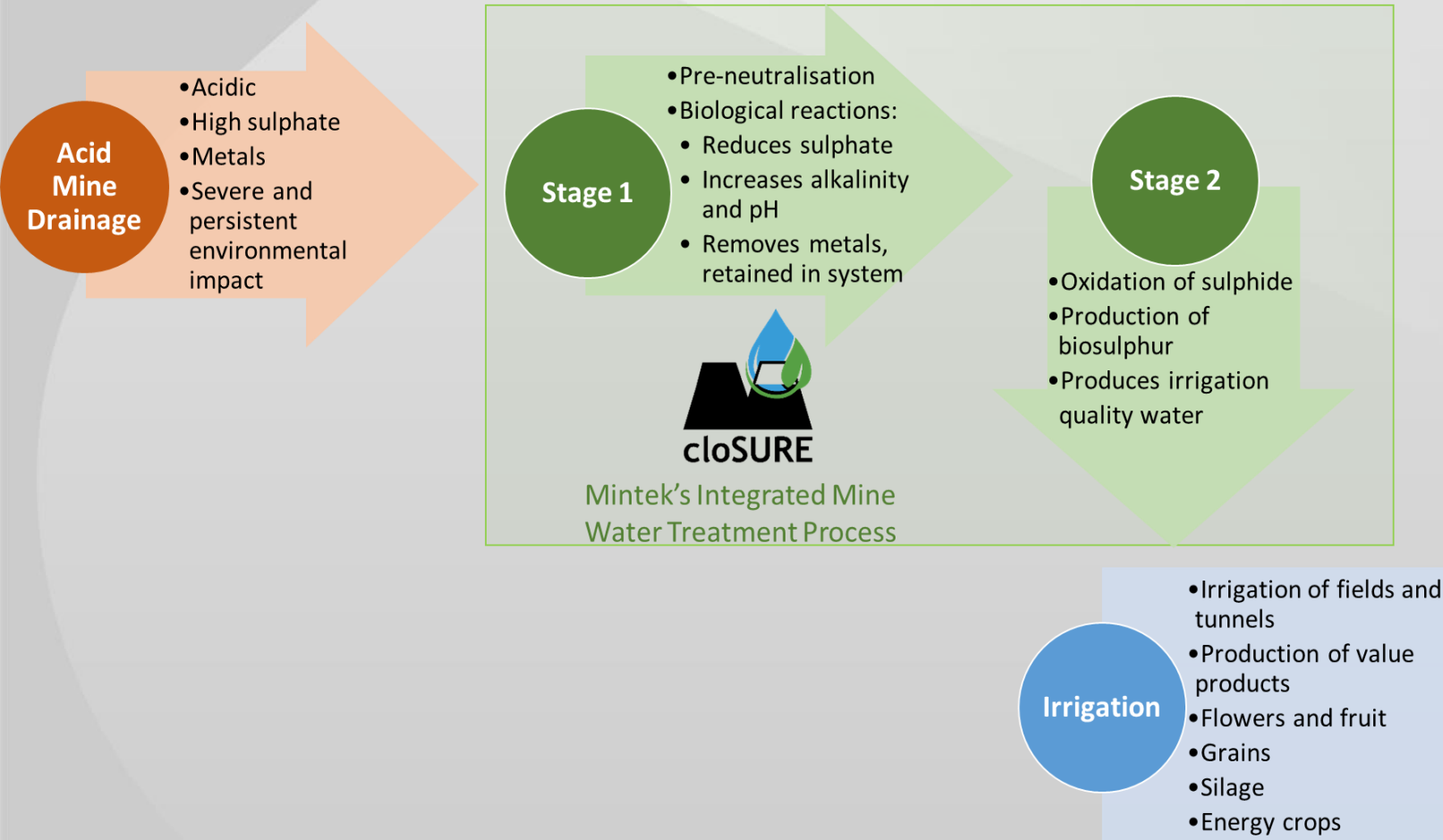




# E2020-5 - Treatment of Acid Mine Drainage for Reuse in Irrigation

# Mintek's cloSURE™ Process



## Technology Application



Mines post closure



Legacy mine sites



Sites with limited infrastructure



Sites with low flows (1-2 ML/d)

## Long term aim of cloSURE™



Reuse of treated mine water



Job creation and food security



Protection of communities



Preservation of natural resources



# Laboratory Work

1. Optimisation of oxidation stage:
  - i. residence time
  - ii. nutrient (N and P) addition
  - iii. biofilm harvesting
2. Biofilm composition
3. Design parameters for scale up
4. Design concept for biofilm harvesting

## Biofilm:

- 234g/m<sup>2</sup>
- 24% sulphur
- 74% struvite

Treated water in line with irrigation water quality targets





# Integrated pilot plant at EWRP

1. Integration and continuous operation of pilot plant
2. Market evaluation for biofilm product
3. Produce irrigation quality water

## Treated water:

- pH 7.5
- 75% sulphate removal
- Metals removal
- 500 L/d

