Rapid Response Achieves Eradication
Chub in Ireland

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Chub (*Leuciscus cephalus*)

Non-native, potential invasive in Ireland

Prized angling species

Inhabit lotic, rel. shallow situations

Multiple or batch spawner (May to August)

Young shoal in shallows; adults more solitary

Young feed on invertebrates and plants

Proportion of fish in diet increases with size and age
Chub (*Leuciscus cephalus*) in River Inny

- Capable of establishing large populations
- Will compete for food and space
- Prey on indigenous salmonids and other fishes
- Could introduce new diseases or pathogens

Intentionally introduced by UK anglers
History of Chub in the River Inny

2001 to 2004  Unconfirmed reports of angler-caught chub in river
2005 (Sept)  Presence of live chub confirmed (in very small numbers)
Chub Eradication Programme on River Inny – 2006 to date

Because of Early Detection, IFI decided to Respond Rapidly to achieve Eradication

2006
Determine locations and status of chub in R Inny catchment
- electric fishing
- seine netting
- gill netting
- (angling)
Gill Netting for Chub in Inny Bay, Lough Ree
Seine Netting for Juvenile Chub in River Inny
Chub Eradication Programme on River Inny – 2006 to date

Because of Early Detection, IFI decided to Respond Rapidly to achieve Eradication

2006
Determine locations and status of chub in R Inny catchment
  - electric fishing
  - seine netting
  - gill netting
  - (angling)

2006 to 2015
Euthanise chub (electric fishing)
Monitor chub status

Logistics of Electric Fishing Operations

13 staff, 4 boats and gear, 5 vehicles

4 to 5 days per survey

Once or twice per annum (May and/or September)
### Chub Eradication Programme on River Inny – 2006 to date

| Year (x) | Number of Chub |
|----------|----------------|
| 2006 (x2) | 17 chub (all adult bar one juvenile - 13cm; male and female) |
| 2007 (x2) | 7 chub (all adult; male and female) |
Growth Rates for Chub in River Inny and British Rivers *

* Caffrey, Acevedo, Gallagher & Britton (2008)
| Year | Count | Description                                      |
|------|-------|--------------------------------------------------|
| 2006 | 17    | 17 chub (all adult bar one juvenile - 13cm; male and female) |
| 2007 | 7     | 7 chub (all adult; male and female)              |
| 2008 | 2     | 2 chub (adult; male)                             |

*Both enlisted onto the ‘Judas’ chub program*
‘Judas Chub’ - radio tag being surgically implanted (2008)
‘Judas’ Chub Tracking on River Inny

Aim: tagged chub would lead us to other chub in river, for ultimate removal

Both chub captured and released upstream Shrule Bridge
Monitored monthly for 12 months

Both chub remained close to each other
Both chub remained within c. 500m of original location
No major movements recorded
Never observed with shoal
### Chub Eradication Programme on River Inny – 2006 to date

| Year | Count | Description |
|------|-------|-------------|
| 2006 | 17 chub (all adult bar one juvenile - 13cm; male and female) |
| 2007 | 7 chub (all adult; male and female) |
| 2008 | 2 chub (adult; male) – both radio tagged |
| 2009 | 2 chub (adult; male) – one tagged |
| 2010 | 2 chub (adult; male) – one tagged |

*Tagged chub that had been at liberty for 2 years*
| Year       | Summary                                                                 |
|-----------|-------------------------------------------------------------------------|
| 2006      | 17 chub (all adult bar one juvenile - 13cm; male and female)            |
| 2007      | 7 chub (all adult; male and female)                                     |
| 2008      | 2 chub (adult; male) – both radio tagged                                |
| 2009      | 2 chub (adult; male) – one tagged                                       |
| 2010      | 2 chub (adult; male) – one tagged                                       |
| 2011 to 2015 | no chub (during electric fishing or angler catch)                      |
| 2016 to 2017 | no chub (in angler catch)                                             |
Eradicated?

**Majority** of chub removed from River Inny

No sustainable population

No juveniles captured or reported since 2006

No reported sightings / catches by anglers since 2010

*Early detection and rapid (and consistent) response can achieve eradication*