Introduction. This article reflects upon how the concept of sustainability relates to the Canada – U.S. border. How does the border contribute to sustainability? In what ways is sustainability hindered by the border? In the Pacific Northwest, sustainability is an increasingly important collaborative goal of state and provincial governments, so consideration of these questions is worthwhile.

At the U.S. – Mexico border, much attention has been paid to such issues. The economic and social forces at play in that setting have led to near-border urbanization and a physical boundary line that pose significant environmental challenges. Organizations have been formed to tackle those challenges within a framework of sustainability, including university-based efforts such as the Southwest Consortium for Environmental Research and Policy (SCERP), and agency-based efforts such as the EPA’s “Border 2012” program. Similar focused attention has not yet been paid to the Canada – U.S. border.

To help bound the discussion, we must provide a conceptualization of “sustainability.” One commonly referenced definition of sustainability was established in 1987 by the U.N.’s World Commission on Environment and Development: “Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs.” Two decades ago, many people interpreted that definition as being focused only upon ecological impacts and the allocation of natural resources — e.g., people now living should not consume resources at the expense of future generations. In the intervening years, a wider conceptualization has gained currency, including the notion of sustaining the human societal fabric. We make our remarks within this broader context, reflecting upon the manner in which the border influences the sustainability of not just natural resources and ecologies, but also our economy and culture.

Ecological Reflections. With respect to ecological impacts directly associated with the Canada – U.S. boundary line, the physical characteristics of the border are relatively benign. Along the vast majority of the border, the 20-foot clear swathe maintained by the International Boundary Commission is the only manifestation of the boundary, and that swathe poses little impediment to the migration of plants and wildlife. It is human-related trans-boundary passage that gives rise to ecological impacts, and such passage is funneled to a small number of widely spaced crossing points.

One ecological impact associated with border crossings is obvious: inspection processes bring cars and trucks to a halt, queuing occurs, fuel is squandered, and vehicle exhaust becomes disproportionately concentrated at the crossing points. If cross-border trade increases significantly in coming years, perpetuation of the existing inspection regime will result in ever-greater pollution and waste, which we view as an unsustainable outcome. A variety of remedies can be imagined. An operational model that supports “rolling” (i.e., in-motion) clearance of vehicles would negate this at-border impact, and such a model will be discussed later. A modification of engine technology could also be beneficial, with B.C.’s recent proposal to establish a West-coast “Hydrogen Highway” an example of this approach. A third remedy is imaginable as a corollary of a more sweeping trend — the curtailing of cross-border commerce as a consequence of fundamental economic restructuring. Some scholars view the globalized economy as an unsustainable (and doomed) model, given its heavy dependence upon nonrenewable petroleum resources. If trans-oceanic supply chains fade in importance and local economies are resurgent, queues of trucks at the border will diminish. Finally, it is reasonable to imagine significant transportation mode shifts in response to a scenario of fuel costs much higher than today’s, but shy of doomsday levels. Rail and transit might one day carry much larger proportions of cross-border traffic. Although rail and transit are afterthoughts in the typical facility planning process today, a sustainable border should facilitate these energy-efficient modes.

We have thus far mentioned aspects of ecological harm related to the border, but funneling traffic through checkpoints can also result in ecological benefit, in that the inspection process can serve to hinder the movement of invasive species and diseases. Absent such barriers, human-assisted migration of invasives could result in harm both to cultivated and to natural ecologies, with possibly serious societal consequences. Note that while the border may serve as a convenient location for such inspections, the necessary location of a barrier is dictated by the geographic distribution of the ecology at risk. Plant and animal inspections can be and have been deployed at boundaries internal to nations.

Cultural Reflections. Strong cultural ties join Canada and the U.S., springing from the heritage the two nations share. Extended families straddle the border; residents frequent the amenities and facilities of the neighboring country (e.g., clubs,
If sweeping changes in clearance processes are not devised, much of the potential environmental benefit associated with transit and passenger rail will be lost. Forcing a passenger to travel out of his way (perhaps even opposite his intended direction) in order to board a train/bus at a single approved pre-clearance site is not an ideal model. There should be numerous stops along the route of a bus or train, and a person should be able to board at any one of the stops. A bus should have access to an uncongested lane at the border. The clearance process must be rapid, implying that automated validation of trusted travelers is again key. The smart NEXUS card described earlier could support instant “inspection” of many travelers by a single agent walking through a train, leaving the agent with the need to interview only a subset of the riders.

With respect to the rolling clearance of freight, technology provides some viable tools. Much freight is today transported in shipping containers, and technologies are becoming available that can seal a container, track its exact travel route via GPS, and detect intrusions. The content of containers could be inspected at distant locations (even at locations overseas), and detailed information would be available to inspectors before the container reached the border. The truck driver could be issued a smart card, as described earlier. At the border, automated processes could identify the shipment and driver, verify customs compliance, and ensure the integrity of the container. No remaining tasks would necessitate that the truck come to more than a momentary stop, as various other technologies deployed at the border (i.e., license plate readers, radiation portal monitors, VACIS) all can operate on a slowly moving vehicle.6 The “trust but verify” regime could also be applied to freight, with trucks diverted out of the rolling stream for more intense inspection.

Conclusion. Recent studies of the Canada – U.S. border have analyzed the extent to which post-9/11 security initiatives have impeded freight and passenger mobility. We believe that a broader focus is merited, using the concept of sustainability as the analytical framework. Viewed in that context, today’s border serves in some instances to cause ecological and societal harm (e.g., air pollution, decline in cross-border visitation), but in other instances to yield benefit (e.g., interdiction of crime, hindering the spread of invasive species). While acknowledging that a barrier in some form must exist at the border, we suggest that a sustainable border should incorporate changes in inspection processes such that “good” freight and people can roll non-stop through the border, whether conveyed by car, bus, truck, or train. Finally, sustainable outcomes may be more likely if border functions are delocalized. Commodity inspections and crime control can be, and often are, carried out away from the border, thereby lessening at-border impacts.

End notes
1. See http://www.scerp.org
2. See http://www.epa.gov/border2012
4. See the Throne Speech of 13 February 2007 by B.C. Premiere Gordon Campbell, found at: http://www.leg.bc.ca/38th3rd/4-8-38-3.htm
6. A VACIS scan of a moving truck would be limited to the cargo compartment, omitting a scan of the driver’s cab.