Economic Growth as a Major Cause of Environmental Crisis: Comment to Ripple et al.

We have read with great interest the "World Scientists' Warning to Humanity: Second Notice" article, by Ripple and colleagues (2017). We believe they touch major points and concur with them that the time is ripe for a new call for change. Although Ripple and colleagues raise several important points, as the authors of the first warning to humanity (Union of Concerned Scientists 1992) did years ago, we are highly concerned that one major cause of global environmental crisis—economic growth—has been overlooked.

Although Ripple and colleagues call for a reassessment of our economy rooted in growth, none of the twelve recommended examples of effective steps toward sustainability touches economic growth directly. Here, we argue that economic growth is one of the two major causes of the environmental crisis, along with population growth, which is correctly addressed by Ripple and colleagues (2017). A transition to sustainability cannot be achieved if our economic system is not radically changed, simply because limitless economic growth is impossible within a limited planet.

Economic growth has been identified as one major issue against the transition to sustainability since at least four decades ago (Georgescu-Roegen 1971, Meadows et al. 1972). The main promises to humanity of the development model based on economic growth have been questioned on all grounds, including equity, human welfare, security, and, obviously, sustainability (see the review in Pacheco et al. 2016). Furthermore, economic growth is tightly attached to energy use and therefore to greenhouse-gas emissions (Brown et al. 2011, Tapia Granados et al. 2012). More recently, even green economy has been acknowledged to represent low possibilities of being a completely sustainable alternative because of its strong links to carbondioxide emissions (Antal and Van Den Bergh 2016).

In short, humanity needs to recognize that the fundamental changes have to happen at the level of the ultimate cause of environmental crisis-that is, a global economic system dependent on growth. To reach such a point, we, as scientists, need to call humanity's attention to the dangers of continuing considering economic growth as a model for development. As we argue in a recent paper (Pacheco et al. 2016), we need a global transformative change in which the conservation of the environment, not economic growth, is the driving force of development. Conservation must be the new paradigm for development as the only alternative for humanity to reach sustainability and therefore a real development state.

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