



*Upper Fraser Fisheries  
Conservation Alliance (UFFCA);  
PICFI & In-land Commercial  
Fishery Development*



---

*UFFCA PICFI Discussion  
EAWG February 2011*

# *Presentation Summary*

---



- ✓ The UFFCA
- ✓ The UFFCA's role in PICFI
  - Why we are engaging?
  - More of the Why?
- ✓ Intended outcomes
- ✓ How we're engaged
- ✓ Followed by – the TNG experience



# *What's the UFFCA?*

---



- ✓ The Upper Fraser Fisheries Conservation Alliance is a First Nations Organization (nf-profit society) formed to further the fisheries and aquatic interests of Fraser First Nations in the upper Fraser River watershed (~Clinton upstream). It's a technically-focused rather than politically-focused organization.
  - Wrt sockeye, the UFFCA area provides the spawning and natal habitats to many of the Fraser's stocks
    - u Early Stuart
    - u Early Summer (Nadina, Taseko, Bowron)
    - u Summer (all of them – Chilko, Quesnel/Horsefly, Late Stuart, Stellako)

# *Why the UFFCA is engaged in PICFI?*



- ✓ The UFFCA has made it a priority to facilitate and support UFFCA area First Nations in re-developing their commercial salmon fisheries for sockeye
  - Why?
- ✓ In short, ...
  - to reduce mixed-stock harvesting pressures and move harvesting pressures towards areas where individual stocks that are returning at harvestable abundances [i.e. the stock(s) creating the TAC on a particular aggregate] can be selectively targeted

# *Why the UFFCA is engaged in PICFI?*

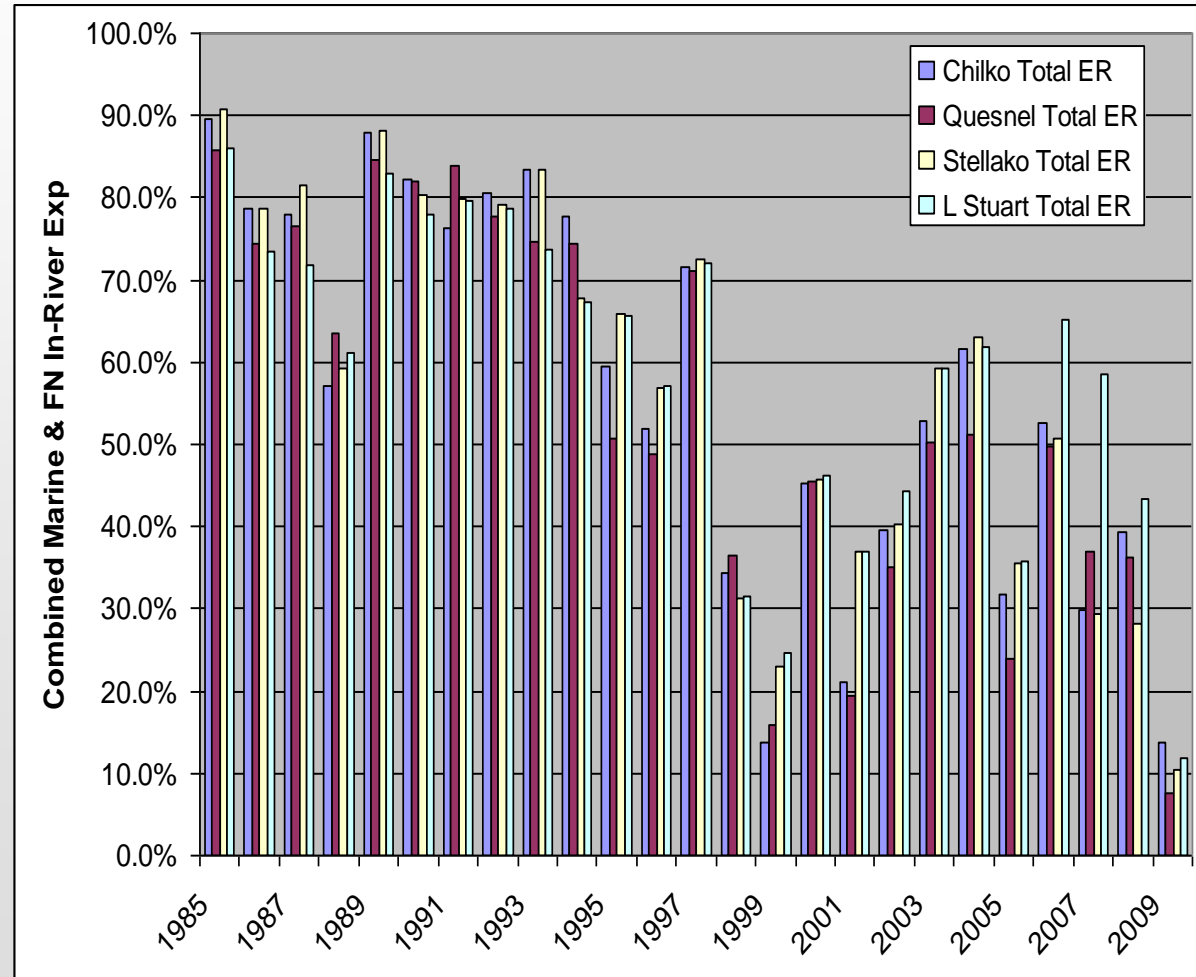


- ✓ In (not so short) detail... “the race to the bottom”
- ✓ The manner in which Fraser salmon, and sockeye in particular, have been managed does not meet the needs of many in-river First Nations, particularly during times of low productivity & abundance.
- ✓ Sockeye stocks originating from different watersheds, which inherently possess vastly different and variable rates of productivity, are harvested in “aggregate” in mixed-stock fisheries
  - (they are subjected to an allowable exploitation rate based on the combined abundance of a mixture of stocks with similar run-timing – the “aggregate”, and spawning escapement targets that are also based on the aggregate).

# The Effects of Aggregate-Based Management & Mixed-stock Exp.



- ✓ The exploitation rate (ER) on Fraser “Summer” Sox 1985-2009
  - Generally very similar year-year due to similar run timing
  - However, the different stocks possess substantial differences
- ✓ Note... ER has still averaged >40% 2000-09 (avg. 63% 1990-99)



# The Effects of Aggregate-Based Management & Mixed-stock Exp.

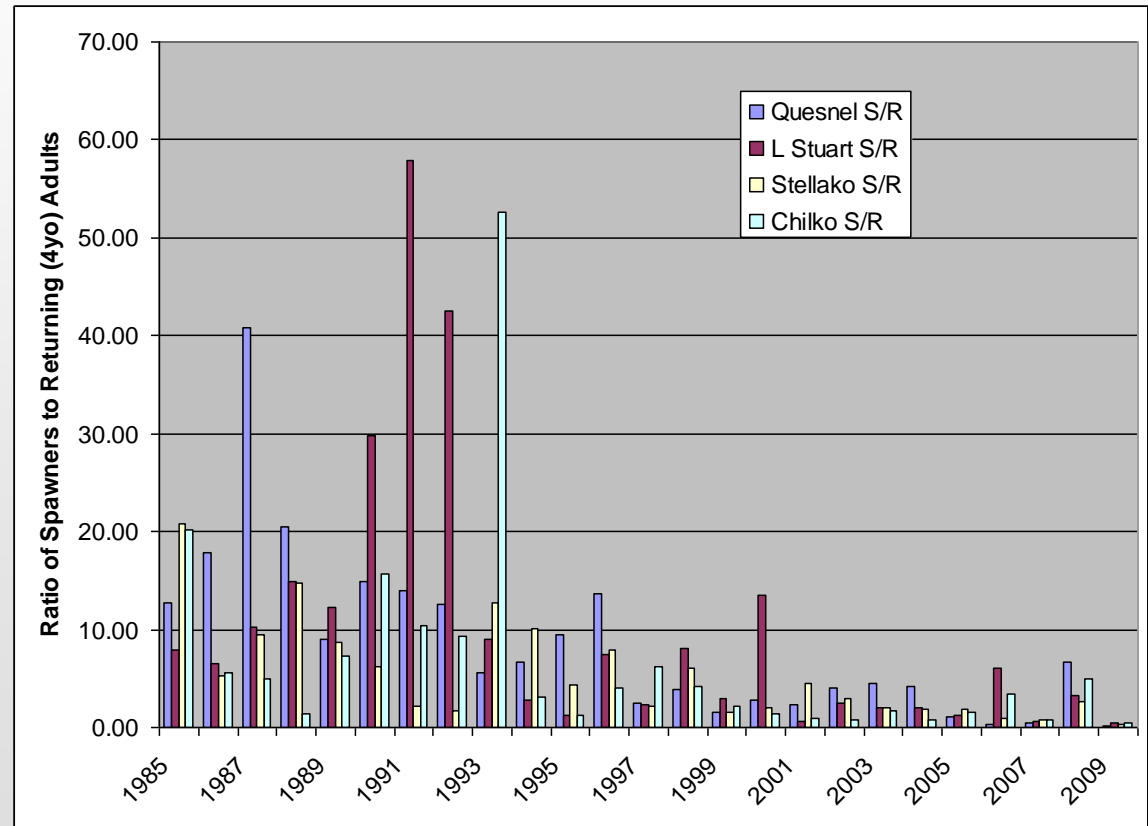


## v Productivity of Summer Sockeye

- Has always demonstrated variability
- Has undergone a severe decline – remains highly variable between stocks

## v Under this scenario;

- Status quo – aggregate-base, mixed-stock management; not working – driving some stocks to new lows



# *The Effects of Aggregate-Based Management & Mixed-stock Exp.*

---



- ✓ Avg. for summer stocks S/R 10.3 1990-99 (100 spawners = 1030 returning adults 4 years later)
- ✓ Avg. for summer stocks S/R 2.4 2000-09
- ✓ Stock-specific S/R stats; 2000-09
  - Quesnel S/R avg. 2.7 (0.15 – 6.7; 1 or  $\leq$  4 times; median 2.6)
  - L Stuart S/R avg. 3.2 (0.44 – 13.5; 1 or  $\leq$  3 times; median 2.0)
  - Stellako S/R avg. 2.0 (0.23 – 4.4; 1 or  $\leq$  4 times; median 1.9)
  - Chilko S/R avg. 1.7 (0.5 – 4.9; 1 or  $\leq$  5 times; median 1.2)
- ✓ ER has still averaged  $>40\%$  2000-09 (avg. 63% 1990-99)

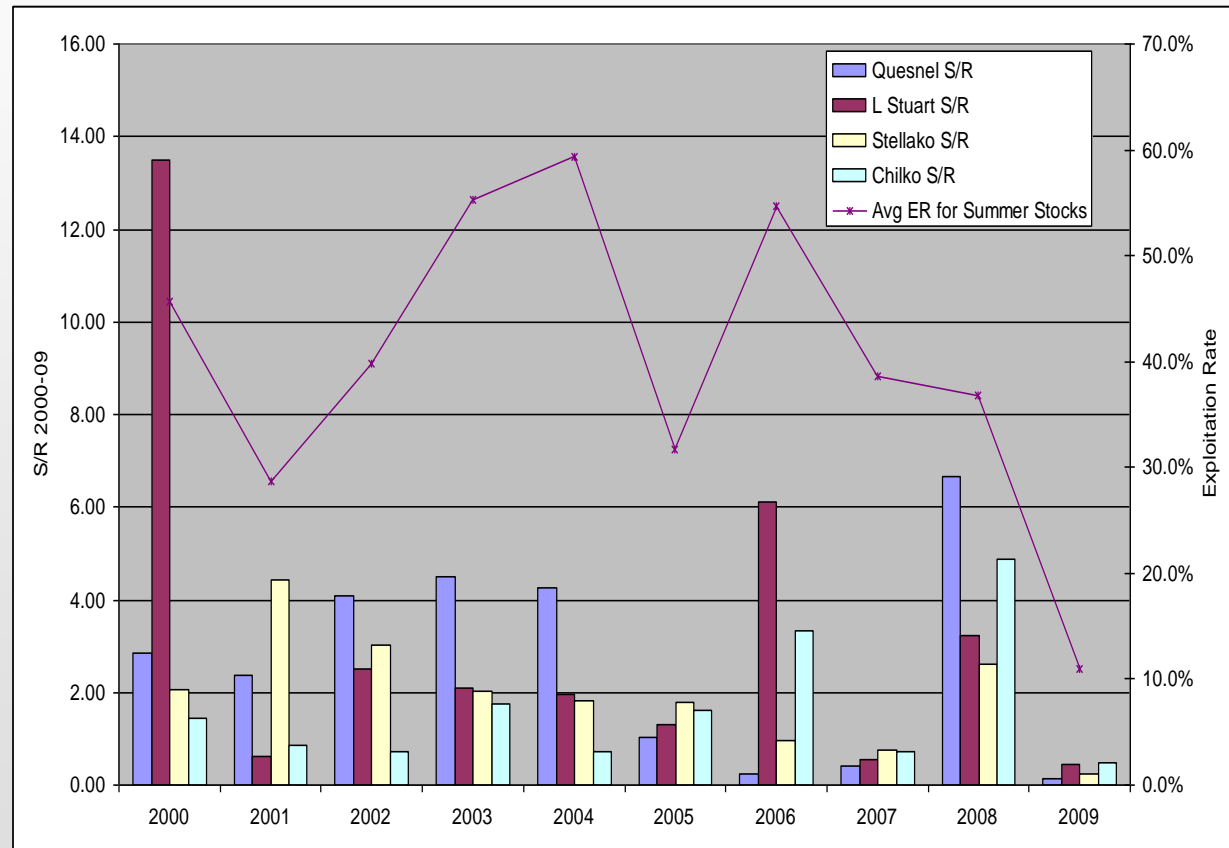
# The Effects of Aggregate-Based Management & Mixed-stock Exp.



v S/R (productivity) in the last decade

- Reduced by 80%
- ER reduced by 30%
- Easy math

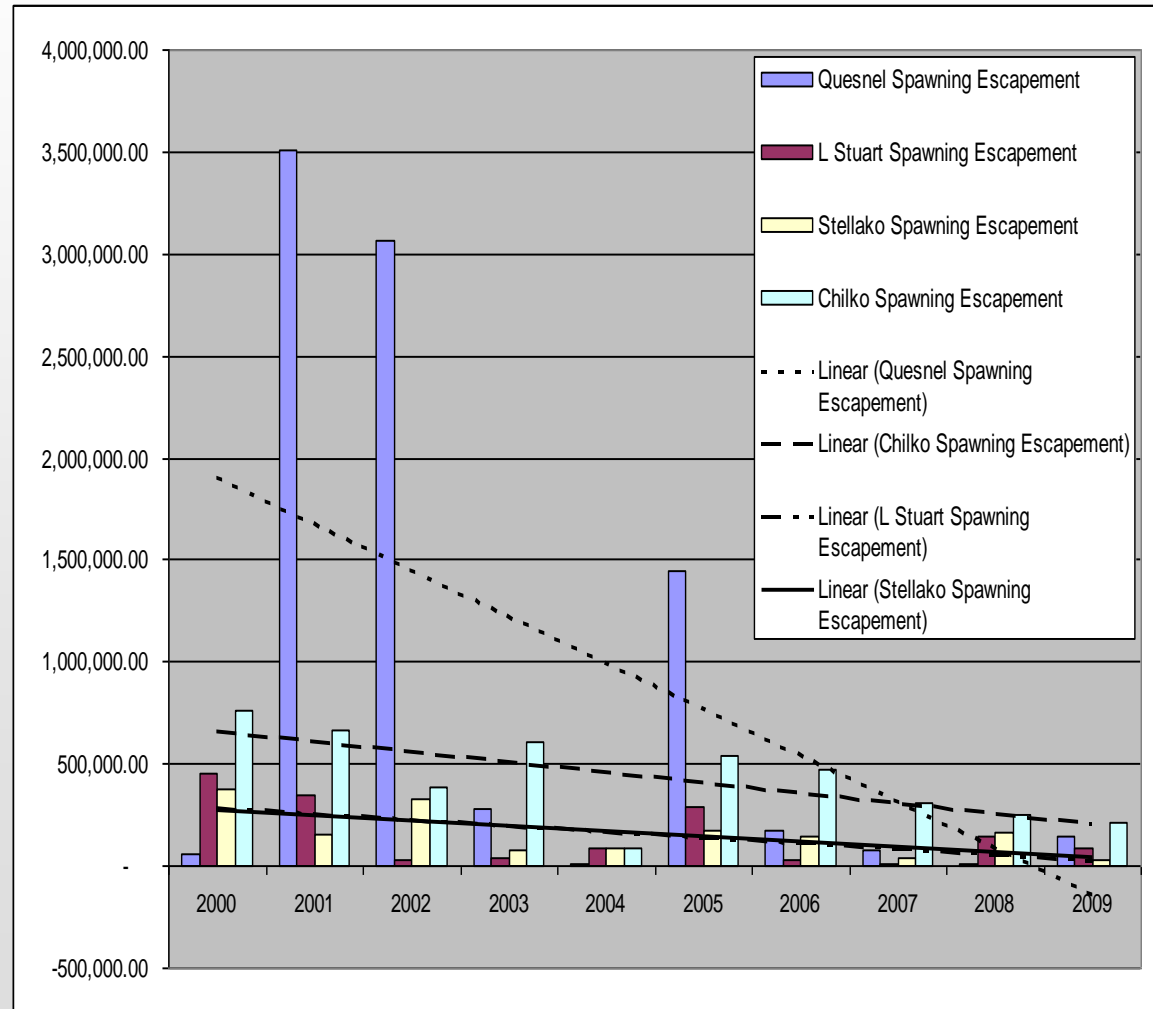
v ER continues on stocks that aren't replacing the previous generation



# The Effects of Aggregate-Based Management & Mixed-stock Exp.



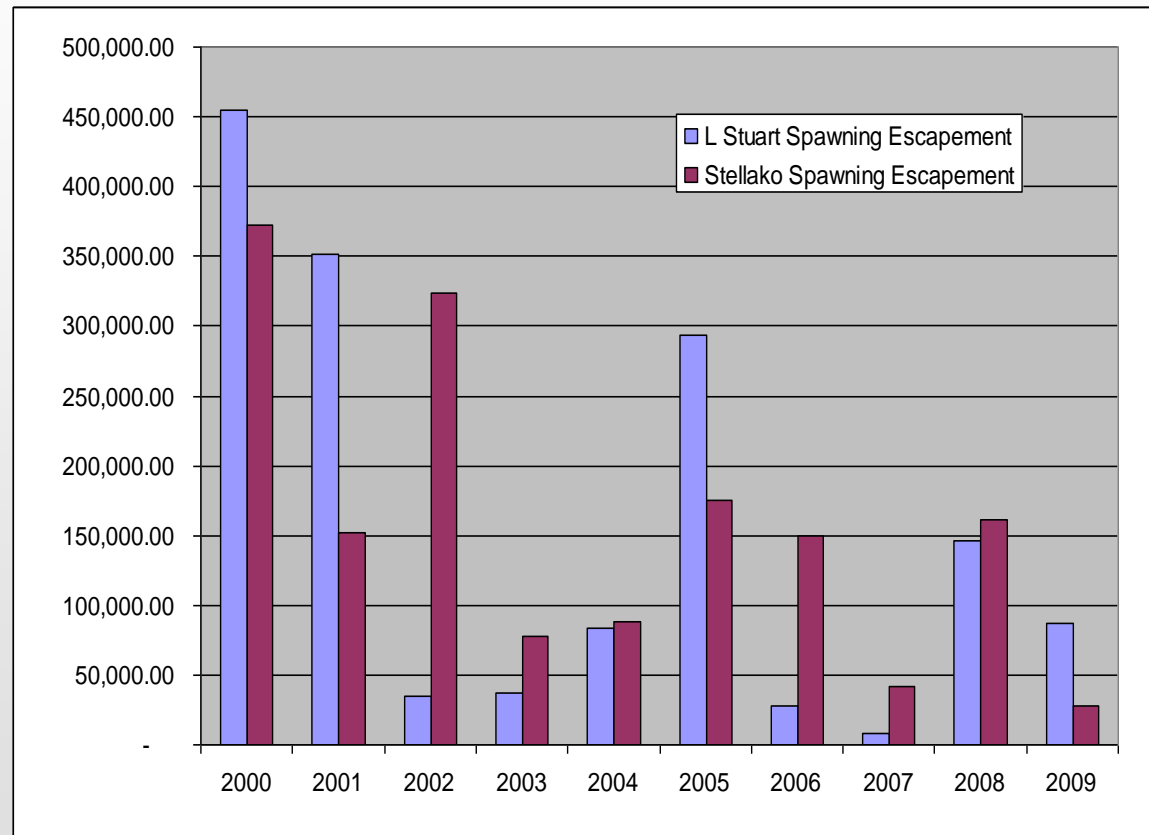
- v The effect is...
  - Spawning escapements of all stocks are being allowed to decline
  - Cyclic dominance is being altered or removed
  - There is no argument for “over-escapement” as being the “issue”



# *The Effects of Aggregate-Based Management & Mixed-stock Exp.*



- ✓ Smaller stocks such as the L Stuart and Stellako are being affected more noticeably
  - FSC needs are being constrained
  - Rebuilding??
  - How long do we really want to go with this trend?



# *Why the UFFCA is engaged in PICFI?*

---



- ✓ This management policy is at the least discriminatory, and potentially – illegal, infringing on the rights of some First Nation groups to access adequate abundances of sockeye stocks that return to their FSC fishing areas
  - (i.e. it's one thing if the stocks, through natural phenomena, don't return in adequate abundance, it's another thing if a substantial portion of them are specifically managed to an exploitation level, resulting in inadequate returning abundances).

# *Why the UFFCA is engaged in PICFI?*

---

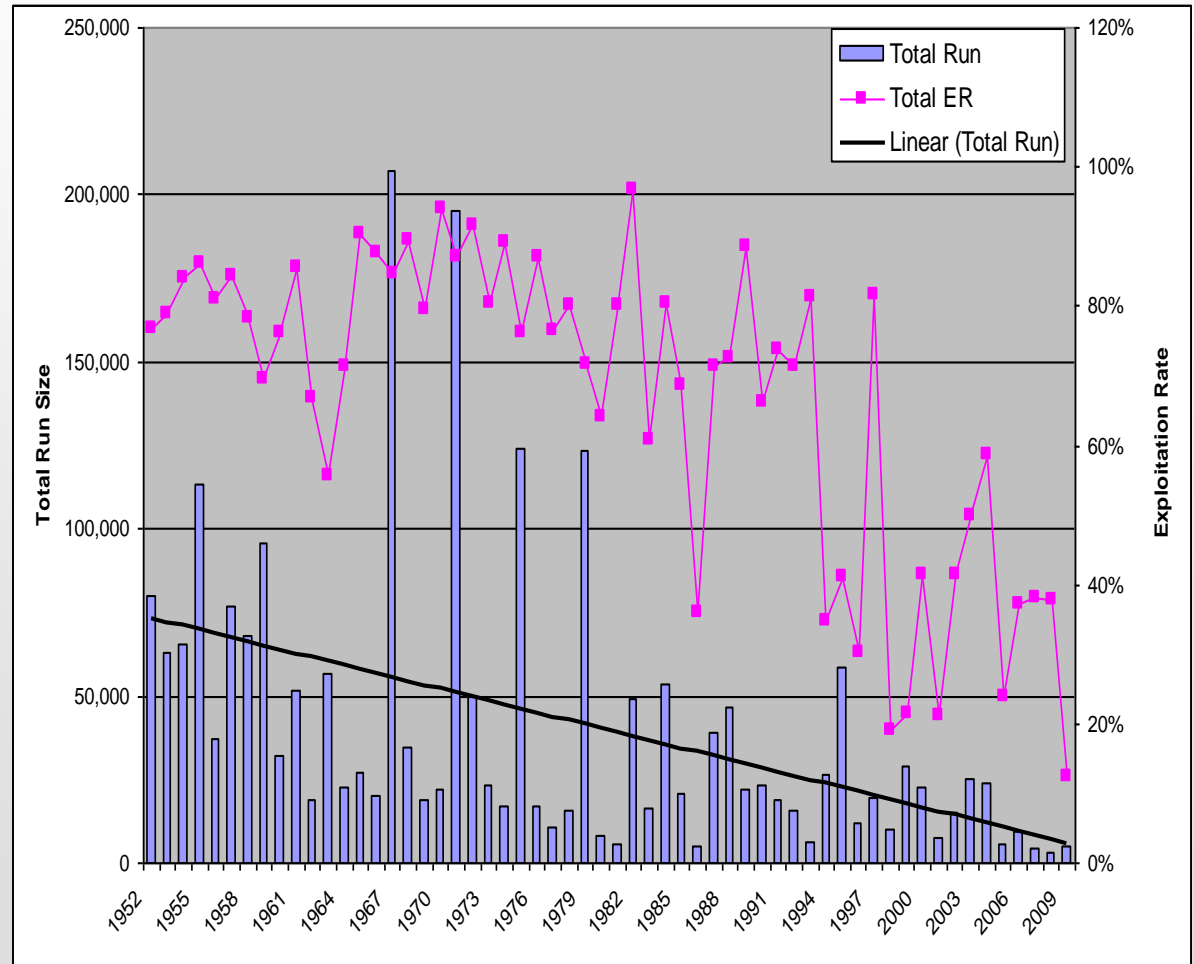


- ✓ The “aggregate” (and other aspects of Fraser sockeye management policy) approach to management also creates conservation issues, and lacks an adequate response mechanism once they’ve been created
  - (i.e. multiple years of harvesting pressure on a stock inherently prone to, or recently experiencing, low productivity relative to similarly timed stocks, will of course cause a declining trend in spawner abundance – which creates in-natal habitat effects that we don’t yet understand, much less know how to reverse)

# Conservation Issues – Bowron Sox As an Ex.



- Productivity incapable of sustaining ER over 5 decades
- Population now declined to COSEWIC criteria for full cycle+
- Cyclic dominance gone – implications
- '0' response to reduced exploitation
- Lheidli T'enneh has lost what was its primary FSC stock
- Will continue to be harvested at unsustainable ERs



# *So, ... getting back to the why*

---



- ✓ The “aggregate-based” management policy calculates harvestable surpluses on aggregates of stocks
- ✓ Transferring a portion of the aggregate-based TAC in-land,
  - where harvesting can be directed on the stocks creating the TAC,
  - in combination with the re-development of in-land stock-selective commercial fishery capacities (remember, in the last 100 years, in-land commercial fisheries were made illegal), will... :
    - u *Reduce harvesting pressures on stocks that can't support harvest, providing an opportunity to conserve or rebuild stocks suffering from declining trends*
    - u *Increase stock-specific escapements to better meet the FSC requirements of First Nations that don't have access to a mixture of stocks*

# *So, ... getting back to the why*

---



- ✓ A transition in Fraser sockeye fishery management is inevitable
  - There will always be some level of marine-based mixed-stock fishing when abundance permits, but...
  - Mixed-stock exploitation rates will continue to face stock conservation issues that force them to be reduced
- ✓ We have the ability to use PICFI to make the transition successful – only for a limited timeframe
- ✓ If it is done right, it could result in *an increase* in harvesting opportunities, in the short and long-term

# *Why the UFFCA is engaged in PICFI?*

---



- ✓ Obviously, the UFFCA's long-term goal is to affect change in the “aggregate policy” – PICFI can provide an interim solution
  - Conveying commercial fishing (access) opportunities via increasing escapement (TAC) – obviously important
  - Funding – PICFI provides funding to aid in
    - u Re-developing commercial harvesting expertise
    - u Developing the business/organizational structures
    - u Knowledge development – business planning

# *How has the UFFCA Engaged?*

---



- ✓ Facilitating Demonstration Fisheries in member communities (TNG, NSTC, CSTC, Lheidli)
- ✓ Coordinating on behalf of UFFCA participants
  - providing a liaison role with DFO
    - *Step 1 Expression of Interest*
      - u (now approved)
    - *Step 2 Business and Capacity Development Planning*
      - u (SoW approved, work ongoing)
    - *Steps 3-5*