Techneau,
June 2009

Consumer Issues in Riga

A Case Study

TECHNEAU

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TECHNEAU is an Integrated Project Funded by the European Commission under the Sixth Framework Programme, Sustainable Development, Global Change and Ecosystems Thematic Priority Area (contract number 018320).

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Title
TECHNEAU WA 6
Final Report: Consumer Issues in Riga

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Deliverable number
D 7.5.7

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1 Introduction

1.1 Overview

This report forms deliverable D7.5.7 on consumer issues facing Riga as part of Work Area 7 activities in the TECHNEAU project. Riga was selected as a TECHNEAU case study site as it was a good example of a city with an aging infrastructure and one that had undergone a major social and economic change in recent years. This report details the consumer issues facing Riga and attempts to identify issues that stakeholders need to address in the near future.

This report draws primarily on two sources of data. The first of these is a series of interviews with key stakeholders in the water sector where the aim was to understand how these stakeholders viewed the water sector and the key consumer issues facing Riga. In 2007 we interviewed representatives of the following organisations:

Water Supplier [WS]	1	Rīgas ūdens (Riga Water Company)
Consumer Organisation [CO]	1	Latvian Association of Water and Gas consumers
NGO	1	Baltijas Vides Forums
Regulator [R1]	1	Riga City Public Utility Regulator
Regulator [R2]	1	Public Health Agency, Ministry of Health
Regulator [R3]	1	Dept. of Investment, Ministry of Environment

Further details of theses interviews and the approach taken can be found in Kelay et al. (2008).

The second source of data was a series of four focus groups held with consumers in 2008. Here the purpose was to get their views about their water supplies and to understand the consumers' relationships with their supplier and other authorities. Four groups were held as follows:

	language	age	residential area
Group 1	Latvian	25-60 years	East bank of Daugava River
Group 2	Russian	25-60 years	East bank of Daugava River
Group 3	Latvian	25-60 years	West bank of Daugava River
Group 4	Russian	25-60 years	West bank of Daugava River

Further details of theses focus groups and the approach taken can be found in Kelay et al. (2009).

All focus groups and interviews were digitally recorded, transcribed and translated from either Latvian or Russian into English. Both approaches necessarily generate

qualitative data from relatively small groups of people so no strong claims of representativeness are being made. However what we report below is consistent with other sources (e.g. Gallup, 2009).

2 Background and Context in Riga

2.1 Introduction

Riga is a case study in the TECHNEAU project as it represents an Eastern European city with an aging infrastructure that is in need of investment. Riga inhabitants' drinking water is sourced by surface water, natural groundwater, and artificially recharged groundwater. The primary source of surface water is the River Daugava. Approximately half of the Riga's drinking water is produced from surface water sources, whilst the other half is sourced from groundwater sources, and thus inhabitants' tap water quality varies according to its source characteristics. The results of drinking water quality monitoring in the region of Riga show that 59.3% of the samples taken do not meet physical and chemical standards set for drinking water quality (SVA, 2007). Also, 3.34 % of the samples do not meet microbiological standards (SVA, 2007).

TECHNEAU has been engaged in developing tools, procedures and technologies in such contexts, where the emphasis in Riga is upon the implementation of a monitoring and management strategy to reduce the risk of water quality deterioration in distribution networks.

2.2 Socio-Political Context

In 1940 Latvia was occupied by the Soviet Union. After World War II Riga became one of the core centres of the western part of the Soviet Union, with key links with industrialization at the time (Municipal Portal of Riga, 2009a). In 1991 Latvia regained its sovereignty, and became a member of the European Union on 1st May 2004. The population composition of Riga's inhabitants is diverse. It is estimated that 43.5% are of Russian descent, and 41.5% Latvian (Municipal Portal of Riga, 2009b). Although the national language is Latvian, Russian, which was widely spoken during the Soviet era is also still in widespread use.

Latvia does not have vast natural resources. Timber and wood products create the bulk of Latvia's exports, along with machinery and equipment, metals, textiles and foodstuffs. Latvia's largest exports partners are the UK, Germany and the USA. Latvia enjoyed rapid economic growth over the last decade, which culminated in double-digit GDP growth rates between 2005 and 2007, after which the economy plunged into a deep recession with double digit negative GDP growth in 2009 (Eurostat, 2009). The recent worldwide recession has hit Latvia hard leading to a devaluation of its currency.

Water is metered at household or apartment block level and since the fall of communism prices to consumers have risen considerably. This has resulted in consumers using less water which has in turn caused problems in the infrastructure which was designed in the communist era with a view to there being high levels of consumption. Large pipes have relatively little water flowing through them leading to long residency times and associated corrosion and fouling problems.

Facts and figures	**Latvia**
Government	Parliamentary democracy
Official language	Latvian
Independence	May 4th 1991 (from USSR)
Accession to the European Union	May 1st 2004
Total area	64 589 km^2
Population	2,291,000 (estimated 2006)
Population Density	35 /km^2
GDP (PPP) Per capita	$18,005 (2006)
Human Development Index	0.845 (2006)
Capital	Riga

The capital city Riga is the largest city, with a population of 717,371 (Central Statistical Bureau of Latvia, 2009). The population has steadily declined from a peak of around 900,000 in 1990, as has the population of Latvia as a whole. Per capita GDP in Latvia is approximately half the EU average (Eurostat 2008).

The water resources of Latvia are abundant, greatly exceeding current and expected future demands (Latvian Environment Geology and Meteorology Agency, 2002). In 2000, approximately 55 percent of water abstraction was from surface waters, 39 percent from groundwater, and 6 percent from quarry and rainwater, with municipal use taking approximately half of the extracted supply and the remainder being used by industry and agriculture. Perhaps due to the relatively plentiful availability of water resources in Latvia, only 27 percent of Latvians say they feel well (or very well) informed about the water resource problems facing their country (Gallup Organisation 2009).

Drinking water in Riga is supplied by Rīgas ūdens (Riga Water), a company wholly owned by the municipality of Riga. The water supply system draws upon two sources of water – water from the Daugava River which is treated in the Daugava water treatment plant, and water drawn from groundwater sources.

3 Findings

3.1 Water quality in Riga

From the viewpoint of the stakeholders interviewed, although the quality of drinking water has improved since the Soviet era, the primary water sector issue in Riga is the ageing infrastructure, which often contributes to poor water quality. They anticipate that there will be considerable change in the water infrastructure in the future (e.g. construction of new pipe networks, drainage systems), whilst there are also possibilities for the introduction of new technologies (for example advanced filtering techniques to treat surface water sources). These developments are likely to mean rising water prices for consumers.

Water regulators when questioned about the key consumer issues said, for example:

[R3] The quality of water, I believe, is the most important thing. To receive the service in the appropriate quality.

[R2] They are interested only in two questions, that's for sure – the quality of the service and the rates, because these things influence them directly.

Similarly, one of the NGO representatives commented:

[NGO] in my opinion, [consumers] are mostly interested in the quality of the product. Do water providers have problems too? Well, that's another question. They look at this problem in general and they are interested in the technical things, the quality of the water pipes, the quality of the dirty water and so on but the consumer is mostly, in my opinion, interested in the quality of the final product or how he sees the quality.

Both regulators and water service providers raised the concern that although the water quality leaving the treatment plants was good, the pipe infrastructure potentially created water quality problems for the consumer. As one of the water suppliers commented:

[WS] I don't think it is quality but it could be quality, but in most of the cases it's not the bad quality of Riga's water but the bad quality of the pipes

Similarly, the NGO representative interviewed commented:

[NGO] it is possible that in some places there is this technical problem connected with bad pipes, consequently the quality is not so high.
[ ]
the main problem could be the mistrust in the quality of water and the quality of water pipes. This problem is actual not only in Riga but in all Latvia. Of course there are different indicators but the most widespread is the heightened concentration of iron and it can be clearly seen if the water is yellow and dirty. People don't like that.

Several stakeholders thought that consumer concern about tap water quality was leading to risk aversive behaviour, such as the drinking of bottled water or filtered water.

[NGO] If they don't believe in the quality of water and think that the pipes are bad, they somehow filter this water or use mineral water. These are the consequences.

[R1] Keeping in mind those worries about the quality of tap-water I would say that they do not trust us 100 percent. There could be less worries about the usage of tap-water and this Soviet myth about boiling water.

[CO] This is an indication that consumers do not have trust in tap water quality. There is an opinion that our water supply system cannot provide a good water quality. In some areas that is really the case.

This was deemed an unnecessary behaviour since the supply was generally thought to be good

[R1] I can say that in Riga we have the best water in all Latvia. Riga is different because the delivery of water does not cause any problems. It's provided corresponding to the regulations. The problems are in the little enterprises in the countryside. Actually, after these results the water in Riga is the best. Well, if not the best then very good.

[R3] [We] have access to good drinking water. Let's say, the newly built regions, let's say Imanta. Imanta gets the water from Daugava. The Daugava water station, they have different kinds of filtering. The water of Daugava has been filtered until the level when it is drinkable. This water is really with good taste qualities and there are no problems.
[ ]
In terms of regulation there are no major problems. We can talk about some specific technical problems – the maintenance of piping, the installation of new lines, the development of new drainage systems and things like that and at present it does not concern the consumer. It could be of concern for the future consumers, those which have not connected yet. But those who are connected, they are getting it, this service, let's say, the right quality.

The Consumers' Views

There was a clear view amongst consumers that water quality in Riga was not of a high standard. As in the excerpt below, many consumers take it as a given that tap water is not fit for consumption, but these judgments were often tacit and embedded in experiences that constitute day-to-day life, for example habitually boiling or filtering water prior to consumption.

(participant 7) We know that its quality isn't very good, but we don't go into detail. We cannot do anything to improve the situation.

Facilitator How do you know that it's not very good?

(participant 3) Everybody tells: don't drink tap water!

(participant 7) Sometimes I drink tap water, when I'm thirsty and I don't have anything else. One glass in 3 months. Nothing bad has happened to me. [Group 4, West Bank]

As with most consumers in most parts of Europe, assessments of tap water quality involved considerations about taste, colour, and clarity (turbidity). Odour was not noted to be a problem. In fact participants said that it had improved, and attributed this to the lowered amount of chlorine in the water.

Facilitator What is it like here?

(participant 3) It has a bad taste because… I don't know why. Maybe it is related to… water supply system in my district, but maybe not… anyway, I try to avoid drinking it.

Facilitator Mhmm. So, taste is important. What else affects your evaluation?

(participant 1) Colour.

(participant 7) Clarity. Sediment which settles to the bottom. What we can find in a coffeepot – we can judge very well by that.

(participant 5) I live on the fourth floor, and on the fourth floor it's even brown. Cold water is okay, but hot…

(participant 7) It's everywhere like that.

(participant 5) I guess so.

(participant 4) Sometimes at first the water is absolutely black… It is so disgusting.

Facilitator What comes to your mind in such situations?

(participant 6) Nothing.

(participant 3) I think that pipes...

Facilitator Bad pipes?

(participant 1) Probably. I have seen in Jelgava and elsewhere sinks with rust spots. Our sink is white. There is no sediment in the centre. After boiling water, yes, there is really something… I don't know…lime or something like that. I'm not a chemist... But, for example, if I put water simply to stand, I cannot see any sediment, nothing.

(participant 6) In different districts water is different, really. [Group 1, East Bank]

Views about poor tap water quality were not restricted to residents residing on the east bank and indeed some on the east bank claimed that they had good quality tap water. Within the sessions, it was clear that perceptions of water quality varied between houses and regions, rather than simply on which side of the river they resided and the source of the water supplied. Thus, although overall judgements of water quality across the city suggested that the water was poor, people often used comparative

assessments in order to compare their tap water with other regions in order to claim that it was better than others.

(participant 5) I think that our water is very tasty. For example, in my house.

(participant 4) People get used to it. It is the fact that a person gets used to the water he drinks – so it is. But if we compare, let me say, different regions then…

Facilitator We are speaking only about Riga at the moment.

(participant 3) In my opinion water has no taste and thanks God, it often has no scent as well. As I know in some districts there is such a problem. [Group 2, East Bank]

And another example of this:

(participant 3) [My tap water is] muddy, white. But I have installed a purification system – everything is okay.

(participant 4) In which region?

(participant 3) Zolitude.

(participant 5) They have problems.

(participant 4) No problems, water like water. In Ilguciems.

(participant 5) Ilguciems – everything is alright, I'm satisfied. But in the area of Bauskas Street… I have been living and working in Ziepniekkalns – if you turn on the tap, there's no difference between water and sewerage.

(participant 6) Water like water. Clean.

(participant 7) I live in Ziepniekkalns, as well.

(participant 8) There are different water bores. I clarified it some time ago.

(participant 6) In the Bauskas Street area – it's true – you turn on the tap… [Group 4, West Bank]

Judgments of tap water tended to be contextualised in relation to their immediate locale, and they often employed their localised knowledge of regional differences to inform their assessments of their own tap water quality. Participants compared their own region with others, drawing on their prior experiences and observations such as sinks with rust stains, and the clarity of tap water. What is worthy of note here is that some participants felt that their tap water was better than other areas. For example, in the following excerpt people residing in the centre of the city (east bank of the Daugava River) felt that their water quality was better than that in the Pardaugava region of the city (west bank of the Daugava River).

Facilitator How much is water valued in your family, household where you live?

(participant 6) I live in the centre and I think that we have better water if compared to those living in Pardaugava

(participant 1) Yes, I live in the centre, too. We drink tap water. My family refuse to drink carbonated water, and we drink tap water instead. I'm afraid to say, but luckily nothing bad has happened. [Group 1, East Bank]

On the other hand, those living in Pardaugava reported good quality water compared to the centre of the city.

Facilitator What do you think about the quality of tap water?

(participant 1) Very good, by the way. In the past, I used to live in the centre, on Matisa Street, water was horrible. It was impossible to drink it. Now I live in Pardaugava – water is very good.

(participant 4) Yes, it's better in Pardaugava if compared to the centre.

(participant 2) I live in Pardaugava, too. I cannot complain at all. It cannot be compared… well, I have… My parents live in other region. What is it? Purvciems, I guess… For example, I fill the bath with water, and I can see through – that's where I live. In their situation – you fill the bath, and you can see that water is yellow, rusty. And also when boiling water, every month you have to remove lime scale from your kettle. [Group 3, West Bank]

This suggests that judgments of water quality may not necessarily be based upon assessments of tap water alone, but may also be informed by residents' feelings about their local setting and the areas that they inhabit. Here, a sense of rootedness in a community may imply strong, positive bonds and associations. This can be linked with research related to environmental pollution, where this phenomenon has been termed the "neighbourhood halo effect" where individuals exhibit a degree of reluctance to attribute high levels of pollution to their home areas (e.g. Bickerstaff and Walker, 2001). However, this same phenomenon could also be explained by knowledge about different sources of water. Although their knowledge was not well developed, some participants were aware that the region is supplied by different sources of water (e.g. boreholes, lakes), and that the source water differs according to the bank of the Daugava River.

Facilitator If we compare water in Pardaugava and on this side of the river, is there any difference?

(participant 4) Which area? On the left side of the river, there are many types of water.

(participant 2) Ilguciems/ Imanta – water is absolutely different. I have relatives living in Imanta – water is not tasty. I guess they have more chlorine in it. At the same time, in Ilguciems it's okay.

(participant 3) I don't know.

(participant 1) I have tried water in Ziepniekkalns, in Ilguciems we have it better.

(participant 6) Water is not the same everywhere. I cannot remember exactly…

(participant 7) Frankly speaking, I haven't thought about it. I know that I can use tap water to wash the dishes, but not for drinking. To say that in Purvciems it's like this and in Ziepniekkalns like that…

(participant 5) Water sources are different on the left side and on the right side of the river. On the left side, people receive it from Bolderaja, but in Purvciems, Jugla, Plavnieki - somewhere from Baltezers, if I remember correctly.

(participant 4) It's not true. Baltezers is a lake, and on that side there are 76 boreholes, which take water from the forest side. And water for people living in Jugla etc. comes from these boreholes. This water isn't filtered. It's like from a well. It tastes good - like spring water. On the left side, water comes from a reservoir and also from boreholes. Everybody living in Pardaugava receives water from the reservoir, but from different places. Therefore, we cannot say that the river Daugava divides Riga in two parts only. Riga is divided into regions. Water always has a taste. It's stronger if there are more salts. [Group 4, West Bank]

In addition to regional and source water variations, participants also made observations about variations in tap water quality between houses; here, they noted that water quality depends on pipe quality, whether pipes had been replaced, and whether the relevant housing authorities had invested in improvements to the pipe network. They claimed that the source water quality is good, and that it was rather the quality of pipes that is responsible for the deterioration in the quality of the water by the time it reaches their houses. Thus, participants also demonstrated an understanding that the reasons for poor water quality were part of a wider infrastructural problem with the quality of the pipe network in the region.

Facilitator Do you think in many regions of Riga the quality of water is different?

(participant 3) Definitely.

Facilitator Where it's better, where it's worse?

(participant 2) I think, we may talk about not only regions. Two houses near each other may differ – one with replaced sewer-pipes, the other – not replaced, of course.

Facilitator [participant's name] tells that pipes are to blame. Any other opinions?

participant 2) Not only. The same infrastructure… I'm not a plumber. Central nodes, pumps – they become worn-out. One house has one manager, the other has another who isn't interested in anything, just collecting money. At the same time the first one makes investments: facade is restored, inner rooms are reconstructed, everything's alright with pipes. In the other case – nothing. [Group 3, West Bank]

In summary it is clear that consumers see problems with the quality of the water they receive at their taps. Some of these perceptions are driven by knowledge of the supply system in general but some also by local knowledge and, potentially, positive beliefs about their own locality. Some appear to accept that the quality of the water is degraded by the infrastructure though the boundary between municipal infrastructure

and residential infrastructure is not clear which, as we will see makes it less clear where the locus of responsibility for remediation lies.

3.2 Water quantity in Riga

Latvia is a country richly endowed with water, having 7313m^3 of renewable water resources per capita (Food and Agriculture Organization, 2009). This lack of water scarcity on a national scale means that there are no water supply issues due to a lack of water availability. However, it was still recognised by some of the stakeholders interviewed that the consumers are concerned about water quantity issues, even if it not their current main concern:

[NGO] They want water to be cheap, in good quality and of course, they are interested in non-stop delivery.

Amongst focus groups participants it was generally recognised that continuity of supply was good.

[participant 3] We have no problems with it – we have water regularly. {Group 2, East Bank]

Where focus group participants did refer to recent supply interruptions they related to repairs and pipe replacement activities:

[participant 3] last year I was forced to live without water for a month because they were replacing pipes. We were buying water in a shop. But we didn't have water for washing. We brought clothes to our parents in order to wash them. [Group 3, West Bank]

[participant 4] Recently, repairs are made often. During repairs, water-supply is turned off, and when it's turned on again… after repairs water is available. Before, it wasn't always like that. The more repairs the better availability of water. [Group 4, West Bank]

The issue of water pressure was raised by the water supplier, who suggested that it was no longer a problem:

[WS] In Riga there are no pressure problems anymore, the pressure of water is satisfactory and even more. In some houses there could be some pressure problems but that is only inside the house and it is the problem of pipes….. Some time ago the main problem was the pressure, then the second problem was the quality.

However, some focus group participants did see water pressure as an ongoing problem:

[participant 8] I would say pressure, sometimes it is very low….. I don't talk about the upper floors. I'm on the first floor, and sometimes at evenings pressure is very, very low. [Group 1, East Bank]

[participant 2] In winters when there's no pressure, they freeze… Water cannot get to the upper floors… [Group 3, West Bank]

3.3 Communications between the supplier and consumers

In the case of communications, the current infrastructure for communication was described as limited, and the water supplier representative admitted this to be a 'weak point'. Effective communication was regarded as vital, and the spokesperson stated that more would be done in this area in the future and indeed a consumer 'client centre' was in the planning phase at the time of the interviews.

One of the water regulators interviewed thought that some of the consumer concerns with water quality were linked to poor information provision on behalf of the water provider:

[R1] If the consumer is not sure about the quality, of course he will have worries. Some time ago there was this myth that you had to boil water before the consumption. There were problems with chlorine and it smelled bad as well. Nowadays we do not have this problem anymore because we have different methods how to work with water. Yes, rather often these worries are from not knowing the right information and then the consumers think that it's better to buy pre-packed water and they believe that it is good for drinking. In reality it is not so. It is very difficult to convince them of the opposite.

However, the water supplier interviewed acknowledged that they did not have a strategy in place for liaising with consumers:

[WS] If I understand it correctly we do not have a marketing policy at the moment, we lack a marketing strategy, how to inform our clients. Each year we send out booklets but I don't think that people are interested in the amount of water consumed or in different chemical substances but we are planning direct contact with this client service, and recognised its importance.
[ ]
We are planning to send out (together with bills) different information booklets. Not only about bad things but also the basic things like what you can throw out in drainage and what could be the consequences.
[ ]
I consider it to be one of our primary concerns because without it there can be no natural monopoly….. In this situation communication with our clients is of paramount importance.

One of the regulators thought that consumers were not provided with sufficient information:

[R1] I think that consumers have very little information on the quality of drinking water. Despite the fact that it's the duty of the provider to inform them, of course, this informing usually happens when the quality of water is bad, these are warnings about restrictions or partial restriction of drinking water. Rather often the inhabitants don't know what kind of water they are consuming. I believe it is very difficult for them to receive this information on the quality of drinking water.
[ ]
I believe that the consumer is not informed well enough on the quality of water….. I believe that you (as a consumer) are also not sure about the quality of drinking water. I think there should be much more information from the providers.

In the focus group sessions the lack of dialogue between consumers and the water company was evident, with participants stating that they did not receive information or even water bills from the water company as these were sent to their apartment's house management. When asked if they had ever been in contact with the water company people commented things like:

[participant 8] How can I be in touch if I even don't know who they are?

[participant 2] Bills are sent by house management.

[participant 8] No information, nothing… [Group 3, West Bank]

Participants said that they were unsure about how to make contact with the water supplier and thought they would need to go through their apartment's house management.

[participant 8] I think we must firstly turn to house management, not to Rīgas ūdens. [Group 2, East Bank]

[participant 5] Firstly, you turn to house management…… Will it be better if you turn to Rīgas ūdens? [Group 3, West Bank]

However, some participants expressed the feeling that they were disenfranchised due to having house management act as their intermediary.

[participant 7] But house management doesn't function well as a mediator: it has undertaken to act as a mediator between us and Rīgas ūdens, we pay them, but we cannot influence the pace. We're used to it, and we don't expect anything better. [Group 4, West Bank]

Similarly, it was thought that the water company would use house managers as an intermediary when trying to contact consumers.

Focus group participants expressed the desire to receive more information directly from the water company, in particular, people were interested in receiving information relating to water quality:

[participant 5] About tests of quality or at least, information about their activity. That information is interesting to me. [Group 2, East Bank]

[participant 6] They could simply provide more information on water content, what it contains and in what amounts. [Group 3, West Bank]

[participant 6] At least we should be able to enter their website and see what our water consists of. We are living in the era of information technologies. We should be able to read their information. I have visited the website but there is no such thing as the results of analysis. None of them has. [Group 1, East Bank]

[participant 5] They could inform people after grouping them by houses or districts, provide some reports, at least once a year, say that everything is okay. [Group 1, East Bank]

These quotes seem at odds with those of the water supplier who thought that consumers were probably not interested in this kind of information.

3.4 Consumer and stakeholder views about each other

Several stakeholders noted that it is not in the nature for Latvians to complain directly about the services they receive, and that in essence there is no 'complaints culture' in Riga. This probably arises as a combination of factors that are the legacy of the communist era. The Soviet era planned economy with its emphasis on massed housing in shared apartment blocks (rather than individual owned or rented houses) naturally channelled responsibility for apartment maintenance away from the individual and toward the apartment block managers. This still persists for many citizens though it is gradually changing as Latvia becomes a more individualistic western society. Thus many people do feel, or have a history of feeling, responsible for their domestic pipe work or complaining about poor service when appropriate.

Facilitator Has Rīgas ūdens ever made contact with you?

(Many voices - No.)

Facilitator Can you think of any instance when they might need to make contact with you?

(participant 7) Through house manager's office they have made contact. We have seen their notifications in staircase about water supply interruptions, at what time on which date etc.. Sometimes due to negligence of the house manager we have not been informed. There have been even such situations. They simply haven't posted the information. And we have only cold water. We don't know anything.

Facilitator Does Rīgas ūdens work correctly, in informing you?

(participant 7) They don't work directly, but through managers and house manager's office. Therefore it is hard to say who made a mistake. [Group 1, East Bank]

Housing managers were regarded as the mediators between consumers and the water company. However, many felt disenfranchised due to the nature of housing managers acting as intermediaries, since they felt they had no 'voice' as consumers and did not believe any action would be taken on their behalf by the managers.

(participant 8) I already told you that nobody is complaining. When a social house was opened in Bolderaja, we turned off water-supply. And when we turned it on, water was rusty for some 3-4 days. I turned it off again, and when I turned it on after some 3-4 days, everything was alright. No, I wasn't complaining. Who should I complain to?

(participant 7) We don't know about our rights, we don't know that we may complain.

(participant 2) And if we knew who we should turn to… At first, you turn to house management, but they try to get rid of you: yes, we will consider… [Group 4, West Bank]

Participants stated that ideally, they would like to have direct dialogue with the water company, but demonstrated a sense of helplessness in that they had little choice but to accept the current situation.

(participant 2) I'd like to turn to the person who is responsible. As we don't know who it is, we turn to house management.

(participant 3) Yes, I also would like to address the person directly, and not through house management.….

(participant 7) …house management doesn't function well as a mediator: it has undertaken to act as a mediator between us and *Rīgas ūdens*, we pay them, but we cannot influence the pace. We're used to it, and we don't expect anything better. [Group 4, West Bank]

Also relating to the Soviet legacy the idea of the citizen exercising consumer rights and complaining about services is relatively novel. Indeed there is evidence of people still regarding water company engineers and meter readers as agents of the State potentially with dubious motives and possibly being corrupt.

(participant 7) They are working for themselves. They simply shouldn't steal so much. (Laughing.) Then everything would be alright. [Group 1, East Bank]

Similarly there is an acknowledged hang over of the Soviet era in respect of the supplier's views of the consumer

[WS] …we have so called inspections when we meet our clients at their living places but these meetings are more negative than positive because in most of the cases we notice some offences or something like that.

[ ]

…now it's better. It has to be mentioned our own attitude towards the clients is very important. The most difficult thing for us who have been through the Soviet times is to look at the consumer and not to see a potential thief, potential offender. It is possible that 3 % of our water is stolen but we cannot look at 97 % of our consumers and think of them as of offenders. The people who work with our clients have to get rid of this opinion and many of us have succeeded and the clients should feel this change.

On a more positive note consumers did not question the water company's competence in providing them with good quality drinking water; participants even acknowledged that the company had made investments to improve water quality, and in this respect they were not held accountable for poor quality drinking water. Indeed, participants said that they had confidence in the processes and technologies that were involved in water provision and trusted the motives of the supplier.

(participant 1) I think they're good. The aim of all these processes is to help people.

(participant 5 If we should use it as it comes directly from the source, it would be more dangerous if compared with all chemical processes.

(participant 8) I would say that everybody who is involved in water purification knows what he/she is doing. We don't have choice. We trust these people. [Group 4, West Bank]

Furthermore, participants said that experts have been assigned and entrusted with the responsibility of providing a good service, and questioned whether they as consumers have grounds for mistrusting them, given that they do not have the prerequisite information to guide and inform their views.

(participant 2) …it is within their scope and responsibility. Should we doubt [it]? Probably, we can mistrust, but then we must have knowledge. I don't have such [knowledge]. [Group 1, East Bank]

3.5 Willingness to pay for improved supplies

As noted earlier consumers believe there is a general water quality problem. Whilst this was framed as a historical problem, and that changes could not be made overnight, there was an underlying sense of dissatisfaction that pipe replacement schemes were not underway. Participants felt that an overhaul of the water system was long overdue, and they politicised this issue when discussing how they felt the relevant authorities operated. It was argued that despite independence, their nation had not gone through a satisfactory transition, and that authorities were not functioning efficiently with little in terms of change.

(particpant 3) *Rīgas ūdens*… definitely they have done something about purification plants because the quality of water has improved. At the same time, the infrastructure… they haven't made investments. I think so. At least not in my region. I guess, there are the same iron pipes because…

(particpant 4) Yes, I haven't seen them replacing...

(particpant 3) I also haven't seen any changes, any work carried out. I haven't seen and I haven't heard of it, as well.

(particpant 4) Nobody has come to ask for our opinion. They could sometimes ask about the situation in general.

Facilitator About old pipes. Do you think that in Pardaugava there are ageing pipes under ground? The same as in the central Riga?

(particpant 3) I guess so.

(particpant 6) I haven't noticed anybody… Really… I was born there and I grew up there. I have been living there for all my life. But I haven't seen anybody digging streets or replacing pipes…

(particpant 1) They were installed in Soviet times, nothing has been done since then.

(particpant 6) I agree. What kind of repairs? I don't know…

(particpant 2) Besides, pipes cannot be replaced in one night.

(particpant 6) Exactly! [Group 3, West Bank]

In deconstructing the issue of accountability further, whilst some consumers agreed that the company fulfilled its responsibilities by delivering water, others believed that the provision of poor tap water quality was a reflection of the company's inefficiency, and that Rīgas ūdens should be held accountable for the maintenance and overhaul of the pipe infrastructure.

(participant 5) Well, the enterprise itself is probably successful, we can evaluate it in this way…

Facilitator Yes?

(participant 5) ….. *Rīgas ūdens* is responsible for maintenance of water-pipes, i.e. pipeline, pipes. How do they change? If the water is rusty it means that there are some drawbacks in their work if the supplied water is rusty. [Group 2, East Bank]

Others thought that maintenance of the pipe network was a wider municipal responsibility, and not necessarily the sole responsibility of the water company. However, it was felt that water was not high on the municipality's agenda.

(participant 1) Yes, but actually *Rīgas ūdens* is a municipal enterprise. It is [the] municipality's problem, they should care about consumers. Actually, *Rīgas ūdens* is just an intermediate [body]. Riga City Council is delegating.

(participant 7) Yes, they are more like contractors.

(participant 1) That's right! Actually, [the] municipality is responsible for water.

(participant 6) However, it is important. *Rīgas ūdens* is on the third place. There is also *Rīgas siltums*, *Rīgas gāze*.

[over talking and interruption]

Facilitator Attention, please!

(participant 6) I don't care about gas, electricity is consumed, but the quality of water is more important. Unfortunately, it seems it is on the third place. [Group 1, East bank]

Participants were also aware that improvements to the pipe infrastructure, and ultimately a better service, would mean rising costs for them as consumers. In the excerpt below, two viewpoints prevail; one suggests that rising costs are necessary for improvements in the system and good quality water, whilst the other suggests that not all citizens would be willing or able to pay more. At the suggestion of a public referendum, it was noted that many would be against paying more.

(participant 5) They can bring in innovations taken from neighbouring countries which are better developed than our country.

(participant 4) New purification system.

(participant 2) But it can affect the price for water.

(participant 5) Of course. It must affect. These are interrelated processes.

(participant 2) Not all people want it. There are many poor people.

(participant 5) We all have mentioned that water costs as much as it costs. And if it costs 1 or 3 Lats more you will pay for it anyway.

(participant 9) This factor is of vital importance.

(participant 2) Yes, but before doing it we will need to hold some kind of referendum.

(participant 5) Probably, yes.

(participant 2) And many people will be against it.

(participant 5) Of course, some people will be unsatisfied. But we speak about high-quality drinking water which cannot be ensured using our old technologies. We have to pay extra for this. [Group 2, East Bank]

Indeed, in the extract below, the very fact that some participants were expressing discontent with their water quality in the focus group discussion was viewed with some sense of concern for Participant 4, who felt that this would lead to a chain of events culminating in rising costs for the consumer. Although the tone of the remark is jovial, the undertone may go some way to explain the apparent lack of a 'complaints culture' in Riga, since consumers are concerned that they will have to pay more.

(participant 4) Judging by what you said, the water-supply system will be inspected. And then we will have new prices for the quality. *(Everybody laughs.)* They will find out why we're dissatisfied, they will say – we will make improvements. And we will have to pay. [Group 4, West Bank]

In terms of accountability for costs, participants proposed that the water company should bear a substantial amount. According to them water companies gain enough revenue from existing water tariffs, which are calculated to provide a service, pay salaries and make investments. Others suggested that the water quality problem was not just one for the water company, but for the state as a whole; Riga City Council, the Latvian government and the European Union were all noted as key actors in funding solutions. Participants claimed that they were already contributing through the payment of taxes, and were adamant that these should not be raised. They also claimed that these contributions may be exploited by the state, demonstrating an overall sense of distrust in the state, and lack of confidence that the funds would be deployed and utilised appropriately. This points to a lack of transparency and communication about how existing funds are utilised.

Facilitator Who do you think is chiefly responsible for dealing with these problems? Let's say for improving the infrastructure.

(participant 7) I think Riga City Council.

Facilitator City Council, not municipality? Who should pay for it?

(participant 6) But we are paying already. Taxes.

(participant 1) Riga City Council, the municipality. We are paying taxes.

Facilitator Would you agree to higher taxes?

(participant 1) No, no, no.

(participant 2) They would spend this money to pay salaries to officials, employees, but not to reach the [goal].

(participant 7) They are working for themselves. They simply shouldn't steal so much. (Laughing.) Then everything would be alright. [Group 1, East Bank]

These findings are compatible with other recent studies which showed that the Latvian public's willingness to pay for measures to clean up the raw water in the Daugava river were very limited. Ready, Malzubris, & Senkane (2002) showed that while citizens were willing to pay 0.7% more of their income for this improvement this figure was considerably less than the amount likely to be required to carry out this remedial work As with many such studies around the world willingness to pay for improvements in water quality is limited even where there are clear public concerns about this issue.

The Impact of Metering on Water Consumption

Water metering is common across most of Europe and is based on the principle that those who use a service more should pay more for it and thus come to value it. Naturally the introduction of metering focuses the mind of the consumer on just how much water they are using and its introduction in Latvia had dramatic effects on consumption levels at least partially causing some of the water quality problems now being experienced. This presents something of a dilemma since consumers are motivated to reduce consumption and thus pay less to the water company making it harder to generate income for major infrastructure investment.

The majority of our participants said that the introduction of water meters, and consequent systems of payment influenced how much they monitored their water use. Participants claimed that they did not leave the tap running, and spent less time taking showers in order to curtail their water use. They said that the only reason they did so was to reduce the amount they have to pay, and that if they didn't have to pay to use more water they doubted they would engage in such strategies.

(participant 5) We started economizing water in the sense that I do control my family members, for instance, when they turn on the water and they go out. Housewives also like it: they turn on the water and wash everything. I control myself and my family members quite systematically.

Facilitator Does it depend on the price?

(participant 4) Yes, of course.

(participant 5) No doubt. We pay per each cubic metre. If we didn't pay I would possibly have no such a habit.

(participant 8) I spend less time in the shower in the mornings.

Facilitator Are you trying to shower more quickly with the aim to save water?

(participant 8) Yes. Because when you see the bill, how much you have to pay, then... [Group 3, West Bank]

Although participants did not express widespread concern about the introduction of water meters, some felt that the system was inequitable due to the design of the system around the prevailing housing-structure, leading to 'unfair' issues of disparities in consumption patterns, and non-payment disputes between neighbours.

(participant 4) I'm personally concerned about water-meters. Each apartment receives a consumption bill and sometimes disparities in consumption constitutes a half of the sum which I have to pay.

Facilitator In your opinion, the system is not fair, right?

(participant 4) Obviously, neighbours don't pay, maybe, but it is a problem throughout Riga, as far as I know, in municipal houses. [Group 1, East Bank]

5 Conclusions

Riga was selected as a TECHNEAU case study site because it represented an Eastern European city in an accession country which had an aging infrastructure in urgent need of investment and improvement. Our focus group participants were aware of the need to invest and the fact that the current poor quality of water supplied to some areas of the city was related to this. The water company was not directly held to blame for the poor quality of the water as it was understood that infrastructure changes would require both time and considerable investment before there would be a noticeable effect on water quality. The key problem was who should pay for the improvements needed and there was little evidence here that consumers thought that they should pay either in the form of higher water prices or increased general taxation.

This lack of willingness to pay for improvements seems to arise in part from a lack of trust in the authorities to use the additional funding properly. There were suggestions that consumers thought the authorities were more concerned with their own profit maximisation than investing in improvements and could not be trusted to spend the money appropriately. A lack of transparency in how public money was spent and a lack of effective means for consumers to communicate with the water company have not helped consumers feel that they can trust the authorities. The latter issue seems particularly problematic in this context where a large proportion of the population live in managed housing and it less clear what the exact communication relationship should be between suppliers, house managers and individual consumers.

The issue of how consumers as tax and water bill payers relate to their water company is undoubtedly a key issue for the next few years. If funds are to be raised for infrastructure investment greater engagement with the public is going to be required and a greater clarity about how citizens relate to their house managers and the water company is required. Currently the average consumer does not feel empowered either to complain to, or engage with, the supplier and without this relationship any increase in tariffs is likely to be unwelcome.

We cannot know whether consumers would become more willing to pay for infrastructure investment were the authorities (meaning the water company and political entities) to be more open about how they spend consumers' money. However, without becoming more responsive to interactions with individual citizens and improving communications it is hard to see how cooperation is to be fostered. Of course the level of willingness to pay for improvements to water supply infrastructure is not high anywhere in Europe as most citizens of developed countries regard the supply of safe drinking water as a human right rather than a product that has to be paid for like any other consumable good and thus we should not assume that the citizens of Riga are unusual in this sense.

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