

Climate Change and Farming Communities

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I live and work on my families pastoral property, Wilpoorinna station near Marree. Sheep and cattle on an extensive rangelands property.

Background is as a mixed animal veterinarian, masters of Sustainable Agriculture and Nuffield Scholar.



Farmers and rural and regional Australians feel the impacts of climate change most dramatically. Farming communities are already adapting, mitigating and innovating to become more sustainable and future proof because their livelihood depends on it.

Farmers play a unique role in being the voice for rural and regional Australia and leading those communities.

2 out of 3 farmers believe climate risks to their business are rising (Rabobank)

Climate change cost ag **\$1.1b** in last 20 years. (ABARES)

2019 drought cost Australia between **\$9.5 billion** and **\$14 billion**

2019 was the driest, hottest year on record: rainfall down 40% & average temp. up
1.52°C (BoM)

Drier winters mean frost risk to wheat up **30%**, costing ~ **\$700m** pa.
(ANU/CSIRO)

ABARES, 2021

Risk that Australian farmers will receive a very low income has doubled since the year 2000

Have lost on average \$30,000 per year in profits over the past 20 years

But.....

Despite this productivity has significantly increased across livestock and cropping sectors



Primary Producer Resilience

- Work with their environment
- Find opportunity in adversity
- Always working on new ventures



- Christoph and Erica Weder,
Ranch in British Columbia
- 8,000 acres free hold and 10,000
acres grazing license forest
- Surviving winter is their goal
- Pasture hay
- 1800 angus cattle, 350 Bison



Species	Temp., °C	Jan	Feb	March
Yak	20	128.2	111.7	143.5
	0	123.4	137.2	164.2
	-30	146.2	150.1	181.8
Bison	20	118.2	105.3	160.4
	0	117.9	124.0	168.6
	-30	90.7	104.6	135.4
Hereford	20	138.7	141.8	155.7
	0	146.5	152.0	174.2
	-30	186.2	186.1	259.8
Highland	20	109.0	116.6	132.9
	0	127.9	133.7	144.7
	-30	137.4	136.8	171.3
Mean monthly temperature, °C		-10.2 (-42.0 to 7.8) ²	-8.5 (-29 to 10)	-5.6 (-34 to 11)

Table 2 Metabolic rate response to temperature of different bovines

<https://www.bisoncentre.com/resources/resource-library/bison-research/physiology/comparative-winter-bioenergetics-american-bison-scottish-highland-and-hereford-calves>




**farmers for
climate action**

Ol Pejeta, Kenya

- 90,000 acres
- 12-13 000 wildlife
- 7,500 bos indicus
- Herded to protect from predators
- Diversity of income
- Benefits to landscape





farmers for
climate action

Australian Livestock production has distinct advantages

- Synergistically with conservation
- Capitalising on the ecologically engaged consumer
- Australia can lead the way with Climate Smart Ag



What can landholders do?

- STAY ENGAGED
 - Be part of the policy discussion
 - Continue innovating and adapting on farm, sequestration methods have many co-benefits
 - Cutting emissions are in line with the common goals of farmers; more from less and leaving the land in a good condition for the next generation
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Thank you

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