

# Student Essay

## Environmental Studies 303: Human Ecology and Sustainability

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Human beings are living in critical and unprecedented times for both our species and the earth as a whole. Human activities alone are threatening the future of the earth. The burning of fossil fuels is leading to earth warming and peak oil has and will continue to make its mark on daily life globally. Fishing fleets have decimated fish populations, and massive deforestation for agricultural land has left the earth hurting (Moran, 26-27). With all of this destruction, many people are striving to find a better way to live. In other words, how is it that humans can build a sustainable global society? American political economist Elinor Ostrom, sustainability advocate Mathis Wackernagel and ecologist Garrett Hardin differ on their ideas of what makes for a sustainable society, but all have something useful and unique to offer in the fight for sustainability.

Hardin approaches the road to sustainability from the viewpoint of the 'tragedy of the commons'. He claims that there are no technical solutions that lead to sustainability. Instead he suggests a system of taxation and administrative laws to keep people from destroying the commons. His main argument is that these laws and taxes are necessary to be able to deal with the "population problem" (Hardin, 1243)". In the words of Hardin, "a finite world can support only a finite population" (Hardin, 1243)". Considering his take on the population problem, I would argue that in his commons model, Hardin wants to take away some rights that people take for granted such as the right to have as many kids as you want. He says that "the optimum population is, then, less than the maximum (Hardin, 1244)" so that all energy requirements for humans are met. To control population, the author calls for a reexamining of the "laissez-faire policy" on reproduction. Hardin also suggests that "freedom in a commons brings a ruin to all" (Hardin, 1244)" which is the problem with the tragedy of the commons. Is Hardin saying that freedom is impeding us on the road to sustainability? I would argue no. Hardin defines freedom as "the recognition of necessity" (Hardin, 1248)". The only way to preserve our other freedoms, he claims, is to relinquish the freedom to breed, and immediately. Overall, Hardin would say that people need to be "mutually coerced" into saving the planet, *that* is the key to sustainability.

Ostrom criticizes Hardin's view of 'the tragedy of the commons'. She points out that "Hardin's influential work was based on an extremely sparse view of the commons (Ostrom, 15183)". Ostrom claims that Hardin's view of the commons leaves out direct communication between parties. In experiments, when people were left to their own devices to discuss the commons, "optimal harvesting levels rather than a severely harvested commons were left (Ostrom, 15183)". In face-to-face discussions, parties were able to develop norms of operating within a sustainable model. Clearly sustainability is possible with community and communication.

**Comment [O1]:** Clearly identifiable thesis. I like it!

**Comment [O2]:** Good identification of his proposed solution

**Comment [O3]:** Note the small edit I made to direct quotation. Close the quote, then cite, then period.

**Comment [O4]:** Moreover, population seems to be dropping quickly in urbanized and developed areas. It's not the problem Hardin thought it was, at least not in all cases. Ostrom would argue against his one size fits all solution to a problem with varied causes.

Wackernagel has a much more technical and systematic approach to sustainability than does Hardin. He also takes entire ecosystems into account, instead of just human populations as Hardin does. Wackernagel claims that humanities burden on the earth “grew to 120% in 1999 (Wackernagel et al, 9266)” thus leading to a need for a system of sustainability. This fact begs the question-Is there hope for sustainability if we have overshoot our earth’s natural supplies by 0.2 earths? Wackernagel would say yes, and this is why. Wackernagel takes into account most coupled human and natural systems. A coupled human and natural system is defined as “integrated systems in which people interact with natural components (Liu et al, 1513).” The systems that Wackernagel takes into account are “growing crops for food, animal feed, fiber, oil, and rubber, grazing animals for meat, harvesting timber, and marine fishing (Wackernagel et al., 9266) to name a few. The most profound suggestion that the authors offer is to maintain a preserve of land, equaling approximately “12% of the biosphere (Wackernagel et al, 9268).” Another necessity for sustainability was to preserve “ecological hotspots containing 44% of the earth’s vascular plant species (Wackernagel et al, 9268)”. Wackernagel also suggested that to have sustainability, the market and economies must be influenced by the environment. One way this can happen is by costs of ecosystem products being adjusted to show costs “borne by third parties, the social costs, including costs to future generations (Wackernagel et al, 9269)”. These ‘shadow costs’ would adjust market prices and show the true cost of production. Similar to Hardin, Wackernagel suggests that a new “distribution of rights” and a consideration of who gets rights to those resources in the first place. As Hardin would argue, just because you are born should not mean that you automatically get use of the commons and resources.

**Comment [O5]:** Yes, this is his solution. Good job identifying.

A combination of all three viewpoints could be optimal in developing a globally sustainable world. Adopting Ostroms community-centered views, accepting Hardin’s valid issues with global population, and taking into account all ecosystems as Wackelnagel has, can build a sustainable model to live by for current and future generations.

**Comment [O6]:** Expand on this!  
How are Hardin’s administrative solution approach and Wackernagel’s markets and accounting based approach different? Are they addressing the same aspects of the sustainability problem or different aspects?

Citations:

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Ostrom, E. “A Diagnostic Approach for Going Beyond Panaceas,” PNAS, 2007, p. 15182.

Moran, E. F. (2006). *People and nature: An introduction to human ecological relations*. Oxford: Blackwell Publishing.

Wackernagel, M., Schutz, N., Deumling, D., Callejas, A et al. “Tracking the Ecological Overshoot of the Human Economy,” PNAS, 2002, p. 9266.

Hardin, G. “The Tragedy of the Commons,” Science, 1968, p. 1243.