

Opportunities and barriers to using payments for ecosystem services and supply chain measures

Participatory research in WaterLIFE demonstration catchments



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Executive Summary

Participatory research in two of the WaterLIFE demonstration catchments (Soar and Camlad) has been undertaken to identify opportunities and barriers to; 1.) the implementation of Paid Ecosystem Service (PES) Schemes; 2.) the engagement of Supply Chain Stakeholders, within River Basin Management.

The participatory approach was complemented by Westcountry Rivers Trust (WRT), within the Tamar, through the development of a pitch to businesses that encompassed PES schemes, identifying benefits to both the environment and business.

This programme of work was undertaken under Action B1.2 and builds on preparatory work (Action A1) that developed stakeholder databases in each catchment and mapped potential opportunities for improving ecosystem service benefits.

PES Schemes

Stakeholder responses in both the Camlad and Soar strongly suggest that PES markets have a greater chance of success where buyers and sellers are closely linked both geographically and culturally. In the Camlad, stakeholders identified challenges to implementing PES schemes across the Welsh-English Border.

In the Soar, local residents expressed a keenness to explore the potential for PES schemes to address flood risk. This was driven primarily by the susceptibility of the downstream part of the catchment, particularly the City of Leicester, to flooding. Some residents suggested that a sum of £3-5 per household would not be unreasonable to pay for flood mitigation schemes.

Flood risk solutions were seen primarily in terms of addressing excessive sedimentation through the dredging of rivers and cleaning of pipes and culverts. However, once prompted and discussed, wider catchment solutions including rural land management that tackle the problem 'at source' were appreciated. The need for much greater awareness of the links between land management, ecosystem service delivery and natural capital across all stakeholders – including the general public - was identified as critical. Here, catchment partnerships can play a key role.

Whilst the concept of PES made intuitive sense to the majority of research participants, concerns were expressed. These included the perception that environmental services are free, and that significant uncertainty may exist with respect to the timeline and effectiveness of schemes.

With specific respect to PES schemes encompassing agricultural land management – concerns were raised that farmers might receive double payment, that the polluter pays concept could be contradicted and that any payment made should build on legal minimum standards for land management. Farmers are keen to engage with PES schemes to enhance farm income, although the length of agreements was raised as a key issue. Farmers were also open to the idea of participating in collaborative schemes encompassing multiple farms.

The importance of an independent organisation as a broker for schemes was also highlighted (with charities and universities perceived as leading candidates) and a preference was stated by local businesses for a broker that understands the business environment as well as the natural environment. Parish Councils were identified by some residents as having the potential to play a major role in deciding where PES funding is spent.

Several respondents articulated a belief that whilst PES schemes have potential on a relatively small scale, larger take-up will not occur, or will take much longer, unless given much greater backing by Government; Private buyers of ecosystem services are perceived as much more likely to engage if the approach is endorsed and given *official validation* by Government. Small pilot PES studies were proposed as a means of building confidence in terms of proof of concept across relevant stakeholders.

Developing a Pitch to Businesses

In the Tamar, a matrix of potential businesses was identified that benefit from the availability of water, or some other element of the natural environment. This focused upon businesses that WRT has not historically worked with and involved the application of a number of selection criteria such as the impact of customer activities on water.

Understanding the business need was a key element of the process, including the ecosystem services a particular business relies upon, and the factors influencing business sustainability. This understanding was then compared with the products and services that WRT can provide, to identify areas of convergence that underpin the subsequent development of the business pitch.

The pitches developed clearly convey not only the benefits to business of working in partnership with WRT but also the environmental improvements that can be realised too. The approach is to be trialled with a local brewery in 2016 with an assessment of the success of the approach to feed into a subsequent wider up-scaled approach targeting additional businesses.

Supply Chains

Stakeholders surveyed recognised that farm quality assurance schemes offer a mechanism to drive improved environmental performance, for example, the Waitrose scheme that pays a premium price for milk in return for adherence to a number of animal welfare and environmental requirements. Respondents in the Camlad expressed a desire for this model to be universal thereby negating the need for PES schemes.

Currently, however, the Waitrose scheme and others apply to a very small proportion of farmed land and whilst broader schemes, such as Red Tractor, also exist, they are not a vehicle for bringing about the change in land management needed to fulfil e.g. Water Framework Directive requirements.

The overarching conclusion reached by stakeholders was that extensive and sustained effort to raise mainstream awareness of the link between food production and wider ecosystem service delivery –

and the dependency of consumers upon these wider services – is needed. The rationale being that increased awareness would lead to increased willingness to pay more for food.

There was belief amongst stakeholders that, in time, consumers will pay more for food provided this supports local producers and that they can have confidence that verifiable environmental improvements will be realised.

There is a clear potential for much greater engagement by retailers and processors within the food supply chain to work with farmers and growers to embed more sustainable practices that can be good for farm business and the environment.

Water Accreditation Scheme

WRT has explored the possibility of establishing a water friendly accreditation scheme within the Tamar, working with Tamar Local Grow, a local Community Interest Company promoting sustainable local produce. Local Producers linked to the company would use the Tamar brand as a kite mark if they undertake measures to protect and improve the freshwater environment. Further development and trialling of the scheme is planned.

1.0 Introduction

This report contains a synthesis of the main findings from research undertaken under Action B1.2 of the WWF LIFE Project WaterLIFE (LIFE13 ENV/UK/000497). Participatory Research in the Soar and Camlad catchments is described that attempted to identify opportunities and barriers to; 1.) the implementation of Paid Ecosystem Service (PES) Schemes; 2.) the engagement of Supply Chain Stakeholders, within River Basin Management. This work, described in Section 2, was undertaken by Alex Inman - independent consultant.

The participatory approach was complemented within the Tamar catchment through work to develop a PES business pitch to a variety of different organisations and to explore the development of a water accreditation scheme. This work is described in section 3.

The programme of research under B1.2 builds on preparatory work (Action A1) that developed stakeholder databases in each catchment and mapped potential opportunities for improving ecosystem service benefits.

2.0 Participatory Research

2.1 Background

There has been much interest in recent years surrounding the feasibility of using market-based instruments to fund pro-environmental land management activity. These instruments comprise a variety of different forms including environmental taxation, resource trading (e.g water abstraction permits, nitrogen trading), biodiversity offsetting, habitat banking, environmental performance bonds, subsidies (e.g Countryside Stewardship/Glastir), Payments for Ecosystem Services (PES) and supply chain measures (e.g quality assurance, product labelling). Some of these mechanisms are in their infancy whilst others are well established with a long history of implementation both in the UK and abroad. Experience has shown that each approach has its strengths and weaknesses, depending on the context in which it is applied. There is no universally applicable silver bullet.

Action B1.2 has sought to investigate the potential for employing the last two of these instruments – PES and supply chain measures – within the context of river basin management planning in the WaterLIFE Soar and Camlad study catchments. For the purposes of this research, definitions of PES and Supply Chain measures are outlined below:

- PES – a voluntary transaction where a well-defined environmental service (ES) (or a land-use likely to secure that service) is ‘bought’ by a (minimum one) ES buyer from a (minimum one) ES provider if and only if the ES provider secures ES provision conditionally
- Supply Chain measure – a quality assurance or product labelling scheme which aims to raise the environmental performance of food production systems through heightened consumer awareness and producer compliance with environmental management performance standards

The specific objectives of the research as outlined in the WaterLife proposal were as follows:

- Evidenced understanding of the opportunities and barriers for Potential PES buyers and sellers to engage in RBMP development and delivery. Including what contractual arrangements are necessary and what monitoring regime will give confidence to investors
- Policy recommendations including a template for the establishment of catchment-based PES markets capable of delivering WFD outcomes
- Evidenced understanding of the opportunities and barriers for supply chain stakeholders to engage in RBMP development and delivery – inc environmental management standards, consumer awareness raising , CSR promotion and brand protection
- Policy recommendations that help realise a more efficient use of natural resources, including water, without compromising productivity of either farm or buyer incomes

2.2 Methodology

Rather than approach the research using a desk based methodology , extensive use was made of primary in-depth research interviews and focus groups with relevant respondents in each study catchment at a ‘grass roots’ level.

In total 40 in-depth interviews were undertaken and 68 participants took part in the focus group events. A breakdown of the societal groups engaged in the research is provided below:

- Local Authority Flood and Conservation Staff
- Individual householders (particularly those in flood risk areas)
- Recreational users (inc anglers, shooters, canoeists, walkers, rowing and boating enthusiasts)
- Farmers (and farming representative organisations)
- Local businesses with an interest in the landscape and rural environment
- Agricultural Advice and marketing
- Conservation NGOs
- Parish Councillors

The research was carried out between March and September 2015.

2.3 Main Findings – PES Research

The following sections contain the key findings obtained from the research. Reporting takes the form of narrative commentary complemented where relevant with verbatim comments made by respondents (in italics).

2.3.1 Relative demand for specific ecosystem services

Flood attenuation – there would appear to be potential demand for flood attenuation services delivered by the environment in both catchments; although the scale of this demand differs between the study areas. Flooding in the Soar catchment is already a problem in several areas and

the local residents consulted perceived this is likely to get worse. The residents of Sibleby appear to be at a particularly high risk of flooding and are, therefore, very keen to explore mitigation options.

In the Camlad, there are a small number of households in high flood risk areas although in the main flooding in the catchment is not perceived as a major issue. What is interesting about the Camlad is that its potential to offer flood mitigation solutions has featured in strategic discussions relating to flood management further down the River Severn catchment, for example around the large conurbation of Worcester. Of note, stakeholders suggest this dialogue has been characterised by a 'nationalist' theme, specifically a hesitation by English flood authorities to consider paying for mitigation activity in Wales (much of the Camlad lies outside the English border). Similarly, there appears to be hesitation by Welsh stakeholders to allocate financial resources in the Camlad, the benefits from which will largely be accrued some way downstream in England. This situation is not atypical of many cross border catchment tensions (e.g the management of abstraction or migratory fish species). It does, however, strongly suggest that PES markets have a better chance of being established where buyers and sellers of services are closely linked both spatially and culturally. This issue is further highlighted below.

Recreation and Aesthetic services – A key finding from the research is that of all the ecosystem services discussed, it is recreation and aesthetic services which have the most immediate and widespread appeal; both to the business and public respondents interviewed.

'The benefits from the environment are physical exercise, the social side, mixing with people' [Soar resident]

Regulating and provisioning services such as water quality delivery, climate regulation and pollination are not top-of-mind and far less obvious. For example, when asked to spontaneously value what they gain most from the local environment, respondents in the Soar mentioned 'quality of the views' and 'being able to get out and about'. For them litter is a key topic as this is considered the main impact on the environment, degrading the recreation and aesthetic opportunities made available. Local businesses such as pubs and tea rooms fronting the river see the negative impacts of litter as particularly pressing. Again in the Soar, community research undertaken by the National Forest has strongly concluded that landscape and green space are the attributes receiving most mentions in resident surveys regarding perceived benefits from living in the National Forest area. Access to green space is regarded as very important; specifically access within close proximity to people's homes.

In the Camlad, residents mentioned 'brilliant air quality', 'no light pollution', 'therapeutic aspects' and 'seeing wildlife everywhere' as aspects of the local environment they value most.

Climate Regulation Services – There does not appear to be a significant demand for climate regulation services in the study areas investigated; there being a lack of large businesses with an interest in carbon management and carbon offsetting in particular. In the Soar, the National Forest has explored the viability of carbon credits and has lodged one transaction with Forest Carbon, the main broker buying and selling carbon credits in the UK. However, the National Forest has concluded that the market price potential carbon buyers are prepared to pay for carbon offsets is not sufficient to incentivise land managers to invest in tree planting activity. It may be possible to derive carbon payments in the future to supplement payments for other ecosystem services, thereby producing a combined income stream for the farmer that will stimulate desired

environmental behaviour. However, carbon based PES is not a priority for the National Forest at the current time.

Water Quality Provision Services – The Soar catchment is not of significant strategic importance to the local water company (Severn-Trent Water) as most of the drinking water consumed in the catchment is imported from elsewhere. In the Camlad it appears there is limited demand for Water Quality services from the water industry. Given the distance of the catchment from Welsh Water’s extraction points further down the Severn river, problems from raw water quality in the Camlad catchment can be mitigated by blending with better quality sources from other sub-catchments further downstream. Interestingly, there is active demand for water quality services from the bottled water industry with the Camlad, specifically from Montgomeryshire Spring Water which abstracts from 18 underground sources in the catchment. The company already has PES agreements in place with relevant farmers not to apply pesticides within proximity of these extraction sites. This demonstrates that where a business beneficiary has a recognised dependency on a specific ecosystem service (with no possible substitute) and where the suppliers of this service can be easily identified, the likelihood of PES market development is likely to be very high.

2.3.2 Societal awareness of the relationship between land use/management and the delivery of ecosystem services

Although there were exceptions, it became very evident from discussions with stakeholders that there is a widespread lack of awareness and understanding of the link between agricultural land use/management and the delivery of ecosystem services. As pointed out above, there would appear to be potential demand for flooding solutions in both catchments. However, when discussing options for flood mitigation, both communities initially focussed their discussions on a need to prevent *‘unbridled development and house building’*. For example, Sileby residents in the Soar blame increased flood risk on the expansion of the upstream urban area around Leicester. In Leicester, rowing and boating interests have become increasingly concerned in recent years over siltation in the Soar which has the potential to reduce water height in the river, thereby compromising navigability. However, the solution is seen in terms of dredging the river (end of pipe) rather than up-stream soil and wider land management husbandry(at source).

Seeking solutions from rural land was, therefore, not spontaneously mentioned; although once prompted and discussed there was considerable enthusiasm for such a course of action. Sileby residents in particular were quick to identify that surrounding farmland upstream of the village could reduced flood risk by allowing managed inundation of this land in high river flow conditions. On reflection, a key conclusion arrived at by stakeholders in both the Soar and Camlad is a need for a wide ranging, systemic and on-going public awareness campaign to demonstrate the benefits that flow from natural capital.

2.3.3 Willingness to pay

The topic of whether beneficiaries interested in the delivery of services would be prepared to pay for these services generated considerable discussion both within the in-depth interviews and focus groups. What became clear from numerous discussions is that whilst the concept of PES made intuitive sense to the vast majority of research participants, there is widespread resistance to

convert tacit interest in PES into concrete payments. The reasons for this appear to be numerous. Firstly, there is an inbuilt belief that environmental services are free:

'I get so much from the environment. Sometimes when I'm feeling low, I just go outside breath the air and watch the birds. It sorts me out and what is amazing is that I get all that for free' [Camlad resident]

Converting a commodity that is perceived to be free into something that commands a market price is going to be a significant challenge.

Secondly, and more often mentioned, many respondents were of the view they already pay for the environment. This might be through rent or licences to access the environment (e.g shooters, anglers), through parking fees (visitors) or through the tax system (council tax payers). There was also an often cited sentiment that farmers already receive payments from the Common Agricultural Policy (Countryside Stewardship/Glastir) to deliver environmental benefits so why should more money be channelled into this objective.

'What first struck me when I had the first approach for this research is that isn't PES reinventing the wheel. For example Countryside Stewardship (30 years ago) was for extra public good out of agri support. I wasn't really quite sure how this PES, how far this would be innovating. Is this something that is already being done? {Member of the Ramblers, Camlad}

Thirdly, the problem of what economists define as 'free riding' (where individuals gain for free the benefits that other people have paid for) would appear to be a barrier for some when considering paying for ecosystem services. For this reason, several respondents called for a need for mandatory payments so that everyone benefitting from a service would be contributing to its delivery. The Sibley community members referred to this as a Parish rates levy, applicable to everyone except those with a genuine reason rendering them unable to pay (e.g disability, unemployment etc). Whilst nothing wrong with this idea in principle, this would represent a move away from PES which by definition is concerned with voluntary payments rather than a mandatory tax based instrument.

A fourth factor likely to generate a resistance amongst beneficiary groups to pay for ecosystem services is a fear over the lack of delivery of what is paid for. Several respondents appeared unconvinced that current environmental stewardship schemes are delivering their objectives and are correspondingly reticent to engage in what they see as a similar exercise without appropriate reassurances being in place. Recognition that measures on the ground may take years to bear any fruit was also expressed as a potential barrier to engaging enthusiasm from stakeholders wanting quick results. Importantly, respondents did not call for a complex and absolute monitoring regime to measure delivery against a precise set of quantitative outputs.

'There needs an evidence base for it but the level it is pitched at is difficult. We almost spend too much effort on producing scientific reports when often the evidence is staring us in the face. I agree that evidence is needed but it is difficult to know the level. You could kill a project with too much science. For example, on the pearl mussel project we do have, and are required to have, a lot of evidence. By the time you have that evidence the thing you are trying to protect has often declined when you already knew what was required [AONB, Camlad]'

'We don't want to go to buyers without any figures but at the same time we don't want to do too much monitoring work before we know potential buyers are interested. Ultimately we would be happy with an expert panel monitoring system as we want to see PES work [National Forest, Soar]'

Stakeholders seemed happy with a set of *'practical indicators'* developed by a panel of expert scientists; either activity based or outcome focussed. What was crucial in the eyes of respondents is that any PES scheme is efficiently and robustly enforced to insure recipients of PES income *'do what they are supposed to do and not take short cuts'*.

A final reservation acting as a barrier to making payments was articulated by some respondents who displayed a lack of agency (belief) surrounding the likely effectiveness of payments in bringing about meaningful change amongst land managers:

'I think payments for ecosystem services is a nice ideology, but perhaps it's a little misguided because you wouldn't come anywhere close financially to making farmers change enough to make a real difference to the environment [Local Business, Soar]'

Aside from the undoubted barriers to making payments cited during the research, a recurring message from respondents was the greater likelihood for payments to be forthcoming if PES schemes are focussed on delivery of local services to local people:

'We are a small club with limited finances, anything we would be interested in would have to be local... this is because we are a small organisation and we would want to make sure any scheme we helped to finance benefited our local members [Loughborough Angling Society]'

This should be regarded as one of the most important findings of the research undertaken and resonates with other research projects looking into PES viability. For example, the Sileby residents have no problem paying for flood mitigation and suggested a sum of £3-5 per household would not be out of the question. Given the large number of households in the Sileby area, residents were of the view considerable sums of money could be raised to target solutions at a local problem without overly pressurising household budgets. There is huge scepticism that money raised through the taxation system is wasted. To counteract this concern, Sileby residents suggested any PES payment scheme must produce transparent statements explaining where funds have been spent. Importantly, transparency over transaction (administration) costs would also be required.

A general observation made by several respondents was that people do not know what their Council Tax is spent on and therefore cannot make informed judgements as to the value of expenditure made. The National Forest referred to an example from a community event where once members of the public were informed of the budget expended on the local Council Parks service and the outputs achieved, they considered this extremely good value for money. In this instance, it appears a consumer surplus was achieved (i.e members of the public perceived the Parks service delivered more than they expected for the budget allocated).

2.3.4 Attitudes towards money being paid to farmers and land managers to deliver PES

Notwithstanding the reservations regarding a willingness to pay as outlined above, there was almost universal agreement that farmers and land managers could not be expected to produce *enhanced* levels of ecosystem services for nothing. The word *enhanced* is important in that, in keeping with

the broader debate about PES within the published and grey literature, respondents had an intuitive sense that PES payments need to build on some form of legal minimum standard for which financial remuneration is not justified. In this sense, payments for ecosystem services is not in contradiction to the polluter pays principle but works alongside it.

So with appropriate checks and balances, it appears there is a broad basis of support in favour of payments to farmers:

'There are demands put on the environment by everyone in wanting to eat cheap chicken, cheap electricity etc. so lumping all onto the landowner when they are under pressure from the rest of the population to deliver other services; is that a balanced way of looking at it? It hasn't really worked so far [Shropshire Council representative]'

'I think sometimes people think farmers are all rich and drive around in flash 4 x 4s. My understanding having lived around here for a while is that the majority of farmers are not at all loaded. They need to make a living like we all do so yes, I've no problem if we pay them to deliver flood defences for us. Why not [Sileby resident]'

In keeping with the discussion around localism above, several respondents mentioned it will be important to educate potential financial contributors about the link between land management activities and ecosystem service delivery if PES is to become a *'mainstream ideology'*.

2.3.5 Attitudes towards governance and co-ordination of PES – who will stakeholders trust?

The research explored views on how potential PES schemes could be managed and specifically which institutions would be best placed to perform a co-ordination and governance role.

There appears to be considerable mistrust directed towards public sector authorities. This mistrust also extends to any organisation considered to be too close to public sector funding streams:

'Government agencies would not be neutral as it's an opportunity to divert money... The Environment Agency but they are government funded, Severn Trent is a good organisation but they are for profit... so aren't independent [Angler, Soar]'

'They [referring to a specific third sector organisation] receive £x million of government money to spend plus other guaranteed revenues. It's not being reinvested in an appropriate way. It's not being invested in the right way because of greed. They have large salaries.... for them it's not about species, it's about revenue.... They don't have much of an environmental consideration [Local Business, Soar]'

To engender trust in PES, nearly all respondents suggested an independent organisation is required with sufficient technical skills and financial probity:

'There has to be an independent middle man... I would be pulling in one direction and the environmental bodies would be pulling the other way so someone needs to bridge that gap [Resident, Camlad]'

There was no universal agreement on which entities should act as PES broker although charities and particularly universities received the highest number of mentions. Businesses were keen to point out that whichever organisation assumed the role should have a fundamental understanding of the

business environment as well as the natural environment. Similarly, local residents felt PES governance must benefit from the experience and knowledge of local people. For this reason, Sibley residents suggested that Parish Councils should play a major role in deciding where PES finance is spent, assisted by professional planning staff from County and/or Unitary Authorities.

Of note, discussions over governance led several respondents to a conclusion that PES schemes will require a 'strategic plan' to insure different sources of finance for multiple ecosystem services are co-ordinated and targeted at appropriate actions. Such a strategic plan is at the heart of river basin management planning and a core objective of the Water Framework Directive although interestingly very few respondents had engaged in any WFD related activities. A challenge exists, therefore, to involve these people in the WFD planning process. On a positive note, the research suggests respondents see a logic and a need for WFD river basin planning. What is required is refreshed efforts to encourage their active and practical involvement.

2.3.6 Attitudes towards the role of Government

It is perhaps surprising given stakeholder distrust of government and its agencies outlined above that they see government intervention as crucial to the future success of PES as a funding mechanism for ecosystem service delivery. But crucially, the role of government should be to set a legal and financial framework within which PES can operate; rather than co-ordinate or in any way manage delivery.

'PES is something I think has to be taken seriously by government. There is a lot of work by lots of organisations gathering evidence and I hope our Natural Flood Management project will give useful information in case studies in how things may be done. There needs to be more clout given to it centrally. It will gather pace but that can be slowly e.g. SuDS is taking decades and we still aren't there with that and that is a relatively simple concept [Shropshire Council representative]'

Several respondents articulated a belief that whilst PES might happen on a relatively small scale, as in the case of Montgomeryshire Spring Water, larger scale mobilisation of PES markets is unlikely to become a reality without government support.; or happen far more slowly. This is because private buyers are considered far more likely to engage with the PES if it is given 'official validation' by government. There is also a perceived need for government to make the case to the business community that they should be proactively exploring opportunities to invest in PES. Several respondents went further to call for government to intervene in the planning and tax system, for example by insisting that Section 106 payments be spent on local PES activities or that a proportion of Council Tax money be spent on the same. A respondent from the CLA suggested tax relief on private investment in flood relief measures could potentially release significant funds from local business into multi-ecosystem generation schemes. His enthusiasm for this idea has been curbed by Treasury feedback which has not been supportive.

'Govt needs to explain to the public the value they get from the environment and then charge through the Council Tax system. Look how much money govt throwing at the 5 a day campaign. Huge marketing campaign needed'

'If we are going to get any meaningful money into carbon based PES payment, the government needs to specify all big businesses need to be carbon neutral and must offset a % in the UK [Wildlife Trust representative]'

Stakeholders welcomed the PES pilot studies that have been funded by the various UK governments but suggest these are not sufficient in scope to *'make PES really happen'*. More pilots are required with a timetable set for implementing their findings and passing enabling legislation. Of interest, research undertaken by Cascade Consulting for the Welsh Assembly has reported similar asks of government.

Rather than being proactive, frustration was voiced by several respondents who see governmental agencies as creating barriers to PES development due to being overly risk averse and stifling innovation. As the National Forest pointed out, public sector agencies will be resistant to take the plunge into the PES pool due to reputational risk. This suggests all the more need for clear unambiguous guidance and support from central government. There would appear to be a real danger that a perceived or otherwise *'hands off'* approach by government may be leading to several advocates of PES failing to take a lead in developing the approach due to high development costs and uncertainties regarding the likelihood of success.

2.3.7 Insights into the supply side of PES

In addition to engaging with PES beneficiaries, significant effort was invested in talking to potential PES market suppliers i.e farmers and land managers. Without their buy-in, it will not be possible to mobilise agriculture-related PES markets, with or without official government backing.

Initial reactions to the PES concept

Farmer reactions to the PES (*'private'* buyer concept) was obtained by presenting them with a tangible PES scheme as follows:

- A PES payment would be made by local businesses or members of the public to an individual land manager (or group of land managers) to deliver specific actions on their land. These might be actions to improve biodiversity (wildlife), improve water quality, prevent flooding or lock up carbon dioxide from the atmosphere
- Payments would be on top of any payments the land manager receives from CAP based agri-environmental schemes and would be administered completely independently of these schemes through bilateral contracts between the buyers and the supplier. There may be multiple buyers involved
- Agreements might be very long-term (50 years +) but the payments would be higher than existing ES type payments to reward the long-term commitment
- Agreements would have a break clause after 25 years. Farmers wishing to exit the agreement would need to return a large part (>75%) of the money paid to them up until that point
- Agreements might involve taking specific plots of ground out of intensive agricultural production. These plots could still be farmed but subject to very low stocking rates (e.g <2 animal units/hectare) and fertiliser applications

In keeping with other recent research undertaken with farmers to assess their propensity to engage with PES schemes, farmer respondents within this study were – in principle - very positive about the concept presented to them. They regarded the scheme as a means of earning additional income to their core farming business and did not appear unduly concerned with the idea of taking specific plots of land out of intensive production. The attribute that several respondents (but not all) did take issue with was the length of agreement, 50 years being seen as too long. Fears tended to focus around potential impacts on land value and not wishing to saddle future generations with restrictions they had no involvement in making. This is potentially a stumbling block, PES buyer research having strongly indicated that funders of land management PES schemes will very likely want to invest in long-term management agreements to secure the longevity of environmental benefits derived. Further negotiation with farmers will obviously be needed should a scheme with these timeframes be considered.

To gain a further understanding of the type of land management prescriptions farmers would be most positively disposed towards, respondents were asked to give preference ratings for a number of options using a 7 point preference scale. Results from this exercise are outlined in Table 1.

Table 1. Relative preference results

	Mean Scores (derived from preference scale)
Low stocking densities in specific fields	2.8
Grazing windows on specific fields at specific times of year	2.3
No growing of high risk crops (e.g maize, potatoes) in specific fields	2.3
Low fertiliser applications in specific fields	2.8
6m buffer strips alongside watercourses (no grazing and no application of fertilisers/agro chemicals)	3.3
Conversion of tillage/grazing ground to wetlands or woodland	6.8

1 = 'I would in principle consider this measure on my farm' and 7 = 'I would definitely not consider this measure on my farm'.

As can be seen from the table, respondents were generally positive about all options with little to distinguish between them. The obvious exception relates to converting productive tillage/grazing ground into wetlands or woodlands that received very negative scores. These results show that farmers are essentially amenable to entering into PES agreements that will deliver a number of nutrient/sediment reduction and infiltration rate improvements (which in turn will deliver numerous ecosystem services) provided they are not asked to fundamentally curtail agricultural production on their farm (e.g the wetland/woodland option). This finding mirrors results from a study of farmer attitudes undertaken by the Defra DTC programme in three study catchments across England.

However, existing modelling work undertaken by the DTC programme and other similar work suggests that in many catchments, there is likely to be a need to stop agricultural production in certain plots of land (fields, groups of fields) if ecological status is to meet statutory requirements including those of the EU Water Framework Directive and Habitats Directive. In order to explore this topic further, we sought to examine whether there is a price at which farmers would consider a 'no or low-production' scenario on specific parts of their respective holdings (1 hectare plots). To this

end, respondents were asked to consider the level of payment (in a one-off lump sum) they would require to manage land under two regimes (for a 50 year time period):

- Take 1 hectare of marginal land completely out of production (although manage to a level where CAP payments are still eligible i.e keep in Good Agricultural Condition)
- Take 1 hectare of prime land out of intensive agricultural production. This land could not be part of a rotation (i.e could not be ploughed) but could be lightly grazed (< 2 animal units). No application of inorganic fertiliser or agro-chemicals

Examples of farmer responses are summarised below:

'To take marginal or prime land out of production, the payment would have to be equivalent to the income that could be made from farming the land intensively plus a 20% safety margin'

'I would calculate the rent for 50 years per hectare and then add 50% to make it worthwhile'

'I would be happy to take a payment of £50,000 to take the marginal land out of production for 50 years. I'm not sure what I would want for the high value land but it would be a lot more as the farm is reliant on this land'

'For the marginal land, the price would be approximately £25,000. For the prime land £40,000'

'We would want £30,000 for the marginal land. £40,000 for the prime land. In both cases, this money would probably be used to buy more land to make up for the loss of land from the scheme'

'To take 1 hectare of marginal land completely out of production we would need at least twice the going rate for renting out the land. This is because of the potential problems/cost of returning the land to a productive state. To engage with the prime land option, we would want the going rent plus 50% extra'

'We do not have any marginal land. We would take a price of approximately £40,000 to take a hectare of prime land out of production. If the offer was for more than 25 hectares to be taken out of production the payment could come down to £25,000. This would then lead to a completely different farming system and a move away from dairy into beef and sheep'

'A yearly payment would be better maybe with a break clause every 5 years. A price for this would have to be what could be made in a good year +5%. A one off payment would have to equal what could be made in a good year +20% for all the years of the agreement'

The above responses indicate possibly not unsurprisingly that farmers would want a considerable payment to enter land into long-term PES contracts; to take into account the loss of production, lack of flexibility in how the land is used and costs of returning the land to full agricultural production in the future. The payment levels cited are well above the rates available under the Countryside Steward Scheme/Glastir and any PES scheme proponents should be aware that successful mobilisation of land management contracts with farmers will require significant financial resources.

Collaborative ES schemes involving multiple farmers

There is a general sense amongst catchment managers and environmental scientists that for PES schemes to deliver meaningful outcomes, supply of ecosystem services will be best delivered from multiple land units working together. This will mean farmers working in collaborative arrangements. To explore farmer attitudes towards this idea, the following scheme concept was positioned to farmer respondents:

- Several farmers will work together as a group to implement a set of land management measures across multiple farms within an area
- The group will be given a lump sum pot of money to deliver a set number of actions from a menu; it is up to the group to split the actions and money across individual farms according to how much or how little each farm wants to deliver
- Farmers would receive a 5% premium for any measures they deliver as a Group compared with payments they would receive by signing individual ES agreements
- If any one farmer failed to deliver on an agreed action all members of the group would have their payments reduced or possibly withdrawn completely
- Outcomes would be measured using physical measurements such as water quality indicators, invertebrate numbers, bird species across the group area as a whole. Indicators to be agreed through discussion with the group

Reactions to the above scheme are summarised as follows:

- Farmers felt way more could be achieved by working together than undertaking individual activities
- The vast majority of respondents were positive towards the idea of collaborative schemes. Some respondents felt uneasy about the idea of entering into a scheme with neighbours as they would worry about not completing all the required outputs and subsequently falling out. Also they would not want too many neighbours coming into their respective farms. Being able to choose which neighbours to work with was mooted as a good idea as was an option to pull out of the scheme if needed
- Outcomes measured on physical measures was regarded as a good idea. Farmers felt this would help them achieve a feeling of achieving results. They also suggested outcome measures will provide flexibility regarding what measures are put in place to achieve results
- Results would need to be independently verified to avoid fraud
- Concerns existed that it would be difficult to ensure all members of a collaborative agreement received a fair deal
- 5% premium is not enough. 10-15% was seen as more in line with expectations to cover perceived extra paperwork, discussions and meetings
- The schemes could have significant positive social outcomes in terms of providing a vehicle for farmers to interact. Respondents were of the view that highly skilled facilitators will be needed to manage farmer groups

The above comments strongly suggest that, contrary to popular belief, there is an appetite amongst the farming community to work together provided sufficient safeguards can be put in place to reduce the chances of disputes occurring.

2.4 Main Findings - Supply Chain Measure Research

There is a strong theoretical argument that if farmers are rewarded in the food supply chain for producing food in such a way that also produces a sufficient suite of other ecosystem services, there is no need for establishing parallel market mechanisms such as PES. Indeed, consumer respondents consulted in the Camlad study catchment came to precisely this conclusion; they want farmers to be paid more for their produce but adhere to higher environmental standards thereby negating the need for other – in their view costly and complicated – payments systems.

Discussions with stakeholders revealed that there are already mechanisms in place to reward farmers for enhanced environmental performance. One farming respondent interviewed is a member of a liquid milk supplier group to Waitrose (47 members in total). Suppliers in this group receive a premium price for their milk, in return for adherence to a number of enhanced animal welfare and environmental requirements. The latter involves supplying farms working with the Farming and Wildlife Advisory Group (FWAG) to develop an environmental farm plan designed to deliver a range of wildlife and natural resource management (soil and water) benefits. Farmers prefer this approach as opposed to a prescriptive approach as it provides flexibility in terms of how environmental outcomes are achieved. They also appear happy with the premium they receive and see this as appropriate remuneration for the additional animal welfare and ecosystem services they are delivering. Marks and Spencers were mentioned as another food retailer operating similar schemes but further details were not obtained.

Another example of a food labelling scheme cited by respondents as having the potential to deliver pro-environmental outcomes is the Red Tractor scheme now in its 15th year of existence. The Red Tractor scheme is effectively an umbrella scheme for an array of Farm Assurance Schemes in operation across the main agricultural produce categories i.e beef, lamb, milk etc. Farmers require farm assured status to access nearly all markets bar basic global commodity markets. In terms of serving as an instrument to influence farmer behaviour, farmer respondents suggested the farm assurance schemes are an effective 'stick' capable of driving standards and are increasingly having an impact on animal welfare and carbon management activities. Indeed, farmers are more concerned about meeting Farm Assurance standards than they are meeting the CAP cross-compliance regulations. The key limitation it seems with farm assurance schemes and the overarching Red Tractor brand is that the land management standards farmers are required to meet appear to be no more than basic legal obligations. It should be noted that farmers do not view farm assurance schemes as a means of securing a premium price for delivering ecosystem services but more as a necessary evil to gain access to a market for their produce. Unlike schemes such as the Waitrose contract outlined above, farm assurance accreditation does not guarantee the farmer a premium price for his produce.

There was therefore a sense amongst stakeholders that quality assurance schemes do offer a mechanism to drive improved environmental performance. However, there are considerable limitations regarding how much the current suite of schemes can achieve. The Waitrose premium scheme can be regarded as driving enhanced standards. However, schemes like this apply to a very small percentage of farmers in the UK. For example, the Waitrose milk scheme cited above only applies to the liquid milk market which is itself a very small proportion of the total milk market (which includes cheese, yoghurt, powdered milk etc). The reach of these schemes in terms of land

area managed under their requirements is therefore small. The broader farm assurance schemes (Red tractor) cover a much broader number of farmers and associated farmland. Whilst these schemes operate as a mechanism for ensuring farmers adhere to minimum environmental requirements, they are not a vehicle for bringing about the enhanced land management standards that will be needed to meet Water Framework Directive and other ecological standards. Theoretically, retailers could ask for higher land management standards to be delivered within the farm assurance standards. However to do so, would effectively be placing extra cost onto farmers without additional revenues being achieved. This is not equitable or sustainable given the low returns many farmers are able to achieve for their produce.

The corollary of all this, and the overarching conclusion reached by stakeholders during the research, is that extensive and sustained effort is required to raise mainstream (not just white middle class) awareness of the link between food production and wider ecosystem service delivery; and the dependency of consumers on these wider services. The logic expressed here is that increased awareness will lead to an increased willingness to pay more for food. This premium can be passed on to the primary producer (the farmer) through enhanced farm assurance standards, thereby insuring improved environmental outputs are derived for the increased revenues achieved.

Caution was expressed by respondents that such an awareness raising strategy will not translate into increased willingness to pay amongst all consumer groups; and that raising awareness will not happen overnight. However, there was an almost universal belief amongst stakeholders that many consumers will pay more for their food provided a) this supports local producers b) they can get access to locally produced food and c) they are convinced producers are delivering verifiable environmental outputs. The need to explain the environmental deliverables was a point strongly made by a respondent from the Agriculture and Horticulture Development Board with extensive experience working within the food marketing arena:

'We know consumers are likely to pay more for local and British but it is currently difficult to get them to pay more for the environmental outputs as they simply don't know what these benefits are and how they positively link to the individual'

Several respondents felt farmers would be more likely to be supported if they are able to demonstrate they are producing efficiently and driving down the costs of production to enable value for money. Interestingly, Camlad focus group members suggested farmers should form co-operatives to achieve this result which they also thought would facilitate security of supply to consumers; this being less likely if farmers acted in isolation.

In terms of how to raise awareness of the link between farming, food production and multi-ecosystem service delivery, a reoccurring suggestion from stakeholders was that this would best be achieved through face-to-face contact between local consumers and producers via on-farm visits. Open farm Sunday is an event held once a year and has proved extremely successful in its aim to help members of the public gain access to working farms within their locality to better understand farming systems. A more regular staging of this event – perhaps monthly or quarterly – involving a greater number of participating farms was seen as a logical and feasible way forward. Innovative usage of technology such as video conferencing (e.g real time streaming of milking time, feeding times etc) was also mentioned as a means of consolidating the relationship between producer and consumer initially generated from an on-farm visit:

'I would be really keen on the idea of my kids being able to see the cows being milked or cattle being fed when they sit down to have their breakfast. It's about making the link with those cows on that farm that we visited [Camlad resident]'

To reaffirm this point a respondent from the Slow Food movement explained the importance of affinity with the producer when buying food:

'To give you an example I buy chicken with Duchy brand because rightly or wrongly I believe Prince Charles has integrity. I feel I don't have any personal connection with any of the other brands in the shops. Not like the connection I had with the local farmers when growing up in rural Canada'

What was very striking from the research is that farmers were overwhelmingly positive towards the idea of greater engagement with the public, recognising this is needed to stand a chance of securing a price premium in the marketplace:

'To be frank, why should consumers buy from us if they don't know anything about us and what we can deliver for them – it's no good relying on some sort of blind faith'

Farmers were clear that they do not want unmanaged public access to their farms for a variety of privacy and health and safety reasons. They couldn't, however, envisage any problems with properly structured visits. The only barrier they could foresee to hosting an on-going sequence of visits is the time and costs involved. This is where financial assistance from the public purse is likely to be able to make a significant contribution, a point reflected in the report recommendations.

Aside from topic of farm assurance and the related need for greater consumer awareness, it is worth noting that respondents working within the food supply chain in an advisory capacity suggested there is a close link between farm business efficiency and environmental gain. Reducing the wastage of nutrients (fertiliser) and agro chemicals are well known examples of economic and environmental 'win-wins'. Animal welfare measures can have economic and environmental benefits. Precision feed management is yet another example of a farm management practice which can increase animal weight per unit of feed input whilst reducing the level of phosphorus excreted in animal manure with associated risks to leaching into watercourses. Despite these complementary linkages, several respondents felt more needs to be done to stress this message to farmers, many of whom still see environmental services and food production as separate and competing objectives. It was suggested by several respondents that the larger food retailers and manufacturers might be able to financially support education programmes aimed at their farm suppliers; to help suppliers to become both more competitive and more environmentally friendly at the same time. In turn this will help retailers and manufacturers with their wider corporate social responsibility aims whilst helping to maintain security of supply by creating a more resilient supply chain. As part of their wider sustainability goals, some retailers such as ASDA and Morrisons already support farm business education programmes. Whilst it appears these initiatives tend to focus on animal welfare and energy efficiency issues, respondents suggested their scope could easily be broadened to raise awareness of the possible efficiency gains from a broader suite of land husbandry activities. Given a lack of large retailer/manufacturer head offices and strategic level staff in the study catchments it was not possible to discuss the feasibility of rolling out such a programme.

2.5 Conclusions and Recommendations

The research has provided several insights to help steer further activity within the WaterLife project going forward. Key conclusions and policy recommendations are outlined below:

2.5.1 Conclusions (relating to PES)

- PES markets are most likely to establish where buyers and sellers of ecosystem services are in close proximity to one another. Buyers want 'local' schemes which directly benefit themselves
- Within the context of the Soar and Camlad catchments, flooding and recreation (landscape) services have the greatest potential to be incorporated within a PES scheme. Water quality is not such a driver given the lack of strategic importance these catchments have for drinking water supply
- Lack of public awareness of the link between agricultural land use/management and the delivery of ecosystem services is a barrier to PES development. A major public awareness campaign is needed based around local benefits
- There is strong support amongst potential buyers around the idea of making payments to farmers, there being a general recognition that farmers cannot be expected to provide enhanced delivery of ecosystem services without financial remuneration
- Given cynicism over how money is spent on public services, there is a need for transparency over where PES payments are made
- To build trust with buyers, PES deliverables must be rigorously enforced to give confidence that payments are resulting in stated outcomes
- PES development will require an independent broker (non profit) to bring buyers and sellers together. The research suggests universities and charities are regarded as leading candidates for this role
- To give buyers confidence to invest in PES, they require PES to receive official backing and recognition from government and its agencies
- Buyers are pragmatic about the measurement of ecosystem service delivery and would be happy with expert derived metrics and proxies rather than absolute quantitative measurement (where this could not be cost effectively obtained). Universities would be trusted to provide independent judgement and monitoring services
- Farmers appear keen to engage with emerging PES schemes as a means of earning additional farm income. They are not positive to the idea of long-term (50+ year) contracts or management agreements which require them to take land completely out of agricultural production. To enter into long-term agreements, they will require payments rates well in excess of the rates offered under existing grants schemes (Countryside Stewardship/Glastir)
- Farmer feedback suggests they are – in principle – not averse to the idea of entering into collaborative schemes with multiple landholdings (e.g on a sub-catchment scale). Expert facilitation will be required to give them confidence in addition to a premium payment above that which they would expect for an individual agreement

2.5.2 Policy recommendations (template) for rolling out PES schemes within the context of catchment management in the UK

- Resources will need to be put in place to identify and map potential PES buyers and sellers at a catchment and sub-catchment scale. Priority should be given to mapping 'local' buyers. The mapping should be undertaken in a participatory manner, involving both buyers and sellers in the process to build trust between the supply and demand side of the market
- Given the lack of societal understanding of the link between land use and ecosystem service delivery, a systemic and ongoing awareness campaign is required particular in relation to less obvious services such as flood attenuation
- Trusted PES administrators (brokers) will need to be identified and financially supported as PES start-up costs are likely to be considerable. Crucially, brokers must be independent and trusted by buyers and sellers. 'Caretaker' brokers may be required until suitable entities – acceptable to all parties – emerge from an initial start-up situation
- Government has a crucial role to play in giving official sanction to the development of PES markets, funding the establishment of PES brokers and funding public awareness campaigns explaining the land management/ecosystem service link
- There is a need to establish more small scale pilot studies in catchments where the establishment of PES markets has a high probability of success. Assuming these pilots are successful, this will provide confidence amongst interested parties to engage in mainstream PES activity. Funding for the establishment of localised PES pilots could be made available through Local Economic Partnerships or similar government funded business led initiatives
- Rigorous policing of PES scheme deliverables will be needed in accordance with a well understood and transparent set of targets. This is role which could potentially be best undertaken by public sector agencies

2.6 Conclusions and Recommendations (relating to Supply Chain measures)

- There is a role for farm assurance (quality control) market instruments to drive increased environmental performance standards on farms. However, there is a limit to what farmers can be asked to deliver without receiving a higher price for their produce. This requires a market transformation of the mainstream food system in which the consumer pays a higher price for the food they purchase
- To achieve such a market transformation will not happen overnight. It will require an ongoing process of relationship building between producers and consumers involving consumer interaction with the farming landscape; both physical and virtual farm visits
- The relationship building process between consumer and producer will not happen spontaneously and is an initiative that will require sustained financial support from government and the backing of multiple governmental departments including those relating to environment, farming, education, health, local government and business support
- There is a role for retailers and processors within the food supply chain to work with farmers and growers to achieve efficiency gains capable of delivering financial returns and pro-environmental outcomes. A current focus on energy management and water consumption should be extended to look at reduction in nutrient use, leakage of agro chemicals and measures to promote soil husbandry

3. Business Engagement in the Tamar

3.1 Background

Westcountry Rivers Trust (WRT) has previous experience in providing an ethical broker role between buyers and sellers within PES based schemes. Typically, PES based schemes implemented in the UK to date have involved landowners and farmers as sellers with buyers including anglers, the public (as visitors to a site), government and water companies. WRT recognises that there is, however, an opportunity to develop PES markets with more 'non-usual suspects' i.e. businesses, organisations and bodies that the Trust does not traditionally work with but whom are seen to have potential as partners. These include other water users and those that benefit from the water environment or catchment management including businesses (such as breweries and distilleries), the tourist industry and other representative bodies.

In order to tap into these potential new markets WRT recognised the need to apply a commercial focus particularly when approaching potential clients in the business sector. In order to achieve this, a selling proposition needed to be tailored to demonstrate both the value of working with WRT and the benefits that will accrue to the business or organisation involved i.e. how does the Trust create a marketing advantage for what is a new business or user group and how does it sell these benefits to the organisation.

3.2 Developing a Pitch to Business

Under action B1.2 and in preparation for actions B5 and B6 of the WaterLIFE project, WRT worked with Propeller Associates Limited (PAL) to map stakeholders and identify potential customer groups that WRT does not traditionally work with, and to develop a pitch to business. The overall objective for this work was to develop and test an approach for creating new business channels for WRT in the Tamar catchment including the upscaling of this approach to other catchments in the South West (Action B6: Upscaling capacity building):

The primary objective was to develop PES shaped opportunities in which WRT can take on the role of ethical broker between buyer and supplier (building on existing relationships with landowners and farmers) or act as supplier directly through its role in environmental improvement. A secondary objective was to consider the role that WRT can have in ethical branding and corporate social responsibility where an organisation develops an affiliation with the Trust and benefits from working with the Trust to deliver positive outcomes for the freshwater environment.

Propeller Associates Limited (PAL) have a long history in both the environmental sector and in business development. For this project specifically, PAL provided external expertise to:

- help to identify tangible new business opportunities where WRT was not currently active;
- identify the benefits that prospective new customers are looking for;
- lead a workshop using a range of creative thinking techniques to help develop a selling proposition to new customers;
- research further opportunities outside of the workshop;
- develop a commercially focused pitch (selling proposition)

3.3 Developing the Approach

The following activities were undertaken by WRT working with PAL to map stakeholders and develop the approach.

3.3.1. Project Inception Meeting

A conference call between the SG at WRT and Propeller Associates Limited (PAL) was held to finalise the project objectives, scope, timelines, deliverables and lines of communication.

3.3.2 One Day Workshop

A one-day workshop was held on 25th August 2015 involving key WRT staff and catchment officers from the Tamar, Dart, Exe, Fowey and Otter catchments. A key objective of the workshop was to identify and start to prioritise potential new customer groups for PES related services. The workshop provided the opportunity for participants to share knowledge and understanding of their catchments and also those businesses that benefit from water and/or the natural environment. The focus was on identifying the non-usual suspects, i.e. businesses, organisations and bodies that the Trust does not traditionally work with but are seen to have potential as partners.

The main objective of the workshop was to develop a matrix of potential customer groups and/or specific organisations across five catchments (the Tamar, Dart, Exe, Fowey and Otter) and to start to develop a set of pitches for approaching them (one pitch per catchment). The workshop comprised seven exercises with the morning session focusing on selecting key customers and understanding their needs and the afternoon session focusing on developing the pitches. A summary of the objectives and outcomes of each exercise is provided in the following sections.

Exercise 1 – Listing potential customer groups (stakeholder mapping)

The objective of this exercise was to start the process of broadly identifying potential customer groups¹ that WRT does not traditionally work with. Table 2 below lists the customer groups identified.

Table 2. Customer groups identified

Sailing Clubs	MoD	Gyms/health spas	Waste processing
Princess Yachts	Surfing companies	Solicitors	Highways
Flybe	Met Office	Restaurants/cafes	Consultancy
Taste of the West	Private Schools	Ambrosia	Pharmaceuticals
Food Producers	Paper manufacturers	Winchester Growers	Chambers of Commerce
Septic Tank (construction and emptying services)	Utilities (electric and gas e.g. Calor)	Pesticide and fertilizer manufacturers	Care Homes
British Canoe Union	Shellfisheries	Cement/aggregates	Doctors
Canoe Hire	Babcock	Car dealerships	High street retailers
Plastics	Board/chipboard/cardboard	Costa Coffee	The Rivers Trust

¹ A local business, larger company or a body representing a group of river users

manufacturing	manufacturing		
Dairy Crest	First Great Western	Breweries	Riverside pubs
Mining and Quarrying	Film and TV companies	Vineyards	Supermarkets
Golf courses	Plymouth Gin	Insurance companies	Banks and investment companies
Hotels	Civil engineering contractors	Housing	Hunts and shoots
Harbour	Ferry Company	Clothing manufacturers	Wetsuit industry
Angling sales	Garden centres	Tourism associations	Pet food
Farm stores	Campsites		

Exercise 2 – Development of selection criteria

The objective of this exercise was to list the characteristics of potentially ideal customers and then to prioritise these characteristics to develop eight key selection criteria to apply to the list in Table 2 to identify **key** customer groups. Workshop participants were asked to select their eight preferred criteria and the resulting scores were used to select the key criteria. Table 3 lists the selection criteria and their priority scores.

Table 3. Selection criteria and priority scores (key criteria in bold)

Potential Selection criteria	Score
Clean Image for the company	2
Closeness to WRT remit	10
Requirement for clean water	4
Local or regional identity	11
Have they got money?	8
Do they have CSR responsibilities?	1
Do their customers care (i.e. have a vested interest in the environment)?	10
Is the business experiencing a problem?	4
What are their competitors doing for the environment?	2
Little competition from other NGOs for CSR/PES opportunities	0
Customer, business and WRT all well linked	3
Customer not already signed up to environmental schemes	4
Innovative company/business	4
Influential businesses	5
Receptiveness to our (WRT) brand	9
Is there a mechanism by which the business can engage with us (distribution chain?)	10
Where are their customers located?	4
Can we ease their conscience?	1
Can we give them a competitive advantage?	8
Can groups of customers collaborate?	2
Impact of customer activities on water	10

Exercise 3 – Identify key customer groups

The objective of this exercise was to apply the key selection criteria to the customer groups identified in Table 2. Working in catchment groups (covering the Dart, Exe, Fowey, Otter and Tamar catchments), participants identified their top five customer groups and selected one group upon which to focus the development of a pitch during the latter exercises. A five-by-five matrix of key customer groups by catchment was developed (Table 4).

Table 4. Matrix of key customer groups by catchment (group selected for pitch development in bold)

Dart	Exe	Fowey	Otter	Tamar
Campsites: - River Dart Country Park	Mega farm shops: - Darts Farm - Greendale	Fowey catchment businesses (consumer funded)	Otter Brewery	Food processors: - Davidstowe - Ambrosia
Drinks industry: - Dartmoor Brewery - Sharpham Vineyard/Cheese - Luscombe Drinks	John Lewis/Waitrose	Imerys	Hotel industry	Wolf minerals/Imerys/Greystone Quarry/WBB
Riverford Organic	The pubs and breweries of the Exe and vineyards	Trewithan Dairys	Construction	Snowbee
Hotels/B&Bs	Royal Devon and Exeter NHS Trust	Property developers	Flybe	Garden centres: - Endsleigh - Wyevale
Waterside pubs/restaurants (linked to shellfishery)	Exe shellfishery	Shellfisheries	Land agents/solicitors	Tourism associations/chains: - Travelodge - Plymouth – ‘Britain’s Ocean City’

Exercise 4 – Customer group needs

The objective of this exercise was to understand what is important to a business owner in relation to:

- The sustainability of their business
- The ecosystem services they rely on

Working in catchment groups, participants were asked to think as business owners (taking account of the different functions within a business such as sales and marketing, finance and operations) and

to construct **mind maps** around their business needs. Each catchment group focused on their chosen customer group. The mind maps were then presented by a spokesperson from each group.

Exercise 5 – Identify WRT offerings

The objective of this exercise was to:

- Map out WRT products and services
- Define WRT brand value and characteristics

The aim of this exercise was not to define the WRT brand *per se* but to hone in on the customer related strengths that WRT has to offer. Working in catchment groups, participants were asked to think about what products and services WRT have to offer potential customers, giving consideration to WRT as a brand. The resulting mind maps were then presented by a spokesperson from each group.

Exercise 6 – Convergence

The objective of this exercise was to consider which elements of the WRT offering would be most likely to resonate with the needs of the potential customers identified. Working in catchment groups, participants were asked to evaluate the two mind maps developed in Exercises 4 and 5 and develop linkages between customer needs and WRT product and service offerings. This exercise would form the basis of identifying the **benefits to the customer** within the commercial pitch.

Exercise 7 – Develop draft commercial pitch

The objective of this exercise was to bring together the thinking, mainly from exercises four, five and six to start to develop a commercial pitch (presentation) that could be used to approach a potential customer. Working in catchment groups, participants were provided with a draft presentation structure and asked to consider for their chosen customer group some key elements of the pitch such as what the Trust could offer to meet the customer's needs, how the two organisations might work together (i.e. the idea proposed) and what supporting evidence would be required. Draft pitches were produced for each catchment.

This exercise concluded the workshop on 25th August 2015.

3.3.3 Select Organisations for pilot study

Following the one-day workshop, WRT and PAL carried out work to further refine the selection criteria to determine those organisations or businesses that would influence the development of the pitch. WRT and PAL then selected target sectors and businesses for further development of the pitch. These included breweries (specifically Penpont Brewery, a micro-brewery in the Tamar

catchment) tourism businesses (specifically the River Dart Country Park, a tourist destination in the River Dart catchment).

3.3.4 Develop pitch for engaging with organisations

The pitches developed clearly demonstrate the benefits to the organisation of entering into a relationship with WRT and include proposals for a water accreditation scheme and opportunities to work in partnership with WRT to deliver improvements to the freshwater environment, while also offering benefits to the target businesses.

The work undertaken by WRT throughout the summer to build capacity in the Tamar catchment under Action B5 forms a central tenet of the pitch that has been developed to approach businesses. This is explained further in the Action B5 report.

The aim is to trial the approach in the New Year with Penpont Brewery. We will then assess the success of the approach before approaching additional businesses and up-scaling, initially to the River Dart catchment.

3.4 Development of a Water Accreditation Scheme in the Tamar

Alongside their work with Propeller Associates, WRT has also discussed opportunities for developing a water friendly accreditation scheme in the Tamar catchment working with Tamar Grow Local. Tamar Grow Local is a Community Interest Company that was set up on co-operative principles for the benefit of the community, promoting sustainable local produce in the Tamar Valley.

Tamar Grow Local (TGL) has been a member of the Tamar Catchment Partnership since its inception in 2012. The TGL co-operative includes 67 individual producers located in the Tamar catchment and they distribute produce to customers across the region. Prior to the summer and autumn public engagement tour of the Tamar catchment, WRT organized a meeting with TGL in order to engage them with their upcoming activities. Flyers, posters and information about the Tamar Catchment Partnership and the River Tamar engagement events over the summer were distributed to their customers via their produce delivery service. WRT and TGL also discussed developing an accreditation scheme with their producers, where local producers would use the Tamar brand developed under Action B5 as a kite mark if they undertake measures to protect and improve the freshwater environment. WRT will continue to work with TGL and the producers in their supply chain in the New Year to further develop and trial this scheme.

