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### Scientific and TiW relevance (max. 150 words)

Explain why your project fits the Innovation Sciences/ Human Technology Interaction domain (dealing with technology AND people) and how it connects or contributes to IS/HTI science.

I think this is a (possibly overdue) contribution to Innovation Sciences, because in effect it is a test of the idea that economic policy instruments can satisfactorily incorporate an externality as big as climate change; an externality that the world economy depends upon (through its need for cheap and reliable energy). It is one of the big governance alternatives that we are being taught in the master IS and I wish to examine this in practice and in-depth. One point of discussion is to what extent this policy does or could stimulate industry innovation towards a transition to a sustainable society, i.e. does it stimulate technical progress in the direction that is aimed for. Another point, more in the ethical domain, is whether the pricing system motivates people or (CEOs of) companies the right way to tackle this global environmental problem; or that it does more harm than good.

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### Method (max. 200 words)

Indicate HOW you are going to answer your research question. Describe for example what the (in)dependent variables are, what methodology you will use or develop. How are you going to collect your data? For example interviews, and if so, who are you going to interview and what for? How will you analyse your data?

To question one, I have read publications on the ETS. However, I've found inconsistencies and therefore I'll read the actual European legislation. Depending on complexity, I may have to conduct interviews for clarification.

To question 2a, in the literature on this subject in environmental ethics, there is a consensus that it would be just for the developed world to make a "big" effort to prevent severe climate change. To quantify this qualitative requirement, I will look to the IPCC science and the 'less than two degrees warming' objective (also expressed as a goal by the EU). I will use this f.e. to determine what the cap ought to be (IPCC data scaled to EU size), and how quickly it ought to diminish in different scenarios. On other subjects, I will likewise use ethical arguments in conjunction with scientific publications or data to reach a normative evaluation of the status quo.

Question 2b of valuation of invaluable goods is more complicated and will involve reading and logical thought. There is no single answer, my aim will be to clarify some of the issues by confronting the utilitarian norm of the ETS with the deontological perspective of duties.

I expect the result of questions one and two to suffice for answering question three.

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### References

Provide three references of scientific articles and/or books that underlie the research proposal. Make complete references (refer to: *Publication Manual of the American Psychological Association*, 6th ed. (Washington, DC: American Psychological Association, 2001)).

- 1 Moore, S. (2013). If the Cap Fits - Reform of European Climate Policy and the EU Emissions Trading Scheme. (G. Newey, Ed.) London: Policy Exchange. Available from <http://www.policyexchange.org.uk/publications/category/item/if-the-cap-fits-reform-of-european-climate-policy-and-the-eu-emissions-trading-system>
  - 2 Sandel, M. J. (2012). What Money Can't Buy. Macmillan.
  - 3 Shue, H. (2005). Responsibility to Future Generations and the Technological Transition. In R.B. Howarth & W. Sinnott-Armstrong (Eds.), *Perspectives on Climate Change: Science, Economics, Politics, Ethics* (Vol. 5, pp. 265-283). Emerald Group Publishers Ltd.
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**Research question (max. 400 words)**

Introduce the research question and explain clearly how it is embedded in the literature. Formulate the research question as adequately as you can, possibly together with sub questions and hypotheses.

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Although global politics seems at a standstill to mitigate climate change, in the field of environmental ethics there is consensus that the developed world has an obligation to tackle the problem. Some argue our obligation to posterity is not just to prevent climate change, but to work towards a transition to a sustainable society (Shue, 2005).

The principle policy in the EU to this end is the European Emissions Trading System (EU ETS). However, it has functioned suboptimal, due to over-allocation in the past, with CO<sub>2</sub> prices too low to provide an innovation incentive for a transition (Moore, 2013). These seem problems of implementation, or politics, but within ethics there is a fundamental concern about the theory of cap-and-trade systems as well. For example, the trading system presupposes that it is best to mitigate climate change against least cost, which implies that f.i. creating extra emission rights through low-cost projects in Africa is desirable. However, this "buying-off" of responsibility renders an issue of justice, that relates to this specific method of pricing of the ETS. On top of that, there are concerns about pricing in itself—whether valuing invaluable goods is desirable at all. One consideration is that pricing makes these goods tradable, which degrades the irreplaceable value they have for humanity (Sandel, 2012).

I will perform a broad evaluation of the EU ETS from the perspective of environmental ethics. My research question is a three-step ladder, in summary: (1) what the current policy is, (2) assessment of the policy using environmental ethics, and (3) how it could be improved upon. In detail:

1. How is the ETS structured in Phase III (2013-2020)?
    - the cap, the allocation mechanism, rules regarding the flexible Kyoto-mechanisms Joint Implementation (JI) and the Clean Development Mechanism (CDM), etc.
  2. Building on these facts, is a cap-and-trade policy a defensible instrument against climate change?
    - (a) as a case study: how does the policy relate to other articulated climate goals and the IPCC scenarios? Are there other problems from the point of view of environmental ethics, f.e. the question of a just distribution of the burden?
    - (b) on a higher level of abstraction: is pricing an ethically defensible way to mitigate climate change? In other words: is the valuation of invaluable goods a good strategy to deal with this problem at all?
  3. Following, how can the ETS be improved upon?
    - As existing policy, but also, considering climate change goals, as the question whether a different policy instrument would perform better.
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