

# Northern Australia Climate Program

## NACP case study

East Kimberley, WA  
February 2020

**Subject:** Mike and Jane Shaw

**Property:** Spring Creek Station

**Location:** Lake Argyle, East Kimberley, WA

**Size:** 300,000 acres

**Enterprise:** live export beef

**Breed:** Brahman

**Herd size:** 5,800 head

### Key message:

At Spring Creek Station, the Shaws use climate forecasts and rainfall monitoring to help determine when to wean and how many cattle to sell or to send on agistment. While currently building their herd, their aim is to retain as many cattle as possible, but to ensure that their pastures, land condition and animal welfare are not compromised.

## Sustainable livestock production & grazing land management in the East Kimberley region, WA

The Shaw family runs, on average, around 5800 head of Brahman cattle on Spring Creek Station, a 300,000 acre property in the East Kimberley bounded by the Ord River to the west and the Northern Territory border to the east. Average rainfall on Spring Creek Station is 615 mm and pastures are native grass species on heavy black soil. Calving percentages are around 66% and, over the past four or five years, around 2200 calves and weaners have been branded each year.

The Shaws also agist cattle at the East Kimberley Cattle Company's Mandangala-Glen Hill Station, east of Lake Argyle. Access to this additional land has been critical, enabling the Shaws to both build their herd by 3-400 females a year and to also periodically reduce stock numbers on Spring Creek Station 'to give the place a spell'.

Mike says the key benefit of operating in the region is that 'you know you're going to get some rain, so you've got time to think and time to plan'

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## **About NACP**

The Northern Australia Climate Program (NACP) is a partnership between the Queensland Government (through the [Drought and Climate Adaptation Program](#)), Meat and Livestock Australia and the University of Southern Queensland (USQ) to help red meat producers in northern Australia manage drought and climate risks. A core component of the program is the 'Climate Mates' initiative, which employs and trains local climate extension experts who are connected through the program to leading climate science researchers at the USQ, BoM and UK Meteorological Office.

The NACP Climate Mates have two key roles: to 'translate' the best available climate information for the local regional context to help producers make informed decisions; and to pass feedback from producers back to researchers to ensure research and product development is targeted to producer needs.

In the Kimberley region of Western Australia, the NACP is also supported by the Department of Primary Industries and Regional Development (DPIRD). DPIRD's role in the program is to support and promote Climate Mate activities, incorporate new or better information into existing extension programs where possible, maintain involvement through the NACP leadership group and contribute to the monitoring and evaluation of the program.

Kath Ryan, who is employed by the DPIRD and their representative on the Northern Australia Climate Program and has an extensive history of engagement with local beef producers and grazing land managers in the Kimberley region of northern WA, says 'The Climate Mates are doing a great job and DPIRD is proud to assist them wherever we can.'

## **Goals**

The main goals for the Shaws are to educate their children and to continue to upgrade the property – 'There's always something to spend money on, so we don't have to worry about bores, so when you get to a yard, it's easy to work in - that sort of thing.' Mike says he worries less about profit than animal welfare and sustainability. 'Let's just worry about lack of grass and lack of water ... I'd rather lose a little bit of money than lose animals later on. It is a balancing act, a bit of a gamble, but you've got to play it on the safe side'.

Mike says he calculated that he needed to have at least 6000 head and to be branding 2000 animals a year to make a reasonable living. As one of the smaller properties in the region, Spring Creek Station was unable to run that number year in year out. Several years ago, when they were offered agistment on Mandangala-Glen Hill Station, the Shaws saw this as an opportunity to both build their herd and to be able to strategically rest Spring Creek.

## **Climate risk management**

The most climate-sensitive decision on Spring Creek is weaning: 'How hard we're going to wean. Working out have we got enough grass to see us through? Will we have to sell extra? at a cheaper rate, because everyone's trying to sell or do we put them off on agistment, which we've done in the last couple of years.'

The added flexibility provided by access to additional agistment land with good pasture is critical and Mike says 'I'm lucky I have that up my sleeve when the dry times come. I can just keep on floating cattle over there and save my own, so long as I'm not flogging theirs. So, the agistment's working in well.' With the last three rainfall seasons below average, they are currently running just 4000 to 4200 mixed head on Spring Creek.

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## Challenges

Mike says there are significant challenges to operating in the region, the most critical of which are the cost of freight and access to markets. Apart from local meatworks, Kimberley producers have access only to the live export market, which can lead to difficulties. 'You're always waiting on an order to come through for when the ships come in. It's not as though you can just take 20 or 30 cattle to the saleyard. You have to have mobs of cattle on hand and sometimes you have to wait for that order to come in, so you're going to have them waiting, chewing holding paddocks out. Waiting. That's the worst part. You know you've got six decks sitting ready to go and you're just waiting for an order. That might be a month, six weeks, two months. Otherwise you put them back in a bigger paddock, and it all costs money to muster them back up again.'

## Links with the NACP and expected benefit

Mike became aware of the potential value of longer-range climate forecasts through the NACP and face-to-face discussions with Kath Ryan in Kununurra.

He says he's always relied on past climate history and the rainfall records for the station, which have been kept almost continuously since 1920: 'I study that rainfall record, just trying to find patterns.' He also watches the Wyndham radar and the BoM four- or five-day forecasts, especially for changes in barometric pressure. Knowing when cold fronts are coming through and the position of high/low pressure systems lets him know if there's a chance of rain. 'It gives you a bit of hope.'

Mike says of the long range forecasting, 'one month, two months, even 12 months ahead ... they're not going to be as accurate a month down the track, but [we'd be happy] if they could tell us, we reckon towards the end of February you should be getting another monsoon ... there should be more lows coming through the bottom or monsoon coming down from the top.'

He says he is cautiously enthusiastic about the value of the seasonal forecasts and particularly the 'chance of above' tool on the BoM website, which provides an indication of the likelihood of at least average rainfall for the next period of time. He says that this appeals to him as his core philosophy is 'don't bank on any more than the average.'



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## ***Relevance to others in the region***

In WA, the inherently low productivity and associated low profitability of the rangelands are major challenges facing beef property managers. As in other rangeland regions of Australia, drought and climate variability are significant challenges, with potential impacts on land condition, agricultural and economic productivity and employment opportunities at property and regional scales. Financial pressures can contribute to high stocking rates, driving land degradation and contributing to increased vulnerability to drought, which undermine long-term resilience.

Actions which are likely to help build regional resilience include strengthening existing pastoralism and grazing land management through policy and investment strategies that ensure healthy and productive landscapes, support flexible management that is able to respond to increasing climate variability, encourage continuous improvement of pastoralist's skills, and provide health services for the wellbeing of families. Effective land management strategies at the property scale include reduction in grazing pressure and implementation of a wet season spelling regime. Such decisions - supported by increased familiarity and use of seasonal climate outlooks - and drought preparation, in particular, can deliver measurable overall benefit to industry.

While seasonal climate forecasts are often criticised for being less than perfect (i.e. less than 100% accurate), significant investment and research effort is being applied to improving the quality and accuracy of forecasts and to ensuring they are relevant to key grazing land management decisions. The NACP – which employs research staff in the Australian Bureau of Meteorology and the UK Met Office - is making important contributions to this, with a particular focus on improving forecast products for 'flash' droughts, Northern Rainfall Onset and rainfall bursts in response to the expressed needs of beef producers, such as the Shaw family, in northern Australia. The availability of more targeted and more skilful regional climate forecasts and information will better support critical decisions about when to offload stock to save grass and water for remaining breeders and reduce pressure on the resource base.

