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## Can monetary compensation ease the siting of CCS projects?

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### Abstract

In a recent article in the *Journal of Environmental Psychology*, Zaal et al. [1] presented the results of three experimental studies conducted to systematically examine the effectiveness of the offering of monetary compensation (i.e., the offering of cash to a local community) in the context of the siting of hazardous facilities. The current conference paper highlights the main results of this research and discusses the relevance of these findings for the specific context of CCS.

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### 1. Introduction

Onshore carbon capture and storage (CCS) projects can encounter local opposition and may be perceived as being hazardous, as we have seen in the Dutch Barendrecht case [2]. The siting of locally unwanted facilities is often characterized by a situation in which local residents perceive that the risks and costs of (CCS) facilities are local, whereas the benefits of the projects are perceived to be at the regional or (inter)national level. The offering of

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compensation to local communities may help to restore this imbalance and in this way it may help to prevent and/or solve (CCS) siting controversies [3]. The type of compensation offered to communities may take different forms. Here we focus on a specific form of monetary compensation (i.e., the offering of cash to a local community). Previous research in the context of several (non CCS) facilities has shown that the offering of monetary compensation may backfire, in particular when people perceive that sacred values such as public health and safety are at risk [4, 5]. As such, for facilities that are perceived to be hazardous, the offering of monetary compensation tends to be rather ineffective, a finding that is potentially relevant for onshore CCS projects [3]. In a recent article in the *Journal of Environmental Psychology*, we presented the results of three experimental studies conducted to systematically examine why and when the offering of monetary compensation in the context of the siting of hazardous facilities is rather ineffective [1]. This research sheds light on factors that do (and do not) play a role in people's support for the decision to accept a hazardous facility in a community and also provide building blocks for designing (more) effective monetary compensation. The current conference paper highlights the main results of this research (details can be found in [1]) and discusses the relevance of these findings for the specific context of CCS.

## 2. Results

In our paper we predicted and found that a problem with the offering of 'plain' money in return for the siting of a hazardous facility is that such a trade-off between what people consider a secular value (money) and a sacred value (health, safety) is considered taboo. This renders 'plain' monetary compensation in return for the siting of facilities that are perceived to be risky rather ineffective. Importantly, we also found that by rhetorically redefining the monetary compensation offer as having sacred (moral) value rather than secular (non-moral) value, the monetary compensation offer resulted in more support of the decision to site a hazardous facility in a community compared to the (identical) 'plain' monetary compensation offer. That is, merely mentioning that the monetary compensation offered may be used to increase local safety (e.g., by using the money to install a traffic light in the community, which would enhance local safety) significantly increased the perceived commensurability of the risk of the facility and the compensation offer and decreased negative emotions experienced. As a result, support for the decision to site the facility increased significantly. This increase in acceptance of the facility was found to be robust among studies and was not affected by factors such as the height of the compensation offer [1].

## 3. Implications

These findings have relevant implications for compensation in the context of CCS facility siting. That is, the results show the importance of knowing and investigating the local values that members of the local public believe are at stake before deciding on compensation (see [1]). When the local community's concerns regarding a local CCS project mainly are financial in nature (i.e., involve secular values) the offering of plain monetary compensation can be rather effective. However, when people suspect that CCS activities form a threat to human health and safety (i.e., a threat to a sacred value), project developers should not necessarily shy away from offering monetary compensation, but in this case should think of whether monetary compensation is the right type of compensation to offer, and think of ways to present and frame the compensation offer to the public. Rhetorically redefining the monetary compensation offered may help to achieve a better fit between the compensation offer and the perceived risk of the facility. Fit alone is not sufficient, however. Several project preconditions need to be in place (e.g., the perceived legitimacy of and societal need for a local CCS project) and there are also ethical considerations that need to be taken into consideration, as discussed in our paper (see [1]). We concluded that the offering of monetary compensation can be useful to prevent or solve controversies regarding the siting of hazardous (CCS) facilities as long as it is 'rhetorically redefined' as having sacred (moral) rather than secular (non-moral) value.

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