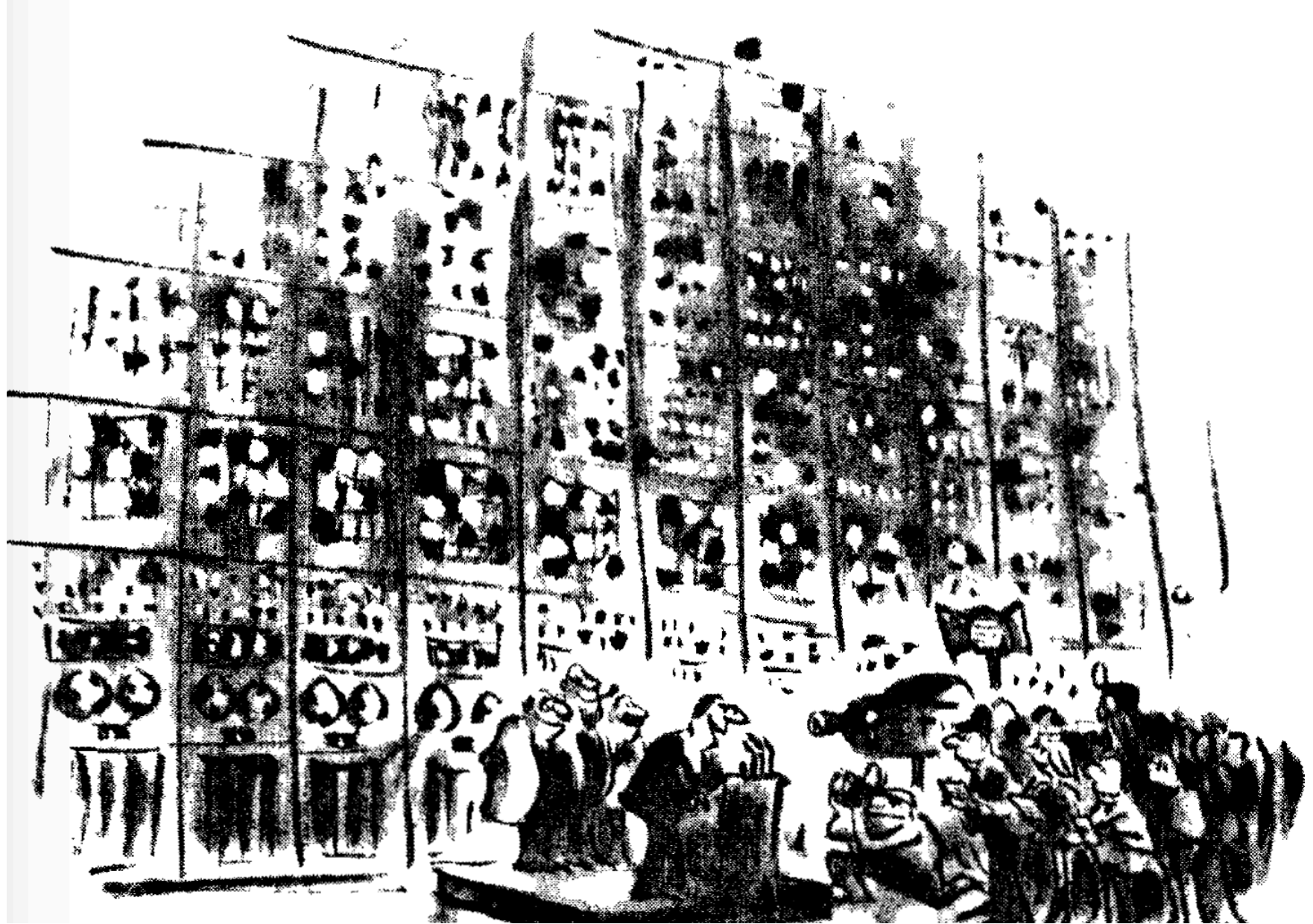
A satellite map of Vancouver Island and the surrounding waters. The island is green and mountainous, with a complex coastline. The water is a deep blue, and the surrounding land is also visible. A semi-transparent white box is overlaid on the map, containing the title and author information.

Sustainability and unsustainability on Vancouver Island: Coming to terms with living on an Island

Richard Kool
Royal Roads University



"We've called you here today to announce that, according to our computer, by the year 2000 everything is going to be peachy." (from The New Yorker) April 14, 1973

50 Year Vision for Vancouver Island

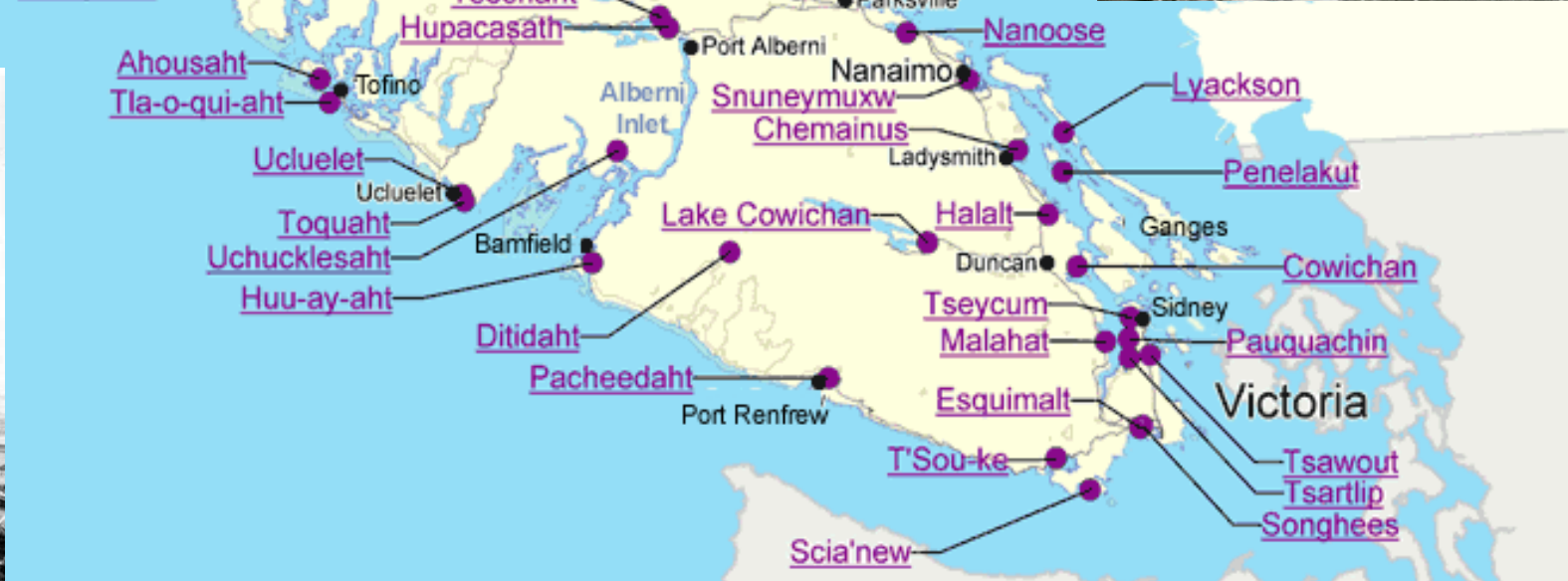
- 50 years seemed like too long
- Visions are too easy



The Vancouver Island Party

Working Toward a New Canadian Province!

Citizens of Vancouver Island, Unite!

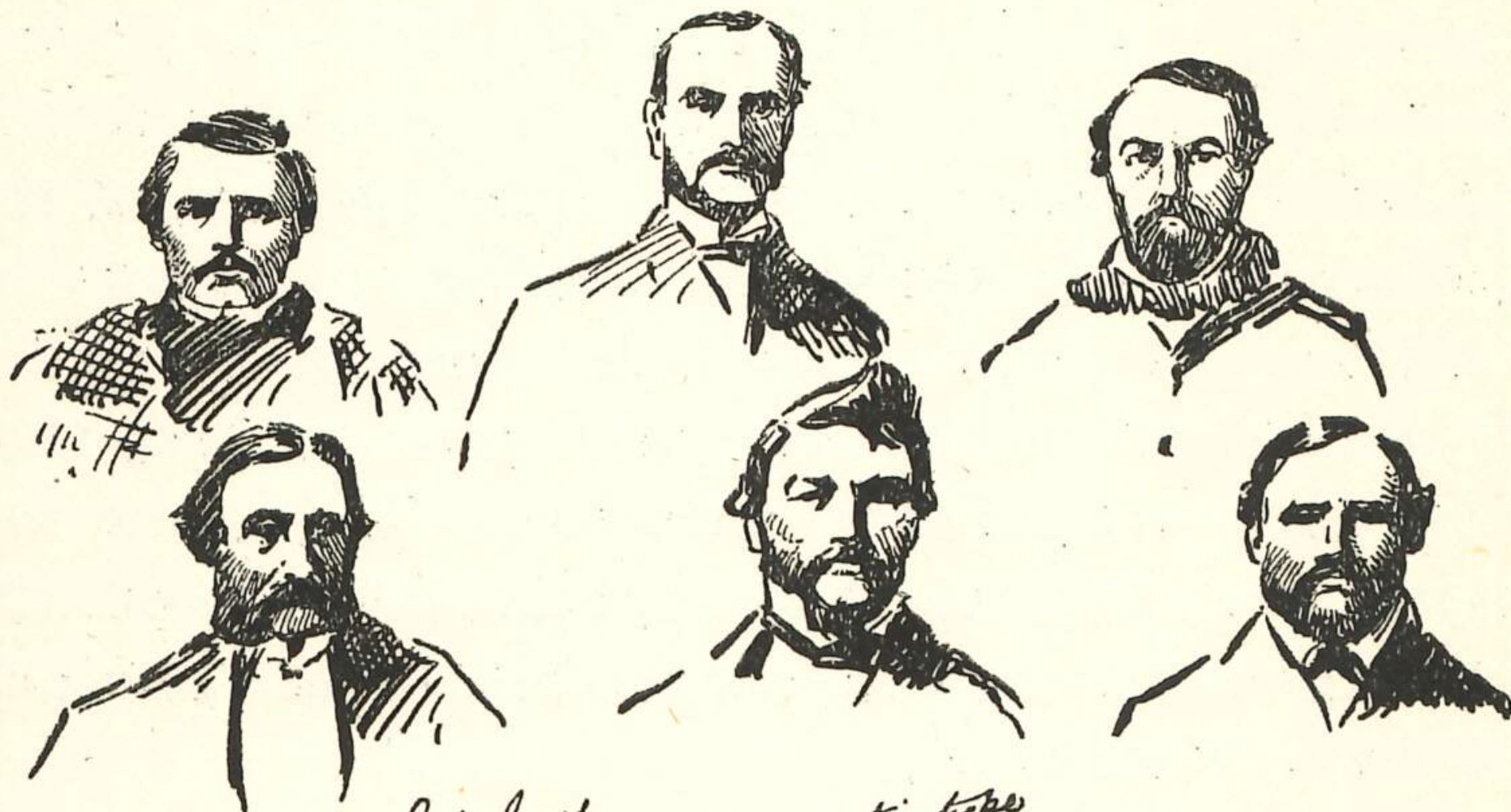


MAP OF
VANCOUVER ISLAND
AND THE ADJACENT COASTS,
COMPILED FROM THE SURVEYS OF
VANCOUVER, KELLET, SIMPSON, CALANCA, VALDES & C.
BY J. ARROWOOD.





The Great Seal of the
Island of Vancouver and
its Dependencies, 1849



*John James.
Sketched from old tin-types*

FIRST LEGISLATIVE COUNCIL OF VANCOUVER ISLAND, A.D. 1856



Richard Blanshard
(1849-1851)



James Douglas (1851-1864)



Arthur Kennedy (1864-1866)

Governors of Vancouver Island

With the colony's budget collapsing by 1865, and the assembly unwilling and unable to introduce proposals for raising revenue, Kennedy was barely able to keep the administration afloat until the union of Vancouver Island and British Columbia in October 1866....(Wikipedia)

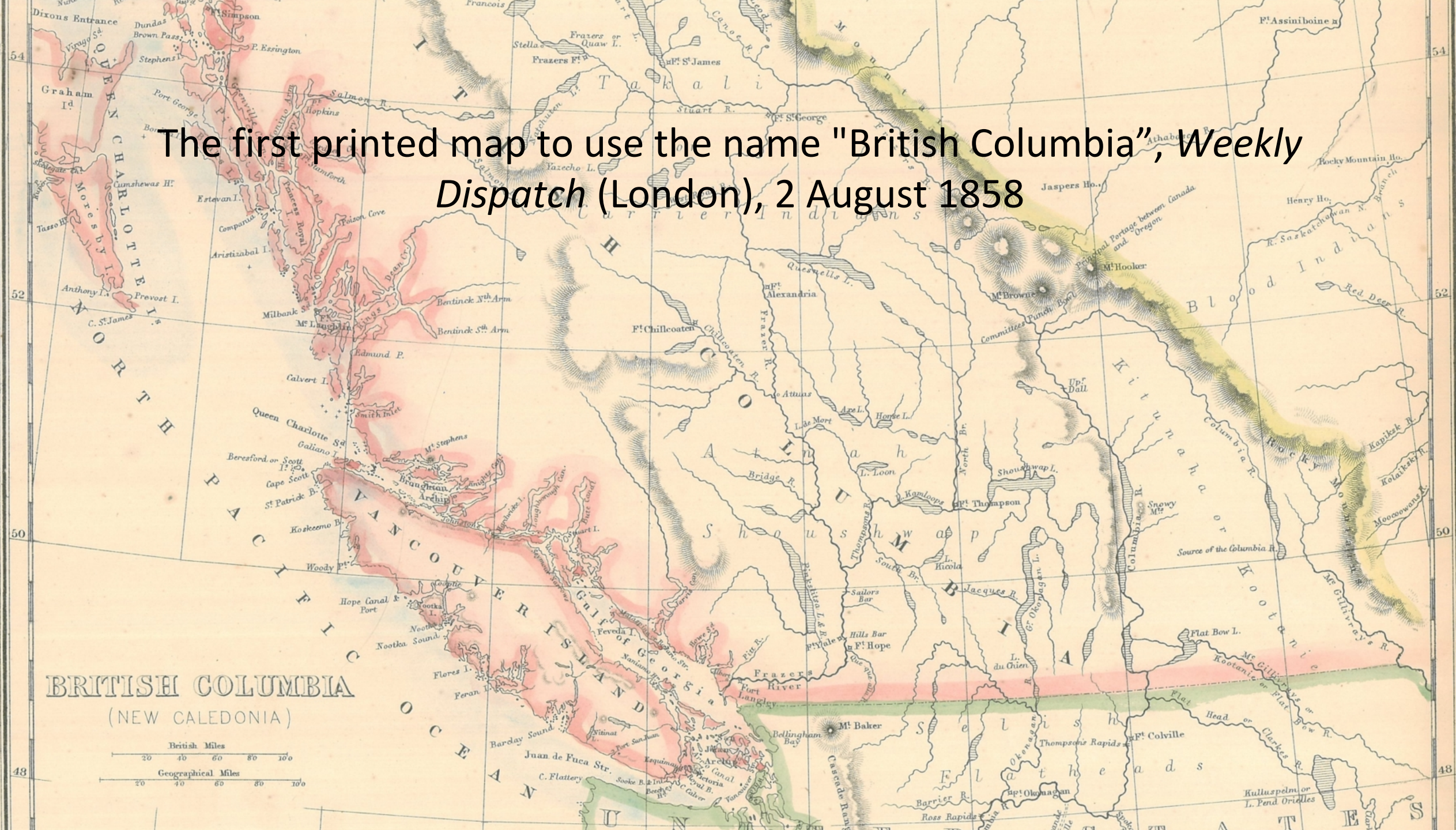


Arthur Kennedy (1864-1866)

Vancouver Island: 1849-1866 (RIP)

Westminster and Victoria Agree. — On January 26th, 1865, resolutions were submitted to the Assembly: “That the immediate union of this colony with British Columbia, under such constitution as her Majesty’s Government may be pleased to grant, is the means best adapted to prevent permanent causes of depression, as well as to stimulate trade, foster industry, develop our resources, augment our population, and ensure our permanent prosperity; ...”

The first printed map to use the name "British Columbia", *Weekly Dispatch* (London), 2 August 1858

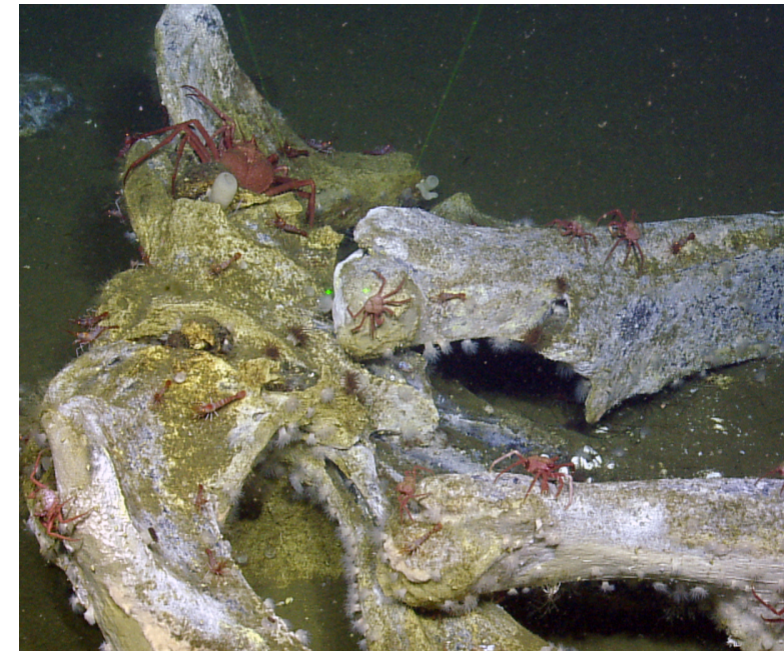


What is an island?

- A space of favourable habitat surrounded by a sea of less-favourable habitat

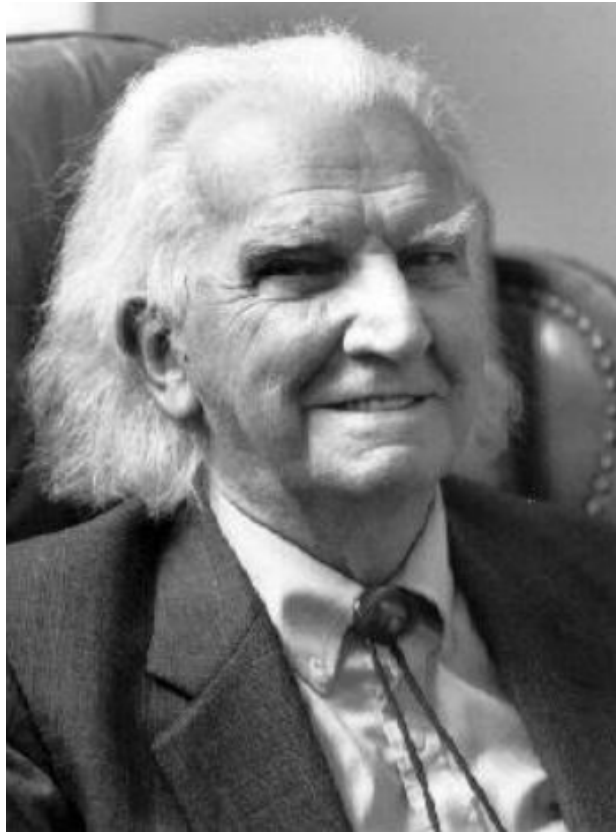


Photograph By Marmot Recovery Foundation



<https://nautiluslive.org/album/2017/07/21/whale-fall-santa-cruz-b>

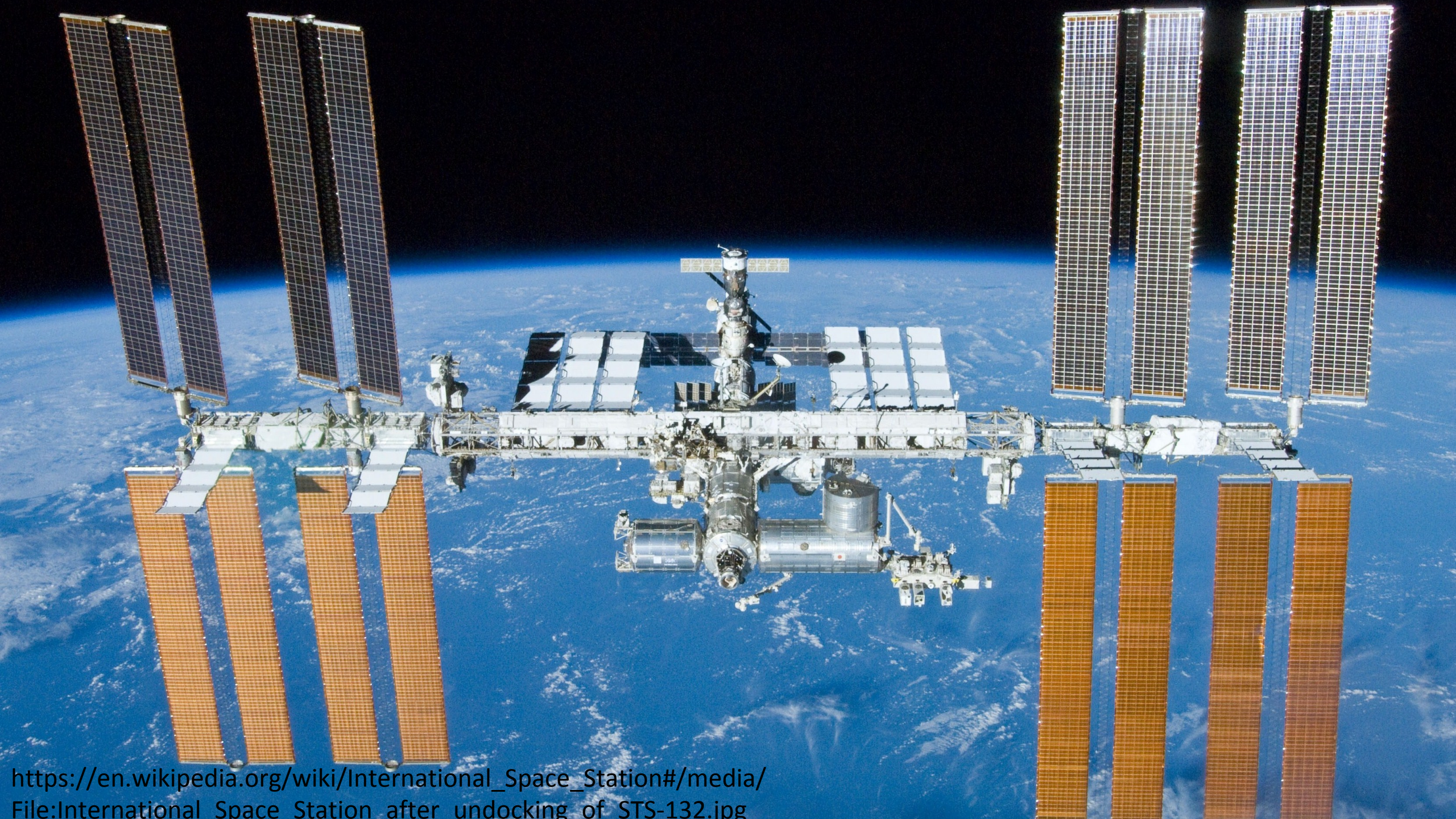
Boulding, K. E. (1966). The economics of the coming spaceship earth. In H. Jarrett (Ed.), *Environmental Quality in a Growing Economy*. Baltimore, MD: Resources for the Future.



Kenneth Boulding (1910-93)

“the only person who believes in perpetual economic growth is either a madman or an economist”





[https://en.wikipedia.org/wiki/International_Space_Station#/media/
File:International Space Station after undocking of STS-132.jpg](https://en.wikipedia.org/wiki/International_Space_Station#/media/File:International_Space_Station_after_undocking_of_STS-132.jpg)

THE LIMITS TO growth

Donella H. Meadows

Dennis L. Meadows

Jørgen Randers

William W. Behrens III

*A Report for THE CLUB OF ROME'S Project on the
Predicament of Mankind*



A POTOMAC ASSOCIATES BOOK

\$ 2.75

“Best selling environmental book
of all time”

30 million copies of the book in 30
languages have been purchased

Second printing before publication 1972

Third printing 1972

Fourth printing 1972

Fifth printing 1972

Library of Congress Catalog Card Number: 73-187907

ISBN 0-87663-165-0

Design by Hubert Leckie

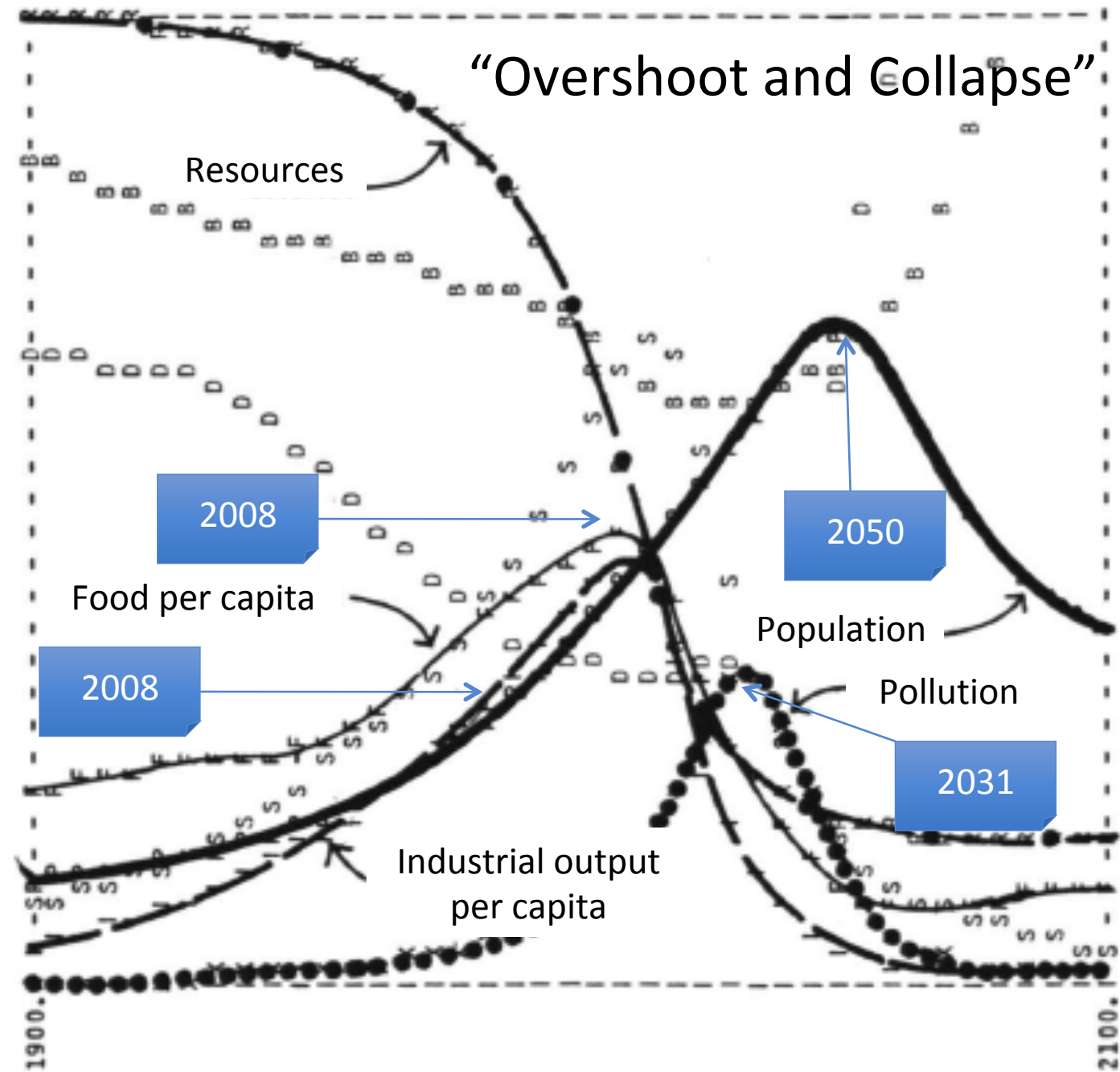
Printed in the United States of America

Published in the United States of America in 1972 by Universe Books,
381 Park Avenue South, New York, New York 10016

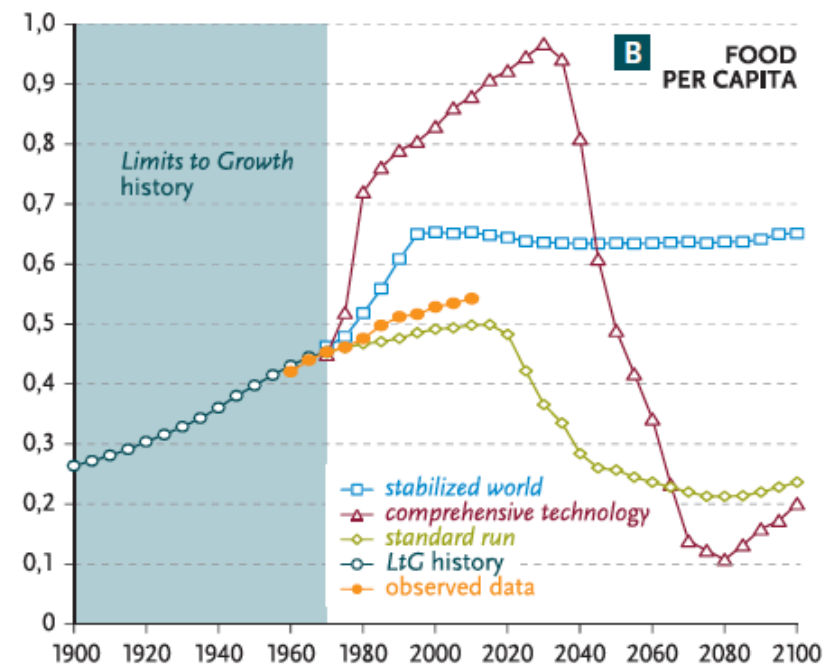
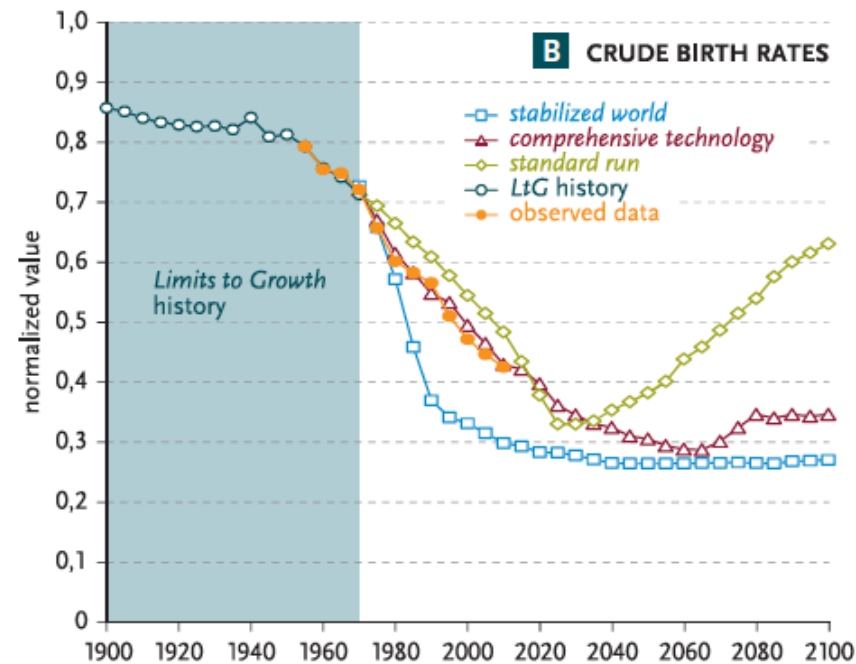
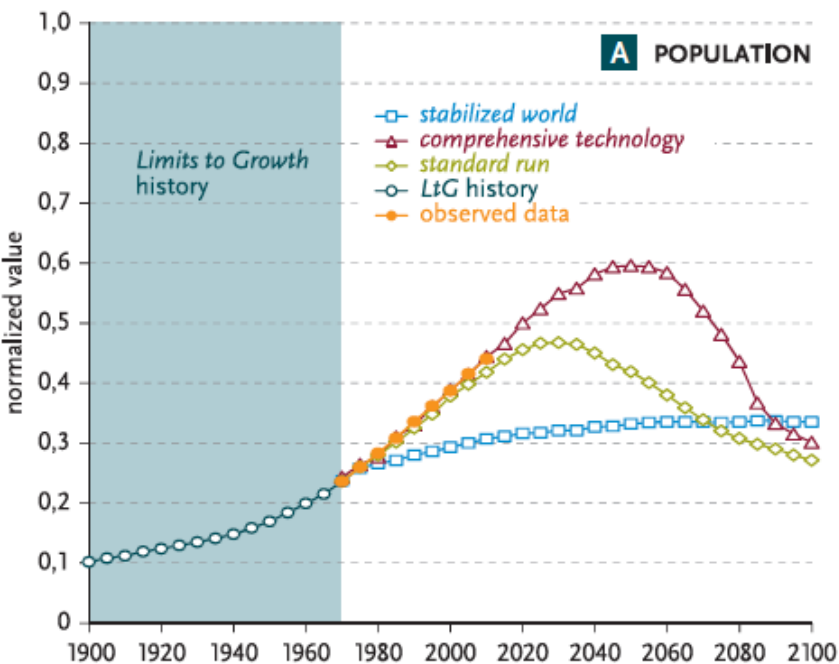
© 1972 by Dennis L. Meadows

Let us begin by assuming that there will be in the future no great changes in human values nor in the functioning of the global population-capital system as it has operated for the last one hundred years.

We can thus say with some confidence that under the assumption of no major change in the present system, population and industrial growth will certainly stop within the next century, at the latest.”



Turner, G. M. (2012). On the cusp of global collapse? Updated comparison of *The Limits to Growth* with historical data. *GAiA: Ecological Perspectives for Science and Society*, 21(2), 116-124.



RESEARCH ARTICLE

SUSTAINABILITY

Planetary boundaries: Guiding human development on a changing planet

Will Steffen,^{1,2*} Katherine Richardson,³ Johan Rockström,¹ Sarah E. Cornell,¹ Ingo Fetzer,¹ Elena M. Bennett,⁴ Reinette Biggs,^{1,5} Stephen R. Carpenter,⁶ Wim de Vries,^{7,8} Cynthia A. de Wit,⁹ Carl Folke,^{1,10} Dieter Gerten,¹¹ Jens Heinke,^{11,12,13} Georgina M. Mace,¹⁴ Linn M. Persson,¹⁵ Veerabhadran Ramanathan,^{16,17} Belinda Reyers,^{1,18} Sverker Sörlin¹⁹

The planetary boundaries framework defines a safe operating space for humanity based on the intrinsic biophysical processes that regulate the stability of the Earth system.

“... a safe operating space for humanity...”

boundaries now have a two-tier approach, reflecting the importance of cross-scale interactions and the regional-level heterogeneity of the processes that underpin the boundaries. Two core boundaries—climate change and biosphere integrity—have been identified, each of which has the potential on its own to drive the Earth system into a new state should they be substantially and persistently transgressed.

(2015)
Science,
347(6223).

If there are limits to growth, there must be boundaries...

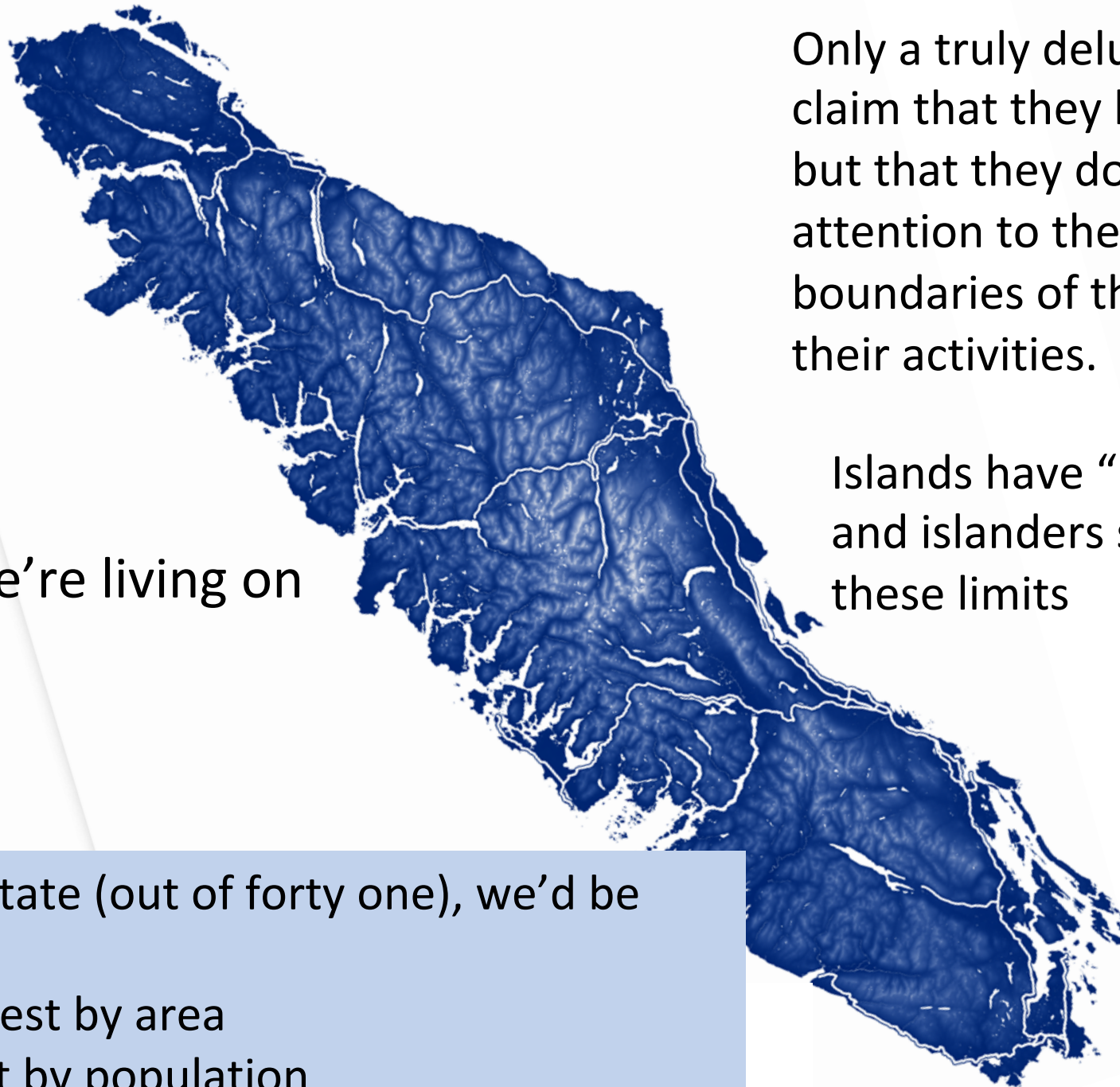
Do we live as if we're living on an Island?

If we were a island-state (out of forty one), we'd be the:

- world's tenth largest by area
- eighteenth largest by population

Only a truly deluded soul would claim that they live on an island but that they don't have to pay attention to the limits the boundaries of the island places on their activities.

Islands have "blue boundaries", and islanders should understand these limits



We're an island geographically, but
not where else...

No Island government/
governance
No Island Minister
No Island voice
No Island decision-making



Is there a (political) Vancouver Island?

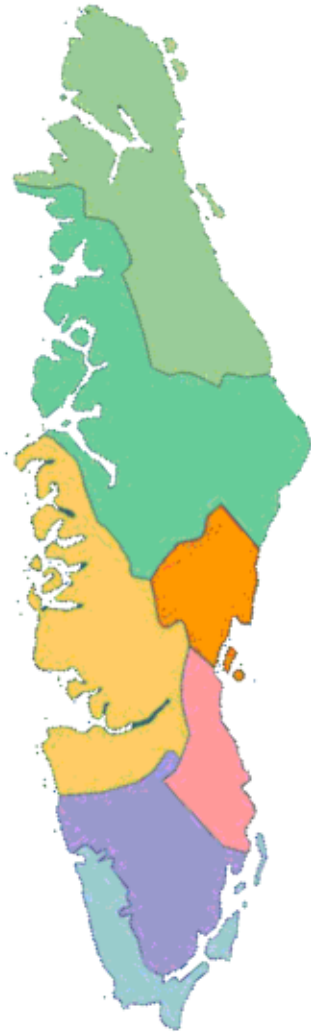


Island Health Region
Ministry of Agriculture regions



Vancouver Island and Coast [Economic
region], British Columbia (StatsCan)

Seven Regional Districts...



**Regional District Populations (000) on
Vancouver Island from 2016 census**

11 - Mount Waddington

45 - Strathcona

67 - Comox Valley

31 - Alberni-Clayoquot

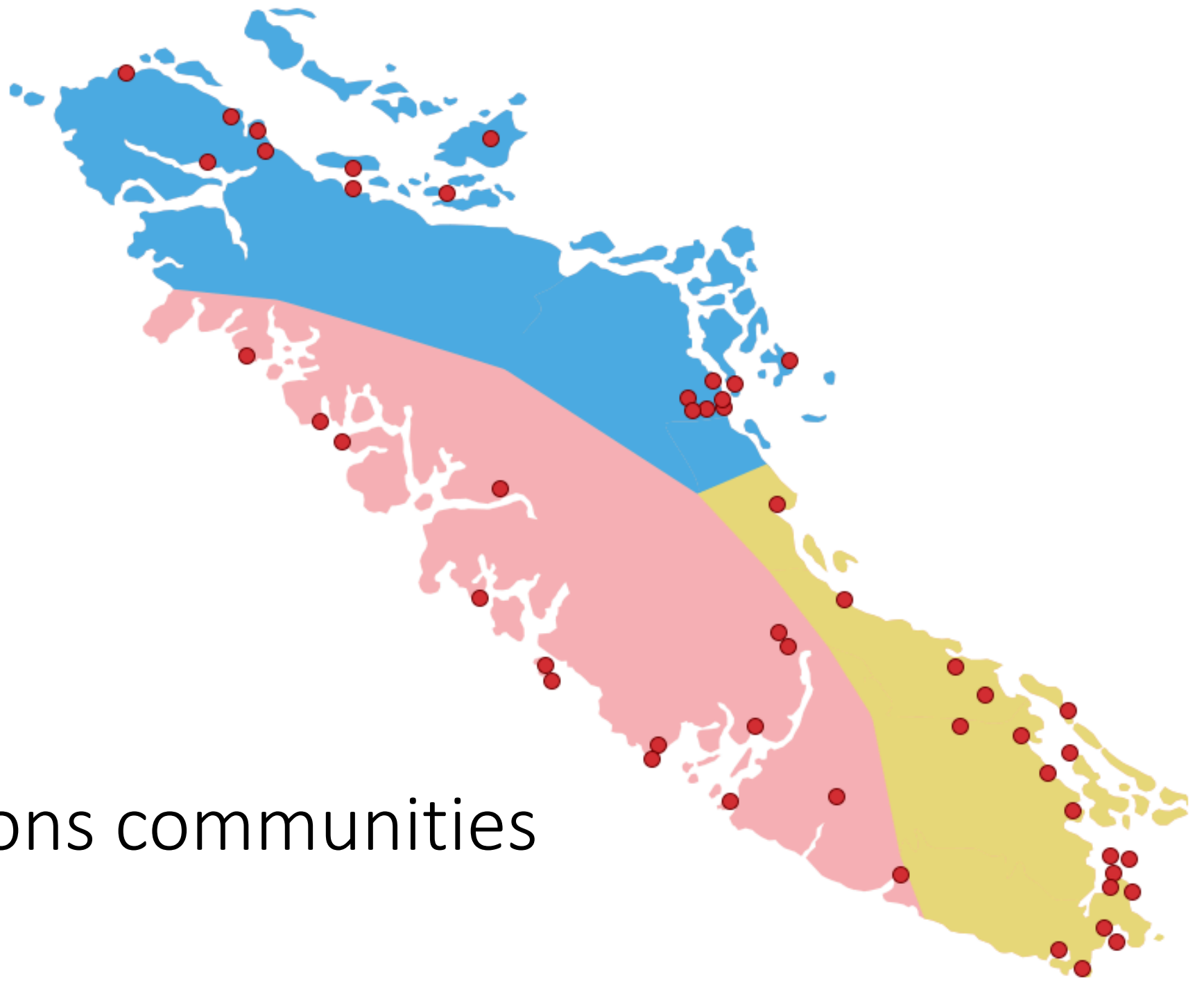
156 - Nanaimo

84 - Cowichan Valley

383 - Capital

37 Municipal governments...





~50 First Nations communities



No Island government/
governance
No Island Minister
No Island voice
No Island decision-making

Are we as green and sustainable as we'd like to think we are?

Some local purchasing



Local seafoods



O.U.R EcoVillage



Vancouver News

Electric vehicles are selling at an astonishing rate in B.C.

Business in Vancouver

By Nelson Bennett - May 18, 2019

Organic farms



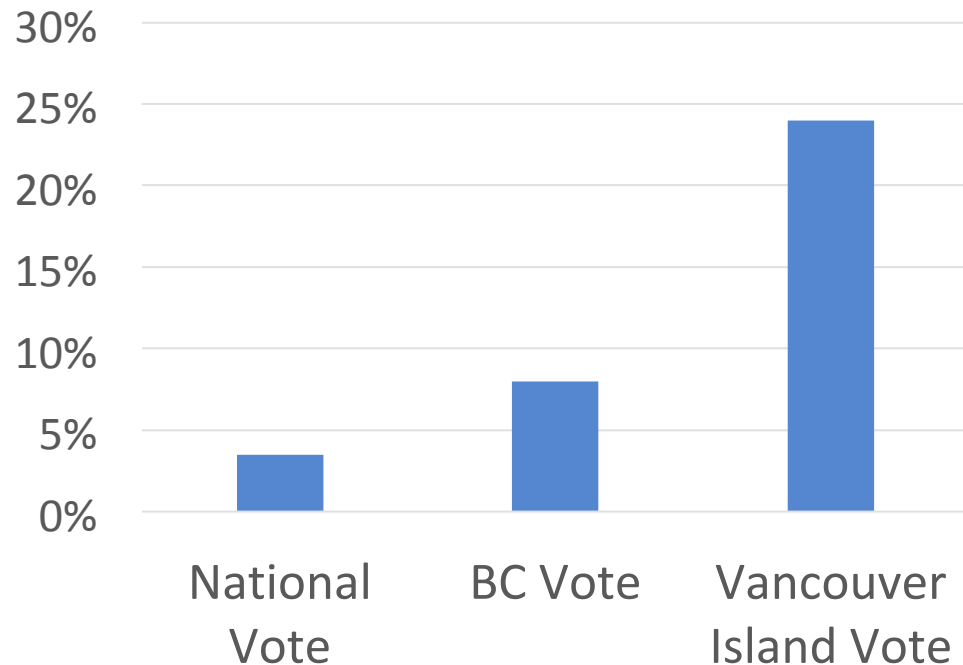
Bike commuting



Are we as green and sustainable as we'd like to think we are?

- Elected first Green MP
- Elected first Green MLA

Percent of vote going to the Green Party in 2015 election



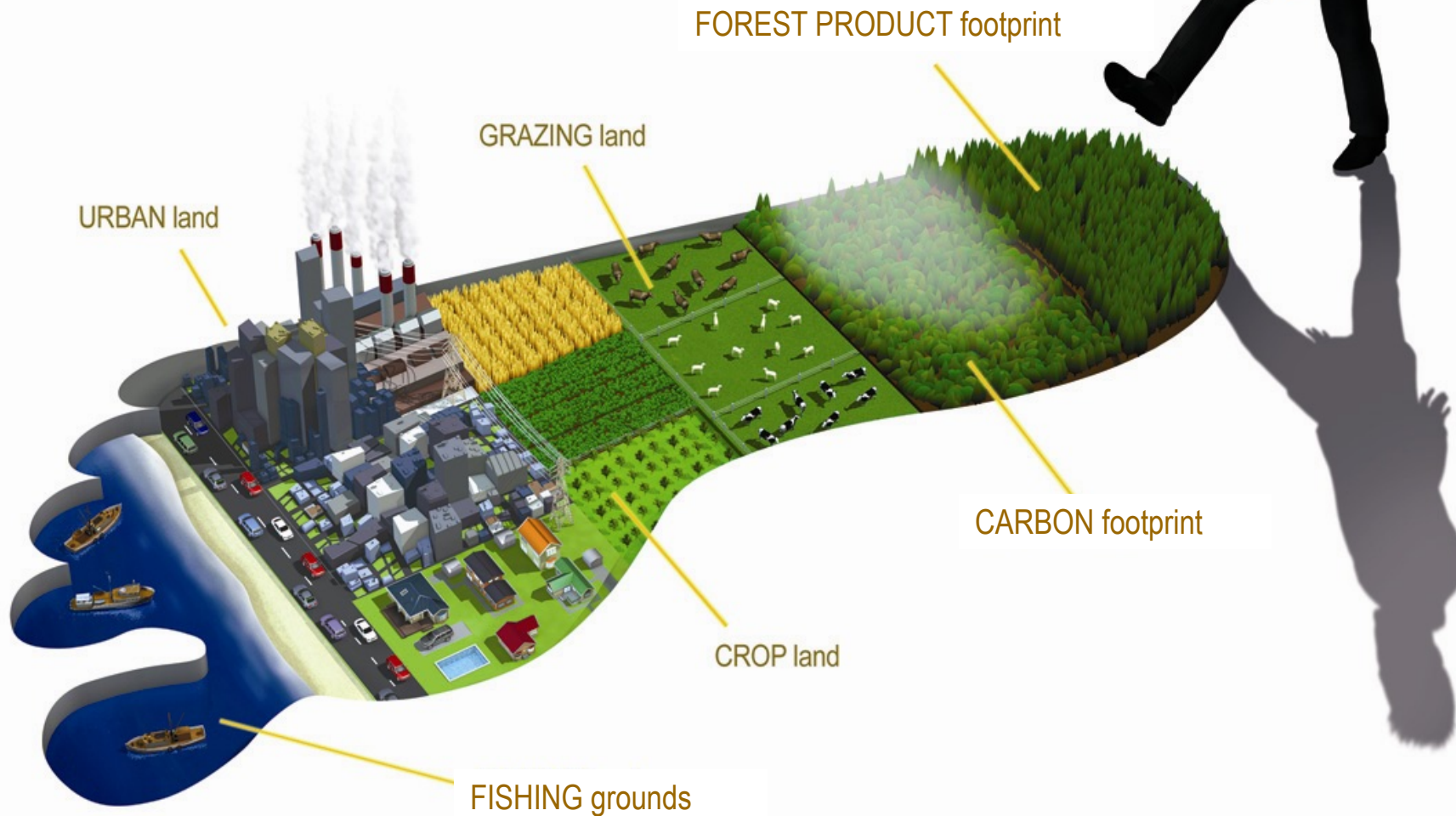


~780,000 people

The Ecological Footprint



Global Footprint Network
Advancing the Science of Sustainability



Vancouver Island = 31,000 km²
(~15% of that is alpine and
subalpine habitat)

Each of us appropriates about 7
hectares of land per year (7
sports fields)

Ecological Footprint of
Vancouver Island population = ~
55,000 km² of bioproductive land



Agricultural land

- Between 1954 and 1974, 263 km² of the Island's prime agricultural land was removed from production
- Another 100 km² (9%) or so has been removed from the Island's original 1976 ALR designation
- We still have ~1000 km² of the best agricultural land on the Island held within the ALR

Agricultural land

- Based on the average Canadian EF of ~1.5 ha/year for *food production*, the ~780,000 residents on VI collectively need ~11,000 km² of agricultural land for our food production
- ...an order of magnitude more land than the present ALR.
- Triple the ALR-equivalent amount of land by converting woodlands to farmlands, by utilizing yards and urban parks could provide ~25% of our food footprint.



“Estimated expenditures on food on Vancouver Island in 2006 were \$5.4 billion, while gross farm receipts of \$163.7 million represent only 3 percent of the \$5.4 billion...”

<https://www.uvic.ca/assets/media-releases/VICRA-summary-report.pdf>

COWICHAN VALLEY CITIZEN

Vancouver Island water system at 50-year low

“Winter drought” has Comox Lake/Puntledge River system in full conservation mode

[JOLENE RUDISUELA](#) / Mar. 11, 2019 2:30 p.m. / [LOCAL NEWS](#) / [NEWS](#)

TIMES  COLONIST

‘Heroic intervention’ saves Cowichan River, but future shaky

Richard Watts / Times Colonist

SEPTEMBER 1, 2019 06:00 AM



Water



<https://www.islandhealth.ca/sites/default/files/2018-09/drinking-water-report-2014.pdf>

Water shortage on Salt Spring Island sparks call for change

Island officials are calling on the B.C. government to fund a 'water service optimization' study



[Adam van der Zwan](#) · CBC · Posted: Jul 14, 2019 2:25 PM PT | Last Updated: July 14

NATIONAL  POST

March 13, 2019

BC Hydro says winter drought on Vancouver Island raises water supply concerns

TOFINO-
UCLUELET
WESTERLY NEWS

Water restrictions hit Tofino

“The more that we can do to conserve water, the more risk is reduced.”


[ANDREW BAILEY](#) / May. 21, 2019 7:00 a.m. / [LOCAL NEWS](#) / [NEWS](#)

Tethers to the mainland: BC Ferries



22.3M
PASSENGERS

UP
1.2%



176K
SAILINGS PER YEAR




**1,309 MORE THAN
THE PRIOR YEAR**

482
AVERAGE DAILY
SAILINGS



8.9M
VEHICLES

UP
1.9%



99.73%
FLEET RELIABILITY



\$7-8B
CARGO
TRANSPORTED



Tethers to the mainland... Fortis

No hydrocarbon production
on Vancouver Island

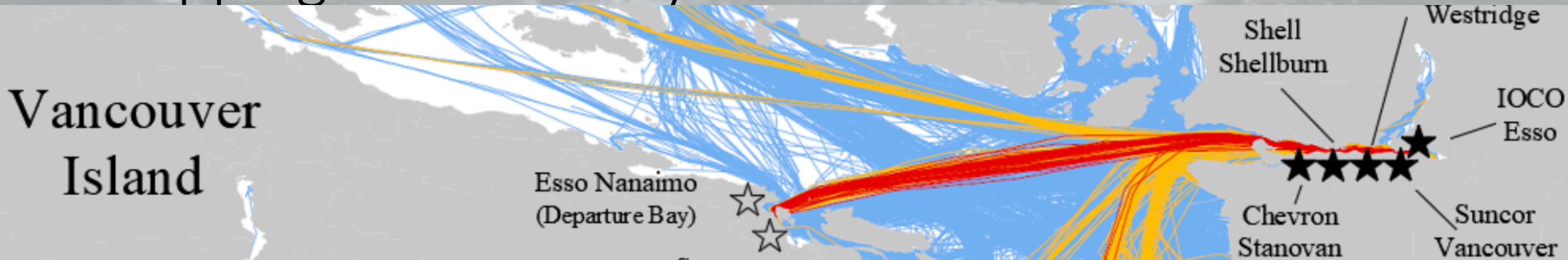
Fortis' natural gas storage
facility near Ladysmith



Tethers to the mainland: Liquid fuel supplies

No hydrocarbon production
on Vancouver Island

We use ~6,500,000 litres of liquid fuel a day, provided via
300 shipping deliveries a year...



Tethers to the mainland: BC Hydro

We use more electricity than we make...

- VI dams can generate ~2000 Gwh
- Residential use of electricity is ~4200 Gwh
- No idea about industrial use of electricity



Tethers to the mainland: BC Hydro

“Today, approximately 80% of Vancouver Island’s electricity is delivered through underwater cables from the BC mainland.”

If all the VI dams were working all the time, we might need only 60% from the mainland...



Official Community Plans (OCP), Community Energy Plans, Sustainability Plans, and Regional Growth Strategies (RGS

While the plans all speak to and about their community/ municipality/ region, **virtually none of them even have a nod to the idea that those communities are on an island in the Pacific Ocean.**

Regional Growth Strategy

Capital Regional District

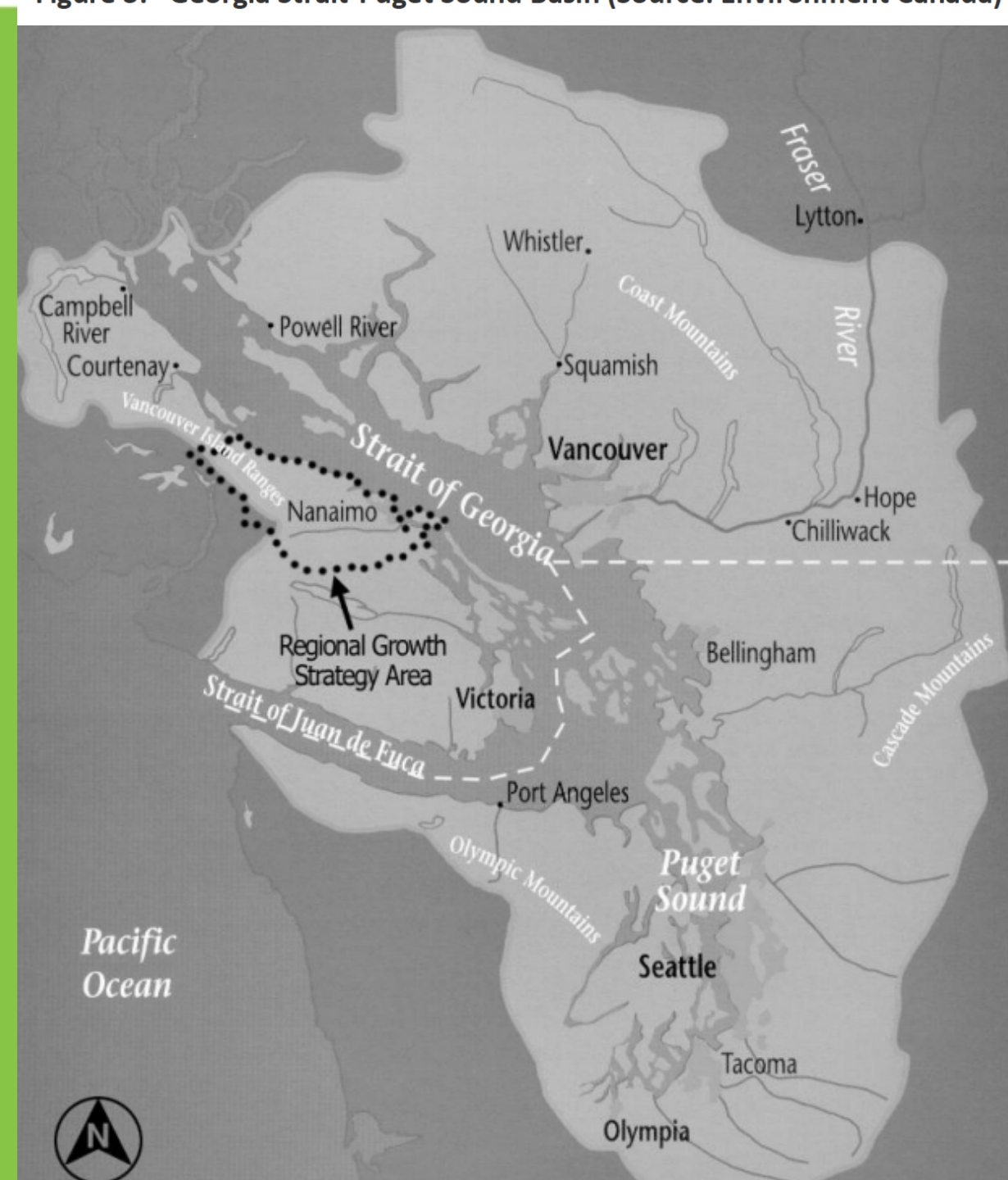
January 2018





Shaping Our Future

**REGIONAL
GROWTH
STRATEGY**
NOVEMBER 22 • 2011





Regional Sustainability Strategy

Capital Regional District

DRAFT
October 2015 - Revised

The high cost of living makes it difficult to attract and retain a young workforce. Living on an island increases travel costs and limited land availability and the attractiveness of the region for retirees keeps housing costs high for younger workers and families. (p. 25)

Comox Valley Sustainability Strategy



FINAL PLAN February 18, 2010

Over the thirty seven municipalities and seven regional districts, there were only three examples of what I was looking for...

The RSS includes actions to protect agricultural lands and identifies two initiatives to reduce dependence on importing food to the island and to increase the resiliency of food availability. (p. 69)



SUSTAINABLE SAANICH

Official Community Plan

Saanich Official Community Plan
2008

Appendix A to Bylaw 8940
Adopted July 8, 2008

“Economic Vibrancy: ...At the same time, a number of challenges in the local economy need to be addressed to ensure continued economic viability. These include the geographic constraints of an island location...”

“Increase the amount of land in crop production for food by 5,000 ha to enhance local food security”

The CRD expects to add 50 km² of agricultural land by 2038, somehow imagining the conversion of an area half the size of Saanich, the largest municipal government in the Regional District, into productive farmland...

Regional Growth Strategy

Capital Regional District

January 2018



Regional Growth Strategy

Capital Regional District

January 2018

Comox Valley Sustainability Strategy

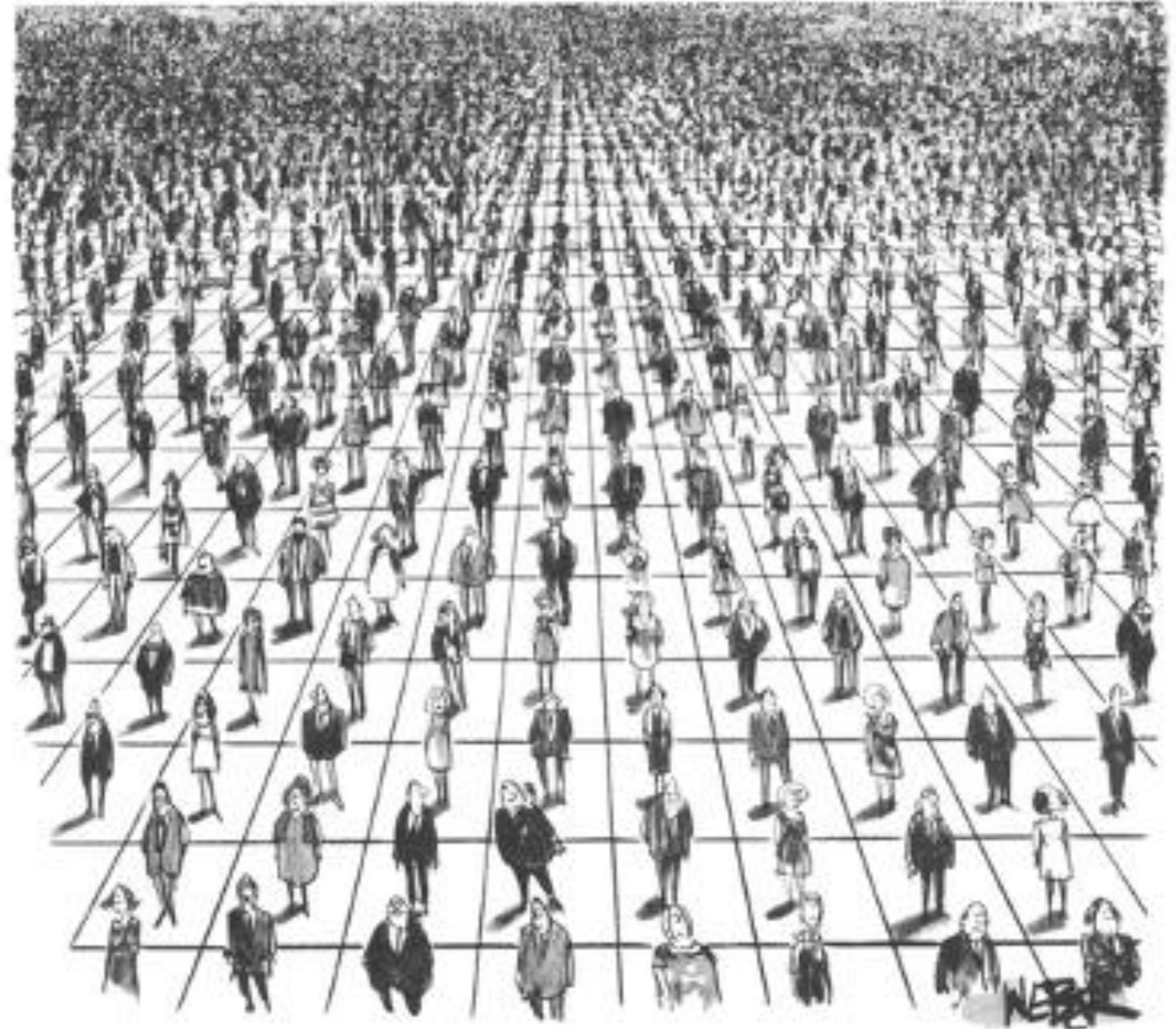
- The term 'electricity' doesn't show up in any of the CRD planning documents or strategies...
- Neither does 'gasoline' or 'natural gas'
- The Comox Valley Regional District's sustainability plan says that by 2050, "the Comox Valley will reduce energy use per capita by 50% and/or will not increase overall energy use from current levels" and will accomplish this through "decreasing the amount of energy we use and on ensuring that the way we use energy is more efficient"

We can't deal with our wastes...

- “...all regional districts have a disposal challenge in the long-term (20 to 40 years from now). Opportunities to site a new landfill are limited, and planning to export waste to the U.S. as a long-term strategy is not without risk” ...
- Cowichan Valley Regional District has essentially no landfill space and must “export” waste; solid waste has to be bundled and transported, via ferries, to the mainland for disposal, in this case to landfills across the border in Washington State.

No regional district
addressed the impact
of population growth

*"Excuse me, sir. I am
prepared to make you
a rather attractive
offer for your square."*

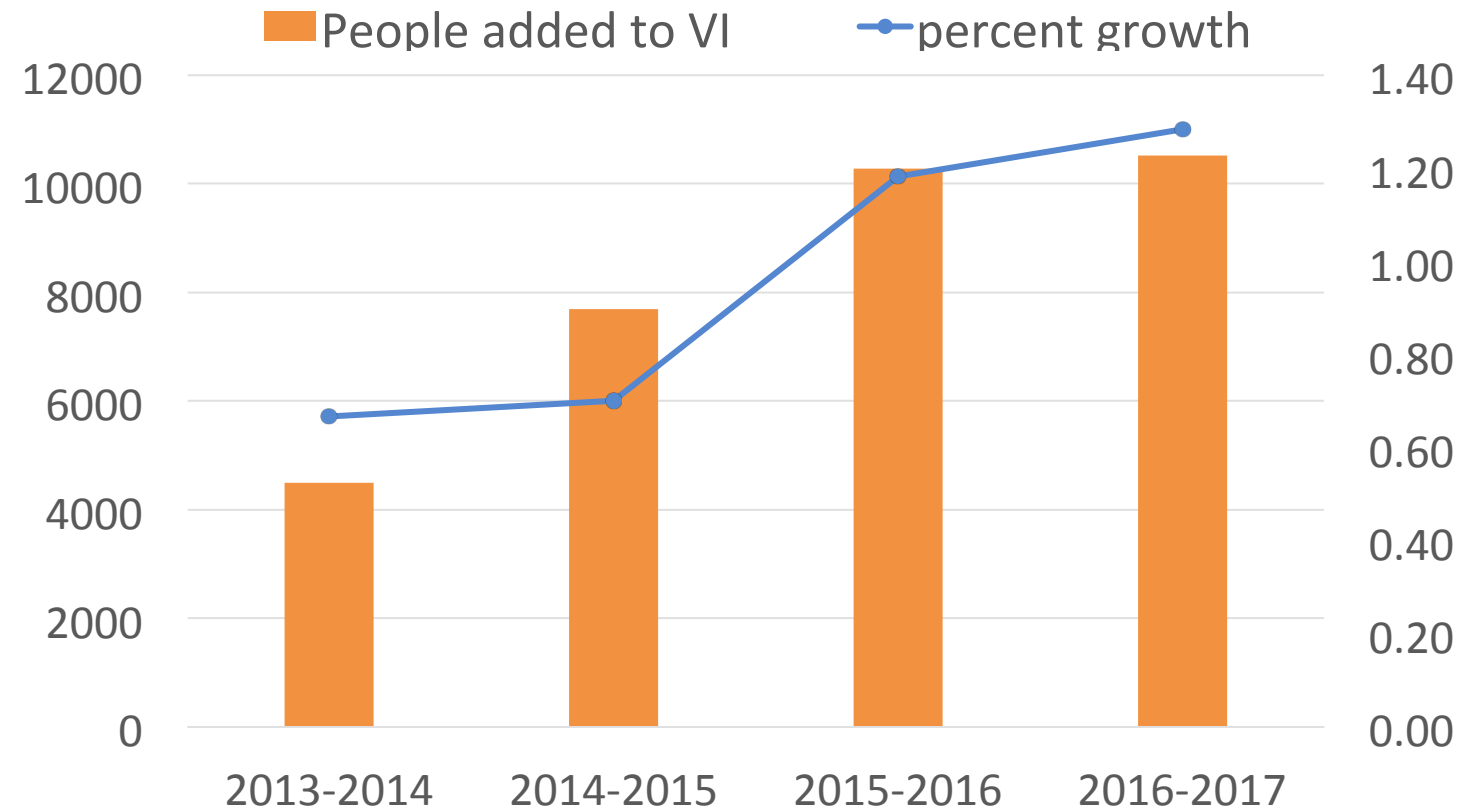


Human population...

Growth of the Island's population was presented as something that is as uncontrollable as the rain...

- “the population is forecast to...”
- “population is expected to...”

Population growth by numbers and percent



Population growth continues to strengthen Vancouver Island's economy

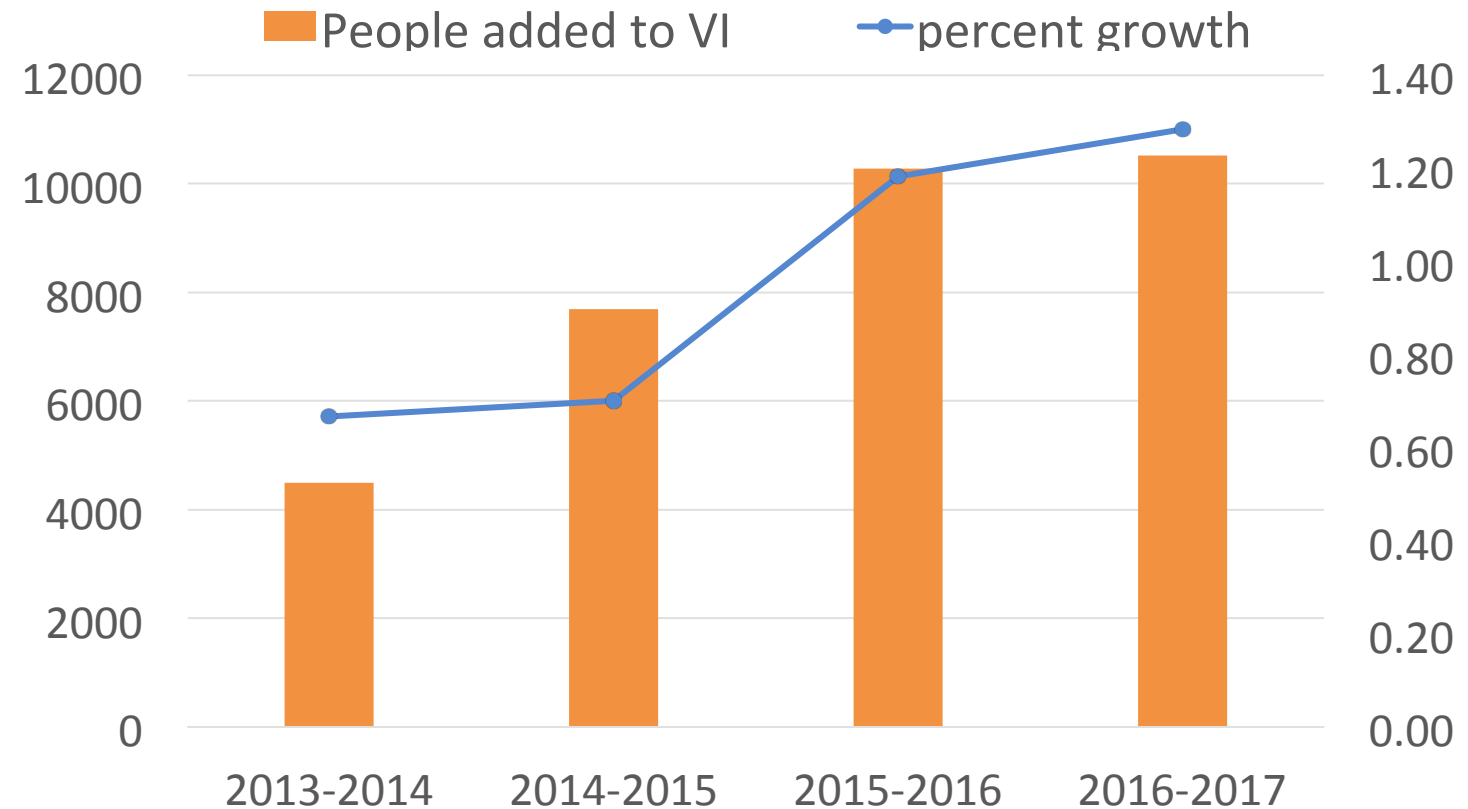
Few plans mentioned where waste would go

Some talked about the need for compact urban areas and ways to reduce suburban sprawl.

None mentioned:

- Ecological Footprint
- environmental impact of increased population
- where food and energy will come from

Population growth by numbers and percent



Are we as green and sustainable as we'd like to think we are?

Vancouver News

Electric vehicles are selling at an astonishing rate in B.C.

Business in Vancouver

By Nelson Bennett - May 18, 2019

Local seafoods



No

Organic farms



Commuting



What do we do?

- Governance of problems needs to be commensurate with the scale of the problem, i.e., no “made in Alberta” solutions to climate change.
 - Not all problems are island-scale problems, but in the absence of island-scale governance, no problems can be dealt with at an island-scale
- Vancouver Island’s existing political boundaries and fragmented governance processes do not provide meaningful contexts for reasonable consideration of Island sustainability concerns.
- Citizens and leaders have to incorporate being on an island into our planning and sustainable development thinking.



Association of Vancouver Island and Coastal Communities

REPRESENTING LOCAL GOVERNMENTS ON: VANCOUVER ISLAND - SUNSHINE COAST - POWELL RIVER - CENTRAL COAST -
NORTH COAST - BRITISH COLUMBIA, CANADA

What do we do?

- Have to be willing to confront “what is” ...
 - Live on an island
 - Fragile and tentative tethers to the mainland
 - EF at the present population that far exceeds our ability to provide
- Then we can begin to imagine what “could be”
- And what “should be”
- And what “will be”, as much as that “will be” is within our control

What do we do?

- VI municipal leadership needs to work to move senior levels of government to create a decision-making forum where Vancouver Islanders can deal with issues on an Island-wide basis.
- This is not easy.

Find local activity on the map

Enter location / postcode

Update

Key

 National Hubs

 Initiatives



If we can't recognize
the 'island' reality of
Vancouver Island, will
we ever be able to
recognize the reality
that Earth too is an
island?

