Consortia Workshop 19–20 September 2012

The ESPA Consortia Workshop was held in order to give the three ESPA-2011 consortia projects an opportunity to meet each other, the Directorate and the I-PAC. The projects also had their 6-month review meetings with the PEB.

Day 1 – Wednesday 19th September

Paul van Gardingen welcomed the attendees and highlighted this as the first opportunity for the three projects to come together to share their science and ideas. Having visited components of all three projects during 2012, there are useful potential links between the projects.

For most funding programmes, it is rare to have significant interaction with the funders after awards have been made. The PFG projects have shown appreciation for the interaction with the Directorate and the chance to highlight new ideas and potential opportunities. The Directorate aims to support projects to do world-class science, to provide the context for ESPA, and to ease the burden of reporting to three different funders.

ESPA Programme Overview – Paul van Gardingen, ESPA Director

A key aim of the Directorate is looking for synergies across the programme, ensuring that it adds up to more than the sum of individual projects. The current projects are building on the Situation Analyses and Strengthening Research Capacity grants. All of the funded consortia benefited from Partnership and Project Development support, and encouragingly many of the PPDs which didn't become ESPA consortia have gone on to find funding elsewhere to continue with their ideas. The Programme Framework Grants have delivered excellent value for money, producing good science out of relatively small projects, with ideas and frameworks that can now be built upon by new ESPA projects. We would encourage the consortia projects to think about synergies with existing and previous ESPA projects.

Three Research Into Use calls have just been announced, mostly targeted towards previous projects but there may also be opportunities to link with newer projects. During 2013 there will be a workshop on RIU and further calls. RIU activities will be increasing in coming years, and projects are encouraged to utilise the intellectual and financial resources from the Directorate.

Highlights for the programme in 2013 included a packed event for the International Development and Environment All Party Parliamentary Group. Attendees included MPs, Lords and the DFID minister. Copies of John Dearing's PFG project open access PNAS paper were distributed and well received.

There will be an announcement about an ESPA 2013 call in November and another round of small Evidence and Impact Research Grants next year.

Project presentation: Dynamic Drivers of Disease in Africa – Melissa Leach

This project is looking at four zoonotic diseases in five countries, all of which have significant poverty impacts: Rift Valley Fever in Kenya, and Trypanosomiasis in Zambia and Zimbabwe, Lassa fever in Sierra Leone, Henipavirus in Ghana. The case studies have different

ecosystem types and varying political, economic and social drivers. The key aim of the project is to reduce disease emergence and effect on the poor, without having tradeoffs on other ecosystem services and benefits. The project is using multiple modelling frameworks, and a novel data collection/storage system using QR codes. The expected outcomes include new theoretical conceptualisation of relationships and tradeoffs between ecosystem services, disease and human wellbeing; new evidence and models will identify tipping points, trade-offs and interventions; understanding of policy processes and the political economy; new methods and practices of interdisciplinary and researcher-practitioner collaboration; practical and policy impacts in addition to academic outputs.

Discussion and Q & A

What was the basis of selection the four diseases?
They were chosen to give a combination of contrasting ecosystem services and locations, using the requirement of zoonotic diseases with human impacts. We chose to focus on Africa due to the large disease burden, and to utilise existing partnerships. The groups involved are all willing to be open and experimental in finding new ways of working.

Can we hear more about the QR code system for data collection?
We are really excited about the Epicollect system. UCL is the leading partner for this work, and have used it for other projects. We could potentially look at ways to share the technique across the programme. Cautious about ending up with data storage tool driving fieldwork, but this system seems very flexible.

Could the narratives on experiences of working be captured by the ESPA programme?
We are relying on individuals contributing, but we have nice feedback so far on the first workshop and the wide-ranging discussion there. Ideally there will be new knowledge and outputs from this exercise.

In terms of biodiversity, I would also look at how people use biodiversity, and how that then impacts disease.
That is embedded in our second question; how different social groups move about in the landscape and use ES and how that links with disease.

You are looking at the difference between irrigated and non-irrigated areas and how that affects disease transmitted by mosquito, there will be important impacts here in terms of adaptation to climate change.
Some of these relationships between irrigation and disease are well described in Africa already, especially in relation to food security, but broader poverty relationships have not been explored.

What about generic lessons for ESPA?
These are likely to come from the cross-cutting themes and case studies, but are hard to predict.

Directorate comments
This project has a really important set of research questions and great innovations around data. The list of partners is very useful for the Directorate, could all projects keep us updated

on those. The experience narrative is also innovative and useful, remember that the most important tools we have are our own heads and our experience. The Directorate is not expecting all projects to know exactly what their outcomes will be; we will be quite happy to get some unexpected outcomes.

Project presentation: ESPA Deltas – Robert Nicholls
This project is exploring the relationship between ecosystem services, wellbeing and health, using a tidal delta study area in Bangladesh. The partnerships include the first institution in Bangladesh to be in receipt of UK funds to run an interdisciplinary project, there will be partner exchanges between India, Bangladesh and UK. The project is addressing 14 of the ecosystem services addressed in the MEA. It consists of six work packages covering governance, model conceptualisation, socioeconomic models, physical models, integration and scenarios, and policy analysis.

Discussion and Q & A

What can you give policy stakeholders that will be relevant to them in the short term?
Decisions now will have impacts across a range of scales. We will be analysing a broad range of futures, but often what will emerge is that a certain direction works in all of them. This helps to provide the evidence to push towards those decisions. Processes are always on-going and should always be revisited.

What are the most important exogenous and endogenous pressures/drivers?
In the short term the endogenous are causing bigger changes, but looking forward exogenous changes could have much broader impact.

Population modelling included?
Yes, in WP3, we have a number of demographers who are working on that. Our socioeconomic model will look at population, demography and the health/ecosystem services relationships.

How much new data will you need in relation to what is already there?
In socio economic there is nothing suitable so we will be first project to collect this in Bangladesh. There will be a lot of work between WP2 and WP3 about sampling and methodological issues. Long time series data already exists for the natural science, we're analysing it to identify the gaps.

You mention health, is that a poverty dimension, what kinds of health dimensions and ES links might be of interest?
The main one is health and nutrition, the provision of food. Other issues that may emerge, such as groundwater and arsenic, issues around water quality. A key issue is the seasonality of disease, such as for diarrheal diseases. Health is being considered as a big component of wellbeing. Maternal health is another key indicator as it can be used as a proxy for other health indicators. The Southampton demographic team has lot of experience with maternal health and are also involved in the ESPA ASSETS project.

How much of an additional challenge is it deal with enormous rivers that spread across countries, in terms of accessing data and also predicting future scenarios?
It's challenging, but probably not most challenging part of project! We have Indian and also

some Chinese partners to work on those cross-boundary issues and management. We are meeting very regularly in Bangladesh to check consistency across models and scenarios. We've also taken on a legal framework group to help develop the trans-boundary policy context.

Directorate comments
Nice to see how projects have moved on since proposal stage, both in terms of the relationships between partners and the increased focus on questions. The programme has to report on new southern-led partnerships, so it is great to see projects like this leading on those, with the first Bangladeshi institution to be in receipt of UK funds to manage an interdisciplinary project.

Project presentation: ESPA ASSETS – Guy Poppy

This project is looking at the linkages between ecosystem services that affect – and are affected by – food security and nutritional health for the rural poor at the forest–agricultural interface.

The project is integrating a suite of complexity tools and cutting-edge models with more traditional participatory assessments in the field. It aims to identify how dynamic stocks and flows of ecosystem services at the landscape scale translate to local-level nutritional diets and health; and to inform policy-makers on how future land-use and climate change will affect both food security and the ecosystem services associated with it.

The project involves five institutions, each with a Co-I. The team is highly interdisciplinary and is led by the University of Southampton in collaboration with researchers from CIAT (Colombia), Rhodes University (South Africa), Chancellor College and WorldFish (Malawi), the Basque Centre for Climate Change Research (Spain), Conservation International (USA) and the University of Dundee.

A participatory approach is being used, looking at how communities view their own ecosystems. The project is also looking to quantify ecosystems in the study sites because the communities themselves are unable to do this.

The project is looking at the linkages between, and is mapping out, the very complex area of where agro-ecosystems meet natural ecosystems.

Specifically, ASSETS is working in Malawi and Colombia. Both regions suffer from deforestation. They demonstrate some of the same drivers of change. Malawi, for example, demonstrates deforestation, poverty and malnourishment. In Colombia, where CIAT and CI have been working for the last 10 years, extremes of wealth and poverty can be seen, unlike in Malawi.

The project is using a DPSIR framework – i.e. a project methodological framework. It's using participatory workshops and household surveys, as well as socioeconomic surveys. It is going to identify what drives, and what the pressures are, on ecosystems. The project is looking at models, too, e.g. the ARIES platform. It integrates different tools and will let the project see the scenarios and the likely outcomes expected due to changes. The project is working at a range of scales over a range of timeframes.

Discussion and Q & A

The project will quantify and model trade-offs between food security and forests. Where will you go from there? Are you going to seek to identify win-wins in terms of approaches which can reconcile these areas?
In terms of policy, in Colombia, climate change is now being regarded both at the agriculture and the environment level as opposed to just the environment level. The challenge is to prioritise areas of focus. It's important that the project identifies where conservation makes a contribution to preserving ES and then to prioritise interventions.

The project aims to learn more about safety nets and coping strategies. There are opportunities here to work with communities to see how they cope with, for example, drought. It's important to document this and to then influence policy.

ARIES and the AI approach: the challenge in all projects is one of integration. What is meant by AI and what is it doing, exactly? Can we have a brief technical overview of ARIES?
ARIES is a framework that can integrate deterministic models or probabilistic models. Models are fitted to data.

Tipping points: in what context are you trying to identify tipping points and how are you going to do it?
The science of tipping points is still evolving. In terms of the delivery of ecosystem services, mapping of the flow of services from their source to the beneficiaries is needed, over the landscape. It's important to model the effects on the landscape and to consider whether changes influence the delivery of the services to the beneficiaries.

It's important to have models for each part of the system and that the models interact with each other. Examining tipping points is useful for advising on timely interventions before reaching tipping points.

The situation in Malawi and Colombia are different in terms of ecosystem services and human capacity. What benefits are there from working across these two continents?
The challenge is in looking at the agricultural–policy interface. Malawi is perhaps already past the tipping point in this regard, whereas Colombia isn't.

ESPA projects in practice – Georgina Mace, ESPA Knowledge Director

The Directorate is aiming to draw together the major conclusions at the end of the programme, and as such we need some consistency in how we refer to things, but we do not want to dictate how projects should work.

The ESPA Conceptual framework shows interrelationships and linkages to help us talk across projects. The framework is very generic, so projects still need to develop their own, but we need to make sure they are consistent and compatible with the ESPA framework.

ESPA separates goods/benefits from the ES which provide them. For example, food is a benefit. ES are the things going on in the environment. MEA and consortia have treated ES as benefits. We want to separate them because benefits are not an inevitable outcome of

services. Many ES can underpin each benefit.

Biodiversity is a useful example of this complication. It can be an intermediate regulatory service, a final ES (such as species diversity improving crop strains), or a benefit (such as a highly valued charismatic species).

The definition of poverty is important; ESPA has a poverty framework with suggestions of working definitions. Poverty analyses often describe condition of being poor rather than how or why the condition exists. The dynamics of poverty are also important – whether and how people move into and out of poverty. In addition vulnerability and equity should be considered.

ESPA projects also need to think about scales. Temporally, a four year project could extrapolate to the end, but there may be solutions which are less impressive in the short term but have better poverty alleviation impacts on much longer scales. If there is an ideal scenario in the far future, could you extrapolate backwards to think about how you could try to get there?

Discussion and Q & A

Does the Fisher mapping of goods and benefits make provisioning services concept almost redundant in very managed landscapes?
No, the provisioning services would be the ES that you are managing landscapes for in order to provide benefits. However, the supporting services become redundant, they just become processes. But cultural services also become goods and benefits.

The MEA says that ES are benefits derived from nature, so we started our planning with the beneficiaries.
When you come to looking at people and changes of wellbeing that people get from different kinds of ecosystem management, if you treat services and goods the same, it becomes difficult to look at alternative ways to provide good health or clean water etc. The main point is to start from people and how their wellbeing is being affected by goods and benefits that come from the environment and work backwards to the ES. The MEA and TEEB started from the environment and included everything as necessary for wellbeing. You can have the same good providing the same differential effect on wellbeing but it could be provided by a different combination of services from the environment.

In terms of temporal scales and scenarios (which, while initially unimpressive, could have better outcomes if looking at the long-term), can you envisage a political landscape where the long-term plan would work, when policy-makers are working on a shorter timescale?
The scenarios that we come up with should not represent policy options, we should use scenario storyline to show alternative kinds of policy interventions. They allow you to say to policy makers “we cannot find a way in which this management scenario will improve long term wellbeing, but we can suggest two new management scenarios”.

Inputs that we put in to get benefits don’t just occur at the final step, but occur all the way through the system, should framework be adapted?
Solar and other physical inputs are shown at the start, and this does include human inputs.

Other capital inputs are for end-stage (largely financial) capital infrastructure. The poorest people are likely to have the least amount of capital input between themselves and the ES they rely on to produce benefits.

Documenting Impact and Reporting - Paul van Gardingen, ESPA Director

ESPA will soon be moving to the RCUK Research Outcomes System (ROS), from which we will be asking for additional detail on activities. For example, we want to know what came out of holding a workshop (e.g. outputs/new capacity etc.), rather than simply that an event was held. All outcomes and impacts will be reported via ROS, so that you only need to report each thing once.

The Directorate will also ask for light-touch six monthly reporting, including catch up meetings via videoconference. The ESPA Theory of Change documents are available on the website, including training guides. They are useful for thinking about what you do within the context of your project, what happens next and what happens in the long-term (and how you can influence those scales). ESPA will be having a mid-term review next year and we will need to report against our Logical Framework.

The new RCUK and DFID requirements for open access are now available from their websites. UK NGOs and international institutions are not covered, but ESPA is committed to open access. The Directorate is looking at how to bridge the gap for projects like the ESPA-2011 consortia to publish open access and will update projects in due course.