

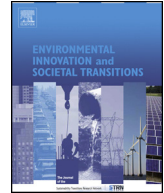


ELSEVIER

Contents lists available at SciVerse ScienceDirect

## Environmental Innovation and Societal Transitions

journal homepage: [www.elsevier.com/locate/eist](http://www.elsevier.com/locate/eist)



# Governing socio-technical transitions: Historical lessons from the implementation of centralized water and sewer systems in Northern Sweden, 1900–1950



Kristina Söderholm\*

*ETS/Social Science Department, History of Technology Unit, Luleå University of Technology, 971 87 Luleå, Sweden*

### ARTICLE INFO

#### *Article history:*

Received 24 September 2012

Received in revised form 4 March 2013

Accepted 14 March 2013

Available online 16 April 2013

#### *Keywords:*

Government

History

Infrastructure

Sweden

Transition

Water and sewerage

### ABSTRACT

Two historical case studies are examined which address the role of public policy with respect to an important socio-technical transition of the first half of the 20th century from a Swedish perspective, with clear implications for the environment and sustainability: the expansion of centralized public water and sewer systems (WSS). This was carried out in the presence of significant government intervention in terms of both financial, legislative and consultative means, and involved changing norms about health and welfare in the Swedish society. The analysis indicates that the cocktail of diverse governmental initiatives seems to have worked in favour for the socio-technical transition, and that this was in large due to the way government made the transition-related uncertainties and costs move from the local to the regional and national level.

© 2013 Elsevier B.V. All rights reserved.

## 1. Introduction

Approaches to socio-technical transitions have been criticized for being overly functionalistic and for treating transformation as a monolithic process neglecting important differences in context (Berkhout et al., 2004). An extended database of historical transitions, which moreover is requested

\* Corresponding author. Tel.: +46 920 491541.

E-mail address: [Kristina.soderholm@ltu.se](mailto:Kristina.soderholm@ltu.se)

in the transition literature (e.g., Van der Brugge et al., 2005; Geels, 2002), can help highlight such differences. This article is essentially an attempt to contribute to this database with partly new historical facts on socio-technical transition. Approaches to socio-technical transitions have furthermore been argued to “tend to be too descriptive and structural, leaving room for greater analysis of *agency* as a means to more informed, deliberative and effective processes of regime transformation” (Smith et al., 2005: 1492). An emerging question is also the possible and appropriate role of governments in socio-technical transitions (Greenwood, 2012; Smith et al., 2005; Shove and Walker, 2007; Meadowcroft, 2007; Voß et al., 2009; Alkemade et al., 2011; Ashford and Hall, 2011; Van den Bergh et al., 2011). This article addresses this issue at a general level by highlighting how national government and policy can effectively facilitate socio-technical transition.

The article’s two case studies illustrate an important socio-technical transition of the first half of the 20th century from a Swedish perspective, with clear implications for the environment and sustainability: the largely nationally driven expansion of centralized public water and sewer systems (WSS), with focus on the local level of system implementation and on key implications of national interventions. Over the first half of the 20th century, especially from the 1930s to the 1950s, WSS replaced the old well and cesspool technology in large parts of rural Sweden in the presence of significant national intervention in terms of financial, legislative and consultative means, as well as changing norms and values about health and welfare in Swedish society. The intervention resulted from a long-standing national policy based on a hygienic movement widely encouraged in Swedish society, as well as from a situation where WSS came to occupy a central position in the build-up of Sweden’s social welfare system. A key feature of these welfare-building efforts was the incorporation of rural Sweden into the welfare society, and a significant proportion of the national intervention was directed towards enabling widespread WSS expansion in rural areas.

### 1.1. *Choice of case studies and questions of interest to the analysis*

With a multiple case-study research design the aim is to contribute insights from contrasting cases of local WSS establishment processes in northern Sweden, one completed at the turn of the 20th century in the city of Luleå, i.e., before the national intervention to facilitate WSS began. The other process was completed in the 1940s and 1950s in the central village of Rånbyn in the rural municipality Råneå,<sup>1</sup> by which time the national intervention was fully developed. By mutually contrasting the earliest development stages of the WSS establishment in the central parts of the two communities, this case-based analysis can shed light on how national government and policy may facilitate socio-technical transition from the view of the local level of system implementation.

Luleå and Råneå are situated relatively close to each other, only 20 km apart on the coast of the county of Norrbotten, Sweden. They thus share local geographic/climatologic conditions; the pipe-bound character of infrastructural systems in general and of WSS in particular makes local physical conditions critical as the pipes stretch like veins in the ground through soil that can freeze in winter and require hydrological preconditions at both “ends”. The two cases furthermore represent typical examples of communities getting “WSS-alized” in their respective period; medium-sized Swedish towns around 1900 and rural communities in the 1940s/1950s.

The same type of source material has been used for both case studies, i.e., primarily minutes (including attachments) from the local governing bodies of the two communities (for further references, see Söderholm, 2012). The case studies thus unveil some new historical facts at the micro-level of socio-technical transition. The case studies are however also based on secondary sources from Swedish history of technology and social history. The local/micro perspective of system implementation adopted in the investigation differs from many other case studies in the transition literature (Geels, 2005, 2006; Correlje and Verbong, 2004; Belz, 2004; Van der Brugge et al., 2005) since it is not in the character of systems analysis to adopt a micro perspective. We argue, however, that the

<sup>1</sup> Today Luleå and Råneå have a common municipal administration.

Download English Version:

<https://daneshyari.com/en/article/108274>

Download Persian Version:

<https://daneshyari.com/article/108274>

[Daneshyari.com](https://daneshyari.com)