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Waste policies gone soft: An analysis of European and Swedish waste prevention plans

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ABSTRACT

This paper presents an analysis of European and Swedish national and municipal waste prevention plans to determine their capability of preventing the generation of waste. An analysis of the stated objectives in these waste prevention plans and the measures they propose to realize them exposes six problematic features: (1) These plans ignore what drives waste generation, such as consumption, and (2) rely as much on conventional waste management goals as they do on goals with the aim of preventing the generation of waste at the source. The Swedish national and local plans (3) focus on small waste streams, such as food waste, rather than large ones, such as industrial and commercial waste. Suggested waste prevention measures at all levels are (4) soft rather than constraining, for example, these plans focus on information campaigns rather than taxes and bans, and (5) not clearly connected to incentives and consequences for the actors involved. The responsibility for waste prevention has been (6) entrusted to non-governmental actors in the market such as companies that are then free to define which proposals suit them best rather than their being guided by planners. For improved waste prevention regulation, two strategies are proposed. First, focus primarily not on household-related waste, but on consumption and production of products with high environmental impact and toxicity as waste. Second, remove waste prevention from the waste hierarchy to make clear that, by definition, waste prevention is not about the management of waste.

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1. Introduction

Waste prevention is broadly considered as having greater environmental potential than the dominant waste management practices of landfilling, energy recovery, and recycling (Gentil et al., 2011). Waste prevention is a policy priority in the United States (US EPA, 2016) and the European Union (European Commission, 2008), and more generally a recommendation from the OECD (2000) and the World Bank (2013). It is defined by the European Commission (2008:10) as "measures taken before a substance, material or product has become waste" (European Commission, 2008: 10), that reduces (1) the amount of waste, (2) harmfulness of waste, or the (3) environmental impact of waste generation.

First mentioned in a Directive by the European Commission (1975), waste prevention became an explicit European priority in 1977 through the second environmental action program (European Commission, 1977). Since then, the political

https://doi.org/10.1016/j.wasman.2018.04.015 0956-053X/© 2018 Elsevier Ltd. All rights reserved. commitment of the European Union to waste prevention has gradually increased. The European Commission's (2008) Waste Framework Directive puts prevention at the top of the waste hierarchy and requires that each member state shall develop a program for waste prevention.

Correspondingly, Swedish waste policy has long stressed the need to prevent waste. Waste prevention was made part of the environmental code in 1998 (SFS, 1998), and the year after, was made an environmental quality objective by the Swedish Government (1999). It is thus one of the grounds of Swedish environmental policy. More recently, in compliance with the Waste Framework Directive (European Commission, 2008), the Swedish EPA (2015a) has produced a detailed national plan for waste prevention that has been followed by numerous municipal plans.

The aim of this paper is to analyze how European, together with Swedish national and municipal plans, approach waste prevention and to critically assess their capability to prevent the generation of waste. The paper does not address the political process leading to the formulation of polices for waste prevention. It focuses instead on the outcome of this process that are the waste prevention plans

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themselves -their actual aims and priorities as well as the potentials, weaknesses, and blind spots of these waste prevention policies.

Such an approach to waste policy complements existing research on waste prevention. Previous research shows that there is a link between economic growth, waste generation, and the environmental impact from waste (Bandara et al., 2007; Beigl et al., 2008). However, how waste and its impact shall be reduced and decoupled from growth remains an open question.

Waste scholars have paid a sustained attention to how behaviors and attitudes can help prevent household waste (Salhofer et al., 2008; Kurisu and Bortoleto, 2011; Cecere et al., 2014; Zacho and Mosgaard, 2016). However, a growing number of researchers argue that waste prevention is not merely about attitudes but also social structures, norms, and infrastructure (Bulkeley and Gregson, 2009). Many different obstacles to waste prevention have been identified: lack of data, standards (Zorpas and Lasaridi, 2013; Ajayi et al., 2017), knowledge (Barr et al., 2013; Cox et al., 2010), resources (Zapata Campos and Zapata, 2017), social norms (Fell et al., 2010; Svingstedt and Corvellec, 2018), financing (Zorpas et al., 2015), organizational capacity, and lock in waste management (Gregson et al., 2013; Corvellec and Czarniawska, 2015).

However, there are only a few studies of policy that primarily aim to develop (Wilts, 2012) or evaluate (Cox et al., 2010) single waste policy proposals. So far, no study has questioned the ability of waste prevention plans to actually reduce waste quantities and their impact. As Zacho and Mosgaard (2016) show, there is not much literature on how to implement waste prevention at the local administrative level.

2. On policy plans

Policy plans are statements of intent that can be found in all types of organizations, including companies, associations, and governments (Lowi, 1972). According to Jann and Wegrich (2007), these documents emerge from policy processes, consisting of five different parts:

Agenda setting: The problem that requires attention is identified and understood, for example, the growing amounts of waste and the environmental threat that waste represents.

Policy formulation: A suitable plan is designed and formulated that can address the problem, for example, national waste prevention programs.

Decision making: The government adopts the plan, which provides its legitimacy, for example when the European Commission adopted the Waste Framework Directive in 2008.

Implementation: The plan is implemented in practice to be realized, for example, when a national waste prevention plan is broken down into local plans.

Evaluation: The plan's capability is evaluated to see if the outcome is met: Is the policy a success or a failure?

Whereas according to Hill (1997) policy processes tend to be messy, involve scores of formal and informal actors, and entail numerous redefinitions of means and objectives, policy plans stand, at least temporarily, for stable expressions of issues, ambitions, priorities, and paths of action that decision makers wish to emphasize for their constituencies.

Typically, a plan begins with explaining the problem and the reasons for change. Wolman (1981) stresses that identifying and understanding the (i) *underlying problem* that is to be addressed through the plan is key in developing an efficient plan. In some cases, however, the problem to be solved cannot be fully addressed since it is part of a larger problem than the scope of the plan. For example, addressing the issue of littered plastic water bottles requires one to address an established global nexus of available

material, technology, food safety regulations, consumption habits, trade flows, and other favorable conditions to today's omnipresence of plastic water bottles (cf. Hawkins et al., 2015). In other cases, the underlying problem that needs to be addressed is not well understood (Borrás, 2011). Incorrect identification of underlying problems can generate inadequate practices.

However, Wolman (1981) continues, the core of a plan consists of the objectives and measures that express political ambitions and priorities. Objectives refer to the desired outcomes of a plan, while measures are suggested actions to reach the objectives and ultimately implement the plan. By pointing at specific objectives and measures, politicians set the "rules of the game" (North, 1990:3) for societal actors with the hope of pointing practices in a desirable direction. For example, the 1999 Swedish landfill tax is a measure that has significantly increased the cost of landfilling and thereby has contributed to the objective of reducing quantities of municipal waste sent to landfills (EPA, 2013).

The challenge in plans, Wolman (1981) underscores, is to address the identified problem through an effective (ii) *design of the plan*. A plan needs to be adequately crafted. For example, unclear or vague objectives such as the United Nations Environment Programme (UNEP, 2017) issuing a declaration of war on plastic litter at sea makes it difficult to evaluate and develop "ambitious measures" needed to realize this goal. Hence, a rational approach to regulation, Vedung et al. (1998) explain, requires that a plan contains measurable objectives with clearly stated quantitative results that allow for evaluation. Measurable objectives are especially important for waste prevention because as Zacho and Mosgaard (2016) warn, leaving out quantitative formulated objectives may yield priority to waste management activities, for example, recycling, because these lend themselves to established measurable targets.

In order for a plan to reach its goals, a balanced design of measures is crucial (Linder and Peters, 1990; Bali and Ramesh, 2015). Following the debate during the 1970s on whether "command and control" regulations or market-based incentives were most appropriate to meet public objectives (cf. Levine, 1972; Schultze, 1977), incentives in the form of economic instruments have become increasingly popular in environmental programs because they are believed to trigger people's attitudes and behavior to serve public purposes (Bailey, 2002). For example, refund schemes drive people to return valuable resources like aluminum cans. However, economic instruments can be expensive to implement and administer (Rhodes, 1997).

Many plans today rest on a mix of *soft* or voluntary and *strict* or compelling instruments (Howlett, 2010), for instance *regulatory*, *economic*, and *information* instruments that Vedung et al. (1998) refer to as *sticks*, *carrots*, and *sermons*, respectively. Constraining regulations may be effective, but not always politically feasible as they may restrict behavior (Bell and Hindmoor, 2009). Inversely, voluntary instruments such as information campaigns may easily gain political acceptance and are flexible and inexpensive, but their effectiveness may also be uncertain (Attari et al., 2009).

Finally, Wolman (1981) explains, the (iii) administrative structure can stand in the way of effective planning. For a plan to reach its aims, responsibilities should be shared across actors. Yet, actors may have diverging interests in, experiences with, and perspectives on the problem that shall be addressed so that it can be difficult to get them to recognize and actually take on their responsibilities (Bali and Ramesh, 2015). For example, the responsibility for waste prevention is often given to actors within the waste sector. But expert as they are in handling already generated waste, waste managers express doubts about their ability to prevent the production of waste (Svingstedt and Corvellec, 2018)

Moreover, the more actors given responsibilities in the plan, the more difficult become the coordination and implementation

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