



Do Community Based Initiatives foster sustainability transitions? Towards a unique Environmental Impact Assessment.

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The active participation in Community Based Initiatives (CBI) is a spreading phenomenon that has reached a significant magnitude and – in some cases – CBIs are also supposed to have catalysed social and technological innovation, thus contributing to global transition into low-carbon economy. Generally speaking, CBIs are grassroots initiatives with broad sustainability foci that promote a plethora of activities such as alternative transportation, urban gardening, renewable energy implementation, waste regeneration/reduction, etc. Some advocate that such practices fostered by bottom-up activities, rather than top-down policies, represent a proficient countermeasure to alleviate global environmental change and effectively foster a societal transition towards sustainability. However, thus far most empirical research grounds mainly on anecdotal evidence and little work has been done to quantitatively assess CBIs’ “environmental impacts” (EI) or their carbon footprints using comparative methodologies.

This research main aim is to frame a methodology to assess univocally CBIs’ EIs which are crucial to understanding their role in societal sustainability transition. However, to do so, three main caveats need to be addressed: first, some CBIs do not directly produce tangible measurable outputs, nor have an intelligibly defined set of inputs (e.g. CBIs focusing on environmental education and awareness rising). Thus, calculating their “indirect” EI may represent an intricate puzzle that is very much open to subjective interpretation. Second, CBIs’ practices are heterogenic and therefore existing methodologies to make comparisons of their EIs are neither straightforward nor proficient, also given the lack of available data. Third, another issue closely related to the one previously mentioned, is a general lack of consensus among already existing impact-assessment frameworks for certain practices (e.g. composting).

A potential way of estimating a CBI’s EI is a standard Carbon Accounting assessment where all possible sources and inputs are assessed in terms of reduced EI in the conversion and production of outputs. However, this is a very complex and time consuming task for which data availability issues abound. Alternatively, the EI per unit of output of each CBI can be evaluated and compared with the equivalent from a standard counterfactual in a sort of Comparative Carbon Accounting fashion. This will result in an assessment of the EI Assessment (EIA) that is not activity-specific and can be reasonably used for a wide spectrum comparison regardless of a CBI’s predominant activity.

This paper first theoretically frames the obstacles to be overcome in conceptualizing a meaningful EI assessment. Second, context variables such as conversion factors, counterfactuals for numerous European CBIs in various countries are established (the latter were mapped by the TESS-Transition FP7 Project). Third, an original EI indicator for CBI based on a Comparative Carbon Accounting methodology is proposed and tested. Finally, some preliminary findings from the application of this methodology to the investigated CBIs are presented, and a potential comparison of these preliminary results with some of the planetary boundaries is discussed. While we are aware that several caveats still need to be further explored and addressed, this novel application of a comparative methodology offers much to the existing literature on CBIs’ impact assessment.