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WORKING PAPERS

Challenges and opportunities facing water-service co-operatives: cases from Argentina and Finland

Vol. 5, N° 4

(In English and Spanish)

Newcastle upon Tyne, Tampere, and Buenos Aires, December 2018

Cover picture: New Lanark, on the River Clyde, in Scotland, with its heritage 19th Century water-driven cotton mills. The site where Utopian thinker and entrepreneur Robert Owen established his model industrial community in 1800-1825.

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Thematic Area Series

Thematic Area 3
Urban Water Cycle and Essential Water Services

Challenges and opportunities facing water-service co-operatives: cases from Argentina and Finland

José Esteban Castro and Tapio S. Katko (Eds.)
Newcastle upon Tyne, Tampere, and Buenos Aires, December 2018

WATERLAT-GOBACIT Research Network

5th Floor Claremont Bridge Building, NE1 7RU Newcastle upon Tyne, United Kingdom
E-mail: waterlat@ncl.ac.uk
Web page: www.waterlat.org

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General Editor

Jose Esteban Castro

Emeritus Professor,
Newcastle University
Newcastle upon Tyne, United Kingdom
E-mail: esteban.castro@ncl.ac.uk

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Cuadernos de Trabajo de la Red WATERLAT-GOBACIT

Vol. 5, N° 4

Serie Áreas Temáticas

Área Temática 3
El Ciclo Urbano del Agua y los Servicios Públicos Esenciales

Desafíos y oportunidades que enfrentan las cooperativas de agua y saneamiento: experiencias de Argentina y Finlandia

José Esteban Castro y Tapio S. Katko (Eds.)

Newcastle upon Tyne , Tampere y Buenos Aires, diciembre de 2018

Thematic Area Series

TA3 – Urban Water Cycle and Essential Water Services

Title: Challenes and opportunities facing the water-service co-operatives: cases from Argentina and Finland.

Corresponding Editor:

José Esteban Castro
Emeritus Professor,
Newcastle University
Newcastle upon Tyne,
United Kingdom
E-mail: esteban.castro@ncl.ac.uk

Corresponding authors:

For comments or queries about the individual articles, contact the relevant authors. Their email addresses are provided in each of the articles.

Serie Áreas Temáticas

AT3 – El Ciclo Urbano del Agua y los Servicios Públicos Esenciales

Título: Desafíos y oportunidades que enfrentan las cooperativas de agua y saneamiento: experiencias de Argentina y Finlandia.

Editor Correspondiente:

José Esteban Castro
Profesor Emérito,
Newcastle University
Newcastle upon Tyne,
Reino Unido
E-mail: esteban.castro@ncl.ac.uk

Autores Correspondientes:

Para enviar comentarios o consultas sobre los artículos individuales incluidos, por favor contacte a los autores relevantes, cuyos datos de contacto son provistos en cada uno de los artículos.

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Presentation

This issue is part of the activities of the WATERLAT-GOBACIT Network's Thematic Area 3 (TA3), the Urban Water Cycle and Essential Public Services (http://waterlat.org/thematic-areas/ta3/). TA3 brings together academics, students, professionals working in the public sector, workers' unions, practitioners from Non-Governmental Organizations, activists and members of civil society groups, and representatives of communities and users of public services, among others. The remit of this TA is broad, as the name suggests, but it has a strong focus on the political ecology of urban water, with emphasis on the politics of essential water services. Key issues addressed within this framework have been the neoliberalization of water services, social struggles against privatization and mercantilization of these services, the politics of public policy and management in the sector, water inequality and injustice in urban areas, and the contradictions and conflicts surrounding the status of water and water services as a public good, as a common good, as a commodity, as a citizenship right, and more recently, as a human right.

The publication is a product of a long-term collaboration with the Capacity Development of Water and Environmental Services (CADWES) Research Group, which holds the UNESCO Chair in Sustainable Water Services at Tampere University of Technology (TUT) in Finland under the coordination of the issue's co-editor, Prof. Tapio S. Katko. The idea of developing a series of publications on the history and relevance of water-service cooperatives around the world has been an important component of our common research plans and initiatives, and we decided to start with this issue on the challenges and opportunities facing cooperatives in the current context. Consistently with our Network's inter- and transdisciplinary approach, the authors include academics and post-graduate students from the social sciences, history, and engineering, as well as professionals and leaders of civil society organizations working in areas relevant to the topics addressed in the publication.

The issue features four articles, two of them addressing the situation of water-service cooperatives in Finland, and the other two focused on experiences from Argentina. Article 1 is authored by Pekka E. Pietilä from CADWES-TUT and Joni Vihanta, who is the Managing Director of Kannus Water Cooperative in Kannus Municipality, Finland and simultaneously a PhD student doing research on water cooperatives at TUT. The paper presents a synthetic overview of the situation of water cooperatives in Finland, including an analysis of the challenges and opportunities they face in a context of rising consumer expectations and stricter service standards. Article 2 by Petri S. Juuti and Riikka P. Rajala, also from TUT, complements the first paper by focusing attention on the case of the first water cooperative created in Finland, Pispala Water Cooperative, which was founded in 1907 near the city of Tampere in the south of the country. Both articles highlight the fact that in the late Nineteenth Century, before becoming independent from Russia in 1917, Finland decided that essential water and sanitation services should be delivered by municipal public bodies or cooperatives run by users and community organizations, rather than by profit-making private companies, which remains a significant principle for the organization of these services in the country until today.

Article 3 is led by Melisa Orta, a PhD student in Politics at the National University of Rosario (UNR) on a studentship from the National Scientific and Technical Research Council (CONICET), Argentina, and was co-authored with Margarita Portapila, from the International French-Argentinean Centre of Information Sciences and Systems (CIFASIS), CONICET and UNR, Alberto Muñoz, from Argentina's Union of Users and Consumers, and Iván Pérez, from the country's Cooperative Funds Managing Institute (IMFC). The article discusses in some detail the history of the cooperative movement in Argentina since the late Nineteenth Century, and the development of water-service cooperatives in the country. It focuses on the case of water-service cooperatives in the Province of Santa Fe and highlights the significance of cooperatives in the provision of services in small and medium cities and rural areas. The authors also address the wide range of obstacles and threats facing water cooperatives, from the lack of safe water sources and adequate financial and technical resources to the systematic antagonism showed since the 1980s by neoliberal governments that seek to erode and eventually dismantle the cooperative movement, which they see as an obstacle to their plans to fully privatize essential services and other important areas. Finally, Article 4 was authored by Joaquín Ulises Deon, a PhD student in Social Agrarian Studies at the National University of Cordoba (UNC) on a studentship from CONICET, Argentina, also working on a joint PhD on Urban-Regional Studies between the Bauhaus Universität Weimar, Germany, and UNC, Argentina. The article partly complements the previous one by addressing important aspects of the history of the cooperative movement in Argentina, highlighting the fact that not all cooperatives adhere to cooperative principles, and many are in fact private enterprises in disguise. The paper addresses the development of cooperatives, and particularly water-service cooperatives, in the arid Province of Cordoba, Argentina, and focuses in more depth on four cases that the author considers are examples of genuine cooperative experiences. The article presents a very critical assessment of government policies against water-service cooperatives at the national, provincial and local levels, and shows evidence of the multiple pressures facing the cooperative movement in the province. Cooperatives have developed successful strategies to cope with these pressures, by establishing alliances with social movements and civil society organizations, exercising legitimate leadership in local and regional struggles to defend their water sources from the aggressive expansion of extractivist activities, including mining, agribusinesses, and private urbanizations.

We are delighted to present this first issue on water-service cooperatives resulting from a combination of academic research and reflections grounded on the long-term experience of professionals working at different levels of the cooperative movement in Europe and Latin America. We wish you all a pleasant and fruitful reading.

Jose Esteban Castro and Tapio S. Katko

Issue Editors

Newcastle upon Tyne, Tampere, and Buenos Aires, December 2018

Presentación

Este número es parte de las actividades del Área Temática 3 de la Red WATERLAT-GOBACIT (AT3), el Ciclo Urbano del Agua y los Servicios Públicos Esenciales (http://waterlat.org/es/areas-tematicas/at3/). El AT3 reúne académicos, estudiantes, profesionales que trabajan en el sector público, sindicalistas, especialistas de Organizaciones no Gubernamentales, activistas y miembros de grupos de la sociedad civil, y representantes de comunidades y de usuarios de los servicios públicos, entre otros. El alcance temático de esta AT es amplio, como lo sugiere el nombre, pero su foco central es la ecología política del agua urbana, con énfasis en la política de los servicios públicos esenciales. Algunos de los aspectos clave que abordamos en este marco han tenido que ver con temas como la neoliberalización de los servicios relacionados con el agua, las luchas sociales contra la privatización y la mercantilización de estos servicios, las políticas, las políticas públicas y la gestión en el sector, la desigualdad y la injusticia en relación al agua en las áreas urbanas, y las contradicciones y conflictos que rodean al agua y a los servicios relacionados con el agua considerados como bien público, como bien común, como mercancía, como un derecho de ciudadanía y, más recientemente, como un derecho humano.

La publicación es producto de una colaboración de largo plazo mantenida con el Grupo de Investigación sobre Desarrollo de Capacidades para los Servicios del Agua y del Ambiente (CADWES), que aloja a la Cátedra UNESCO en Servicios de Agua Sostenibles en la Universidad Técnica de Tampere (TUT) en Finlandia, bajo la coordinación del coeditor de este número, el Dr. Tapio S. Katko. La idea de desarrollar una serie de publicaciones sobre la historia y la relevancia de las cooperativas de servicios de agua a nivel internacional ha sido un componente importante de nuestros planes e iniciativas de investigación compartidas y decidimos comenzar con este número que coloca la atención sobre los desafíos y oportunidades que enfrentan las cooperativas en el contexto actual. Consistentemente con el enfoque inter- y transdisciplinario de nuestra Red, los autores incluyen académicos y estudiantes de posgrado de las ciencias sociales, la historia y la ingeniería, así como también a profesionales y líderes de organizaciones de la sociedad civil que trabajan en áreas relevantes a los temas tratados en la publicación.

El número presenta cuatro artículos, dos de ellos que tratan la situación de las cooperativas de servicios de agua en Finlandia y los otros dos que abordan experiencias de Argentina. El Artículo 1 corresponde a Pekka E. Pietilä de CADWES-TUT y a Joni Vihanta, que es el Director Gerente de la Cooperativa de Agua de Kannus, en la Municipalidad de Kannus, Finlandia, y quien simultáneamente desarrolla estudios de doctorado en TUT sobre cooperativas de agua. El trabajo presenta una síntesis general de la situación de las cooperativas de agua en Finlandia, incluyendo un análisis de los desafíos y oportunidades que las mismas enfrentan en un contexto de expectativas crecientes de parte de los usuarios y de estándares de servicio cada vez más estrictos.

El Artículo 2, a cargo de Petri S. Juuti y Riikka P. Rajala, también de TUT, complementa al primer trabajo y enfoca la atención sobre el caso de la primera cooperativa de agua que se creó en Finlandia, La Cooperativa de Agua de Pispala, fundada en 1907 cerca de la ciudad de Tampere en el sur del país. Ambos artículos enfatizan el hecho de que

desde fines del Siglo Diecinueve, antes de independizarse de Rusia en 1917, Finlandia decidió que los servicios esenciales de agua y saneamiento deben ser provistos por organismos públicos municipales o por cooperativas dirigidas por los usuarios o por organizaciones comunitarias, antes que por empresas privadas generadoras de lucro, un principio que continua vertebrando la organización de estos servicios en el país hasta el presente.

El Artículo 3 liderado por Melisa Orta, una estudiante de doctorado en Ciencias Políticas en la Universidad Nacional de Rosario (UNR) con una beca del Consejo Nacional de Investigaciones Científicas y Técnicas (CONICET), Argentina, con la coautoría de Margarita Portapila, del Centro Internacional Franco Argentino de Ciencias de la Información y de Sistemas (CIFASIS), CONICET y UNR, Alberto Muñoz, de la Unión de Usuarios y Consumidores de Argentina e Iván Pérez, del Instituto Movilizador de Fondos Cooperativos (IMFC), también de Argentina. El artículo discute en detalle la historia del movimiento cooperativo en Argentina desde fines del Siglo Diecinueve y el desarrollo de las cooperativas de servicios de agua en el país. El trabajo se centra en el caso de las cooperativas de servicios de agua en la Provincia de Santa Fe y enfatiza la importancia de las cooperativas en la provisión de servicios en ciudades pequeñas y medianas y en las áreas rurales. Los autores también tratan el amplio rango de obstáculos y amenazas que enfrentan las cooperativas, desde la falta de fuentes de agua seguras y recursos financieros y técnicos adecuados, hasta el antagonismo sistemático demostrado desde la década de 1980 por los gobiernos neoliberales que procuran erosionar y eventualmente desmantelar al movimiento cooperativo, al que ven como un obstáculo a sus planes de privatización plena de los servicios esenciales y de otras áreas importantes.

Finalmente, el Artículo 4 está a cargo de Joaquín Ulises Deon, un estudiante de doctorado en Estudios Sociales Agrarios en la Universidad Nacional de Córdoba (UNC) y becario de CONICET, Argentina, que también se encuentra trabajando en un doctorado en Estudios Urbano-Regionales conjunto entre Bauhaus Universität Weimar, Alemania, y la UNC de Argentina. El artículo parcialmente complementa al trabajo anterior mediante el tratamiento de aspectos importantes de la historia del movimiento cooperativo en Argentina, destacando el hecho de que no todas las cooperativas adhieren a los principios cooperativos y que muchas son en realidad empresas privadas disimuladas. El artículo aborda el desarrollo de las cooperativas, particularmente las cooperativas de servicios de agua, en la árida Provincia de Córdoba, Argentina, y se concentra en mayor profundidad en cuatro casos que el autor considera son ejemplos de experiencias genuinas de cooperativismo. El trabajo presenta una valoración muy crítica de las políticas gubernamentales contra las cooperativas de servicios de agua a nivel, nacional, provincial y local y suministra evidencia de las múltiples presiones que enfrenta el movimiento cooperativo en la provincia. Las cooperativas han desarrollado estrategias exitosas para superar estas presiones mediante el establecimiento de alianzas con movimientos sociales y con organizaciones de la sociedad civil, ejerciendo un liderazgo legítimo en las luchas locales y regionales para defender sus fuentes de agua contra la expansión agresiva de las actividades extractivistas, incluyendo la minería, los agronegocios y las urbanizaciones privadas.

Es con gran placer que presentamos este primer número sobre el tema de cooperativas de servicios de agua, que es el resultado de una combinación

de investigaciones académicas y reflexiones basadas en la larga experiencia de profesionales que trabajan en distintos niveles del movimiento cooperativo en Europa y en América Latina. Les deseamos una placentera y fructífera lectura.

José Esteban Castro y Tapio S. Katko

Editores del Número

Newcastle upon Tyne, Tampere y Buenos Aires, diciembre de 2018

Article 2

Water Cooperatives in Tampere, Finland: the case of Pispala

Petri S. Juuti[1] - Tampere University of Technology, Tampere, Finland

Riikka P. Rajala[2] - Tampere University of Technology, Tampere, Finland

Abstract

Pispala Water Cooperative was established in 1907 in Pispala, next to the city of Tampere, Finland. The area is located along a ridge formed during the last ice age. The ridge was not a good place for a well and the inhabitants of Pispala were tired of retrieving water from a distant water source, so they searched for a solution for their water supply problem. When Pispala Water Cooperative was created, it took its water from a spring located in lower Pispala, or Tahmela, which provided water to the whole of Pispala until 1966. Although this first formal water cooperative was established in a suburban area, early water cooperatives in Finland were typically solutions for domestic rural water supplies, especially for the needs of cowhouses. In the hilly Pispala, the cooperative was established for water supply only, not for wastewater services.

Keywords: water cooperatives, community water supply, Cooperatives Act, Tampere, Pispala, Finland.

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1 E-mail: petri.juuti@tut.fi.
2 E-mail: riikka.rajala@tut.fi.

Resumen

La Cooperativa de Agua de Pispala fue creada en 1907, en Pispala, cerca de la ciudad de Tampere, Finlandia. El área está situada en una elevación rocosa formada durante la última época glacial. Las características del terreno no eran adecuadas para la perforación de pozos lo que obligaba a los habitantes de Pispala a obtener el agua de una fuente lejana, por lo cual decidieron buscar una solución para el problema. Al crearse la Cooperativa de Agua de Pispala se utilizó una naciente localizada en la zona baja de Pispala, conocida como Tahmela, y esa fuente proveyó agua para toda la población de Pispala hasta 1966. Aunque esta primera cooperativa formal se estableció en un área suburbana, las primeras cooperativas de agua en Finlandia fueron típicamente dedicadas a la provisión de agua en zonas rurales, especialmente para la cría de ganado en establos. En la rocosa Pispala, la cooperativa tenía la única función de proveer agua a la población, sin servicios de saneamiento.

Palabras clave: cooperativas de agua, servicios de agua comunitarios, Ley de Cooperativas, Tampere, Pispala, Finlandia.

Recibido: agosto de 2018 Aceptado: noviembre de 2018

Introduction

There is more than enough water in the world for domestic purposes, for agriculture, and for industry. The real problem lies elsewhere. The World Water Development Report 2003 noted that the major problem of the water and sanitation sector could not be reduced to the lack of water and that the main "tragedy" was "poor water governance" (UNESCO 2003). Unfortunately, that is still true today. From another angle, various kinds of solutions are needed because living conditions and needs are different in different places. In this regard, in many countries water cooperatives have proved to be a good solution for domestic water use in growing suburbs, one example being Finland.

Finland is quite a unique country in Europe due to its water resources. The country has some 56,000 lakes with a minimum area of one hectare and has a total of around 200,000 lakes. Groundwater occurs in alluvial eskers formed during the ice ages, the last of which ended some 10,000 years ago. Areas lower than 50-60 metres above sea level have problems with water quality due to geological reasons. In such areas bigger cities use surface water for their water supply or acquire their raw water from sources further away. Nowadays some 60 percent of the population use natural groundwater or artificially recharged water sources.

The city of Tampere is situated approximately 140 kilometres northwest of Helsinki, the capital of Finland. The city was established in 1779 along rapids between two lakes, Näsijärvi and Pyhäjärvi, with an elevation difference of 18 metres between them. The centre of the city is traversed by the nearly 1-kilometre-long Tammerkoski Rapids around which the city and its industry originally grew up. The rapids, running from north to south, break an esker formation separating the lakes. The esker is one of the highest traverse ridges in the world formed during the Ice Age. For long, Tampere used to be the centre of Finnish industry which is also reflected in its nickname "Manse" which derives from Manchester, the traditional English industrial centre. Many industries and factories established in Tampere from the 1830s to the 1950s were among the first of their type in Finland. In later years, several high-tech innovation "firsts" have also been launched in Tampere.

The history and development of Tampere have been largely shaped by issues related to water and water management. The city was established along the rapids that cut their way through a glacio-fluvial esker between two large lakes some 7,500 years ago. The availability of water power and lakes suitable for waterborne transport made the Tammerkoski Rapids and its banks a favourable location for a growing town. (Katko and Juuti, 2007). The first municipal "water pumping system" in Tampere was built in 1835. It had a German-made iron pump upstream of Tammerkoski Rapids which pumped water through a wooden pipe to a well in the market square. The system was a failure, but it was only after the destruction caused to the city by the "great fire" of 1865 that the piped-water issue was taken up again. The industrialist Wilhelm von Nottbeck suggested to the City Board that a privately-owned waterworks should be constructed for the city. Von Nottbeck was the owner of the biggest industrial enterprise in Tampere, the Finlayson Mill. Since the proposed privately-owned waterworks would have meant quite a big financial risk to the city, the Board rejected the proposal and decided that the city would build its own piped-water system.

Subsequently, the city sought expert knowledge and contractors from the private

sector, such as Mr. Malakias Pasi in 1874. The following year the City Board decided "to submit the piped-water issue to a committee for examination". This meant the start of a new era in the history of water supply in Tampere: ever since all related plans and projects have been initiated by the city. In 1882, Tampere's waterworks was inaugurated. It was gravity-operated, and it was only a temporary solution because the city was growing fast. The service area only included the city centre, and this was also the case when a more modern high-pressure waterworks was completed in 1898.

The peripheries of Finnish cities were not serviced for decades and relied on wells and latrines for long. However, the inhabitants of the peripheries were not necessarily in a worse position than those living in the city. They largely escaped the great typhoid epidemics that of 1916-1917 in Tampere, mostly due to their isolation[3]. Sections of surrounding municipalities have often been incorporated into the cities over the years.

The emergence of water cooperatives in Finland

Community water supply cooperatives (co-ops) are predominant in rural areas of many developed countries such as Canada, featuring around 200 co-ops (Bakker, 2007), and Finland, with around 1,500 co-ops (Pietilä and Vihanta, Article 1 in this collection). Finland is quite likely the country with most water cooperatives in the world. The concept of cooperatives was established in Finland with the foundation of Pellervo, the Confederation of Finnish Cooperatives, in 1899. Hannes Gebhard (1864-1933), considered to be the father of the Finnish cooperative movement, was the founder and managing director of Pellervo. The first Cooperative Act in Finland was enacted in 1901. The first registered, official consumer-managed water cooperative was established in 1907 in Pispala, next to Tampere.

The case of Pispala

Pispala has a long revolutionary history. During the Finnish Civil War of 1918, which followed the country's independence from Russia in 1917, Tampere was a "red city", a working-class city, and Pispala was one of the battlegrounds in the war. Pispala had been built shortly before the war as a neighbourhood for workers. It was quite chaotically built, full of small wooden houses. Even today, Pispala remains a nurturing place for collective activities and is home to many self-organised activities such as the Rajaportti Sauna, the oldest public sauna in Finland, the Vastavirta club, owned by a punk rock co-op, Hirvitalo, home to the Center of Contemporary Art, Kurpitsatalo (The Pumpkin House), that hosts the community's garden movement, and the communally self-organised library next to Hirvitalo, which has been independently kept alive after the City Council closed the local branch of the City Library (Takku, 2018).

In relation to water services, Pispala is located along a ridge formed during the last

3 A somewhat similar case occurred in 1892 in Altona-Hamburg, Germany, where people living in adjoining areas were saved from cholera depending on whether they drank treated or untreated water. A system does not necessarily have to be of a high technical level, if the water source is protected or isolated. But surface water must be treated (Juuti 2001; Evans 1987).

ice age. Its hilly location was not a good place for a well and the inhabitants of Pispala were tired of retrieving water from distant water sources, so they searched for solutions to their water supply problems (Juuti and Katko, 1998; Arvonen *et al*. 2017). There is a spring in lower Pispala, or Tahmela, and most efforts were centred on tapping this source, which eventually would become the main water source for the whole of Pispala until 1966.

Picture Nº 1. Tahmela spring

Source: Tampere City photo archives.

In the late Nineteenth Century, August Koivunen (1860-1938), a mechanic and entrepreneur, started several business operations to tap Tahmela spring, firstly as an energy source. He rented the spring from Pispa House in 1891 and built an apartment and workrooms (*tilalle a workroom*) for himself next to the spring. Koivunen embanked the spring and built a waterwheel to power a mill for grinding corn, but the power of the waterwheel was not sufficient. He also tried other business activities until in 1896-97 he proposed the idea of pumping water for human consumption. However, pumping required to overcome the difference in altitude from the spring to the top of the ridge, which is 83 metres high, within a distance of 320 metres. The villagers of Pispala called an expert engineer from the Huber Engineering Company to help, who suggested that it was not possible to rise the water rise to the top of the ridge without a steam engine. Koivunen started to experiment and finally managed to rise water with the help of a water wheel in 1905. However, the business failed and Koivunen went bankrupt and had to sell his water operation to a local shopkeeper, Mr. Ahlstedt. Shortly afterwards, the

private operation was taken over through the creation of the Pispala Water Cooperative in 1907. The lease of Tahmela spring was moved to the cooperative on 11 May 1907 (Juuti and Katko 1998). The cooperative was established for water supply only, not for wastewater services. The water distribution system of the cooperative was first based on the tarred tree pipes. Tree pipes were gradually replaced with iron pipes starting from the 1930s.

Picture Nº 2. Installing the water mains.

Source: Tampere City photo archives.

In the users' opinion, water was of good quality and it tasted good. The cooperative did not test the quality of water. A municipal health officer however performed 2-3 tests yearly. The spring and the tank were cleaned every June, around Midsummer time. In his last poem called "Happiness", published the day he passed away, Lauri Viita described his childhood summers in Pispala in the 1920s, referring also to the water service of the town:

> Narrow path from well to door / overgrown with grass. / In front of a window /a withered apple tree. / Rucksack hanging by the door / with a bird's nest inside. / When I'm dead and gone. / Summer goes on. Sweet summer (cited in Juuti and Katko 1998, 86-87).

Picture Nº 3. Water test in the year 1952.

Source: Tampere City photo archives.

Picture Nº 4. Pumping station of the Pispala water cooperative in 1952.

Source: Tampere City photo archives.

Picture Nº 5. Pispala water cooperative got a new pump in year 1956. Mr. Wilen was the only permanent worker.

Source: Mr. P. Wilen.

Although the pioneering Pispala Water Cooperative was established in a suburban area, early water cooperatives were typically solutions for domestic rural water supplies, especially for the needs of cowhouses (Katko, 1996). Also, in addition to Pispala, two other built-up areas of the Teisko-Aitolahti rural district, which nowadays is part of Tampere, have water supply and sewerage systems run by the city. In other sparsely populated areas water supply and sewerage continue to be provided through cooperatives or by individual property owners themselves. Pispala was eventually incorporated into Tampere in 1937, and the municipal waterworks assumed control of that particular system in 1962. By then, the cooperative had come to the conclusion that it would not be able to make the necessary future investments to keep running the service. It was short of money because it charged very low rates, and all the main water pipes needed maintenance or replacement.

In 1961, a year before the Pispala Water Cooperative became part of Tampere Water Works, there were 603 houses and 185 members in the cooperative. There were 328 houses with a water meter, while others paid a flat rate according to their individual agreements. The water rates were collected twice per year. During the last years of the cooperative society in the early 1960s, the daily water consumption was 350-600 cubic metres. A considerable factor in the water consumption was the number of saunas, which increased water consumption, especially on Saturdays. The possession of the water works was transferred to the town in July 1962. The price was 13,365,000 Finnish marks (approximately 42 thousand US dollars at the time), of which the town paid 10 million (approximately 31 thousand USD) in cash and the rest through an arrangement in

which the town paid the pension of two employees of the cooperative. The operation of the water works after the takeover first continued with no changes, apart from the water rates, which were raised. Pispala was later connected to the water and sewer networks of the city water works (Juuti and Katko 1998, 74-87).

There were other cases not too dissimilar from Pispala's in the Tampere region that can be mentioned. For example, in the rural municipality of Messukylä, east of Tampere, a small informal water cooperative was founded in 1928. It was complemented by a more formal cooperative that covered the central municipal area in 1937. Ten years later, after the end of World War II, Messukylä was merged with Tampere. The city expanded its water and sewage network to Messukylä, and in 1954 the water cooperative started to distribute water bought from the city network until 1960, when Tampere Water Works took over its operations. However, despite the trend of cooperatives' takeovers by Tampere Municipality, the city has been also involved in the creation of a new cooperatives. Thus, in the 1990s, Tampere Water Works was involved in the establishment of two new water cooperatives, Sisaruspohja and Nurmi, in the northern part of the city in the Teisko area (Juuti and Katko 1998).

Concluding comments

The Finnish experience shows that water cooperatives tend to have good internal democratic self-governance, and that they are oriented to deliver a service to their local communities, not to make profit for private benefit. This was the case in the history of Pispala Water Cooperative and in is the prevailing pattern. In line with globalisation processes, and in a context of urban and population growth, urban water systems have greatly expanded and are still expanding worldwide. However, at the same time, people living in smaller communities and dispersed areas often rely or prefer modern small-scale or on-site systems. In all cases, as suggested from the experience of Tampere Municipality, the role of local governments in water services is fundamental –something that is not perhaps adequately stressed in global water forums and policy discussions related to the problems facing the provision of water and sanitation services. In developed countries, local governments have overwhelmingly been the owners of water systems, and in many transition and developing economies they are getting an increasingly important role. In this context, it is worth stressing the lessons learned from our research: water cooperatives are still a very good solution in many places where the scale is not very big.

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