TRAP

Handbook

INTERREG IVC
INNOVATION & ENVIRONMENT
REGIONS OF EUROPE SHARING SOLUTIONS

European Union
European Regional Development Fund

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ABBREVIATIONS

ELC	European Landscape Convention
ESA	Ecosystem services approach
ESS or ES	Ecosystem services
ESIF OP	European Structural and Investments Funds Operational Programmes
GP	Good practice
PP	Project partner
KE, PP1	Kainuun Etu Oy, FI
ShDev, PP2	Shannon Development, IE (19.12.2011-31.5.2013)
MWRA, PP3	Mid-West Regional Authority, IE (19.12.2011-30.9.2014)
RT, PP4	The Rivers Trust, UK
SVDC, PP5	Soca Valley Development Centre, SI
SWRA, PP6	South West Regional Authority, IE (19.12.2011-1.6.2014)
INCDMTM, PP7	National Institute of Research Development for Mechatronics and Measurement Technique -INCDMTM, RO
ANKO, PP8	Regional Development Agency of Western Macedonia SA, GR
ZePIRe, PP9	Zemgale Planning Region, LV
WB, PP10	Waterboard Noorderzijlvest, NL
TCC, PP11	Tipperary County Council (1.10.2014-31.12.2014)
CCC, PP12	Cork County Council
TA1	Thematic Area 1
TA2	Thematic Area 2
TA3	Thematic Area 3
TA4	Thematic Area 4
RBMP	River basin management plans
TRAP	Territories of Rivers Action Plans
WFD	Water Framework Directive

OVERVIEW & THANKS

Full name and index	Territories of Rivers Action Plans; 10006 R4 TRAP
Priority	2, Environment and risk prevention
Programme sub theme	Water management
Duration	19.12.2011 – 31.12.2014
Budget	1 810 542,99 €
Funding sources	ERDF 1 418 484,92€; national 392 058,07€
Project website	www. trapproject.eu
Partnership	PP 1. Kainuun Etu Oy FI, www.kainuunetu.fi PP 2. Shannon Development IE (19.12.2011-31.5.2013) PP 3. Mid-West Regional Authority, IE (19.12.2011-30.9.2014) PP 4. The Rivers Trust UK, www.theriverstrust.org PP 5. Soca Valley Development Centre SI, www.prc.si PP 6. South West Regional Authority IE (19.12.2011-1.6.2014) PP 7. National Institute of Research Development for Mechatronics and Measurement Technique –INCDMTM RO, www.incdmtm.ro PP 8. Regional Development Agency of Western Macedonia SA GR, www.anko.gr PP 9. Zemgale Planning Region LV, www.zemgale.lv PP 10. Waterboard Noorderzijlvest NL, www.noorderzijlvest.nl PP 11. Tipperary County Council (1.10.2014-31.12.2014) IE, www.tipperarycoco.ie PP 12. Cork County Council (1.6.2014 – 31.12.2014) IE, www.corkcoco.ie

TRAP project would like to express warmest thanks towards the Interreg IV C programme and the Joint Technical Secretariat for their constructive, positive and long-time support to TRAP, as well as to the Finnish Interreg IV C Managing Authority that have encouraged our efforts from the very beginning & throughout the project.

Kajaani, Finland, November 2014

CREDITS

TRAP HANDBOOK TASKS	TRAP PARTNER CONTRIBUTIONS
Executive Summary	Kainuun Etu Oy and the Rivers Trust
Part 1 Policy Background & the TRAP GPs	All the TRAP partners for the GP contributions; the Rivers Trust UK and Kainuun Etu Oy reviewed
Part 2 Regional needs analysis	All the TRAP partners contributed their own regional needs analysis; the Rivers Trust UK and Kainuun Etu reviewed
Part 3 Regional Attractive Growth Model	Waterboard Noorderzijlvest (overall responsibility). Contributions were received from: ANKO GR, Soca Valley Development Centre, The Rivers Trust UK, Kainuun Etu Oy
Part 4 Good practice transfer and improvement of policy instruments in TRAP	All the TRAP partners for the GP transfer / policy impact implementation plans and the GP transfer contributions; the Rivers Trust and Kainuun Etu reviewed
Part 5 Lessons learnt, conclusions, next steps	Kainuun Etu and the Rivers Trust
Part 6 Conclusions	Conclusions The Rivers Trust and Kainuun Etu
Annex 1 Implementation plan template	Kainuun Etu
Review of handbook text and comments	Each and every TRAP partner
Text & language editing	Cork County Council
Handbook design	External expert through TRAP shared costs (Magut srl)

PART 1
EXECUTIVE SUMMARY

TRAP deals with the challenge of integrated management of rivers and river territories. Its purpose is to build on and transfer good practices that embed aquatic and cultural heritage protection in regional, sustainable growth solutions. TRAP contributes to the implementation of the Water Framework Directive (WFD), the European Landscape Convention (ELC) and the Europe 2020 strategy. The WFD establishes a framework for the protection of inland surface waters, transitional waters, coastal waters and groundwater; good water status is to be achieved by 2015 throughout the EU. The ELC stresses European identity and diversity through the protection, management and planning of European landscapes, living natural and cultural heritage, ordinary or outstanding, urban or rural, on land or in water. Europe 2020 is the EU's growth strategy for the coming decade, aiming at smart, sustainable and inclusive growth.

To reach good water status, continue WFD implementation and address the ELC, requires considerable resources and upscale development solutions. These relate to regional policy areas dealing with the resources and tools required to improve and sustain river basins' quality, stakeholder involvement & commitment towards ensuring and maintaining good water, as well as solutions and tools ensuring high quality, inclusive growth. Thus, the overall objective of TRAP is to benefit from partners' good practices in these policy areas and improve accordingly regional policies and tools.

TRAP focuses on four thematic areas (TA's) in respect to the good practice analysis. TA1, TA2, and TA3 build directly on the WFD. Their purpose is to support the implementation of the river basin management plans (RBMP) which are the main regional policy tools of the WFD; TA4 focuses on the uptake of the ELC:

- **TA1 GOVERNANCE** Economic impact assessment tools as a base for stakeholder involvement and consensus building methodologies.
- **TA2 MONITORING** Enforceability of the WFD -monitoring technologies / methods / programmes and information exchange platforms.
- **TA3 AQUATIC ENVIRONMENT** Enhancement of the aquatic environmentand rehabilitation of the water cycle -projects, solutions and technologies.
- **TA4 INTEGRATED RIVER TOURISM** River tourism –products, plans and methodologies integrating landscape protection into diversified & inclusive river tourism development.

As an Interreg IV C project the overarching purpose of TRAP is to analyse and transfer good practices and improve relevant policy instruments. The policy instruments in focus include Article 13 of the WFD River Basin Management Plans (RBMP), regional development plans & their tools, and liaising with Natura 2000. Through this process, TRAP aimed at addressing two types of problems: (1) The targets set by the by the WFD require potentially costly solutions, risk stakeholder divergence, and need good practices demonstrating the growth and protection potentials and (2) How to protect natural and cultural heritage (which implies, for example, less intense land uses) and ensure comparable income to the community. The initial TRAP map (2011) summarized the approach (Figure 1 below); today, some 3 years later, we feel that the original approach is still relevant but would need to be adjusted to reflect the multiple and intense linkages among and between all four thematic areas that were identified during the 3 years of the TRAP project.

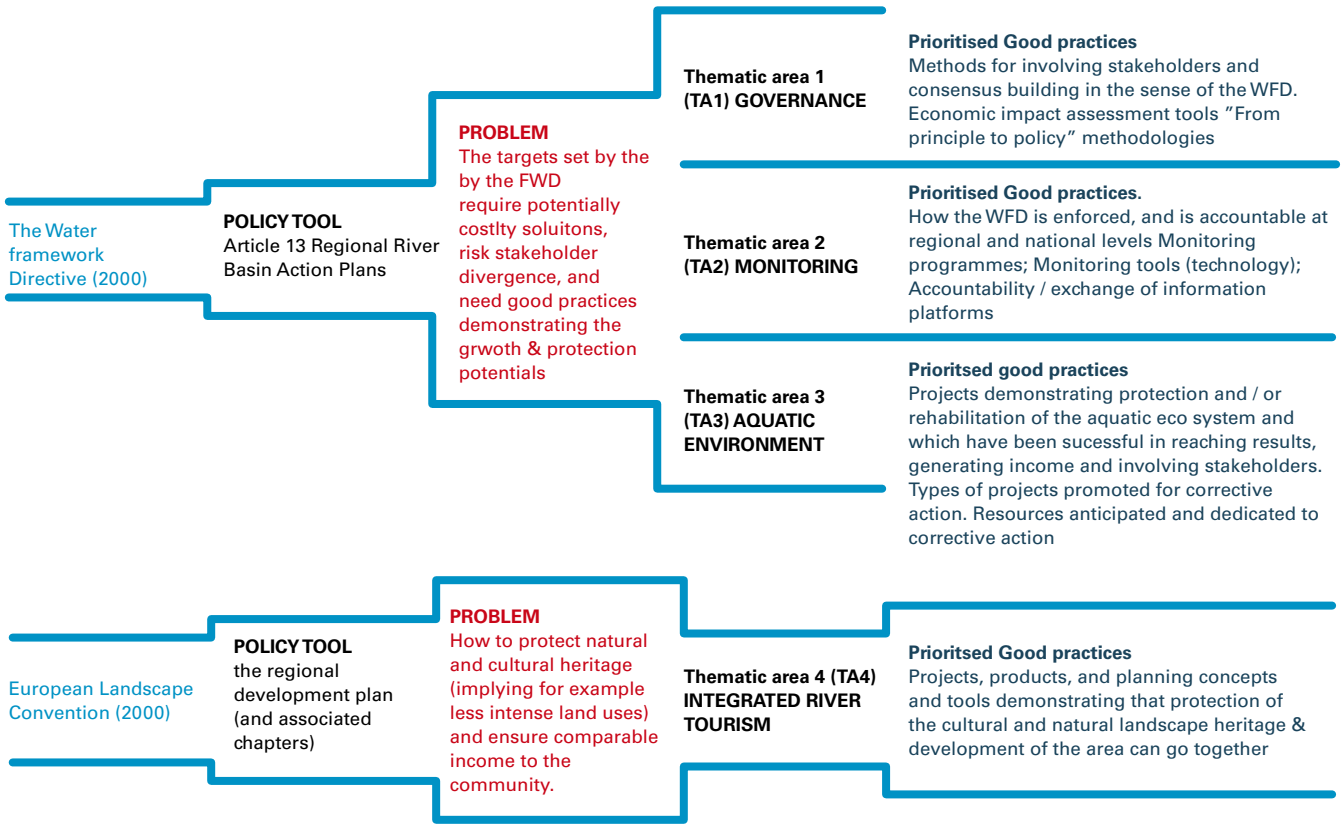

Figure 1.
TRAP concept and approach as in the project proposal submitted in 2011.

At this closing stage of the project the most important question to consider is the degree to which TRAP project achieved its original objectives. We argue that it strongly did, especially when it comes to the implementation of the WFD, for the following reasons:

(1) Good practice analysis The original TRAP proposal agreed to analyse 21 GPs. Out of 29 partner contributions, 28 were retained, and 7 of them were selected for good practice transfer, six (6) pilots have been implemented and seven (7) policy instruments have been improved. All four thematic areas have been covered, however (i) GPs often covered multiple thematic areas, implying an unexplored potential within many of them; (ii) the GPs did not cover all four areas equivalently. Only two (GP 5 and 8; respectively on land use tourism planning trade-off tools and ecosystem services) out of the 28 GPs touched landscape issues and trade-offs in respect to land use (including river ecosystems). The trade-off concept potential and transferability were not explored in depth. This also implies that Article 13 of the WFD, which is dedicated to horizontal integration through coordination actions, have not been explored sufficiently. And yet, in the forthcoming period, trade-off arguments regarding land use and ecosystem services will be priorities for all regions. Therefore for future projects and initiatives, relevant horizontal policy integration would be a key objective.

(2) Contribution to the implementation of the WFD and the ELC through the good practice transfer and the policy impact. The six good practices that were selected for transfer generated six pilots and seven policy impact efforts with associated confirmed results. The six preferred GPs covered Article 13 of the WFD but also Article 8 (monitoring tools) and Article 14 (public consultation). Many partners identified important gaps in the fragmentation of local and cross border interests relating to water management and prioritised effective stakeholder involvement methods in their GP transfer.

(3) Integrated development and evidence-based sustainable development policy approaches were reinforced through good practice transfer in two regional development plans.

(4) Ecosystem services was a strong emerging theme. TRAP Good Practice 8 (GP8) on Economic impact assessment tools for stakeholder involvement and consensus building attracted the interest of at least three importing regions. GP8 introduced such concepts as cultural ecosystem services together with regulation, provision and environmental ones. GP8 reflects the implementation of Article 5 of the Biodiversity Strategy and contributes to the implementation of Article 13 of the WFD. Ecosystem services contribute towards better decision making as policy appraisals account for the costs and benefits to the natural environment. The approach requires that the consequences for natural capital – including the services provided by aquatic ecosystems - be taken into account within the decision-making process within integrated land and water management, hence improving the likelihood of finding optimal outcomes.

(5) Modelling of the approach. The Attractive Regional Growth Model (ARGM) is intended as an effort to capitalise on the TRAP good practices, from a decision-making perspective. According to the interpretation agreed through TRAP, attractive regional growth is based on benchmarks (in this case TRAP good practices reflecting integrated solutions to specific problems), as interpreted by stakeholders (in this case the stakeholders were the TRAP partners). ARGM contribution can be summarised into an algorithm for decision making which needs to be contextualised to be really operational.

(6) Confirmation of TRAP as a valuable partnership. All partners have been strongly involved in the GP analysis and transfer. 3 out of the 6 GP transferred (i.e. 50%) came from one partner who, for this reason, became an exclusively 'exporting partner' so that they could dedicate resources towards supporting the GP transfer. The results of the GPs transferred include strong organisational & policy learning aspects, together with pilots and policy instrument improvement. To date (16.11.2014) there have been seven confirmed policy instrument improvements and three pending.

A word on the legacy of TRAP: It is considered that the horizontal integration of the WFD Article 13 Coordination actions and a more comprehensive and exhaustive approach towards the adoption of ecosystem service application that can work easily in many different environments are the key legacies of the TRAP project

PART 1
POLICY BACKGROUND & THE TRAP GOOD PRACTICES

Introduction and project purpose

TRAP was approved on 19.12.2011, during the meeting of the Interreg IV C Managing Authorities in Warsaw, Poland to select from projects submitted under the 4th & last call of the programme. The successful TRAP proposal was a resubmission. TRAP was submitted for the first time under the 3rd call of the same programme but did not pass for administrative reasons.

The project idea was initially developed by four of the TRAP partners Shannon Development, the Rivers Trust, South West Regional Authority (now Cork County Council) and Kainuun Etu, in the aftermath of two Interreg III C network projects implemented between 2004-2007, and which both highlighted sustainable management of rivers. One of them was the Union Terres de Rivières (Shannon Development and Rivers Trust). This project identified how crucial wide socio-political consensus, beyond administrative, geographic or cultural borders, is for long-term sustainable river management, and acknowledged the importance of effective governance. The other one, European Salmon Tours – SAT (South West Regional Authority and Kainuun Etu), 2004-2007, identified good practices in rehabilitation and enhancement of aquatic eco systems. In 2007 and 2008 the Water Framework Directive (WFD) was making its first impact on regions, which were gradually realising its demanding targets. During the same period, we observed that the European Landscape Convention (ELC) benefitted regions, which could appreciate its relevance for high quality sustainable development. Thus, the first TRAP action plan was formulated. We then looked for partners in regions where rivers and river territories play an important role, where there are relevant good practices and where the potential & willingness to impact policies are ensured. The partnership base brought together pre-existing partner networks reinforced with new regions, which joined through the Interreg IV C partner search base.

TRAP content was organised through a long exchange among the partners. It is relevant to mention, now, some 5-6 years after the first efforts that the long preparation period was essential because of the relative novelty of the policies the project addressed. To clarify the content of TRAP, we dedicated a lot of time analysing and confirming the exact aspects of integrated river and river territory management that were of most interest to the partner regions. The focus on the WFD (rather than on more flexible 'benchmarks') was retained because of three reasons: first of all, the WFD was/ is a demanding policy to implement; secondly many regions were hesitating towards its implementation; and thirdly, relevant good practices existed in many regions regardless of the WFD implementation status. So good practices were identified that would support the uptake of WFD solutions. We also decided to commit to the ELC because it orients regions towards quality-based, diverse, inclusive, and sustainable growth. Thus the TRAP good practice analysis and transfer was organised around four thematic areas: governance, monitoring, aquatic environment, and integrated river tourism. The first four themes relate directly to the WFD but not only, the latter also to the ELC. The integrated tourism theme was prioritised because of two reasons: relevance to all partner regions and possibility to reach trade off solutions whereby tourism activity and environmental quality can be optimal. The table below summarises how the four TRAP thematic areas link to the WFD and the ELC.

1
OF DIRECTIVE 2000/60/ ECTHE EUROPEAN PARLIAMENT AND OFTHE COUNCIL of 23 October 2000 establishing a framework for Community action in the field of water policy.

2
The European Landscape Convention - also known as the Florence Convention, - promotes the protection, management and planning of European landscapes and organises European co-operation on landscape issues. The convention was adopted on 20 October 2000 in Florence (Italy) and came into force on 1 March 2004 (Council of Europe Treaty Series no. 176).

http://conventions.coe.int/Treaty/Commun/QueVoulezVous.

TABLE 1. TRAP THEMATIC AREAS AND THEIR RELATION TO THE WFD AND THE ELC

THEMATIC AREA	WFD	ELC
Governance	Article 14 Public information and consultation	**+**
Monitoring	Article 8 Monitoring of surface water status, groundwater status and protected areas	**+**
Aquatic environment	Article 13 River Basin Management Plans	
Integrated river tourism	Indirectly to Article 11 Programme of measures	**+++**

During the preparation period we collected some 37 successful experiences of integrated river and river territory management. Partners discussed them, and 23 out of the 37 were selected as good practices to be included into the TRAP proposal.

Policy background

The overarching objective of TRAP was to build on and transfer good practices that embed water and landscape protection within regional, sustainable growth solutions. TRAP, therefore, focused on the notion of 'protection and development', i.e. the embedding of environmental (aquatic) and cultural heritage landscape protection within regional sustainable growth solutions. In this respect, the project aimed to contribute to the understanding and mechanisms by which environmental protection through river and river territory management is no longer an externalized cost but becomes a condition of and driver to growth.

The integrated nature of TRAP encompassed three European policies:

- The Water Framework Directive (WFD) which aims to protect and enhance the water environment;
- The European Landscape Convention (ELC) which promotes the protection, management and planning of European landscapes and that recognises the role of landscape as a resource for economic development, particularly through tourism;
- the EU's Europe2020 growth strategy which aims to create the conditions for smart, sustainable and inclusive growth that deliver high levels of employment, productivity and social cohesion.

During the planning and early implementation stages of TRAP, EU2020 was still evolving, not in terms of principles, but in terms of implementation measures. For example, EU2020 is today (November 2014) reflected in the ESIF OP's of the member states and the regions. At that time, the OP's were still at initial planning stage. Therefore, we interpreted TRAP to be aligned to the principle of smart and green growth through the trade-off approaches that the WFD and the ELC imply.

The following two sections outline the WFD and ELC, respectively, describing also the inter-relationships between each and TRAP.
This text serves as a background and precursor to the later discussion on good practices.

THE WATER FRAMEWORK DIRECTIVE [3]

3
Key Links

http://ec.europa.eu/environment/water/water-framework/impl_reports.htm

http://ec.europa.eu/environment/water/water-framework/impl_reports.htm

http://en.wikipedia.org/wiki/Water_Framework_Directive

http://eur-lex.europa.eu/legalcontent/EN/ALL/;ELX_SESSIONID=GsR3JLST5LgNQ51Dd6lrBYKw2TFWStDQ8Y43dLnlQs1gpdhJG23b!491267419?uri=CELEX:32000L0060

The Water Framework Directive establishes a legal framework to protect and restore clean water across Europe and ensure (WFD) its long-term, sustainable use. The directive requires water management at the scale of the river basin and sets specific deadlines for Member States to protect aquatic ecosystems. The WFD addresses inland surface waters, transitional waters, coastal waters and groundwater, and has established innovative principles for water management, including public participation in planning and economic approaches, including the recovery of the cost of water services and an assessment of cost-effectiveness of measures.

Monitoring is the main tool used by Member States under WFD to classify the status of each water body. The Directive sets a five-class scale - high, good, moderate, poor and bad status – for surface waters and two classes – good and poor – for groundwater, and requires Member States to achieve good status in all waters by 2015. Once Member States have determined the current status of their water bodies, monitoring then helps them track the effectiveness of measures needed to improve water quality and achieve good status. While prior European legislation considered chemical contamination in water, the WFD provides a major innovation by addressing aquatic ecosystems as well. Monitoring now assesses the health of aquatic ecosystems. This is a complex task, as ecosystems differ across Europe, and an intercalibration process was therefore required to ensure harmonised results. Monitoring also tackles human impacts on hydromorphology, the physical shape of river systems. Such impacts include changes in the flow of rivers as a result of water extraction or dams that can harm the health of surface waters and their ecosystems.

The Directive requires Member States to establish a River Basin Management Plan (RBMP) for each River Basin District that provides a detailed account of how the objectives set for that river basin are to be reached in the timescale required. As rivers often cross national borders, joint management – between Member States – is required in these international 'transboundary' river basin districts, including the production of the RBMP. The Directive envisages a cyclical process whereby RBMPs are prepared, implemented and reviewed every six years. There are four distinct elements to the river basin planning cycle: characterisation and assessment of impacts on river basin districts; environmental monitoring; the setting of environmental objectives; and the design and implementation of the programme of measures needed to achieve them.
Article 14 of the WFD requires 'public participation' in water management and acknowledges that the success of the Directive relies on close cooperation with the public and stakeholders at a local level and their involvement in key decisions that often require balancing the interests of various groups. To this end the WFD provides greater power to citizens, NGO's and other stakeholders to influence the direction of environmental protection. This 'public' participation is especially important for the development of RBMPs and as a consequence draft plans are open for public consultation with all background documentation on which decisions are based to be made accessible.

The WFD requires the protection of water-dependent Natura 2000 sites, including terrestrial ecosystems and the habitats and species they support. In this respect synergies are apparent between the WFD and nature-related Directives that offer the potential for multiple benefits to arise from certain management measures. Some integration can also be found between the WFD and Floods Directive, with the RBMPs of the former providing the mechanism to address climate change adaptation with respect not only to flood risk management but droughts and water scarcity too.

In 2012 the European Commission conducted an assessment of WFD River Basin Management Plans across the EU concluding that; coordination and governance mechanisms were not clear; plans lacked clear fully costed measures; the level of ambition was low and associated with an extensive use of exemptions; there was a lack of transparency about decision-making, particularly around stakeholder participation; poor integration with other policies was apparent. TRAP has addressed some of these issues raised by the European Commission developing for example, good practices related to Governance and stakeholder engagement.

TRAP perspective

Rivers and their surrounding landscapes are inter-dependent and TRAP sought to integrate the two from a growth and development perspective. TRAP good practices have been developed to address four important elements of integrated river and river territory management, capturing them under the thematic areas of: Governance, Monitoring, Aquatic Environment and River Tourism (Table 2). The first three of these thematic areas relate directly to the WFD and its requirement for the development and implementation of River Basin Management Plans whilst the fourth (River Tourism) introduces the sustainable growth dimension.

TABLE 2. TRAP THEMATIC AREAS AND THEIR RELATION TO THE WFD

TRAP THEMATIC AREA	WFD	TRAP SPECIFIC ANGLE
Governance	Article 14 Public information and consultation	Types and purposes of takeholder involvement and consultations
Monitoring	Article 8 Monitoring of surface water status, groundwater status and protected areas	Vertical monitoring
Aquatic environment	Article 13 River Basin Management Plans and Article 11 Programme of measures	Status of the RBMP implementation, vertical and horizontal integration, coordination actions, challenges
Integrated river tourism	Article 13 River Basin Management Plans, coordination actions	Types of trade-off tools

Early in the project, we became aware that it would be better to ensure, across project partners, a common baseline understanding of the WFD. This proved a useful approach, since not all partners came from environmental agencies and most are in fact from regional development planning authorities. For that purpose we formulated a brief survey and we filled it in online sessions during the second semester (Autumn 2012). The questions included in the survey focused on Article 13 of the WFD, i.e. the implementation of the RBMP, prioritised by the TRAP project objectives. The questions were the following:

(1) Has the river basin been already analysed? i.e. the water quality and ecosystem status.
(2) Has the WFD been activated in the region? If no, go to question 5. If yes, then partner should answer all six (6) questions
(3) WFD status of implementation: (3.1) The status of the river basin action plans and (3.2) Monitoring mechanisms used.
(4) WFD implementation pending issues & challenges in implementation: (4.1) Corrective programmes or any corrective actions undertaken, if any, (4.2) Vertical integration of the WFD, and (4.3) Horizontal integration of the WFD with other regional policies

(5) Crucial environmental challenges (see also corrective programmes column)
(6) Feedback from DG Environment to the on-going RBMP.

The feedback we received indicated that –as can be expected- almost all partners have activated WFD (except one), and in many cases, vertical and horizontal integration of the WFD and the RBMP are addressed. Vertical integration (from river basin to national to EU) is also present in most regions. The 'reality check' came from the discussion on horizontal integration of the WFD (i.e. into other policies) and from related challenges faced in the region, i.e. questions 4.3 and 5.

The feedback to these two questions indicates that when it comes to horizontal integration (4.3) spatial planning, land use intensity, and construction & operation permit and license criteria are crucial. As stated by the Irish regional planning authorities (MWRA/PP3 and SWRA/PP6):
"The Regional Planning Guidelines (RPGs) provided an integrated, evidence-based development framework in Ireland at regional level and are reviewed every six years."

Other partners also stress that spatial planning, development planning, investment incentives, tax incentives, regional education need to take river and river territory balance into account:

"The [planning] document analyses where and how relevant policies, planning processes, management processes, programmes, initiatives and methods are being better aligned to deliver more sustainable outcomes for the water environment. Both national alignment and targeted local work are addressed. The document also addresses natural heritage, e.g. SSSI's, Habitats Directive designated sites and the UK Biodiversity Action Plan. …. The challenges in aligning WFD with other policies are highlighted in the document. For example, spatial planning and the growth of housing, some of which may be in areas already water stressed or at high risk of flooding. …. There is now also a strong awareness of the need to take into account WFD requirements with respect to flood and coastal erosion risk management and a recent shift to adopting a more holistic approach. This aims to not only reduce risks to people and property but also deliver the greatest environmental, social and economic benefit." (RT, UK PP4).

The challenges identified under question 5 support the question 4.3 findings. One type of challenge is economic growth requiring more space, secondly the costs of reaching and maintaining good water (and eventually also ecosystem status), an issue especially poignant when there is economic crisis, and finally monitoring tools and practices.
What we can conclude from this is that while the WFD is a necessary condition, it is not sufficient to shape development. The challenges that have been registered by the partners witness the need to get deeper insights of what balanced growth can be, how it can be accessed, and under what preconditions. As a result, the focus of TRAP on trade-off tools & methods and on stakeholder involvement became even more relevant than initially thought.

Feedback to question 6 (EC feedback to the RBMP's) was interesting in the case of one partner (INCDTM, PP7 Romania). The partner stated that the EC recommended to "improve monitoring and data collection: it was necessary to redefine and synthesizing watercourses typology." PP7, as a response to this recommendation, benefitted from TRAP and "imported" and adopted the good practice Surface water monitoring technology & operational aspects, GP1 (contributed by KE, PP1, FI). We believe that this is maybe a good example of how "the dots can be connected" within a larger scale and how regions can benefit from many types of resources.

THE EUROPEAN LANDSCAPE CONVENTION [4]

The European Landscape Convention (ELC) promotes the protection, management and planning of European landscapes and organises European co-operation on landscape issues.

The Convention applies to entire territories and importantly encompasses both everyday or degraded landscapes, as well as those that might be considered outstanding.
The concept of sustainable development is understood by the ELC as fully integrating the environmental, cultural, social and economic dimensions in an overall and integrated fashion, that is, by applying them to the entire territory. Landscape is essential in balancing the preservation of natural and cultural heritage as a reflection of European identity and diversity, and is used as an economic resource, for example through tourism.

The public is encouraged to take an active part in the protection, conservation and management of the heritage value of a particular landscape, helping to steer changes brought about by economic, social or environmental necessity, and in its planning, particularly for those areas most radically affected by change. Hence the ELC provides a people-centred and forward-looking way to reconcile environmental management with the socio-economic challenges of the 21st century.

The ELC requires that the landscape dimension be included in the preparation of all spatial management policies - every planning action or project should comply with landscape quality objectives and should in particular improve landscape quality, or at least not bring about a decline.

TRAP perspective

All TRAP partners come from member states that have signed, ratified and entered the ELC into force. However, only three of them have matured the entry into force to the stage of territorial application (see Table 3 below).

4
Key links

http://www.coe.int/t/dg4/cultureheritage/heritage/Landscape/default_en.asp,

http://www.coe.int/t/dg4/cultureheritage/heritage/Landscape/default_en.asp
http://conventions.coe.int/Treaty/en/Treaties/Html/176.htm

http://conventions.coe.int/Treaty/en/Reports/Html/176.htm

https://wcd.coe.int/ViewDoc.jsp?Ref=CM/Rec(2008)3&Language=lanEnglish&Ver=original&Site=CM&BackColorInternet=9999C C&BackColorIntranet=FFBB55&BackColorLogged=FFAC75

TABLE 3. TRAP PARTNER AREAS AND THEIR CURRENT POSITIONING IN RESPECT TO THE ELC [5]

TRAP PARTNER AREA (alphabetically)	SIGNATURE	RATIFICATION	ENTRY INTO FORCE	STATUS [6]
Finland	20/10/2000	16/12/2005	01/04/2006	T
Ireland	22/03/2002	22/03/2002	01/03/2004	
Greece	13/12/2000	17/05/2010	01/09/2010	
Latvia	29/11/2006	05/06/2007	01/10/2007	
Netherlands	27/07/2005	27/07/2005	01/11/2005	T
Romania	20/10/2000	07/11/2002	01/03/2004	
Slovenia	07/03/2001	25/09/2003	01/03/2004	
UK	21/02/2006	21/11/2006	01/03/2007	T

5
Source Council of Europe

http://conventions.coe.int/Treaty/Commun/ChercheSig.asp?NT=176&CM=8&DF=&CL=ENG

6
a Accession
s Signature without reservation as to ratification
su Succession
r Signature "ad referendum"
R Reservations
D Declarations
A Authorities
T Territorial Application
C Communication
O Objection.

And even so, the territorial application associated measures are not evident in all three of these regions. For example, in Finland, landscape protection is almost exclusively linked to environmental balance and is not taking aesthetics sufficiently into account.

Similar observations were registered during the GP discussion in TRAP. Simply, landscape has not yet been systematically integrated into most of the partner areas development policies. Thus, we decided to encourage organisational learning as a first step and we decided and dedicated considerable resources into discussing landscape measurement approaches including LUCAS, Shannon Index and the Wales scale. The Wales scale is a transferrable good practice that has matured into a systematic approach comprising four steps (**Step 1**: Classifying and mapping Visual & Sensory Aspect Areas **Step 2**: Aspect Areas data capture (Collector Surveys) **Step 3**: Compilation of a Technical Report **Step 4**: Quality Assurance) and leading to the compilation of Visual & Sensory.

TRAP partners organised special sessions to discuss these three tools and compare them. We further disseminated information about them to the partners. We also went a step further and compared how the ELC is taken into account in practice in each partner region which assisted in identifying gaps that could link to good practice transfer. We asked the partners to assess their regions from six points of view:

1. How is landscape protection addressed / taken into account and by which types of institutions in the region?
2. The European Landscape Convention in the region
3. Landscape assessment tools
4. Integration of protection & growth successes and challenges in the region
5. Integration of landscape protection in the region with international networks (ELC per se, UNESCO, others…)
6. Pressures on the landscape

The feedback from the partners is summarised below:

7
EUROSTAT 2011: LUCAS stands for Land Use and Cover Area frame Survey. The aim of the LUCAS survey is to gather harmonised data on land use/cover and their changes over time. In addition the survey provides territorial information facilitating the analysis of the interactions between agriculture, environment and countryside. LUCAS is an in-situ survey area frame survey, which means that the data is gathered through direct observations by the surveyors on the ground. Land cover data can also be obtained by photo interpreting satellite images or orthophotos as is done in the Corine Land Cover. The land cover/use statistics derived from the LUCAS survey are unique as they are fully harmonised (same definitions and methodology) and comparable over time and among Member States. The land cover and the visible land use are classified according to the harmonized LUCAS land cover and land use nomenclatures.
The full survey supporting documents consist of field form, where all the measured variables are listed, surveyors' instructions, which give detailed instructions to the field surveyors and of the quality control procedures. The full description of the statistical data set is available in the land cover/use statistics metadata attached to the data.

8
The Shannon evenness index, abbreviated as SEI, provides information on area composition and richness. It covers the number of different land cover types (m) observed along the straight line and their relative abundances (Pi). It is calculated by dividing the Shannon diversity index by its maximum (h (m)). Therefore it varies between 0 and 1 and is relatively easy to interpret. M: SEI = SDI / max (SDI) = -Σ (Pi * ln (Pi)) / ln(m)(source: EUROSTAT 2012, Statistics explained).

9
www.ccw.gov.uk/landmap

"LANDMAP assesses the diversity of landscapes within Wales. It identifies and explains their most important characteristics and qualities - whether they are ordinary, but locally important landscapes, or nationally recognised spectacular landscapes. LANDMAP, the Welsh approach to landscape assessment, will achieve complete quality assured coverage in 2008. LANDMAP, introduced in 1997, was revolutionised in 2003 with the introduction of a benchmark methodology and quality assurance process to ensure consistency, accuracy and accessibility of landscape information in Wales. LANDMAP is a GIS (Geographical Information System) based landscape resource where landscape characteristics, qualities and influences on the landscape are recorded and evaluated into a nationally consistent data set. Specialists collect LANDMAP Information in a structured and rigorous way that is defined by five methodological chapters, the Geological Landscape, Landscape Habitats, Visual & Sensory, Historic Landscape and Cultural Landscape. These chapters should be taken as the key landscape guidance for Wales. It is the use of all five layers of information that promotes sustainable landscape decision-making as what may be less important to in one particular layer may be of high importance in another. Giving all five layers equal consideration ensures no aspect of the landscape is overlooked. One of the key defining features in LANDMAPs recent success as the key landscape resource in Wales is the improved accessibility to the information. All quality assured LANDMAP Information is now available from the LANDMAP website, either by viewing the information in the online GIS or by downloading the information onto your computer. The online GIS option has enabled practitioners in landscape work to access the information without having to have a GIS license, a considerable benefit both within local authority departments and private consultancies."

HOW IS LANDSCAPE PROTECTION ADDRESSED / TAKEN INTO ACCOUNT AND BY WHICH TYPES OF INSTITUTIONS IN THE REGION?

PP 10, NL The implementation of the ELC in the Netherlands is the responsibility of the Ministry of Environment and Infrastructure.

PP9, LV According to the National Law on European Landscape Convention, Latvia has ratified the ELC on 29.03.2007, while it is in force since 01.10.2007. The Ministry of the Environmental Protection and Regional Development has an overall responsibility for implementation of the ELC in the country.
At the moment the Framework for Landscape Policy is developed and shall be submitted for approval at the Cabinet of Ministers by 30 June 2013.
Nevertheless, landscape protection in Latvia has a longer history than the ELC. Among different specially protected nature territories, a protected landscape area is one of them aiming at protection and preservation of cultural environment and landscapes characteristic of Latvia in all their diversity, as well as to ensure the preservation of environment suitable for tourism and recreation to territories. There are 9 protected landscape areas in Latvia, which are remarkable for original and diverse landscapes and special beauty. However, there is none of the protected landscape area in Zemgale region.

PP8, GR The Minister of Environment, Energy and Climate Change (EECC) has the overall responsibility in landscape issues in national level. The Minister is responsible to decree the "Notably Natural Beatty Landscapes", and environmentally license every project, which has significant environmental impact. The impacts of a project on the landscape during the construction and the operation phases are taken into account and evaluated, as preconditions for issuing the environmental permit.

PP7, RO The landscape represents a part of the territory as perceived by the population whose character is the result of the natural or human interaction factors.
In Arges-Vedea region these issues are dealt with by: The National Agency for Environment Protection-Arges subsidiary; National Environmental Guard through county commissariats Arges, Dambovita and Ilfov; National Agency for Protected Natural Areas and Biodiversity Preservation through Arges, Dambovita and Ilfov subsidiaries.

PP2,3,6,IE National Landscape strategy: The Department of Arts, Heritage and the Gaeltacht have overall responsibility for landscape issues at a national level. This has recently changed from the Department of Environment, Community and Local Government. Stakeholders include: Department of the Environment, Heritage and Local Government (chair);

- Department of Tourism, Culture & Sport
- Department of Agriculture, Fisheries and Food
- Department of Communications, Energy and Natural Resources
- Department of Community, Equality and Gaeltacht Affairs
- Heritage Council
- Irish Landscape Institute
- Coillte
- Teagasc
- University College Dublin
- Dublin Institute of Technology
- Meath County Council
- County and City Managers Association
- Landscape Alliance Ireland

- An Taisce
- Fáilte Ireland
- Farming representative.

The National Parks and Wildlife Service (NPWS) also have a role in landscape protection.

PP5, SI ELC was implemented into Slovenian legislation with the ratification in 2003 with the law about ratification of European landscape convention. It is managed through legislation regarding spatial planning, nature conservation, cultural heritage and rural development. National Conservation Act sets out levels of protection on national or local level with all necessary procedures. It follows IUCN basic principles for protected areas.

PP4, UK The UK implements a number of elements of the ELC. For example, the Landscape Character Assessment (LCA) is a technique used to develop a consistent and comprehensive understanding of what gives England's landscape its character. It uses statistical analysis and application of structured landscape assessment techniques. LCAs provide more detailed descriptions and analysis at a local level within the national framework of National Character Areas. The main role of the LCA is to help ensure that change and development does not undermine whatever is characteristic or valued about any particular landscape, and that ways of improving the character of a place can be considered.
Landscapes in England are protected by a range of mechanisms including statutory and non-statutory designations, national planning policies and European conventions (i.e. ELC).

PP1, FI The management and protection of Finland's cultural landscapes and architectural heritage are controlled by national legislation and international agreements and recommendations. The preservation of valuable landscapes and buildings is mainly ensured through local authority planning decisions. Culturally or historically significant buildings and built-up areas may also be protected under the Act on the Protection of Buildings. Certain types of buildings, including many significant railway station buildings, are protected under other special schemes. Archaeological remains are protected under the Antiquities Act.
Nationally or regionally significant landscapes may be designated as landscape conservation areas under Finland's Nature Conservation Act, so that their special natural, cultural or historical features can be suitably managed and preserved. Different programmes are used for the landscape protection, and they are detailed below.
Finland ratified the European Landscape Convention (ELC) in 2005. It is implemented through the national legislation and already before 2005 Finnish legislation contained lots of elements from ELC.

PP 10, NL The Ministry transferred this responsibility to Landschapsbeheer Nederland. This is a national foundation that aims to preserve and to maintain the Dutch landscape. It operates with 13 regional offices, one in each province. It is paid for by a small public contribution for part of the staff, and out of subsidies on landscape maintenance projects. These projects are mostly funded by a combination of regional and national public funds, and EU-grants. The amount available is declining. Also the regional offices manage the maintenance of privately owned areas on request of their owners. Payment is from private sources. National Landscape Park areas are accessible through the information channels of the Ministry of Economy, Agriculture and Innovation (Ministry of EL&I) website.

PP9, LV In Zemgale Planning Region, and in relation to the Lielupe river basin, the five Natura 2000 sites (known as nature parks) have been designated including the landscape protection zone: Bauska; Sauka; Svete floodplan; Vilce; Tervete. The third aspect of the landscape protection is related to cultural and historical heritage. The protection is implemented in form of designation of protected cultural monuments (e.g. archaeological, architectural, historical, monuments of arts, monuments of urban development). There are 636 of national importance and 375 of local importance cultural monuments located in the Zemgale Planning region.

PP8, GR At a regional level the General Secretariat of Decentralized Administration of Western Macedonia and Ipeiros is responsible for landscape issues. Specifically, the General Secretariat has the responsibility to decree a Protected Landscapes, due to significant ecological, geological aesthetic or civilization value. Also the General Secretariat is responsible to environmentally license the projects, which have significant environmental effects. On a county level, the Prefect is responsible to environmentally license the projects which have significant environmental effects (including effects to landscape).

PP7, RO ELC was implemented into Romanian legislation in 2006. Most of valuable landscape areas are protected In the Arges-Vedea reservoir the following stipulations apply: ELC, NATURA 2000, Directive 79/409/CEE- Bird Directive and Directive 92/42/CEE regarding conservation of natural habitat, flora and wild fauna (Habitat Directive), applied through OUG 57/2007. In the Arges-Vedea region there are 23 nationally significant landscape conservation areas, which are included in 4 of 6 land use plans in the county.
There are also 3786 architectural historical monuments identified of which 321 are in the Arges-Vedea rivers territories. In the Arges-Vedea region, the responsibility of the landscape protection issues is spread among 6 county councils, 12 municipal mayors and 128 village mayors.

PP2, 3,6, IE Landscape issues, including protection, in Ireland have predominately been addressed at Local Authority level. Within the South West Region, Cork County Council has prepared a Draft Landscape Strategy which includes a Landscape Character Assessment, Landscape Values and Landscape Sensitivity for the county of Cork. In the main, Local Authorities prepare landscape strategies in order to inform renewable energy strategies and to some extent, settlement policies. The majority of work completed to date on landscape has been by the Local Authorities through their Forward Planning sections as part of the review of Development Plans. This work is funded by Local Authorities.
The Heritage Council have been proactive in advising Local Authorities and national Government on landscape management. The Heritage Council are a public authority but 80% of its annual budget is allocated to a wide range of heritage grants including landscape management initiatives.

PP1, FI The responsibility of the landscape protection issues is spread amongst few different authorities and organisations. In Kainuu region The Regional Centre for Economic Development, Transport and the Environment is the main body; but also the municipalities and Finnish Forest Research Institute play an important role. There are few landscape related projects on going in the region: The Best Landscape Project: The most visible outcome of the ratification of the ELC is the Landscape Award of the Council of Europe. It is carried out in Finland under the name of 'The Best Landscape Project'. The competition was launched in 2008 and it is held every second year. The winner for this year will be announced by the end of the year.

Landscape Into Line –project: 'Landscape into line' (Maisemat ruotuun, MARU) –project was launched in 2011 in Kainuu and Lappi regions. The aim of the project is to maintain the cultural-historically valuable environments and landscapes, especially the old village areas typical to the both regions. The first step of the project is to map the significant landscapes and together with locals to identify the most important ones. For those selected sites the needed actions are defined and the partners will be searched. Local inhabitants, tourism companies and farmers are involved both in the planning phase and later on for the actions.

VAAKA-project: There is also a project called VAAKA to develop socioecological tools for the planning of tourist destinations in Kainuu. This ERDF funded project is aiming to develop a new operations model based on geographical information for land-use planning. The goal of the operations model is to increase the social acceptability, ecological sustainability and attractiveness of nature-based tourism in Kainuu. The project's pilot areas are Paljakka and Ukkohalla tourism resorts, both located close to nature protection areas. The growing tourism industry requires a change in the current land-use plan and local authorities face the challenge of managing the different business and tourism uses in the area.

Landscape sensitivity in the forest areas: Sensitivity mapping regarding the landscape for the forestry areas was performed in Sotkamo municipality. As a result sensitive areas for the landscape were identified. In Kainuu region the forestry could cause some deterioration of the landscape when the old forest is suddenly cut down. Most of the Kainuu region is very hilly, where the view could be very wide and such logging visible for distances. Currently there is a second project ongoing to map the landscape sensitivity for the rest of hilly-Kainuu region.

LANDSCAPE ASSESSMENT TOOLS

PP 10, NL The criteria are based on EU standards concerning the NATURA 2000 areas. On the Ecological Nature Mainframe and Landscape quality, criteria about the goals have been prepared by the provincial governments, and decided upon by the democratically chosen provincial councils. However, they vary among the provinces.

PP9, LV The importance of the landscape has been also recognised within the territories of other protected nature areas or NATURA 2000 sites.

PP8, GR There is no landscape assessment document in the region of Western Macedonia. The effects of a project to the landscape are considered during the environmental license of every project, as it mentioned above. The ministry of Environment of MEECC, or the General Secretariat of Western Macedonia and Ipeiros or the Prefect of Western Macedonia have competence to take into account the opinions of the services and to issue the obligations – commitments for the projects. The promoter of the project is obligated to abide these commitments.**PP7, RO** Not really in use in Arges-Vedea region

PP2,3,6, IE A "Landscape Character Assessment: Multi-Disciplinary CPD Training Course" is co-ordinated by the Heritage Council. This also included Historical Character Assessment. This all-island, multi-disciplinary CPD training course will be of value to those whose professional work impinges on the Irish landscape. This includes planners, landscape architects, archaeologists, ecologists, architects and engineers. The course has been developed in partnership with a wide range of Professional Institutes (10 in total North and South); Local Authorities; local communities in Spanish Point and Tulla; and the Landscape Observatory of Catalonia, Spain.

PP5, SI There was a European convention on landscape in Ljubljana in 2006, 4. Meeting of workshops for the implementation of European landscape convention. A project was undertaken, entitled "Regional Distribution of Landscape Types in Slovenia" describing landscape areas, including landscape types and patterns, and guidelines for planners were developed according to individual landscape regions or typological units. The guidelines are based on special features of the landscape structure, taking into account expected landscape processes and the desired state of these landscapes. The project was commissioned by the Ministry of the Environment and Spatial Planning, the National Office for Spatial Planning, and developed by the University of Ljubljana, Biotechnical Faculty, Department of Landscape Architecture. It commenced in 1993 and was completed in 1997. The achievements of the project were presented in a publication in 1998.

PP4, UK The ELC is implemented in the South West region, in part, through the statutory designations including a number of AONB and two national parks; Exmoor and Dartmoor. Each of these has a National Park authority that works with a range of partner organisations. This work is guided by a statutory management plan for the National Park. In addition, more than two-thirds of the South West's coastline is designated as a Heritage Coast. Much of Natural England's work with regard to the ELC revolves around encouraging the intent and language of the ELC to be used within the policies and plans of other organisations. To support this, a guidance document has been developed – see link:
http://www.naturalengland.org.uk/ourwork/landscape/protection/europeanconvention/default.aspx#guidelines
The Landscape Character assessment tool referred to above in section 2.1 is also supported by web-based information, accessible by the general public. MAGIC is an interactive website that brings together information on key environmental schemes and designations into one place. http://magic.defra.gov.uk/

PP1, FI Not really in use in Kainuu region

INTEGRATION OF PROTECTION & GROWTH SUCCESSES AND CHALLENGES IN THE REGION; INCLUDING PLANNING, STAKEHOLDER INVOLVEMENT, PERMITS, EDUCATION, AND INVOLVEMENT OF THE PRIVATE SECTOR

PP 10, NL In the Netherlands the concept of integrated (rural) development is well established in higher and professional education, since about 20 years. In the management of natural resources the concept is common as well. In addition to the development of multidisciplinary knowledge, that feeds the integrated approach, also process approaches have been developed and taught. Those facilitate the approach of stakeholders in decision forming issues. Universities as e.g. Wageningen, Twente, Groningen offer an abundance of professional careers (spatial planning, rural planning, natural resources management, rural and civil engineering) and shorter courses. This practice in rural development processes is called "poldering", after the establishment of polders: low-lying areas protected from the sea and rivers by surrounding dikes. It could be reached only by mutual cooperation and cooperative organisation. This pattern of organisation originates the establishment of the "waterboards", from the year 1280 A.D. onwards.

PP9, LV PLANNING: The Spatial Plan of the Zemgale Planning region has set cultural and nature landscape protection as one of the tasks related to the rural areas. As Zemgale is characterised by open large size agricultural fields, then the maintenance of this land cover structure is also declared as important goal for spatial development. In 2007, the guidelines adopted for spatial planning at local level also contain the provisions on need to define the protection zones around the cultural monuments, to promote the landscape maintenance and sustainable use for tourism development. One can state that landscape protection is mainly ensured via cultural and environmental (nature conservation) policies. Current agriculture policy focuses rather on maintenance and not on landscape protection.

PP8, GR PLANNING & PERMITS: For every new project, improvement or new activity, the owner has to have the approval of Environmental Terms. This Approval sets the obligation to the owner, in order to protect the natural and human environment during the construction and the operation of this project. According to the magnitude of the project and of the impacts, the responsible to issue this approval is the Minister of EECC, The ministry of Environment of MEECC, or the General Secretariat of Western Macedonia and Ipeiros or the Prefect of Western Macedonia. During this process, a study is prepared which contains a description of the project and all the effects of the project or the action to the natural and human environment which must be evaluated to. This study is evaluated of all the stakeholders:

- The services of antiquities (ephoreia prehistorically and classical antiquities, Byzantine antiquities and modern monuments).
- The services of Environment
- The services of water resources
- The services of forestry
- The services of rural development
- Local Authorities (town council of the town, where the project is constructed and regional council)
- NGOs
- Any natural of legal person can pose views, during this process.

PP7, RO Arges-Vedea hydrographic basin regional needs analysis as it's a tool for understanding in a unitary way the situation of the analysed area, especially in terms of the application of Directive WFD and ELC & NATURA 2000. There are a series of additional corrective action to 2015 regarding:

- Improvement of the meteorological and hydrologic data system through water monitoring automation and developing hydrological forecasting centres at Arges-Vedea basin level.
- Additional funding through advancing deadlines for restoration and restoration of the wet zones in the rivers Arges, Dambovita and Targului.
- Creating effective structures for cooperation between farmers and water companies

PP2,3,6, IE There is a legislative requirement for Local Authorities and Regional Authorities to contain landscape objectives in their Development Plan and Regional Planning Guidelines (RPGs):

- South West Regional Planning Guidelines (RPGs)
- Kerry County Development Plan 2009-2015
- Cork City Development Plan 2009-2015
- Cork County Development Plan 2009-2015
- Clare County Landscape Strateg
- Limerick County Landscape Strategy

PP4, UK Natural England works in partnership with local Government, developers, local communities and other key stakeholders to ensure that planning processes protect, and wherever possible enhance, the natural environment, delivering sustainable development and maximizing benefits from green infrastructure. Natural England is a statutory consultee on environmental assessment processes and development proposals including that of Nationally Significant Infrastructure Projects and the transport network. Natural England has also established the South West Lands-capes Partnership (SWLP) as part of its role in implementing the ELC. It brings together those involved in the under-standing, management, planning and protection of the region's landscape. To fulfill its aim, this Action Plan identifies the areas of work where the Partnership can be most effective and influential. It is hoped it will stimulate the production of further, locally or organisationally focused plans, produced by partners and those with an interest in the landscape of the South West.
http://www.naturalengland.org.uk/ourwork/landscape/englands/character/lcn/resources/elcresources/regionalplans.aspx

PP1, FI PLANNING AND PERMITS: The regional land use plan for Kainuu region was adopted by the Finnish government in 2009. The plan is valid for ten years, and will be renewed according to the national land use guidelines. Public consultation is part of the renewal process. Regional land use plan may outcome the update process in coming years. In the current plan, no landscape protection issues are taken into account. During the update process, also the nationally and regionally significant landscape areas will be added to the plan to ensure their protection. Regionally significant landscape conservation areas will be mapped in the 'Landscape into line' –project during the year 2013.
There are seven nationally significant landscape conservation areas in Kainuu:

I. Vuokatti, Sotkamo: A rugged landscape of tree-covered hills and water bodies with traditional cultural characteristics of the region; area of 8,700 hectares;
II. Naapurinvaara, Sotkamo: Valuable both from landscape and built - historical side; area 2,200 hectares;
III. Paltaniemi, Kajaani: Village by the lake shore having landscape and cultural history value; area 840 hectares;
IV. Manamansalo, Vaala: Cultural landscape, island village habitation; area 600 hectares;
V. Melalahti – Vaarankylä, Paltamo: Shore village and shore habitation, tree - covered hills habitation; area 2,300 hectares;
VI. Säräisniemi, Vaala: Cultural landscape, old village centre; area 1,100 hectares;
VII. Joukokylä – Kempasvaara, Puolanka: A representative example of Kainuu tree-covered hills habitation landscape; area 800 hectare. In addition there are six

traditional landscapes areas in Kainuu:

VIII. Hiidenportin Kovasinvaaran niityt; Sotkamo: Kovasinvaara meadows around the former habitation in Hiidenportti national park;

IX. Välilehdon laidunniityt; Hyrynsalmi: pasturage meadows in Hyrynsalmi;

X. Hossan eräkulttuurimaisemat; Suomussalmi: wilderness cultural landscape in Hossa that is productive fishing and hunting area;

XI. Kalmosärkkä; Suomussalmi: ancient habitation place by the lake;

XII. Hukkajoen myllyt; Suomussalmi: old wooden mills by the river;

XIII. Martinselkosen tulvaniityt; Suomussalmi: meadows by the river experiencing regular flooding.

INTEGRATION OF LANDSCAPE PROTECTION IN THE REGION WITH INTERNATIONAL NETWORKS (ELC PER SE, UNESCO, OTHERS…)

PP 10, NL National Park Lauwersmeer, Middag-Humsterland (National landscape).The Colony of Benevolence Veenhuizen Waddensea.

PP9, LV In 2009, Tervete Nature Park received the award of European Destinations of Excellence with regard to sustainable tourism in protected nature areas.In 2002 Rundale Palace Museum was awarded with the major international Europa Nostra diploma for dedicated service. In 2004 Bauska Fortress was awarded diploma of Europa Nostra in the category of conservation.

PP8, GR In Western Macedonia, Lake Small Prespa is protected by Ramsar Convention. Also in the Region there are also two (2) National Forests (Prespes, Pindos) and 2 National Parks (Prespes, Northern Pindos)

PP7, RO There is one UNESCO site in the Arges-Vedea region: Monastery of Horezu. Other monastery (Curtea de Arges) is undergoing the procedures of recognition and reporting of UNESCO site.

PP2,3,6, IE South West Region: Sceilg Mhichíl which is located 12km of the coast of County Kerry. See more on: http://whc.unesco.org/en/list/757
Mid-West Region: the Burren and Cliffs of Moher has recently been made a UNESCO European GEOPARK

PP5, SI Triglav national park is a member of the Unesco Man and Biosfere programme MAB. Soca valley was in 2008 awarded by EDEN – Europen destinations of excellence.

PP4, UK The Jurrasic Coast designated as a World Heritage Site, the South West region has the North Devon Biosphere Reserve as designated under UNESCO's Man and the Biosphere Programme.

PP1, FI There are no UNESCO sites in the region.

PRESSURES ON THE LANDSCAPE

PP 10, NL Extensively exploited agricultural area combined with an additional income source : recreation farm, retail farm, small scale processing farm; Provisions for small scale caneoing in new established nature area; mitigation of negative influences on economic return and/or mitigation of negative influences on environment quality (WFD criteria); Water management practices choice between safety and damage prevention and forecasted natural values; Geographically separating land uses with contradictory characteristics.

PP9, LV The authorities and stakeholders acting in the Lielupe river basin are facing an ambitious challenge to achieve good water status. The water quality assessment indicates that a majority of water bodies is at the risk to fail achieving the objectives of the WFD. Therefore, measures to reduce the pollution should be undertaken as for seen in the Lielupe river basin management plan 2010-2015. The key measures for local municipalities are related to planning and building up the advanced waste water treatment plants as well as expanding existing sewage collection networks in the region. Due to the intensive agriculture Zemgale region is designated as a vulnerable area to nitrate pollution. This imposes a set of good practices to be applied by farmers, e.g. manure storage, limitation of fertilisers use. However, the enforcement of the measure is not so strong to confirm the compliance whether farmers implement the good practice rules accordingly. Although the spatial planning and development plans of Zemgale Planning Region recognise the importance of landscape in the region, the use of a term "landscape" is multi-dimensional. The main focus is on nature conservation or cultural heritage, however, the aspect of maintenance of the share of agriculture in land cover is also highlighted. Since implementation of the ELC has not been properly dealt with at the national level, the approach to address the landscape issue varies in Latvia. Different attention to the landscape is also given in the local development planning documents.

PP8, GR As it mentioned above, the most significant problem of the River Basin 09 is the water Scarcity which is limited to the summer period.
Another problem is the large amount of water,which is used for irrigation in agriculture. The large amounts of water to the irrigation caused from the following parameters:
- Due to the large number of boreholes, many of them they are not documented.
- Due to the costing policy of the service management of irrigation.
  Particularly, the use of the water is costing according to the crop area and the crop, so there aren't any motives for the farmer to save water.

PP7, RO In the Arges-Vedea hydrographic ares a 191 water users have been identified which might cause accidental pollution. Under the direct coordination of Romanian Waters, the Arges-Vedea subsidiary have developed their own plans for preventing and combating accidental pollution. Here pressures induced by pollution with organic substances, nutrient pollution, pollution by dangerous substances were identified. -For the analysis of pressures and their impact in Arges-Vedea region the concept of DPSIR (Driver-Pressure-State-Impact-Response) urban agglomerations was used for areas do not have adequate systems for collecting waste water e.g. farms which do not have adequate systems for storage and dejection; certain deposits of raw materials, building materials, chemical fertilizers.

PP2,3,6, IE Farming, tourism, expansion of urban centres

PP4, UK Agriculture: Pollution from agriculture remains a major pressure on fresh and coastal waters in the South West RBD (as is the case across much of the UK). Nutrients (nitrogen and phosphorus) from fertilisers, pesticides, organic material, sediment and

pathogenic microorganisms are washed to waterways, primarily via diffuse pathways. These pollutants not only prevent the achievement of good status under WFD, but also cause problems such as eutrophication and the need for expensive treatment where a waterbody is a source of drinking water.

Clearly food production is a critical issue and a strong agricultural sector must be maintained, particularly in the light of a growing global population and the associated demand for food. A growing demand for bioenergy crops will also ensure continued pressure on agricultural land. To address the conflict between agriculture and water resources in the region requires that win-win approaches be identified, including those on-farm measures that are low cost or even cost neutral. In some cases these measures control 'at source', for example, the reduction of phosphorus inputs in fertiliser onto land, where phosphorus levels in soils have progressively built up over time to the extent that they are sufficient for plant growth. According to Defra (2003) such an approach could substantially reduce phosphorus losses from agricultural land and at no cost to farmers. In addition, reducing phosphorus in animal feeds has been shown to be of minimal cost (Jacobsen et al. 2004). Other low cost measures include the restriction of fertiliser applications in high-risk (critical source) locations and at high-risk times, for example when soils are saturated, since under these conditions a significant proportion of fertiliser applied is simply washed away, representing an economic loss to the farmer.

Innovative approaches to tackling agricultural pollution that look beyond the standard regulatory approach also have a role to play. For example, the mapping of conflicts between various ecosystem services and agriculture can identify those areas of a catchment where intensive agriculture is inadvisable, and conversely, where it may even be possible for an intensification of agriculture to occur without detrimentally affecting those ecosystem services. Payments for ecosystem services (PES – schemes whereby the beneficiaries of ecosystem services provide payment to the stewards of those services.) can also play a role and have been established between the water company (South West Water) and farmers in the South West of England, resulting in less agricultural pollution of drinking water sources and, hence, in time lower treatment costs.

Reconciling environmental and sectoral demand for water: The balance between water demand and availability has reached a serious level in some catchments in the South West RBD, the result of over-abstraction and prolonged periods of low rainfall or drought. Typically the needs of those sectors that use water have taken precedence, with freshwater ecosystems being of secondary importance; reduced river flows are the result with detrimental impacts on freshwater ecosystems including fish life. Lack of water also reduces the capacity to dilute pollution, increasing still further the pressure on water resources and threatening the achievement of good status under WFD. To solve or at least considerably lessen this conflict a different approach to water management is needed, one which focuses upon conserving water, using it more efficiently and managing the demand. Physical Modifications to Waterbodies: Flood defenses, agricultural drainage and other modifications have a detrimental hydromorphological impact upon fresh and estuarine waters of the South West region, including the establishment of barriers to fish migration. Pressure to establish small-scale hydropower schemes may exacerbate this issue. Compromise solutions are required that identify gains for freshwater habitats, for example, on the back of flood defense schemes. Payment for ecosystem services schemes may have a role to play, for example, where a farmer receives a subsidy for the loss of unproductive land that can be given over to nature, helping to retain water and reduce flood risk, attenuate pollutants and support biodiversity. Tourism: The Economy of the South West region is strongly dependent upon tourism, driven by the natural landscape including; a number of Bathing Water Directive designated beaches, the natural beauty of the National Parks; a landscape of significant cultural and historical heritage; opportunities for recreation including boating, sailing, angling and hiking.

A challenge exists therefore, to grow tourism revenue without compromising the historical, cultural or natural environment. Solutions are required that can increase rural and local incomes in a sustainable manner. Development Pressures: Certain areas of the South West RBD will be subject to growth in population over the coming years. The increase in housing, extended transport networks, and impermeable urban land associated with this will raise a range of pressures on the freshwater environment. These are likely to include greater urban diffuse runoff, greater requirement for wastewater treatment and an increased water demand. Innovative solutions are required including the implementation of sustainable urban drainage schemes that reduce flood risk and improve water quality.

PP1, FI The general challenge in the Kainuu region is that very little development is combined to the protection. The driving factor and the main aim is usually the protection of valuable landscape areas or status good in the water basins in Kainuu. But often economical development is not combined to the plans or actions. Still those protection actions could have a positive effect for the economy of the region, for example by providing better environments for the tourism activities. Related to the European Landscape Convention the valuable landscape areas in Kainuu region are precisely documented to the inventory, which is publicly available in the internet. Those areas are usually also protected and maintained properly. When implementing Water Framework Directive the aim for the status good is the driving factor. That could mean some rehabilitation needs in the rivers & lakes that are consequently well documented and planned.

There are some conflicts of interests for the land use in the Kainuu region mainly arising from the growing mining industry, huge land user forestry and tourism who prefers natural environments. The conflicts of interests for the new planned activities are dealt mainly by the environmental legislation. In such cases an environmental impact assessment is needed and that is subjected to the public hearing. The improvements in the forestry sector are slow, but still observable. As an example there is the Landscape sensitivity mapping –project.

As a conclusion from Kainuu region, more development should be combined to the protection. No development should happen in the cost of protection, because those areas and environments have a value as their own. But those naturally beautiful areas and landscapes could bring needed income to the region. That is also in the line with Europe 2020 strategy by creating regional, sustainable growth.

From this exercise, which was implemented during the second semester (Autumn 2012), we concluded that in general, landscape protection is part of land use planning and the construction permits & licenses process. Few regions are using landscape-mapping tools, and few regions have done impact studies. Therefore, it appears that landscape protection is more on macro and less on micro spatial scales. However it is considered that pressures need to be confronted at the micro level. We believe that this is a valuable insight. Two of the TRAP good practices address landscape management at relatively micro to meso spatial scale, namely Tourism development plans and products for Lough Derg GP4 and Trade-offs and economic tools supporting the implementation GP5, both contributed by Shannon Development (PP2). However, transferring these good practices to the regions was difficult for two reasons: PP2 withdrew and regions were not very familiar with such approaches therefore a lengthier facilitated process would be necessary for real policy impact. Thus we feel that TRAP regions could have greatly benefitted if it were possible to pilot in each region the Landmap Wales scale and draw landscape and land use plan conclusions accordingly. But it was not possible as the effort would diverge from the TRAP key objectives. However, we wish to strongly recommend that the ELC remains in focus both at regional and interregional actions for the future.

TRAP GOOD PRACTICES

Background

This component of the report summarises the TRAP good practices and discusses the results attained through them, underlining their specific contributions to the project objectives. Considering that its purpose is to build on and transfer good practices that embed water and landscape protection in regional, sustainable growth solutions, TRAP project contributes to the implementation of two important EU tools: the Water Framework Directive (WFD), the European Landscape Convention (ELC); by making direct reference to the first tool, which can be seen as part of the Gothenburg strategy, there is the willingness to accelerate the achievement of harmonised water quality standards across the EU and with respect to the second tool providing support to the natural quality and cultural identity and differentiation of European landscapes. In particular the Water Framework Directive is implemented through River Basin Management Plans (the main normative instrument and scale provided by the WFD for the protection and management of water resources) and the European Landscape Convention through impacting regional development plans and the tourism & environment development plans. In seeking to embed water and landscape protection in regional, sustainable growth solutions, TRAP also addresses to some degree the Europe2020 strategy for growth and jobs.

The Water Framework Directive, answering to the increasing importance of water as raw material, the threat of pollution and the demand from the public for cleaner rivers, lakes and beaches, establishes a framework for the protection of inland surface waters, transitional waters, coastal waters and groundwater and aims to achieve good water by 2015 throughout the EU. The implementation of WFD raises challenges to Member States because the Directive is demanding in its requirements and timetable (not only do authorities need to comply with the requirement to reach good ecological and chemical status, but they will be subject to significant fines for non-compliance), with a complex and detailed text. Moreover, its implementation comes at a time of economic austerity, with limitations in human and financial resources that increase the necessity to seek trade off solutions. TRAP attempts to help local and regional authorities to adhere to certain WFD requirements: establish good monitoring programmes and networks (TA 2), undertake measures able to improve water bodies status (TA 3), involve local stakeholders (TA 1), integrating water management policies (TRAP overall objective).

As far as the European Landscape Convention is concerned, this voluntary tool, points out that landscape plays an important role in human fulfilment, has an important role in culture, ecology, environment and society, and constitutes a resource for economic development (particularly tourism), acknowledging that developments have often damaged landscapes or obliterated their distinctiveness, promotes landscape protection, management and planning of Europe's landscapes (urban and rural ones, normal and outstanding ones, land and water ones) and European cooperation on landscape issues. Rivers and their surrounding landscapes are inter-dependent and the TRAP project seeks to integrate the two from a growth and development perspective, focusing especially on tourism activities. TA 4 is the thematic area most related one to this issue, even if landscape protection involves also the other three thematic areas.

As the ELC is a voluntary tool, it has been taken up by and benefits fewer regions than the WFD (but it has been addressed by all the project partners authorities). Additionally, as its requirements are very generic, the evaluation of its implementation results reached by the good practices is challenging and needs to be undertaken by adopting landscape assessment methodologies devised by regional authorities (in addition to the UNESCO criteria for including a site in the World Heritage List).

Other European tools taken account of by TRAP project are the Europe 2020 Strategy,

the EU's growth strategy for the coming decade, the Gothenburg strategy and the Lisbon strategy. Additionally, many territories affected by the good practices are encompassed by the Natura 2000 network, whilst all need to implement the Floods Directive too.
TRAP argues that practical and conceptual challenges arise from the implementation of both the WFD and ELA, especially in terms of environmental rehabilitation costs, potentially restricted land uses, stakeholder involvement, and consensus building.

The TRAP GP's

TRAP pre-defined 23 good practices contributing to four thematic areas: Governance, Monitoring, Aquatic environment, and Tourism development. During the first period of TRAP (1.1.2012 – 30.6.2012) we received 25 good practice contributions, the main aspects of which are summarised in this document.
TRAP good practices have been planned to address four important aspects of integrated river and river territory management and the good practice analysis is organised into four thematic areas: Governance (Thematic Area 1-TA1), Monitoring (Thematic Area 2-TA2), Aquatic environment (Thematic Area 3-TA3), and River tourism (Thematic Area 4-TA4). TRAP focuses on the notion of 'protection and development', i.e. how protection measures –including rehabilitation & restoration, of environmental (water) and cultural / historical landscapes can be part of an overall economic growth process. Ultimately, it aims at contributing to the on-going discussion of internalising socio/environmental costs profitably into the development & growth process.

The good practice collection and analysis primarily undertaken during the first semester of TRAP (i.e.1.1.2012– 30.6.2012), was organized into four, overlapping, steps:

• **19.12.2011 - 31.1.2012** Formulation of the good practice analysis templates. The CP3 coordinating partner (PP1) formulated the initial template, sent it to all the partners and agreed it on the base of bilateral e-meetings. After the 1st ISC 27-29.3.2012, the GP template was reinforced with 2 more questions aiming at making it more focused and oriented towards the identification of the "attractive regional growth" concept.

• **31.1.2012 – 15.5.2012** Good practice description & discussion among the partners. Partners identified interesting to their respective regions GPs, and asked further questions of the GP owners.

• **15.5.2012 – 20.6.2012** GP processing, with GP owners revising GP description and answering questions, leading to pre-selection of good practices. The pre-selection of good practices is only indicative at this stage. Final selection will follow the needs analysis reports during the second semester (July 2012 – Dec 2012) of TRAP.

• **27.6.2012** Review of the GP analysis during the 2nd CP3 interregional meeting.

Importantly, the regional needs analysis (see Part 2 of this report) that was implemented 1.4.2012 – 31.10.2012 revealed specific needs of the regions, some of which were not covered by the good practices that were already identified. For example, stakeholder involvement and forms of cross border (including county and regional levels) cooperation regarding catchment and sub catchment management plans were prioritised. Four more good practices were developed and three of these were retained (GPs 26, 27 and 29). Ultimately then, TRAP identified and analysed 28 good practices. The list of good practices contributed per partner is provided in Table 4 below.

TABLE 1. LIST OF TRAP GOOD PRACTICES

KAINUUN ETU OY (FI), PP1	GP
Surface water monitoring technology & operational aspects	**GP1**
Rehabilitation project of Oulujoki river flow	**GP2**
Rehabilitation of the water cycle	**GP3**
Oulu – Kajaani regional development zone (RDZ) 2010	**GP29**
SHANNON DEVELOPMENT (IE), PP2	
Tourism development plans and products for Lough Derg	**GP4**
Trade offs and economic tools supporting the implementation	**GP5**
MIDWEST REGIONAL AUTHORITY (IE), PP3	
Regional Planning Guidelines	**GP6**
Lough Derg marketing strategy group	**GP7**
THE RIVERS TRUST (UK), PP4	
Economic impact assessment tools (=methodology) for stakeholder involvement and consensus building	**GP8**
Monitoring programmes for the implementation of the regional RBMP	**GP9**
Information Platforms to support WFD communication and planning,	**GP10**
Economic development tools & examples of solutions for including landscape & cultural heritage into the regional economic development	**GP11**
Catchment management plans	**GP26**
Governance, structure and goals of the Rivers Trust Movement	**GP27**
SOCA VALLEY DEVELOPMENT CENTRE (SI), PP5	
Institutional good practice for ensuring aquatic eco-system quality	**GP12**
Tourism development plans & products ensuring fishing tourism and water sports compatibility and balance	**GP13**
SOUTHWEST REGIONAL AUTHORITY (IE), PP6	
Regional planning guidelines and resource conservation	**GP14**
Regional Environmental River Enhancement Programme	**GP15**
Rural environment protection schemes	**GP16**
Forestry and water quality guidelines	**GP17**
NATIONAL INSTITUTE OF RESEARCH DEVELOPMENT FOR MECHATRONICS AND MEASUREMENT TECHNIQUE (RO), PP7	
Systems for forecasting of floods	**GP18**
Technology and systems for sediments monitoring in reservoirs and rivers, GP19	**GP19**
REGIONAL DEVELOPMENT AGENCY OF WESTERN MACEDONIA (GR), PP8	
Project demonstrating environmentally friendly tourism development project taking into account forest resources	**GP20**
ZEMGALE PLANNING REGION (LV), PP9	
Project on river territory rehabilitation & land use change; including infrastructure for river tourism, riverbank improvement, water treatments in villages and cities	**GP21**
WATERBOARD NOORDERZIJLVEST (NL), PP10	
Reservoir for temporary water storage as safety provision and as Natura 2000 area	**GP22**
Re-meandering of river-streambed as both WFD and safety measure in agricultural production area within the law of land reform	**GP23**
Integrated rural intervention with re-meandering helophyte water filtering of agricultural and industrial effluent with voluntary participation of government and private partners	**GP24**
Determination of water management practices in a big lake combi2000 aims and water safety limits	**GP25**

The contribution of the TRAP good practices to the project objectives

The TRAP objectives prioritise good practices with respect to the Water Framework Directive, applications of the European Landscape Convention, and integrated development solutions dealing with environmental protection & growth (and hence relate to the Europe2020 strategy too). The latter forms the base of the rational arguing for the adoption of trade-off approaches between protection and development where win-win solutions cannot be found.

The starting point of TRAP addresses how to internalise important socio (=heritage, cultural) / environmental externalities into effective growth & land use models so as to ensure protection of the said externalities / vulnerabilities through stakeholder consensus. This issue has been discussed for a long period of time and provides the background for many EU policies and initiatives such as the revised sustainable development strategy (2006), the eco innovation policy, the Environmental Technologies Action Plans, the Lead Market Initiative, the Resource Efficiency Directive, the Energy & Sustainable Construction discussion and many others. What TRAP contributes to this discussion is the focus on overall economic development criteria of an area & its land use aspects. The TRAP question is: taking into account that the requirement to achieve (maintain, rehabilitate, monitor, protect) good water status by 2015 as well as ensure suitable landscape protection in general, what are the economic & otherwise development tools available leading to growth and minimising in the process the relative weight of protection externalities?

The answer to this question, through the contributions of the 28 good practices (GPs), is a regional development dynamic that demonstrates how it successfully addresses the notion of 'protection & development', 'protection through development' and 'protection only but affordable', and leads to the model of attractive regional growth. GPs contributions can be summarised as follows:

All 28 TRAP GPs combine methodological with demonstration sides. This facilitated the good practice transfer. In a few cases technologies are also involved, and in other cases very important investments are required. To summarise some of the key findings from the good practice analysis,

- there are important and transferable direct contributions to the implementation of the River Basin Management Plans (RBMP, Article 13 of the Water Framework Directive). Such GPs deal more with monitoring approaches and data bases.

- there are important solutions of natural and aquatic rehabilitation & protection reflecting mainly public investments and / or public private partnership initiatives. Such solutions even if inevitably contextually defined and generic in nature, provide, nevertheless interesting transferable tools and demonstrable results. This type of solutions can be transferred both as general environmental initiatives as well as under Programmes (= rehabilitation actions) of the RBMP's.

- the European Landscape Convention (ELC) is taken up explicitly only by one good practice. However, landscape issues are strongly addressed by planners in at least 4 out of the 10 TRAP regions. During the first semester, it was possible to open up the concept of the ELC as well as of landscape assessment tools such and the Shannon Index, LUCAS and Landmap. Such tools measure landscape diversity & ecological vulnerability (Shannon Index and LUCAS) and ecological, heritage, and visual vulnerabilities (Landmap). While none of these tools are definitive, there is a growing consensus that they are essential to planning & economic development.

- we identified comprehensive trade off approaches, including institutional context, methodological tools, governance and demonstrable results. Most of the contributed good practices contain trade off elements. However, only a few could be described as comprehensive methodologies- "Traditionally" trade-offs start from a socio/ environmental protection need. The need is assessed, and the protection impacts on the development are also integrated into the planning process. Stakeholder involvement starts from the very beginning of the development process. Maybe the most radical type of trade-off solutions comes from our PP10 in the Netherlands, whereby development needs are accommodated by land ownership swapping-if necessary. An interesting tool is the economic appraisal of ecosystem services proposed by our PP4 in the UK, leading to improved conflict resolution through impact studies and stakeholder involvement (GP8 Ecosystem services). Our PP2 partner in Ireland shared with us a comprehensive tourism development plan utilising landscape and ecosystem vulnerability tools, development audits and benchmarking development options. It was in fact the only good practice that explicitly dealt with landscape mapping and the ELC. It is very regrettable that PP2 (Shannon Development) had to withdraw by 31.5.2013 from TRAP due to administrative reform in Ireland.

- stakeholder engagement, as an objective and as methodology became central to many TRAP partners' needs. In some cases this reflected historical fragmentations among stakeholders. In other cases, the nature of the WFD implementation, which follows the logic of river basins rather than of administrative borders, clearly indicated the need for intermediate governance levels. Partners benefitted from the good practice model represented by the Rivers Trust, UK (itself a TRAP partner), and transferred it totally-e.g. Soca Valley, Slovenia and South West Region, Ireland or partially (Mid-West Region, Ireland).

In most of the TRAP good practices, while the contextual and institutional aspects might be a little difficult to adopt, the legislative and methodological tools are easily transferable. This can be summarised in applying vulnerability assessment tools (for the ecology, the heritage and the visual aspects of landscape); benchmarked development (what is vs what could / should be); by assigning a name and a price to the services ecosystems provide to societies, they are making ecosystems part of the overall development discussion; applying sector-based capacity carrying upper thresholds to define the land use intensity; applying matrices to bring together river & river territory vulnerabilities / sensitivities with development targets decision making; applying legislation facilitating farm swapping and land banks to provide land use options to land owners; applying public investments to rehabilitate the environment and deliver it for new land use and development approaches; invest in planning, dedicate more resources to planning; applying comprehensive planning tools and stakeholder involvement strategically, from the very beginning of an operation.

At the end of the first semester of the TRAP project, it was very clear was that it is possible to deal with trade-offs and benefit from trade-off logic to target better, more attractive regional development. Tools are available to support this and we also recognised that stakeholder involvement and lengthy negotiations procedures as well as policies tailored to serve trade off-based development are preconditions for succeeding in this task.

TABLE 5. TRAP GOOD PRACTICES AND THEIR CONTRIBUTION TO THE WFD

KAINUUN ETU OY (FI), PP1	GP	CONTRIBUTIONS
Surface water monitoring technology & operational aspects	**GP1**	Water Framework Directive, Article 8 Monitoring of surface water status, groundwater status and protected areas
Rehabilitation project of Oulujoki river flow vironmental	**GP2**	Environmental rehabilitation and re-use project (economic & development), WFD Article 13 River Basin Management Plan; and Article 3 Coordination of administrative arrangements within river basin districts
Rehabilitation of the water cycle environmental	**GP3**	Environmental rehabilitation and re-use project (economic & development), WFD Article 13 River Basin Management Plan
Oulu – Kajaani regional development zone (RDZ) 2010 and joint	**GP29**	Method for cross-county and cross- border joint programming development; WFD Article 14 Public information and consultation
SHANNON DEVELOPMENT (IE), PP2		
Tourism development plans and products for Lough Derg	**GP4**	Integrated tourism development
Trade offs and economic tools supporting the implementation	**GP5**	Trade off solutions and methodologies (vulnerability assessment tools)
MIDWEST REGIONAL AUTHORITY (IE), PP3		
Regional Planning Guidelines	**GP6**	Evidence based policy making & stakeholder involvement
Lough Derg marketing strategy group	**GP7**	Towards integrated tourism development
THE RIVERS TRUST (UK), PP4		
Economic impact assessment tools (=methodology) for stakeholder involvement and consensus building	**GP8**	Methodology documenting trade off arguments (Eco system services)
Monitoring programmes for the implementation of the regional RBMP status	**GP9**	Water Framework Directive, Article 8 Monitoring of surface water
Information Platforms to support WFD communication and planning,	**GP10**	Water Framework Directive, Article 8 Monitoring of surface water status
Economic development tools & examples of solutions for including landscape & cultural heritage into the regional economic development	**GP11**	Integrated development & the ELC
Catchment management plans	**GP26**	Methodology documenting trade off arguments; Article 13 River basin management plans
Governance, structure and goals of the Rivers Trust Movement consultation	**GP27**	Water Framework Directive Article 14 Public information and consultation
SOCA VALLEY DEVELOPMENT CENTRE (SI), PP5		
Institutional good practice for ensuring aquatic eco-system quality	**GP12**	Environmental protection liaising with the Water Framework Directive
Tourism development plans & products ensuring fishing tourism and water sports compatibility and balance	**GP13**	Integrated tourism development
SOUTHWEST REGIONAL AUTHORITY (IE), PP6		
Regional planning guidelines and resource conservation	**GP14**	Rural development liaising with the Water Framework Directive (coordination actions)
Regional Environmental River Enhancement Programme	**GP15**	Rural development liaising with the Water Framework Directive Article 13
Rural environment protection schemes	**GP16**	Integrated rural development
Forestry and water quality guidelines	**GP17**	Integrated rural development
NATIONAL INSTITUTE OF RESEARCH DEVELOP-MENT FOR MECHATRONICS AND MEASUREMENT TECHNIQUE (RO), PP7		
Systems for forecasting of floods	**GP18**	Flood Directive and the Water Framework Directive
Technology and systems for sediments monitoring in reservoirs and rivers, GP19	**GP19**	Flood Directive and the Water Framework Directive

REGIONAL DEVELOPMENT AGENCY OF WESTERN MACEDONIA (GR), PP8		
Project demonstrating environmentally friendly tourism development project taking into account forest resources	**GP20**	European Landscape Convention and integrated tourism development
ZEMGALE PLANNING REGION (LV), PP9		
Project on river territory rehabilitation & land use change; including infrastructure for river tourism, riverbank improvement, water treatments in villages and cities	**GP21**	Integrated tourism development
WATERBOARD NOORDERZIJLVEST (NL), PP10		
Reservoir for temporary water storage as safety provision and as Natura 2000 area	**GP22**	Integrated environmental protection and development
Re-meandering of river-streambed as both WFD and safety measure in agricultural production area within the law of land reform	**GP23**	Water Framework Directive (Articles 13 & 14), trade offs; more tools based on land use management
Integrated rural intervention with re-meandering helophyte water filtering of agricultural and industrial effluent with voluntary participation of government and private partners	**GP24**	Water Framework Directive (Articles 13 & 14), trade offs; more tools based on land use management
Determination of water management practices in a big lake combi2000 aims and water safety limits	**GP25**	Water Framework Directive (Articles 13 & 14), trade offs; more tools based on land use management
Determination of water management practices in a big lake combi2000 aims and water safety limits		

SUMMARIES OF THE TRAP GOOD PRACTICES

Good practice name **Surface water monitoring technology & operational aspects, GP1**
Thematic area Monitoring, TA2
Location Kainuu, FI
Relevant policy tool The Water Framework Directive

GOOD PRACTICE DESCRIPTION

Problem addressed

In Finland, water bodies are very vulnerable to environmental pressures & land use challenges. The GP controls emissions from non-rural, especially industrial land uses.

Objectives

To support through an advanced monitoring system, the achievement of the 'good' status of river waters by 2015

Activities

National legislation-based permit procedures (for activities that may lead to pollution water or for activities having an effect on constructions in waters or the water supply) involve thorough assessments of the environmental impacts of specific operations, and the consequent setting of tailored controls.
The permit holder must present a monitoring plan to the relevant regional Centre for Economic Development, Transport and the Environment. The authority checks the plan, and if necessary, makes alterations to it.
Monitoring programmes are designed on a case-by-case basis.
Obligatory monitoring may include, for example, measurements of water quality, hydrology or biological parameters. Surveillance monitoring is used to monitor significant changes in the long term, but also unexpected changes. Operational monitoring is more precise, and it involves, for example, monitoring of the potential effects of human activities. The data from the obligatory monitoring programmes are recorded in databases of the environmental administration.

Main results

The reduction of emissions to water has reduced remarkably in industry e.g. from 1995 to 2010: oils by 83 per cent, phenols 75, chrome 91, iron 96, nickel, 74, copper 75, zinc 87, cadmium 68, mercury 75 and lead by 88 per cent. Phosphorous and nitrogen emissions from agriculture have not been reduced from early 1990's to early 2000's. The use of data bases handles the data flow.

Costs and positive impacts (on the economy)

The costs of monitoring are dependent on the monitoring programmes. In the case of the Oulujoki river basin, the overall cost for the basic measures is for the first management period app. 91 million € for investments and app. 39 million € for operational costs per year, and for the supplementary measures app. 5.1 million € and for the operational costs annually 1.2 million €. Benefits: high value of water in terms of recreation activities and land property prices; reduction of water bodies rehabilitation costs; increasing professional and recreational fishing activities.

TRAP OBJECTIVES & THE CONTRIBUTION OF THE GP

Trade offs

The trade offs are between the rehabilitation and investment costs and the value of the properties + the quality of the environment.

Contribution to attractive regional growth

GP1 is an effective tool to protect the environment and balance maintenance with prevention costs.

Transferability

GP1 is fully transferable both as legislation and as monitoring technology.

More information

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Good practice name **Rehabilitation project of Oulujoki river flow, GP2**
Thematic area Aquatic environment, TA3
Location Kainuu, FI
Relevant policy tool Economic development & environmental rehabilitation

GOOD PRACTICE DESCRIPTION

Problem addressed

Salmon has not migrated to river Oulujoki since 1940's. The building of hydropower plants ended the old and highly valued form of fishing – rapid fishing. The salmon stock has now nearly vanished from the lake Oulujärvi.

Objectives

To rehabilitate Kainuu rivers to host salmons again. So, the long-term objective is the restoration of the 'salmon zone' in Kainuu. The immediate objective is to draw a picture of how restoring the migrating fish stock into to the river in cooperation with the relevant authorities and stakeholders is carried out.

Activities

In 2003 the longest fishway in Finland, with 56 steps and total rise of 11 m, was built in

the Merikoski hydropower plant in downstream of river Oulujoki. The company producing energy in Merikoski, Oulun Energia, is obligated to stock down and upstream from Merikoskirapid annually 26,200 (min 14 cm) alevin Atlantic salmon; 4,550 (min 20 cm) sea trout; 15 million newly hatched whitefish; 50,000 river lampreys, and 4,250 kg of rainbow trout. In 2004, the regional authorities of two Finnish regions (Oulu region and Kainuu) started to create an Oulu-Kajaani regional development zone to promote prerequisites for their development; the emphasis was directed on using knowledge flows, improving transport connections, making the zone better known and more attractive, distributing welfare and developing a specific zoning model.

(1) Project 'River Oulujoki fishways', 2009-2011, aimed to have specific plans for six fishways in river Oulujoki.

(2) Project 'The Migrating Fish of Kainuu', 2009–2011 aimed at enhancing the natural reproduction of migrating fish in the most important water bodies running to lake Oulujärvi. It cooperated with projects building fishways in river Oulujoki aiming at bringing sea salmon to Lake Oulujärvi.

Main results

According to the fish stock in river Oulujoki the ecological status was classified as good or satisfactory. Fishes migrate upstream through the Merikoski fishway.

Costs and positive impacts (on the economy)

Construction of the Merikoski fishway cost app. 1.2 million euro. The total cost of the project "River Oulujoki fishways" was 1.2 million euro. Increase of tourist activities; professional fishing activities are expanded and also the whole weaving factory revolving fish (from fishing to retailing); increase of property value of land alongside Oulujoki banks.

TRAP OBJECTIVES & THE CONTRIBUTION OF THE GP

Trade offs

OuKa (Oulu-Kajaani) project and development efforts are on-going. Trade-offs are between the investment of public funds in rehabilitating a river area and the income (taxation) + jobs gained from the leisure activities that develop in the said area. To make the trade-off status clear, we need to understand better the balance between the invested (public) funds, the income resulting from the new activities, the GDP and the jobs from the development.

Contribution to attractive regional growth

GP2 adds to the concept of attractive regional growth by stressing how shared river territories can bring together in a functional way actors and policy makers, to strengthen a challenged joint development zone. While this is the case for cross border river basins, we see that it can be also the answer of smaller spatial scale.

Transferability

Process is transferable.

More information

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Good practice name	**Rehabilitation of the water cycle, GP3**
Thematic area	Aquatic environment, TA3
Location	Kainuu, FI
Relevant policy tool	Economic development & environmental rehabilitation

GOOD PRACTICE DESCRIPTION

Problem addressed

Since centuries, the Kainuu rivers were cleared and channelized for log floating. When a river channel is changed from its natural status to a floating channel all the obstacle materials are removed from the channel leading to higher velocity of the river flow. The natural spawning of fish stock is no longer possible because of the higher velocity of the river flow.

Objectives

To rehabilitate river Luvanjoki, and especially the Kynäkoski rapids, located in Hyrynsalmi, upstream from Oulujärvi. The aim of the rehabilitation is to have successful spawning for both the current fish species and the saltwater fish in the future.

Activities

The regional Centre for Economic Development, Transport and the Environment participates annually in few rehabilitation projects either as implementer or as funder. Rehabilitation projects involve a 'development mix' comprising several measures aiming at the improvement of the physical, chemical and ecological state and also improvement of the recreational value of the rehabilitated water-course. When the planning process is finalised, the permit application procedure begins (obviously he approvals from the land owners need to be in order before any rehabilitation actions are carried out). The Kynäkoski rapids in the Luva water course have been rehabilitated in 2002 by Kainuu Centre for Economic Development, Transport and the Environment, trying to make the river flows more fluctuating and add spawning areas for trout and graylings. The Kynäkoski rapids are an eco-fishing site where the catch and release rule is applied (par example the only way of fishing is fly fishing with a hook without any barbs). Permits to fish are needed and they are sold online and by local retailers.

Main results

The rehabilitation activities have decreased the water velocity (i.e. increased the retention time of water), reduced the transported (allochthonous) soil, and transferred the rapids-quiet waters distribution to its natural state. Before the rehabilitation and the eco-fishing regulation (1999-2000) there was not any juvenile fish, after the measures juvenile fish exist in the rapids.

Costs and positive impacts (on the economy)

The costs rehabilitation measures were in total 10.200 € (VAT 0%) of which the actual measures cost 6.830 euro (VAT 0%), rest of the costs being costs of supervising etc.
Benefits: increasing tourism, especially fishing activities; expanding indirect commercial services linked with fishing activities; improvements in some ecosystem services (par example flood decreasing which reduces the need for engineered flood control infrastructure).

TRAP OBJECTIVES & THE CONTRIBUTION OF THE GP

Trade offs

The trade off is between the investment of public funds in rehabilitating a river area and the income (taxation) + jobs gained from the leisure activities that develop in the said area. To make the trade off status clear, we need to understand better the balance between the invested (public) funds, the income resulting from the new activities, the GDP and the jobs from the development.

Contribution to attractive regional growth	In any case, the rehabilitation of the river flow is an important infrastructure work, positioning for new types of development.
Transferability	Easily so.
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Good practice name	**Tourism development plans and products TRAP Lough Derg, GP4**
Thematic area	Tourism development, TA 4
Location	Shannon, IE (Lough Derg, Lower Shannon River)
Relevant policy tool	Economic development (tourism sector)

GOOD PRACTICE DESCRIPTION

Problem addressed	The waterway is considerably under-used on most days and has strong potential for activity based tourism. There has been a decline in traditional markets (such as angling and cruising) , as well as a decline in air access into the Region. Demand for water and land recreation and facilities from the home market has increased over the past 10 years but has mainly shown itself in increased private boat registrations and private marina berths without providing significant benefits to the local economy.
Objectives	The development of tourism on rivers and lakes, integrated with local environment, and the provision of a well-managed tourism destination.
Activities	The Tourism Development Plan looks at: what should be developed to achieve more vibrant water and land based tourism and recreation economy, where the most sensitive areas of the lake and its surrounds are and how they should be protected from development of a damaging kind, criteria provided within the proposals also give guidance on how developments should be designed to have the maximum benefit to the area. The Action Plan contains various actions under 5 tourism objectives: Markets & Visibility, Tourism & Activity Infrastructure, Recreation and Special Interest Product Development, Local skills Development, Management for Sustainability.
Main results	In contrast to the effect of agriculture and municipal waste, the impact of tourism on the aquatic environment has been very restricted and localised (par example around local harbours). The Study identifies ecologically sensitive areas and recommends that little or no tourism activity takes place in these areas.
Costs and positive impacts (on the economy)	Unfortunately the implementation has coincided with economic recession and a downturn in tourism numbers to Ireland. It is difficult to assess the growth potential of the GP in these circumstances. Nonetheless, it is contended that as a result of the GP, that tourism development in the Lough Derg area is progressing in a coherent and sustainable way with wide stakeholder involvement.

Good practice name	**Tourism Trade offs and economic tools supporting the implementation, (of Lough Derg Sustainable Marina, Recreational & Tourism Development Study), GP5**
Thematic area	Tourism development, TA4
Location	Lough Derg, Lower Shannon River/Ireland
Relevant policy tool	Economic development (tourism sector)

GOOD PRACTICE DESCRIPTION

Problem addressed	The waterway is considerably under-used on most days and has strong potential for activity based tourism. There has been a decline in traditional markets (such as angling and cruising), as well as a decline in air access into the Region. Demand for water and land recreation and facilities from the home market has increased over the past 10 years but has mainly shown itself in increased private boat registrations and private marina berths without providing significant benefits to the local economy.
Objectives	The development of tourism on rivers and lakes, integrated with local environment, and the provision of a well-managed tourism destination.
Activities	The Tourism Development Plan looks at: what should be developed to achieve more vibrant water and land based tourism and recreation economy, where the most sensitive areas of the lake and its surrounds are and how they should be protected from development of a damaging kind, criteria provided within the proposals also give guidance on how developments should be designed to have the maximum benefit to the area. The Action Plan contains various actions under 5 tourism objectives: Markets & Visibility, Tourism & Activity Infrastructure, Recreation and Special Interest Product Development, Local skills Development, Management for Sustainability.
Main results	In contrast to the effect of agriculture and municipal waste, the impact of tourism on the aquatic environment has been very restricted and localised (par example around local harbours). The Study identifies ecologically sensitive areas and recommends that little or no tourism activity takes place in these areas.
Costs and positive impacts (on the economy)	Unfortunately the implementation has coincided with economic recession and a downturn in tourism numbers to Ireland. It is difficult to assess the growth potential of the GP in these circumstances. Nonetheless, it is contended that as a result of the GP, that tourism development in the Lough Derg area is progressing in a coherent and sustainable way with wide stakeholder involvement.

TRAP OBJECTIVES & THE CONTRIBUTION OF THE GP

Trade offs	Trade offs are in-built in the whole process since, in addition to the assessment of rivers and river territories in terms of sensitivity, tourism planning becomes part of a public consultation where local stakeholders discuss about protection costs and benefits coming from tourism development.
Contribution to attractive regional growth	A well-managed, environmentally and economically sustainable tourism destination is part of the regional attractive growth model.

Transferability	Plan per se is maybe generic, but the process, the methodology, and the parameters addressed are very transferable. Especially important is the assessment of sensitive river territories, i.e. beyond the SEA (Strategic Environmental Assessment).
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Good practice name	**Regional Planning Guidelines, GP6**
Thematic area	Governance, TA1
Location	County Clare, North Tipperary, Limerick, i.e Mid-West Region (NUTS III)/Ireland
Relevant policy tool	Economic development (tourism sector)

GOOD PRACTICE DESCRIPTION

Problem addressed	Consensus building around evidence-based methods for regional planning and ensuring sustainable development.
Objectives	To set clear objectives and targets to guide the development plans of the planning authorities; promote effective integration and coordination of development plans within an overall vision for development; work within the overall policy frameworks established by the National Spatial Strategy (NSS), National Development Plan (NDP) and the current budgetary and fiscal outlook; be supported by effective regional level implementation structures that work and report regularly, within an overall NSS and NDP reporting framework, on progress made in achieving a sustainable development.
Activities	The Regional Planning Guidelines 2010-2022 are not an ab initio exercise but rather consist of a review of previous planning guidelines. In that respect the RPGs focus on significant changes that have occurred in the Region in the context of the previous planning guidelines (review every 6 years). A number of key national, regional and local stakeholders are involved in the consultative and implementation process. Three sub groups have been set up, respectively for the coordinated development of zone one area Coordinated development of zone one area, renewable energies and infrastructures.
Main results	The consultative process has resulted in improved transparency, increased efficiency and streamlining of policy at county and regional level. The 2011 report highlighted many collaborative actions between different administrative units.
Costs and positive impacts (on the economy)	Different indicators have been identified for each region and work is on-going to identify a common set of indicators (e.g. employment and unemployment rates) that can be used. One of the objectives for the year 2012 was to establish and commence measurement of a robust set of indicators.

TRAP OBJECTIVES & THE CONTRIBUTION OF THE GP

Trade offs	The main implementation costs of the RPG's costs are related to fixing high water quality targets (whose meeting could increase costs for local enterprises) and benefits consist on adopting a consensus building method, which helps to find in an easier way trade offs solutions and supporting economic activities that utilise the region strengths, including

natural resources However, the RPG's are still a methodology, not a demonstration of trade off solutions.

Contribution to attractive regional growth

As an evidence – based policy-making tool and, through this, a stakeholder involvement and consensus building methodology, RPGs contribute to attractive regional growth.

Transferability

RPGs are transferable and they already been transferred through another project.

More information

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Good practice name **Lough Derg marketing strategy group, GP7**
Thematic area River Tourism (TA4)
Location Mid West Region, IE / Tipperary County Council
Relevant policy tool Development Action Plan

GOOD PRACTICE DESCRIPTION

Problem addressed

Following a request by Lough Derg public agency stakeholders, a marketing strategy for the period 2006-2009 was carried out. The strategy found that there were significant weaknesses in the Lough Derg product offerings. While there were some very good products it identified numerous product gaps.

Objectives

To develop Lough Derg as a key destination for superb water based activities combined with a range of very high quality walking, cycling, heritage and culture and food experiences that will entice the domestic and international visitor to stay longer.

Activities

The Lough Derg Marketing Strategy Group developed a Destination Development Action Plan to positively impact on the growth and sustainability of all businesses and communities through increased visitor numbers, tourism revenue and jobs.
The actions required to reach the overall aim were categorised into four objectives (Infrastructure, Product Development, Education and Training and Marketing and Sales Connect). The Lough Derg Marketing Strategy Group, through a voting system, prioritised actions within each Objective. In addition a lead agency has been identified for each objective and is responsible for reporting back to the streering committee.
Collaboration with tourism stakeholders is central to the implementation.

Main results

The Lough Derg model is an excellent example of stakeholders' involvement and consensus building.

Costs and positive impacts (on the economy)

Costs are related to planning activities (stakeholders meetings arrangement, analysis costs,…) promotion of local products, realization of infrastructures.
Concerning the benefits, the overall objective of the LDMSG and indeed the Destination Development Plan is to develop the Lough Derg area for locals (including local businesses and service providers) and visitors alike.

TRAP OBJECTIVES & THE CONTRIBUTION OF THE GP

Trade offs

An evaluation study regarding the impact of the plan on the aquatic environment and local economy has not been carried out to date as the plan was only finalised in 2011.

However, the main objective of the plan was to increase tourism numbers to the lake and this should not have a negative impact on the water bodies territories.

Contribution to attractive regional growth

Destination Development Action Plan is a tool for developing, in a sustainable way, Lough Derg as a key destination for water based activities combined with a range of very high quality walking, cycling, heritage and culture and food experiences. Local stakeholders involvement and consensus building approach contribute to reduce conflicts of interest about how to develop the area in terms of environment and economic growth.

Transferability

The Lough Derg model can be readily transferred to other regions.

For more information

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Good practice name **Economic impact assessment tools (=methodology) for stakeholder involvement and consensus building, GP8**

Thematic area Governance (TA1)

Location UK

Relevant policy tool The Water Framework Directive, Article 14

GOOD PRACTICE DESCRIPTION

Problem addressed

Ecosystem services, i.e. the 'services' ecosystems provide to societies, the ways ecosystems are important to societies, can be challenging to evaluate. As a result such services aren´t considered enough during the policy making process.

Objectives

To ensure that the true value of ecosystems and the services they provide are taken into account in policy decision-making. Resolving or at least finding improved outcomes between competing uses.

Activities

In order to understand the value of an ecosystem it is necessary to characterise and quantify the relationships between ecosystems and the provision of ecosystem services, and to identify the ways in which these impact on human welfare. Ecosystem benefits can be translated into economic value using economic valuation techniques (the most appropriate depends on various factors). The Total Economic Value (TEV) conceptual framework views ecosystem goods and services as the flows of benefits to humans provided by the stock of natural capital. Other methodologies attempt to establish either an individual's willingness to pay (WTP) for an ecosystem service (or to avoid its degradation) or willingness to accept (WTA) compensation for the degradation of an ecosystem service (or for going an improvement or restoration of an ecosystem service). The Westcountry Rivers Trust has developed a series of ecosystem service provision models attributing a delivery score for each and mapping this across four catchments (The Tamar, Torridge, Taw and Exe) in a spatially distributed manner.

Main results

The true value of ecosystems and the services they provide are taken into account in policy decision-making. Through River Trusts ecosystem services provision models a

better resolution of conflicts between agriculture and ecosystems services can result (where the conflict is intense benefits derived from the other ecosystem services must be optimized) and in this sense the models can be considered as economic impact assessment tools able to take account of WFD and ELC (the tourism activities increased by an high value landscape are an ecosystem service). Improvements in water quality and flood risk reduction have been recorded from catchment management activities that have sought to resolve the conflict between intensive agriculture and upland land management and the pollution of drinking water and the treatment costs that are required..

Costs and positive impacts (on the economy) The consideration of ecosystem services allows the reduction of many costs. For example South West Water has established the 'Upstream Thinking' programme of environmental improvement and with the support of Westcountry Rivers Trust helps farmers and land managers to keep peat, soils and natural fertilisers on the land, taking action also to improve slurry management. Strong benefit to cost ratios are projected, with modelling showing that a £10 million investment into catchment management could save £650 million in costs of treating nutrient and topsoil-laden water over a 30-year period.

TRAP OBJECTIVES & THE CONTRIBUTION OF THE GP

Trade offs

The costs of the ecosystem services analysis (fieldwork, mapping,…) and following decisions are compensated by the reduction of other costs due to environmental improvement (for example a sustainable approach to improve the quality of water abstracted for drinking reduces the need for water treatment and so reduces treatment costs). Better resolution of conflicts/trade-offs can result from the adoption of an ecosystem service analysis.

Contribution to attractive regional growth

The economic value of natural resources is considered during policy making process. Valuation of ecosystem services leads to identification of policy decisions that yield the best net outcome in terms of societal benefits and optimize trade off solutions.

Transferability

Ecosystems services are one good example of how to attempt to internalise environmental protection costs into land use & economic development planning. This GP is fully transferable because the approaches proposed are universal.

More information

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Good practice name **Monitoring programmes for the implementation of WFD River Basin Management Plans, GP9**
Thematic area Monitoring (TA2)
Location UK
Relevant policy tool The Water Framework Directive Article 8

GOOD PRACTICE DESCRIPTION

Problem addressed When determining WFD status there could be some problems: potential insensitivity

of certain standardised biological assessment tools, the exclusion of sediment as an element in the determination of WFD status, the high occurrence of water bodies in poor status that remain difficult to explain or hard to reconcile with observed physic-chemical status, the challenges in identifying sources of diffuse pollution and their impacts at a local scale.

Objectives

Improved WFD monitoring, classification of water bodies and investigation of pressures, including diffuse pollution sources, leading to better targeting of measures, improved management of agricultural land and higher WFD status of water bodies.

Activities

Collate information sources to better understand the river catchment and the pressures impacting upon local water bodies.

Re-evaluate the classification of biological elements using more sensitive indicators.

One of the major challenges of identifying the extent to which diffuse sources of pollution are likely to impact ecological status lies in the fact that such pollution occurs disproportionately during intense rainfall events. To address this issue, high frequency sampling during heavy rainfall events can identify the magnitude of diffuse pollution.

Undertake "walkover" surveys which can provide invaluable information (riparian conditions, status of bed substrate and hydromorphological pressures) and predictive assessment tools are a further important element which can be used to identify sources of diffuse pollution from agricultural land, and their pathways to waterbodies.

Main results

The monitoring methodologies suggested have improved the water bodies classification according to WFD criteria (using more sensitive indicators), the identification of pressures (particularly diffuse sources) and the measures necessary to address them, the fish migration since barriers are identified and the engagement with local stakeholders.

Costs and positive impacts (on the economy)

Costs are not easily defined, since the work has been undertaken under various contracts.

Benefits: reduced loss of diffuse pollutants (nutrients, soil, pesticides) is an economic gain for farmers; improved drinking water quality leads to reduced treatment costs; economic gains are also realised from improved water quality, although these have not been directly quantified in the RT catchments; improved fish passage also leads to enhanced fisheries.

TRAP OBJECTIVES & THE CONTRIBUTION OF THE GP

Trade offs

The tool is about improving the implementation of the WFD. The costs it entails are balanced by benefitting farmers, fishermen, and the public sector with the reduction of water treatment needs costs.

Contribution to attractive regional growth

Provided measures are implemented, they can lead to a more sustainable management of agricultural land, maintaining productivity whilst improving water quality and supporting WFD compliance.

Transferability The GP is directly transferable, also because the issues addressed by it are tackled across Europe.

More information

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Good practice name **Information Platforms to support WFD communication and planning, GP10**
Thematic area Monitoring (TA2)
Location UK
Relevant policy tool The Water Framework Directive, Article 8

GOOD PRACTICE DESCRIPTION

Problem addressed The sources of information about water bodies and WFD implementation process must be improved.

Objectives To enable the visual communication and interpretation of pressures and impacts upon water bodies; to support wide stakeholder engagement in WFD implementation including public participation; to aid river basin management.

Activities A range of different spatial datasets can be incorporated into a WFD information platform, that include data describing the catchment characteristics (biological, hydromorphological and chemical ones) and the pressures impacting upon the water environment. Major data providers are making their datasets, which can be incorporated alongside other datasets, available as data services. Provision of a platform, such as a web or desktop GIS, preferably with the ability to render layers semi-transparent, enables users to simultaneously overlay multiple layers, and therefore highlight spatial relationships.
Information platforms are accompanied by a user guide to describe the functionality of the system, outline the data contents and give a more detailed description of the key information.

Main results The usage of digital information platforms has improved the understanding of WFD issues (thanks to the considerable number of information about catchment characteristics provided by them) and stakeholders engagement into water management because they can access in an easier way the data about water bodies conditions; also decision making process for the river basin planning thanks to these platforms is easier to carry out.

Costs and positive impacts (on the economy) System and maintenance costs for such systems depend on a whole range of factors. A very basic system is possible to set up at very low cost using Free, Open Source Software (FOSS) but however server infrastructure is still required and the time and staff resources required to learn and maintain these systems can be significant. Contracting out the entire service can be more expensive, but it will probably be a quicker solution. For a system with more sophisticated functionality (par example the ability for users to submit their own information) the costs can easily be in the region of £50- 100k. Benefits: indirectly, wide stakeholder engagement via the information platforms, will improve decision making, including better identification of trade-offs and conflict resolution between economic sectors and freshwater environment.

TRAP OBJECTIVES & THE CONTRIBUTION OF THE GP

Trade offs

Trade-offs are between creation and maintenance costs for these digital information platforms and higher quality of information which helps to speed up the policy making process (reducing time costs). There is also a better identification of trade-offs.

Contribution to attractive regional growth

By identifying in a better way the trade-offs between economic sectors and fresh water environment, it is possible to understand what decisions can well combine water protection with economic development.

Transferability

It is transferable; many of the spatial datasets required should be available via national agencies.

More information

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Good practice name **Development of Rural Economy through Angling Tourism, GP11**
Thematic area River Tourism (TA4)
Location UK
Relevant policy tool Economic development (river tourism)

GOOD PRACTICE DESCRIPTION

Problem addressed

Rural areas often suffer economic hardship with income and employment dependent on a limited number of income streams, often dominated by agriculture.

Objectives

Main Objective: Development of the rural economy through Angling tourism
Sub Objective: Environmental benefits through a) the need for good water quality to support healthy fish populations and b) anglers providing the 'eyes and ears' of the freshwater environment.

Activities

Economic valuation of the angling: Quantifying the relative impact that angling has on income and employment not only in local communities but the wider region, is of value (Substance 2012) and helps to better understand the market and shape the nature of its expansion. Promotion of angling-based tourism as a hub (angling tourism in the centre of various other recreation options). Ensure expansion of angling tourism is sustainable: basic information gathering key to identifying when and where angler numbers can be increased and where they need to be managed (Substance 2012).

Main results

The aquatic environment has been positively impacted thanks to a greater number of anglers watching over and reporting about rivers condition and by monitoring anglers number, details of permit sales and fish stocks; furthermore this recreational ecosystem system service provided by the freshwater and landscape has been more widely recognised and valued. But the most significant outcome is an increase in rural income. Costs and positive impacts (on the economy) There are different types of costs, especially related to promotion activities. The River Tweed Commission study has quantified the economic benefits of Angling Tourism, showing significant financial and employment gains from it. Assynt angling has quantified the number of website visits, unique visitors and page views.

TRAP OBJECTIVES & THE CONTRIBUTION OF THE GP

Trade offs
The method is development oriented and preventive (in the sense of environmental protection)

Contribution to attractive regional growth
The contribution to the growth of rural economies provided is sustainable because fish stocks and fishing permits are monitored and anglers watch over rivers ecological conditions.

Transferability
Transferable

More information
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Good practice name **Institutional good practice for ensuring aquatic eco-system quality, GP12**
Thematic area Aquatic Environment (TA3)
Location Republic of Slovenia
Relevant policy tool The Water Framework Directive, Article 13

GOOD PRACTICE DESCRIPTION

Problem addressed
Numerous water abstractions and derivations for the different purposes (hydropower, irrigation, drinking water etc.) are located on Slovene rivers. In many cases water abstractions are excessive, especially in periods of low flows.

Objectives
To ensure quantity and quality of water in rivers in cases of water abstraction or derivation.

Activities
Definition of criteria for determination, the monitoring and the reporting of ecologically acceptable flow. Hydrological baseline, type of water abstraction, hydrological, hydromorphological and biological characteristics and information on protection regimes have been analysed to assess the flow.

Main results
Protection and improvement of the status of aquatic ecosystems in cases of water abstractions or derivations; methodology for ecologically acceptable flow assessment.

Costs and positive impacts (on the economy)
Monitoring costs.
Benefits: higher value of water which increases riverside land value and tourism activities
Monitoring costs are offset by increasing land value and tourism thanks to an higher value of the environment.

TRAP OBJECTIVES & THE CONTRIBUTION OF THE GP

Trade offs
This good practice is developmental and preventive, the conflicts between different interests sides are not among the objectives.

Contribution to attractive regional growth
Environmental protection is combined with an economic usage of the water bodies and river territories better quality (under ecological and landscape points of view).

Transferability	Transferable.
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Good practice name	**Tourism development plans & products ensuring fishing tourism and water sports compatibility and balance, GP13**
Thematic area	River Tourism (TA4)
Location	Soca Valley Development Centre, SI
Relevant policy tool	Tourism Development Plan

GOOD PRACTICE DESCRIPTION

Problem addressed	Fishing tourism was present on the river Soca for many years but it was based on popular fish species. This brought almost to the extinction of the Marble trout.
Objectives	A concession tool aiming at revitalisation and breeding of autochthonous fish; protection of the local aquatic ecosystems; development of sport fishing as a product in tourism; balance with water sports.
Activities	Activities include: Revitalisation and breeding of autochthonous fish; Protection of the local aquatic ecosystems; Development of sport fishing as a product in tourism; Balance with water sports. With a special research programme the local Angling club (NGO) tried to change the negative trend of the Marble trout amounts and at the same time also develop the sport fishing to a higher level (higher added value, more focus on quality of the services, direct marketing, fly fishing only,...). An action plan for the repopulation of marble trout started in the 1996 and the activities are continuing now. A decree was prepared on the regional level about entrance/exit points, fees and (seasonal and daily) timetable for water sports.
Main results	Aquatic ecosystems of the river achieved a good quality status, especially as far as the ecological aspect is concerned (better state of Marble trout), and tourism angling sector has gained added value but being balanced with environment protection.
Costs and positive impacts (on the economy)	Costs are related to the repopulation of marble trout. Benefits: breeding of fish brings jobs (NGO established a company and employed experts); according to the "spending per day" analysis fishing related tourists is the highest on the ranking list.

TRAP OBJECTIVES & THE CONTRIBUTION OF THE GP

Trade offs	
Contribution to attractive regional growth	Tourism angling sector has gained added value but being balanced with environment safeguarding (par example only fly-fishing is allowed).

Transferability It can be transferable to the regions with a high potential for fishing tourism.

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Good practice name **Regional planning guidelines and resource conservation, GP14**
Thematic area Aquatic Environment (TA3)
Location South West Region, IE
Relevant policy tool Regional Development Plan

GOOD PRACTICE DESCRIPTION

Problem addressed There is an explicit requirement in the legislation that RPGs be prepared in order to support the implementation of the National Spatial Strategy, a twenty-year national planning framework designed to provide a national framework in order to guide policies, programmes and investments.

Objectives To maintain and develop a sustainable and competitive economy in the region, optimise the quality of life of its residents and visitors (by meeting their employment and housing, educational and social needs in sustainable communities), protect and, by reducing impacts on climate change and the environment, including savings in energy and water use and strengthening the environmental quality of the region, enhance its unique environment.

Activities The RPGs is a strategic policy document designed to steer the future growth of the region over the medium to long term and works to implement the strategic planning frameworks set out in the National Spatial Strategy (NSS) published in 2002 and National Development Plan 2007-2013. The RPG sets out high level strategies, in line with the NSS and promotes the overall sustainability and growth of the region. The RPG policies inform and advise the Local Authorities in the preparation and review of their respective Development Plans, thus providing clear integrated linkages from national to local levels, in terms of planning and development policy.
The first RPGs for the South West Region were adopted in 2004 and set out a strategic framework for planning and development for the region up to 2016. The current RPG has reviewed and updated the 2004 document and looks forward to 2022.
The RPGs provide a clear identification of key pressures on aquatic environments and in turn provided a regional policy response to addressing them.

Main results The RPG consultative process has resulted in improved transparency, increased efficiency and streamlining of policy at county and regional level. It is considered that the cumulative impacts of providing a co-ordinated regional environmental strategy for the South West region into the RPG will positive effect on biodiversity including the aquatic environment.

Costs and positive impacts (on the economy) Costs regards planning activities (arranging stakeholders meeting, study analysis,..) and eventual restraints on economic activities due to environmental protection.
The prioritisation of infrastructure at the regional level through the RPGs has required the alignment of planned development with defined investment priorities outlined in

the RPGs. Thus this ensures that infrastructural projects at a Local Authority level are prioritised on the basis of their consistency with the RPGs and in turn focuses public expenditure on projects that will have the maximum economic benefit to the region.

TRAP OBJECTIVES & THE CONTRIBUTION OF THE GP

Trade offs

Costs for the environmental protection and the prioritisation of infrastructural projects able to give the maximum benefit to the region; stakeholder involvement.

Contribution to attractive regional growth

The overall policy aim of the Regional Planning Guidelines is to set out an overall strategic and sustainable approach to the future development of the region, its population and economic growth; the development and strengthening of the local economy is promoted within the context of heightened protection of the region's biodiversity. Environmental protection is internalized into economic development.

Transferability

The concept of preparing and implementing a regional development and environmental strategy as provided by the RPGs is transferable.

For more information

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Good practice name **Regional Environmental River Enhancement Programme, GP15**
Thematic area Aquatic Environment (TA3)
Location Ireland
Relevant policy tool Environmental protection and economic development

GOOD PRACTICE DESCRIPTION

Problem addressed

Many drained rivers are a result of a number of large and small scale arterial drainage schemes which were carried out, across the country, since the 1940's. While such works substantially reduced flooding in many areas and brought much benefit to agriculture there were unfortunately some negative impacts on fisheries, angling and on the river corridor habitat.

Objectives

The project wished to 'enhance' river corridors along arterially drained channels, managed by the Office of Public Works (OPW), through either a Capital Works programme or through use of Enhanced Maintenance strategies; it was envisaged that 'enhancement' or increased diversity of the physical and flow regimes would facilitate increases in biodiversity.

Activities

The OPW initiated the Environmental River Enhancement Programme (EREP) in 2008. This programme has two major strands: capital enhancement where capital investment is required, such as the importation of rock and spawning gravels to help restore or enhance OPW drained channels; enhanced maintenance where available on-site materials are used and no capital investment is needed. The effectiveness of both of these programmes is being assessed through monitoring the impacts of the necessary physical works on the river corridor biodiversity and hydromorphology. Monitoring and survey work undertaken through EREP are carried out with pre and post works in the channels that analyse hydromorphology, plant communities, aquatic macro-invertebrates,

fish communities and bird populations.Future survey work and monitoring work will focus on the information gaps. Monitoring of the enhancement works consists of carrying out pre and post works habitat assessments on representative river stretches with the resulting improvements being reported through the River Basin Management Plans.

Main results Support to the achievement of a good ecological status of drained rivers and increase biodiversity on drained salmonid rivers while maintaining their drainage function but only the release of annual reports can give more detailed information. EREP will provide for the increased enhancement of biodiversity along river corridors.

Costs and positive impacts (on the economy) Enhancement costs for the EREP per annum are approx. €1.1 million euro; approx. costs for plant and labour are ganger/Driver €1000 /wk, excavator €1000 /wk, fencing €8 /m and stone €15/ton. Benefits: in providing remedial actions through EREP it is envisaged that the fishing and angling related tourism activities would benefit thus this would provide for an increase in the tourist potential in many areas.

TRAP OBJECTIVES & THE CONTRIBUTION OF THE GP

Trade offs The costs for capital enhancement of the rivers and their maintenance is offset by increasing fishing and tourism activities which is due to the improvement of the ecological status of the rivers.

Contribution to attractive regional growth EREP has positive impact on fishing activities but at the same time addresses fisheries protection and it contains an approach towards dealing with invasive species. This encouragement of a sustainable economic activity creates the potential for rural diversification in the predominately rural parts of the region.

Transferability It could be transferred.

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Good practice name **Rural Environmental Protection Schemes, GP16**
Thematic area Aquatic Environment (TA3)
Location Ireland
Relevant policy tool The Water Framework Directive, Article 13

GOOD PRACTICE DESCRIPTION

Problem addressed Farming activities may damage the environment (par example by using herbicides, pesticides and fertilizers which pollute soil and water bodies).

Objectives To establish farming practices and production methods which reflect the increasing concern for conservation, landscape protection and wider environmental issues, including water quality; protect wildlife habitats and endangered species of flora and fauna; produce quality food in an extensive and environmentally friendly manner.

Activities

REPS (Rural Environment Protection Scheme), is an agri-environmental scheme designed to reward farmers for carrying their farming activities in an environmentally friendly. This tool, after the 2014, will be replaced by the Agri-Environmental Options Scheme (AEOS) which will be on much smaller basis because they will only cover certain aspects of the farm holding.
The latest version of the Rural Environment Protection Scheme, REPS 4, encourages farmers to enhance the environment through a range of actions including the management of their farming activities for a five year period in accordance with an agri-environmental plan prepared in accordance with the Scheme document and agri-environmental specification, creation of a plan prepared for the total area of the farm, reduced use of fertilizers and pesticides, protection and maintenance of all watercourses and wells.
The scheme also assists in maintaining existing hedgerows and planting new ones, growing crops to provide food for wild birds and preserving traditional breeds of animals.

Main results

The main success of REPS has been its role in assisting in incorporating environmental awareness and actions into farming practice. National Farm Survey (NFS) data has shown reductions in nitrogen, phosphorus and methane on REPS farms compared to non-REPA farms within NFS categories; while there is little published evidence to support this, it is considered that there will be consequent positive effects on water quality and aquatic environments. The visual value of the rural landscape has improved.

Costs and positive impacts (on the economy)

From 1994 to 2010, REPS has paid over €3.1 billion to Irish farmers with about €368 million being allocated in 2009. The Teagasc National Farm Survey estimated that 45% of farms received REPS payments in 2008 and that the average family farm income on REPS farms was €18,339, about 15.5% higher than the €15,869 income on non-REPS farms. Benefits: aside from financial benefits to participants in the scheme, the main economic benefit of the REPS payment has been in maintaining farm structures and farming in places where intensification or abandonment might otherwise have occurred; this has benefited the small to medium farm holders.

TRAP OBJECTIVES & THE CONTRIBUTION OF THE GP

Trade offs

REPS partially compensates payments to farmers by supporting the continuation of farming in areas where abandonment may have occurred. This has assisted in maintaining the characteristics of the working landscape, making these rural areas more attractive to tourists (especially concerning farm holidays).

Contribution to attractive regional growth

REPS have been the only economic policy incentive for Irish farmers to enhance the environment and landscape contribution of their holdings. Farming activities are managed in a more environmental friendly way, leading up to a better water and landscape quality.

Transferability

The scheme can be transferred as an intermediary step towards more sustainable agricultural practices. Similar agri-environmental schemes may exist in partner states and certain aspects of REPS may be transferable.

For more information

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Good practice name	**Forestry and water qualities guidelines, GP17**
Thematic area	Aquatic Environment (TA3)
Location	Ireland
Relevant policy tool	Water Framework Directive, Article 13 Coordination actions

GOOD PRACTICE DESCRIPTION

Problem addressed	Forestry activities could have negative impacts on the environment.
Objectives	To provide guidelines on best management practices by combining Coillte's previous management documents with experience gained in the field.
Activities	Coillte was established under the Forestry Act 1988 and it is a commercial company operating in forestry, land based businesses, renewable energy and panel products. The main activities of this organization regard planning procedures for the completion of high impact operations, focus on appropriate planning and management of mitigations to avoid potential impact to watercourses arising from forest operations, visual water monitoring procedures, detailed analysis of water sampling procedures. Natives woodlands are encouraged where it is considered that commercial species may have a negative impact on aquatic environments.
Main results	The good practice has a positive effect on water quality and the aquatic environment. It provides clear guidance to local forest management and process team and it is a bridging step between forestry operations and WFD programme of measures.
Costs and positive impacts (on the economy)	Costs are related to mitigation actions and visual monitoring procedures. Benefits: the attention to a sustainable development of forestry in the South West region enhances this area reputation as being green and environmentally friendly. There is also the creation of the potential for rural diversification in the predominately rural parts of the region.

TRAP OBJECTIVES & THE CONTRIBUTION OF THE GP

Trade offs	Trade-offs are between mitigations and visual monitoring actions, as well as the limitation of forestry activities linked to commercial (and so profitable) species which have negative impact on aquatic environment, and the enhancement of South West region reputation for paying attention the environment quality.
Contribution to attractive regional growth	This good practice assists in supporting the sustainable development of forestry in the South West Region, favouring also actions which have positive impacts on the aquatic environment and thus enhances the South West Region reputation as a green and environmentally friendly economy.
Transferability	It could be transferred as an intermediary step (guidance action)towards more sustainable forestry practices and management.
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Good practice name	**Systems for forecasting of floods, GP18**
Thematic area	Monitoring (TA2)
Location	Banat Region, RO
Relevant policy tool	The Water Framework Directive

GOOD PRACTICE DESCRIPTION

Problem addressed

The risk of floods. The early warning and flood prevention measures can be elaborated only based on a sustainable monitoring system. The forecast of the flood in real time should avoid loss of human lives, significant economic loss, damages to landscape and habitat.

Objectives

The objective of the good practice consists in risk management of the floods evaluated through economic, social and environment objectives. Economic objectives follow the flood protection of the existent economic infrastructure, social objectives are related to protecting the public and the communities from floods, environmental objectives are linked to maintain a balanced economic and social development and the environmental protection.

Activities

The methodology of the flood risk forecasting foresees topogeodezical measurements, analysis of the hydrological and climatic data, achievement of 1D and 2D hydrodynamic modeling, development of the maps of risk and vulnerability, analysis of the existing flood defence infrastructures, development of the scenarios for flood defence and prioritization of flood prevention measures for building new flood defences (but also their development and achievement timetable). Most part of the activities has been fulfilled and at the moment the last two steps are being carried out. Next steps are to be taken to elaborate of a strategic plan for a fully implemented monitoring system according to the WFD best practices.

This methodology uses specialized equipment and software: equipment for topogeodezical measurements using FLI-MAP method and specific software for digital models of territory and for 1D and 2D hydrodynamic modelling.

Main results

The digital territory models based on the topogeodezical measurements; the hydrodynamic models, based on DTM and the hydrological and climatic data analyses; the maps of flood risk and vulnerability, based on the hydrodynamic models and the existing flood defence infrastructure analyses. All these tools improve flood protection

There is the possibility of improving the flood defence infrastructure by building new infrastructure exactly at the flood risk location will be possible.

Costs and positive impacts (on the economy)

An estimation of the flood monitoring implemented in the Banat region is approximated at 800.000 Euro.

Benefits: reduction of the significant recovery cost due to flood damage. At the same time the flood risk assessment allows to find areas where the risk is low and it is possible to carry out economic activities in an intensive way.

TRAP OBJECTIVES & THE CONTRIBUTION OF THE GP

Trade offs

Not really a trade-off. However, flood monitoring and building flood defences (and their costs) avoid the considerable economic losses caused by major flood events.

Contribution to attractive regional growth. The increased flood protection that GP 18 offers has a big positive impact not only on the environment (which is more protected)

but also on the economy and society as it is possible to better protect the existent economic infrastructure and to ensure future economic and social opportunities for the future generations.

Transferability This good practice covers both methodology and technology issues that can be transferred or should be purchased from different suppliers.

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Good practice name **Technology and system for Monitoring the manner in which sediments deposit both in an artificial dam lake and along a river, GP19**
Thematic area Monitoring (TA2)
Location South-Muntenia Region, RO
Relevant policy tool The Water Framework Directive

GOOD PRACTICE DESCRIPTION

Problem addressed The real time monitoring devices development for deposits in the dam lakes becomes a capital. In Romania, the clogging of some artificial dam lakes, the navigable channel of Danube, which are strategic interest areas, may lead to damage. The river bed erosion (downstream of the dam) by the circulated water through the accumulation due to deposition in the lake increases its erosion capacity. An accurate assessment of the sedimentation process is very important.

Objectives The main objective of the good practice consists in real time continuous monitoring of the hydrodynamic parameters and mostly of the thickness of the sediment layer, the turbidity and the sediment flux using the CASP (coherent acoustic sediment probe).

Activities GP 17 is a monitoring good practice that will help to improve the sediment monitoring and the planning & implementation of the specific measures against the clogging of the dam lakes, navigable channels, ports areas, etc.
It is applied on Arges River and targets the dam Lake Pitesti, at 3rd km downstream of confluence with Doamnei River. Since now there have been achieved the first project's activities and have been obtained: the mathematical modelling of the Pitesti dam lake, the data input into the modelling software Delft 3D, the 2D meshing of the interest zones, the achievement of the 3D model by morphological analysis with increments.
Solutions are foreseen to minimize erosion of the territorial area of the river, with agro and hydro technical works.
The accepted and recommended methods for evaluating and characterizing the amount of sediments are: echo-probe signals comparison, seismic-reflection, methods of penetration, use of satellite-investigation methods.

Main results In the Arges river it has been shown the usefulness and effectiveness of the equipment and procedures used to monitor local sediments hydrodynamics. Also through the introduction of precise measurement data provided by equipment developed, for the variation of sediment thickness, turbidity (in certain areas of ecological interest) and granulometric sediment transport into the delft 3d software there were obtained more accurate results in water accumulation and hydrographic basin modelling.

Costs and positive impacts (on the economy)

An estimation of the monitoring technology and systems in the artificial dam lake Piteşti and along the course of river Argeş (15km) is about 1,150,000 EURO.
Benefits: continuous real-time measurement of the sediments layers and the technical intervention before the clogging event takes place have great economic and social effects. Clogging of the navigable channels or the ports areas and stopping the goods transport activity generates considerable losses; all interventions for cleaning, dredging etc. before the major incidents have lower costs with 30-35 % compared to the emergency situations.

TRAP OBJECTIVES & THE CONTRIBUTION OF THE GP

Trade offs

Monitoring costs are offset through the measurement of the sediments layers in the navigable channels (also in dam lakes and port areas) and the adoption of measures against the clogging, which reduce losses related to the stop of goods transport caused by this phenomenon.

Contribution to attractive regional growth

The analysis of sediments levels and the measures to undertake against the clogging are useful not only to improve hydrodynamic status of water bodies but also to reduce losses to economic activities (during good transport stages) caused by the clogging.

Transferability

This good practice covers both methodology and technology issues that can be transferred or should be purchased from different suppliers.

For more information

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Good practice name **Project demonstrating environmentally friendly tourism development project taking into account forest resources, GP20**

Thematic area River Tourism (TA4)

Location Western Macedonia, GR

Relevant policy tool European Landscape Convention (economic development and environmental protection)

GOOD PRACTICE DESCRIPTION

Problem addressed

Lack of information and guiding maps for the visitors.

Objectives

The main objective was to develop and apply recommendations and quality standards for the area of Pentalofos including interpretive trails, guided walks and exhibitions. The project was designed to raise awareness of the natural and cultural heritage in a recreational setting, bring together different methods of communication with the specific objective of addressing public's visiting and increase competitiveness of sustainable tourism

Activities

The Transnational Cooperetion Project «TRANSINTERPRET II» has been held from August 2003 until September 2006 and involved totally fifteen partners from four

different countries. It has been proposed a special interpretation methodology, called Transinterpret, which offers to visitor's qualitative tourist experience satisfying the needs for tourist products with elements from the natural and cultural heritage of an area, besides the typical accommodation, restaurants, shopping and entertainment areas.
The creation of some infrastructures, as bridges and paths or an integrated map which guide the tourist at the five different trails, has been necessary in order that the interpretation methodology be implemented.
Main aspect of this good practice is the realization of the Transinterpret database (translated in German, English, Italian and Greek): construction of the expert database, basic database structure (literature research, advice to concrete interpretation projects), entry of recommendations for self-guided trails (inventory of existing interpretive facilities).

Main results

It is not only demonstrated the practical applicability of the recommendations contained in the database, but it was also taken beyond the project itself by relevant visitors' survey results; these have demonstrated that the interpretive approach holds considerable appeal to a German public. The additional input required by the multi-faceted know-how of Heritage Interpretation is offset by considerably higher degrees of visitors satisfaction.

Costs and positive impacts (on the economy)

Calculating the expenses that concerned the various facilities in the area of Pentalofos (reconstruction of bridges - taps, construction of stoned pathwaysetc.), the expenses concerning the participation and training in the Transinterpret II programme, as well as the promotion expenses (panels, signs, maps), then the total cost rises up to 400.000 euro. Benefits: the additional input required by the multi-faceted know-how of Heritage Interpretation is offset by considerably higher degrees of visitor's satisfaction, which in turn is an important factor in optimising the economic benefits provided by tourism. Increase of the visiting in the area.

TRAP OBJECTIVES & THE CONTRIBUTION OF THE GP

Trade offs

The costs for the infrastructures and the implementation of the interpretation methodology, which indirectly contribute to landscape safeguarding, are covered by the increase of tourists in the area, a consequence of the raising awareness of natural and cultural heritage.

Contribution to attractive regional growth

Even if there are no impacts on the aquatic environment, this good practice addressed ELC indications (raising awareness of natural and cultural heritage), including so landscape protection into economic development.

Transferability

This good practice is transferable because it is a methodology for interpretation and not a specific tool based on a particular project for a particular area.

For more information

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Good practice name	**Project on river territory rehabilitation & land use change; including infrastructure for river tourism, riverbank improvement, water treatments in villages and cities, GP21**
Thematic area	Aquatic Environment (TA3)
Location	Zemgale Region, LV
Relevant policy tool	Natura 2000

GOOD PRACTICE DESCRIPTION

Problem addressed

The Lielupe river basin is at the risk not to achieve the EU WFD target, to have good water status by 2015. 75% of the river waters in Latvia have a potential to fail meeting water policy objectives because of pollution load by nutrients as well as morphological changes (hydropower plants, drainage). Moreover, transboundary pollution from Lithuania to Latvia is significant factor. The pollution in water bodies is caused either by point source or diffuse pollution.

Objectives

The overall objective of the good practice is to improve environmental status in the Lielupe river basin by implementing joint measures targeted to management of water resources in the border region.

Activities

This good practice includes different activities : study on the existing solutions and practices on the rain water, drinking and sewage water in rural settlements; planning and designing of improvements in water systems in the region; inventory on the river water quality by boating, sampling and express tests; local meetings and campaigning with individual house/land owners to encourage undertaking the improvement measures; cleaned river/lake banks; construction of rainwater sewage system in Bauska (mouth in Memele river) and elaboration of technical project for rainwater collection system development in 59 ha area in Bauska (mouth in Musa river).
The projects has several innovative aspects for the region: joint comprehensive LV/LT study including information on existing available solutions and equipment for rural settlements to deal with rain water, drinking water and sewage waters; assessing water quality in the way foreseen by the project- boating along rivers ; taking and analysing key compounds, then inviting to local people to discuss the results.

Main results

River stage of purification from overgrowing by restoring swift habitats and fish spawning sites, significantly also improves water quality and bathing conditions. These measures to increase the velocity prevent potential cyanobacterial blooms but improves water rapids aeration. Awareness and capacity building of local governments on environmental issues have risen and a rain water management system has been realized.

Costs and positive impacts (on the economy)

More than 1.200.000 € for different projects. Benefits: improvements have been observed in the field of tourism, as the project activity is an indirect influence on tourism; improved drinking water quality leads to reduced treatment costs.

TRAP OBJECTIVES & THE CONTRIBUTION OF THE GP

Trade offs

Rehabilitation of the river, which has made this last more attractive to tourists, is counter-balanced by the costs for the rehabilitation actions. The improvement of drinking water (a provisioning ecosystem service) has reduced treatment costs.

Contribution to attractive regional growth

By improving aquatic environment, increasing environmental awareness of society through gained information, knowledge and more advanced skills in the management of water resources and involving local stakeholders (including local citizens) into the policy making process, economic growth in the region has been boosted.

Transferability

This practice is definitely transferable.

For more information

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Good practice name **Reservoir for temporary water storage as safety provision and as Natura 2000 area, GP22**

Thematic area Aquatic Environment (TA3)

Location Onlanden, NL

Relevant policy tool The Water Framework Directive

GOOD PRACTICE DESCRIPTION

Problem addressed

In 1998 excessive rainfall caused very high water levels in the northern part of the Netherlands. Urban and rural areas were in danger of flooding. There were also some agricoltur problems such as fragmentation of land use and the locally small parcel size.

Objectives

Improvement of agricultural structure, combined with the accelerated creation of nature areas together with the risk reduction of unwanted flooding.

Activities

In order to fully realize the assignment and goals about 800 ha of land in the Onlanden area that was still in agricultural use had to be acquired. An improvement of the agricultural structure was intended for agriculture by concentrating agricultural land around the company structures as much as possible and enlarging the house parcels, so cows could graze around the company structures the whole year round. In the Peizer- and Eeldermaden a water storage facility has been developed in order to store excess water during extreme precipitation. These water storage areas have been cleared of agricultural lands. Embankments have been built around the water storage areas and existing embankments have been elevated. In the southern part of the water storage area the old meanders have been rebuilt where possible and part of the area has been turfed for the realization of nature; with that the lower parts have been accentuated and open water has been created. Along the Eelderdiep the bank strips have been partly dug off to stimulate swamp development and create a more subtle passage between water and land. Other actions to improve nature have been carried out.
Regarding the landscape, some peat mounds have been preserved as archaeological monuments where possible. Also the cultural historically important elements of point, line and plane and the relation between those has been maintained and reinforced where possible. The area is accessible to recreational guests via cycle tracks and footpaths. The focus here lies on daily recreation consisting of walking, cycling, horse, riding, fishing and boating.

Main results

The creation of a large area of wetland, connected to the lake Leekstermeer, will improve water quality. Especially fish and marsh plant species will profit. Thanks to the creation of a water storage area the safety in the territory has increased (in extreme situations like in 1998 the maximum level of the water will be 0,40 m lower).

Costs and positive impacts (on the economy)

The realization of the initiatives costs 41 million Euro; some farming activities have been dismissed for the creation of the water storage area. Benefits: For the agricultural sector the greatest effect is that the amount of parcels per company decreases and that house parcels have been enlarged. This has a positive effect on company expenses by a decrease in traveling distance and more efficient cultivation of the parcels. A total of four companies are relocated; the relocation made room for water storage and nature; at the same time enabled themselves to grow into a much more optimal company. Recreation is stimulated by the more attractive landscape.

TRAP OBJECTIVES & THE CONTRIBUTION OF THE GP

Trade offs

The creation of a wetland area has been expensive directly and also indirectly by dismissing some farming activities. However, the improvement of water quality comes with a more rational reorganization of agriculture land parcels and the water storage area reduced economic damages caused by flooding. Landscape quality has also been increased, supporting recreational activities.

Contribution to attractive regional growth

Safety measures (the water storage area) and nature development contribute to reduce flooding damages on economic activities and are well combined with optimizing arable farming. Recreation is stimulated by creating a very large and high quality (under environmental and landscape points of views) nature reserve.

Transferability

It is transferable in areas where flooding risk is concrete.

For more information

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Good practice name **Re-meandering of river streambed as both WFD and safety measure in agricultural production area within the law of land reform, GP23**

Thematic area Aquatic Environment (TA3)

Location Province of Drenthe, NL

Relevant policy tool The Water Framework Directive

GOOD PRACTICE DESCRIPTION

Problem addressed

The agricultural developments during the 20th century the Oostervoortsche Diep area caused many problems to the environment because the landscape became so dry and eutrophic that there was no more room on the land and in the brook for many domestic species of plants and animals. The quality of water deteriorated. The improved drainage system for agricultural use led to more flooding in northern Drenthe and Groningen.

Objectives

Restoration of the stream valley (Oostervoortsche Diep) combined with water safety measures.

Activities

In the narrow valley there are only options for the brook and water retention on ground level (the possibilities for water conservation in many, higher parts proved impossible because this would damage the agriculture).
Because natural brooks have a fairly large width-depth relation and because shallow brooks drain very little, the choice concerning the brook restorations was made in favour of relatively shallow, wide brook. It has been chosen for a modestly bending brook that follows the lowest parts; only downstream a part of the old location was chosen because of the presence of archaeological value sites.
Many measures have concerned the terrains around the brook as removing the eutrophic top layer of the ground or filling many ditches.
As a compensation for the farmers, damaged by the brook and terrains development, a start with an elevation of the ground level, for parcels that still would be sub irrigated, was already made in the north for the future path of the brook valley downstream.
Though the promotion of recreation was not a goal of the project, contact with the region brought up the demand for a few recreational utilities.

Main results

Safer water system; reduction of peak discharges; stream valley restoration in the aquatic and terrestrial areas (characteristic fish species were favoured and plant species showed an increase after restoration measures).

Costs and positive impacts (on the economy)

The costs of the entire project are ± 2,8 mill Euro (including compensating measures for the farmers). The northern part, which has already been executed, cost 1,7 mill Euro, the southern part is not yet finished but will be about 1,1 mill Euro. Because of the brook and terrains development agricultural land in the area can become more wetter, causing damaging by flooding. Benefits: arable farming has been improved. Recreation is stimulated by the more attractive landscape.

TRAP OBJECTIVES & THE CONTRIBUTION OF THE GP

Trade offs

The costs for rehabilitating the brook are offset by a higher environmental value of the area; the more attractive landscape has favoured recreation activities. Interventions for the brook have damaged arable farming (par example part of the agricultural areas have been converted to nature function) but some compensations measures improved it.

Contribution to attractive regional growth

It has been established a new balance between farming activities and nature where, in addition to a better ecological status of the area, the landscape is more attractive and arable farming has been improved under some point of view.

Transferability

This good practice can be transferred.

For more information

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Good practice name	**Integrated rural intervention with re-meandering helophyte water filtering of agricultural and industrial effluent with voluntary participation of government and private partners, GP24**
Thematic area	Aquatic Environment (TA3)
Location	Province of Groningen, NL
Relevant policy tool	Environmental & economic development

GOOD PRACTICE DESCRIPTION

Problem addressed

In the past decades the brook Dwarsdiep has been straightened and widened to accommodate agricultural and economic use. This has resulted in an increase of peak discharges in periods with rain, but a shortage of water in periods of drought.

Objectives

The optimization of nature development (establishment of a wetland/marsh water retention area), water quality, industrial production and recreation in the Marumerlage area. To compensate for the water shortage, water is pumped from another area, into the catchment area of the brook. These changes have a negative influence on the water quality of the brook and on the ecological status of the basin.

Activities

A strategic development plan (SIP) is aimed towards the Marumerlage, an area which is part of the Dwarsdiep brook valley. The foundation for this strategic development plan consists of three measures that the water board intends to take in the Marumerlage on short notice (late 2015): construction of a 25ha marsh area, the 4th purification stage and the renovation of the RWZI (sewage treatment system) Marum.
The marsh area (expected to be realized during the duration period of TRAP) is aimed towards ecological purposes (flora and fauna) but it will also be set up for water buffering; by squeezing off an existing waterway, water is retained in the lower area.
It has been agreed that an end-of-pipe technology would be realized for the RWZI Marum in late 2015 for the extra purification of the effluent: a 4th purification step behind the RWZI. The RWZI Marum will be renovated and gain a capacity improvement.
Three industrial activities can be found in and around the Marumerlage: the RWZI Marum, the AWZI at the cheese factory in Marum and the butter factory in Noordwijk; cooperation between Noorderzijlvest (the waterboard) and these private actors has been explored.

Main results

Combination of different policy goals in one integral plan; possible collaboration with commercial partners; after the implementation of the devised measures, water quality will improve, especially in ecological terms.

Costs and positive impacts (on the economy)

The estimated costs for the creation of a marsh area is 1.187.00€, for the 4th purification stage of the RWZI Marum is 352.000€, for the renovation of the RWZI Marum is 4.700.000€. Benefits: at least two food processing factories (the butter and cheese factories) will be able to develop, without an extra negative influence on the water system; trying to integrate industrial activities into the water system the employment in the area is preserved. The efficiency of the wastewater treatment plant will be optimized. More recreation activities are possible.

TRAP OBJECTIVES & THE CONTRIBUTION OF THE GP

Trade offs

Implementation costs of the three measures are necessary to improve aquatic environment by creating a nature reserve which stimulates recreation opportunities and

adopting more effective methodologies for wastewater management.

Contribution to attractive regional growth

Intended measures accommodate both ecological and economic improvement, including the growth of a cheese factory (without damaging local aquatic environment). The ecosystem service of the brook and it's (to be constructed) marsh and filters will benefit economic development (e.g. more recreational activities), assuring at the same time a better transition of wastewater to water of adequate quality. Cooperation between stakeholders in an early stage of strategic thinking resulted in a common notion and view on ecologic and economic potential of the area.

Transferability

The method of water system analysis and technologies of natural wastewater treatment can be transferred.

For more information

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Good practice name **Determination of water management practices in a big lake combining Natura 2000 aims and water safety limits, GP5**

Thematic area Aquatic Environment (TA3)

Location Lauwers Lake, NL

Relevant policy tool The Water Framework Directive

GOOD PRACTICE DESCRIPTION

Problem addressed

Lauwers Lake is a former estuary that borders the Waddensea, separated from the sea in 1967. Lake Lauwersmeer is part of the watersystem of the waterboard Noorderzijlvest. Due to issues on safety (after the high water levels in 1993 and 1995 and the problems with excessive water in the following years it became clear the Netherlands had to change its water management) and environmental goals (the area is a nature reserve which addresses Nature 2000) the water level management is being researched.

Objectives

Optimization of present and future operational water management in the Lauwersmeer with regard to water safety standards, the development of nature values and economic values; taking into account the relations between hinterland (upstream) and Wadden Sea (downstream); protection against overflowing and floods.

Activities

Provinces of Gronigen and Drenthe, liaising with the Regional Water Authority Noorderzijlvest and acknowledging the problems related with the water management of the Lauwers Lake, led in 2001 to the ambition of drawing up the Water Vision, a plan which focuses on the future of the lake in order to realize proper water management.
Considering different types of scenarios about future water management it has been selected an alternative whose focal point was the construction of a large pumping-station at Lauwersoog, keeping the lake as a fresh water one and permitting fish migration from the sea to the lake and vice versa. In September 2012 the boards of both regional water authorities involved will most likely decide whether or not a pumping-station should be built. Researches about the ecological importance and of Lake Lauwersmeer in relation to the total water system have been carried out, together with an analysis of hydrological characteristics of the catchment areas, the lake (functioning as a reservoir) and the tidal movement at sea.

Main results

All stakeholders were closely involved during all phases of the process and so, the many, sometimes conflicting, functions of the Lauwers Lake area were represented in the best possible way; explicit attention for aquatic species and the natural environment which spreads from the upper reaches of brooks in the province of Drenthe to the Wadden Sea and vice versa.

Costs and positive impacts (on the economy)

Total amount of research and policy development costs are estimated at at least €300.000; costs for the pumping-station are estimated at approximately €175 million.
Benefits: no direct economic benefits arise from the good practice. But from the outcome of the research it has been gained knowledge on the management of the water system and the effects of this management on fish and fisheries.

TRAP OBJECTIVES & THE CONTRIBUTION OF THE GP

Trade offs

Trade offs are between costs for research and (eventual) realization of a pumping-station, which is very expensive, and the opportunity of a high environmental value of the area and a more efficient management of the water system thanks to a better knowledge. Improving the aquatic environment of the lake help to make it more attractive to tourists.

Contribution to attractive regional growth

Gaining knowledge on the hydrologic characteristics of the Lauwersmeer and its ecological relevance help to optimize water management in the lake, allowing the development of its natural and economic values. It is possible improve fish-stocks in order to have a more sustainable conditions in fishing (protection of the species but also a bigger quantity of fishes can be achieved).

Transferability

The good practice is transferable.

For more information

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Good practice name **GP26 Catchment Management Plans**
Thematic area Governance (TA1)
Location UK
Relevant policy tool WFD, Article 13

GOOD PRACTICE DESCRIPTION

Problem addressed

Top-down Government regulation is unable to capture local knowledge or engage the wider community in decision making with respect to managing freshwater resources

Objectives

Main Objective: Develop shared understanding of issues within a catchment, drawing on local expertise across a range of stakeholders. Identify co-ordinated action and deliver benefits to the environment.

Sub Objective

Capture measures, responsibilities and timelines within a catchment plan

Activities

- Establish catchment host and wider partnership including water companies, local Government, NGO's, supply chain businesses.
- Develop shared understanding of current issues,
- Deliver actions and hence benefits to the environment, influence how resources are used, help shape and inform content of 2nd cycle RBMPs thereby fulfilling Article 14 of the WFD.

Main results

Catchment partnerships have been successful in bringing together a wide range of stakeholders, often with conflicting views, and reaching a consensus on action and delivery. Local expertise and knowledge has been captured within a catchment plan which will be used to feed into and, where necessary, challenge 2nd cycle River Basin Management Plans.

Costs and positive impacts (on the economy)

Catchment stakeholders are able to bring local knowledge to the national approach to cost-benefit analysis, at times modifying the outcome of that analysis, such that a particular measure is no longer deemed to be 'not feasible' on the grounds of cost. In addition, local catchment groups can deliver (or co-deliver) measures reducing costs.

TRAP OBJECTIVES & THE CONTRIBUTION OF THE GP

Trade offs

The inclusion of a wide range of stakeholders within the catchment groups means that trade-offs have been identified, e.g. between farmers and water companies, whereby the former modify their land management practices within drinking water source areas.

Contribution to attractive regional growth

Trade-offs are identified that secure economic output (e.g. from agriculture) whilst affording environmental protection, particularly with respect to freshwater.

Transferability

Transferable

For more information

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Good practice name **GP27 Governance, Structure and goals of the Rivers Trust Movement**
Thematic area Governance (TA1)
Location UK
Relevant policy tool WFD, Article 14

GOOD PRACTICE DESCRIPTION

Problem addressed

Top-down Government regulation is unable to capture local knowledge or engage the wider community in decision making with respect to managing freshwater resources.

Objectives

Establish a catchment scale network of environmental organisations nationwide to work in partnership with local stakeholders to protect and enhance freshwater ecosystems through land and water management. Illustrate the functioning of this network in terms of its Governance and soft influencing power.

Activities	- Wide stakeholder enagagement to reach consensus on measures - Assert 'soft' influencing power and co-deliver benefits in partnership with Government - Undertake integrated catchment management to deliver benefits outlined below
Main results	Engagement with local stakeholders to reach consensus on action and delivery that leads to; Quantifiable improvements in water quality and aquatic habitat; Improvements to agricultural practice and efficiency; Reductions in flood risk; Control or eradication of invasive non-native species.
Costs and positive impacts (on the economy)	Delivery of environmental benefits more cost-effectively than is possible from central Government and Agencies. Engagement with farmers has led to more efficient farming practices leading to economic savings for farmers.

TRAP OBJECTIVES & THE CONTRIBUTION OF THE GP

Trade offs	Engagement by Rivers Trusts with a wide range of stakeholders within the catchment groups means that trade-offs have been identified, e.g. between farmers and water companies, whereby the former modify their land management practices within drinking water source areas. Such Paid Ecosystem Service approaches have led to deals being brokered by Rivers Trusts in the role of an independent middle-man.
Contribution to attractive regional growth	Trade-offs are identified that secure economic output (e.g. from agriculture) whilst affording environmental protection, particularly with respect to freshwater.
Transferability	Transferable

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Good practice name	**GP29**
Thematic area	Governance (TA1)
Location	Northern Finland and Karelia (RU)
Relevant policy tool	Regional development plans + WFD Article 13 + Article 14

GOOD PRACTICE DESCRIPTION

Problem addressed	To set up a regional development zone (RDZ) to address economic development and environmental (namely water) protection needs, linking Kostamush (Russia) to Oulu (FI) through Kajaani (FI). BACKGROUND: OUKA, as an RDZ, builds on historical routes, but expands their significance into economic, environmental and infrastructural development. Formal work started in 2001, but discussions go back to 1993 (with Arkangelsk, RU).
Objectives	OUKA is the Oulu – Kajaani river corridor development programme. OUKA is a regional development zone and builds on historical routes, but expands their significance into

economic, environmental and infrastructural development. Formal work started in 2001, but discussions go back as early as 1993 (with Arkangelsk, RU). The objective of these discussions has been to set up a regional development zone to address economic development and environmental (namely water) protection needs, linking Kostomuksha (RU) to Oulu (FI) through Kajaani (FI).
Key objectives 2007-2010: (a) master plan production (formulation of the development zone model), (b) OUKA visibility and awareness-raising, (c) development of skills for prioritised activities within the zone such as well-being, the environment and tourism; (d) increase of the attractiveness of the Oulujoki (Oulu river) area; (e) promotion and development of international transport.

Activities

OUKA key activities include (1) Management: the set-up of the new association by the zone-participating regions; (2) Programme content definition: three consecutive coordination projects; (3) Implementation: Business exchange and cargo through developed train infrastructure links Barents / Murmansk to Finland and the Baltic (Bothnian corridor); Terva cultural route; Fresh water (Oulu river) rehabilitation projects. Outcomes include the tourism development in Sotkamo (Kainuu), the growth of mining activities within the zone, the linking of geoparks to tourism and the strengthening of transport connections to the area. The biggest challenge is acknowledged to be population ageing and population reduction in the area. Other challenges, such as the closure of the paper industry in Kainuu in 2008 and the relocation of ICT from Oulu to lower labour-cost countries, are addressed through new development schemes and partnerships.
The 2020 OUKA vision focuses on business development, attraction of qualified labour, well-being and quality of life (including high quality ecosystem services), environment and tourism-related entrepreneurship and skills. The zone continues through Vartius to the Arkhangelsk region as an international transport corridor and development zone.

Main results

Management: new association by the zone-adhering regions; (2) RDZ content definition: 3 consecutive coordination projects; (3) Implementation: Business exchange & cargo through developed train infrastructure links Barents/Murmansk to Finland and Baltic (Bothnian corridor); Terva cultural route; Fresh water (Oulu river) rehabilitation projects.
Summary of key activities implemented 2007-2010: Signing of the Partnership Agreeement, Production of Master Plan, Production of Activity and Funding Programme (Regional Councils and Structural Funds of Northern and Eastern Finland), development projects implemented in parallel, dissemination and networking, interregional research, training and the promotion of cooperation in the development.

Costs and positive impacts (on the economy)

The set-up and first period of operation of OUKA required some 3 - 6 years, between 2001 - 2010. This is further distinguished into two main time periods:

OUKA stage1
2001 - 2004 and 2004 - 2007: Preliminary planning for 2001 - 2004, 2004 - 2007 development project, letter of intent / MoU signed by 9 municipalities, a co-ordination project with 12 sub-projects; total cost 1 000 000€, two Regional Councils.

OUKA stage2
2007 - 2010 Signing of the Partnership Agreement 8 municipalities, 1 coordination project with subprojects, financing decision for 2007 - 2008 of 217 000€, financing decision for 2009 -2010 of 237 000€.

10
OULU-KAINUU 2013 TYÖOHJELMA 1.11.2010-31.10.2013 (Työohjelma luonnos 16.6.2010)

OUKA stage3 [10]

2010 (1.11.2010) - 2013 (31.10.2013): An updated programme was prepared which includes a SWOT and a vision to 2020. The programme is jointly supported (as before) by the two Regional Councils of Northern Ostrobothnia and of Kainuu. On the positive side outcomes include the tourism development in Sotkamo (Kainuu), the growth of mining activities within the zone, the linking of geoparks to tourism and the strengthening of transport connections to the area. The biggest challenge is acknowledged to be the population ageing and the population reduction in the area. Other challenges, such as the closure of the paper industry in Kainuu in 2008 and the relocation of ICT from Oulu to lower labour-cost countries, are addressed through new development schemes and partnerships. The 2020 OUKA vision focuses on business development, attraction of qualified labour, well-being and quality of life (including high quality ecosystem services), environment and tourism-related entrepreneurship and skills. The zone continues through Vartius to the Arkhangelsk region as an international transport corridor and development zone. Further development of the zone will be based on this well-established co-operation, together with nature and culture resources combined with the opportunities created by improved transport.

TRAP OBJECTIVES & THE CONTRIBUTION OF THE GP

Trade offs

Not really a trade off issue

Contribution to attractive regional growth

OUKA is a good practice in inter-regional governance (including water) and development. The implemented activities and their continuous growth testify to the success of the OUKA RDZ, e.g. one of the Oulu river rehabilitation projects is a TRAP good practice (the fish way). Weakness: economic interactions within the RDZ, still need efforts to flourish.

Transferability

The model is fully transferrable

For more information

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PART 2
REGIONAL NEEDS ANALYSIS

CREDITS

TRAP concept flow: ANKO, PP8

Conceptualising the River Basin Management Plans (RBMP) structure: River Trusts, PP4 and Kainuun Etu, PP1

Matching TRAP good practices (GPs) to the RBMP specifications: River Trusts, PP4 and Kainuun Etu, PP1

Synthesis report: Kainuun Etu Oy, PP1

Contributions (regional needs analysis reports & comments to this report, any other contributions): all TRAP partners

SUMMARY

With the completion of the regional needs analysis TRAP implementation has achieved a milestone: to match (very) complex Water Framework Directive (WFD) & integrated river territory development good practices to respective needs in the regions. We have followed a systematic approach and created methodological tools to help document regions' needs regarding the WFD & integrated river territory management. We hope that in the process, it has been possible to also raise further awareness among all of the partners of the WFD, the European Landscape Convention (ELC) and the operational connections to regional policies.

- March 2013.

REMINDER: TRAP CONCEPT

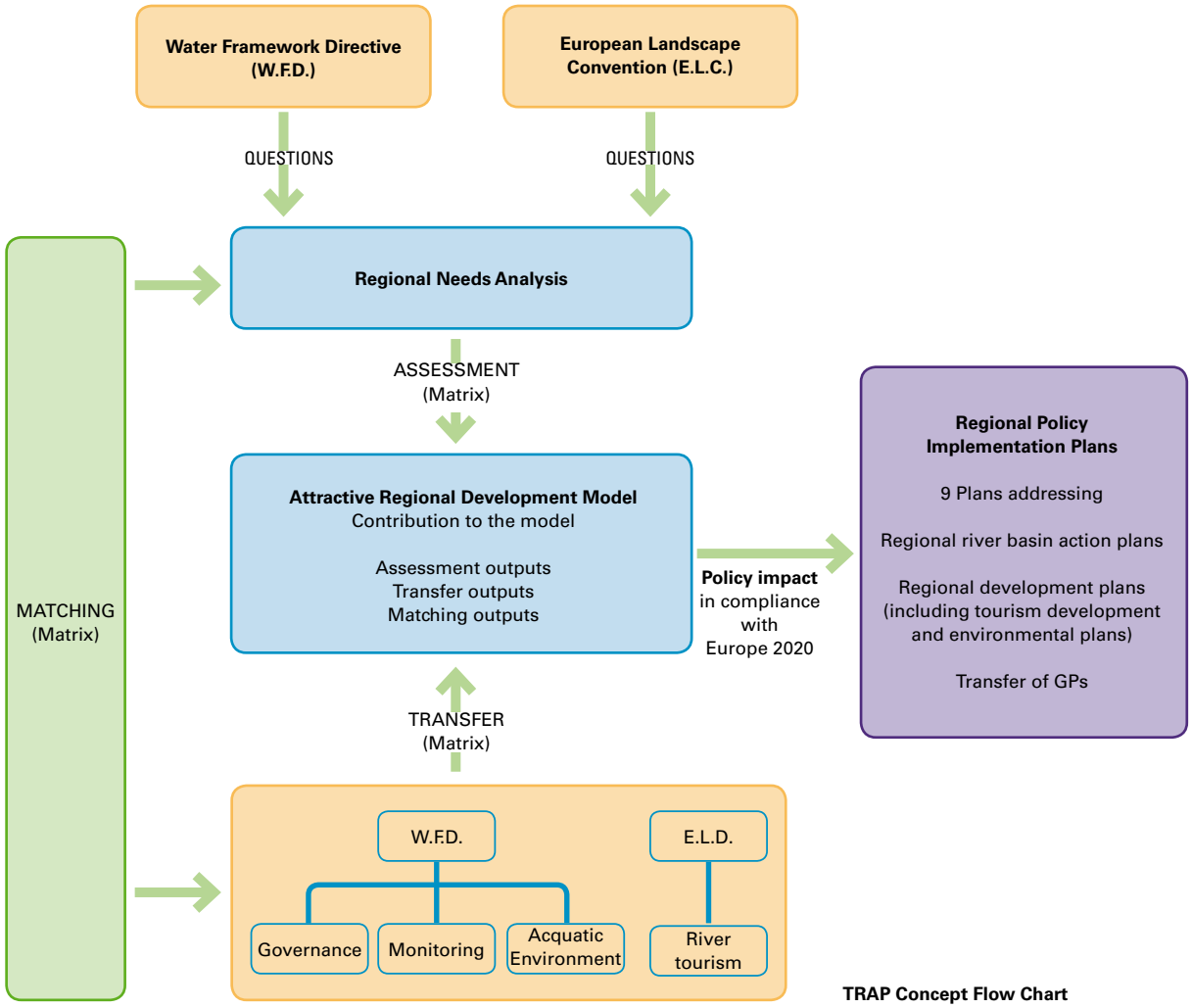


Figure 2.
TRAP concept flow [11]

TRAP was set up with the purpose of bringing together river & river territory protection with associated convincing, probable, sustainable, performing growth. This is called integrated development. The understanding of how this can be achieved should be described in the attractive regional growth model, and practiced in the good practice transfer and the related policy change. TRAP started as an effort to strengthen the benefits from both the Water Framework Directive and the European Landscape Convention for all partner regions; it continues with reinforced focus on sustainable growth.

Summary and conclusions from the regional needs analysis

The purpose of the regional needs analysis in TRAP is to support regions to select and absorb those good practices that are most needed / most useful to each region (Figure 1). Experience proved that this was a useful action-itinerary since 1) it helped strengthen the exchanges with the Water Framework Directive authorities, which in some cases are a little apart from development planning and policy making organisations in the regions; 2) it raised awareness of the European Landscape Convention and of equivalent tools being integrated with land use and economic development planning; 3) it provided a strong discussion platform in many regions, addressing not only the closing of gaps ("what needs to be improved") in water protection but also the introduction of optimal development solutions ("how we can get income to pay for the closing of gaps"). In fact,

11 Courtesy of TRAP partner ANKO, PP8, Western Macedonia, Greece.

during the third interregional meeting which took place in Zemgale, Latvia, October 15th and 16th 2012, the CP3 sessions revealed the need to link water and landscape protection and rehabilitation to regional income generation.

To realise its purpose, the regional needs analysis deals with four aspects: the implementation of the Water Framework Directive, the implementation of the European Convention or similar, environmental and economic pressures on the river & river territories of the partner regions, which can be grouped into two categories: (i) uptake and implementation of the Water Framework Directive through the River Basin Action Plans and the European Landscape Convention (or similar tools), and (ii) understanding the economic and environmental pressures in the region and the potential resulting conflict situations arising from them.

All partners caried out the regional needs analysis, as per their water basin districts. Regional reports were completed and discussed (online sessions) from October 2012 to the end of November 2012. Conforming to the provisions of the TRAP project, Shannon Development and the MidWest Regional Authority (PP2 and PP3 respectively) made one joint regional needs analysis report, as they belong to the same water basin. The table below summarises the overall findings.

TABLE 6. TRAP REGIONS AND THEIR REGIONAL NEEDS ANALYSIS: WFD, ELC, INTEGRATED DEVELOPMENT, ECONOMIC PRESSURES

WFD	
RBMP exists, and there are provisions also for coordination actions	**5 regions**
RBMP exists, but coordination actions not stressed	**3 regions**
RBMP not operative yet	**1 region**
RBMP exists, operative, but river basin area too large, needs sub-basin plans	**4 regions**
EUROPEAN LANDSCAPE CONVENTION (ELC)	
The ELC explicitly taken into account in land use and economic development planning	**2 regions**
The ELC is not used, but equivalent landscape assessment tools are used in evidence based land use and economic development planning	**7 regions**
Not considered at all in any form	**0 regions**
PRESSURES, IMMINENT CHALLENGES; ECONOMIC AND OTHERWISE	
Development (housing & economic activities (rural, manufacturing, services) demand for land and potentially incompatible land uses	**7 regions**
Climate change (floods etc.)	**4 regions**
"No pressures" challenge (not sufficient economic activities to generate income for protection and rehabilitation actions)	**5 regions**
Economic means to maintain good water status a challenge (directly or implicitly expressed)	**All regions**

The Water Framework Directive in the TRAP regions

The regional needs analysis generated considerable discussion on the policy frameworks of the actual needs and how they relate to the Water Framework Directive (WFD) and the River Basin Management Plans (RBMP)[12]. During the period 1.7.2012 - 31.12.2012, a lot of resources have been dedicated to the better understanding of the WFD/RBMP, how it relates to the needs of each region and to the stakeholders that should be very closely involved. The WFD is a complex policy tool, and the nature of its implementation is to some degree under evolution. We studied the recommended structure for the RBMPs and matched it to TRAP partner river basins & associated actions. This was an important step, i.e. positioning of the TRAP regions overall performance and explicit needs in the

12 The RBMP correspond to Art. 13.1 the "Member States shall ensure that a river basin management plan is produced for each river basin district lying entirely within their territory."

demanding WFD framework. For example, we found that only one region is not formally active in the WFD, whereby both the RBMP and the required administrative provisions are still under preparation. However, what we also found is that the WFD is not yet a well-known regional player in all regions. Occasionally it has also been challenging to involve WFD administrations into the regional stakeholder groups. Therefore, it is possible that all formal provisions of the WFD and of the RBMP are in place, while the implementation is not yet activated sufficiently. As a general rule, the WFD implementation is most advanced in areas that had been dealing with the protection of the aquatic environment and aquatic eco systems long before the WFD came into force. We also found that a few of the partner regions invested almost exclusively in environmental protection and did not / do not benefit from integrated approaches bringing together protection and growth (=income for potentially financing environmental protection costs). These findings are summarised in Table 7 below. In Table 7, columns 2,3,4,5,6,7 and 9 reflect a recommended structure for the RBMP by the WFD, e.g. the Irish and the Danube river RBMP's are fully aligned to this. Column 8 indicates the "regional needs areas" of the TRAP project partner regions.

TABLE 7. TRAP REGIONS AND THE RIVER BASIN MANAGEMENT PLANS (RBMP)

Partners	1 RBMP of the river basin of the partner region		2 Gap (state of the art of the river basin)				3 Measure programmes (Y/N + comments)		4 Registry of protected areas	5 Reporting system is set up (Y/N + comments)		6 Administrative arrangements within river basin districts, Article 3.2 of the WFD	7 Coordination actions	8 What is not being done / challenges	9 Financing tools for the implementation of the measure programmes
	Exists (Y/N+comments)	Activated (Y/N+comments)	Current status	Monitoring issues	Key pressures	EC assessment	Planned	Happening		Monitoring (technology + administration)	Databases, vertical links and reporting to EC				
PP1	X	X	X	X	X	X	X	X	X	X	X	X		7	X
PP2 / PP3	X		X	X	X	X	X		X	X		X	X	3,5,7	(X)
PP4	X	X	X	X	X	X	X	X	X	X	X	X	X	3,5,7	(X)
PP5	X	X	X	X	X	X	X	X	X	X	X	X	X	7	X
PP6	X		X	X	X	X	X		X	X		X	X	7	(X)
PP7	X	X	X	X	X	X	X	X	X	X	X	X		(5,3) 7	X
PP8														3,5,7	X
PP9	X	X	(X)	X	X	X	X	X	X	X		X		3,7	X
PP10	X	X	X	X	X	X	X	X	X	X	X	X	X	7,9	X

In the above summary table we note that partners have prioritised Measurement programme action needs (category 3), reporting arrangements (category 5) and coordination actions (category 7). Table 2 profiles the evolutionary character of the RBMPs and their implementation, and it also indicates the continuous search of regions for solutions that work. For example, even partners with apparent full deployment of the RBMPs are seeking better Coordination and Programme measures actions. There are no "best", definitive solutions.

In column 9 of Table 2 financial tools are mentioned. Six partners have identified this need explicitly, however, the emphasis on coordinated actions challenges, indicates that all regions are seeking income for growth and environmental protection. So we have added as an implied common need this aspect to all partners, but in parenthesis.

The European Landscape Convention in the TRAP regions

The European Landscape Convention (ELC) is a voluntary tool for natural and cultural landscape protection. In the section that refers to the ELC we researched questions such as: institutional involvement in the ELC, presence of the ELC in the region, funding and financing sources, ELC integration into economic development tools in the regions, and integration of the region in international networks, such as UNESCO.
What we observe is that the ELC is present in all the regions. However, for most of the regions, the process is through a national inventory of protected areas. Landscape assessment tools are utilised, in the bottom up policy making sense, by two regions. We feel that, as part of the evidence-based model of policy-making, landscape & eco system assessment tools are crucial for integrated development anyway, and TRAP should encourage and disseminate them among the partners. Table 8 summarises these findings.

TABLE 8. ELC AND THE TRAP REGIONS

Partners	The European Landscape Convention (ELC)					
	ELC at national level & institutions involved	ELC in the region		Landscape assessment tools practices bottom up	Landscape protection and economic development policy integration in the region	Regional landscape natural and / or cultural heritage part of international networks such as UNESCO
		natural landscape	cultural landscape			
PP1	**X**	**X**	**X**		Planning and permits	**(X)**
PP2 / PP3 / PP6	**X**	**X**	**X**	**(X)**	Planning; trade off tools discussed	**X**
PP4	**X**	**X**	**X**	**X**	Planning, permits and trade offs methods	**X**
PP5	**X**	**X**	**X**		Planning & permits	**X**
PP7	**X**		**X**		Planning & permits	**X**
PP8	**X**	**X**	**X**		Planning & permits	**X**
PP9	**X**	**X**	**X**		Planning	**X**
PP10	**X**	**X**	**X**	**X**	Planning, permits and trade off solutions	**X**

What Table 8 tells us is that landscape protection is a shared national and regional / county policy. The European Landscape Convention is disseminated to all TRAP regions. What remains, consequently, is to understand the quality of implementation. The quality of implementation depends on the realisation of landscape protection policies per se, on the costs of landscape protection to society and how they are balanced, as well as on the costs of landscape protection to private stakeholders and how they are mitigated (otherwise the private actors will contest protection all the time and the policies will not be implemented). The issue is, therefore, how development & protection interact in the TRAP regions.

Pressures, development and trade offs

The last section of the regional needs analysis is dedicated to discussing the most imminent pressures in the regions, and trade-off solutions if any. The pressures are discussed in detail in the next section. To summarise, they concern development pressures (from various economic activities), rationalisation of water use (improvement of infrastructure, monitoring), de-pollution, and climate change.
The interaction between development and landscape protection has a long history.

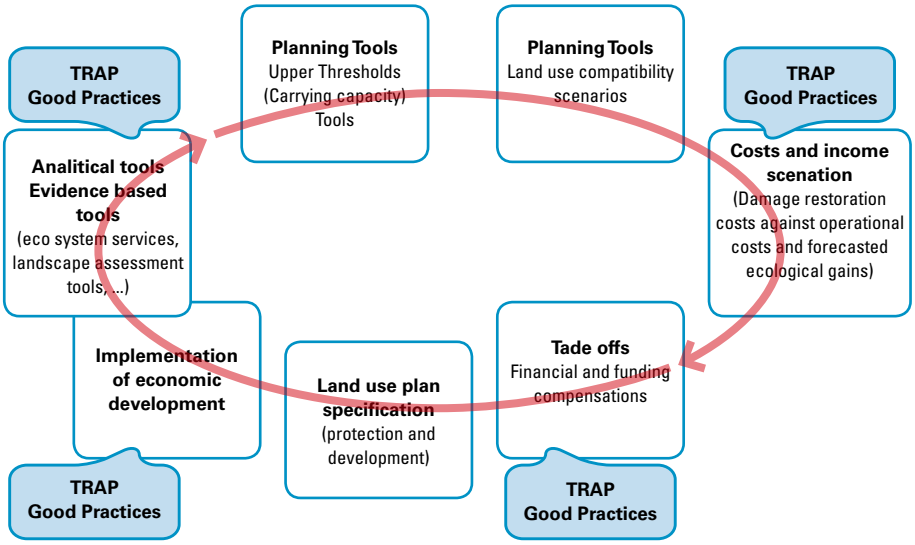
In recent years, combining protection with development -when and where it is possible- has become a priority as a potential win-win solution. Nevertheless, we should also realise that this is not always possible and some kind of compromise or trade-off is a more realistic outcome that can still give rise to overall benefits. Sometimes protected areas cannot generate income and at other times growth investments take over protection priorities. We grouped accordingly the potential protection / development patterns and asked the partners to identify any trade off tools they are using leading to win-win situations. The result is in Table 9 below. Research showed that not all partners have clarified the trade-off approaches in their regions and respective member states. All regions have trade off arrangements. However, based on the good practice contributions, the partners with the most comprehensive approach (with beneficial outcomes) to trade-offs appear to be the Waterboard Noorderzijlvest in the Netherlands (PP10) and the Rivers Trust in UK (PP4), and for landscape assessment, Shannon Development (PP2).

TABLE 9. PROTECTION, DEVELOPMENT, TRADE OFF CONCEPTS, AND TRAP REGIONS

PROTECTION AND DEVELOPMENT	TRADE OFF CONCEPT
PROTECTION THROUGH DEVELOPMENT	
Rehabilitation & re-use	Abolishment of the strict separation of land use functions, defining "carrying capacity"
Land use & economic activities compatibility (that is to say protected areas combined with compatible economic development)	Compensation (payment /provisions) for future decline in economic results, private co-investment in mitigating structures
Upper thresholds in land use intensity	Safety limits and damage restoration costs against operational costs and forecasted ecological gains
Protection and development but isolated Conservation / restoration with separation of land uses (zoning solutions)	Land and function swapping, obligatory, but compensation for excess costs

The insight we gained from researching into the 'protection & development' issue is that it is an iterative process (inevitably since land uses change with time) and involves various tools, such as analytical tools for evidence – based decision-making, trade off schemes, and systematic stakeholder involvement. In fact, stakeholder involvement and consensus-based decision making appears to be an overarching value. In Figure 3 we mapped the protection & development cycle and the areas that TRAP good practices contribute.
Moreover, the discussion on pressures in the regions revealed three types of challenges: environmental deterioration, growth challenges, and methodological gaps.

Figure 3.
The development & protection cycle, and TRAP good practices



Environmental deterioration and growth challenges are potentially the most significant, and we have / are encouraging partner regions to consider addressing such challenges (rather than focus exclusively on methodological gaps and incremental improvements).
It follows that, in the good practice transfer, we address funding sources & development concepts, both of which can prove as challenging as the problems they aim at addressing in the first place. Included within 'Funding' is the money required simply to maintain current environmental protection.

How doTRAP contributed good practices respond & satisfy the confirmed challenges?

First of all, it is important to position TRAP good practice categories within related policy frameworks in the partner regions. TRAP good practice categories can be classified into four types of solutions: generic good practices (like river territory development projects) – and most of them are under the Coordination actions (column 7 in Table 2), tools for evidence-based policy making (such as trade-offs calculation methods, landscape assessment tools, ecosystem services) and these, too, are mostly under Coordination actions (column 7 in Table 2), RBMP monitoring tools (column 5 in Table 2) and direct RBMP Programme measure actions (such as river & river territory ecosystem rehabilitation actions, column 3 in Table 2). It is possible & probable, that a good practice "covers" more than one category, especially when it is a project. However here there has been a conceptual breakthrough for the TRAP partners: we understood that the WFD is not only about protection of the aquatic environment through, for example, monitoring & direct rehabilitation actions, it is also about integration of protection into regional development needs. This is especially the case of the Coordination actions. Through them, we have been able to link the RBMPs to the regional land use & economic development planning, to the European Landscape convention, and to integrated river & river territory development. This understanding marked an important conceptual step in the implementation of the TRAP project. We consider it a milestone for the TRAP good practice transfer and implementation. These findings are mapped in Figure 4 below.

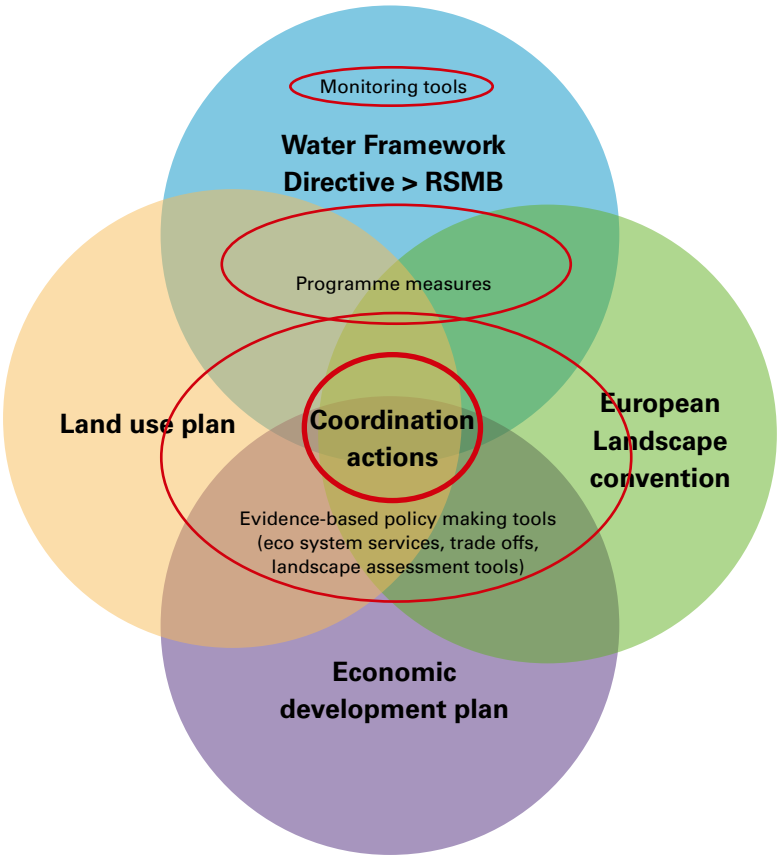


Figure 4.
TRAP good practice types in relation to relevant regional policy frameworks

Secondly, it was necessary to consider how the content, the achievements of individual good practices correspond to the WFD/RBMPs. The correspondence of the TRAP good practices to the provisions of the WFD are summarised in Table 10. Table 10 indicates that TRAP good practices are within the policy focus of the project, and that, considered together with Table 11, which matches the TRAP partners' regional needs analysis with the WFD, they form a good background for transfer and policy change. The classification in Table 10 indicates that a good practice might be performing in more than one aspect of the WFD.

TABLE 10. THE WFD ARTICLE 13 RBMP, TRAP GPS, AND HOW &HOW MUCH THEY CONTRIBUTE TO TRAP REGIONS NEEDS ASPER THE REGIONAL NEEDS ANALYSIS

Impacts on river & river territories from environmental, economic and coordination challenges (challenges as per TRAP partners regional needs analysis reports)	**Correspondence to WFD/RBMP**	**GP contri-bution**	**TRAP Good Practices**					
			PP1				**PP2**	
			GP1	**GP2**	**GP3**	**GP29**	**GP4**	**GP5**
	3) Measure programmes	**6**	**1**					
Water costing, monitoring, distribution technology	5) Reporting system-> Monitoring							
	7) Coordination actions							
Enhancing fish population (fish migration, regulating fishery)	3) Measure programmes	**5**		**1**	**1**			
	7) Coordination actions							
Rehabilitation (bearing, restoration)	3) Measure programmes	**6**		**1**	**1**			
Impact on planning procedures (with regard to integration of landscape assessment)	*7)* Coordination actions	**9**				**1**		**1**
Balancing water tourism with water quality	7) Coordination actions	**4**			**1**	**1**		
Cost vs. benefit – evaluation (including quantification)	7) Coordination actions	**4**						**1**
Using cost-benefit analysis for decision making								
Catchment management Pollution / water management	3) Measure programmes	**9**	**1**					
	7) Coordination actions							
Sustainable development - green infrastructure	3) Measure programmes	**9**				**1**	**1**	**1**
	7) Coordination actions							
Integrated fishing management for rivers	3) Measure programmes	**8**		**1**	**1**	**1**		
	7) Coordination actions							
Water management plans	3) Measure programmes	**9**				**1**		
	7) Coordination actions							
Integrated river corridor management / policy level / body	7) Coordination actions	**9**				**1**	**1**	**1**
Stakeholder involvement models and consensus building…?	6) Adminitrative arrangements	**9**				**1**	**1**	**1**

TRAP Good Practices

	PP3		PP4						PP5		PP6				PP7		PP8	PP9	PP10			
	GP6	GP7	GP8	GP9	GP10	GP11	GP26	GP27	GP12	GP13	GP14	GP15	GP16	GP17	GP18	GP19	GP20	GP21	GP22	GP23	GP24	GP25
			1	1					1					1								
										1		1										
												1						1	1	1		
	1	1			1			1			1			1								1
						1		1														
			1																1	1		
							1															
			1	1									1	1			1		1		1	1
	1							1			1		1		1							1
						1	1	1		1		1										
				1	1		1	1	1						1						1	1
	1	1					1	1										1		1		
		1				1		1		1							1	1				

TABLE 11. TRAP PARTNERS REGIONAL NEEDS ANALYSIS: CONFIRMED PRIORITIES AND THE WFD

Impacts on river & river territories from environmental, economic and coordination challenges (challenges as per TRAP partners regional needs analysis reports)	**Correspondence to WFD-RBMP**	**TRAP PARTNERS**										**TOTAL**
		PP10	**PP9**	**PP8**	**PP7**	**PP6**	**PP5**	**PP4**	**PP3**	**PP2**	**PP1**	**NEEDS**
Water costing, monitoring, distribution technology	3) Measure programmes			**1**								**1**
	5) Reporting system-> Monitoring			**1**								
	7) Coordination actions			**1**								
Enhancing fish population (fish migration, regulating fishery)	3) Measure programmes											**0**
	7) Coordination actions											
Rehabilitation (bearing, restoration)	3) Measure programmes		**1**	**1**								**2**
Impact on planning procedures (with regard to integration of landscape assessment)	7) Coordination actions		**1**			**1**						**2**
Balancing water tourism with water quality	7) Coordination actions											**0**
Cost vs. benefit – evaluation (including quantification)	7) Coordination actions	**1**		**1**		**1**		**1**		**1**	**1**	**6**
Using cost-benefit analysis for decision making												
Catchment management Pollution / water management	3) Measure programmes			**1**				**1**				**2**
	7) Coordination actions											
Sustainable development - green infrastructure	3) Measure programmes			**1**				**1**		**1**		**3**
	7) Coordination actions											
Integrated fishing management for rivers	3) Measure programmes				**1**							**1**
	7) Coordination actions											
Water management plans	3) Measure programmes			**1**								**1**
	7) Coordination actions											
Integrated river corridor management / policy level, / body	7) Coordination actions					**1**	**1**					**2**
Stakeholder involvement models and consensus building…?	6) Administrative arrangements					**1**			**1**	**1**		**3**
	7) Coordination actions											
"no pressures"= no income etc. -> Development sol (interesting modular calculations)	7) Coordination actions		**1**	**1**			**1**				**1**	**4**
Sustainable water use	3) Measure programmes			**1**				**1**		**1**		**3**
	5) Reporting system -> Monitoring											
	7) Coordination actions											
Sustainable tourism	7) Coordination actions			**1**	**1**			**1**		**1**		**4**
Physical modification of water bodies	3) Measure programmes							**1**		**1**		**2**
	5) Reporting system -> Monitoring											
Finding co-finance for actions with mutual goals	9) Financing tools	**1**										**1**
		2	**3**	**10**	**2**	**4**	**2**	**6**	**1**	**6**	**2**	**37**

Conclusions

Based on the exchange among all TRAP partners during the semester (1.7.2012 - 31.12.2012) we became aware from the pre-selection of GPs that partners pre-selected GPs that are first of all relevant (either address an important pressure or indicate an interesting opportunity) and feasible (GPs that can be transferred within the context of a project); also, stakeholders tend to appreciate (in the sense of willing to import) aspects of good practices rather than being committed to importing a complete good practice.
By reviewing the regional needs analysis from each one of the partner regions, we identified a number of pressures such as pressures resulting from economic development farming 9 regions, tourism - 7 regions, manufacturing - 6 regions, forestry - 5 regions, mining (pollution and gravel digging) - 5 regions, water transfers - 3 regions, household use - 8 regions, hydropower production - 7 regions; climate change (flooding) - 7 regions; institutional (government such as missing relevant policy, or even competent bodies & policy implementation tools - 3 regions; governance and especially consensus building among various stakeholder groups - 4 regions); costs such as lack of required regional income - 5 regions, and lack of funds in the regional authority - 1 region.

By reviewing the pre-selected good practices we found that overall partners prioritise integrated development models (Integrated river corridor management / policy level, / body) and associated tools such as Cost vs. benefit - evaluation (including quantification), using cost-benefit analysis for decision making (including eco system services methodologies), especially as tools for evidence based decision making and multi-sided consensus building (Stakeholder involvement models and consensus building). Out of 37 preferred GP targets, this type of transferable solution has an overall preferred mark of 21, i.e. about 56% of the total, and it corresponds to 37 good practice contributions to the WFD out of a total of 98, i.e. 37% (Table 8 below the cells in italics). Overall, this indicates that from the four thematic areas on which the TRAP proposal is built (governance, monitoring, aquatic environment, river tourism) the most recurring theme in demand is that of governance.

Given that both governance and consensus building tools were clearly identified through the Regional Needs analysis, further Good Practices were developed to address these issues. One of these described the governance structure of the rivers trust movement in the UK, its close working relationship with Government and its Agencies, and its role in bringing together a wide range of stakeholders in decision-making and consensus-building with respect to land and water management. Tools to engage with stakeholders are also encompassed including methods to reach consensus between conflicting sectors. Closely related to this, was the development of a further GP focused upon the development of catchment scale plans to capture local expertise across all stakeholders, formalising it in the plan and, ultimately, feeding it into the WFD RBMP. Additionally, PP1 also developed an additional Good Practice focused on the development of a regional economic development zone, underpinned by international and inter-regional Governance

TABLE 12. CORRESPONDENCE OF TRAP GOOD PRACTICES TO REGIONAL PRESSURES

Impacts on river & river territories from environmental, economic and coordination challenges (challenges as per TRAP partners regional needs analysis reports)	**Correspondence to WFD/RBMP & the ELC** – the latter through the coordination actions	**TOTAL needs**	**TOTAL GPs**
Water costing, monitoring, distribution technology	5) Reporting system-> Monitoring 3) Measure programmes 7) Coordination actions	**1**	**6**
Enhancing fish population (fish migration, regulating fishery)	3) Measure programmes 7) Coordination actions	**0**	**4**
Rehabilitation (bearing, restoration)	3) Measure programmes	**2**	**6**
Impact on planning procedures (with regard to integration of landscape assessment)	*7) Coordination actions*	***2***	***7***
Balancing water tourism with water quality	7) Coordination actions	**0**	**3**
Cost vs. benefit – evaluation (including quantification) *Using cost-benefit analysis for decision making*	*7) Coordination actions*	***6***	***4***
Catchment management Pollution / water management	3) Measure programmes 7) Coordination actions	**2**	**9**
Sustainable development - green infrastructure	3) Measure programmes 7) Coordination actions	**3**	**7**
Integrated fishing management for rivers	7) Coordination actions	**1**	**5**
Water management plans	3) Measure programmes 7) Coordination actions		**6**
Integrated river corridor management / policy level, / body	7) Coordination actions	***2***	***6***
Stakeholder involvement models and consensus building…?	7) Coordination actions	***3***	***5***
"no pressures"= no income etc. -> Development model (interesting modular calculations)	7) Coordination actions	***4***	***7***
Sustainable water use	5) Reporting system -> Monitoring 3) Measure programmes	**3**	**5**
Sustainable tourism	7) Coordination actions	***4***	***8***
Physical modification of water bodies	5) Reporting system -> Monitoring 3) Measure programmes	**2**	**5**
Finding co-finance for actions with mutual goals	9) Financing tools	**1**	**5**
		37	**98**

PART 3
REGIONAL ATTRACTIVE GROWTH MODEL

As part of the EU Interreg IVC project TRAP, this paper describes the steps to assess the contribution of interventions to attractive regional growth and the transfer of Good Practices between European partners. This paper has been drawn up after additions made by some partners, following consultation.

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One of the deliverables of the TRAP project is the Attractive Regional Growth Model. In the project application reference is made to a jointly developed transferable Model for attractive regional growth (embedding cultural/environmental protection), to be delivered as a project output. Also reference to the same product is made under the name "model for attractive River territory growth". Attractive growth is supposed to incorporate quality-based, diverse, inclusive and sustainable growth. In the context of the TRAP project, "attractive regional growth model" implies river and river territory development approaches & tools explicitly demonstrating how an area can effectively protect its aquatic (Water Framework Directive) and landscape (European Landscape Convention) environments and at the same time ensure sustainable economic growth. Such approaches and tools are linked to the TRAP good practices and the types of integrated river and river territory development solutions they demonstrate. In the sense of the Europe 2020 strategy, it means that an area realises high levels of employment, productivity and social cohesion. As an Interreg IVC project, TRAP aims at a close partnership operation, emphasising mutual learning, exchange of experience and transfer of good practices. Partners learn from each other and their good practices. They mutually assist another in the transfer of good practices. TRAP good practices, contribute to the attractive regional growth model from three points of view: as solutions, i.e. as examples of development interventions in river & river territory areas demonstrating the qualities of attractive regional growth, as tools for evidence-based decision making towards attractive regional growth, and as stakeholder engagement methodologies aiming at "serving" attractive regional growth through consensus & win-win types of decisions & solutions.

DEFINITIONS

Intervention, i.e. development intervention: Actions taken or work performed through which inputs, such as funds, technical assistance and other types of resources are mobilized to produce specific outputs aiming at improving the development conditions in regions, localities, countries. (page 20)[13].

Stakeholders: It is generally accepted that a stakeholder is an entity with some form of claim on the focal organisation and with sufficient power to influence that organisation. Mitchell, Agle et al. (1997)[14] have recently provided a detailed analysis of stakeholder attributes suggesting that they can be identified through the three attributes of power, legitimacy (potential of stakeholder to influence power) and urgency. These aspects are summarised in the table below.

13 OECD (2002) GLOSSARY OF KEY TERMS IN EVALUATION AND RESULTS BASED MANAGEMENT. ISBN 92-64-08527-0,

www.oecd.org/dac/evaluationnetwork .

14 Mitchell, R. K., Agle, B. R., Wood, D. J. 1997. Toward a Theory of Stakeholder Identification and Salience: Defining the Principle of Who and What Really Counts. Academy of Management Review. 22(4): 853-886.

TABLE 13. COMPONENTS OF THE STAKEHOLDER RELATIONSHIP

Elements influencing out-come of stakeholder engagement	Stake (What are the key issues or claims in the relationship?)	Parties (Who or what are involved?)	Processes (What processes are involved in managing the relationship?)	Connections (What form do the connections between the organisation and the stakeholders take?)
Power	Does the nature of the claim or stake have implications for the type of power involved?	What type of power do the parties involve use (if required) to obtain a result?	Do some processes result in the exercise of different types of power?	What effect does the form of connections have on the form of power used?
Rationality	How is the interest or stake expressed (cognitive, social or personal)? How urgent is the issue?	What are the epistemological and ontological perspectives of the parties and how do they influence their view of the issue or interest?	Do the processes and procedures affect the opportunity for understanding based on a broad or narrow conceptualisation of rationality?	How urgency of the issue tends to affect all involved parties?

Source: Adapted (Legitimacy cells added) from Jan Jonker and David Foster: Stakeholder Excellence? Framing the evolution and complexity of a stakeholder perspective of the firm, page 6

Academic and practical evidence suggests that a best practice approach to stakeholder engagement is moving away from one-off, issues or project based stakeholder management interventions - to holistic, company-wide, stakeholder collaboration. These approaches go beyond organisational buffering and reactive issues management - to provide a source of opportunity and potential competitive advantage for companies, as well as heightened corporate transparency and inclusiveness for stakeholder communities (Svendson, 1998)[15] and this is why it can be transposed to policy decision making.

Stakeholder engagement is integral to any kind of negotiation that involves different / even conflicting interest groups. There are an increasing number of references on how to appropriately identify, select and engage with stakeholders (Table below).

15 Svendsen, A. (1998) The Stakeholder Strategy. Profiting from Collaborative Business Relationships. San Francisco: Berrett-Koehlert Publishers Inc.

Table 14. SELECTING HIGH PRIORITY STAKEHOLDERS AND ENSURING CREDIBILITY

Factors to consider when determining high priority stakeholders:

Responsibility - stakeholders to whom your facility has, or in the future may have, legal, financial, and operational responsibilities in the form of regulations, contracts, policies, or codes of practice.
Influence - stakeholders with influence or decision-making power.

Proximity - stakeholders that your facility interacts with most, including internal stakeholders, those with long-standing relationships, and those stakeholders that your facility depends on in its day-to-day operations.

Dependency - stakeholders indirectly or directly dependent on your facility's operations and activities in economic or financial terms, or in terms of local or regional infrastructure.

Representation - stakeholders who, (through regulation, custom, or culture), can legitimately claim to represent a constituency, including those representing the "voiceless" (e.g., the environment, children, future generations).

Policy and Strategic Intent - stakeholders your facility addresses in policy and value statements, including those who can give early warning about emerging issues and risks.

Use the following criteria to evaluate stakeholders' credibility:

Affectedness - any stakeholders that are substantially affected by your facility's activities, products, or services should be included.

Diverse and wide representation - stakeholders who reflect a wide range of societal expectations, impacted groups, and issue areas. Representation is best achieved by ensuring at least one representative of each relevant stakeholder group is included.

Coverage - at least a subset of the stakeholders should be able to address, with an adequate level of competence, each of the issues applicable to your facility's sustainability footprint.

Legitimacy - stakeholders who are legitimate representatives of the interest/issue for which they are standing – namely, if they have a record of engaging in the area of interest for a substantial period of time and are a widely recognized entity in their sphere.

Independence - stakeholders should be independent of your facility's commercial and political interests.

TRAP good practices identified two examples of systematic and effective stakeholder engagement methods: the Rivers Trust approach from the UK and the OUKA river corridor management in Finland.

Sustainable development: The need for reconciliation between human development and the surrounding environment can be traced back to early civilisations. George Perkins Marsh, considered as one of the first environmentalists, in 1864 asserted that the collapse of past civilisations often showed the common trait of using natural resources faster than they could be replenished[16].This can be understood to be the 'basic thinking' of the term sustainable development. However, this term became mainstream in late 1980s, during and through the 1987 United Nations (UN) 'World Commission on Environment and Development' (WCED), at which was presented a report entitled 'Our Common Future'. This was a non-binding document, and came to be known as the 'Brundtland report' after its chair Gro Harlem Brundtland.

It introduced the most commonly accepted and maybe known definition of sustainable development as 'development that meets the needs of the present without compromising the ability of future generations to meet their own needs'[18].

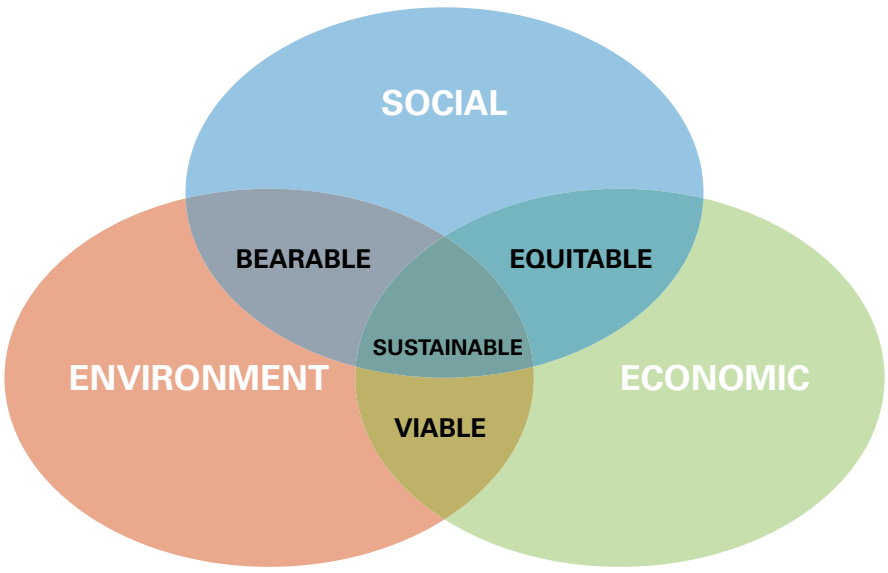
The European Council on 15-16 June 2001 in Gottemburg adopted the integrated development strategy, i.e. the reconciliation of economic growth with societal and environmental well-being, which led to the revised EU Sustainable Development Strategy (EU SDS) in 2006. It was then, for the first time that the action objectives behind sustainable development principles, were integrated into a single framework. The revised EU SDS identified seven challenges for a sustainable Europe, in particular climate change and green energy; sustainable transport; sustainable consumption and production; threats to public health; social exclusion, demographics and migration; conservation and management of natural resources; and the war on poverty in the world and the challenges in terms of sustainable development. It reaffirmed the key principles that should guide sustainable development at the EU level, namely the promotion of fundamental rights, the precautionary principle and the polluter-pays principle.

16
Marsh, G. P. (1864) Man and Nature – or Physical Geography as Modified by Human Action, later republished as The Earth as Modified by Human Action – A new Edition of Man and Nature, 1878. The latter publication is available as a work in the public domain via Project Gutenberg at: <http://www.gutenberg.org/etext/6019>. See also: Rao, P. K - Sustainable development: economics and policy, 1999, p. 5 for a discussion about early environmentalism.

18
WCED - Our common future, 1987, p.54. See also Redclift, M. - Sustainable Development (1987–2005): An Oxymoron Comes of Age, 2005, p. 212.

Figure 5.
The components of integrated development

http://edurhetor.wordpress.com/2008/11/01/is-social-sustainability-subservient/



Environmental sustainability: No single universally accepted definition of environmental sustainability exists, although generally the term is viewed as reflecting a meeting of the resource and services needs of current and future generations without compromising the health of the ecosystems that provide them. Environmental sustainability reflects a condition of balance, resilience, and interconnectedness that allows human society to satisfy its needs while neither exceeding the capacity of its supporting ecosystems to continue to regenerate the services necessary to meet those needs nor by our actions diminishing biological diversity (Morelli 2011)[19].

Since our societies are fundamentally dependent upon the flow of ecosystem services, a sustainable environment is a prerequisite for a sustainable socio-economic system. Within the European Union, specific Directives help to quantify a definition of environmental sustainability. With respect to freshwater resources, for example, the Water Framework Directive provides a definition of good ecological and chemical status. Attainment of good status implicitly requires a sustainable management of freshwater and its surrounding catchment. Other aspects are less well-defined in quantitative terms, however, including just what constitutes sustainable management of soil.

Achieving environmental sustainability and economic growth is challenging. Simply being resource efficient may not be enough by itself to guarantee environmental sustainability since growing consumption can mean that resource use increases despite efficiency gains (EEA 2012)[20]. Nevertheless, economic growth with environmental sustainability can be achieved. Managing water demand, for example, can result in sufficient water for both the environment and to service a growth in water-using economic sectors. Similarly, certain European countries have reduced the nitrogen surplus on agricultural land (a measure of water pollution) whilst increasing agricultural output. Likewise the European refining industry has increased output over recent decades whilst markedly reducing polluting discharges to water.

Economic sustainability: In the economic debate, sustainable development is most often described as "the need to maintain a permanent income for humankind, generated from non-declining capital stocks (Hicksian income)"[21].

Social sustainability: Social Sustainability is maybe the least defined and least understood of the three pillars of sustainability and sustainable development. Nobel Laureat Amartya Sen proposes the following dimensions for social sustainability :

- Equity - the community provides equitable opportunities and outcomes for all its members, particularly the poorest and most vulnerable members of the community
- Diversity - the community promotes and encourages diversity
- Interconnected/Social cohesions - the community provides processes, systems and structures that promote connectedness within and outside the community at the formal, informal and institutional level
- Quality of life - the community ensures that basic needs are met and fosters a good quality of life for all members at the individual, group and community level (e.g. health, housing, education, employment, safety)
- Democracy and governance - the community provides democratic processes and open and accountable governance structures.
- Maturity - the individual accepts the responsibility of consistent growth and improvement through broader social attributes (e.g. communication styles, behavioural patterns, indirect education and philosophical explorations).

19
Morelli, 2011. Environmental Sustainability: A definition for Environmental Professionals. Journal of Environmental Sustainability, Vol 1.

20
European Environment Agency, 2012. Towards efficient use of water resources in Europe.

21
Joachim H. Spangenberg (2005) Economic sustainability of the economy: concepts and indicators. Int. J. Sustainable Development, Vol. 8, Nos. 1/2, 2005

22
Sen, A.K. (2000) The ends and means of sustainability, keynote address at the International Conference on Transition to sustainability, Tokyo, May 2000. See also: Anand, S. and Sen, A.K. (1996) 'Sustainable human development: concepts and priorities', Office of Development Studies Discussion Paper, No. 1, UNDP, New York

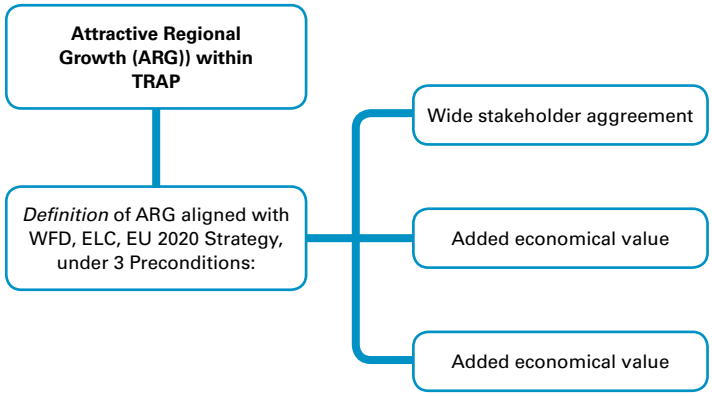
Structure of the model

The Attractive Regional Growth Model comprises 4 steps. It serves as a decision making tool regarding whether a planned development intervention in a river territory will positively contribute to attractive regional growth (and how).
The structure of ARGM is based on 3 main phases:

- Definition of Attractive Regional Growth
- Description and Assessment of Intervention
- Decision making

Specifically:
Definition of Attractive Regional Growth
The definition of ARG comes within the alignment of TRAP basic institutional elements (WFD, ELC, EU 2020 Strategy) with the 3 components of integrated Sustainable Development (Environmental – Social – Economic Sustainability, see above). Specifically, ARG is defined having the alignment of the 3 components of sustainability as preconditions, according to the following figure below:

Figure 6. Reminder of integrated development



DESCRIPTION AND ASSESSMENT OF INTERVENTION

All intervention assessment in the Model starts from agreeing what attractive regional growth is all about and the preconditions that ensure it is happening. For example, in the case of the TRAP project, attractive regional growth is about ensuring & maintaining good water status, protecting and building on the landscape quality and protection, and ensuring income & jobs –in general good quality level of living- for the region. Therefore the preconditions are environmental, social and economic sustainability. This is aligned with the WFD, the ELC and the EU2020 strategy.
Assessment of Intervention in terms of ARG preconditions
The assessment of intervention, in terms of ARG preconditions and wider, uses well known tools (i.e. Feasibility study, Cost-benefit analysis, Environmental Impact Assessment, EMAS standards, ESS) in order to examine its:

- Qualities
- Impact
- Feasibility

This process of intervention's assessment consists of 4 Steps:

Step 1:
Contribution to ARG and alignment with the 3 Sustainability preconditions
In Step 1, the notion of attractive regional growth is interpreted in terms of the planned intervention.
Step 1 answers questions like:

- What does attractive regional growth mean in terms of the proposed development intervention?
- How does, for example, building a river damn contribute to attractive regional growth, and how does the rehabilitation of a coastal area achieve the same target?

Step 2:
Determination of successful conditions within the context of ARG
Step 2 considers the preconditions for ensuring attractive regional growth within the context of the planned development intervention. It builds on the findings of Step 1. If the intervention is considered to contribute to attractive regional growth, it is worth analysing what specific variables and conditions made it successful. It will create consciousness on the success-and-fail factors. This analysis will help the sustainability of the impact in preventing accidentally removing success factors, and/or annihilating fail-factors.
These successful factors or conditions can be in the field of stakeholder involvement, economic development, use of knowledge and technology or other aspects. It is also interesting to explore the amplification the effect these factors might have on each other.
It answers questions such as:

- What measures need to be taken, and how much do they cost, in order to achieve attractive regional growth in the context of the planned intervention?
- What are the core positive characteristics of the planned intervention in terms of the attractive regional growth model?
- Can the use of applied technology enlarge the local support and trust for an intervention?

The answers will specify under which variables/conditions the intervention could be implemented, leading to the next step.

Step 3:
Conditions to be modified to ensure ARG
Step 3 considers the actual conditions that need to be modified for the planned intervention to ensure attractive regional growth. In Step 2, for assessing the potentiality of an intervention, not just its description, but more importantly, the key success factors, should be identified. The possibility of implementation is determined by the local / regional presences and conditions of these factors, as the mix of present success factors and conditions is the base for application of an intervention. Possible modifications of these conditions must be identified.
E.g. if the key success factor in region X is the cultural tendency of inhabitants to get involved with local initiatives of contributing to maintenance of nature reserves, this can be identified as a key success factor. The intervention can't easily be implemented to region Y in which inhabitants tend to rely on the government for maintenance of the public domain. If the critical success factors are not present, the implementation of the intervention may not be feasible.

Step 4:
Adjustment of conditions needed
At the final Step 4, the adjustments needed based on the findings of Step 3 that need to be made are defined, so that the planned development intervention ensures attractive

regional growth. In this sense it also considers costs of adjustments. This leads to the final question whether it is feasible to propose such adjustments or whether they should be further qualified or even dropped in extreme cases.
If the critical success factors are not present, either the regional conditions or intervention might be adjusted to reach a good fit between the intervention and the implementation area. Like in the second step, multiple factors, including technology, can be identified as beneficial. Nevertheless, some interventions will not be viable in any form in certain areas and certain social/cultural realities.
The assessment of an intervention in terms of ARG preconditions, using specific tools in 4 steps, could lead to a decision making according to if an intervention in an area is feasible or not and it is illustrated in the figure below:

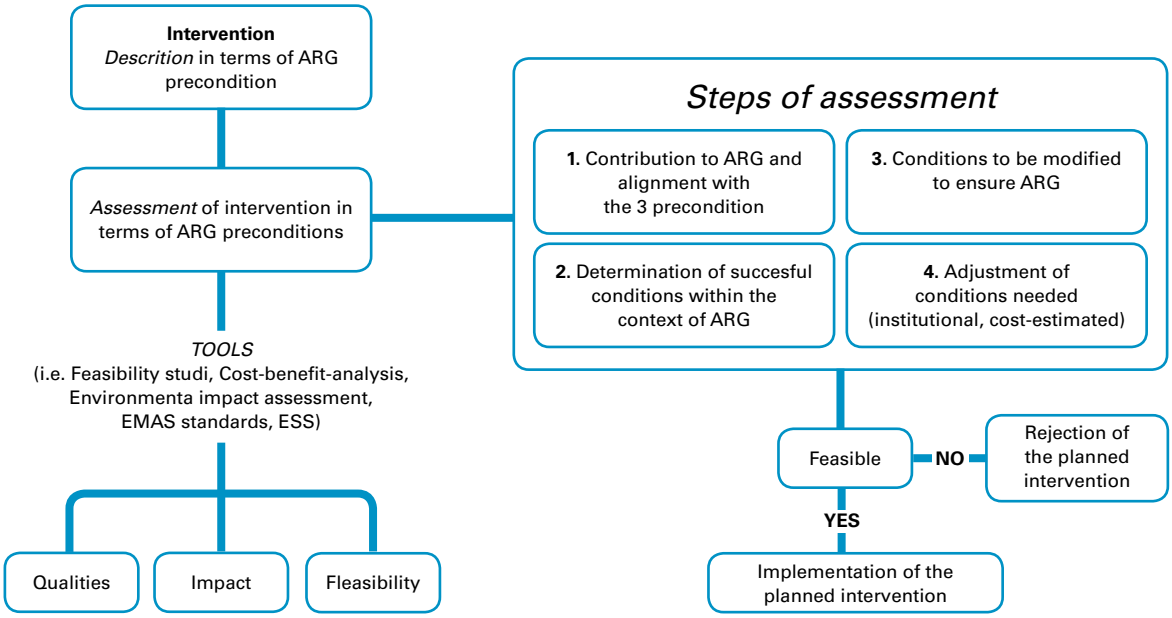


Figure 7. ARGM steps and decision making approach

Assessment of intervention in terms of TRAP common aspects which define ARG:
Moreover, in the TRAP project the deep analysis of the Good Practices and their relationship with ARG led to the assessment of interventions (considered as Good Practices) in terms of TRAP common aspects which define ARG.

Specifically:
- TRAP Good Practices in the Model
- In this work, 2 main Sources were used:

Source 1: project plan TRAP
Some other orientation to what the model should contribute is written in the project description of TRAP. The parts that touch this subject are presented below.

The project focuses on four thematic areas for the Good Practice analysis :
Governance: Stakeholder involvement and consensus building methodologies (economic impact assessment tools)

Monitoring: Ensuring the enforceability of the WFD
Aquatic environment: Enhancement of policies, projects and technologies
River tourism: Products, plans & tools integrating landscape protection into diversified, inclusive river territory development and growth.

Source 2: Good Practice description

Another input to the main characteristics of attractive regional growth, which resulted from the discussions among the TRAP project partners, is directly derived form the good practices description.
In the good practice description template, there are specific references as to the reasons why a good practice is indeed considered a good practice, and what it contributes to attractive regional growth (Q.13). These references allow understanding of the criteria and the core priorities according to which, partners contributing the good practices, identified, described and evaluated them in the first place. They also reveal what attractive regional growth means to the TRAP partners.

A review of these contributions is listed below:

- continuity in increasing income from fishing tourism (UK, IR, SI, FI);
- include ecological services as a value in policy decisions on best societal benefits (UK);
- increase of the value of the tourism product (EL, FI);
- tool for coherent tourism development with wide stakeholder involvement and common objective (IE);
- wide stakeholder involvement and decision taking focused on the common objectives (NL);
- continuity in productive activities (NL, RO).

Thus, it appears, that the notion of Attractive Regional Growth is understood in terms of income generating initiatives (fishing, ecological services, upscale tourism, productive activities), which create added economic value in the region. In addition, importance is given to an element of common objectives of stakeholders and policy decisions on best societal benefits. This has elements of common interests, or shared interests: wide stakeholder agreement. Clearly, TRAP partners' focus regarding attractive regional growth is not limited to ELC and WFD criteria: it seems, they are implicitly present in the way wide stakeholder agreement is realized. This is as planned, since the WFD and the ELC are policy frameworks and the point of departure of TRAP and, in the case of the WFD, also enforceable.

In conclusion:

According to the convictions of the TRAP partners, the common aspects which define attractive regional growth are:

1. Added economical value to the region

2. Wide stakeholder agreement

These are the main elements of interventions whose simultaneous presence determines the contribution to attractive regional growth. The two main elements deserve some explanation.

AD 1. ADDED ECONOMIC VALUE TO THE REGION

As seen before the added economic value to the region has to do with the direct value that is reflected by the economic value of the products sold: fish, tourist experiences, agricultural products, space for urbanisation, logging wood, minerals, energy etc. Also an indirect economic value can contribute: paid employment. This results in higher consumer activity, and attracts economic value to the region. Variables/conditions are e.g. temporal and permanent labour.

Finally we distinguish as indirect economic added value the employment and economic value created in next steps of the production chain, whether at the same spot as the primary product was realised, or elsewhere. Variables/conditions would be the location and the continuity. It would be logical to include here any negative result for society formulated to lost economic value. For example loss of production/employment in a competing but defeated production process, and harm to cultural heritage and well-being, harm to biodiversity and ecology.

AD 2. WIDE STAKEHOLDER AGREEMENT

Wide stakeholder agreement is realised when different stakeholders, with different interests, come to a common understanding. The consequence is that some stakeholders accept negative consequences and still support the proposed intervention (good practice). That might be caused by accepting decisions made by a (public) authority, it might be that some compensation has been realised to balance the disadvantaged.
For example, each type of land use (agriculture, forestry, nature/biodiversity, fishery, tourism, mining, urbanisation, flood protection etc.) coincides with specific economic activities that have specific impacts on landscape, water quality, creation of added value. Also specific stakeholders can be distinguished with their interests in whether economic value, landscape, water quality or all. To reach stakeholder agreement, the questions about the contradictions should be overcome. The way the stakeholder agreement was reached (or lost) is the aspect of what trade-offs could be reached, and in what manner. Variables/conditions are : what is to be achieved, what is to be protected, which stakeholders pay/invest, and which benefit.

ARG in TRAP common aspects

The two aspects that simultaneously should be present in an intervention can be combined in a graph that enables the analysis of planned interventions.

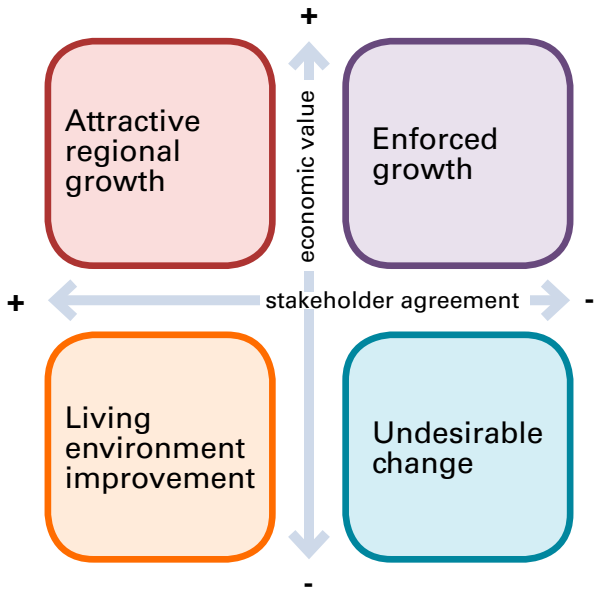


Figure 8. Locating ARG in TRAP & different growth options

By analysing the objective to deliver a "model for attractive regional growth", combined with the description of the Good Practices, two elements arise: added economic value and wide stakeholder agreement. According to the descriptions of the Good Practices, added economic value is what most Project Partners strive for. To achieve this added economic value, in most examples, a process with stakeholders was started, to reach consensus and thus stakeholder agreement of the intended interventions. However,

interventions ("good" practices) don't always reach these goals. Sometimes they are enforced, sometimes no or little added value will be gained as a result. So they qualify differently. A method of determining the added economic value, which can be used to score on the vertical axis, is the Cost-benefit Analysis (CBA). For scoring on the horizontal axis, a stakeholder analysis can be applied.

- The two elements can be related to each other in a Model, which consists of the four quadrants. A single (intended) intervention can be checked in the Model. For each component an intervention can score "+" or "-", which places it in a quadrant. The description of the quadrants is as follows:

- **Attractive regional growth:** the added economic value of an intervention is scored as positive, as well as the wide stakeholder agreement. This means the intervention will bey supported be all stakeholders and the region will benefit.

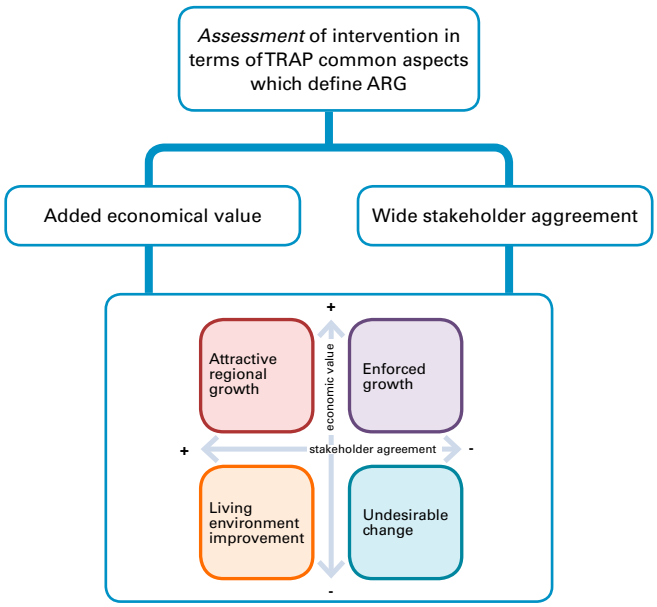
- **Enforced growth**: the added economic value of an intervention is scored as positive, but the stakeholder agreement is negative. This means that certain stakeholders oppose interventions. In some cases and circumstances, an intervention has to be made, to add economic value, or to prevent economic detriment or loss.

- **Living environment improvement:** the stakeholder agreement to an intervention is scored as positive, although there is no added economic value. In this case, all stakeholders agree that the intervention should be made. A decline in regional economic value is acceptable because all stakeholders feel favoured, or added economic value is only reached on micro level.

- **Undesirable change:** stakeholder agreement and added economic value both score as negative. In this situation most stakeholders oppose the intervention and no economic value for the region is added. This can be the case where just one, or a few stakeholders benefit by the intervention and are capable of carrying it out.

With this method intended interventions can be judged by locating them in one of the quadrants according to its score on the axes, making clear in which context it operates. As a result, the assessment of an intervention in terms of TRAP common aspects, which define ARG can be illustrated as follows:

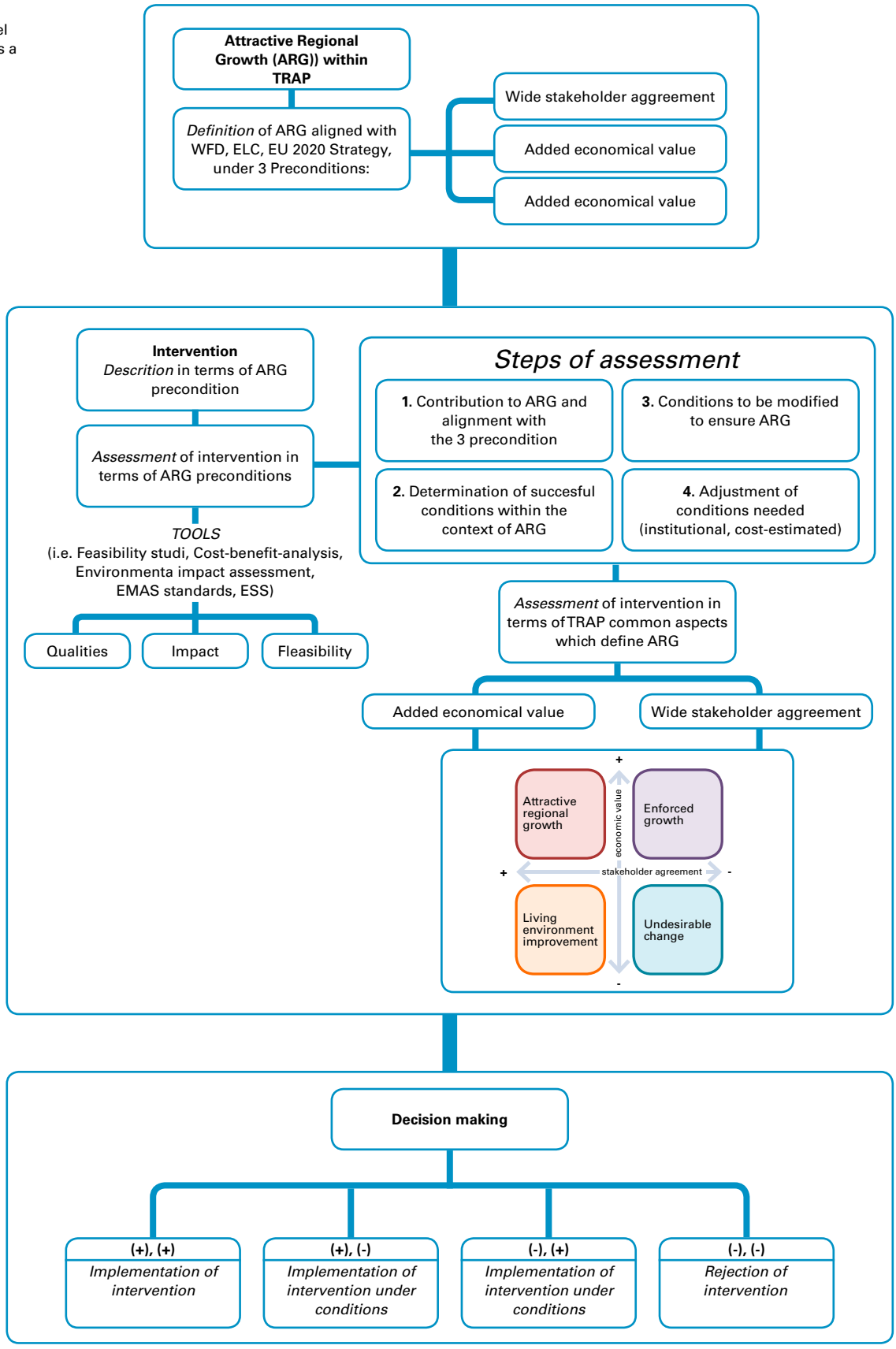
Figure 9. ARG in TRAP: economic well-being and stakeholder agreement



Decision Making

Utilizing and combining all the above, an Attractive Regional Growth Model (ARGM) within TRAP as a decision making tool could have the following flow chart:

Figure 10. Attractive Regional Growth Model (ARGM) within TRAP as a decision making tool



The added value of the ARGM

(1) Places integrated development at the core of any development intervention rational and builds the decision making problematique on this precondition.

(2) TRAP good practices demonstrate how the ARGM can be applied in practice. Besides good practices that demonstrate environmental (thematic areas 2 and 3) and economic sustainability (thematic area 4), there are good practices that facilitate the decision making process through evidence based policy making, trade off solutions, and application of ecosystem services (thematic area 1).

TABLE 15. TRAP GOOD PRACTICES & CONTRIBUTING PARTNERS

	TRAP TA:s
Kainuun Etu Oy (FI), PP1	
Surface water monitoring technology & operational aspects, GP1	2
Rehabilitation project of Oulujoki river flow, GP2	3
Rehabilitation of the water cycle, GP3	3
Oulu – Kajaani regional development zone (RDZ) 2010, GP29	1
Shannon Development (IE), PP2	
Tourism development plans and products for Lough Derg, GP4	4,1
Trade offs and economic tools supporting the implementation, GP5	4,1
MidWest Regional Authority (IE), PP3	
Regional Planning Guidelines, GP6	4,1
Lough Derg marketing strategy group, GP7	4
The Rivers Trust (UK), PP4	
Economic impact assessment tools (=methodology) for stakeholder involvement and consensus building, GP8	1
Monitoring programmes for the implementation of the regional RBMP, GP9	2
Information Platforms to support WFD communication and planning, GP10	2
Economic development tools & examples of solutions for including landscape & cultural heritage into the regional economic development, GP11	2
Catchment management plans, GP26	3
Governance, structure and goals of the Rivers Trust Movement, GP27	1
Soca Valley Development Centre (SI), PP5	
Institutional good practice for ensuring aquatic eco-system quality, GP12	3
Tourism development plans & products ensuring fishing tourism and water sports compatibility and balance, GP13	4
SouthWest Regional Authority (IE), PP6	
Regional planning guidelines and resource conservation, GP14	4
Regional Environmental River Enhancement Programme, GP15	3
Rural environment protection schemes, GP16	3
Forestry and water quality guidelines, GP17	2
National Institute of Research Development for Mechatronics and Measurement Technique (RO), PP7	
Systems for forecasting of floods, GP18	2
Technology and systems for sediments monitoring in reservoirs and rivers, GP19	2
Regional Development Agency of Western Macedonia (GR), PP8	
Project demonstrating environmentally friendly tourism development project taking into account forest resources, GP20	4
Zemgale Planning Region (LV), PP9	
Project on river territory rehabilitation & land use change; including infrastructure for river tourism, riverbank improvement, water treatments in villages and cities, GP21	4
Waterboard Noorderzijlvest (NL), PP10	
Reservoir for temporary water storage as safety provision & as Natura 2000 area, GP22	3
Re-meandering of river-streambed as both WFD and safety measure in agricultural production area within the law of land reform, GP23	1,3,4
Integrated rural intervention with re-meandering helophyte water filtering of agricultural and industrial effluent with voluntary participation of government and private partners, GP24	1,3,4
Determination of water management practices in a big lake combining Natura 2000 aims and water safety limits, GP25	3

CASE STUDY DEMONSTRATING ARGM SOLUTIONS THROUGH TRAP GOOD PRACTICES

Since our societies are fundamentally dependent upon the flow of ecosystem services, a sustainable environment is a prerequisite for a sustainable socio-economic system. This realisation has led to a growing focus on an ecosystem services approach to land and water management including the potential for payment between buyers and sellers of those services.

Agriculture is a key pressure on fresh and coastal water across much of Europe with a range of pollutants including nutrients from fertilisers, pesticides, sediment and faecal microbes reducing water quality and impacting aquatic life. Where such pollution impacts upon raw drinking water sources, expensive advanced treatment is required, for example, to remove pesticides to enable the water to be potable. The cost of this treatment is ultimately borne by the consumers in the water company region and hence represents a cost to the wider society.

In South-West England the regional water company has adopted an ecosystem services approach to addressing the problem of agricultural pollution with a solution which reflects many elements of the attractive regional growth model. The water company has engaged with farmers in the catchment area of each drinking water source and using innovative covenants has gained agreement from the farmers to manage their land in a more sustainable manner. The deal, brokered by a local rivers trust, means that pollution of the drinking water source will progressively diminish, a key outcome tested by feasibility studies. Importantly further expensive treatment technologies can be avoided, with a clear financial benefit to the water company being realised and, ultimately, its consumers too. Importantly the compensation paid to the farming community means that they do not suffer economic losses. As a consequence the approach fulfils the critical success factors and pre-conditions of the ARGM with the twin elements of economic value and stakeholder agreement both positive.

PART 4
GOOD PRACTICE TRANSFER & POLICY IMPACT IN TRAP

APPROACH

The good practice transfer, in TRAP, followed a systematic approach and took a long time. Based, in fact, on lessons learnt from other Interreg IVC projects, in TRAP we dedicated considerable resources towards ensuring that the good practice transfer was both very relevant and feasible to be transferred in each partner case.
Timeline of the good practice transfer:

- **15 & 16.10.2012** The good practice transfer discussion was introduced during the 3rd interregional steering committee meeting in Latvia, October 15th and 16th 2012.
- **Autumn 2012** Completion of the regional needs analysis and pre-selection of good practices.
- **22-24.4. 2013** Good practice discussion formal part of the 4th interregional meeting; mapping of the process.
- **April - June 2013** Confirmation of pre-selected good practices (many online sessions with the partners). Formulation and agreement on the implementation plan template.
- **July 2nd 2013** Organisation of good practice transfer session (half day) during the site visit to Kainuu. Following that session, final GPs selected for transfer were agreed.
- **8-10.10.2013** Discussion on stakeholder involvement and approaches in relation to the good practice transfer, interregional steering committee meeting in Ireland.
- **Autumn 2013 to 9.3.2014** Realisation of the implementation plans, monitoring, adjustments, delivery of agreed outputs and results.
- **10-11.3.2014** Interregional meeting in Kozani, review of progress of the realisation of the implementation plans.
- **Spring 2014 – to date** Realisation of the implementation plans, monitoring, adjustments, delivery of agreed outputs and results.

ORGANISATION OF THE GOOD PRACTICE TRANSFER

Once again, based on lessons learnt from prior experiences in Interreg IVC projects, we tried to provide as much guidance as possible to the partners, and encourage as strongly as possible exchanges among all of the TRAP team. We also tried to provide baseline guidance, relating, for example, to the overall Component 3 methodology, the stakeholder involvement and the transfer teams (figures below).
As shown in Figure 15 below, the good practices contributed would be preselected and good practice transfer and policy impact would be reached through a structured (but not restrictive) 6-step process, summarised as follows:
Good practice analysis → pre selection of good practices: what each partner needs to improve and what each partner is willing to improve → matching of partner improvement priorities to analysed good practices → transfer session between "exporting" and "importing" partners and asking all needed clarifications and questions (such sessions usually need some 3 hours) → final decision of the good practices to be imported. Usually one GP transfer, fully focused on can be a good decision → formulation of the implementation plan (detailed, with timetable, resources needed, and deliverables) → realisation of the implementation plan →on going evaluation of the implementation plan realisation → reaching of results (in full or partial) → closing report and description of what happened.

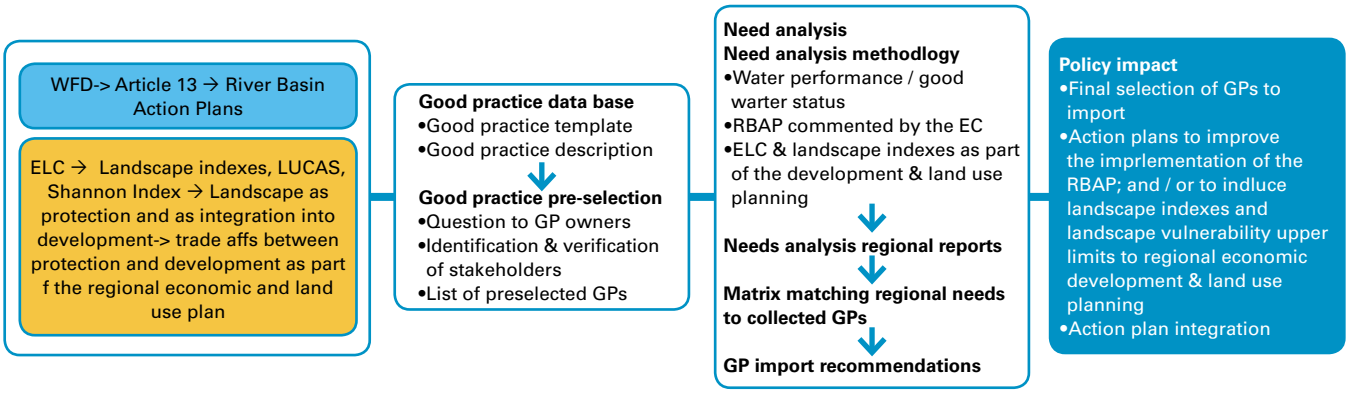


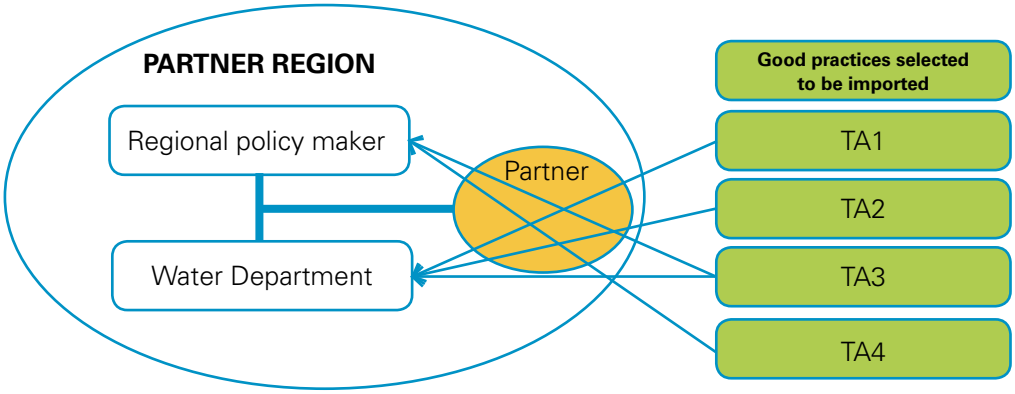
Figure 11.
Organisation of the good practice transfer [22]

22
Source: PP1, KE presentation from the TRAP kick off meeitng 26-27.3.2012 in Bucarest, RO.

The notion of stakeholder involvement was dealt with as one of the crucial preconditions towards ensuring good practice transfer and mainstreaming. We stressed the importance of involving both regional /country policy decision makers and water authorities. It was taken for granted that not all partner organisations had decision making competence, and therefore, it was expected that they liaise with the related competent institutions in their regions. Later, practice indicated that stakeholder involvement posed challenges for a number of regions, so it became itself a good practice transfer focus. Figure 16 below, maps the basic TRAP approach.

Figure 12.
The notion of stakeholder involvement in TRAP[23] ; the light blue arrows indicate potential links of in potential good practice transfer processes.

22
Source: ibid, previous.



Resources were also dedicated to the good practice transfer team exercise. A basic transfer team approach was mapped, discussed and agreed during the interregional meeting in Exeter on April 22-24th 2013. This is shown in Figure 17 below.

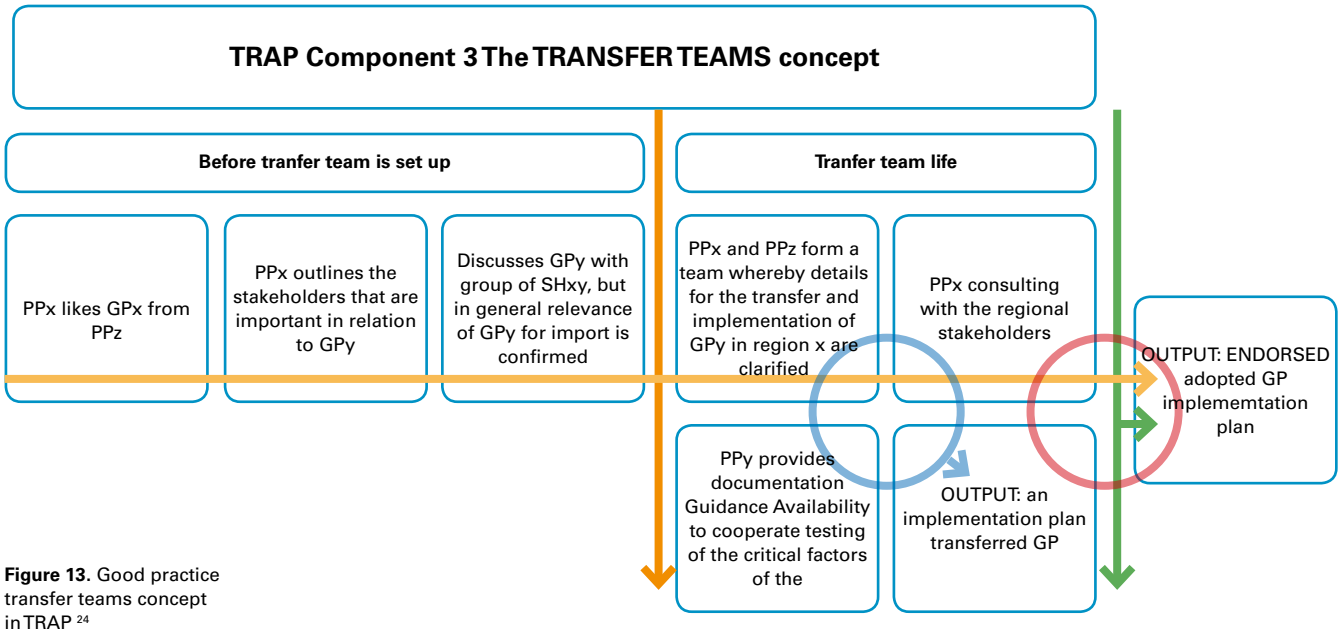


Figure 13. Good practice transfer teams concept in TRAP [24]

24 Source: KE, PP1 presentation in Exeter, April 2013.

Then, between 24th April 2013 and the site visit in Kainuu July 2-4th 2013, we discussed GP import interests with partners and we organized plenary and bilateral sessions between the transfer teams. The programme is shown below:

Figure 14. Good practice transfer teams meetings [25]

25
Source: KE, PP1, Kainuu site visit programme, July 2013.

CP3, Kainuu study visit

Wednesday 3rd of July 2013

9.00-9.30 **Opening of the day**

9.30-10.00

	PP1	PP2	PP3	PP4	PP5	PP6	PP7	PP8	PP9	PP10
GP8	x			x				x		x
GP6			x						x	

10.00-12.30

	PP1	PP2	PP3	PP4	PP5	PP6	PP7	PP8	PP9	PP10
GP8	x			x				x		x
GP3	x(Tuomo)						x			x
GP27			x	x	x					
GP20								x	x	
GP2	x			x						x

12.30-13.30 **Lunch**

13.30-15.00

	PP1	PP2	PP3	PP4	PP5	PP6	PP7	PP8	PP9	PP10
GP1	x(Silja)						x			
GP4		x							x	x
GP26				x		x				
GP15				x		x				
GP13					x			x		x
GP29	x(Ninetta)		x							

15.00-16.00

	PP1	PP2	PP3	PP4	PP5	PP6	PP7	PP8	PP9	PP10
GP5	x	x							x	
GP22&23				x		x				x
GP7			x					x	x	

16.30-17.30 **Closing of the day**

The 'transfer teams' exercise was very useful (as TRAP partners have confirmed): it helped screen and finally select, and focus on the prioritised 6 good practices, shown in table 19 below, together with the rationale that explains the final selection.

TABLE 1. TRAP PROJECT: 28 GPS, 7 EXPORTED

GP	GP NAME	FROM	TO	ADDED VALUE
GP1	Surface water monitoring technology & operational aspects	**PP1**	**PP7**	New and interactive e-based services for monitoring water piloted in depth; possibly mainstreamed at regional level; responds to EC comments on the RBMP of Romania. Implementing Article 8 of the WFD (Article 8 – Monitoring and Status Assessments)
GP6	Regional Planning Guidelines	**PP3**	**PP9**	Introduces advanced sustainable development concepts linked to water management in the regional development plan
GP7	Lough Derg Marketing Strategy Group	**PP3**	**PP8**	Included as indicative action into the local development plan (=regional development plan) (2014 approval, 2015 implementation
GP8	Economic impact assessment tools for stakeholder involvement and consensus building (Eco System Services-ESS)	**PP4**	**PP10** **PP8**	Organisational and policy learning; ESS to be eventually adopted by the Waterboard regional water management development plan (2016) ESS target & indicative action within the ESIF OP 2014-2020 ESS included as indicative action into the local development plan (=regional development plan) (2014 approval, 2015 implementation)
			PP1	Transferable pilot with operational ESS valuation tool; towards policy mainstreaming (2015)
GP13	Tourism development plans & products ensuring fishing tourism and water sports compatibility and balance	**PP5**	**PP8**	Included as indicative action into the local development plan (=regional development plan) (2014 approval, 2015 implementation Solution that works, combining water protection with income activities, saving development costs to importing partner.
GP26	Catchment management plans	**PP4**	**PP6/12**	(a) Effectively addresses the fragmentation of decision making at county level in Ireland, and (b) pilots regional implementations of Article 13 of the WFD in Ireland.
GP27	Governance, structure and goals of the Rivers Trust movement	**PP4**	**PP3/11** **PP5** **PP6/12**	Effective institutional solution for implementing Article 13 of the WFD at catchment level.

Finally, we formulated the good practice transfer implementation plan template.
The implementation template is differentiated according to whether the partner is attempting a project transfer or is aiming at policy impact. The process is slightly differentiated, according to the types of mainstreaming and outputs. In general the approach worked, and supported the policy transfer. The implementation plan template and the implementation plans of each partner can be found, respectively, in Annex 1 and 2 of this report.

ACHIEVEMENTS OF THE GOOD PRACTICE TRANSFER

On the basis of the six (7) good practices that were transferred, there were six good practice transfer pilots generated, seven (7) policy instruments were improved, and two (2) policy improvements are pending.

GOOD PRACTICE 1: Surface water monitoring technology & operational aspects

Exporting partner: Kainuun Etu, PP1

(1) Importing partner: National Institute of Research Development for Mechatronics and Measurement Technique -INCDMTM, RO, PP7

Pilot: yes: New and interactive e-based services for monitoring water piloted in depth. Implementing Article 8 of the WFD (Article 8 - Monitoring and Status Assessments).

Policy impact: yes: GP1 is implemented for improving the urban wastewater treatment monitoring accordingly with the Government Decisions: GD 188/2002 and GD 352/2005, Article 4 - paragraph 1a and 1b and Article 5 - paragraph 2, having the implementation deadline on 30.06.2015. These GDs transpose the Council Directive 912 / 271 / EEC of 21.05.1991 and the Commission Directive 98/15 / EC of 27.02.1998.

Policy mainstreaming organisation: National Administration of "Romanian Waters" - Arges-Vedea rivers basin Administration.

GOOD PRACTICE 6: Regional Planning Guidelines: Introduces advanced sustainable development concepts linked to water management in the regional development plan.

Exporting partner: MidWest Regional Authority, PP3

(2) Importing partner: Zemgale Planning Region, PP9

Pilot: no

Policy impact: yes: Regional development programme: the Environmental chapter of the updated regional development plan is including provisions from GP6 Planning Guidelines, and also specifies priority development actions. Thus the GP transfer impacts at both strategic and operational levels. Project pipeline is planned as part of the GP transfer outputs, thus increasing the implementation probabilities.

Policy mainstreaming organisation: Zemgale Planning Region, LV.

GOOD PRACTICE 7: Lough Derg Marketing Group: formulation of marketing strategy

Exporting partner: MidWest Regional Authority, PP3

(3) Importing partner: ANKO, PP8

Pilot: **no**

Policy impact: yes: Local (=regional) development plan

Policy mainstreaming organisation: Region of Kozani, GR.

GOOD PRACTICE 8: Economic impact assessment tools for stakeholder involvement and consensus building (Eco System Services-ESS). GP8 reflects implementation of Article 5 of the Biodiversity Strategy and contributes to the implementation of Article 13 of the WFD.

Exporting partner: The Rivers Trust, PP4

(3) Importing partner: Kainuun Etu, PP1

Pilot: yes: Comprehensive application of ESS (mapping + valuation) and modelling of the approach (valuation tool), comparing costs and benefits of river rehabilitation projects, in contexts similar to Pajakkajoki, Kuhmo area where the pilot was implemented. ESS applications understood, easier to apply; mainstreamed into policy tools. Landscape taken into account, too. ESS as a development trigger tool.

Policy impact: no, but the pilot is intended as the required evidence-based (feasibility study) actions before a policy decision has been made. Follow up actions (project pipeline) have been agreed with City of Kuhmo, where the pilot was made.

Steps towards mainstreaming
- ESS & the Biodiversity strategy have been formally included into the coordination actions of the Water Management thematic programme of Kainuu region. The thematic programme is part of the usual, staged approach towards the implementation of the regional development plan (result of meeting 28.10.2014 with the Regional Council of Kainuu).
- Transferability of the valuation calculation tool formulated through the Pajakkajoki pilot confirmed and intention to be used in other similar cases in northern Finland as the context is very similar (result of meeting 29.10.2014 with Northern Finland ELY Keskus, Water Management Department).

Policy mainstreaming organisation: ELY Keskus (Centre for the Environment, Economy and Transport).

(4) Importing partner: ANKO, PP8

Pilot: no

Policy impact: yes: The concept (as a potential project implementation) has been mainstreamed into the Local Development Plan of Kozani. Also, ESS as target & as indicative actions have been included into the Western Macedonia & Ipeiros ESIF OP 2014-2020.

Policy mainstreaming organisation: Region of Kozani (for the Local Development Plan), Western Macedonia & Ipeiros ESIF MA for the ESIF OP intervention.

(5) Importing partner: Waterboard Noorderzijlvest, PP10

Pilot: no

Policy impact: intended: Inclusion of the ESS concept in medium term policy document (draft Mid-term policy Plan 2016-2021); partner organisation is mainstreaming; recommendation document in 2014, decision in February 2015. An ESS implementation manual will accompany the policy document. However, the focus is on organisational and policy learning actions.

Policy mainstreaming organisation: Waterboard Noorderzijlvest

GOOD PRACTICE 13: Tourism development plans & products ensuring fishing tourism and water sports compatibility and balance.

Exporting partner: Soca Valley Development Centre, PP5

(6) Importing partner: ANKO, PP8

Pilot: **no**

Policy impact: yes: The good practice has been included as indicative action into the local development plan. The implementation of the good practice has generated a land use change around the artificial Polyfytos lake and a part of the area has been re-classified from protected to sustainable tourism development area. In that sense, it has also has also had an impact on the area of application of the RBMP

Policy mainstreaming organisation: Region of Kozani.

GOOD PRACTICE 26 Catchment management plans: sub-river basin level management plans; contribution to article 13 of the WFD-

Exporting partner: The Rivers Trust, PP4

(7) Importing partner: South West Regional Authority, PP6 / Cork County Council, PP12

Pilot: yes

Policy impact: yes

Policy mainstreaming organisation: The River Allow Catchment group, through the endorsement of the River Basin District (RBD) Coordinators of Ireland. NOTE: Please see GP27, for complete details.

GOOD PRACTICE 27 Governance, structure and goals of the Rivers Trust movement: Effective institutional solution for implementing Article 134 of the WFD at catchment level.

Exporting partner: The Rivers Trust, PP4

(8) Importing partner: Mid-West Regional Authority, PP3/Tipperary County Council, PP11

Pilot: yes: Lough Derg Marketing Strategy (joint programming document) + two demonstration actions, the food trail network set-up and the canoeing environmental appraisal.

Policy impact: no: The Lough Derg Marketing Strategy Document in process of being endorsed as a joint programming document by the stakeholders that make up the Lough Derg Marketing Strategy Group.

Policy mainstreaming organisation: The members of the the Lough Derg Marketing Strategy Group (Tipperary County Council and four more public and private organisations).

(9) Importing partner: Soča Valley Development Centre, SI

Pilot: yes: Transposition of the RT model to Soča river basin in Slovenia. The system is fully replicated following a bottom up approach, NGO status, non-profit, purpose water management. The NGO was established on 6.8.2014, by the name 'Fundacija za Sočo' or 'Soča river foundation'.

Policy impact: yes New NGO in process of being authorised by Slovenian Ministry of Environment and Agriculture for water management in Soca Valley area (reference to the Slovenian Government Gazette
http://www.uradni-list.si/1/objava.jsp?urlurid=20143353)

Policy mainstreaming organisation: new NGO as authorised agent by the Slovenian Ministry of Environment and Agriculture for water management in Soca Valley area.

(10) Importing partner: South West Regional Authority, PP6 / Cork County Council, PP12

Pilot: yes: A Catchment Management Action Plan has been prepared by a partnership of the SWRA through TRAP and the IRD Duhallow LIFE+ project. This plan will be implemented and amended as seen necessary by the River Allow Catchment Management Group has been formed through a pilot arrangement in the River Allow catchment. The plan will be a constantly evolving document, which the River Allow Catchment Management Group will amend and update under the leadership of IRD Duhallow.

Policy impact: yes: The TRAP project has delivered a best practice structure of implementing this plan at a catchment level which has been endorsed by text and an objective in the Draft Cork County Development Plan (see Chapter 13, pages 221 and 222). The River Basin District (RBD) Coordinators of Ireland have provided their endorsement of the work on the River Allow Catchment and they state that it's a best practice model at a local level which could be replicated in other catchments in Ireland. The Environmental Protection Agency (EPA) has endorsed the River Allow integrated catchment management approach and have adopted its structure as a national pilot. This has resulted in EPA funding for a number of small-scale projects for the catchment.

Policy mainstreaming organisation: The River Allow Catchment group, through the endorsement of the River Basin District (RBD) Coordinators of Ireland and the Environmental Protection Agency (EPA).

PART 5
LESSONS LEARNT

TRAP METHODOLOGY

The 'TRAP methodology' is a consolidation of relatively long term experience in project-based joint development. Each project is different and therefore, the methodology evolves from each experience. During TRAP, we added one step to this staged, joint development methodology, i.e. Stage 5 Capitalisation. In TRAP, this is represented by our Attractive Regional Growth Model. The capitalisation idea consisted of modelling a process focusing on integrated river & river territory management, i.e. combining protection and development. We call this 'capitalisation' and not 'exploitation' because the exploitation term entails uptake of the concepts capitalised upon, and in TRAP, exploitation of the model is not part of the objectives.

In summary, the steps we took in TRAP and which have been confirmed as relevant for the most part, are listed below. Nevertheless, TRAP partners remarked that in future efforts, it might be better if the 'Regional needs analysis' stage could have preceded the 'Good practice exchange' stage. While this is an option, it might be even better, in the future, if the regional needs analysis could be implemented during the proposal preparation phase. This would allow better focus on the GPs & associated exchange as well as classify more accurately the organisational profile of potential partners.

Stage 1: Policy → baseline understanding of the policy → state of the art of the policy implementation in the regions (identification of gaps).

Stage 2: Good practice exchange → good practice analysis template addresses explicitly policy aspects → good practices described accordingly → discussion and analysis of the collected good practices, what is more useful, how they could benefit regions, could they be broken down into partial adoption, and so on.

Stage 3: Regional needs analysis → biggest problems relevant to the project each partner region faces → biggest problems relevant to the project each partner region faces and which, at the same time, are possible for partners to address (institutional feasibility[26]).

Stage 4: Good practice transfer → pre selection of GPs: what each partner needs and is willing to improve (see Stage 3) → matching of partner improvement priorities to analysed good practices → transfer session between "exporting" and "importing" partners and asking all needed clarifications and questions (such sessions usually need some 3 hours) → final decision of the good practices to be imported. Usually one GP transfer (rather than 2 or 3 GPs) can be a good decision → formulation of the implementation plan (detailed, with timetable, resources needed, and deliverables) → realisation of the implementation plan →on going evaluation of the implementation plan realisation → reaching of results (in full or partial) → closing report and description of what happened.

Stage 5: Capitalisation of the project findings → in the case of TRAP this is the formulation of the Attractive Regional Growth model. However, it could be other types of actions in other cases.

26
Drawing on experience from other Interreg IV C projects, institutional, policy-making competence towards mainstreaming of GPs was emphasised during the set up of the TRAP partnership. Partner organisations were requested to ensure direct or indirect policy making potential or at least provable statutory involvement in policy planning in their regions. The relevance of this criterion was confirmed in TRAP whereby, partners with policy making competence or direct involvement in policy planning, achieved timely results.

IMPLEMENTATION OF THE WFD IN THE REGIONS

It was important to ensure a common, baseline understanding of the WFD. This proved a useful approach since the TRAP partnership is diverse, including water management bodies, regional authorities and regional development agencies. For that purpose we formulated a brief survey and we filled it in online sessions during the second semester (autumn 2012). The questions included in the survey focused on Article 13 of the WFD, i.e. the implementation of the RBMP, prioritised by the TRAP project objectives.

The feedback we received indicates that –as can be expected- almost all partners (except one) have an activated RBMP and in many cases, vertical and horizontal integration of the WFD and the RBMP are addressed. Vertical integration (from river basin to national to EU) is also present in most regions. The 'reality check' came from the discussion on horizontal integration of the WFD (i.e. into other policies) and from related challenges faced in the region. Both indicate that while the WFD is a necessary condition, it is not sufficient to shape development. The challenges that have been registered by the partners witness the need to get deeper insight of what balanced growth can be, how it can be accessed, and under what preconditions. As a result, the focus of TRAP on trade off tools & methods, as well as on stakeholder involvement, became even more relevant than initially thought.

Linkages between the project issues and larger or related issues are also important. For example, addressing EC feedback to one TRAP region's RBMP through the options provided by TRAP good practices.

IMPLEMENTATION OF THE ELC IN THE REGIONS

From the exercise we implemented during the 2nd semester (autumn 2012), we conclude that in general, landscape protection is part of the land use planning and the construction permits & licenses process. Few regions are using landscape-mapping tools, and few regions have done impact studies. Therefore, it appears that landscape protection is on macro and less on meso or micro spatial scales, while, on the other hand, pressures to be confronted start at micro level. This might be a valuable insight. Two of the TRAP GPs address landscape management at relatively micro to meso spatial scale, namely Tourism development plans and products for Lough Derg GP4 and Trade-offs and economic tools supporting the implementation GP5, both contributed by Shannon Development PP2. However, transferring these GPs to the regions was difficult for two reasons: PP2 withdrew and regions were / are not yet very familiar with such approaches, i.e. a lengthier, facilitated process would be necessary for a real policy impact. Therefore, we feel that TRAP regions could have greatly benefitted if it were possible to pilot in each region the Landmap Wales scale and draw landscape and land use plan conclusions accordingly. However, such an exercise was not possible as the effort would diverge from the TRAP key objectives.
TRAP wishes to strongly recommend that the ELC remains in focus both at regional and interregional actions for the future.

TYPES OF GOOD PRACTICES COLLECTED AND TYPES OF GOOD PRACTICES TRANSFERRED

The table below summarises the TRAP GPs that were retained, those that have been exported, and the types of GP actions that they involved [27].

27
During the TRAP preparation period we had distinguished GPs into technology, methodology, project intervention and policy.

TABLE 1. TRAP GPS, THEMATIC CONTRIBUTIONS AND TYPES

TRAP GOOD PRACTICES	CONTRIBUTION OF TRAP GPS TO TRAP THEMATIC AREAS	EXPORTED GPS	GP TYPE
Kainuun Etu Oy (FI), PP1			
Surface water monitoring technology & operational aspects, GP1	**2**	**X**	Organisational + Technology (decisions based on government + governance support)
Rehabilitation project of Oulujoki river flow, GP2	**3**		
Rehabilitation of the water cycle, GP3	**3**		
Oulu – Kajaani regional development zone (RDZ) 2010, GP29	**1**		
Shannon Development (IE), PP2			
Tourism development plans and products for Lough Derg, GP4	**4**		
Trade offs and economic tools supporting the implementation, GP5	**4,1**		
MidWest Regional Authority (IE), PP3			
Regional Planning Guidelines, GP6	**4,1**	**X**	Policy
Lough Derg marketing strategy group, GP7	**4,1**		
The Rivers Trust (UK), PP4			
Economic impact assessment tools (=methodology) for stakeholder involvement and consensus building, GP8	**1**	**3X**	EU policy tool adjusted to regional contexts (tools + policy)
Monitoring programmes for the implementation of the regional RBMP, GP9	**2**		
Information Platforms to support WFD communication and planning, GP10	**2**		
Economic development tools & examples of solutions for including landscape & cultural heritage into the regional economic development, GP11	**2**		
Catchment management plans, GP26	**3**	**X**	Methodology +policy (governance + government support)
Governance, structure and goals of the Rivers Trust Movement, GP27	**1**	**3X**	Methodology + policy (governance + government support)
Soca Valley Development Centre (SI), PP5			
Institutional good practice for ensuring aquatic eco-system quality, GP12	**3**		
Tourism development plans & products ensuring fishing tourism and water sports compatibility and balance, GP13	**4**	**X**	Development approach adjusted to regional context (governance + government support)
SouthWest Regional Authority (IE), PP6			
Regional planning guidelines and resource conservation, GP14	**4**		
Regional Environmental River Enhancement Programme, GP15	**3**		
Rural environment protection schemes, GP16	**3**		
Forestry and water quality guidelines, GP17	**2**		
National Institute of Research Development for Mechatronics and Measurement Technique (RO), PP7			
Systems for forecasting of floods, GP18	**2**		
Technology and systems for sediments monitoring in reservoirs and rivers, GP19	**2**		
Regional Development Agency of Western Macedonia (GR), PP8			
Project demonstrating environmentally friendly tourism development project taking into account forest resources, GP20	**4**		
Zemgale Planning Region (LV), PP9			
Project on river territory rehabilitation & land use change; including infrastructure for river tourism, riverbank improvement, water treatments in villages and cities, GP21	**4**		
Waterboard Noorderzijlvest (NL), PP10			
Reservoir for temporary water storage as safety provision & as Natura 2000 area, GP22	**3**		
Re-meandering of river-streambed as both WFD and safety measure in agricultural production area within the law of land reform, GP23	**1,3,4**		
Integrated rural intervention with re-meandering helophyte water filtering of agricultural and industrial effluent with voluntary participation of government and private partners, GP24	**1,3,4**		
Determination of water management practices in a big lake combining Natura 2000 aims and water safety limits, GP25	**3**		

In conclusion

- methodological good practices were those transferred the most, and this finding confirms other Interreg IV C project experiences[28], while the most challenging to transfer were comprehensive projects like GPs 23 or 24 for example. It implies that sometimes, it is the good practice within a good practice that can be transferred (and maybe it should, as long as there is evidence of results): for example, the success of GPs 23 and 24 is founded on respective good practices on land use law, stakeholder involvement, and engineering.
- explicitly linking good practices to European Directives & specific articles (rather than 'just' policies) is a valid approach, leading to GP transfer and policy change and considerable organisational learning.
- the institutional & competence status of the partners is (re-)confirmed as crucial factor. Invariably, partners with policy-making competence or formal, content-based involvement are those that have been able to mainstream better. In the case of TRAP, because of the WFD-focused nature and established way of management, we also observe that those partners ensuring (formal) contacts to the national level have been able to mainstream good practices more and more smoothly.

Capitalisation: the Attractive Regional Growth Model (ARGM)

The ARGM model was / is intended as an effort to capitalise on the TRAP good practices, from a decision making perspective. The concept of ARGM per se, benefits from extensive literature since early 1970s. For example principles and considerations of what attractive growth is, were introduced in 1972, in 'Limits to growth' [29] or even since mid-1950s if one considers as starting point Kuznets' article on income trends in 1955 [30] and the discussion on environmental curves that emerged from it. Anyway, research as to what is attractive growth vs. what could be considered enforced growth, or even undesirable growth, is on-going.

The ARGM is aligned with the approach explored extensively and in depth by NL researchers[31] and focuses the model as a decision making tool. According to these assumptions, attractive regional growth is based on benchmarks (in this case TRAP good practices reflecting integrated solutions to specific problems), as interpreted by stakeholders (in this case the stakeholders were the TRAP partners). The starting point of the stakeholder input was to stress economic benefits through the integrated development solutions.

What we have learnt from the ARGM approach adopted in TRAP is summarised, as follows:

- the approach to stakeholder involvement on the base of interdependencies (Jurian Edelenbos & Erik-Hans Klijn (2005) Managing stakeholder involvement in decision-making A comparative analysis of six interactive processes in The Netherlands) rather than ethical aspects, can work more effectively, it is operational and transferable.
- the content of interdependencies needs to be opened up in depth so that the groups involved are reflecting these issues and are in a position to make educated inputs (i.e. self-interest becomes more inclusive, potentially at least)
- the interdependency approach is a scale-based approach. The scale can be defined to take into account the direct impact of proposed growth activities (minimum) in specific localitles, but it can also be planned to take into account broader parametres (such as, for example, overall supply side projections). Thus the geographical, socio-economic, and environmental scales may not always coincide within the set administrative decision making borders of a region or municipality. This insight confirms another TRAP finding, from the ESS exercises (i.e. the good practice transfers in Netherlands and Finland), that the scale definition needs more insights and better understanding.

28 E.g. FRESH, STEP, ECOREGIONS.

29 Meadows D. H., D. L. Meadows J. Randers, W. Behrens III (1972): The Limits to Growth, Earth Island Ltd.

30 Kuznets, S., 1955. Economic growth and income inequality. American Economic Review, 49: 1-28. : Pollution often appears first to worsen and later to improve as countries' incomes grow. Because of its resemblance to the pattern of inequality and income described by Simon Kuznets, this pattern of pollution and income has been labelled an 'environmental Kuznets curve'. While many pollutants exhibit this pattern, peak pollution levels occur at different income levels for different pollutants, countries and time periods. This link between income and pollution cannot be interpreted causally, and is consistent with either efficient or inefficient growth paths. *The evidence does, however, refute the claim that environmental degradation is an inevitable consequence* of economic growth.

(http://faculty.georgetown.edu/aml6/pdfs&zips/PalgraveEKC.pdf).

31 Jurian Edelenbos Erik-Hans Klijn (2005) Managing stakeholder involvement in decision-making A comparative analysis of six interactive processes in The Netherlands; Koppenjan, J.F.M. , E.H. Klijn (2004), Managing uncertainties in networks; a network approach to problem solving and decision making, London: Routledge

Therefore, the ARGM will need a lot of background impact and optimisation studies to become fully operational and transferable. However, we consider inevitable that such studies are needed for balanced growth to become more accessible, both as concept and as practice, to all EU regions and beyond.

STAKEHOLDER INVOLVEMENT AS A CENTRAL TRAP THEME

The WFD is one of the very first EU Directives that prioritises natural rather than administrative boundaries, and in that sense, water management is very much a governance and not only government approach. This is the reason that the first thematic area (TA1) of TRAP was dedicated to Governance and stakeholder involvement. However, while it was planned to reflect good practices addressing Article 14 of the WFD (Public consultation), practice indicated that the stakeholder involvement theme was very important (i.e. a challenge) in a number of TRAP regions. As a result of this demand, one of the TRAP partners who had been contributing such good practices (PP4 RT, UK, GPs 26 and 27), became a solely 'exporting partner' and helped importing regions (e.g. PP3/PP11, PP6, PP5) to set up systematic stakeholder involvement processes, focused especially on joint programming. This focus is also aligned with the stakeholder involvement in other partner areas (which did not report stakeholder involvement needs).
While reviewing stakeholder involvement literature, we found that classifications could vary, however, in general we follow the UNDP approach (Figure below) to which then we attach activities and level of inclusion (Figure below) are not yet totally agreed and there might be contradictions.

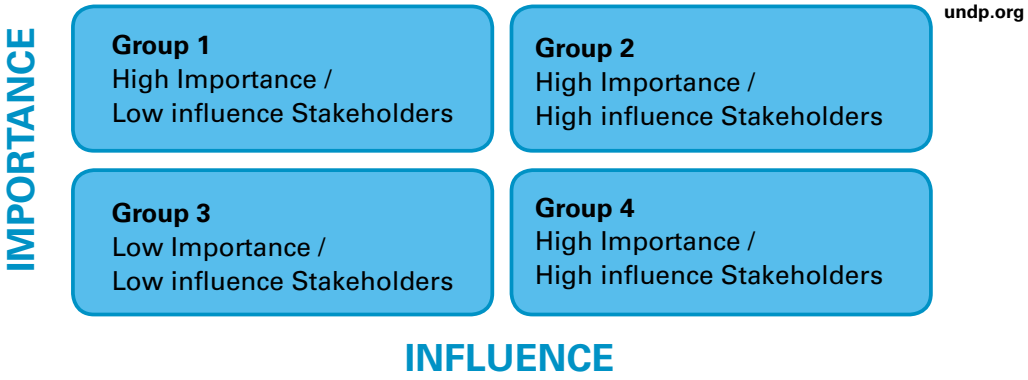


Figure 15. Stakeholder importance and influence matrix (1)

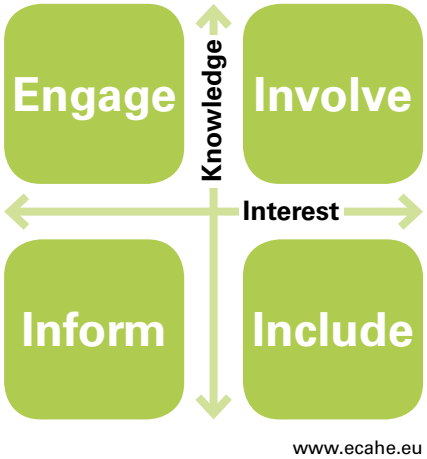


Figure 16. Stakeholder importance and influence matrix (2)

As a closing remark, we would like to emphasise that, stakeholder involvement is multisided and we feel that its relevance grow in the years to come. Thus, conceptual clarifications together with mapping and classifying of stakeholders & their roles could prove an important exercise for probably all of the regions.

ECOSYSTEM SERVICES AS AN EMERGING TRAP THEME

TRAP Good Practice 8 on Economic impact assessment tools for stakeholder involvement and consensus building, attracted the interest of at least three importing regions. GP8 introduced such concepts as cultural eco system services together with regulation, provision and environmental ones. GP8 reflects implementation of Article 5 of the Biodiversity Strategy and contributes to the implementation of Article 13 of the WFD. Accounting for ecosystem services contributes towards better decision making, whereby policy appraisals account for the costs and benefits to the natural environment. The approach requires that the consequences for natural capital – including the services provided by aquatic ecosystems - be taken into account within the decision-making process within integrated land and water management, hence improving the likelihood of finding optimal outcomes.

The Eco system approach (ESA), as part of the Biodiversity strategy, is not direct part of the WFD. However, ESA provides a framework for looking at whole ecosystems in decision making to ensure that society can maintain a healthy and resilient natural environment now and for future generations. Therefore, although it is not explicitly mentioned in the Water Framework Directive, the Ecosystem Approach appears "to be a promising concept to help its implementation, on the basis that there is a connection between the aims and objectives of the Directive (including good ecological status) and the provision of ecosystem services"[32]

The concept of recognising and acknowledging the value of "services" the ecosystem provides, proved very interesting to the TRAP partners. The concept was opened up more and various mapping and shadow pricing methodologies were discussed. Three TRAP partners focused their good practice transfer on GP8 (see following section) and three more expressed their interest in joining further cooperation on ESS applications.

ACHIEVEMENTS, INTENSITY OF GOOD PRACTICE TRANSFER, BENEFITS & CHALLENGES

The GP exchange was conceived to facilitate GP pilots ('GP transfer') as part of the overarching TRAP objective, which is improvement of policy instruments. Sometimes the GP transfer means a pilot for evidence-based policy decision-making. Thus, GP pilots were meant as feasibility studies towards policy impact.

In this section we present the confirmed results based on outputs as well as regular & frequent discussions with each and every partner. On the base of the six (7) good practices that were transferred, there were six good practice transfer pilots generated, seven (7) policy instruments were improved, and two (2) policy improvements are pending.

32 Vlachopoulou M, Coughlin, Forrow, Kirk S, Logan P, Voulvoulis N. (2013) Sci Total Environ. 2014 Feb 1;470-471:684-94. doi: 10.1016/j.scitotenv.2013.09.072. Epub 2013 Oct 29. Useful to TRAP: In this paper, methodological linkages between the Ecosystem Approach and the Water Framework Directive have been reviewed and a framework is proposed that links its implementation to the Ecosystem Approach taking into consideration all ecosystem services and water management objectives. Individual River Basin Management Plan objectives are qualitatively assessed as to how strong their link is with individual ecosystem services. The benefits of using this approach to provide a preliminary assessment of how it could support future implementation of the Directive have been identified and discussed. Findings also demonstrate its potential to encourage more systematic and systemic thinking as it can provide a consistent framework for identifying shared aims and evaluating alternative water management scenarios and options in decision making.

TABLE 19. TRAP, POLICY INSTRUMENTS IMPROVED DURING THE PROJECT 19.12.2011- 31.12.2014

PARTNER AND GOOD PRACTICE TRANSFER ACTION	GP1	GP6	GP7	GP8	GP13	GP26	GP27
PP1 KE Piloting ecosystem services (ESS mapping and appraisal) in WFD-implementing river & territory rehabilitation project. Pilot completed and disseminated officially 15.9.2014. Outputs include (1) transferable ESS appraisal tool, relevant for similar contexts, (2) the mapping and appraisal reports, and (3) development possibilities (project pipeline) that emerged from the mapping of cultural use & non-use ESS. All material is accessible at: http://www.kainuunetu.fi/fi/47cf8c72-41df-4585-a1ba-d77c88ec22ff/0bee1139-7b60-4dba-9293-1de59d0df629; (4) Minor mainstreaming of ESS into policy implementation (ESS as part of the Water thematic programme coordination actions on 29.10.2014; project generation needed for the implementation); (5) ESS valuation tool has been tested in another area of Kainuu (ELY Keskus), 8.11.2014)				X			
PP5 SVDC Establishment of an NGO for localised water management, replicating the Rivers Trust model; name of NGP is 'Fundacija za Sočo' or 'Soča river foundation'. It was established on 6.8.2014.							X
PP7 INCDTM, RO Web site testing the process of monitoring & waste water Web site available at: http://www.goodpractice-trap.ro	X						
PP10 Handbook stressing organizational & policy learning.				X			
PP11 TCC/ PP3 MWRA Consolidation of the Lough Derg Marketing Group into a joint programming inter-county, multi-stakeholder team which produced a revised strategy with enhanced stakeholder engagement actions. This included three demonstration studies as pilots (food trail, canoe trail and angling) focusing on tourism integrated with land and water management. Strategy document is available at http://www.failteireland.ie/FailteIreland/media/WebsiteStructure/Documents/3_Research_Insights/2_Regional_SurveysReports/LoughDergRoadmap2014_Publication_v1-0.pdf?ext=.pdf and the demonstration pilots are available at www.discoverloughderg.ie							X
PP12 CCC/PP6 SWRA, IE Integrated Catchment Management (ICM) structure established at a sub-catchment level. Sub-catchment management plan produced. The sub-catchment plan is available at: http://trapproject.eu/downloads/river-allow-catchment-management-action-plan-july-2014						X	X
PP5 SVDC Establishment of an NGO for localised water management, replicating the Rivers Trust model; name of NGP is 'Fundacija za Sočo' or 'Soča river foundation'. It was established on 6.8.2014. NGO was endorsed by the Slovenian Ministry of Environment, Government Gazette reference: http://www.uradni-list.si/1/objava.jsp?urlurid=20143353							X
PP7 INCDTM, RO GD 188/2002 and GD 352/2005, Article 4 - paragraph 1a and 1b and Article 5 - paragraph 2, having the implementation deadline on 30.06.2015. These GDs transpose the Council Directive 912 / 271 / EEC of 21.05.1991 and the Commission Directive 98/15 / EC of 27.02.1998.	X						
PP8 ANKO, GR The area of application of **the River Basin Management Plan (R.B.A.P.) of W. Macedonia** was adjusted. There has been a land use plan change and the change is found in the 29.01.2014 official approval by the Greek Ministry of Environment, http://wfd.ypeka.gr/index.php?option=com_content&task=view&id=113&Itemid=19)					X		
Regional Operational Programme (R.O.P.) 2014 – 2020 of Western Macedonia / Operational Document (21.7.2014 official submission of R.O.P. First version to E.C., http://www.espa.gr/el/Pages/staticNewProgrammingPeriod.aspx)				X	X		
Local Development Programme (L.D.P.) 2012 – 2016 of Western Macedonia / Operational Document (11.04.2014 official approval by the regional council, http://hefaistos.anko.gr:7778/images/tabs/anko/EAP/2012-2016/EAP-1.pdf)				X	X		
PP9 ZemPlRe, LV **Zemgale Planning Region Development Programme 2014-2020**. Political decision to start public discussion will be on November, 21. Final approval of Programme expected between end of Dec 2014- to end of January2015.		X					
PP12 CCC/PP6 SWRA,IE **River Basin Management Plan (Sub-catchment management plan and intra-county multi-stakeholder stakeholder action group River Allow)**; endorsement to act as intermediary by the Irish WFD Coordination Unit 14.8.2014						X	X

TAB 20. INTENSITY OF GOOD PRACTICE TRANSFER & POLICY IMPACT TO DATE (26.10.2014). FIGURES INDICATE LEVEL OF INTENSITY; MULTIPLE ROWS UNDER ONE GP INDICATE THAT MORE THAN ONE PARTNERS IMPORTED

GP	ORGANISATIONAL LEARNING (1)	POLICY LEARNING (INCLUDES STAKEHOLDER INVOLVEMENT OUTSIDE THE PARTNER ORGANIZATION) (2)	GOOD PRACTICE TRANSFER (=PILOT) (3)	POLICY IMPACT (=CONFIRMED NEW POLICY DOCUMENTS) (4)
GP1	1	2	3	4
GP6	1	2		4
GP7	1	2		4
GP8	1	2	3	Pending (1 partner)
	1	2		
	1	2		4 x2
GP13	1	2		4
GP26	1	2	3	4
GP27	1	2	3	Pending (1 partner)
				4x 2 (completed)
	1	3	3	4
	1	2	3	

We understand the notion of 'intensity of good practice transfer' as the degree of mainstreaming, starting from organisational learning and ending at policy change. What can be concluded is that organisational and policy learning have been very strong. On the other hand, good practice transfer (pilots) could have been stronger, and maybe this should be recommended in the future, because pilots produce evidence for policy making and, in that sense, support policy making. Finally, there are six policy instruments impacted. Three out of these six relate to the WFD and three to regional development plans including ESIF OP.

In conclusion, good practice transfer and policy impact indicate relatively high intensity of results –of course there is always space for improvement. Challenges have been identified as follows:

- ELC is very weak in the good practice contribution and transfer

- Coordination actions within Article 13 of the WFD, a missed opportunity. In general, the WFD, as a cross border planning & environmental protection tool, should be widely disseminated; horizontal integration (coordination actions) issues should be opened up. For example through other projects or local policy upgrade initiatives.

- The Biodiversity strategy and the ESS aspects need to be opened up and disseminated widely to regional policy decision makers. Moreover, regional and water authorities should share a baseline approach of the suitable scale (-s) of ESS applications and the recommended shadow pricing [33] methods in the various cases.

- Stakeholders not always sufficiently aware of policy issues; baseline understanding of policy issues not always good enough.

- Policy 'maturity' = easiness to apply not advanced enough, in some cases it discouraged from making pilots

- Contacts with national level weak, this weakened mainstreaming potential.

33 Shadow pricing: Opportunity cost of an activity or project to a society, computed where the actual price is not known, or, if known, does not reflect the real sacrifice made. Where price does not reflect the actual value of a good or commodity, or no market value for a good or commodity exists, shadow pricing can be used. Shadow pricing is a proxy value of a good, often defined by what an individual must give up to gain an extra unit of the good. The value of a good or impact resulting from a project when measured using shadow pricing may, differ from the value of that or similar goods or impacts when measured using market prices. This occurs due to market failure in real markets which impacts on the shadow value of certain goods and impacts. In some cases shadow pricing can be used to obtain a valuation of the impacts of a project, whether benefits or costs, using stated and revealed preferences. The UK Department for Transport, for example, collect data on revealed and stated preferences for use in their COBA project appraisal. (reference: http://www.cbabuilder.co.uk/Quant2.html; resource was created by Dr Dan Wheatley. The project was funded by the Economics Network and the Centre for Education in the Built Environment (CEBE) as part of the Teaching and Learning Development Projects 2010/11.supported by the Economics Network [The Economics Network is based at and supported by the University of Bristol. It receives funding from the Royal Economic Society, the Scottish Economic Society, the London School of Economics and Political Science, and the University of Exeter.

PART 6
CONCLUSIONS

THE INTEGRATED NATURE OF TRAP PROVED TO BE A STRENGTH

TRAP was a genuinely integrated project that cut across a number of issues. Whilst this led to a relatively challenging initiation period, ultimately it was a key factor in the success of the project, as evidenced by the implementation of a range of cross-cutting good practices.

The partners were drawn from a wide range of expertise and time was required in the early stages of the project to develop an understanding of the potential linkages between relevant issues, for example, land use planning and water management, with the latter including requirements to engage with River Basin Management Planning under WFD.

Expertise across the partners ranged from the promotion of river tourism through the details of WFD implementation, to Governance issues, and as with all organisations some early 'silo' thinking existed. Close co-operation between partners, however, led to 'organisational learning' and a progressively deeper understanding of WFD, ELC, Europe2020 and the integrated aspects between them.

Of particular note was the nascent understanding by TRAP partners that the WFD need not be perceived in a narrow sense as solely focused upon the protection of the aquatic environment but can applied broadly and embedded within regional planning through, for example, the enhancement of ecosystem services. Linked to this, one partner recognised that TRAP had helped to identify previously hidden operational potential within their wider organisation.

The integrated nature of some of the pre-determined good practices helped to underpin the positive outcomes realised by TRAP. This applied in particular to those that encompassed environmental protection with regional growth solutions either through win-win solutions or trade-offs.

MORE CAN BE DONE TO IMPLEMENT THE ELC

Analysis across partner regions indicated that the ELC is not necessarily as widely applied as the respective country commitments would imply. In fact, TRAP has raised awareness of landscape protection in certain partner regions and overall, identified that landscape vulnerability assessment tools are essential to determine optimised solutions to growth that include environmental protection.

THE INTERFACE BETWEEN LAND USE PLANNING AND WATER MANAGEMENT REMAINS LIMITED

Whilst TRAP drove greater synergies between environmental protection and economic growth, integration between land use planning and water management typically remains incomplete across the project partners. A lack of understanding of the 'other' discipline is generally apparent reflecting the relatively narrow scope of those departments responsible for each particular issue. Here though, TRAP has had some success, with stakeholder engagement activities bringing closer collaboration and understanding between respective parties.

THE REGIONAL NEEDS ANALYSIS PROVIDED MULTIPLE BENEFITS TO THE PROJECT

The Regional Needs Analysis (RNA) under TRAP enabled partners to match good practices to regional requirements through a systematic process. In undertaking this process, some partners were able to strengthen collaboration with WFD authorities with a mutual realisation that aspects of WFD implementation can be integrated into regional development planning.

The RNA identified a requirement for the development of new good practices, particularly those focused on Governance and consensus-building tools with which to engage stakeholders within decision-making. The development of an important second phase of good practices was then undertaken, of proven benefit to the project, driven by the outcomes of the RNA.

GOVERNANCE AND STAKEHOLDER ENGAGEMENT ARE KEY ISSUES IN IMPLEMENTING THE WFD

Key weaknesses in the governance of water management were identified & prioritised in at least three partner regions and import of TRAP GPs helped to address these. In particular, a 'bottom-up' approach engaging local stakeholders has been integrated to complement top down regulation at regional or national scale. In each case, this local expertise can now be fed into and enhance the 2nd round WFD draft River basin Management Plans which are by nature rather high-level and lacking local context.

Closely linked to these Governance issues has been the clear recognition of the importance of wide stakeholder engagement to promote integration and coordination. Here TRAP has been very successful, with GP implementation leading to the establishment of catchment groups that encompass stakeholders drawn from various sectors. As these partnerships develop, they will address issues such as the existing fragmentation of decision-making and progressively develop responsibility for the management of their catchment. As such, they will also be addressing Article 14 Public consultation of the WFD.

TRAP partners have identified their organisational learning and progressive understanding of water issues as being of benefit with respect to engaging with stakeholders, including in terms of helping to develop a common language so that all parties can understand one another.

Given the importance of stakeholder engagement in TRAP, it is worth noting that none of the original pre-determined GPs addressed the issue. The sessions during interregional project meetings (June 2012 and October 2012) dedicated to the opening up of the WFD and the ELC, together with the Regional Needs Analysis led to the development of new GPs focused on Governance and Stakeholder engagement.

Stakeholder engagement, in TRAP, emerged as an important theme also because it led to important insights relating to the implementation of the WFD & the ELC in general: (1) it showed the need to map, open up & resolve conflicts of interest of various stakeholders in view of implementing the RBMP and the ELC. This takes systematic mapping of stakeholders, impact studies of policies and interventions and interdependency analyses as starting points. In general, such approaches are not sufficiently taken up by TRAP regions; (2) implementing the RBMP requires, often, sub catchment plans and scaling-down of water management through governance interfaces; (3) it also requires vertical integration

not only in terms of monitoring of water sources and related data collection (Article 8), but also by national or river basin catchment level Water authorities endorsing of sub catchment plan management governance groups. In TRAP two partners attempted such endorsement, and one achieved during the project. In the future, the criteria for endorsing sub catchment riven basin governance groups and the process to be followed for that purpose, will need to be specified and generalised in more regions; (4) the implementation of Coordination actions (part of Article 13 RBMP) implies policy integration of WFD water quality objectives, and therefore reinforces the need for stakeholder engagement.

THE ECOSYSTEM SERVICES APPROACH HAS CLEAR BENEFITS & STRONG MAINSTREAMING POTENTIAL

The import and implementation within policy of the Ecosystem Services (ESS) approach by three TRAP partners, reflected a growing recognition and understanding of the issues involved, including the practical benefits arising from implementation. Additionally, other partners have identified plans to explore the potential to implement ESS schemes, in one case, having already taken practical steps to do so.

The benefits of the ESS approach are detailed in the Conclusions of this report but it is worth noting here that partners particularly recognised the importance of valuing ecosystem benefits and hence the ability to improve and refine cost-benefit analysis of measures. In fact, application of the ESS is expected to be generalised by the end of 2015 for all member states who are Such measures can include those within WFD RBMPs. Stakeholder engagement with ESS implementation also proved to be of importance.

GOOD PRACTICE TRANSFER WAS SUCCESSFUL BUT CHALLENGING

Pre-determination of the detail of a number of Good Practices prior to the start of the project led to a challenging early stage whereby partners strived to identify those GPs of greatest relevance to their region. This process was undertaken at a time when organisational learning by partners across the range of integrated issues addressed by TRAP was still at an early stage. In this respect the RNA proved to be of value, identifying the need for new GPs. The flexibility to develop these new GPs as the project progressed proved to be important as they form a significant proportion of those that were ultimately transferred.

Whilst some of the TRAP GPs struggled to fully embrace the integrated aims of the project, others were very cross-cutting in nature and of direct relevance to integrated land and water management. For example, one GP, focused upon the conversion of flood-prone agricultural land to an extensive wetland feature, realised benefits with respect to flood risk management, water quality and biodiversity. As consequence, this particular GP is of direct relevance to a range of policy and legislation, including WFD, the Floods Directive and Biodiversity 2020 strategy.

It is also of note that beyond the formal transfer (import) of a GP, TRAP partners also generally found them to be of value in terms of informing, confirming and strengthening existing knowledge on a particular issue. The value of this should not be underestimated. In this respect wide dissemination of all GPs to other INTERREG projects, and beyond, would be of value. This is particularly important when it is considered that TRAP partners saw opportunities for wider implementation of some GPs, to other regions or even nationally. For example,

- the South West Regional Authority PP6 engaged, within TRAP, the local partners of a LIFE+ project (IRD Duhallow) yielding a beneficial outcome whereby those local

partners have helped form and develop the River Allow Catchment Management Group. Membership of the group also includes the Office of Public works responsible for flood management, environmental organisations and farming representative groups. Engagement between the projects has led, therefore, to a synergistic and positive outcome.

- TRAP tried also to network with two other water-related Interreg IVC projects, ERCIP and LakeAdmin. Networking activities with ERCIP focused on comparing results and especially insights. ERCIP resulted to similar conclusions, as TRAP, regarding the importance of governance and stakeholder engagement.

SUPPORT TO GOOD PRACTICE IMPLEMENTATION IS IMPORTANT

On-going exporting-partner support has proved important in ensuring successful implementation of good practices in TRAP partner regions. This support has been provided through various mechanisms including informal communication via email and Skype and more formalised approaches including in one case, the holding of a dedicated workshop. Implementation is not necessarily a smooth process and sufficient time needs to be made available in comparable projects for the provision of guidance by exporting partners. This could be formalised (as far as possible) at the project proposal stage

PART 7
ANNEXES

ANNEX 1
GOOD PRACTICE TRANSFER IMPLEMENTATION PLAN TEMPLATE

1. The GP to be transferred is a project

1. Name of the organisation adopting the good practice:
2. GOOD PRACTICE NAME:
3. Justification
   a. Background of the good practice:
   b. State of the art in the region (policies and public sector including education) in respet to the good practice
   c. State of the art in the region from the priavte sector (i.e. get in touch with businesses and have their feedback, do they need this GP?)
4. Adaptation, localisation of the good practice, new project plan
   a. Purpose
   b. Objectives of the new project and objectives quantification:
   c. Activities supported:
   d. Budget
   e. Eligible categories of expenditure:
   f. Financing plan
   g. Beneficiaries
   h. Timeplan of the project
5. Funding sources (amounts, programme & organisations)
6. Implementation location & administrative unit
7. Implementation period:
8. Connection with other parts of the programme and other programmes
9. Start date of implementation

Contact person for the good practice transfer:
Name:
E-mail:
Telephone:

2. The GP to be transferred is a methodology, or indicators, or policy per se

INTEGRATION FRAMEWORK

1. Name of the organisation adopting the good practice
2. Name of the policy tool that will be impacted, into which the adapted good practice will be integrated
3. Name of the methodology/indicators/ policy that will be adopted
4. Name and origin of the good practice that is adopted

JUSTIFICATION AND PROCESS

5. Justification for the GP import: added value of the GP to the region and to the related policies.
6. Process of endorsement of the GP within the adopting organisation and timetable

INTEGRATION

7. Feasibility study, methodological adaptation
8. Acceptance of the feasibility study
9. Timetable for requesting the GP endorsement
10. Endorsement and adotpion of the GP
11. Start of application

Contact person for the good practice transfer:
Name:
E-mail:
Telephone:

ANNEX 2
REFERENCES AND CREDITS

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From: http://www.cbabuilder.co.uk/Quant2.html; resource was created by Dr Dan Wheatley. The project was funded by the Economics Network and the Centre for Education in the Built Environment (CEBE) as part of the Teaching and Learning Development Projects 2010/11.supported by the Economics Network [The Economics Network is based at and supported by the University of Bristol. It receives funding from the Royal Economic Society, the Scottish Economic Society, the London School of Economics and Political Science, and the University of Exeter.

MARKET	DIFFERENCE BETWEEN MARKET AND SHADOW PRICE	EXPLANATION
Labour	Shadow wage is less than market wage when there is unemployment.	No loss in output elsewhere when individual gains employment, so marginal social cost of hiring this individual is lower than market wage.
Capital	Shadow interest rate is greater than market interest rate when there is rationing in capital markets.	Expected return is greater than interest rate as firms wish to borrow more at given interest rate than they can. Opportunity cost of funds is greater than interest rate.
Steel	Shadow price is greater than market price.	Steel producer does not account for marginal social cost of pollution in production costs.

In some cases shadow pricing can be used to obtain a valuation of the impacts of a project, whether benefits or costs, using stated and revealed preferences. The UK Department for Transport, for example, collect data on revealed and stated preferences for use in their COBA project appraisal.

'STATED' OR 'EXPRESSED' PREFERENCES

Collecting data on stated or expressed preferences involves asking individuals directly to express how they feel about the impacts of a project. This method is usually applied where impacts are involved which either do not have a market price, or a market price is deemed inappropriate. Stated or expressed preferences are a contingent valuation method of data collection which involve the use of either willingness to pay or willingness to accept measures of a good or commodity (see Boardman et al, 2001, 30-36).

Willingness to Pay

If collecting data on benefits this measure will usually involve asking an individual, using a survey or questionnaire, about their *willingness* to pay for some sort of benefit, for example improved journey times, or the preservation of a local park. The willingness to pay method has been used in the UK to evaluate the 'use value' of an amenity to individuals.

Willingness to Accept

Equally a *willingness* to accept measure can be used. This involves asking individuals how much they would be willing to accept in compensation to consume more undesirable goods or commodities. For example, what monetary compensation would a fisherman accept to continue living along a coastline impacted by an oil spill.

TOTAL ECONOMIC VALUE

The total economic value (TEV) of a resource or amenity reflects not only the value we associate with our current use of the amenity (the 'use value') but also the potential future value we consider the amenity to have, and the value we associate simply with the existence of the resource or amenity.
This can be expressed as follows:

TEV = Use Value + Option Value + Existence Value

- **Use Value**
  The Use Value is the value we consider a resource or amenity to currently have in reference to our current use of it. For example, we may value a park based on walking a dog around it, playing football one night per week, and having picnics on it during the summer months.

- **Option Value**
  The option value of a resource or amenity reflects the value we would give to our potential or optional future use of the resource or amenity. For example, we may consider our local park would be a good place to start playing cricket on the weekends, which would increase our overall future use of the park and therefore our value of it.

- **Existence Value**
  The existence value is the value which reflects our willingness to pay for a resource or asset to be preserved simply because we wish for it to continue to exist. In the case of our park regardless of current use value and future option value, we would also wish it to continue to exist because of the aesthetic and ambience it provides to the area.

THE BIAS PROBLEM

Collecting data from individuals using a questionnaire method can suffer from a key problem relating to bias. When attempting to apply a valuation to some cost or benefit of a project two potential biasing problems may be encountered:

(1) Bias in the sample: In most cases the researcher involved in the CBA will have limited resources (time and financial). This means that a sample will have to be chosen to collect the stated preference data on the costs/benefits associated with a project. However, in collecting data using only a sample of the wider population potential bias can be found. This will be a particular problem if only a small sample of individuals is surveyed as part of the data collection. For example, if a survey samples only 100 individuals, and within this sample 12 are members of a local environmental action group, the responses of these individuals could bias the overall results. This problem can be addressed, at least to a certain extent, by collecting data from a large sample, and through use of sampling methods which ensure a representative cross-section of individuals.

(2) Bias in responses: Asking individuals directly about their willingness to pay or willingness to accept may illicit a stronger view from the individuals than they actually have. For example, when asking individuals how much they would be willing to pay to preserve an area of local parkland they may apply a significantly larger monetary valuation than they would really be willing to pay, knowing that they

would not actually be asked to pay this amount should the parkland be preserved. Moreover, individuals may state a willingness to pay to preserve an amenity such as a local park, even though they actually never visit the park and may consider it a nuisance at night when children hang around on the park.

CREDITS

Structure of the TRAP handbook
all TRAP partners

Executive summary
Rob Collins (PP4) and Ninetta Chaniotou (PP1)

Part 1 Policy Background & the TRAP good practices
All the TRAP partners for the GP contributions; the Rivers Trust UK (Rob Collins) and Kainuun Etu Oy (Ninetta Chaniotou, Silja Keränen, Tiina Hartman) for the review.

Part 2 Regional needs analysis
All the TRAP partners for each region's needs analysis contributions; the Rivers Trust UK (Rob Collins) and Kainuun Etu Oy (Ninetta Chaniotou, Silja Keränen, Tiina Hartman) for the review.

Part 3 Regional Attractive Growth Model
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Part 4 Good practice transfer and improvement of policy instruments in TRAP
All the TRAP partners for each region's GP transfer implementation pan and related transfer activities; the Rivers Trust UK (Rob Collins) and Kainuun Etu Oy (Ninetta Chaniotou, Silja Keränen) for the review.

Part 5 Lessons learnt
Rob Collins (PP4) and Ninetta Chaniotou (PP1)

Part 6 Conclusions
Rob Collins (PP4) and Ninetta Chaniotou (PP1)

Part 7 Annexes
Implementation plan template, Ninetta Chaniotou (PP1)