upon wetlands. A hydrological model along with the optimally balanced ecosystem model will be developed and based on these outcomes two technical alternatives for improved drainage in the watershed will be identified. Each of the alternatives will be assessed for its technical viability, so by the end of May available to MCA-Armenia will be two technical and management alternatives for drainage rehabilitation as well as Terms of Reference for a feasibility study and final design of Ararat Valley drainage system rehabilitation subcomponent.



Wetlands in Ararat Valley