

# ***‘LOOKING AFTER COUNTRY’* THROUGH WILDLIFE UTILISATION**

**<sup>1</sup>Julian Gorman; <sup>2</sup>Chris Brady and <sup>3</sup>Yasmina Sultanbawa**

<sup>1</sup>Research Institute for Environment and Livelihoods, Charles Darwin University

<sup>2</sup>EcOz Environmental Services

<sup>3</sup>Queensland Alliance for Agriculture and Food Innovation, The University of Queensland



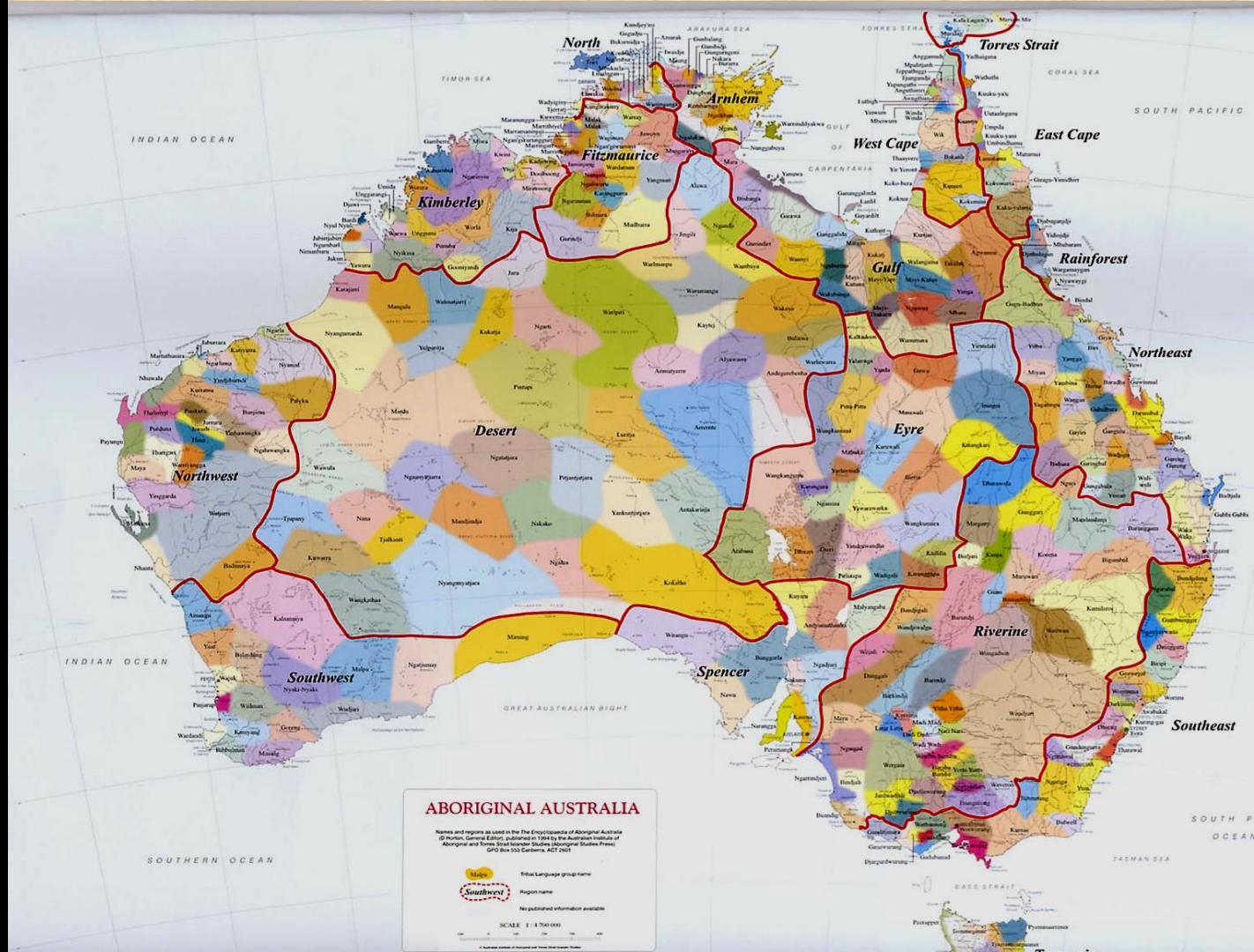
# ***'Looking after country'***

- term used by Aboriginal Traditional Owners to describe customary obligation in managing their country
- holistic and includes management of both cultural and natural resources
- use of wildlife considered an essential part of land management



# Where are we?

Complex cultural,  
social, ecological  
and political  
landscapes



# Context

## *What do remote Northern Territory landscapes have of value?*

- a vibrant, unique and largely intact culture with many dimensions of connectivity between people and country: totems, kinships, ceremony, language, art
- healthy country with a great diversity of plants and animals (many of them unique and endemic to this country)
- traditional landowners and land managers who are still involved in decision making and management of their country
- Indigenous Rangers trained to link between traditional ways and Western ways of manage country



# Value of NT landscapes

- unexploited and structurally intact landscapes
- rich in natural and cultural heritage values



# Major ecological threats and issues

- feral animals (buffalo, camel, pigs) and invasive plants (Mimosa, gamba etc)
- changing fire regimes (destructive wildfires)
- species loss of granivorous birds and small mammals at an alarming rate

Very low number of people on country – land management at very large scale.

Government programs which encourage people off country into townships (education, employment and health programs) further reducing people on country



## NT Landscapes

Limited conventional economic value (cattle, cropping etc.)

High natural and cultural values

Requires active management to remain intact (weeds/feral animals, wild fire)

Currently incentive-based management: carbon credits – fire abatement, customary harvest



# Looking after country

*Healthy  
people*

## **Wildlife based enterprise**

- Ecotourism/hunting
- bush tucker
- croc eggs
- reptiles for pets
- cycad harvest
- buffalo muster



## **Commonalities**

- people on the country
- livelihood opportunities
- natural and cultural management



*Healthy  
country*

## **Land management**

- weeds, fire, ferals, water management conservation
- Payment for Service (WALFA, AQIS, Customs)





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# Distribution of Indigenous population in NT

32% population, 50% of land, 75% live remote

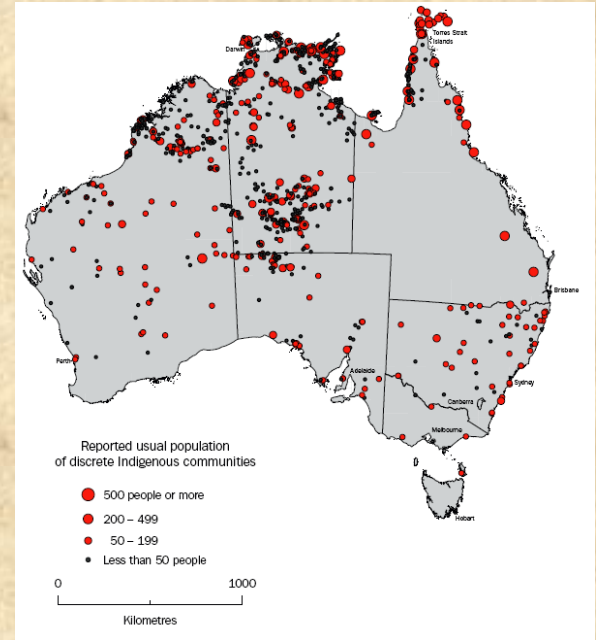
~200 communities in Northern Territory

- range in size from a few small family groups to over 3000 people

**Population density ~ is 0.1 people per km<sup>2</sup>**

**Remote Aboriginal communities generally have:**

- high levels of unemployment
- little infrastructure
- poor education and health
- few economic activities other than management and commercial use of wildlife



# Examples of some wildlife based enterprise (WBE):

- Wild harvest of crocodile eggs (for ranching – skins etc.)
- Harvest and value adding of plant products (soap, food, dyes for weaving)
- Domestication of native bees (honey, wax, pollen, pets)
- Harvest of bark and wood (painting, carving and music)
- Reptiles and spiders for the pet industry (snakes, long necked turtle, tarantula spiders)
- Land management services (carbon abatement, weeds, feral animals) as fee for service



# Why do Aboriginal communities like WBE?

- money and employment
- be on their country (bush tucker, cultural obligations)
- healthy as it involves exercise
- interaction old and young (intergenerational flow of knowledge)
- ability to work in family groups
- manage themselves (when, where, who)

## What are the main obstacles?

- tyranny of distance (markets, equipment, training)
- lack of business acumen (value chains, western markets, product development)
- lack of support
- scale (ability to supply markets consistently and right quantity)
- cultural differences (different world views, governance and obligations)

# Collection of bush tucker: Kakadu Plum

## Ecology Aspects:

Scientific name: *Terminalia ferdinandiana*

Common names: Kakadu plum, *Gubinge* (Kimberley), *Mi Mirrarl* (Wadeye).

## Family Combretaceae\*

- *T. ferdinandiana* is endemic to northern Australia, one of 29 species in Australia
- small to moderate sized, semi-deciduous tree to ~7m tall
- found in the western tropical savannas
- often on stony, poorly drained clay soils fringing flood plains

Reference: \* Dunlop *et al.* 1995



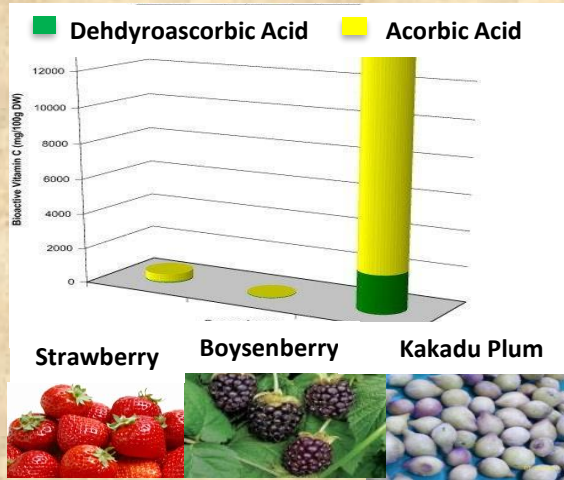
# TERMINALIA

- ~200 species worldwide, tannins, timber and dyes;
- edible nuts (*T. catappa*, *T. copelandii*, *T. cunninghamii*);
- edible, Vitamin-C rich fruit (*T. ferdinandiana*, *T. carpentariae*, and *T. petiolaris*) - and hybrids;
- edible gums (eg: *Terminalia canescens*)
- high commercial value and many *Terminalia* species have been well researched – especially in India

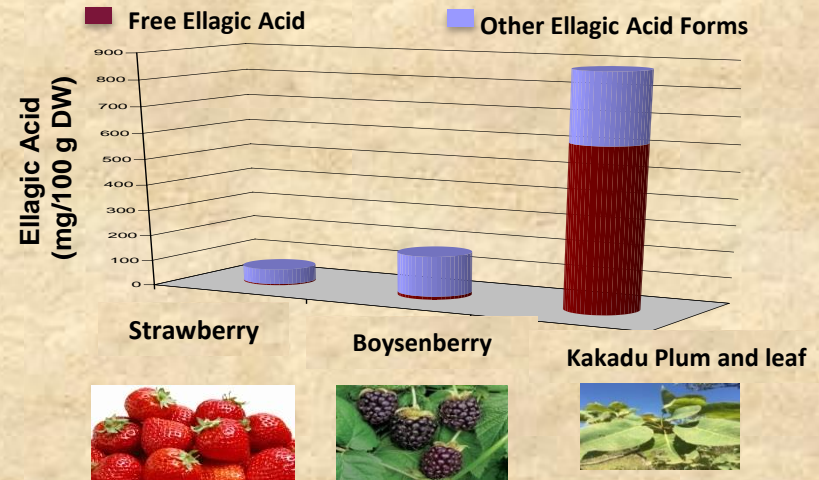


# Properties of Kakadu plum fruit and leaf - active compounds (phytochemicals)

## Total **Vitamin C** (Ascorbic Acid) content



## Total **Ellagic Acid** content

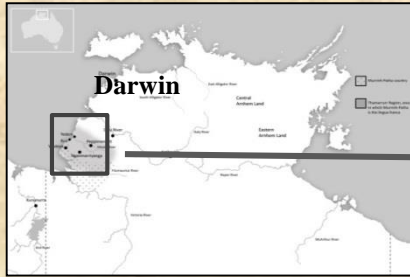


**Vitamin C (Ascorbic Acid)** = highest of any plant product in world

**Ellagic Acid:** high antioxidant capacity = anti-microbial properties = preservative qualities/anti-cancer properties

**Markets:** preservative (seafood industry), pharmaceutical, nutraceutical, cosmetic industry

# Example of wild harvest in Wadeye: The Thamarrurr Region



**Figure 1:** Map of NT showing Thamarrurr Region

**Figure 2:** Map of Thamarrurr Region showing Clan Estates\*

- main town in the Thamarrurr Region (TR) is Wadeye (formally Pt Keats mission)
- 21 clan estates in the region
- population 3000 , ~ 200 non-indigenous
- main language in Wadeye is Murrinh-Patha, one of 6 languages and 7 sub-dialects
- Thamarrurr Development Corporation (TDC) - main governing body
- Thamarrurr Rangers manage 20,000 km<sup>2</sup> land in this region



# History of commercial harvest of *Kakadu Plum* in the Thamarrurr Region

## 2007 – 2010:

- wild harvest through Indigenous Ranger group – Thamarrurr Rangers
- \$20 per kg sorted, packed, frozen and delivered to Darwin
- **never harvested much (400kg per annum)**

## 2011/12

- Thamarrurr Development Corporation established an enterprise centre
- payment up front to community members
- 2011 season >2000 kg harvested

## 2013 - 2015

- a Wadeye Indigenous woman's centre took over the business from TDC
- purchased freezers, employed staff, quality control, funding for equipment
- 3500 kg in 2014 season, 4000 kg in 2015 season, 5,500 kg in 2016
- in the 2016 season, Wadeye had 148 pickers registered (11 men and 137 women),
- **\$55,000 going back into community directly into pickers pockets!**

Set up to operate as a collection centre

## Collection Centres

- No direct contact with markets
- Supply to a processing hub that does the value adding

## Stages – pre harvest planning

### Culture

Consultation with Traditional Owners/NLC – compliance with *ALRA* (NT) 1976

### Sustainability

Application for ‘Take’ Permits, NTG – compliance with *TPWCA* 2006

Induction – rules about picking (harvest practice, authority)

### Logistics

Business – freezers, training of staff, payment process, agreements with processing hub

# Harvest – on ground logistics

- Wild harvest - some assistance getting out to country
  - advice from rangers about best practice
- Sorting, grading and payment (quality, country?)
- Some processing - pulping and freezing
- Packaging and transport



## Raw fruit

10kg

\$30 per kg

## Pulp

6kg

\$60 per kg

## Powder

1kg

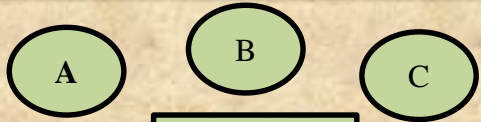
\$550 per kg

## Why is it successful?

- Community is empowered
  - Aboriginal owned business
  - cultural authority for picking
  - people work when they want
  - different areas can have input into names and branding
- People like the work conditions
  - payment is piece meal and immediate
  - can work as a family or group
  - get back on country (bush tucker, obligation)
- Scale of enterprise
  - no pressure from large markets to perform as part of a cooperative

# Cooperative Model - meeting demand from wild harvest

**COLLECTION CENTRES**  
NT and WA Indigenous Communities



Collect fruit and freeze

Indigenous collection hubs across Northern Australia

Sorting, grading and some processing

Whole fruits Puree

**MARKETS**

Australian Seafood Industry	Skin products and cosmetic	Neutriceutical Market
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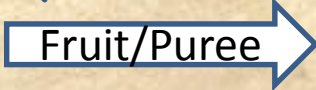
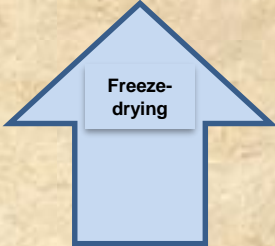


Marketing, product development

Powder

Puree

Whole fruits



**CENTRAL PROCESSING HUB**  
Traditional Homeland Enterprises (T.H.E.) Pty LTD

# Increasing commercial demand and limited supply

– how can meet demand without turning to large scale monoculture horticulture

Three ways to supply:

**Wild harvest:  
leaf and fruit**



**Enrichment planting**  
- Kimberley Training  
Institute



**Monoculture/Mixed**  
- Bidyadanga, WA  
- Wildman River, NT



# Research and development

- **Cultural and social**
  - community aspirations (size, directions, involvement)
- **Ecological**
  - sustainability (harvest practice, yields, impacts)
  - wild harvest vrs horticulture (cost benefits, best practice, varieties)
- **Economic**
  - harvest costs, value chains, linkages to markets
- **Governance and logistics**
  - scale and ownership
- **Commercial**
  - What other products does market want?

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## Acknowledgements:

- Kindred Spirits Enterprises
- Thamarrurr Rangers
- Palngun Wurnangat Association (Woman's Centre)



Thankyou and questions?