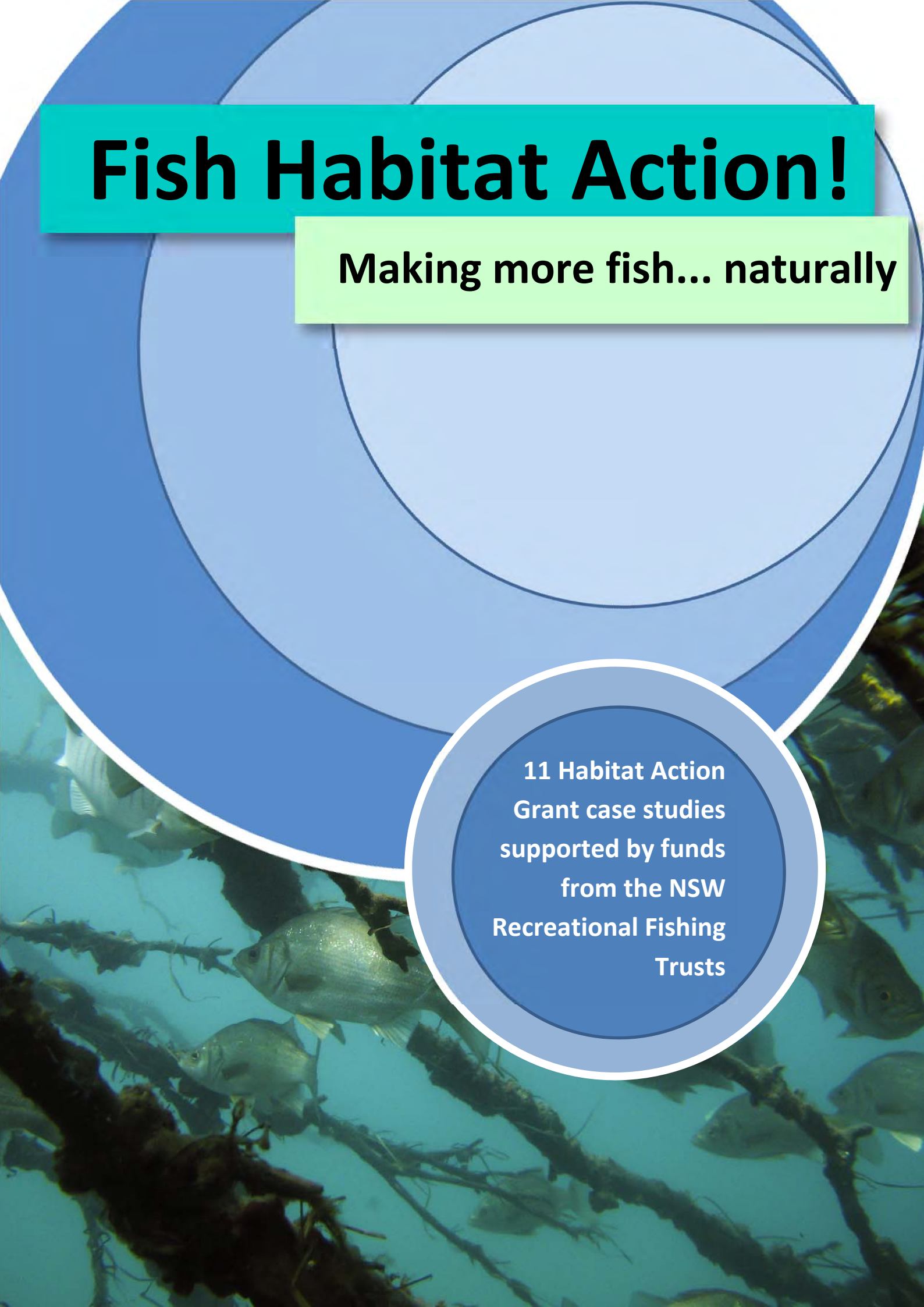
Fish Habitat Action!

Making more fish... naturally



11 Habitat Action Grant case studies supported by funds from the NSW Recreational Fishing Trusts

Fish Habitat Action!

Making more fish… naturally

Native fish need shelter, clean water, food and room to move. In the past, rivers, creeks and wetlands throughout NSW have undergone extensive change due to urban, industrial and agricultural development. These changes have put significant pressure on native fisheries and recreational fishing opportunities.

The restoration and rehabilitation of degraded fish habitat has become progressively more important in NSW as communities recognise the value of healthy waterways for their wellbeing and recreational enjoyment and for native plants and animals.

Since 2008 the NSW Recreational Fishing Trust has supported the Habitat Action Program. Through this program approximately half a million dollars' worth in Habitat Action Grants have been made available to recreational anglers, community groups, individuals and local Councils each year for projects to improve fish habitat and enhance recreational fishing opportunities across the State.

This brochure highlights 11 of these inspiring projects, demonstrating how grass-root effort can do something positive for a local fishery!

Contents

Recreational Fishing Trusts

NSW GOVERNMENT

Image: Gunther Schmida

Angling for a better fishery

Korogoro Creek Foreshore Rehabilitation Stages 1&2

Proponent:	Hat Head Bowling & Recreation Club Amateur Fishing Club
Landuse:	Crown reserve
HAG:	$8,000*
In-kind:	$9,450*

*totals over 3 grants

The site

Hat Head is a popular holiday destination near Kempsey on the State's mid-north coast. The area experiences a large influx of visitors during holiday times, which places strong pressure on the natural resources of the region. The southern bank of Korogoro Creek, a small coastal creek, had been heavily impacted from unrestricted vehicle access resulting in a network of tracks that have fragmented and damaged native riparian vegetation including sensitive areas of saltmarsh.

The project

The health of the creek and its surrounds are important to the local Hat Head Bowling & Recreation Club Amateur Fishing Club. Recognising the declining health of the area the Club's members decided to be proactive in securing the future of their local fishery. Working in partnership with Kempsey Shire Council the Club developed a staged approach to rehabilitating the foreshore which aligned to the recommendations of an Estuary Management Plan for the creek.

The outcomes

Outcomes of the project include:

- Over 1800 native plantings, including saltmarsh species.
- Rehabilitation of a total riparian area of 3.2 ha

In conjunction with the Club's project, Kempsey Shire Council controlled invasive foreshore weeds and installed bank erosion protection measures.

The Club's dedication was demonstrated by the high level of volunteer involvement in planting, mulching and watering activities. Over 300 volunteer hours were devoted to the rehabilitation project.

An excellent turn-out for a Club planting bee – Stage 1.

Preparing the vehicle tracks for planting – Stage 2.

Images: Hat Head Fishing Club.

Big Wood for BIG Fish

Making fish happen in the Macquarie River & Mending our Macquarie

Proponent: Inland Waterways Rejuvenation Association

Landuse: Crown reserve

HAG: $43,348*

In-kind: $45,702*

*totals over 2 grants

The site

The Macquarie River and surrounding region is popular with recreational fishers. However, native fish populations in the River reflect those across the Murray Darling Basin which are estimated to have declined by as much as 90 % over the past 200 years. One of the factors contributing to this decline has been a loss of fish habitat including instream woody structure, which Murray Cod and Golden Perch use for shelter and spawning sites. Direct removal of this timber coupled with riparian zone clearing resulted in a loss of wood in the river systems.

The project

The Inland Waterways Rejuvenation Association (IWRA) is a very active local fishing group which has developed a strong interest in supporting and assisting projects to restore fish habitat. Mapping of the Macquarie River by NSW DPI Fisheries revealed a deficiency of woody habitat around Dubbo. Strategic re-snagging was identified as a critical step in improving the health of the river for fish. In partnership with local fisheries staff IWRA aimed to reconnect fragmented habitats, support spawning and seasonal migration and maintain and create refuge habitat to enhance the local native fishery and recreational fishing opportunities

The outcomes

Making fish happen in the Macquarie River (2013) sourced snags from a road upgrade and contracted a local earthmover to transport and install the snags. Sites were strategically chosen to link areas of existing healthy habitat which were adjacent to or close to Crown Reserves with easy boat or bank access. 72 individual trees were installed in 14 snag complexes at two reserve locations.

Mending our Macquarie (funded in 2014) has taken a holistic approach to fish habitat rejuvenation. This project plans to install 60 snags at 13 complexes within a 10 km priority reach, undertake 2 ha of willow management and 2 ha of native riverbank revegetation.

New fish habitat ready for installation.

Resnagging at Dickygundi Reserve.

Newly installed homes for fish!

Grand actions for Bass!

Russell Street, Emu Plains Rehabilitation Project

Proponent:	Bass Sydney Fishing Club
Landuse:	Council Crown reserve
HAG:	$4,981.30
In-kind:	$88,568

The site

The Nepean River is the largest river in the greater Sydney metro region. In highly developed areas dedicated public access points, such as crown reserves, are important local community assets. Penrith City Council's reserve at Emu Plains has been identified as a River Flat Eucalypt Forest Endangered Ecological Community. The health of the reserve was in a poor state with severe infestations of noxious weeds smothering the site – hampering the growth of native vegetation and restricting community access.

The project

Bass Sydney Fishing Club is not your usual fishing club; they devote their time to doing whatever they can to improve the Bass fishery. Recognising the value of the reserve at Emu Plains for fishing access and environmental importance, Bass Sydney took matters into their own hands and applied to Council for co-management of the reserve. With approvals granted, the Club applied for a habitat action grant to initiate rehabilitation of the site.

The outcomes

The Club started work in July 2011 with a monthly working bee. Heavy infestations of Balloon vine, lantana and madeira vine were removed. Once cleared, native plant regeneration was discovered in some areas. In other areas there was no natural seedbank and supplementary native planting was required to help stabilise the bank and provide habitat.

The Club are aware that their hard efforts need to be preserved and have committed to maintaining the site for 5-10 years. The Club's dedication to the restoration of the reserve is significant. In May 2015 they reached the considerable milestone of 1000 hours of volunteer labour devoted to the site.

Bass Sydney members controlling noxious weeds.

Fishers clocking up their 1000th hour of voluntary rehabilitation time at the reserve!

Images: Bass Sydney Fishing Club.

Fish Friendly Farming

Coopers Creek Fish Habitat Restoration Project

Proponent: Robert Hunter
Landuse: private, grazing
HAG: $35,167*
In-kind: $35,950*
*totals over 4 years

The site

Coopers Creek runs through the Hunter family's Corndale property approximately 20 kilometers from the township of Lismore. Downstream of the property the creek flows into the Wilsons River, a major tributary of the Richmond River. Coopers Creek is a popular fishing spot for local fishers with regular catches of prized Australian Bass. Historical tree clearing in the region and heavy stock grazing of the creek banks resulted in a degraded riparian zone and increased erosion and sedimentation into the waterway.

The project

Robert Hunter has a strong desire to farm sustainably. Recognising the impact his livestock had on the creek he applied for funding for a rehabilitation project. Starting off on a small, manageable section of creek, Robert aimed to restrict stock access, control weeds and plant native local species to restore fish habitat. From the success of Stage 1, the Hunter family have undertaken 3 subsequent stages of works. Each project only targets small, easy-to-manage riparian areas which they know from experience will be achievable in the grant payment time frame whilst balancing their farm management.

The outcomes

This project has resulted in:

- 2.2 km of riparian fencing.
- Around 4500 native plantings.
- Rehabilitation of a total riparian area of 21,000 square metres.

To maximise plant survival rates, the Hunter family have made important in-kind contributions. These have included providing fencing materials and labour for fence installation, tubestock planting, weed control and ongoing maintenance of the plantings and fences. Robert's long-term commitment to the project and the health of the creek is an excellent demonstration to other farmers that you can have a productive farm and look after the environment too.

Stage 1 plantings, 6 months old.

A proud fish friendly farmer.

The next reach ripe for rehabilitation!

A Capital idea for Fish!

Queanbeyan River Restoration

Proponent:	Capital Region Fishing Alliance
Landuse:	Community reserves (Crown & Council)
HAG:	$21,950
In-kind:	$18,700

The site

The Queanbeyan River is a tributary of the Molonglo River which flows through Canberra. Throughout the Queanbeyan City Council area, the river's riparian condition, water quality and in-stream habitat is highly modified due to agriculture and urban development. The degraded state of the river is reflected in fish surveys that showed the Queanbeyan River's fish community is severely depleted and dominated by alien species such as Carp and Redfin. Despite this, the river is a popular recreational fishery.

The project

The Capital Region Fishing Alliance (CRFA) is a highly active fishing organisation based in the Canberra region. The Alliance has a strong aim to contribute to the management, conservation and enhancement of fish and fish habitat in the Capital Region.

The CRFA initiated a Queanbeyan River riparian and instream habitat restoration project to enhance the local fishery and raise public awareness of the river, river health and native fish. The project would also value add to recent willow control works completed by the Queanbeyan Indigenous Green Team and the Queanbeyan City Council (QCC) whilst also contributing to a river corridor Plan of Management.

The outcomes

The CRFA formed strategic partnerships with NSW DPI and QCC for technical advice and assistance. CRFA contracted a recommended operator for the re-snagging works and coordinated successful re-snagging activities in May 2013. Importantly the project's activities also coincided with a QCC project to undertaken further riverbank restoration works utilising an Australian Government funded Green Army team. This timely opportunity provided the CRFA a newly skilled work force to assist in project activities.

QCC supported Green Army team planted native species along 700m of riverbank.

One of 20 snags being installed to provide habitat for native fish.

Photos: CRFA.

Saltmarsh SOS

Saving Saltmarsh at South West Rocks

Proponent: Seabreeze Beach Hotel Fishing Club

Landuse: Crown foreshore reserve

HAG: $4,500

In-kind: $6,000

The site

South West Rocks on the mid-north coast is a popular fishing destination with locals and visitors alike. The Macleay River breakwall is a favoured fishing spot, offering a land-based fishing opportunity for Flathead, Whiting, Bream and even big Mulloway. As a result of its popularity, the area closest to the breakwall walking track was frequently accessed by unrestricted vehicles at low tide, driving over and parking on saltmarsh (an Endangered Ecological Community) and mangrove habitat.

The project

Seabreeze Beach Hotel Fishing Club is a small club that is active in the local community. The club has a strong interest in working to improve fish habitat in the local area. The Club recognised the great damage being done to the fragile habitat and developed a plan of action to rectify it. With the support of the local Crown Lands office the Club's project aimed to control and direct vehicles onto a defined route without denying access to the popular fishing spot or the beach.

The outcomes

This Club-driven fish habitat restoration project:

- Protected nearly 13,000 square metres of saltmarsh and mangrove habitat and created a defined vehicle corridor via bollard fencing, complete with night reflectors.
- Planted 100 supplementary saltmarsh species.
- Dedicated over 90 hours of voluntary labour

The Club's dedication will help support a viable fishery for many generations of fishers to come.

Uncontrolled vehicle access through the saltmarsh.

Club volunteers getting their hands dirty for fish habitat.

Sign informing the public of the site's importance.

Images: Seabreeze Beach Hotel Fishing Club.

Productive Partnerships

Tuross Head Fishing Club working to protect their own patch

Proponent:	Eurobodalla Shire Council & Tuross Head Fishing Club
Landuse:	Crown reserve (Council managed)
HAG:	$24,260
In-kind:	$30,484

The site

The Tuross River flows into Tuross Lake before reaching its mouth at Tuross Head. The idyllic seaside town of Tuross Head offers exceptional fishing and boating opportunities. A popular spot on the river is the Council managed reserve at Snake Flat which experiences high visitation rates year round. Unfortunately the pressure from users on the reserve, led to a degradation of the site. Unrestricted vehicle access, wash from speed boats and a loss of vegetation resulted in severe erosion of the river banks and loss of fish habitat.

The project

Tuross Head Fishing Club has been getting proactive in looking after their local fishing spots. At Snake Flat the Club recognised the impact of high visitor numbers and a need to increase vegetation and reduce erosion points whilst also enhancing local fish habitat. The Club approached Eurobodalla Shire Council with the suggestion of a joint project to address the issues.

The outcomes

The collaborative project utilised the differing skills and expertise of all partners and achieved

- Extensive weed control and follow up revegetation (1000 plants)
- Installation of instream erosion control and fish habitat including native hardwood rootballs and large trunks
- Installation of traffic management bollards
- Engagement of over 30 fishing club and other community group volunteers
- Funds saved on bollard materials and installation allowed weed control and revegetation activities of an additional 2km riparian area downstream of Tuross River Bridge (500 plants).

Denuded riverbanks at Snake Flat.

Community support was vital for the project's success.

The dedicated team of Fishing Club volunteers.

Images: Eurobodalla Shire Council.

Keeping Big Fish Moving ①

Provision of fish passage at the Obley Gauging Station Control Structure

Proponent:	**Yeoval Fishing Club**
Landuse:	**Crown (river bed)** **Private (adjacent land)**
HAG:	**$25,750**
In-kind:	**$29,225**

The site

The Little River is a major tributary of the Macquarie River and is one of a few remaining unregulated Murray Darling Basin rivers. It is a haven for native fish and is within the historical range of many threatened species including Trout Cod. The Obley gauging station control structure is a low level weir which provides a control point for the River's gauging station, enabling river flows to be accurately measured. The Little River typically discharges low flows so only during rare larger events do fish have an opportunity to move upstream of the weir.

The project

Yeoval Fishing Club is an enthusiastic, progressive group with a strong local membership of keen recreational anglers and excellent relationships with local landholders and other community groups. The Club in partnership with NSW DPI identified the need to improve fish passage in the Little River system. Several road crossings, downstream of the weir were remediated previously by the State Government, opening up 64 km of fish passage. Remediation of fish passage at Obley Weir would provide additional free access for fish to upstream habitat.

The outcomes

Yeoval Fishing Club worked closely with NSW DPI to facilitate the project's progress. A high level of preplanning was required to ensure all stakeholders were supportive of the project, that all legislation was adhered to and the project activities progressed smoothly.

A 10 m section of the barrier was removed down to bed level and the section of the river battered to maintain flow and fish passage during low flows.

Keeping Big Fish Moving I restored 46 Km of fish passage during a wider range of flows in the Little River and significantly demonstrated that small community groups can collaborate successfully with government to achieve positive outcomes for native fish.

Obley Weir – restricting access for fish to upstream habitat.

Stakeholder consultation was an important part of the planning process.

Now you see it… now you don't!

Keeping Big Fish Moving ②

Remediation of fish passage at Heads Road causeway

Proponent:	Yeoval Fishing Club
Landuse:	Crown (river bed), Council owned structure
HAG:	$40,000
In-kind:	$108,592

The site

The completion of *Keeping Big Fish Moving I* vastly improved the ability for native fish to freely access suitable habitat in the Little River. Few fish passage barriers remain in the system. The Heads Road causeway located approximately 15 Km west of Cumnock was identified by NSW DPI as the last remaining high priority fish passage barrier site in the Little River. The Heads Road causeway provides access for landholders to their properties during all but very high flows in the Little River but blocks fish passage at all other times.

The project

Yeoval Fishing Club in partnership with NSW DPI, Cabonne Shire Council and the Central West CMA aimed to remediate the Heads Road causeway by replacing it with a new box culvert structure whilst also raising awareness of the impact of restricting fish movement and the requirement for fish passage with the local Council and general community.

The outcomes

All partners worked closely together to achieve:

- Barrier removal and installation of a single span bridge. Higher than expected construction costs for the box culverts resulted in this redesign.
- Restoration of 50 km of fish passage for native fish in the Little River system.

Keeping Big Fish Moving I & *II* in conjunction with a number of other fish passage barrier projects was the culmination of a 3 year program which opened up a significant 114 km of prime breeding and feeding aquatic habitat for fish in the Macquarie River catchment.

Heads Road causeway – limiting access for fish.

Construction works underway at Heads Road.

Improved access for fish and local residents.

For the love of fish

Richmond River Revegetation

Proponent: Kevin Clark
Landuse: Crown (TSR)
Private (adjacent land)
HAG: $950
In-kind: $5,625

The site

The Richmond River is situated in the Northern Rivers region of far north coast NSW. It rises in the hills to the west of Mount Lindesay and literally flows through Kyogle-based fisherman Kevin Clark's backyard on its journey off the hills to the sea near Ballina. The river's health has altered dramatically in Kevin's lifetime with impacts from agriculture and development and he has witnessed many changes in local fish populations. The Richmond still supports a viable fishery which is popular with locals and visitors alike.

The project

Kevin Clark is well known and deeply respected in fishing circles as a master lure maker. However, his quiet achievements as a protector and advocate for fish habitat are lesser known. Kevin has been involved in projects to restore fish habitat in the Richmond River since the early 1990's, working with NSW DPI Fisheries to improve passage for fish in the river. Not afraid to put into practice his strong beliefs for river restoration, Kevin started work to restore the riverbank behind his own home. Unfortunately unrestricted livestock from the adjacent Travelling Stock Route (TSR) damaged the tubestock and continued to degrade the bank. Kevin realised he needed to extend the works to encompass the TSR in order to achieve a more desirable outcome for fish.

The outcomes

Kevin worked with NSW DPI and Crown Lands to ensure approvals for the project were in place and then installed 200 m of temporary stock management fencing along the TSR and revegetated the extended reach of 450 m with local native plants. Kevin has committed to 5 years maintenance of the site to ensure the funding and his hard efforts are not futile. The project demonstrates that no matter how small, we can all make a difference for fish habitat and river health– we just need to start somewhere, even in our own backyard!

Kevin's riparian plantings in his own backyard.

Getting his hands dirty at a local tree planting day.

Kevin discussing his passion for fish and the river.

Viva Volunteers!

UMDR community willow control project

Proponent:	Kosciuszko 2 Coast (K2C)
Landuse:	Crown (river corridor)
HAG:	$10,400
In-kind:	$32,668

The site

Located near the national capital, the 100 km long Upper Murrumbidgee Demonstration Reach (UMDR) is an initiative which aims to demonstrate the cumulative benefit of collaborative river management interventions for a healthier, more resilient and sustainable river. The reach encompasses known habitat for three threatened native freshwater fish – Murray Cod, Trout Cod and Macquarie Perch and is characterised by large sections of inaccessible gorge country.

The project

Willow infestation is a well-recognised issue for river management across many rivers in NSW including the Murrumbidgee. Willows can cause significant issues for native fish populations including increased erosion and sedimentation of a waterway, a reduction in water quality and flow and a loss of suitable habitat. The emergence of young sapling willows was identified as a threat in the UMDR to the future health of the system. The effective engagement of the community in willow removal, especially at the younger stages of growth, had previously been demonstrated by the successful Willow Warriors program. The UMDR coordinators K2C, decided to utilise a similar approach to this arising management issue.

The outcomes

The effort from community volunteers in controlling willows was outstanding especially given that the project activities were undertaken in remote locations which could only be accessed via the use of kayaks or rafts. The project achieved:

- 17 willow control canoe days
- 93 volunteers engaged in the project
- an 85% success rate with willow control.

This project has also demonstrated that a team of trained volunteers can be really effective for weed control activities, especially for strategic environmental weeding in otherwise pristine habitats.

Raft and kayak access only!

Volunteers tackling willows in gorge country.

Controlling willows, an emerging threat to native fish.

Images: K2C.

Image: David Seaman

More habitat = More fish = Better fishing!

Improve the health of your local fishery!

Here's 5 easy steps to get you started:

1. **Talk with other local fishers, local council staff, Landcare or other environment group or your regional NSW DPI Fisheries Manager to identify issues that need attention.**
2. **Involve your neighbours and your neighbours' neighbours – share skills and spread the work load.**
3. **Apply for funds and resources and encourage others to contribute (remember permits may be required).**
4. **Plan well but start quickly and don't bite off more than you can chew! Good progress encourages other people to help.**
5. **Spread the word in your community and involve your local media.**

Acknowledgements:

Special thanks to the project proponents which feature in this brochure.

Disclaimer: Legislation covering conservation of native vegetation and fish may regulate some fish improvement practices. Inquire through NSW Department of Primary Industries or your regional Local Land Services for further information.

To find out more about the Habitat Action Grants

visit *www.dpi.nsw.gov.au/hag*

email *fish.habitat@dpi.nsw.gov.au*

To find out more about fish habitat issues, projects, or to find out what is happening in your local area follow the Fish Habitat Network on Facebook

www.facebook.com/fishhabitatnetwork

or subscribe to the free e-newsletter Newstreams. Email the editor at

newstreams@greenpigeon.com.au

For further information about fish habitat rehabilitation projects and why having good fish habitat benefits you, visit *www.fishhabitatnetwork.com.au*

The Fish Habitat Network is a group of Australia-wide government, recreational fishing peak body, research and trade organisations dedicated to making more fish naturally by protecting and rehabilitating fish habitat.

Formed in NSW in 2009 the Network's vision is for a recreational fishing community that is actively involved in managing fish habitat across Australia.