Risk Assessment of the ‘Voda Donbasu’ Water System — 2017

Brief on conclusions and recommendations
Taking into consideration the critical role VD in water supply in the area, and the damages and difficulties inherent to the conflict, UNICEF conducted an assessment early 2017, as a snapshot of the situation at that time, to evaluate the major risks the company faces daily.

The study highlighted that the water supply service provided by VD is under serious and severe threat. The complex situation of protracted armed conflict imposes devastating operational conditions. VD is in urgent need of substantive and reliable support to its operational capacity and the affording of a ‘special’ legal status. Humanitarian assistance alone cannot provide adequate solutions at scale, nor substitute the various system governance aspects.

Note that larger questions, including the future structure of Voda Donbasu, and whether specific geographic areas would be better served by separate systems, while not covered by the study, would require targeted consultations by all sides bearing in mind updated water demands that reflect or predict future water usage levels. The study has focused solely on how to preserve the existing networks, linking humanitarian action with development and transitional thinking in order to guarantee access to safe water during a difficult period.

Apart from the recommendations listed below that are designed to strengthen VD’s operational capacity, it is a matter of urgency to create an enabling operational context in the political and security sphere, so that VD can fulfil its functions safely and reliably. There is an imperative need to establish a platform for dialogue between all sides sharing a common service.

Main risks and recommendation on different risks faced by the company were divided in the report into technical, financial, security, environmental and governance issues.
ECONOMIC AND FINANCIAL RISKS

Economic indicators for Voda Donbasu have been declining since the start of the conflict.

47% ↑ Of Trade Payable

There have been increasing negative equity ratios since 2014 as a result of accumulated losses, and there has been a massive and rapidly increasing payables; trade payable have risen from 68% of total assets in 2013 up to 115% in 2016. The company is effectively dependent on its creditors.

34% ↓ Tariffs Collection Rate

Tariffs collected are inadequate. Overall collection rate decreased in average from around 100% in 2012 to 66% in 2016.

Gross profit of Voda Donbasu was negative every year from 2012 to 2016.

In other words, the income (net sales) of the company is not enough to cover operating costs.

9% ↑ Energy Cost

Energy costs, which made up 53% of total operating costs in 2012–2014, rose to 62% in 2015-16.

10% ↑ Water Loss

Official overall water losses increased from 36% at the end of 2013 to 46% in 2016.

Voda Donbasu should be afforded ‘special’ legal status, for an interim period of 1 year.

To ensure the economic stabilisation of the company including a restructuring of its debt, in order to ensure recognition of its humanitarian role in providing access to water for persons residing on both sides of the line of contact.
SECURITY RISKS

VD staff work close to the line of contact where there is frequent shelling and exchange of fire of varying intensity. The danger to get injured by armed hostilities, a resulting chemical incident, or explosive remnants of war is extremely high.

Tragically, 9 of VD’s staff were killed and 12 injured on duty from June 2014 to December 2016.

The threat is very real to those working at facilities in proximity to the line of contact, as well as those crossing the line regularly for work purposes.

There are only 4 crossing points in operation between GCA and CADLR. Long queues at the check points and restrictions in the movement of staff across the line of contact pose a serious problem to VD’s daily operation. Despite the existence of special passes for some VD staff, travel across the line of contact is time-consuming and dangerous.

The transfer of certain supplies, material and equipment, including VD’s own assets such as valves and machinery, is prohibited.

In order to facilitate the full implementation of the Minsk agreements, particularly in regards to the withdrawal of prohibited weapons, and disengagement of forces and hardware and to ensure protection of infrastructure indispensable for the survival of the civilian population, all sides must distinguish between civilian and military infrastructure and between fighters and civilians. Such a distinction should be clearly drawn for staff of VD, particularly workers operating VD assets along the line of contact who should, stemming from the ‘special’ legal status afforded to VD, be recognized as emergency (first) responders and provided adequate administrative, social and security protection.

As emergency responders, the staff of VD should be provided unimpeded access to both sides of the line of contact and to civilian infrastructure under VD management. The vehicles, uniforms, identification cards used by VD should be recognized by all sides as attesting to their status.

2 According to UN OCHA, 9 serious security incidents occurred at crossing points (2 at Mayorsk, 1 at Novotroyitske, 6 at Maryinka) between November 2016 and March 2017. 4 of the 5 resulting casualties were civilian.
GOVERNANCE RISKS

Internally, VD’s staff cooperate across the line of contact, constantly facing the threat of a potential split of the company into two entities along the line of contact. Such threats have exacerbated the corporate governance risks to which VD is exposed when delivering services in two different operational contexts.

Vitally important communication, accountability, and transparency, while maintained, is constrained by conflicting legal gaps. The company is registered in Ukraine and as such operates under Ukrainian law. However, its headquarters is located in Donetsk\(^3\) city and in order to remain operational, VD has to carry out business with entities in CADLR and cooperate with duty bearers on both sides of the line of contact.

The lack of clarity around primary duty bearers in this context prevents much needed coordination over the use of a shared resource. Legislation in support of the provision of essential services to the affected population is deficient. VD which operate in a largely unregulated and uncertain setting, are exposed to potential legal or reprimanding action.

To enhance the effectiveness of the management of VD, a ‘special’ legal status should be afforded in line with the legislation of Ukraine, for a period of one year.

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\(^3\) An office with headquarter functions has been established at Krasnoarmiysk Regional Operational Office located in Pokrovsk (previously Krasnoarmiysk) to facilitate access to the Donetsk Oblast Administration.
ENVIRONMENTAL RISKS THAT AFFECT WATER SUPPLY

Environmental risks and recommendations below focus on Centralized wastewater disposal systems operated by VD, structure cover 33 cities, 34 urban-type settlements, and 12 rural-type settlements, serving over 3.7 million people. In total, the various utilities operate 54 WWTPs with total design capacity of 699,500 m3/d (actual inflow: 197,250 m3/d), and 165 Wastewater Pumping Stations (WWPSs).

Key environmental risks which affect the production of clean water include:

- Of 3,358 km of sewer networks more than 2,000 km, or almost 60% are in a severely dilapidated state and 20 out of 54 facilities no longer perform biological treatment (aeration).
- Treated wastewater is discharged into the river basins of the Dnieper, the Siverskyi Donets, and the basin of the Azov Sea. During power cuts, however, the effluent remains untreated. Sludge treatment and disposal poses a significant problem. Most WWTPs have accumulated huge volumes of partially dewatered and insufficiently stabilized sludge.
- Most of the 165 WWPSs lack back-up pumping equipment, ventilation, and experience structural collapse.

As well as the risks from wastewater entering the environment, unused coal mines are liable to flooding causing subsidence and therefore destruction of clean water pipelines above, and groundwater pollution that will demand additional treatment should sources be use for drinking water.

Liquidized chlorine gas used for water and wastewater treatment is a hazardous material. It is typically stored in bottles of 900 kg, in multiple locations owned by Voda Donbasu. Any spill incident caused by shelling damage would affect the general public as well as staff of the facility, with risk to life. Therefore Personal protective Equipment, PPE is essential at all VD locations where chlorine is stored. PPE for a potential hazardous material situation at particularly risky locations has been procured in Ukraine with the support of a humanitarian organization, but the approval for transporting it across the line of contact has not been given so far.

Although emergency procedures and protective measures are generally in place, many sites lack chlorine gas detectors; also, meteorological stations required to determine the potential level of exposure of the population residing in proximity are not functional. The safety installations in place (sprinklers, scrubbers for neutralization, and air extraction systems) are partly defective and need revision.

Voda Donbasu serving over 3.7 million people

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4 This number does not include people provided with wastewater collection services by VKs.
TECHNICAL RISKS AND MITIGATING MEASURES

Technical risks would cause the supply of water to cease to the 3.65 million people served in total by Voda Donbasu. These can be grouped into prioritised civils, pipeline, mechanical and electrical repairs; urgently needed maintenance equipment; and emergency preparedness activities and have been prioritised from 1 to 3 according to:

1st Priority
Humanitarian-focused repairs and initiatives which are urgently required, within one year, to prevent water stoppages, and increased risk of water-related diseases to the population;

2nd Priority
Urgent, but not yet critical, repairs which require additional planning, but still need to be completed within a 2-year timeline; and

3rd Priority
Transitional system strengthening work that is needed within the next 5 years, to ensure the water network can survive long enough, so that within the context of an end to the conflict system remodelling and design, feasibility studies and cost benefit analysis of options can be planned and implemented. This represents a robustification of the existing system to permit recovery programming.

Table 1 and 2 list the costs of priority technical measures focusing mainly on improvements to power supply equipment, pipeline repairs, essential urgently needed equipment and other activities that are critical to continue water supply.

Table 1. Priority measures focussing on water supply equipment in areas of military activity

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<thead>
<tr>
<th>Priority</th>
<th>Cost of main actions (USD)</th>
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<tbody>
<tr>
<td>Priority 1</td>
<td>4,676,924</td>
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<td>(critical 1 year timeline)</td>
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<tr>
<td>Priority 2</td>
<td>5,787,630</td>
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<tr>
<td>(urgent, 2 years timeline)</td>
<td></td>
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<tr>
<td>Priority 3</td>
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<td>(key actions within 5 years)</td>
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<tr>
<td><strong>Total</strong></td>
<td><strong>68,656,900</strong></td>
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Table 2. Priority measures focussing on water supply equipment in areas outside of military activity

<table>
<thead>
<tr>
<th>Priority</th>
<th>Cost of main actions (USD)</th>
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</thead>
<tbody>
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<td>Priority 2</td>
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<td>(urgent, 2 years timeline)</td>
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<td>Priority 3</td>
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<td>(key actions within 5 years)</td>
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<tr>
<td><strong>Total</strong></td>
<td><strong>101,661,475</strong></td>
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CLOSING REMARKS

While recognising the lead role of the government of Ukraine and all those involved in the conflict, in preventing risks and providing the population with water, UNICEF would welcome the involvement of international actors to renew their commitment to ensuring actions can be implemented. In that respect we request such actors to consider:

- To attempt to make available and coordinate appropriate supportive financing of the water supply services in conflict affected areas;
- Consider financial support to the State Emergency Services in the conflict-affected areas to ensure an appropriate and timely support to longer term / larger scale supply disruptions.
- Liaise as appropriate with all respective parties to comply with the provisions of the Minsk agreement, and to fulfil obligations under IHLL;
- Impress the urgency to reach agreement over roles and responsibilities concerning essential service provision to the civilian population on relevant decision-makers, and to remind these to refrain from using essential services to apply political pressure on their opponents;
- Ensure that humanitarian actors are provided with timely and adequate means to support access to essential services to those living near the line of contact in the medium term; strategic support initiatives and assistance should foster communication and transparency to build trust on both sides of the line of contact.