Integrated River Basin Management
A Rivers Trust in Action

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Westcountry Rivers Trust:
Registered Charity Established 1994
Who is the Westcountry Rivers Trust?

- Independent charitable organisation
- Established in 1994
- Concentrate on creating practical improvements
- Raise funds for specific projects
To achieve its objectives …...

- Research & development
- Practical advice
- **Catchment-scale projects**
- Environmental education
- Demonstration sites
- Physical works
WRT led catchment scale projects (started in 1996)

- Tamar 2000 SUPPORT Project (complete 1999)
- Westcountry Rivers Project (complete 2001)
- Tale River Project (complete 2002)
- Cornwall Rivers Project (in progress)
Restoration tackles **diffuse pollution, habitat degradation and unnatural flow problems** at source

**Examples**
- Fine sediments
- Nutrient enrichment
- Water quality
- Habitat degradation
- Water quantity

**Consequences**
- Large & local scale alteration of river channel
- Eutrophication of river & coastal shelf
- Poor water quality
- Deterioration of in-river habitat
- Loss of biodiversity within and associated with the river
- Loss of environmental value
- Loss of amenity value and capital value
- **Cost to land managers and the public**
Catchment based restoration find win-win solutions to problems with equitably distributed costs and benefits

Conceptual framework for ecosystem management

- Recognition of ecosystem functioning.
- Allow for site linkage
- Inter-linkage of nature and culture.
- Holistic approach without focus on single species or protected areas.
- Voluntary stakeholder participation in management of ecosystems, self propagating.
- Appropriate division of costs and benefits.
- Scale of the project is determined by the issues.
- Management is decentralised to the lowest practical level.
WRT project framework

Catchment

Sub-Catchment

Farm and River Level

Whole Farm Plan

Water and Economics are the drivers within each plan
Economically sustainable solutions to the Westcountry rivers’ problems. (A selection of the 100 + opportunities identified)

- Westcountry Soil Issues
Soil solutions

- Maize
- Cereals
- Sacrifice areas

Minimum Tillage

Minimising soil disturbance and combining passes

Crop saving - £9/ha
Cultivation saving - £33/ha
Other savings - £35/ha

Benefit - £86/ha

+ reduced soil loss, reduced run off, reduced nutrient losses and reduced compaction
Nutrient Enrichment Issues
Nutrient enrichment solutions

Buffer diets
Rotational ditch clearance reduces pollution risk, enhances base flow maintenance and creates linear wetlands which denitrify and filter water flowing off land. This farm saved £45/year.

Crop diets
Applying only the crop requirements and taking account of soil reserves and FYM application commonly saves over £3,000/pa.

Nutrient application
Fitting a deflector to a spinner to keep fertiliser out of hedges and ditch bottoms saves, on an average Westcountry dairy farm:
Water quality issues

- Storage
- Pathways
Water quality solutions

- FYM handling (Yard)
- Prevention

Using Manures

Clean and dirty water separation

Efficient clean water separation can save considerable amounts of money. In this case the farmer had over 1300 m³ of water entering his slurry system. This pressured the system causing reduced storage and cost over £400/pa to irrigate to land. The replacement guttering cost £16!

Guttered buildings showing water discharging onto ground & gutters clogged with vegetation
Habitat Degradation Issues

- Stock access
- Excessive shade
- Channelisation
Habitat solutions

- Fencing
- Coppicing
- In-stream works
Results – Water quality

River Waldon
Project Exit Strategies

- Ongoing farmer liaison
- A2000

Anglers on database
Token sales
Average/beat

ANGLING 2000
Flexible day permits for quality game fishing beats on Westcountry rivers

Fish for wild Trout, Seatrout, Salmon, and Grayling in unrivalled surroundings on previously un-fished waters

For your free copy of the Angling 2000 booklet please contact: Westcountry Rivers Trust, Fore Street, Lifton, Devon. PL16 0AA Telephone: 01566 784488 Email: Simon@wrt.org.uk or visit our show stand (no. 750) in the countryside area
Economic, Environmental & Social Benefits

- **DIRECT BENEFITS** predominantly to farmers – average savings of £2,300 per farm, per year, for example through optimising farm inputs, water separation and leak reduction, improved stock health, diversification.

- **INDIRECT BENEFITS** to community, tourist & anglers - difficult to value, examples include improved water quality & summer flows, improved wildlife habitats.
Results

- River Tamar Salmon runs 1996-2002
Rivers Trust’s Restoration Projects have:

• Tackled a diffuse problem on an *appropriate scale* in a fashion that is *sustainable* beyond the life of the project because it has looked after the interests of the *environment*, the *stakeholders* and the *public*. 
Future projects

- CRP phase 1 complete in September 2004
- CRP phase 2
- 4 Interreg funded projects – lead partner in 1
  - ASAP – salmon genetics
  - INDICANG – eels
  - Waterwaysnet – River Camel invasive weeds
  - SALAR - fishing
- Angling 2000 - ongoing