

The River Dart SAP Final Plan

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Executive Summary

The River Dart Salmon Action Plan (SAP) has been produced after consideration of feedback from public consultation. The consultation document was published in January 2003. This final plan provides a list of the agreed issues and actions for the next five years to maintain and improve the River Dart salmon stock. An attempt has been made to cost these actions, identify possible sources of funding and the timescale under which they will be dealt with. It indicates how the plan will be managed, i.e., implemented and reviewed, and, summarises progress of on-going actions.

The low marine survival (likely to be below 10%) is possibly to be the main cause for the River Dart salmon stock non-compliance with its conservation limit. Actions protecting smolts and maximising spawning activity of returning adults are seen as priorities to contribute to mitigate the low marine survival. Also the lack of information on salmon stock and its habitat is recognised as one main factor limiting the better management of salmon fisheries. Efforts will be focused on gaining more knowledge and improving modelling techniques. The actions presented in this document are perceived as those required to address the important issues and factors limiting the salmon stock.

This SAP aims also to promote long term collaboration between the Agency and other interested parties in managing the River Dart salmon stock and fisheries.

Introduction

In 1996, the National River Authority published "A strategy for the management of Salmon in England and Wales". This national strategy identifies clear objectives that allow resources to be focused on priority activities. It provides consistent policies and frameworks to manage stocks. The objectives for the future management of this resource are given as:

- (i) Optimise the number of salmon returning to home water fisheries.
- (ii) Maintain and improve fitness and diversity of salmon stocks.
- (iii) Optimise the total economic value of surplus stocks.
- (iv) Ensure beneficiaries meet necessary costs.

The strategy document outlines how these could be achieved in practice to ensure the sustainable exploitation of our salmon, so conserving this species for future generations.

The Environment Agency is committed to implementing this strategy by means of local Salmon Action Plans produced by the end of 2003 for all our principal rivers, after consultation with local interest groups.

The River Dart Salmon Action Plan consultation document was published in January 2003 for consultation with external interest groups and organisations, and:

- Introduced the river–specific conservation limit of 4 million eggs and assessed the current stock to be below this conservation limit.
- Identified factors limiting salmon survival and production in both the marine and freshwater phase of the life cycle.
- Justified a programme of works necessary to enable improvements and development measures.

Using the feedback of the external consultation, this final plan provides a clear statement of actions to be undertaken, with an indication of timecales, priorities, costs and partnerships. Some of these actions are currently being addressed.

A key role of this plan is to provide a reference document for monitoring the progress of the actions for the next 5 years.

This plan should be read in conjunction with the River Dart Consultation Plan (January 2003).

1. Public consultation

The River Dart Salmon Action Plan consultation document described the River Dart salmon stock and its environment, highlighted major issues and outlining Environment Agency's proposals for addressing these constraints. The report was published in January 2003 and the consultation was carried out throughout January and February 2003.

Seventy copies were sent to all relevant Environment Agency departments, to external organisations and to parties who have an interest in the River Dart and its salmon population. The consultation aimed to seek views and support for the pursuit of collaborative actions.

Thirteen responses were received from external consultees. A list of these is attached in the appendix. Most responses from consultees agreed with the issues identified and actions required to progress them. Offers of technical collaboration and manpower support have been put forward by external organisations on different issues and will be explored further by the Environment Agency.

Lack of knowledge of both the River Dart salmon stock and river habitat remains the key constraint to the better management of net and rod fisheries. Developing modelling techniques to compensate the lack of information could be the answer to financial and technical constraints that comprehensive monitoring might entail. However, feasibility studies should be carried out before ruling out any monitoring options. The decline of adult salmon returning to the River Dart was accepted as a key limiting factor to the salmon production. However, a general view from the fishing interests was that the Agency overlooked issues such as predation by birds, which might have a significant impact on the salmon population. It needs to be noted that the Agency will not support licensed killing of fish eating birds until proof of serious damage has been established and that culling is proven to be the most effective means for preventing significant loss of fish stock. Also, consultees are keen to see a mechanism for reporting on progress of various actions, reviewing these and for coordinating the work of different partners.

The low adult return rate (proportion of smolts returning as adult into coastal waters) and the lack of knowledge about salmon stocks and habitat should provide a justification for targeting of actions where environmental opportunities can be exploited and it is suggested that these actions are prioritised as follows:

- **First priority**: **protecting smolts**: carry out actions that will contribute to the reduction of smolt losses into leats and to the impact assessment of smolt predation.
- Second priority: maximising spawning activity: carry out actions that will contribute to the restoration of the spawning habitat to its natural potential and those that will maximise the utilisation of spawning habitat by returning adults.
- Third priority: gaining management information: carry out actions that will contribute to the improvement of our knowledge about salmon stock and habitat.

In addition to the Net Limitation Order and national byelaw reviews, the Agency will encourage further voluntary catch controls in the net and rod fisheries in order to contribute to a reduction in exploitation rates.

Initiatives to investigate and/or address some of local issues on the River Dart are identified and prioritised in the following table "Issues and Actions". Key partners are identified with the lead partner highlighted in bold letters. Actions are aimed to conserve salmon populations and habitat from future developments and from new threats, as well as to resolve present issues.

2. Management of the plan

The local area fisheries technical team (part of the Fisheries, Recreation and Biodiversity team) is responsible for the production of the consultation document and final plan. The team will report on progress with the actions which will involve the work of other Environment Agency teams.

An annual review will be carried out. It will consist of an overview of the following key points:

- The performance of rod and net fisheries
- Participation in the rod and net fisheries
- Status of the salmon stock with respect to conservation limit.
- Progress with the actions and reviewing these.

An implementation group will be set up to co-ordinate, review and report the progress of the actions. Once all the plans have been completed for the southwest salmon rivers, it is our intention to deal with the rivers in a strategic way. Many of the issues and people involved are similar and the plans could be managed around common issues or partners or geographical area. For example, there are opportunities for coordinating work of some of south west rivers around Dartmoor rivers or strategies such as biodiversity action plans. The way Salmon Actions Plans will be managed will be developed over this year and into 2004.

3. On-going actions and progress

The Agency have assessed a couple of proposals made by the Dart Fisheries Association. These were not progressed primary because of cost. Other methods of direct stock assessment will be investigated.

The smolt run into Buckfast Abbey leat has been monitored by the Agency this spring. It showed that significant number of salmon smolts enter the leat. Further investigation is required to determine whether the smolts survive passage through the abstraction. If a high level of mortality is found, a solution will be sought to minimise smolt losses.

Fish pass improvements at the Holy Brook weir have been designed. Subject to the agreement of interested parties, the improvements should be implemented this year.

Fish pass for the A38 underpass on Dean Burn has been designed. The Highways Agency is currently assessing the design to ensure that it poses no risk to the road crossing structure. Should they be satisfied with the proposed design, they will hopefully fund the works.

Surveys and actions regarding elevated BOD in the Bidwell Brook are completed. River Hems and Wash surveys are ongoing as part of RQO non-compliance work.

Issues and Actions

| ISSUE | ACTION | TIM | IESC | | | | COST (£K) AND | Ref |
|---|--|-----------|-----------|-----------|-----------|-----------|---|-----|
| VH= Very High priority Medium priority , L= Lo | | 03/ 04 | 04/ 05 | 05/ 06 | 06/ 07 | 07/ 08 | FUNDING SOURCES | |
| LACK OF INFORM | ATION FOR FISHER | | | | | ••• | | |
| Insufficient monitoring of | Need to consider National EA | | | | | | Feasibility study 5 | |
| salmon adult run and lack of information on exploitation rates | policy related to funding fish counter. Assess feasibility and viability of alternative method of direct salmon counting (VH). | * | * | | | | Agency, Riparian owners and fishing association | Da1 |
| Insufficient information relating to the freshwater habitat | Assess the feasibility of overall freshwater habitat mapping and classification using national Environment Agency procedure in order to evaluate the river's carrying capacity (H). | * | * | | | | Feasibility study 5 Agency WRT | Da2 |
| | Assess source and impact of acidification in the upper Dart. On going (H). | * | | | | | Agency 35 | Da3 |
| | Identify and map sections of river that are impacted by silt accumulation and diffuse pollution (M) | * | * | | | | Agency WRT | Da4 |
| Insufficient information related to salmon fishing effort | Report angling effort targeted to salmon and angling effort target to sea trout (VH). | * | * | * | | | Fishing association | Da5 |
| Insufficient information relating to freshwater utilisation and production | Implement new juvenile routine monitoring programme in accordance with national guidelines (VH) and as far as possible to link these with invertebrate and chemical monitoring (H). Consider need for additional monitoring (H). | * | * | * | * | * | Agency | Da6 |
| | Carry out HABSCORE surveys and analysis as recommended by the national monitoring programme for the 47 juvenile sites by 2007 (VH). | * | * | * | * | * | Agency | Da7 |
| PHYSICAL DEGRA | DATION OF RIVER I | HABI | ГАТ | | | | | |
| Investigate origin of suspended solid in the Bidwell Brook (L), Hems (M), Gatcombe Brook (M), Am Brook (M) and other streams as identified in action Da4. | For each sub-catchment evaluate the land use, risk of erosion and excessive run off Take appropriate action if benefits for salmon population are demonstrable. | | | * | * | * | Agency Defra Fwag Dnpa | Da8 |
| Bank erosion | Protect riverbank by limiting livestock access to the river and by encouraging the growth of bankside vegetation. Carry out fencing and provide alternative water supply systems where benefits are demonstrable. Programme on going part of Action for Wildlife on Dartmoor (H) and seek funding from the Dartmoor Environmental Sensitive Area scheme and from other partners in order to extend area of actions (M). | * | * | * | * | * | Agency Defra Dnpa Fwag | Da9 |

| ISSUE | ACTION | TIM | 1ESC | ALE | | | COST (£K) AND | Ref |
|---|---|-----------|-----------|-----------|-----------|-----------|--------------------------------------|------|
| VH= Very High priority, H= High priority, M= Medium priority , L= Low priority | | 03/ 04 | 04/ 05 | 05/ 06 | 06/ 07 | 07/ 08 | FUNDING SOURCES | |
| Lack of river habitat improvement strategy | Develop a strategy for the annual river habitat restoration and rehabilitation works which aim will ensure long term benefit for the river ecology (H). | * | * | | | | Agency | Da10 |
| Soil erosion and land run off | Influence best farming practices to protect river habitat (H). Promote utilisation of soil management plan for each farm (H). Influence Environmental Sensitive Area prescriptions on Dartmoor ESA (H). | * | * | * | * | * | Agency Defra Fwag | Da11 |
| WATER POLLUTIO | DN | | | 1 | | 1 | | |
| Diffuse pollution from agricultural activities | Review investigation program in light of latest RQOs monitoring results. | * | * | * | * | * | Agency | Da12 |
| | Promote good farming practice that protect the water quality and benefit the farmers. Influence Environmental Sensitive Area prescriptions on Dartmoor ESA (H). Promote utilisation of farm management plans for managing nutrient, manure inputs and crop protection (H). | * | * | * | * | * | Agency Defra Fwag | Da13 |
| | Promote the protection of identified river sections by creating a buffer zone along the river bank to absorb any run off (H). | * | * | * | * | * | Agency Farmer Dnpa Defra | Da14 |
| Diffuse pollution from road run offs | Investigate systems to filter chemical determinants, such as interceptors for oil run-off, where benefits are demonstrable (M). | | | * | * | | Agency | Da15 |
| Point source pollution from discharges, sewage treatment works, agricultural pollution incidents | Education of farming community to minimise risks of pollution incidents (MAFF Codes of Practice) (H) | * | * | | | | Nfu, Defra Fwag Dnpa Agency | Da16 |
| | Improvement on going: Totnes STW and its storm overflow capacity, at Ipplepen STW on a tributary of the Am Brook and at Dartington CSO on Bidwell Brook, planned for Harbertonford STW, new STW at Dartmouth. Investigation are ongoing Buckfastleigh operation CSO. | * | * | * | * | * | Agency SWW | Da17 |
| | Contribute to the review of discharge consents under the Habitat Regulations for Dartmoor cSAC (H). | | * | * | | | Agency EN | Da18 |

| ISSUE | ACTION | TIN | IESC | | | | COST (£K) AND | Ref |
|---|--|-----------|-----------|-----------|-----------|-----------|---|------|
| VH= Very High priority Medium priority , L= Lo | | 03/ 04 | 04/ 05 | 05/ 06 | 06/ 07 | 07/ 08 | FUNDING SOURCES | |
| OBSTRUCTION TO | FISH PASSAGE | | | | | | | |
| Restricted access due to man made structures | Improve fish passage on the Holy Brook weir (H), on the Dean Burn (H) at A38 stopper, at the Swincombe intake fish pass (H), on the West Dart Devonport leat weir (M), at Strode weir on the Mardle (M), Bag park weir (M) on the East | * * | * * | | | | Agency Abstractors Highway Agency Holy Brook weir: 6 Dean Burn underpass: 50 | Da19 |
| | Webburn Assess the feasibility and viability of improving fish passage on Ashburn weirs (M), on Bidwell brook (L) at Dartington mill, fish pass at Jordan weir (H). | * | | * | | | Agency Abstractors Highway Agency 5 | Da20 |
| Restricted access due to temporary structures | Continue programme of "tripper dam" removal. Work with DNPA to educate the public and limit their creation (M) | * | * | * | * | * | Agency Dnpa | Da21 |
| IMPACTS OF WA | TER SURFACE ABS | TRA | CTIO | ONS | | | 1 | |
| Loss of smolts into leats | List and assess screening and smolt passes at abstraction points (VH). Ensure adequate screening arrangements are in place to allow migrating fish to bypass abstraction points. Need for screening identified at Buckfast Abbey (VH), Swincombe intake (H), Jordan leat (H), River Dart Country Park leat (H), Beenleigh Manor (H) on the Harbourne. | * | * * | * | | | Agency Abstractors | Da22 |
| Flow reduction | Demonstrate impact of abstractions at Buckfast Abbey (VH), River Dart Country Park (H), Jordan (VH), Belsford (H) and Beenleigh (H) and Hatchlands fish farm (H) on fish passage and juvenile production. | | * | * | | | Agency | Da23 |
| | Contribute the appropriate assessment that the Agency must undertake as part of stage 3 of the review of consents under Habitats Directive for Dartmoor cSAC (H) | | * | * | | | Agency English Nature | Da24 |
| | Ensure adequate levels of protection for the river when granting new licences. Influence the River Dart CAMS and in particular the definition of RFOs (M). | | | * | | | Agency Abstractors | Da25 |
| | Develop ecological and flow monitoring to quantify impact under RSAP for potential unsustainable abstractions, part of the review of all licences as in action | | | * | * | * | Agency Abstractors | Da26 |

| ISSUE | ACTION | TIN | 1ESC | ALE | | | COST (£K) AND | Ref |
|---|--|------------|-----------|-----------|-----------|-----------|---|------|
| VH= Very High priority Medium priority , L= L | | 03/ 04 | 04/ 05 | 05/ 06 | 06/ 07 | 07/ 08 | FUNDING SOURCES | |
| ILLEGAL EXPLOI | TATION | | | | | | | |
| Illegal exploitation in freshwater, estuary and coastal waters occurring most times of the year. | Extend current level of enforcement and increase manpower (H). | * | * | * | * | * | Agency 30 DFA Netsmen Police Dnpa DHNA | Da27 |
| | Publicise successful poaching offence prosecution. Raise awareness through magistrate training seminars (M). | * | | | | | Agency | Da28 |
| | T CURRENT LOW ST | <u>OCK</u> | LEV | EL | | | | |
| Net exploitation at current low level of stock | Reduce net exploitation rates (VH) | * | * | | | | Netsmen | Da29 |
| | Seek voluntary measures | * | * | | | | Aganay | Da30 |
| | from the netsmen (VH). Review effect of 1999 | * | ~ | - | + | | Agency Agency | Da31 |
| | national salmon byelaw on spring and MSW fish component in 2003 (VH) | | | | | | i i gone y | Dust |
| | Review current NLO by 2006 (M) | | | * | * | | Agency | Da32 |
| Exploitation of River Dart salmon stock by Irish drift nets at unknown level | Assess the significance of the Irish fishery exploitation on south west rivers (L) | | * | | | | Agency defra | Da33 |
| Angling exploitation at current low level of stock | Review effect of 1999 national salmon byelaw on spring and MSW fish component in 2003 (VH) | * | | | | | Agency | Da34 |
| | Maintain exploitation at or below current level by maintaining fishing effort at or below current levels (VH) | * | * | | | | DFA | Da35 |
| | Promote more catch and release and promote more use of barbless hooks to aid survival after release (VH) | | | | | | | |
| | Continue or tighten voluntary measures through the angling association regulations (H). | | | | | | | |
| BIRD PREDATION | | | | | | | | |
| Predation of bird on salmon stock at an unknown level | Develop a method to assess impact of bird predation on salmon population. (VH) | * | * | | | | Agency | Da36 |

EN: English Nature

FWAG: Farming and Wildlife Advisory Group

DFA: Dart Fishing Association

DEFRA: Rural Development Service, Department for Environment Food and Rural Affairs

DHNA: Dart Harbour Navigation Authority

LTFA: Upper Teign Fishing Association

DNPA: Dartmoor National Park Authority

NFU: National Farmers Union

SWW: South West Water

WRT: Westcountry Rivers Trust

References:

Environment Agency (2003), River Dart Salmon Action Plan consultation document.

National Rivers Authority (1996), A Strategy for the management of Salmon in England and Wales.

Appendix: List of consultees who responded:

The Atlantic Salmon Trust The Buckfast Abbey Trustees British Waterways Dart Fisheries Association/ Dart Angling Association Dartmoor National Park Authority Dart Estuary Environmental Management/Dart Harbour and Navigation Authority Rural Development Service, DEFRA English Nature Farming and Wildlife Advisory Group North Atlantic Salmon Fund River Dart Netsmen's Association South West Fisheries Ecology Recreation Advisory Comity Westcountry Rivers Trust

The Environment Agency would like to thank all those who have responded and sent helpful comments.