## Walking the talk on sustainability

According to the United Nations Brundtland Commission Report (1987), development is sustainable if it "meets the needs of the present without compromising the ability of future generations to meet their own needs". The clear implication of this definition is that our current consumption and standard of living must be reduced in order to ensure that the lifestyle of future generations is not compromised. We must deny ourselves the beneficial use of petroleum, timber, and other resources today if such use lowers the welfare of future generations. But how realistic is "intergenerational equity" if we are rapidly exhausting valuable, non-renewable resources? In turn, aren't those who "live the good life" while arguing to sacrifice our present-day quality of life for the well-being of our descendants simply hypocrites?

Sacrifice is indeed an apt description of the implications of sustainability. There are two cases to consider: non-renewable and renewable resources. By definition, our present rate of consumption of, for instance, oil (globally about 5 barrels per capita per year) necessarily reduces the amount available for future use. With renewable resources, if the annual depletion rate exceeds the annual growth rate, then overharvesting (of forests, fisheries, or wildlife) will reduce the amount future generations can obtain. But keeping present-day usage less than or equal to the annual increase in the stock only ensures that future quality of life is not compromised under the strict condition of non-positive human population growth. Maintaining the future standard of living of a growing population requires current depletion of a renewable resource that is less than the annual increase (ie the stock must grow over time). But, of course, holding existing consumption to less than the annual increase in the stock lowers the well-being of the present generation.

Clearly, some adults sacrifice their lifestyle to improve the welfare of their children and grandchildren, but that's not enough to meet the "enduring" aspect of sustainability. The real question is, how much of our standard of living will we sacrifice for generations born 100 or even 1000 years into the future? The answer would appear to be "precious little".

Let's consider that non-renewable resource, oil. Assume there are 3 trillion barrels of recoverable oil in the world (a recent estimate is less than 2.5 trillion barrels) and that the per capita depletion is only five barrels of oil per year (annual US consumption is about 25 barrels per capita). So, how much oil should we be using (assuming intergenerational equity for 1000 years)? If the world had a stable population of 10 billion people, 1 year of consumption would equal 50 billion barrels. But 50 billion barrels consumed each year for 1000 years is equivalent to 50 trillion barrels (not 3 trillion)! If all these assumptions are correct, we would run out of oil in 60 years (presuming that a less costly alternative energy source isn't discovered in the meantime). This rate of depletion is neither "sustainable" nor "equitable". To be equitable for 1000 years, we would need to reduce usage to 3 billion barrels per year. This amounts to a 94% reduction in global per capita consumption. In fact, with respect to non-renewable resources like fossil fuels, sustainable use is an oxymoron.

Most elected government officials, who (ideally) collectively reflect the will of the citizens of their respective nations, pass laws that encourage consumption at the expense of future generations – behavior that is neither sustainable nor consistent with intergenerational equity. This is because present-day votes and campaign contributions affect the political fortunes of today's elected government officials; future generations obviously cannot vote for or funnel money to today's politicians.

Including the word "sustainable" in governmental reports and research programs may make some officials and readers feel good, but the truth is that most of us do not (and indeed cannot) live according to this ideal. Comparatively sustainable lifestyles (like the Old Order Amish communities in the US) exist in modern times in developed nations, but this alternative is simply unrealistic for most urban people and impractical at a large scale. Even for the subset of us who have this option available, the evidence suggests that, overwhelmingly, most instead choose a higher standard of living – one that requires less manual labor but is ultimately "unsustainable" and "inequitable". Although many individuals can and do reduce their negative environmental impacts at smaller scales, the majority continue to imperil future generations' well-being – but those who "talk the talk" of sustainability while failing to adhere to that code are just deceiving themselves.



David N Laband School of Forestry and Wildlife Sciences, Auburn University, Auburn, AL



David B South School of Forestry and Wildlife Sciences, Auburn University, Auburn, AL