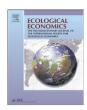
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Methodological and Ideological Options

# Ecological sufficiency, individual liberties, and distributive justice: Implications for policy making



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#### ABSTRACT

We investigate the prospects of voluntary ecological sufficiency for environmental and climate policy under the constraints implied by political liberalism. We find that freedom of choice restricts sufficiency to rather wealthy societies and that a sufficiency threshold cannot be derived by referring to the poor. Sufficiency can be in conflict with the demands of social justice, i.e. if the sufficiency threshold is below the social minimum implied by social justice. Benefits from sufficiency are highly related to individual perceptions. Such benefits cannot be expressed in a standard preference framework. Consequently, alternative measures of welfare and inequality are required if sufficiency is a significant phenomenon in society. 'Standard' environmental policies can have a pronounced interaction with voluntary sufficiency, i.e. if 'quantity regulation' is present. Overall, the voluntary notion of sufficiency causes a dilemma as sufficiency is largely a matter of civil society. However, voluntary sufficiency is expected to make important contributions to the preservation of ecological resources if properly balanced with social and environmental policies and framed by public discursive control.

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#### 1. Introduction

Ecological sufficiency (also abbreviated as 'sufficiency' in what follows) refers to a voluntary restriction of individual consumption motivated by ecological concerns. Behind the idea of sufficiency stands the compelling argument that the world's ecological resources are limited and that the current generation needs to assume responsibility for future generations and non-human species by preserving those resources. An eco-sufficient lifestyle implies assuming ecological responsibility on a personal basis and in everyday life.

Sufficiency explicitly considers an absolute decrease of consumption as part of an ecologically responsible way of living. The concept strongly contrasts with other approaches of environmental protection. These approaches usually focus on the preservation of ecological resources by means of technological progress and exogenous changes in incentives, such as carbon taxes, in order to cause changes in consumption behaviour. Technological aspects include increases in energy efficiency as well as the deployment of less resource-consuming technologies. However, a reduction of overall consumption is usually not the aim of 'standard' environmental and climate policies.

The focus of this paper is not to examine whether technology- and incentive-based environmental policies are sufficiently effective from

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an environmental perspective or whether a decrease in consumption or 'degrowth' is actually necessary. Given persisting global environmental problems and large uncertainty concerning the impact of environmental policies and increasing discussion on non-orthodox solutions (e.g. degrowth), we believe that eco-sufficiency could at least play some role for the protection of the environment and in combination with other measures and policies.

Assuming that eco-sufficiency is indeed considered a strategy to mitigate climate change, a number of theoretically and practically relevant issues emerge which we discuss in this article. In particular, these relate to the interaction of eco-sufficiency with other environmental policies, the measurement of welfare and inequality, standard economic preference-based frameworks, and widely accepted normative views on distributive justice and individual liberties. These aspects have received little attention so far in the academic literature. Consequently, our article aims at clarifying the relevant issues and points to potential tensions and challenges.

Given the wide range of topics, it is impossible to address all related aspects here. We rather aim at relating the discussion on eco-sufficiency to important topics in the existing literature in philosophy and economics and at identifying some problems of the concept. Moreover, our objective is to provide a starting point for further research and possible applications of eco-sufficiency in practise as part of a 'climate policy mix'. The remainder of this article is organised as follows: Section 2 briefly discusses what eco-efficiency is. In Section 3, we discuss

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sufficiency in the light of the existing literature related to individual liberties and distributive justice, behavioural economics, social welfare and welfare measurement, and 'standard' environmental policies. We review and collect the most important arguments in Section 4. Section 5 concludes.

#### 2. What Is Ecological Sufficiency?

Sufficiency can be described as the reduction of consumption on an individual level in order to contribute to ecological sustainability (Alcott, 2008; Fischer and Grießhammer, 2013). Sufficiency is understood as a change in consumption behaviour that augments other approaches of environmental and climate policy, for instance carbon taxation.

The prevailing view in economics is that a 'single price' on an environmental externality, such as greenhouse gas emissions, which is implemented by a central planning authority, is sufficient to fully internalise the externality (Baumol and Oates, 1971; Pigou, 1912). In a deterministic setup, regulation by prices (e.g. a carbon tax) and quantities (e.g. cap-and-trade) are equivalent (Montgomery, 1972), while the slope of marginal costs and benefits causes a comparative advantage of one instrument over the other in the presence of uncertainty (Weitzman, 1974). With respect to climate change, there is evidence that a (global) carbon price is preferable over cap-and-trade from the perspective of aggregated welfare (Hepburn, 2006; Hoel and Karp, 2002; Newell and Pizer, 2003; Pizer, 2002). Targeted research and development (R&D) subsidies for the promotion of low-carbon technologies are discussed as an important additional element of carbon prices (Acemoglu et al., 2012; Fischer and Heutel, 2013; Fischer and Newell, 2008; Fischer and Preonas, 2010). Environmental regulation, possibly augmented by R&D subsidies, is expected to cause technological progress which will make goods and services less resource-intensive. From the perspective of neoclassical economic theory, there is no need for additional efforts by individuals for environmental protection, such as the reduction of consumption.

In contrast, advocates of sufficiency argue that rebound effects will (at least partly) offset ecological benefits from standard environmental policies, meaning that sufficiency is a necessary (but not sufficient) condition for achieving long-term environmental objectives. Sufficiency, as an additional measure augmenting other environmental policies, demands a change in lifestyle and usually implies a reduction of consumption and a shift of resources towards non-market and non-polluting goods.<sup>2</sup> Overall, sufficiency is a behavioural change that goes beyond the change in economic activities which originates from environmental policies such as carbon taxes. The idea of sufficiency is consistent with the view that the transformation of a society towards ecological sustainability will require fundamental changes in the economy. Economic activities would have to take place under strict ecological constraints. This may include a shift in consumption towards non-market goods. However, the notion of an overall reduction in consumption is typically emphasised. Advocates of sufficiency further highlight that a less resource-intense lifestyle provides non-pecuniary benefits for individuals, which is an important argument in favour of sufficiency (Princen,

Eco-sufficiency (as discussed in this paper) is characterised by four aspects: It is motivated by an *ecological objective*; it is an *individual approach*; it is *consumption-based*; and it is *voluntary*. The voluntary nature

of sufficiency is disputed. For instance, Sachs (2009) or Princen (2005) does not pay particular attention to voluntariness. However, we will discuss sufficiency as a voluntary concept in the following as it has two advantages. First, voluntary sufficiency allows for a "bottom-up" approach regarding environmental protection without the need for centrally planned action. Second, voluntary sufficiency is compatible with political liberalism, if understood, in very broad terms, as a guiding principle of modern democratic societies. This perspective on sufficiency is the starting point of our discussion in Section 3 below. Nevertheless, we also examine the consequences of relaxing the assumption of voluntariness towards the end of the paper.

Please note that we need to distinguish between the individual choice to subscribe to eco-sufficiency and the individual choice to define the concept (and demands) of eco-sufficiency. Voluntariness implies the former but not the latter. Thus, while voluntary sufficiency does not allow imposing a particular consumption level on individuals, it nevertheless implies a *non-arbitrary* specification of the 'sufficiency-threshold' (i.e. a consumption level which is adequate to meet some exogenously defined ecological objective) in order to provide guidance to individuals. People may still voluntarily commit to the sufficiency threshold, but sufficiency cannot be voluntary in the sense that people can define the concept in whatever way they want.

Based on this understanding of eco-sufficiency, we do not address the questions of how large a reduction in consumption needs to be to protect the planet's ecology, and how eco-sufficiency is related to individual well-being. These issues tend to be the focus of existing literature on eco-sufficiency (especially the rebound effect). Without taking a stance on the necessity of eco-sufficiency, we simply note that there are increasing doubts about the effectiveness of 'standard' policy measures as global carbon emissions continue to rise despite all efforts. Under such circumstances, it seems worthwhile to examine the feasibility and implications of seemingly 'unorthodox' approaches like eco-sufficiency as part of a policy mix which is embedded in a broader political and economic framework.

Such approaches have received increased attention, especially the so-called 'degrowth' movement. Eco-sufficiency is akin to degrowth in calling for abandoning economic growth as a means to foster environmental sustainability, justice, and well-being (Demaria et al., 2013). On environmental matters, advocates of eco-sufficiency and degrowth agree that technological advancements cannot decouple current production and consumption patterns from ecological damage. Degrowth and eco-sufficiency also converge on the idea that consuming less can yield additional private benefits, in addition to ecological benefits.

However, degrowth activism has a broader scope and a more radical outlook than eco-sufficiency, as it relates to democratic theory, the concept of development, global justice, and the meaning of life (Demaria et al., 2013; Kallis, 2011). The scope of eco-sufficiency is narrower, focusing on ecology- and consumption-related issues. Thus, it seems prima facie possible to fit eco-sufficiency into existing liberal economic and policy frameworks rather than integrating it into a more radical degrowth approach, which is unlikely to leave the foundations of current frameworks intact (see e.g. Salleh, 2011).

Hence, we focus on voluntary sufficiency in relation to individual liberties, social justice, welfare, and 'standard' environmental policies. In particular, we examine possible tensions between sufficiency (understood as a guiding principle with direct implications for policy making) and political liberalism (understood in very broad terms as a guiding principle of modern democratic societies).

#### 3. Problems Related to Ecological Sufficiency

#### 3.1. Freedom, Poverty, and Justice

Sufficiency, as understood here, is not defined by mandatory restrictions of consumption but rather by free choice, thought as a voluntary individual decision. Freedom of choice – to be a meaningful concept –

<sup>&</sup>lt;sup>1</sup> Alternative definitions of sufficiency go even further and advocate a change in the overall style of living and the economic system, including a change in the perception of oneself, the social environment, and ecological resources (Princen, 2005; Sachs, 1993).

<sup>&</sup>lt;sup>2</sup> This can be demonstrated on the basis of Kaya's Identity (Kaya and Yokobori, 1997). Alcott (2012) provides an interesting discussion on 'environmental structural change' with arguments in favour of a sufficiency strategy.

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