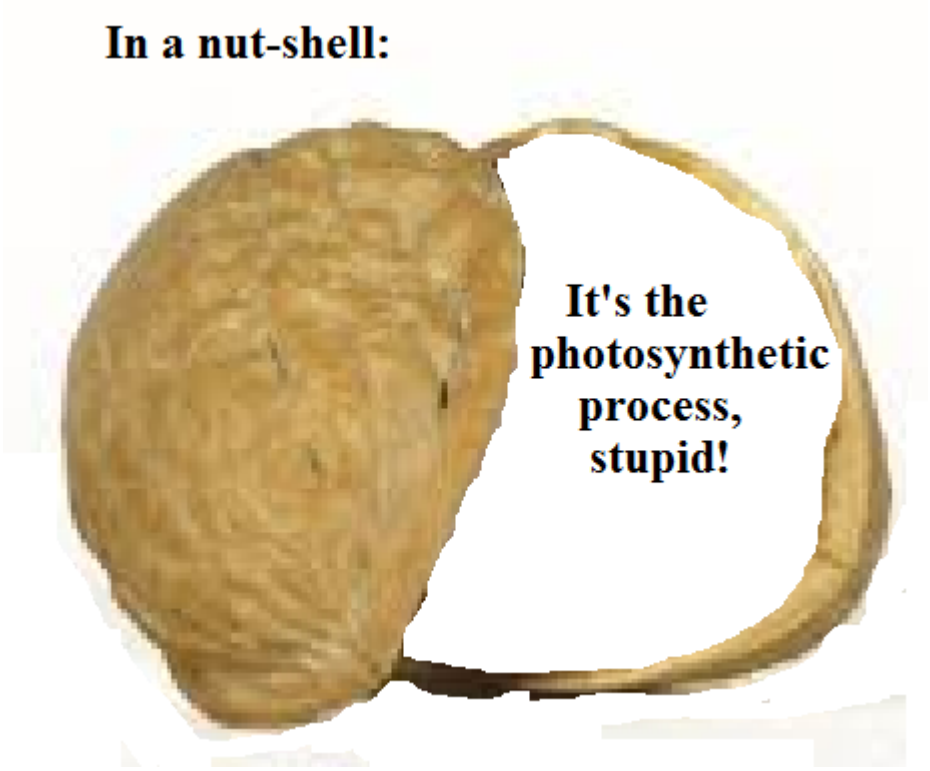
Agricultural Competitiveness White Paper Submission - IP584
Kachana Pastoral Company
Submitted 17 April 2014

Where to, Australia?

(The empirical evidence of what is stated below has been around for thousands of years. Modern science only began picking it up in the twentieth century. Some of the actual science to substantiate what is stated below only became accessible to the general public towards the beginning of this century.)

Part I



Follow the energy…

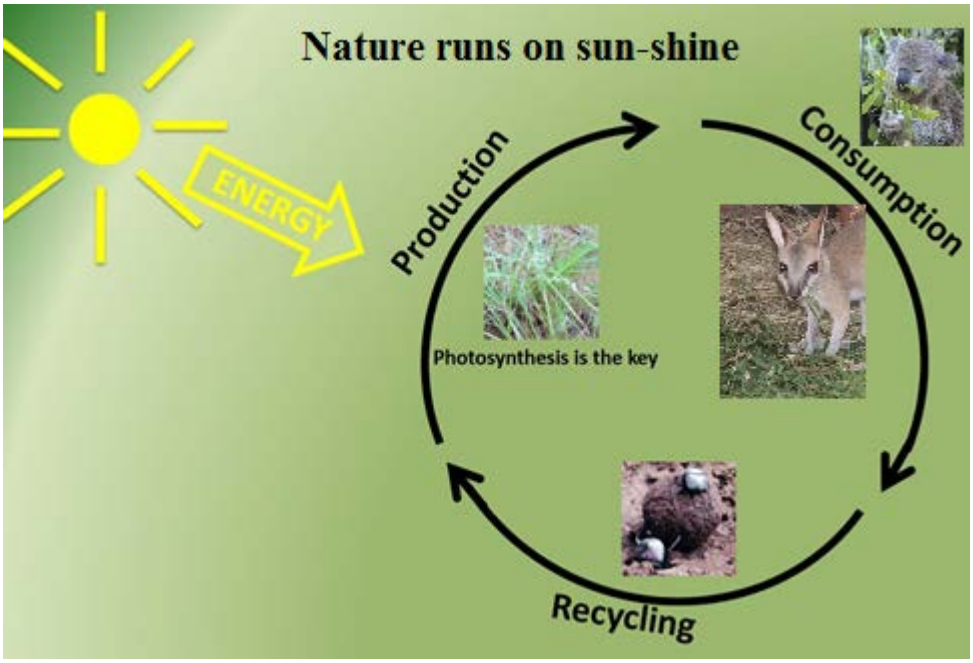
Business as usual is now leading modern civilisations into the middle of the "perfect storm" so eloquently described by Allan Savory in his 2013 TED-presentation.

"We have all the money in the world, but we are running out of time." A. Savory

Part II **Following the energy**

Sunshine drives the weather.
Temperature differentials off land and sea dictate air-flow and weather patterns.

Sunshine is also the fuel that drives biology.



Photosynthesis provides the energy for just about all life-forms.
Plants deliver food to micro-organisms in the soil.
Animals above the ground help themselves to plants.

Biological processes blended with physical processes produce climate.

When the outcome of one or more of the processes changes, then climate changes.

Photosynthesis is the key to climate; it is also a key to life.

WHAT IS IN IT FOR US?

- The production of oxygen and the purification of air
- The purification and the availability of abundant clean water
- The growth of healthy food with high nutrient-density

Less photosynthesis leads directly to less health, less life, less wealth.

Part III **The good news**

The evidence is out there that effective positive change on the scale required may still be within reach. Realistic and commercially feasible options of how to achieve this are limited. At operational levels there seem to be only three:

1. The introduction of **sound pastoral practices** to **watersheds** and **catchment areas** that are currently **not being managed** or that have been **abandoned** for commercial or political reasons.
   (Key Indicator → water quality and water-security)

2. The support of **regenerative** farming practices in country that is currently under management for **primary production**.
   (Key Indicator → increasing soil-carbon)

3. Escalating promotion of farmers' markets, more **informed food-choice** (e.g. www.Chakula.com), new models of urban development and urban farming in line with the concept "waste = food"
   (Key Indicator → health and wellbeing)

All three options are about introducing and/or enhancing eco-system function on land surfaces. All three are within Australia's "circle of influence".

Viewed from an ecological perspective, we do what it takes to:

- Increase our annual intake of solar energy into the natural systems
- Increase the effectiveness of our rainfall
- Enhance the cycling and recycling of minerals, water and captured energy
- Enhance biodiversity and the natural productivity of our landscapes

Collectively this enhancement of eco-system function begins to stabilise micro-climate and produces a biologically driven buffering effect on weather-events

Building hope, resilience and opportunity into our landscapes!

Part IV **Were we are now**

WHAT IS HAPPENING (on land)

- Photosynthetic activity is in decline
- More bare ground is exposed to sun and wind each year
- After sun-set increasingly more hot air rises off land surface
- Weather patterns are being destabilised
- Wild, weird, unprecedented and unpredictable weather-events are on the increase
- There are also more predictable events like:
  - Melting ice
  - Rising sea-levels
  - Migrations:
    - Human From land to city
    - From the coast to higher land
    - Out of Africa
    - Away from danger-zones
  - Disrupted animal migrations
  - Disrupted bird migrations

(We call this human-induced process **DESERTIFICATION**)

WHAT COULD HAPPEN

With sound landscape-management, we can initiate desirable trends.

- New and evolving pastoral practices are the key to addressing the vast areas that no longer support conventional human economic activity. http://www.youtube.com/watch?v=5LHoh-OKUfU
- New and evolving synergistic production-models of farming offer a bright future for existing agriculture. Joel Salatin shows us a way: http://vimeo.com/81468461
- New models of urban development based on principles observed in the natural world offer a way forward to modern life-styles. WASTE = FOOD http://vimeo.com/3237777

Photosynthetic activity would increase and we would begin reversing a whole host of undesirable trends.

(We call this human-induced process **REGENERATIVE LANDSCAPE MANAGEMENT**)

We are at a crossroads. We can choose the way.

Part V **Conclusion**

Nature runs on sunshine.

Sunshine drives the weather.

Sunshine drives eco-system function.

Together these two determine climate.

Photosynthesis is the key process.

Humans now determine photosynthesis.

Humans hold the key to mitigating the effects of destabilised climatic patterns.

By putting our own house in order first, Australians have the capacity to sustain the level of population needed to justify the levels of infrastructure that we modern humans aspire.
This would also enable us to export a working knowledge of how to live within the means of one's environments.

(We dare not forget about the challenges of rebuilding of ocean-biodiversity or the curbing of exponential population-growth, but for the moment these two issues remain outside of our immediate influence.)

Nature runs on sunshine.

Humans are consumers.
It is how we consume this century that will dictate the future of humankind.

With each dollar we spend on drink, food and entertainment **we cast a vote**.

If you are old enough to spend, you are old enough to vote!

She’s alive, she’s beautiful… http://www.youtube.com/watch?v=nGeXdv-uPaw