



Valuing agroecological farmers

What can we learn from alternative economic approaches to ensure the contribution of agroecological farmers is valued appropriately?

Findings from participatory research and deliberation as part of the Transitions to Agroecological Food Systems project

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This report has been prepared as part of the UK component of the Transitions to Agroecological Food systems project, in partnership between the STEPS Centre at the Institute of Development Studies and the Land Workers' Alliance. For more information, please contact Elise Wach, e.wach@ids.ac.uk

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Introduction

The topic of accounting for the social and environmental costs of farming approaches appeared in two, separately distilled, maps at the August workshop with farmers; one on producer business viability, and the other on the feasibility of supplying local food. Producer business viability was a focus for discussion, in the early part of the second day, and many aspects of this were discussed, including subsidies, grants, competition from other types of producers, and lifestyle elements (long hours for low pay and reduced time with family etc.). Local food issues are closely related to business viability, as most small-scale producers will be selling into their local markets whilst in competition with supermarkets, etc, where the food sold is not subject to such stringent environmental or social standards. There were strong feelings amongst the farmers that their work was undervalued, particularly in financial terms by both the public and government.

This issue, also emerged during a discussion of how agroecological produce is undervalued in the market, and prices are undercut by supermarkets. Farmers noted that true costs are hidden by subsidies and also through the monopolistic behaviour of industrial processers and retailers, which leads to low prices for customers at the producers' expense. Further, the social and ecological costs of food are not normally accounted for, in conventional markets, though these are the aspects in which agroecological producers are providing the most benefits in comparison to industrial scale and chemical based agriculture.

The need to investigate the potential of economic approaches, which take into account social and ecological costs as well as the financial ones, was discussed and compared to the way the state currently pays for the environmental and social costs of the food system. One of the approaches mentioned by the farmers, in these discussions, was 'triple bottom line accounting.' This paper looks at the potential usefulness of triple bottom line accounting, and also explores other approaches, in financial accounting, for ecological and social outcomes and the effects of different farming methods. It then provides details of the presentations given by three witnesses and a summary of the outcomes of the farmer panel deliberation.

Valuing nature?

Currently the complex task of quantifying and putting a price on the costs of producing food is being approached in many different ways. It is thought by some, that a common methodology would eventually emerge from this process, allowing comparisons to be made more easily. However, others question whether attempting to put an economic value on everything is the right path.

"One question, is whether it is possible, or even ethical, to value everything. We can only attach surrogate (not actual) costs to animal suffering, species extinction or a breathtaking view, for example. Yet, agricultural policies dictate the food systems we have, and these are set by politicians and are largely based on harsh economics. So, while we need to recognise the limitations and the potential traps of placing a monetary value on everything, doing so is necessary for the widespread transition to more sustainable food production, processing and consumption." – Patrick Holden

<http://www.agriculturesnetwork.org/magazines/global/making-the-case-for-agroecology/the-true-cost-of-food>

The arguments against attempting to economically quantify social and ecological values are put very clearly by environmental writer, Richard Conniff.¹ Many of these objections centre on the idea that once a price is put on something, it then becomes saleable, and more easily lost. It also assumes that values are transferrable. For example, 'why not build over this ancient biodiverse flower meadow and sow another meadow elsewhere?' According to Conniff, a price cannot account for the cultural value, nor the embedded biodiversity, which cannot simply be replicated by sowing a similar mix of seeds.

With these challenges in mind, the paper explores a number of approaches for 'environmental and social accounting'.

Methods and uses of environmental and social accounting

A number of methods for environmental and social accounting exist. This table provides a summary of the approaches, which are discussed in this paper.

Approaches to account for environmental and social values in economic systems	
Approach	Description
Triple bottom line accounting	An accounting framework, covering social and environmental impacts as well as financial. Developed as part of Corporate Social Responsibility models, and typically applied on a voluntary basis by companies looking to report on and/or improve their performance.
Environmental Accounting	One strand of triple bottom line accounting. Insight is offered here from an accountant who is offering the service, but finding very low uptake.
True Cost	The aim of the True Cost accounting campaign is not that the true cost of production be directly incorporated in to the retail price of a product, as in Triple Bottom Line accounting, but the development of a range of incentives, taxes, subsidy redistribution and policy initiatives to ensure that those who pollute and produce food that is damaging to health, pay more than those who are farming more sustainably.
Natural Capital	A model currently favoured by the UK government to evaluate the nation's natural capital assets, whilst attributing to them a financial value, so as to manage them more effectively.
The Economics of Ecosystems and Biodiversity	A worldwide initiative focused on "making nature's values visible". Its main objective is to ensure that the values of biodiversity and ecosystem services are incorporated in decision-making at all levels. It is developing a structured approach to valuation, to aid decision-makers in recognizing the wide range of benefits provided by ecosystems and biodiversity, demonstrating their values in economic terms and, where appropriate, including those values in decision-making. Its agriculture strand has a specific focus on the acknowledgement and accounting for externalities.
NaturEtrade	A form of Payment for Ecosystem Services, rather than accounting. Particular interest, in this approach, is in the method of evaluating the ecosystem services provided by parcels of land.
The Polluter Pays Principle	Applied through environmental regulations requiring organisations to prevent or rectify any environmental damage.

Triple Bottom Line Accounting

Triple bottom line (TBL) accounting is an accounting framework, which attempts to include social and ecological/ environmental elements as well as the standard financial bottom line. The concept was developed during the 1980's and 90's by Freer Speckley and John Elkington, among others, and is used by organisations to evaluate their own performance in these areas. As such, it has been part of the movement towards corporate social responsibility (CSR), and a framework used to report on a business's impact on an environment and its people. It has proved valuable to businesses, charities and social enterprises looking to improve their performance in these areas, providing a baseline and making visible potential areas for improvement. However, it has also been open to charges of greenwashing – producing statistics to make a company look good in its annual report without backing them up with genuine positive change.

An underlying principle of the TBL is that what you measure is what you will pay attention to², and that getting businesses to measure their impacts in the social and environmental spectra is an important way to develop socially and environmentally responsible organisations. However, herein lies the difficulty, as it is almost impossible to develop comparable measurements for the three bottom lines – we may be able to calculate the financial cost of a pollution incident, but the social cost to families of being forced to move away, or long-term health problems are more difficult to quantify. Slaper and Hall argue in their 2011 article³ that the problem is not so much with the idea, but with the practical aspects of measurement. There is no universal standard method for calculating the triple bottom line, nor agreement on the measures that should be used. Companies may be valuing completely different factors from acres of wetland preserved, to passengers carried per mile. Perhaps, in an effort to address this, the new economics foundation has developed a toolkit at www.proveandimprove.org enabling organisations to develop their own indicators for outcomes they wish to monitor. The toolkit, is aimed at “mission driven organisations” – charities, voluntary sector organisations and social enterprises.

Professor Harpinder Sandhu, of Flinders University, South Australia, has been working with the Sustainable Food Trust to develop a sustainability assessment tool that could be applied to individual farms. Dr Sandhu created his own accounting system for each of his case study farms, which covered all inputs and outputs including product sales, and environmental and social impacts.

Sandhu uses ecological economics to quantify and put a monetary value on environmental and social costs and benefits such as pollution, pollination, soil carbon sequestration, health outcomes and knowledge generation. His work, so far, using this accounting system has demonstrated that diversified farms generate more environmental and social benefits than monocultures and he has said: “When these benefits are included, farm products [from diversified farms] present better value to society as a whole than the so called cheap beef and milk from feedlot systems, which isn’t really cheap at all.”

Problems with Triple Bottom Line Accounting

There are many issues with Triple Bottom Line accounting as conventionally defined. Information in this section is mainly from the scathing New Economics Foundation report ‘Corporate Spin’⁴, published in 2000. Specifically, the problems of definition, greenwash and the likelihood of practical change have been discussed:

Definitions

As discussed above, arguments against the use of the TBL include that there is no universal way of calculating the triple bottom line, nor agreement on which measures should be used. The practical elements of measuring are complicated and different types of measures must be developed for different types of impacts, some of which will only apply to a very small number of organisations. Furthermore, there are many people who are opposed to ideas such as “putting a price on nature”, believing that putting a price on something makes it that much more likely to be sold or destroyed (see below for further discussion of this). This approach, disputes the validity of putting a numerical value on the destruction or protection of wetland, for example. While some argue that all values should be monetized for comparability while others object to putting a value on, for example, forests

or human happiness either philosophically or for practical reasons – how would the value be determined?

Greenwash and corporate spin

There is a widespread perception that triple bottom line accounting is simply a PR tool, used to make a company's performance appear better than it really is and to deflect attention from more troubling areas – for instance, Shell's annual report, in 2000, focused heavily on its social activities in Nigeria, whilst the leaking pipelines in Ogoniland were merely referenced as "Nigeria remains a challenge", while the hospital, funded by Shell, was reported elsewhere to lack basic amenities such as drinkable water and electricity. According to organisational theorist Nils Brunsson, such incongruencies in organisational values and intentions are inevitable⁵.

Problems with commoditising nature

Researcher Douglas McCauley⁶ points out that, "Market-based conservation strategies, as currently articulated, offer little- guidance on how we are to protect the chunks of nature that conflict with our interests, or preserve the perhaps far more numerous pieces of nature that neither help nor harm us." He also suggests that the intrinsic value of nature makes it priceless and that this should be reason enough to protect it. McCauley points out the successes of environmental campaigns based on moral and emotional grounds such as the designation of national parks, and legislation to protect whales, which have worked without being predicated on the financial value of nature. He furthermore warns that nature protection schemes, based on financial values, are vulnerable to changes in those values – e.g. the development of new technologies for water filtration could reduce the value of land protected as a water catchment, or a change in crops, grown locally, might reduce the value of habitat protected for pollinators.

Even at an economic level, an accurate economic value may be impossible to define. A DEFRA commissioned assessment, of the economic value of England's terrestrial ecosystem services⁷, noted that: "Supporting services can be defined as the services that are necessary for the production of all other ecosystem services. They include : microclimate regulation; nutrient cycling; photosynthesis; pollination; primary production; soil formation and functioning; and water cycling. It can therefore be argued that the value of supporting services is infinite, as without them there would be no other services or final benefits. These services provide an 'infrastructure' service that is necessary, in some way, to realise all of the final benefits."

Likelihood of its leading to actual change

The nef (NEF?) report, suggests that many of the problems with triple bottom line accounting result from the voluntary unregulated nature of the activity. They propose that a legal requirement to report on the social (as in France) or the environmental (as in Germany) consequences of an organisation's activities, lead to a much higher standard of reporting. In these cases, it is legislation already in place that is driving up standards.

Where we may wish to change the playing field to the benefit of smaller, less destructive, players, the function of triple bottom line accounting is harder to see. It's most useful ideas have been employed in many other policy initiatives and campaigns, such as Payment for Ecosystem Services, the

incorporation of the Polluter Pays Principle in environmental law, and many other programmes, some of which are outlined below.

Environmental accounting

This is one strand of triple bottom line accounting, which can also be done independently. However, discussion with the owner of an accountancy firm, specialising in this area, suggests that uptake is low and will become even lower:

“Our client base is almost entirely Social Enterprises (including CICs); Charities and businesses closely connected with environmental or social matters. You may be surprised to hear that the take up of environmental accounting that we offer is extremely low, even when offered free of charge.

...Political will is almost non-existent. This not only means that legislation is sorely lacking, and legislation is potentially the only way of changing behaviours, but it also discourages voluntary take up of environmental initiatives.

The triple bottom line and other published works add to our knowledge about how business can be less damaging (though usually not truly sustainable) ...I do not have any experience of an organisation actually putting a serious structure around their own environmental and social strategies. Many organisations want to, and often do, help others in great ways, but leave their own business affairs to be driven by market forces and price and quality.” -- David Wilsdon, Green Accountancy, Oxford

This supports the argument that triple bottom line accounting is, in itself, of very limited value in improving companies’ environmental performance.

True cost accounting

True cost accounting is a variation on triple bottom line accounting, which has had particular attention from the sustainable food movement. Patrick Holden, now of the Sustainable Food Trust (SFT) and previously Director of the Soil Association has been a strong advocate for the idea, and its potential to change the atmosphere in which agroecological farmers must operate.

True cost accounting builds on the concept of triple bottom line accounting in demanding that the full costs to society of doing business, be made clear. Many of these costs are currently externalised – the clean-up of rivers poisoned with factory waste or pesticide, or fertiliser run-off, the health consequences of non-nutritious food, the loss of habitat for wildlife and the resulting loss of biodiversity. The stated aim of the Sustainable Food Trust (set up and headed by Patrick Holden) in promoting true cost accounting is, “to rebalance our food system and ensure the sustainable food production is more economically viable than unsustainable food production”⁸. He goes on to say,

“Currently, it is more economically profitable to farm unsustainably than it is to farm sustainably. Placing a clear monetary value on the benefits and impacts of different food production systems, would enable the introduction of policy mechanisms to penalise damaging practices and reward the development of systems that deliver positive environmental and public-health outcomes.”⁹

The aim of the campaign is not that the true cost of production be directly incorporated in to the retail price of a product, but that the development of a range of incentives, taxes, subsidy redistribution and policy initiatives ensures that those who pollute and produce food, that is damaging to health, pay more than those who are farming more sustainably. For example, taxes on nitrogen fertilisers could encourage farmers to use less, and the income generated could be put towards the promotion of leguminous green manures as an alternative source of nitrogen.¹

The Sustainable food trust (Food Trust) is working with a group of experts to determine the prices of externalities, i.e. costs that are transferred to society as a whole – waste management, water pollution, health problems. Their long-term aim, is to enable the introduction of taxes and incentives that would penalise those who damage our environment and health while rewarding those whose contribution is positive. “This would rebalance our food system and ensure that sustainable food production was more economically viable than unsustainable food production.” – Patrick Holden.¹⁰

“Moving towards a more globally sustainable food production system is critical. Our present system of food production and distribution is built on a range of practices that are unsustainable as we near the tipping points of climate change, ecosystem collapse and rising obesity levels. It privileges these unsustainable practices by redistributing the costs of their damaging impacts from the private sector to the public sector.” -- Patrick Holden

Interviewed by Liz Earle, 22 Nov 2013,
<http://sustainablefoodtrust.org/articles/the-true-cost-of-food/>

The externalities, that the working group are looking at include:
<http://sustainablefoodtrust.org/articles/the-true-cost-of-food/>

- **Emissions** - Greenhouse gas emissions e.g. carbon dioxide, nitrous oxide, methane
- **Pollution** - Nitrates and phosphates in water, fertilisers and pesticides, animal manures, heavy metals in soils
- **Biodiversity** - Diversity of wild and agricultural plants, insect diversity, pollinators
- **Human Health** - Obesity and diabetes resulting from the widespread supply of unhealthy food, in particular, the overproduction of corn and High Fructose Corn Syrup, and the misuse of antibiotics leading to loss of effectiveness, potentially cancers, allergies, asthma, autoimmune diseases.
- **Jobs, cultural life** - Loss of competent organic farmers as they go out of business).

Once measures of the costs for these externalities have been developed, the information is intended to be used to make the case for the need to rebalance the economics of the food system, using a variety of policy tools. The policy and economic instruments proposed by the SFT to act as incentives and disincentives, include:

- Subsidies,
- Taxes
- Pricing natural capital – water, soil, carbon
- Regulation and legislation
- Market instruments – certification, pricing
- Risk assessment insurance

- Education
- Fair trade label for UK produce, assuring good social and sustainable practice

The Sustainable Food Trust, have various proposals regarding how these policy levers could work in tandem, for example one-way taxation and education could work together to support the same end: “Taxes on nitrogen fertilisers could help to encourage farmers to use less, and funds could directly contribute to a programme to promote the use of legumes as a nitrogen-fixing alternative”. (Aine Morris)¹¹

“Those who choose to buy local or organic, are currently footing the bill twice, paying extra at the tills, and again [through their taxes] to prop up a system they disagree with.”

-- Aine Morris, Sustainable Food Trust

The SFT report that “the European Nitrogen Assessment has estimated that collectively, the costs of nitrogen-related damage range as high as US\$355bn, or up to US\$830, per person, every year, about two-thirds of which, relate directly to agriculture. However, because farmers are not financially accountable for this damage, there is still a good business case for using nitrogen fertilizer – each dollar spent on nitrogen fertilizer brings a three-fold return on the investment for farmers. Yet, if the harm caused by its use, including CO₂ and nitrous oxide emissions, water and soil pollution and its impact on public health were taken into account and nitrogen was taxed, in proportion to the damage done, this would in all probability eliminate the financial incentive to use it. In addition, it would improve the financial case for farming systems that avoid the use of chemical nitrogen, by using alternative methods for building fertility, such as crop rotations and legumes.”

The very low level of agricultural wages worldwide is another factor, which is rarely taken into account, and which affects both sides of the issue, in terms of customers’ ability pay the price of food, and the social costs of the exploitation of workers. It has been noted globally, as a consequence of the transition towards capitalism in agriculture: not all farms have needed to be ‘technically efficient’ to survive, but farmers have had to work harder, depressing the real return to labour¹². This is clearly an issue that should be addressed, but is not one that the SFT has focused on in its work on true cost accounting.

Natural Capital accounting

Natural Capital Accounting is essentially another name for environmental accounting. Though it discusses the value an organisation’s natural assets may have to the wider world¹³, it offers no suggestions as to how these should be maintained or paid for, by that wider community, leaving them costed, but not valued in practice. The various proponents of natural capital accounting advocate using the method to marketize nature, with Dieter Helm, Chair of the Natural Capital Accounting Committee, proposing that farmers should compete to provide ecosystem services, and with George Eustice, suggesting that there should be a “tradeable market in biodiversity obligations” (both quotes from “a pebble in the pond”, by people need nature.) (People Need Nature?)

The current UK government is very interested in the idea of natural capital accounting and is promoting it as a framework for valuing businesses natural assets. The Campaign for the Protection of Rural England has taken up these ideas, on how to take into account the wider costs of farming, in its

post-Brexit policy briefing 'New Model Farming'. They suggest that Government should “plan for a holistic assessment model that accounts for all major inputs and outputs on farmed land”, which would build on what is learnt from (DEFRA's?) four 'Pioneer' projects, on techniques for natural capital accounting. They propose that the farming industry should be regularly assessed against a range of measures to enable targeting of financial and other support, (which should include or lead to?) better on-farm monitoring, measuring and decision-making. The CPRE, also emphasise the value of these assessments in evaluating the effectiveness of public funding in bringing about the desired changes in farming practice.

One concern of the Natural Capital Committee, is to address what they see as the potential for direct conflict between Pillar I's area-based payments of the EU's Common Agricultural Policy (CAP), which they say indirectly incentivizes production, despite the decoupling of payments from production in the UK, after 2005 and Pillar II payments for environmental protection and enhancement. The committee also mentions concerns regarding polluters avoiding the costs of their pollution and thus being effectively subsidized by the wider public, regarding what they see as “perverse subsidies which incentivize the misuse of the environment”, such as tax incentives that exist in the UK for hydrocarbon exploration¹⁴. Thus, to some extent, the committee shares the concerns of the proponents of other methods examined in this report regarding harmful incentives, but they take a more market-focused approach than, for example, the Sustainable Food Trust.

The Economics of Ecosystems and Biodiversity

The Economics of Ecosystems and Biodiversity (TEEB) is a worldwide initiative, focused on “making nature's values visible”. Its main objective is to ensure that the values of biodiversity and ecosystem services are incorporated in decision-making at all levels. It aims to achieve this by developing a structured approach to valuation, to aid decision-makers in recognizing the wide range of benefits provided by ecosystems and biodiversity, demonstrating their values in economic terms, and indicating how they could be incorporated in policy decisions.

The TEEB programs are part of the United Nations Environment Program (UNEP). It has an international advisory board, which includes Patrick Holden and Alexander Muller (who has spoken on True Cost Accounting at the Oxford Real Farming Conference). There are six areas of work: Natural Capital Accounting, TEEB for business, TEEB Country Studies, Water and Wetlands, Oceans and Coasts, and Agriculture and Food.

The program works with and alongside a range of other UN initiatives aimed at mainstreaming ecosystem service and biodiversity values: <http://www.teebweb.org/about/related-initiatives/>

The area of work, of most interest to us here is Agriculture and Food which commenced, in 2014: “TEEB for Agriculture & Food study, led by the TEEB Office, will... bring together economists, business leaders, agriculturalists and experts in biodiversity and ecosystems to provide a comprehensive economic evaluation of the 'eco-agri-food systems' complex, and demonstrate that the economic environment, in which farmers operate, is distorted by significant externalities, both negative and positive, and a lack of awareness of dependency on natural capital.”

The TEEB-Ag group released its interim report, in 2015, calling for an end to business-as-usual and emphasising the urgency of the need for change now, as “neglecting the value of the positive and

negative externalities of the eco-agri-food complex, will in turn lead to decisions that are undermining the productive capacity of ecosystems”

The group is looking at how to effectively gather useful information, and a range of possible policy interventions are suggested:

- Market-based – incentivising good practice e.g. through payment for ecosystem services, (an extant part of the CAP), and removing market failures and perverse incentives (e.g. for the destruction of orchards and hedgerows)
- Regulatory – government legislation on permitted practices
- Institutional changes to farmers’ environment – e.g. tenure arrangements, subsidies for pesticides and fuel use
- Institutional changes to processors environment – e.g. changes to corporation tax rules
- Information provision – ecolabeling, provision of Agricultural Knowledge Science and Technology, support for further research.

Their primary aim is to make the case to farmers, agri-businesses, municipalities and governments that it’s in their best interest to account for the externalities and impacts that have previously been invisible in the eco-agri-food systems complex. The priority, in Phase I of the project, is wide recognition of the fact that the failure to acknowledge the benefits that ecosystems and biodiversity provide, for food and agriculture, leads to such benefits being eroded over time – and that process has already begun. Phase II of the project will look at the wider picture including the impact on human health and production, processing, distribution, consumption and food.

NaturEtrade

NaturEtrade is funded by the EU, and run by Oxford University and the Sylva Foundation. The overall aim of the project is “to develop an innovative solution to the loss of ecologically-rich land in Europe.” The group are developing an online mapping system and ecological evaluation tool, using satellite and other data, combined with a trading platform. Its purpose, is to enable landowners to measure the value of environmental services, provided by their land, and (for the?) beneficiaries of those services to (be able to?) contribute towards those benefits, financially. It’s a form of Payment for Ecosystem Services, rather than accounting, and the interest here is in the method of evaluating the land.

The tool considers various ecosystem services, potentially including: clean-water provision, flood regulation, pollination services, pest control, habitat provision, carbon sequestration, biodiversity, and cultural values. The main target market for the tool is farmers and landowners, for whom it offers an opportunity to enter into contracts, which would compensate for the supply of ecological benefits from the land. This offers an alternative funding stream and diversification of farm incomes. There will be the opportunity to develop sponsorship contracts, of one year, initially, which may be renewed and expanded or upgraded (e.g. in the light of increased environmental benefits) thereafter. Within 5 years, the intention is to roll out the platform, to 8000 stakeholders in 4 case study regions, and achieve a 40% reduction in conversion of natural cover land types to non-natural types, compared to the baseline.

Investors and sponsors may include local government, other farmers, and community groups. For example, there has already been interest in sponsoring upland farmers in Cumbria to carry out flood minimisation strategies from a consortium of other local farmers, local councils, residents, and a water treatment company. Other examples of possible investors include, anti-quarrying groups paying a landowner not to quarry, or fruit farmers who wish to preserve local pollinator resources.

The key benefit of the tool, from the point of view of the difficulties with evaluation we have discussed, is the ease of collating the information. The NaturEtrade team have produced the following table indicating the significance of the time savings:

Missing Table?

The time taken for one person to manually extract, process, and produce a LEFT report¹⁵ is typically 14-18 days – depending on the level of GIS skills, whereas the time taken to obtain a report, using the NaturEtrade platform, is approximately 5 minutes with output usually delivered after one hour. This stands in clear contrast to the potential administrative burden of requiring businesses to complete full triple bottom line accounts each year.

The ‘Polluter Pays’ Principle

The Environmental Damage (Prevention and Remediation) Regulations came in to force in the law of England and Wales on 1 March, 2009, enshrining the polluter pays principle. The regulations require those whose activities threaten to cause, or have caused, environmental damage to take steps to prevent the damage (or further damage) occurring, and to inform the Environment Agency or other authorities (who will provide information on what must be done to prevent the damage and or remedy the damage).

Some UK environmental law, derives from Europe. Britain has integrated parts of the European legislation into our national law, but some is directly applicable to the UK without any need for incorporation into British legislation, including, for example, the Industrial Emissions Directive¹⁶.

Helen Browning, Chief Executive of the Soil Association, suggested, at the 2017 Oxford Real Farming Conference, that in the aftermath of Brexit and a reinvention of British agricultural policy, post-CAP, the Polluter Pays Principle is likely to become much more important in guiding British policy. Keeping track of pollution and calculating payments owed might be done using a triple bottom line or true cost type of accounting method.

Challenges with accounting approaches

Practical difficulties

Some of the problems of trying to measure and compare disparate factors have been discussed above. Another problem with trying to roll out Triple Bottom Line or True Cost accounting to businesses in general would be the enormous administrative burden this would impose. Although, unlike the administrative burden of organic certification and similar schemes, which falls only on those farmers trying to farm more agro-ecologically, this would fall upon all farmers. Despite this, it is still likely to be more than many small businesses could bear. The negative effects of many kinds of regulation often affect small

businesses disproportionately (e.g. environmental health requirements) and can be another factor working against their success – the opposite of the outcome we would be looking to achieve.

What if it causes a rise in the price of food?

Nadia Scialabba, Senior Environment Officer at the FAO in Rome, has discussed how organic food prices currently internalise the external costs whereas conventional agriculture does not, and how this skews consumer choice and leaves little financial incentive for a shift to sustainable farming methods¹⁷. Furthermore, under the current system, food prices have been so prohibitively high, for millions, that it not realistic to expect them to be able to pay the cost of natural resource management on top of those prices. A new system is therefore necessary.

Patrick Holden's point of view, is that we must raise public awareness of the distortions in the economics of our food systems as a matter of urgency. The UN has already forecast a 40% rise in the cost of food over the next decade. With the pressure on food production increasing, in light of climate change and rising fuel costs, it is essential that we push for changes in food production that will prevent prices from rising as much as they might do, if we fail to implement those changes. For example, food prices could be held down by eliminating the cost of fossil-fuel-based fertilisers, and the pesticides and herbicides that many farmers have become reliant upon. Localising production and encouraging people to return to a more regional diet and to cut their meat consumption would also potentially act in the same way.

Patrick claims that “rewarding beneficial outcomes, such as farming systems that build soil fertility, or sequester atmospheric carbon back into the earth, would mean that the cost of sustainably produced food – that also tends to be healthier for us to eat – would actually be reduced.”

Our subsidies report touches on other aspects of the cost of food. However, there are larger issues here about the affordability of food, which not only relates to the price of food itself but also to the (disposable?) income that populations have, to pay for it. With the high cost of land and housing in the UK, less income is left to pay for food.

The difficulty of translating the evidence into policy

Nadia Scialabba has emphasised the huge gap between knowledge and action – comparing the question of externalised costs with other issues for organic farming, where many case studies exist showing that sustainable methods can produce healthy yields, but political action, in favour of organics, is yet to follow in any meaningful way.

Many useful policy suggestions have been made, what is generally lacking is the will to adopt them, a much trickier problem to solve.

Rather than auditing every single farm as using the triple bottom line or other environmental accounting methods, Patrick Holden's idea is to use the information about the true costs of production to change policy and level the playing field for those producers who are not offsetting vast costs to the taxpayer – this would need the body of information that already exists on this subject to be presented effectively, such that governments choose to stop this double subsidy.

Reasons why governments might choose to do that:

- Savings on clean-up costs etc. (e.g. reducing water pollution, flooding)
- Environmental benefits (i.e. reducing the kind of damage that is difficult/impossible to clean up – flooding, biodiversity loss)
- Longer term, but major savings on health costs

Why wouldn't they?

- Concern regarding the increasing price of food
- Pressure from those who would lose out in any cuts to the current subsidies or profits, which are currently going to them and/or their associates.

In some ways, what these approaches and this report points to, is the need for a culture change. In some ways this might resemble a return to the days when the Lord of the Manor had responsibilities just as the peasants did. Approaches, such as True Cost Accounting, would make it an imperative for businesses to take their social and environmental impacts seriously if they want to retain their “social licence” to do business, as well as its manifestation in their bank accounts through the subsidy and taxation regimes. Harmful practices would need to be mitigated or reduced, in favour of engaging preferentially in practices that lead to social and ecological regeneration.

Additional insights from our expert speakers and deliberations

Expert witnesses: Patrick Holden, Sustainable Food Trust
Irene Sotiropoulou, Centre for Agroecology, Water and Resilience, Coventry University

Although, Patrick was very involved in the initial development of organic standards, he now believes that the organic price premium is treating a symptom, not the cause of the problem.

“Organic farmers are trying to farm in such a way that there are benefits to the environment and society rather than costs. The development of organic standards and marketing was a way of avoiding the truth about how the costs of other farming are never directly paid.”

“The best business case has always been to grow continuous crops and pour on fertilisers and pesticides, rather than to build soil capital and local communities, for which there is no reward (other than a bit of subsidy money and organic premium). There was talk about the polluter pays principle, and the water companies did use some taxes and incentives, but it was largely ignored.”

Irene was also sceptical regarding the potential for using the economic system to control itself. Her view was that even if stronger “polluter pays” legislation was brought in, polluter pays tends to become “who can pay, pollutes”, and the huge companies are so big that they can still carry on and treat any fines as a cost of doing business.

Worse, premiums make organic food expensive and are seen as elitist, restricting it to 5% of the market and leaving the other 95% of farmers trashing the environment.

Patrick brought up the idea of our current food system as a trap, which none of us, as farmers, supermarkets or consumers can escape. Farmers have to sell on to commodity markets, supermarkets

have to buy those commodities and process them into unhealthy food, and they have to make more profit to keep the shareholders happy. The supermarkets are trapped, and can't increase their prices without losing their customer base. In a conversation with Patrick, Greg Creed (CEO of Yum! Foods, owners of Taco Bell, KFC and Pizza Hut), stated that millennials weren't buying their products but they couldn't see how to switch to more ethical products without putting up prices and losing their mass market.

Regarding Natural Capital Accounting, Patrick suggested that if food businesses were to account for it all, they would likely go out of business – therefore they have been avoiding having to look at it. Patrick said that PricewaterhouseCoopers (PwC) commissioned a study, looking at this food, which was the only sector that would not only become less profitable, but which would go into the red if forced to account financially for its externalities. Therefore, we need to change the financial environment so that companies can make changes without going out of business.

There is also a need for sustainability metrics – on soil, water, biodiversity etc., including for farmers who want to monitor the performance of their own practices, in order to improve them.

A panel member wondered whether true cost accounting was the most effective lever for change, in that presenting evidence may bring about little change unless narratives are also rewritten. Patrick Holden responded that in order to make change “low hanging political fruit” is need – for example publicising some of the issues around externalities, which could directly affect votes. Climate change has the potential to be one of these, e.g., if a reliable way of managing soil carbon levels were to be developed, farmers could be paid to act as carbon stewards. The UK government has signed up to a commitment to increase soil carbon at the COP in Marrakech, this year. Another possibility is public health – a clear correlation, or even better evidence of causation, between some foods and antibiotics or allergies or mental health problems, and we could directly link the need for change to health costs to create an effective lever for change.

Another panel member questioned the focus on large companies due to their limited long-term future and inability to change, and talked of a need for a conversation about businesses becoming smaller and more local and connected.

Patrick Holden saw this idea as a question about the value of two different models which must co-exist: evolution of the large, possibly ponderous, “dinosaur” organisations; and revolution where we grow new cells, new farms and shops, etc, under the radar to replace them. He emphasised that while we need the new cells, it's not necessarily very constructive and it can be quite adversarial to ignore the big companies that supply 80-90% of our food. He is interested in finding a way to introduce these ideas to the people, in the big companies. Panel members were interested in this idea, but remained unconvinced that the model of very large-scale companies was compatible with the principles of sustainability.

A farmer expressed interest in how to translate the qualitative value of agroecology into quantitative data. (This panel member is part of a group at Coventry University working on this area). There was general agreement on the difficulty of doing this, but Patrick also mentioned that the German Government are leading on carbon stewardship metrics. In the UK, the Natural Capital Committee is engaged in work on quantifying the values of nature, but Patrick felt that their work on food was of limited value and said that the Sustainable Food Trust have been talking with the Committee about this. He added that the Sustainable Food Trust are also talking to DEFRA about how the quantification

of the costs and benefits of farming could be included in post-Brexit food policy. At this point, we really need common agreement on measurement, and an app to make quantification straightforward.

There was some discussion of how other household members' needs and wants affect purchasing patterns, and the difficulties of changing the food system through consumer pressure. The feeling of a need to go to the supermarket and buy convenience food was familiar to most panel members, despite being strong supporters of organic and local food. It was particularly associated with children's demands for treats, and the need to provide packed lunches for school.

The use of free labour including internships, traineeships, and volunteers in general was discussed as one way in which agroecological producers could keep costs down.

Deliberation

After hearing from both witnesses and questioning them, the panel moved on to the deliberation. The panel revisited the distilled map (produced at the August workshop), to include new ideas and missing concepts, and considered whether the framing of the question was still appropriate.

Ideas put forward included, thoughts on the alignments and conflicts between farmers' interests, agroecological concepts and the public interest. The lack of clarity, in the wording of the question, regarding "valuing appropriately" was also raised.

As before, panellists identified and clustered their ideas for actions to change the situation.



Figure 1: grouping of ideas on ways to work on making sure agroecology is valued

Ideas centred around: awareness raising and campaigning; compiling evidence; refocusing law and policy and building networks. A strong desire was apparent to work with like-minded groups to quantify and expose the costs of the destructive practices of agribusiness. The group also wanted to be heard by the Natural Capital Committee and to be able to influence policy, for example, through working with the Land Workers' Alliance. Brexit was mentioned as a key moment in the relationship between farmers and the public, at a time when food security and wellbeing are in the public eye. The need to continue to educate consumers and local governments, on the importance of the issues, was discussed.

Three of the six areas of work chosen by the group, after deliberating on all the topics, were related to this question:

- Making the case for the true benefits of agroecological farming
- Shaping the reform of subsidies
- Defining objectives and values, including in the People's Food Policy

Summary

The current dual economy of organic and non-organic does not work because those who prefer 'cheap food', with externalised environmental costs, end up paying for it through their taxes. Similarly, those who can afford organic food are also paying the costs of non-ecological food through their taxes, on top of any premiums they are paying. The various versions of alternative accounting systems described above could help with raising awareness of the social, health and ecological costs of various farming approaches. However, approaches such as the Triple Bottom Line and Natural Capital Accounting, which translate the social and environmental costs to the consumer, only continue to create a dual economy. Such company-led approaches can also facilitate 'green washing' – enabling companies to continue unsustainable practices.

The Polluter Pays principle, is one that in some ways already exists in our current governmental frameworks, through the use of fines and fees for unsustainable practices. However, the disadvantage of this approach is that it can become 'those who can pay, pollute'.

The TEEB-Ag project of the UNEP, has a very wide focus and the externalities it encompasses include those on human health as well as the effects on water and the wider environment. Its main thrust is to make visible the value of environmental service and biodiversity, and suggest approaches – market based, regulatory and institutional – that may improve practices.

NatureEtrade demonstrates a relatively simple way of gathering data on the environmental services provided by a piece of land, reducing the costs of information collection and potentially making monitoring more viable. At present, the model is market-based, but the system of using satellite data combined with other resources could potentially be used in other models.

The True Cost Accounting approach offers the potential to make ecological farming the norm, rather than something that only certain classes can access. The movement seeks to generate a solid base of evidence, quantifying the costs to governments and society, of different farming practices in order to enable policy makers to direct their actions towards a rebalancing of the food system, and one that incorporates farming's effects on ecology and people. While this approach is currently weak on social

considerations, (e.g. on farm labour) and still runs into the same problem of commodifying what cannot be commodified, members of the panel saw this to be a worthwhile endeavour and the panel concluded that the LWA should be more closely involved, in shaping the True Cost campaign's activities.

Overall, the panel concluded that more needs to be done to synthesize and compile evidence on the costs to the public of farming practices, interlinked with the development of a People's Food Policy and the shaping of agricultural subsidies. Panel members also felt strongly about the concept that not everything – including people's connection to land and the value of their lifestyle – could or should be commoditised or translated into monetary values.

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