

Stokell's Smelt Coordinated Action Plan

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Sjaan Bowie & Jane Kitson

Department of Conservation & Tohu Environmental



Department of
Conservation
Te Papa Atawhai

Te Kāwanatanga
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Cover photo: Stokell's smelt - Credit Nicholas Dunn (DOC)

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Workshop participants (from left to right): Mike McMillian, Hamish Stevens, Jo Hoyle, Tom McTavish, Jarred Arthur, Simon Elkington, Mike Hickford, Chris Meijer, Adrian Meredith, Emily Craig, Matt Wylie, Brittany Earl, Chris Fauth, Jane Kitson, Sjaan Bowie

Introduction

This Stokell's Smelt (*Stokellia anisodon*) Coordinated Action Plan (SSCAP) has been co-developed with our partners, rūnaka representatives from the Kāi Tahu Takiwā, and multidisciplinary experts during a dedicated workshop held at the Department of Conservation (DOC) in Christchurch on 25 November 2025. The workshop brought together a wide range of knowledge, perspectives, and expertise to collectively establish an agreed and enduring direction for the protection and recovery of Stokell's smelt.

The plan synthesises this collective knowledge to identify the pressures affecting this taonga species, outline the actions needed to support its recovery, and highlight key information gaps that must be addressed to enable a coordinated, collaborative, and effective conservation response. Grounded in a kaupapa of cross-disciplinary collaboration, the SSCAP sets out a long-term, integrated approach to Stokell's smelt conservation, and seeks to optimise implementation by identifying lead agencies for specific actions.

DOC recognises the importance of collaboration, and that different groups and agencies have distinct roles and responsibilities in freshwater management. Securing the future of Stokell's smelt cannot be achieved by DOC alone. Improving the ecological and habitat evidence base is essential to inform and guide effective management.

This SSCAP complements and strengthens DOC's Biodiversity Investment (BioInvest)¹ process by using the draft Stokell's smelt Outcome Plans as a foundation for discussion and aligning directly with them. The shared priorities, pressures, actions, and information gaps identified through the workshop will be incorporated into DOC's final long-term (50-year) planning, investment, and monitoring framework for Stokell's smelt, with the aim of ensuring long-term persistence. Priority focal sites are proposed within BioInvest; however, these sites will need to be confirmed across all actions and organisations to determine where effort will be concentrated, as it will not be feasible to implement all actions at every site.

Stokell's smelt are an endemic, range-restricted freshwater fish found only in Canterbury. They have a diadromous lifecycle, involving spring-summer migrations from the sea into river mouths and hāpua, the laying of adhesive eggs in low-altitude freshwater habitats, and a marine juvenile growth phase. They are also of

¹ <https://www.doc.govt.nz/our-work/managing-our-biodiversity/bioinvest/>

significant cultural importance as a taoka/taonga and mahika kai species for Ngāi Tahu.

Recent surveys indicate substantial declines in population numbers over recent decades. With the species now listed as Threatened-Nationally Critical², the need for coordinated and decisive action is urgent. This plan provides a foundation for that response by bringing together agencies, rūnaka representatives from the Kāi Tahu Takiwā, researchers, and communities around a shared pathway to ensure the long-term survival of Stokell's smelt.

² Dunn, N. R., Closs, G. P., Crow, S. K., David, B. O., Goodman, J. M., Griffiths, M., Hicks, A. S., Hickford, M. J. H., Jack, D. C., Kitson, J. C., Ling, N., Waters, J. M., Wylie, M. J., Hitchmough, R. A., & Makan, T. (2025). *Conservation status of New Zealand freshwater fishes, 2023*. New Zealand Threat Classification Series 46. Department of Conservation.

Report scope

This report captures the key decisions, insights, and technical contributions arising from the Stokell's smelt workshop held on 25 November 2025. Its purpose is to document the collective assessment of pressures on the species, the refinement and validation of proposed management actions, and the identification of critical research and information gaps requiring further investigation. It also confirms the shared vision for Stokell's smelt action agreed by participants and records the agency responsibilities identified through the workshop discussions.

The report distils the contributions of rūnaka representatives, partner agencies, and subject matter experts into a clear set of priorities and directions to guide coordinated conservation action. To support informed discussion, recent work, background and an overview of scientific information was provided to participants both before and during the workshop.

Together, these elements provide a consolidated record of the workshop outcomes and establish the technical and strategic foundation for the coordinated actions set out in this plan. Further steps will be required to finalise and implement the plan.

Shared vision for Stokell’s smelt conservation

Stokell’s smelt populations are thriving within healthy, connected hāpua, river, and coastal ecosystems, and supported by collaborative management that integrates science, mātauraka Māori, and community values for future generations.

Management context

Table 1: Summary of agency responsibilities confirmed by workshop participants.

Agency	Freshwater	Relevant Legislation / Frameworks	Smelt
DOC	Conservation, indigenous freshwater fisheries protection, monitoring, and advocates for fish and habitats Whitebait fisheries management	Conservation Act 1987 Freshwater Fisheries Regulations 1983 Whitebait Fishing Regulations 2021 New Zealand Coastal Policy Statement 2010 Coastal Marine Plans	Monitoring, management, protection, research. Assess conservation status. Fish passage. Habitat protection (PCLW, Marine). Structures & discharges in the coastal marine area.
Canterbury Regional Council (Environment Canterbury)	Water quality, Water quantity, catchment and coastal marine management	RMA 1991, NPS-FM 2020, Canterbury Land and Water Regional Plan 2012	Habitat protection. Support aquatic life and fish passage. Monitoring.
Rūnaka/Te Rūnaka o Ngai Tahu	Kaitiaki and Te Tiriti o Waitangi partner	Ki uta ki tai Tino Rakatirataka Ngai Tahu Settlement Act 1998 Iwi management plans	Kaitiakitaka, mahika kai, management, co-developing research plan.
Fish and Game NZ	Sports fish management	Conservation Act 1987, Wildlife Act 1953 Freshwater Fisheries Regulations 1983	Monitoring, habitat protection and advocacy.
Fisheries New Zealand	Fisheries management (except whitebait)	Fisheries Act 1996 Fisheries (South-East Area Commercial Fishing) Regulations 1986 Fisheries (Amateur Fishing) Regulations 2013	Monitoring, setting and implementing quota management systems. Commercial, recreational and customary fishing.
Earth Sciences NZ (and other Public Research Organisations (PROs))	Research and environmental modelling	CRI ACT 1992	Smelt ecology and habitat research.

Pressures

Using the full list of possible pressures from BioInvest, the following potential key pressures were identified for Stokell's smelt through the workshop's science overviews and breakout discussions. Pressures identified are "expert" opinions based on observations and weight of evidence approach; however, it is also acknowledged that there are currently many knowledge gaps for this species. Those raised by multiple breakout groups are marked with asterisks (*), with the number of asterisks indicating how many groups independently identified each pressure.

Hydrological alteration and connectivity

Pressures related to flow regimes, and the physical connections required for smelt migration, spawning, egg development, and larval transport.

- River mouth closures and reduced connectivity between hāpua, river, and sea ***
- Artificial/engineered river mouth openings (timing, method, ecological impact) ***
- Advection risks (larvae swept to unsuitable habitats) ***
- Reduced freshwater discharge and weakened freshwater plumes
- High flow abstraction, low minimum flows, and high allocation ***
- Changes to flood pulses, freshes, and seasonal flow patterns
- Altered connectivity between online and offline river hāpua ***
- Barriers to fish passage (structures or water level changes) ***

Sedimentation, geomorphology and habitat change

Pressures relating to sediment supply, transport, deposition, and changes in river or hāpua form and function.

- Increased fine sediment loading (silt and clay) from land use and flow alteration **
- Gravel/sand and mineral extraction **
- Sediment return to rivers from irrigation or engineering activities
- Narrowing or loss of braid plain extent and reduced side braid habitats
- Sediment accumulation in hāpua (shallowing or smothering of substrates) **
- Reduced transport of sediment into the marine plume
- Habitat limitations arising from altered river geomorphology

- Erosion processes affecting hāpua and coastal systems
- Changing mouth positions and hāpua morphology

Water quality decline and pollution

Pressures affecting water chemistry, clarity, oxygenation, and contaminant levels.

- Nutrient enrichment (nitrogen, phosphorus and other contaminants) **
- Increased turbidity and reduced water clarity **
- Nuisance periphyton and phytoplankton/algal blooms **
- Low dissolved oxygen, especially during closed mouth conditions **
- Sewage contamination (e.g., failing septic systems, rural sources) **
- Herbicide/pesticide inputs from weed control or land management
- Effects of woody vegetation control (bulldozing or chemical spraying)
- Saltwater intrusion into hāpua

Climate-driven impacts

Long-term shifts affecting habitat suitability across all life stages.

- Increased extreme temperatures (fresh water and marine) **
- Reduced snowpack-fed summer flows **
- More frequent droughts **
- Sea level rise affecting hāpua structure and stability **
- Changes in ocean circulation influencing larval transport and plume dynamics **
- Increased sediment inputs during climate-driven high flow events
- Changes in coastal plume extent and productivity

Coastal and marine system pressures

Pressures influencing larvae and adults during their marine or near-shore phases.

- Shrinking coastal plume/shelter zone (reduced turbidity offshore) **
- Changes in coastal connectivity and erosion
- Altered oceanographic conditions affecting food availability **

- Predation in near-shore and marine environments (kahawai, barracouta, seals, sharks) **
- Potential bycatch in inshore fisheries (data gap)

Predation, competition and fishing interactions

Biological pressures influencing survival and recruitment.

- Predation by salmonids, kahawai, eels, birds, and marine mammals **
- Competition with common smelt and other co-occurring freshwater and marine species**
- Recreational catch **
- Trawl and dredge fishery bycatch (poorly monitored/data gap) **

Invasive species and biosecurity

Direct biological threats to habitats and ecological processes.

- Risks from invasive species (e.g., gold clams)
- Didymo impacts on habitat
- Weed encroachment (e.g., willow, gorse, lupin, broom, blackberry, false tamarisk) **
- Effects of weed encroachment on habitat structure, channel movement, and sediment capture **

Land use and catchment pressures

Drivers from land-based activities that influence freshwater and coastal systems.

- Agricultural intensification and associated sediment runoff
- Land use around hāpua and coastal margins (e.g., bach communities, agriculture) **
- Flood protection works prioritised over ecological function
- Fixed asset protection (roads, rail, stop banks) that constrain river/hāpua dynamics **
- Wetland loss or modification **

Systemic and governance challenges

Structural issues that constrain coordinated management and exacerbate other pressures.

- Lack of integrated ki uta ki tai (mountains to sea) management planning
- Lack of coordinated coastal adaptation planning
- Unclear roles and responsibilities for coastal management

- Fragmented funding pathways
- Siloed research and inconsistent agency approaches
- Limited ability to influence drivers outside DOC control
- Need for catchment-scale collaboration beyond the workshop group
- Catchment land-use decisions not aligned with ecological outcomes
- Limited distribution risk

These core themes form the basis for prioritising management actions across agencies. In addressing them, all partners will also need to remain mindful of the broader systemic and governance challenges outlined above, which influence how effectively these pressures can be managed.

Information gaps

This section brings together the key knowledge gaps identified from the workshop breakout group discussions, the workshop presentations, and those previously identified through other work. Addressing these gaps is critical for guiding management efforts, informing effective monitoring design, and reducing uncertainty in decision-making. These gaps are yet to be prioritised, so are listed in no particular order.

1) Spawning ecology and habitat use (freshwater / hāpua)

Why it matters: recovery depends on protecting and rehabilitating the habitats and conditions that support successful spawning and egg development. Captive breeding, broodstock husbandry and cryobanking initiatives may also need to be considered for the future security of this species.

Work identified:

- Locate and map spawning sites within hāpua and the “first riffle” zones; confirm seasonal timing by site
- Define microhabitat requirements (substrate type, local flow/velocity, sediment thresholds) and egg development conditions/durations (temperature, DO)
- Relate spawning success to mouth state (open/closed/constricted) short term connectivity, and microhabitat requirements
- Determine if algae, sediment or other features are impacting spawning success
- Establish successful captive breeding, larval rearing and broodstock husbandry.

2) Marine and near shore phase (“marine mysteries”)

Why it matters: as the species spends most of its life at sea, recruitment failure may be driven by poorly understood marine processes.

Work identified:

- Determine where/when Stokell's smelt occur at sea using near shore eDNA pilots and targeted netting
- Investigate larval behaviour (phototaxis, vertical movement, dispersal cues) and return timing
- Resolve marine diet and predation via gut content analysis (including eDNA) of key predators (e.g., kahawai) across seasons
- Link observations to coastal currents/plume dynamics and oceanic conditions

- Determine any threats that could be managed to improve security.

3) Dispersal pathways and population connectivity

Why it matters: understanding the balance between mixing and catchment-specific homing, including whether smelt intermingle at sea and within catchments, is critical for informing site management and assessing system resilience.

Work identified:

- Confirm longitudinal distribution in freshwater
- Population genomics (non-lethal fin clips) to quantify gene flow and structure across rivers/hāpua in partnership with mana whenua
- Explore otolith microchemistry/stable isotopes to infer natal origins and movement
- Determine how long larvae remain in fresh water, and identify the timing and flow conditions that trigger their transition to the marine environment

4) Physiological tolerances (all life stages)

Why it matters: thresholds for temperature, salinity, fine sediment, nutrients, and dissolved oxygen govern survival, spawning success, and site viability, particularly under changing climatic conditions and altered flow regimes.

Work identified:

- Laboratory/mesocosm trials for egg, larval, and adult tolerances; field validation during extreme events and closures
- Translate thresholds into flow/limit setting and mouth opening protocols

5) Flow, hydrology and hāpua dynamics

Why it matters: river mouth state, water levels, and inflows influence connectivity, oxygenation, and water-quality risk within hāpua.

Work identified:

- Define the hydrological thresholds governing mouth opening and closure, as well as flow conditions within hāpua, and relate these to smelt presence and spawning windows
- Quantify residence time and water quality risk during closures; relate freshwater plume characteristics to migration and larval retention
- Clarify sediment transport implications of abstraction/high flow harvesting for lower river habitats

6) Monitoring and detection methods

Why it matters: we lack consistent, long-term data to detect trends and evaluate interventions.

Work identified:

- Establish a standardised seasonal rolling monitoring programme across species extent: seine and eDNA at river mouth and both sides of hāpua/river mouths, with agreed Standard Operating Procedures and metadata
- Confirm eDNA methodology for best detection in hāpua.
- Validate marine detection (eDNA in nearshore waters; larval sampling methods)
- Deploy environmental loggers (water level, temperature, DO, turbidity/clarity, particle size) in hāpua known previously as population strongholds, and develop automated methods, including water-level time-series classification and feasibility assessments of satellite imagery, to improve monitoring of outlet state and hāpua morphology

7) Fisheries interactions and bycatch

Why it matters: Recreational bycatch and potential inshore fishery bycatch are poorly quantified, limiting risk management.

Work identified:

- Engage Fisheries NZ on observer protocols for small fish near river plumes, pilot bycatch reporting in relevant fisheries
- Partner with whitebaiter/hut/recreational communities for opportunistic reporting and sample collection to supplement environmental sampling and direction

8) Species identification (field and genetic)

Why it matters: confusion between Stokell's and common smelt can distort trend analysis and obscure accurate site attribution.

Work identified:

- Determine any structuring within Stokell's smelt, and extent and implications of hybridising with common smelt (sit alongside population genomics studies below)
- Refine field characters with practical guidance
- Calibrate eDNA assays for specificity/detection probability
- Critically review historical survey datasets for possible misidentification of Stokell's smelt as common smelt by re-evaluating field notes, measurements, and distribution records against updated ID criteria, supported by contemporary eDNA and habitat data

9) Habitat availability and quality

Why it matters: the extent and condition of suitable spawning and nursery habitats remain uncertain.

Work identified:

- Document how microhabitats used by Stokell's smelt may have changed over time, how this could be resulting in decline and how this could be reversed
- Map current spawning suitable substrates; quantify fine sediment and other effects
- Assess impacts of woody weeds on channel dynamics and habitat availability
- Separate habitat loss vs. environmental condition drivers of decline
- Analyse existing water quality data to investigate drivers of poor water quality in hāpua

10) Mātauraka Māori and community knowledge

Why it matters: valuable knowledge – such as historical timing, catch methods, and observations of hāpua change – may be lost if it is not actively documented and preserved.

Work identified:

- Co-design a mātauraka capture programme with mana whenua (oral histories, archives, wānanga)
- Co-design a programme that demonstrates how mātauraka Māori can guide smelt genomic research by developing high-quality reference genomes aligned with the priorities of mana whenua as kaitiaki, while supporting capacity and understanding in genome development workflows, data stewardship and storage of associated genomic resources from this taoka species.
- Systematically document whitebaiter/community observations of smelt runs, mouth state, and habitat changes and pair with environmental data collection

11) Range and distribution uncertainty

Why it matters: uncertainty around current presence or absence at the northern range limits, range margins, and in hāpua-like systems constrains prioritisation and the selection of priority focal management site selection.

Work identified:

- Conduct range-wide eDNA screening (Waiau–Waitaki; plus other lower catchments outside the known distribution, such as Waiau–Kakanui; Banks Peninsula and Lyttelton harbour embayment's) to determine current status and distribution

12) Drivers of decline

Why it matters: the workshop identified multiple interacting pressures on Stokell's smelt and highlighted uncertainty regarding which factors are most influential across different life stages and locations.

Work identified:

- Increase temporal/spatial monitoring at priority focal sites and improve cross-domain understanding (flows, hāpua morphology, coastal processes, marine phase)

Proposed actions

The actions outlined below translate the workshop's discussions and decisions into practical steps for Stokell's smelt conservation. They directly address the pressures and knowledge gaps identified through the workshop's science overviews, breakout groups, and supporting materials, and align with the agency responsibilities confirmed by participants. Actions are organised with a lead agency specified for each and collaborating partners noted where relevant.

These actions focus on what participants agreed are important to progress immediately, including consistent, standardised monitoring; targeted habitat and hāpua management; addressing key research gaps; and strengthening management and engagement frameworks. Some initiatives will continue to be refined through ongoing kōrero with mana whenua and partner agencies. Implementation will be adaptive and prioritised depending on availability of partner resources: Monitoring and research results will guide annual reviews, allowing the group to confirm priorities for the following season and adjust effort to maximise conservation outcomes.

To maintain fidelity to the workshop kōrero, participants reviewed the 'Proposed Actions' section to confirm its accuracy and completeness.

Collectively, these actions establish a coordinated programme that complements existing agency responsibilities, supports mana whenua leadership and mātauraka, and provides a clear pathway for partners to work ki uta ki tai, securing the future of Stokell's smelt.

A) Habitat restoration and site management

1. Develop hāpua management plans that recognise hāpua as receiving environments and balance ecological needs with flood-risk management; be deliberate about if/when/why to use artificial river-mouth openings.

Lead: Environment Canterbury

Partners: DOC, Rūnaka/TRoNT, Fish & Game, ESNZ/PROs, territorial authorities, communities

2. Define and apply ecological triggers for mouth openings at priority focal sites (timing, method, potential effects on habitat and connectivity).

Lead: Environment Canterbury

Partners: DOC, Rūnaka/TRoNT, ESNZ/PROs

3. Protect and restore spawning micro-habitats by trial adaptive management of probable threats (e.g. targeted fine-sediment removal, edge planting, stock-fencing, and manage algal mats where necessary).

Lead: DOC (site action), Environment Canterbury (catchment interfaces)

Partners: Rūnaka/TRoNT, Fish & Game, landowners/community groups

4. Address catchment drivers that degrade lower-river and hāpua habitats: propose minimum flows/abstraction settings and consider effects of high-flow harvesting and gravel/sediment abstraction on sediment transport and habitat.

Lead: Environment Canterbury

Partners: DOC, Rūnaka/TRoNT, ESNZ/PROs

5. Targeted weed control (e.g., willows, lupin, broom, blackberry, false tamarisk) in critical lower-river/hāpua areas that affect channel movement and sediment capture (use mechanical/chemical tools judiciously).

Lead: Environment Canterbury (regional biosecurity/river operations) (lead is dependent on land tenure/status could sometimes be DOC, landowners)

Partners: DOC, Rūnaka/TRoNT, landowners

B) Monitoring

6. Seasonal, standardised monitoring network (Nov–Mar) using seine nets and eDNA monitoring at river mouths and in hāpua, with agreed SOPs and shared metadata (build on existing Opihi/Rakitata work).

Lead: DOC

Partners: Environment Canterbury, Rūnaka/TRoNT, Fish & Game, ESNZ/PROs

7. Range-wide screening to confirm current distributional extent: coordinated eDNA snapshots across all hāpua from Waiau–Waitaki (initial pass noted for Dec/Jan in the workshop notes), including checks outside range (e.g., Waiau–Kakanui) and any targeted Banks Peninsula and Lyttelton embayments.

Lead: DOC

Partners: Environment Canterbury, Rūnaka/TRoNT, ESNZ/PROs

8. Develop automated methods to improve system-scale understanding of hāpua state:

Lead: Environment Canterbury

Partners: DOC, ESNZ/PROs

9. Automated analysis of satellite imagery (feasibility study) to track hāpua extent/morphology

Lead: Environment Canterbury, ESNZ

Partners: DOC

10. Automated classification of hāpua water-level time series to identify outlet state (open/closed/constricted).

Lead: Environment Canterbury

Partners: DOC, ESNZ/PROs

11. Population monitoring to check status and test efficacy of management at priority focal sites (e.g., Rakitata (Rangitata)/ Rakaia/ Hakatere/ Hurunui/ Waipara/ Opihi): continue consistent seasonal surveys to evaluate population trends and assess responses to management.

Lead: DOC

Partners: Environment Canterbury, Rūnaka/TRoNT, Fish & Game, ESNZ/PROs, community

12. Environmental monitoring at priority focal hāpua to support population status and efficacy monitoring (action 11): deploy water-level recorders; undertake gauging of inflows (at ungauged systems); log temperature, DO, turbidity/clarity, particle size; record outlet configuration alongside water-quality sampling; monitor chlorophyll-a and water quality risk during closures.

Lead: Environment Canterbury

Partners: DOC, ESNZ/PROs

C) Research and knowledge

13. Locate and confirm spawning sites, spawning timing and egg development conditions.

Lead: DOC

Partners: Rūnaka/TRoNT, Environment Canterbury, ESNZ/PROs

14. Marine/near-shore presence and ecology: trial near-shore eDNA and targeted netting, predator diet checks (e.g., kahawai; include eDNA gut content where feasible), and observe links to coastal currents/plume dynamics.

Lead: DOC

Partners: ESNZ/PROs, Environment Canterbury (coastal), Rūnaka/TRoNT, Fisheries New Zealand (as relevant)

15. Population structure and connectivity: initiate non-lethal genetics (fin clips) to understand any species structuring and mixing vs. homing among rivers/hāpua.

Co-lead: DOC and Rūnaka/TRoNT

Partners: ESNZ/PROs, Rūnaka/TroNT, University of Canterbury

16. Physiological tolerance work (temperature, salinity, fine sediment, nutrients, DO) for eggs, larvae, adults (laboratory/mesocosm with field validation).

Lead: ESNZ/PROs

Partners: DOC, Environment Canterbury

17. Species identification reliability: refine field ID using Jawad (2022) morphological characters; calibrate eDNA assays for specificity/detection probability; critically review historical datasets where misidentification is suspected (re-evaluate field notes/measurements/photos against updated criteria).

Lead: DOC

Partners: ESNZ/PROs

18. Co-design monitoring and knowledge capture with mana whenua (mātauraka Māori): document historical and contemporary knowledge of runs, habitats, and hāpua change; support rakatahi involvement.

Lead: Rūnaka/TRoNT

Partners: DOC, Environment Canterbury

D) Policy, consents and compliance

19. Embed Stokell's smelt conservation requirements within plans and consents by incorporating appropriate and precautionary provisions for

flows and abstraction, sediment and nutrient limits, hāpua protection, and river works and mouth-opening protocols into regional and district planning frameworks and consent processes.

Lead: Environment Canterbury

Partners: DOC, Rūnaka/TRoNT, territorial authorities.

20. Protect key habitat: Schedule Stokell's smelt spawning habitat in Conservation Act (Section 26ZJA and 26ZJ) to aid protection

Lead: DOC

21. List Stokell's smelt in the Canterbury Land & Water Regional Plan, & planning maps (Plan Change 7) under "Critical Habitats" (PC7) along with the other freshwater species/ habitats

Lead: Environment Canterbury

Partners: DOC, Rūnaka/TroNT.

22. Fishing/bycatch information pathway: engage Fisheries New Zealand about observer protocols and small-fish reporting around river plumes (scoping/feasibility) and explore options to collate any relevant near-shore bycatch information.

Lead: Fisheries New Zealand

Partners: DOC, ESNZ/PROs, Rūnaka/TroNT.

23. Whitebait interface: ensure whitebait regulations and messaging consider Stokell's smelt interface and potential by-catch.

Lead: DOC

Partners: Rūnaka/TRoNT, Fish & Game, bach/hut/whitebait/recreational communities.

E) Advocacy and engagement

24. Advocating for the protection and restoration of Stokell's smelt in any proposed developments within catchments and key habitats

Lead: Environment Canterbury

Partners: Rūnaka/TRoNT, DOC, Fish & Game

25. Engage Canterbury communities (huts/bach settlements, whitebaiters, anglers, local residents) in priority focal hāpua and river mouth areas.

Lead: Environment Canterbury

Partners: Rūnaka/TRoNT, DOC, Fish & Game

26. Deliver targeted, Canterbury-specific communication and simple reporting mechanisms to support monitoring and fill information gaps (e.g., sightings, run timing, mouth state, unusual events).

Lead: DOC

Partners: Rūnaka/TRoNT, Environment Canterbury, Fish & Game

27. On-site signage/notices at Canterbury river mouths/hāpua explaining what to look for, how to report (e.g., QR code to a short form, email/SMS), and who to contact.

Lead: Environment Canterbury (as lead action 1)

Partners: Rūnaka/TRoNT, DOC, Fish & Game

28. Targeted outreach to whitebaiters and bach/hut communities (e.g., Opihi/Milford Huts, lower Rakitata/Rakaia/Hakatere settlements) and to angler networks (coordinated with Fish & Game).

Joint Lead: Environment Canterbury, Rūnaka/TRoNT, DOC, Fish & Game

29. Community updates (what was observed locally and how it informed monitoring/management).

Lead: DOC

Partners: Fish & Game, Environment Canterbury, Rūnaka/TRoNT, territorial authorities, community groups (e.g., bach/hut communities)

30. Public awareness and media (aligned with key milestones): coordinate communications to raise the profile of Stokell's smelt and the condition of Canterbury hāpua, timed to confirmed milestones (e.g., the start of seasonal monitoring or community wānaka). Ensure messaging is consistent with agency roles and local priorities.

Lead: DOC

Partners: Rūnaka/TRoNT, Environment Canterbury, Fish & Game

31. Internal and partner communications: maintain clear, regular updates across participating agencies and partners (including rūnaka and community leads) on seasonal monitoring plans, access and logistics,

summary results, and next step decisions, to support coordinated action and minimise duplication.

Lead: DOC (with Steering rōpū)

Partners: Environment Canterbury, Rūnaka/TRoNT, Fish & Game, ESNZ/PROs

F) Programme operations (coordination and transparency)

32. Establish a Stokell's smelt Steering rōpū

Lead: DOC

Partners: Environment Canterbury, ESNZ/PROs, Rūnaka/TRoNT, Fish & Game

33. Annual data sharing across agencies and partners; SOPs, metadata and QA/QC for all monitoring and surveys.

Lead: DOC

Partners: Environment Canterbury, ESNZ/PROs, Rūnaka/TRoNT, Fish & Game

34. Annual synthesis and adaptive review of monitoring and research results to confirm priorities for the following season (workshop participants emphasised learning-by-doing given uncertainty).

Lead: DOC (with Steering rōpū)

Partners: Environment Canterbury, Rūnaka/TRoNT, ESNZ/PROs, Fish & Game

Proposed next steps

To implement this mahi as outlined in this SSCAP, the following priority next steps have been identified to support delivery. A further workshop may be required to refine priorities, including key information gaps, actions and the selection of focal sites.

#	Action	Lead and Partners
1	<p>Circulate and confirm this draft</p> <p>Share the draft Coordinated Action Plan with workshop participants for accuracy and completeness.</p>	<p>Lead: DOC</p> <p>Partners: Rūnaka/TRoNT, Environment Canterbury, Fish & Game, ESNZ</p>
2	<p>Establish governance and delivery structure to implement SSCAP</p> <p>Stand up a small steering rōpū and nominate workstream leads</p> <p>Agree on TOR, meeting cadence, decision-pathway, reporting lines.</p>	<p>Lead: DOC (with Rūnaka/TRoNT and Environment Canterbury,)</p> <p>Partners: Fish & Game, ESNZ/PROs</p>
3	<p>Confirm focal priority management sites, prioritise pressures, information gaps and actions, and establish the initial work programme</p> <p>Finalise the initial set of priority focal hāpua/rivers (Rakitata, Rakaia, Hakatere/Ashburton; plus Hurunui, Waipara, Opihi).</p>	<p>Lead: DOC</p> <p>Partners: Environment Canterbury, Rūnaka/TRoNT, Fish & Game, ESNZ/PROs, territorial authorities</p>

Appendices

Appendix A -Participant list (25 November 2025)

Participant	Representation	Expertise
Sjaan Bowie	DOC – Freshwater Species Team, Advisor	Smelt, freshwater fish, braided rivers
Brittany Earl	DOC - Operations – Canterbury wide, Ranger	Migratory fish
Jane Kitson	Facilitator, Tohu Environmental	Facilitation, freshwater, mahika kai, mātauraka, customary fisheries, ecology, geography
Chris Meijer	Environment Canterbury	Smelt, water quality, braided rivers, hāpua
Adrian Meredith	Environment Canterbury	Smelt, water quality, braided rivers, hāpua, flows
Jarred Arthur	Pattle Delamore Partners	Stokell's smelt investigative work, braided rivers
Mike Hickford	Earth Sciences NZ	Stokell's smelt/ early life history of fish/marine fisheries
Jo Hoyle	Earth Sciences NZ	Geomorphology; multi-disciplinary river/hāpua issues
Tom McTavish	DOC – Marine, Mahaanui	Marine
Chris Fauth	Environment Canterbury	Coastal processes
Hamish Stevens	Fish & Game (CSI)	Sports fish, smelt, international smelt management knowledge
Emily Craig	Fish & Game (NC)	Sports fish, smelt, braided rivers,
Mike McMillian	Arowhenua Rūnaka	Kaitiaki, smelt, cultural significance, mahika kai, mātauraka Māori perspectives, local expertise and knowledge
Matt Wylie	Te Rūnanga o Ngāi Tahu (TRoNT)	Indigenous-led fisheries research, fish reproduction, aquaculture and captive breeding, and conservation biotechnologies such as cryobanking.
Simon Elkington	DOC – Ranger Biodiversity, Rangiora	Freshwater fish

Apologies: Brad Edwards (Nga Awa Ranger, Raukapuka, DOC); Leslie Wanhalla (Taumutu Rūnanga); Kauri Tīpa (Te Rūnanga o Moeraki); Te Rūnanga o Kaikōura, Te Ngāi Tūāhuriri Runanga and Te Rūnanga o Waihao.

Appendix B - Workshop agenda

WORKSHOP PURPOSE:

Bring together our partners and key experts (across diverse disciplines) to establish a shared direction, identify and prioritise pressures, actions and information gaps to fill for Stokell's smelt conservation, and support the establishment and implementation of a coordinated Action Plan.

Proposed Vision: To be discussed,

Thriving Stokell's smelt populations are sustained within healthy, connected hāpua, river, and coastal ecosystems, supported by collaborative management that integrates science, mātauranga Māori, and community values for future generations.

KEY QUESTIONS TO THINK ABOUT BEFORE AND DURING THE WORKSHOP

- Does the vision capture everything required?
- Do the identified pressures on Stokell's smelt cover everything
- What are priority actions and information gaps that need to be filled to support conservation of Stokell's smelt?

AGENDA

9:00 – 9:30	Karakia Tīmatanga and introductions	
	Introductions: who you are, your role, and your connection with Stokell 's Smelt (SS).	
9:30 –10:00	Background and Context	
	Purpose, vision, aims and expected outcomes from today	[Jane]
	Confirm agency responsibilities (in relation to SS)	[Jane]
	Overview of SS science knowledge and previous work	[Sjaan]
10:15 –10:30	Morning Tea	
	Context cont'd	
	Overview of the state of hāpua and braided river systems, with emphasis on catchment influences and flow dynamics	[Adrian]
	Geomorphology and river dynamics	[Jo]
	Coastal processes considerations	[John Benn or Chris Fauth, TBC]
	Cultural Context	[Kaitiaki invited to provide]
11:00 –12:00	DOC management framework	
	[Sjaan]	
	What does an outcome plan require?	
	What we are focusing on today: Pressures, Actions and information gaps	

	<p>PRESSURES: <i>Refer to the Supplementary Information.</i> Reviewing the listed pressures</p>	[Breakout Groups]
12:00–12:45 pm	Lunch	
12:45 pm	Recap the discussion on pressures [Jane]	
1:00– 2:00 pm	<p>ACTIONS: <i>Refer to the Supplementary Information</i> Groups:</p> <ul style="list-style-type: none"> • Habitat restoration and site management (Freshwater, Marine) • Monitoring • Advocacy/engagement <p>➤ What could be considered priorities? Reporting back by each group and group discussion</p>	[Breakout Groups]
2:00–3:00 pm	<p>RESEARCH INFORMATION GAPS <i>Refer to the Supplementary Information</i> ➤ What could be considered priorities?</p>	[Discussion or Breakout Groups]
3:00–3:15 pm	Afternoon tea	
3:15-4:00 pm	Bringing It Together	[Jane and Sjaan]
	Recap on discussion points in workshop	
	Proposed framework for draft plan	
	Discussion and agreement on recommendations for the coordinated action plan	
	Agree on next Steps and timeline.	
	Karakia whakamutunga	