

Valuing the impact of food:

Towards practical
and comparable
monetary valuation
of food system
impacts

Executive Summary

A report of the Food System Impact
Valuation Initiative (FoodSIVI)

May 2020

GLOBAL
ALLIANCE
FOR THE
FUTURE
OF FOOD



EXECUTIVE SUMMARY

What is the cost of the food we eat? What is the value of the sustainable products and practices in the food sector? Here cost means more than the price at the market or the supermarket. It also means the costs of climate change, ecological dead zones from nitrogen run-off, air pollution, water scarcity, rural poverty and preventable death and disease from obesity, diabetes, hunger, and stunting. These costs are incurred through the production, processing, and consumption of the food we eat. These costs are not included at the cash register, but they are being paid nonetheless. We pay for them, both directly and indirectly, through health costs, social costs, lost productivity, lost quality of life, conflict, and increasing scarcity.

Yet, it is food that provides us with the essential calories and nutrition we need, connects cultures, brings family and friends together, delights us with taste and much more. The decreasing cost of food has allowed money left over in household budgets to be spent on other needs and activities, further increasing value. So how do we balance these short-term and private values with the longer-term and externalised costs taking their toll on nature, the communities of workers producing and processing food, human health, and more?

The costing of carbon describes how activity, measured by carbon footprints, is translated into a monetary estimate of the cost of carbon production. We produce too much carbon and putting a cost on it enables measures and incentives to reduce footprint.

This report examines food impact costing, and whether the way that carbon is costed in terms of social and abatement costs can be adjusted to estimate the longer-term and externalised costs of food production, processing, and consumption. Social costs are the damage that would result from producing the footprint. Abatement costs are the costs to reduce the footprint. The conclusion overall is that social and abatement costing can be adjusted to food's impact, but that there are some considerable complications and the need for co-ordinated effort.

We do not need to produce less food globally, and we do not want to lose the immediate value food brings, but we need to produce food with a lower global footprint. Besides carbon footprints, the water, nitrogen, land-use, unhealthy food consumption and other footprints of food globally are considerable. These footprints and their consequences are accelerating, evolving into multiple crises. A growing number of scientific reports recommend the need for a food system transformation to halt and reduce impact. The purpose of food impact costing is the same as carbon costing, to enable economic correction and incentives to reduce footprints. The corrections and incentives may be indicators to influence food consumers or the financers of the food sector, government regulations and taxes, or a range of other measures.

Footprint is not universally bad. It is likely that developing countries need to increase their application of nitrogen as well as their efficiency of applying nitrogen. The impact on social and human well-being depends on where and how a footprint is occurred. Footprint and impact are not the same. Environmental, social and nutrition science is concerned with the how, the how much, and the consequence of footprint. Economics is concerned with balancing short-term private gain against external and/or long-term value loss for social and human well-being.

High level reports from the EAT-Lancet Commission on healthy diets from sustainable food systems in January 2019, the FABLE consortium in July 2019, and the Intergovernmental Panel on Climate Change (IPCC) in August 2019 have laid the foundation for global footprint targets. Work on food system valuation, in terms of the underlying basis for social and abatement costing, is part of the follow-on from the high-level reports to investigate what can guide economic contributions to food system transformation towards those targets.

The report examines the steps of valuation outlined in leading impact frameworks. Based upon the examination, the inherent ethical choices, uncertainties in costing, and on the variation observed across nine case studies, the report concludes and suggests the following:

- That abatement costing be further developed for two reasons: one, to inform costs of tangible action and economic trajectories for food system transformation; two, to improve (cost-effectiveness) measures of the value provided by sustainable food products and practices to accelerate investment in them.
- That a footprint protocol solidifying what to measure and how to track reduction be developed by a consortium of intergovernmental and institutional actors and experts (a societal process), in collaboration with the food sector. The protocol and subsequent steps should lead ultimately to a food system non-financial capital accounting standard which guides footprint accounting and formalises impact pathways, like the ecosystem component of the UN System of Environmental Experimental Accounting. The UN body, UNEP, produces an annual report on the progress toward carbon emission targets called “The Emissions Gap Report”. Global progress to food transformation targets could also be reported. There are many environmental pollutants, and many social consequences associated to the food system, but the footprint protocol should identify and deal only with those of major global concern, and others left to local processes.
- That there is enough scientific work to start to formalise food footprint and targets. The gap is in the political and societal process. Realising market corrections requires synergy between a triad of food system science, economics and users. A network can bring the triad closer together. Investment can enable the community to develop and promote measures for economic correction of food system impact at scale
- That carbon neutral is an important aspiration for the food sector in line with food system transformation targets, but an integrated form of impact neutrality should be promoted to emphasise aspiration to meet the multiple dimensions of food system transformation targets.
- That, given unavoidable ethical choices and order of magnitude uncertainties inherent in both social and abatement costing, a societal process building on private starts and national handbooks should compile, set and update social and abatement costs (shadow prices) associated to food footprints. The costs incurred by society differ depending on where the impact and footprints occur so there will be many shadow prices. A practical model for using the shadow prices is described, as are non-linear corrections to impact costing for scarcity and interactions created by food’s multiple footprints, and risk-based corrections because of the uncertainty.

- That having a set of established and regularly updated shadow prices takes ethical choices in the costing of societal impact away from individual businesses and consultants. Leaving business to compete on footprint reduction. The report also suggests that uniformity and availability of the difficult to calculate shadow prices will enhance comparison of impact costings leading to enhanced use.
- The high-level reports mentioned, particularly the EAT-Lancet Commission on healthy diets from sustainable food systems, advocate strongly for the need for an intergovernmental body to inform food system impact (an “IPCC-for-food”). Such a body would be a natural home, or focus at least, for establishing a footprint protocol and the societal process leading to setting and updating shadow prices. National governments can adapt pricing but given the quantities of footprint embodied in food trade crossing many national borders, the shadow prices stimulate and benchmark pricing for impact costing involving global value chains.

In suggesting the above to overcome the complications in food impact costing, the report is not suggesting that the application and uses of food impact costing should wait until an “IPCC-for-food” is formed. Food system transformation is identified by high-level reports as urgent. Steps toward a food footprint protocol and developing social and abatement costings should proceed under the umbrella of food economic policy with the caveats noted in this report and others. As should uses of impact costing to advocate change to consumers, guide impact investing, and challenge government to adjust subsidies and financial incentives. Shaping these steps and uses to align toward an accounting standard and societal process for shadow pricing are improvements toward practical and comparable food system impact valuation.

KEY MESSAGES

Food system impact valuations can align the market dynamics of food and agricultural toward the social and human well-being targets of food system transformation.

Building on private starts and national handbooks a societal development and review process should set shadow prices to bring credibility, comparability, and reduce other barriers to use. This would overcome the complexity in calculating shadow prices for quantities associated to food system impact and accelerate the uses that will have the most effect on reducing impact.

Carbon is estimated to produce less than one-third of global food system social costs. A food system non-financial capital accounting standard would guide what to measure and disclose in terms of other footprints, guide transacting the contributions to value and impact along the food and agriculture sector’s complex value chains and provide a standard set of quantities on which to base shadow prices. This would enable tracking of global footprint reduction targets, and disclosure and offset opportunities similar to carbon disclosure and offset.

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NEXT SECTION: 2. FOREWORDS AND SUMMARY