

Food System Impact Valuation Initiative (FoodSIVI)

A collaborative initiative among food businesses, NGOs and academia

FOODPROCURE Project Paper

FoodProcure

Under present international trade law, public regulation to penalise through tariffs or duties, or restrict access to market, of imports based on their environmental and social impact would be viewed as a trade barrier and likely to be contested at the WTO. This is a potential barrier to public regulation incentivising the food system and market to lower its environmental, social and health (ESH) externalities. Public procurement, however, is a loophole in WTO regulations. Public bodies can set criteria to purchase according to the lowest “true cost”, taking into account purchase price and externalities in the production and supply of goods. EU procurement law, for example, permits EU members to purchase based on true cost. True cost procurement of food, e.g. prisons, hospitals, school, etc. represents a significant market lever to incentivise products and companies to lower ESH externalities. Public procurement agencies in Sweden and Norway, in particular, are requesting a standardised method and software by which they can compare the true cost valuation of food products within specific tenders.

At present there exists no third party, open, traceable individual food product level ESH impact data (LCA databases involve aggregates and averages) that a public procurer can use to conduct a comparison of tenders. Some food companies have detailed ES data (H is a further issue, see the next project) of their own supply chain. Then the issue for the procurer is how to trust and compare first party estimates of externalities and costs, which could have used different methodologies, different boundaries on what externalities were included, different definitions, different costs applied to the same externality with the same definition, etc. Currently there are no standard nor interoperable representations for food product externalities which the procurer could require of the tender submission to enable comparison

The aim of FoodProcure is to conduct research on solutions for true cost food procurement, and to pilot a method and software.

Components of project:

- Develop a standard vocabulary/ontology for food system impact valuation. Common terms are used in different ways, not only causing confusion but also obscuring the relationships between concepts and variables. Data scientists use ontologies, which are vocabularies and relationships between terms, to make data sources interoperable and connect them.
- Develop LCA model from blockchain. An LCA analysis requires two components, a ‘model’ which shows all the inputs and processes being accounted for leading to the end product, and ES data for the inputs and processes. The two, model and data, provide the basis for ES impact and valuation estimation. Usually LCA models are generic.
 - Decentralized digital ledger technology, such as blockchain, raises the potential to extract and reconstruct from the ledger an LCA model for that specific individual

product. Based on the developed ontology, the extraction is to a standard format for models.

- For large procurement, given a product specific model in a standardised format, data from available LCA databases is used to fill in the model.
 - Private LCA database
 - Public LCA database
 - Part of the study is to compare final numbers between databases
 - Opportunity for LCA model extension from Project results
- Tenders attach the digital ledger to their supply chain. This serves two ends for the procurer
 - Traceability and trust for the procurer in the first party products models
 - Standardisation of models from any number of procurers
- Barriers to use
 - Examine roadblocks – procurer burden, company burden, supply chain issues, equity issues (SMB versus large procurers), use to inform pilot
 - Estimate environmental and social change through true cost food procurement
 - For small procurement – issues of LCA data
 - Functional units. Per meal across a representative distribution of diets (e.g. prison population, hospital, school). Software allows user input from the procurer, which the software uses to calculate the functional unit(s), and imports information from the tenders.
- Pilot (Swedish NAPP)
 - Software development