Our Land and Water Symposium

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Our National Challenge?

How to future-proof the predominance of ruminant, pastoral agriculture by reducing the environmental impact to 'acceptable' levels while maintaining or increasing profitability?

or

How to change the mix of land use to deliver better environmental and economic outcomes, with an inevitable reduction in the dominance of ruminant, pastoral agriculture?

What's the weighting in our efforts? How path dependent are we? Is this our 'faster horse'/Blackberry/Kodak moment?



What's the problem we are trying to fix?

- Nitrogen and periphyton
- Swimmability and potability: E.coli
- Sediment and phosphorus
- Greenhouse gas emissions
- Climate change resilience
- Biosecurity and biodiversity
- Meeting markets, maximising protein per hectare
- Economic diversification to manage risk
- Regional development and employment

Our principal **problem** is the legacy of past decisions has left us unfit for the future and yet we are very path dependent. Our principal **challenge** is how to transition from where we are today to where we need to be tomorrow quickly enough.



Our changing operating environment

- Increased community priority for the environment: low tolerance for degradation & polluters, impatience for change
- **Common property:** no longer out of sight and out of mind, public interest in what occurs on your land, socialising impacts and 'the way things are' less acceptable
- More participation: retiring baby boomers and empowered youth, articulate and organised, consultation to codesign
- Treaty settlement based co-governance and co-management: complex landscape with many layers
- More certainty of outcomes expected: regulation, compliance and enforcement, RMA more prescriptive
- More transparency and rapid dissemination of information

Populism and professionalism of local government politics

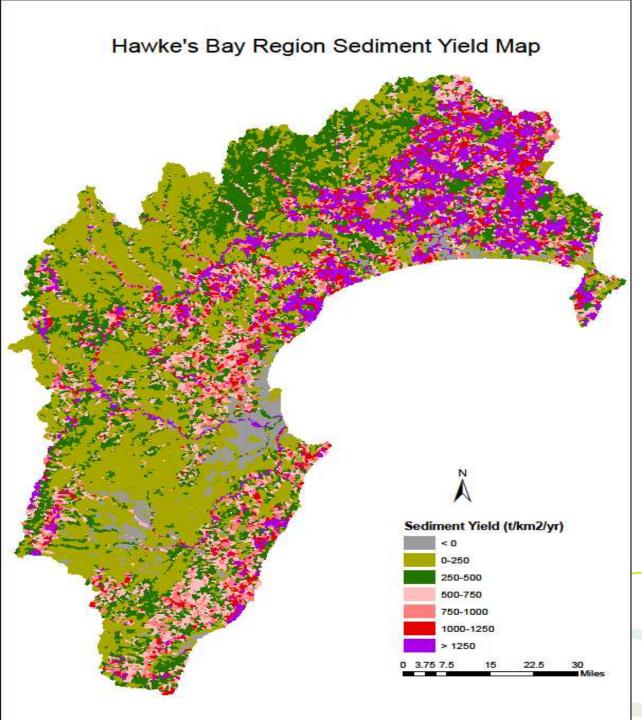


What's driving regional government

- Freshwater reform: NPSFM, limit setting/allocation to action, eating an elephant, shift from nitrogen/dairy focus to swimmability/E.coli and sediment/phosphorus
- **Climate Change:** growing community and political focus on climate change adaptation and hazard management
- **Biosecurity to biodiversity:** possum to predator control, habitat restoration, system capacity for new incursions in question
- Coastal management: fish stock to ecosystem management, sediment major stressor
- 2017 OECD Environmental Review of NZ: recommended policy alignment for climate, water, land and biodiversity, and with economic policy. New government embracing this.

Optimising land use is at ground zero of it all





277,000 hectares of highly erosion prone land.

If all planted then a 90% reduction in sediement: SedNet

Targeted treatment of 100,000 hectares forecast to reduce sediment by 50-

60%





A tale of two catchments

Tuki Tuki Plan Change

- Adversarial, plan driven hard by development project
- Tough nutrient limits, especially DIN, universal FEMPs
- Challenging minimum flows, 'bet the house' storage
- Low level of buy-in, compliance with FEMP requirements
- Will seriously challenge intensive pastoral farming

Heretaunga Plan Change

- Mostly collaborative but tardy, now with WCO
- Likely more realistic transition pathway on lowering nutrients
- Proactivity and ownership from industry on solutions
- Likely more water storage/augmentation friendly due to low contaminant pathway, greater affordability
- Horticulture driving land use change



How our challenge becomes opportunity

We need lower-impact diverse, resilient, multi-functional landscapes but how do we make it pay with yesterday's economics?

- How to value ecosystem services: carbon, fresh and coastal water quality, biodiversity – community and consumer funded
- How can we 're-imagineer' our agricultural models: scale, diversity, value, products
- Can we adapt or create new physical, economic and social systems fast enough and how much public support is this given
- Can we dissolve sectoral seperatism of pastoral farming by integrating with other primary sectors, Maori economy, tourism to being a more aligned part of NZ's future wellbeing

What to do with sunk capital and vested interest in status quo





You Said 💻

In a ratepayer survey late last year more than 2,000 of you told us where to focus our efforts and how much you might pay for this. You sent a clear signal for us to put more focus on the environment. That gave us a clear direction to develop Facing Our Future 2018-28.

TITE

Top 3 Areas to focus more time and money

69% 'spend more' on waterways and aquifers 45% 'spend more' on protecting the marine environment

'spend more' on native species and pests

%

Would you pay more for these improvements?

51% prefer no increase to rates \$10-\$25 more per year \$25-\$50 more per year

HBRC approach: 'Facing Our Future'

Accelerating rate of change, enabled by strong political leadership

- Integrated catchment management, place & community based
- ICM teams of catchment advisors: 16 solution 'brokers'
- Science driving the conversation: pressure, state, impact
- Mountains to sea: coastal important too
- Science and data informing resource deployment
- Biosecurity to biodiversity, pests *and* habitat
- Rethinking role in economic development: how does core environmental management secure the long-term future
- Quality over quantity in engagement, intimate is essential
- Regulation and incentives balanced, must have lots of both
- Flexible tools important, every person and property differs



HBRC's Facing Our Future Tools

Non-regulatory: leveraging the balance sheet, grants, investment

- Farm Environment Management Plans: interest free loan, paid off with rates, no excuses
- Fencing, planting, wetlands, sediment traps: up to 75% subsidy
- Erosion control planting: targeted through SedNet and Smaps
- Commercial forestry investment: soil, water and carbon focus, alternative dryland species, manuka
- Future Framing Trust: Farmer-led, regional focus, crowd in effort

Regulatory: increased planning, consent and compliance effort

- Farm Environment Management Plans
- Nitrogen allocated on land use capability
- Phosphorus/sediment management plans
- Stock exclusion and slope cultivation rules



Where to next?

- Do we understand the alternative land use options of today and the future? What does science and technology enable?
- Where are the value chains required to sustain these, how are these built and by who? Can we rely in incumbents?
- Where's the pipeline of advisory and support workforce?
- How do we rapidly build farmer capability and willingness for managing complex and diverse systems?
- Do we really need more social science? Is nudge enough?
- Do we understand the urgency? Can we change land use mix fast enough? How much public/regulatory pressure to apply?
- Are we investing enough in the right places relative to the natural and financial capital we are losing or risking? How much venture/blue ocean/disruptive capital is in the mix?