The background of the slide is a close-up photograph of several clear water droplets resting on a vibrant green leaf. The droplets are in various stages of focus, with some sharp and others blurred, creating a sense of depth. The leaf's veins are clearly visible, and the overall lighting is bright and natural.

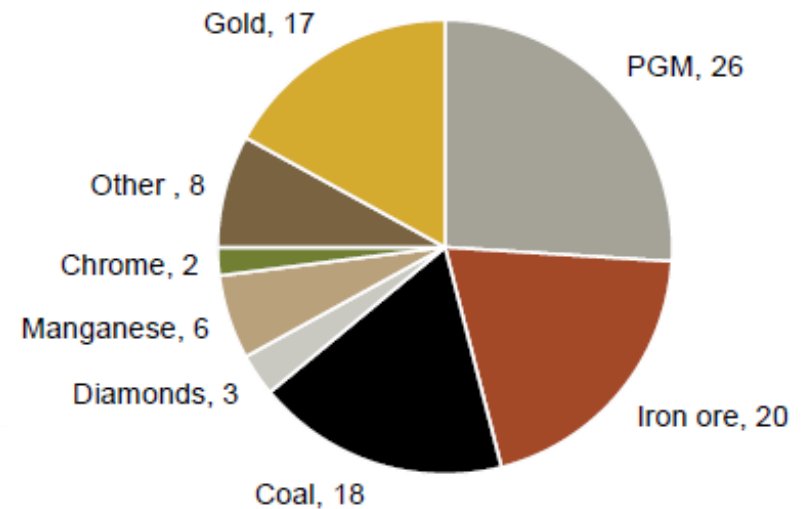
**Life After Mining – A Brighter Future**  
**Future Water Symposium**  
**28 July 2017**

# Mining Industry

In 2015, the South African mining industry contributed:

- 7.7% to GDP
- Around 15% to FDI
- 20% of private investment
- 1,4 million jobs
- 25% of exports

**Sector contributions to mining minerals exports in SA (2014)**



Source: Chamber of Mines estimates, StatsSA

# Background

- Activities of the mining sector have led to serious environmental consequences
- In areas of concentrated mining activities:
  - There are cumulative impacts such as pollution
  - Pollution concentrates in shared water courses
- Regional impact rather than a single operation  
e.g. Witwatersrand Goldfields
- Stricter mine closure legislation





# Success is down to all of us!

- **Mining industry** – to provide necessary resources for mine rehabilitation and sustainable water management
- **Government** - to create an enabling policy environment to enable creative closure
- **Technical experts** - to guide the industry with ongoing innovative solutions
- **Other industry sectors** – embrace the future opportunities that are presented e.g. agriculture and associated supply chain
- **Civil society** – Challenge the industry norms but also support the positive projects and initiatives
- **Community** – work with the mining industry and above stakeholders to communicate their needs and be part of the greater solution



# Collaborative Platform

- Establishment of public-private collaborative platform
  - Opportunity to address long-term mine water management and closure challenges
  - Environmental, social and economic challenges

## **Mine Water Coordinating Body (MWCB)**

- Initial focus on the Mpumalanga Coalfields
  - Coal mining industry together with the SWPN
  - 30-40 years remaining Life of Mine
  - Established in 2017
- DWS see this as a model for other mining regions in SA, of proven successful

# Partners



# Benefits

- Neutral Platform for engagement
- Address new closure legislation requirements
- Address challenges associated with closure
- Research and implement collaborative projects
- Joint funding of projects
- Identify operation partners
  - e.g. operation of water treatment plants post closure
- Potential to improve licensing and permitting processes
- Leave a positive legacy



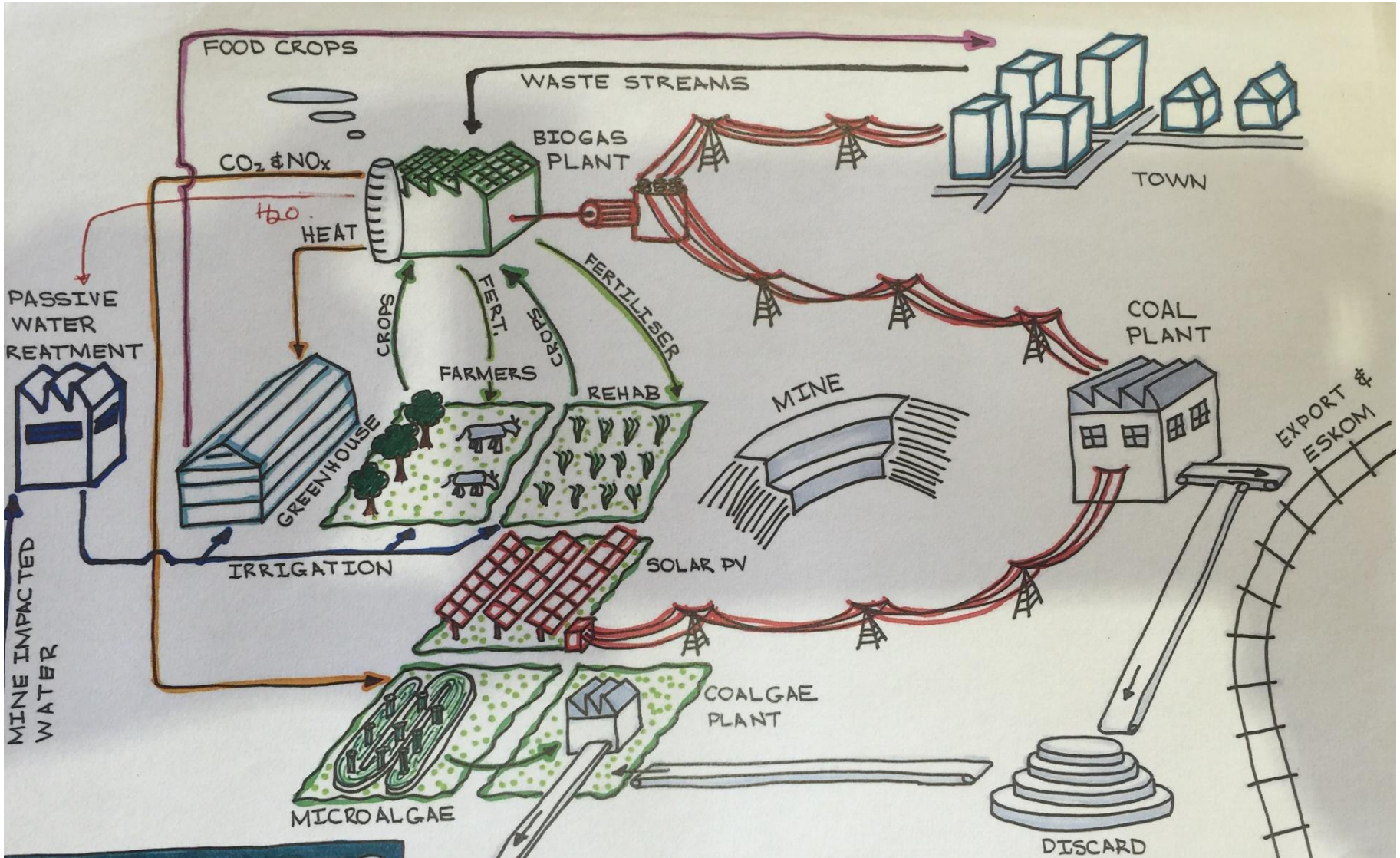


# Mine Water for Irrigation

- Use of saline mine water for irrigation
- Saline resistant crops e.g. wheat and soya
- Potential for biofuel crops
- Demonstration extending over 60 hectares
- Mixture of rehabilitated and virgin land under central pivots
- $\pm 1$  Ml/per day mine water required for irrigation
- Number of future benefits



# The Green Engine



# Arnot Regional Water Scheme

- Investigate regional water treatment
- Explore construction of regional WTP
- Identify potential off takers of treated water
- Currently conducting a gap analysis of existing data



## Other continuing work

- Investigate opportunities for introducing new industries
- Identify implementation partners
- Align with National, Provincial and Local Government planning
- Guide mining industry with mine rehabilitation and closure planning
- Areas where mining and agriculture compete for land use
- Develop the agricultural sector and supply chain
- Assist in project identification

# Conclusion

- A single mining company cannot achieve sustainable mine closure in isolation
- Collaboration within the mining industry and other partners
- Mine closure does not mark the end, but rather the beginning of new opportunities

