



**pricemerrett**  
CONSULTING PTY LTD

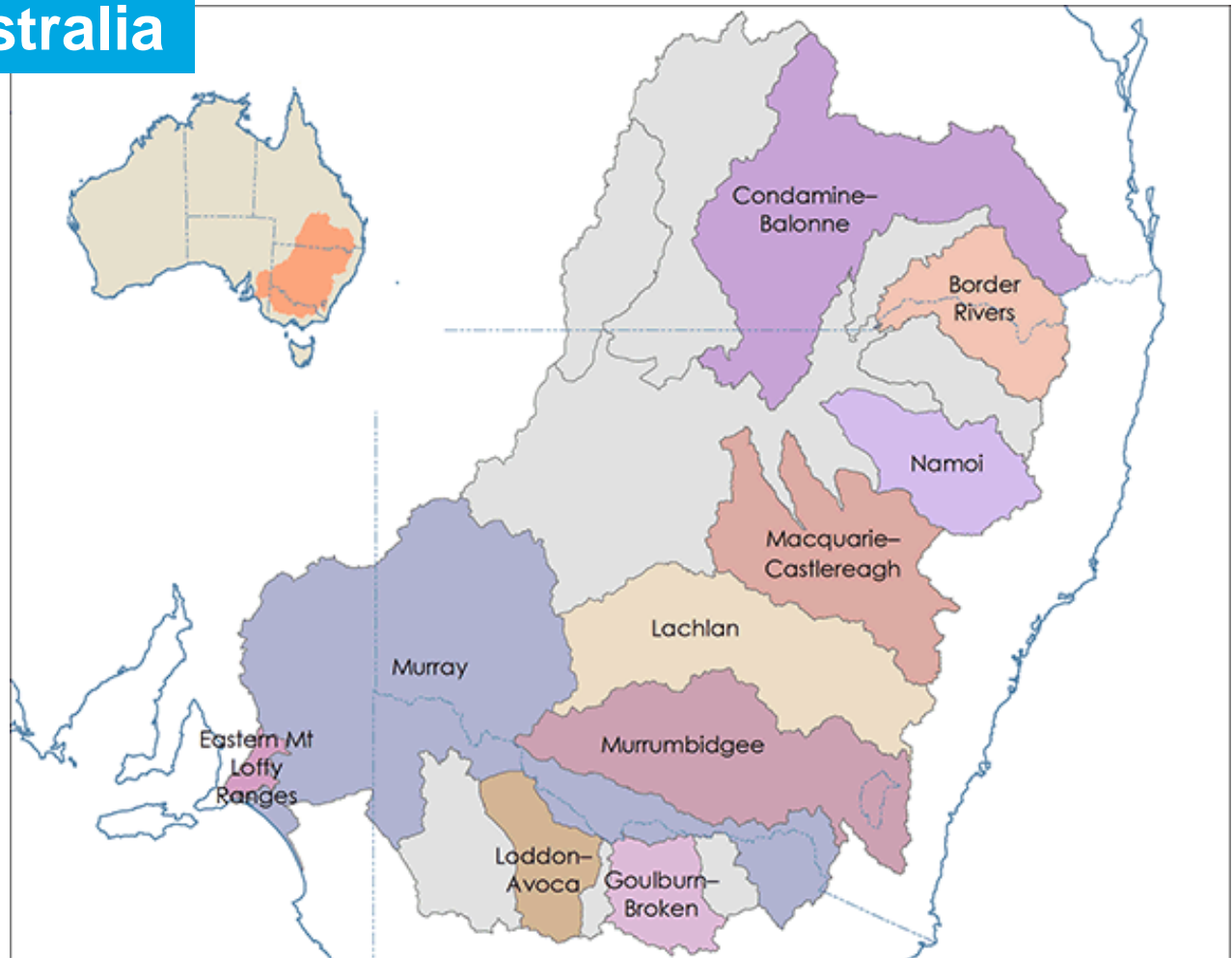
**Philip Price**  
**Victoria, Aust.**

**BAppSc**  
**Dip Irrig**  
**CID Ag Surf**



SURVEYING  
ENGINEERING  
IRRIGATION  
PROJECT  
MANAGEMENT

# Irrigation in Australia



# Rice Production in Australia



## Sunrice Statistics for 2016 Crop in Australia

Yield (tonnes per hectare)	12.41
Price (A\$)	\$415
Revenue (A\$)	\$5,150
Total Variable Costs (A\$)	\$1,740
Gross Margin (per hectare)	\$3,410
Water Use (ML)	12.25
Gross Margin (per ML)	\$278

# Irrigation Systems

- Old Style Contour Bank



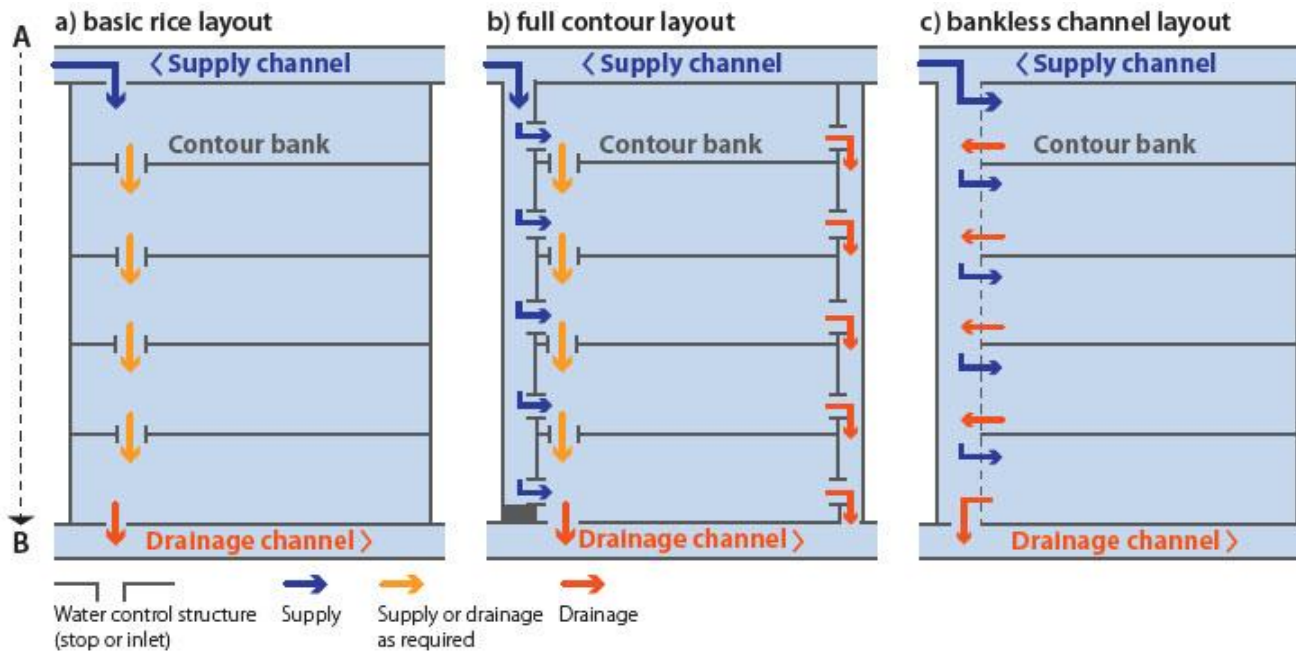
# Irrigation Systems

## Lasered Contour Layout

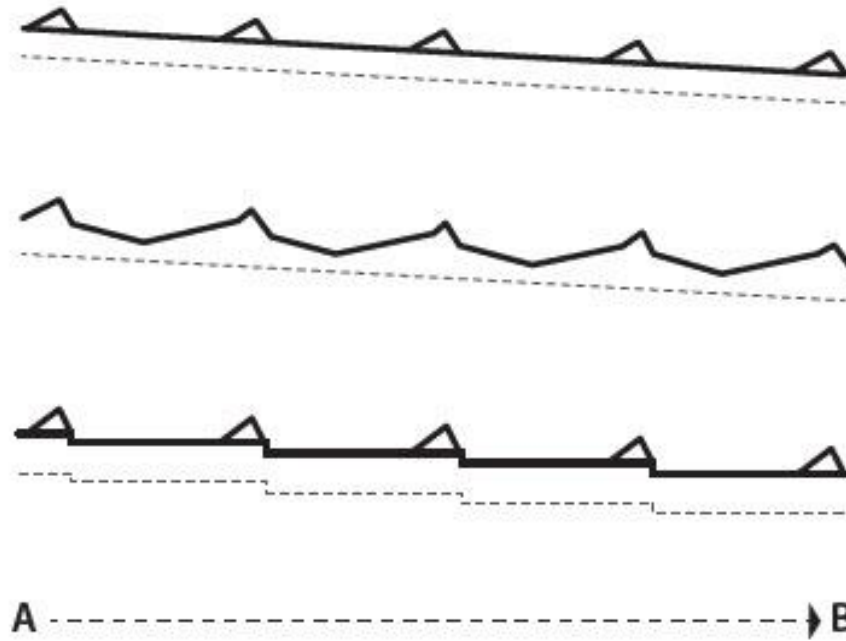




# Current Trends

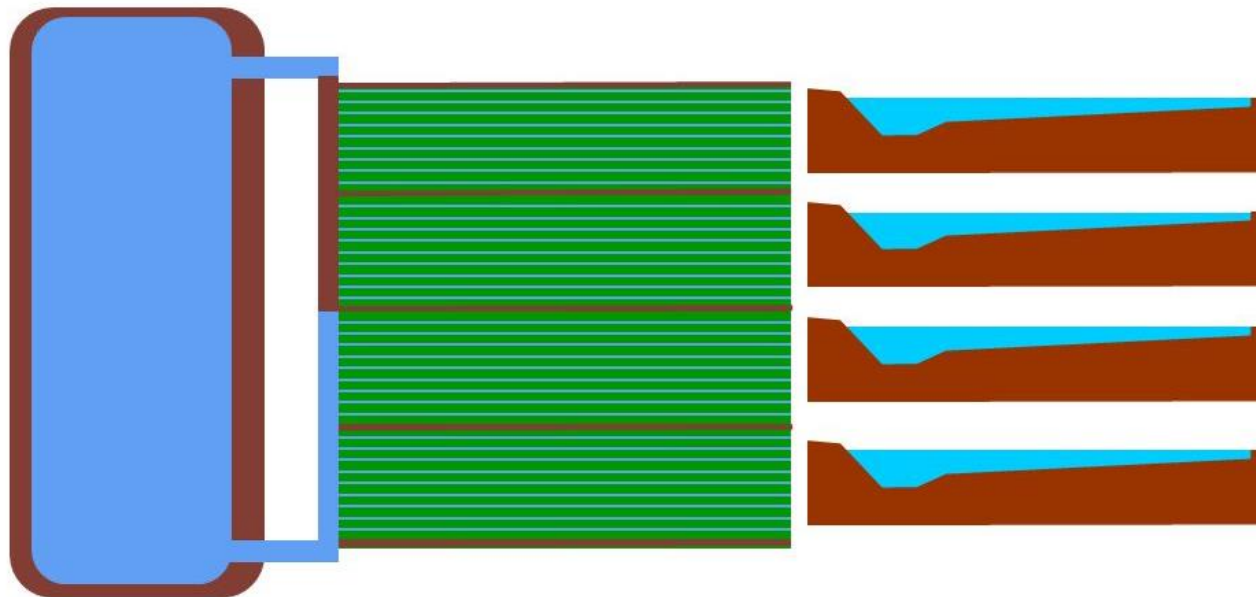


# Current Trends



# Irrigation Systems

## Bankless Channel Arrangements





# Irrigation Systems

## Bankless Channel Arrangements



# Irrigation Systems

## Bankless Channel Arrangements





# Irrigation Systems

## Bankless Channel Arrangements



## Issues for Cambodia

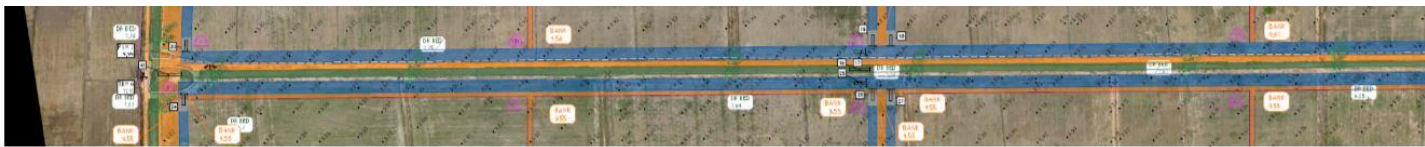
- **Small scale production**
- **Title to Land**
- **Pests**
- **Floods**
- **Drainage**
- **Irrigation or Lack of.**
- **Infrastructure**



# Kirivong Project



- Existing 237 rice paddies .
- Planned 22 x 12ha to 15ha rice bays using a bank less channel layout



# Kirivong Project

## Design Features:

- Central main elevated header channels
  - Pumped supply from flood waters and existing regional supply system
  - Existing levee borrow area creates an estimated 120 to 150 megalitres of storage.
  - Price Merrett is currently assessing suitability of soil types for 2 x 100 megalitre to 150 megalitre storages.
  - The pumping system consists of 2 x Chinese Axial flow pumps powered by Deutz diesel engines.
  - The 2 pumps will deliver a combined minimum flow rate of 30 megalitres per day.
- 
- Storages will provide an additional flow of 30 ML per day
  - A total flow rate of 60 ML per day over a period of a 3 to 5 day irrigation cycle.
  - Existing levee borrow area allows drainage water to re-enter the moat for re-lifting back into the elevated channel feeder system.





# Kirivong Project

- During the wet season flood water can also be harvested by gravity and held for later use.
- Modern irrigation structures will initially be imported from Australia.
- The aim in the long term is to use local manufactures to construct major irrigation structures.
- Construction of such projects has a very slim window of opportunity. Three to four months of dry season is most likely the maximum time available for construction.
- Hence good planning and equipment selection is of paramount importance.

