

Environmental Management & Sustainable Development in the Mining and Minerals Sector



What is Sustainable Development?





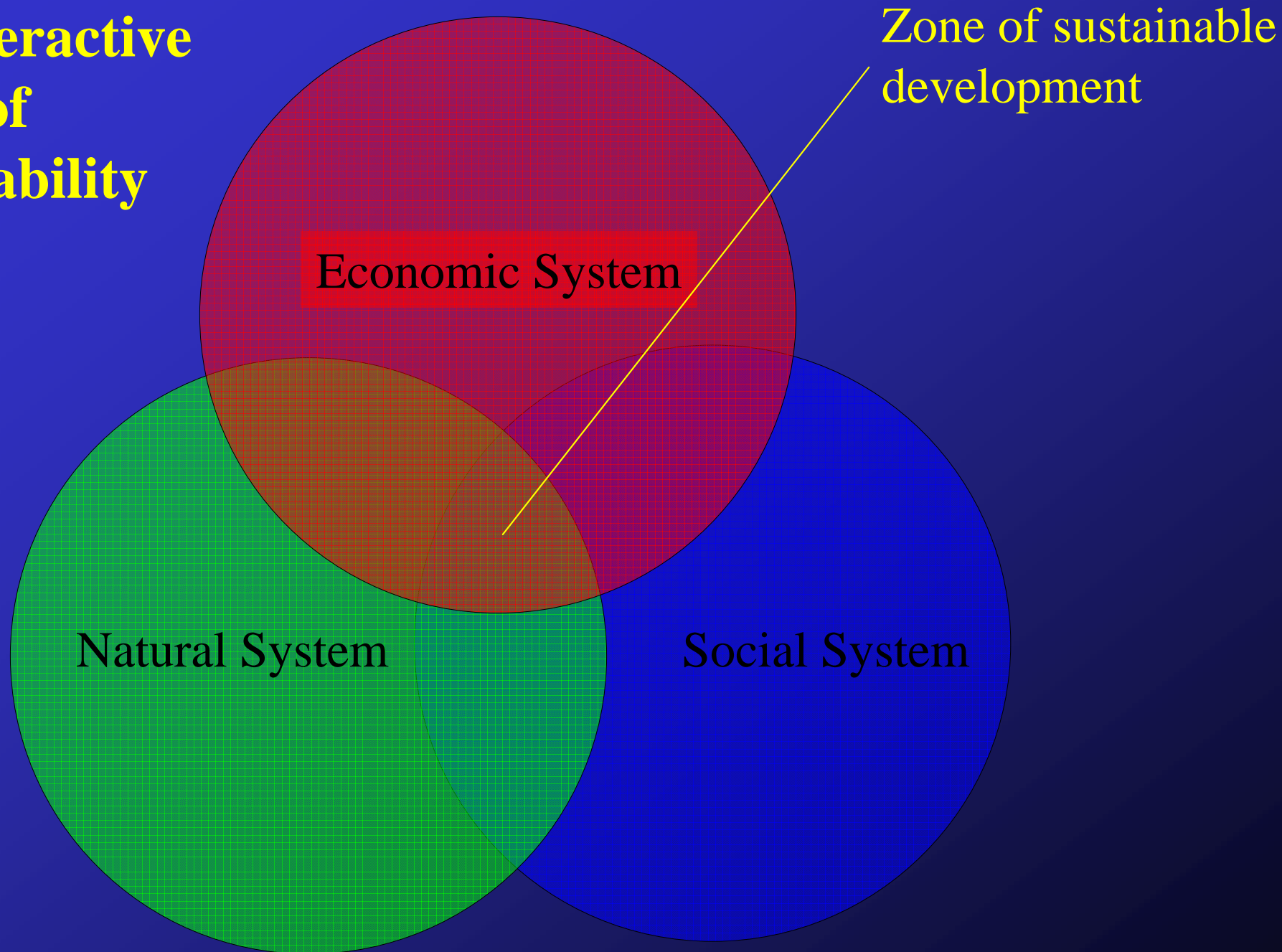
**What sustainable
development is not....**

Sustainable Development as a Spatial and Temporal Concept

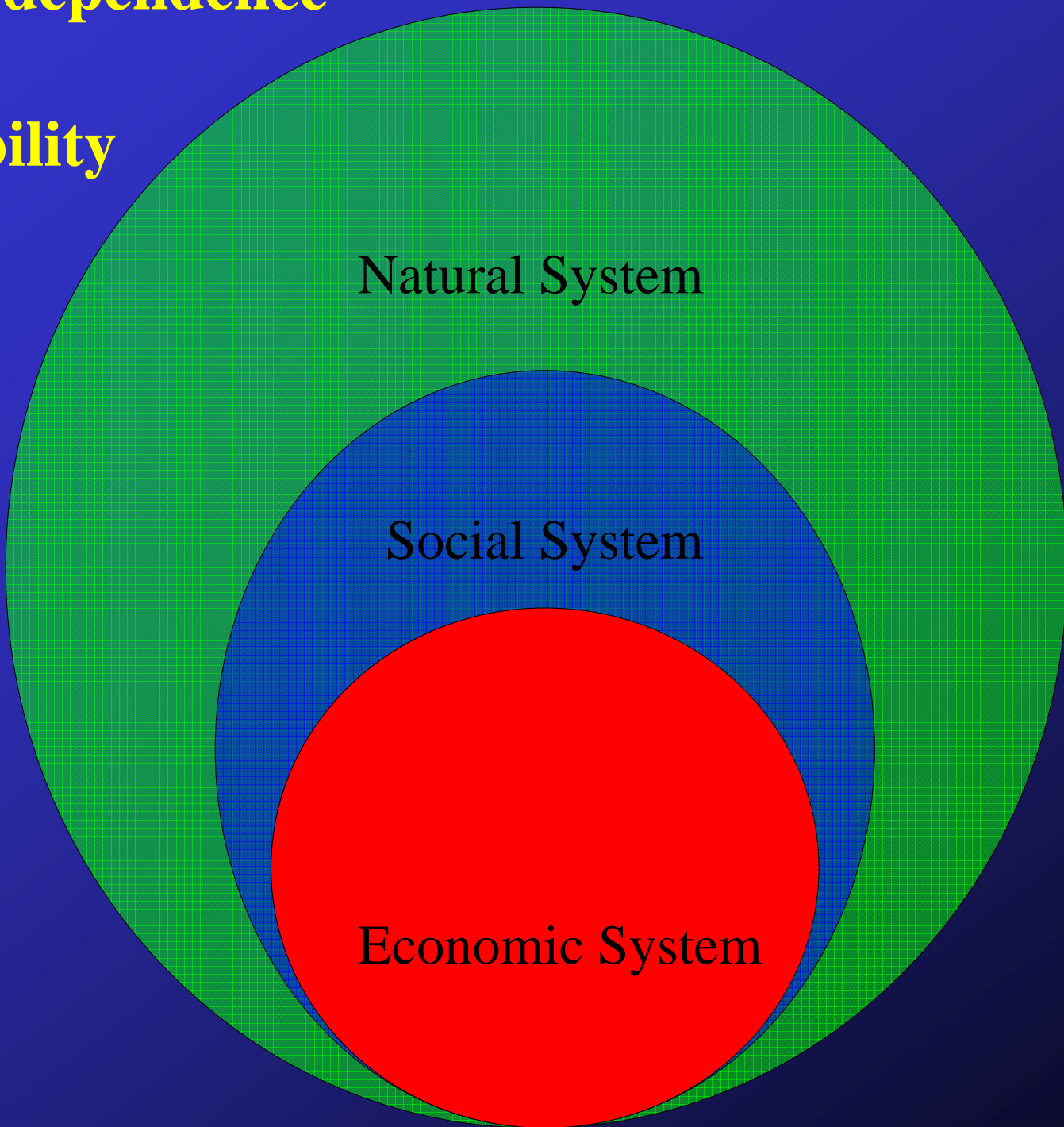
- SD is not a panacea.
- SD is a relativistic concept which has little meaning unless referenced to a particular place over a defined period.



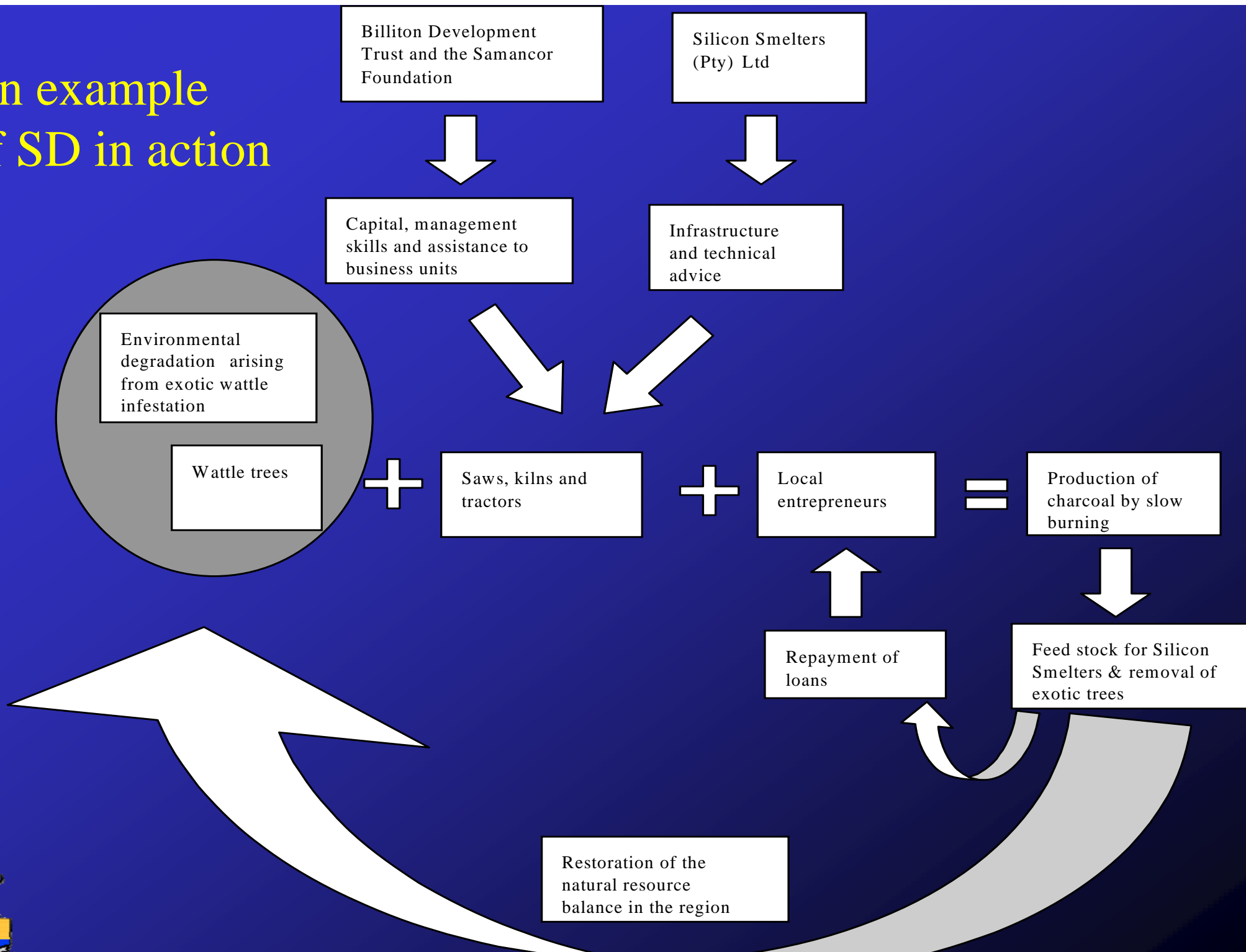
The interactive model of sustainability



The interdependence model of sustainability



An example of SD in action



How did we get here?

- Increasing environmental impacts resulted in powerful Green lobby groups in the 1970's. The increased awareness of environmental degradation lead to the integration of environmental management into mining projects.
- Gradually, social impacts were recognised and incorporated into EIA's and environmental management in general.
- Environmental management is simply a specific application of SD



Environmental Challenges Facing the Mining Industry

- Erosion & runoff
- Rehabilitation of old sites
- Transport & recycling of hazardous mine waste
- Minimisation of hazardous chemical residues from mining
- Wastes from ancillary operations (e.g. power generation)
- Chemical safety at operations
- Use of ozone depleting substances
- Global climate change and energy use
- Protection of natural habitats and sites



Social Challenges

- small scale mining
- poverty and jobs
- human resource development - training
- downstream industrial development
- women in mining
- alleviation of poverty
- empowerment of communities in decision making
- rent distribution
- mineral ownership

Source: MMSD Multistakeholder Meeting, 2000



Social Challenges

- retrenchment
- post mine closure
- globalisation
- job creation - labour intensive practices
- resettlement
- corporate responsibility



How has government responded?

- The South African Government has gradually refined the regulatory environment:
 - 1991 – the Minerals Act regulated mine environmental management for the first time. Social impact management is implicit in the legislation but not fully developed
 - Post 1994: the Constitution, the Minerals and Mining Policy
 - 2001: the Mineral Development Draft Bill



How has industry responded?

- Various forces have come to bear on industry:
 - Public perception
 - Legislation
 - Shareholders
 - Access to finance
- Industry self-regulation
 - Global co-operation: The GMI



GLOBAL MINING INITIATIVE

Generate a broadly-based and authoritative analysis of the key issues for the mining and minerals industry as it moves towards SD

ANGLO AMERICAN
BHP
BILLITON
CODELCO
NEWMONT
NORANDA
PHELPS DODGE
PLACER DOME
RIO TINTO
WMC

WBCSD

INTERNATIONAL INSTITUTE FOR ENVIRONMENTAL DEVELOPMENT

Global Assurance Group

Sponsorship Group

MMSD

Regional Initiatives

Australia

Europe

Latin America

Indonesia/Phillipines

Southern Africa

North America



MMSD

- How can the mining and minerals sector best contribute towards the global transition towards SD?
 - Benefits of wealth and employment are clear, but what of indirect benefits (capacity building in education, innovation and the contribution to building sustainable livelihoods)?
 - The industry needs to engage more effectively with others to address criticisms and to establish where further changes in the way it operates are necessary



Results of MMSD

- Analysis of the issues
- Explore new standards and benchmarks
- Seek to agree on processes for carrying on work on other issues beyond the scope of current project
- New working methods and relationships
- Improved trust and understanding between participants

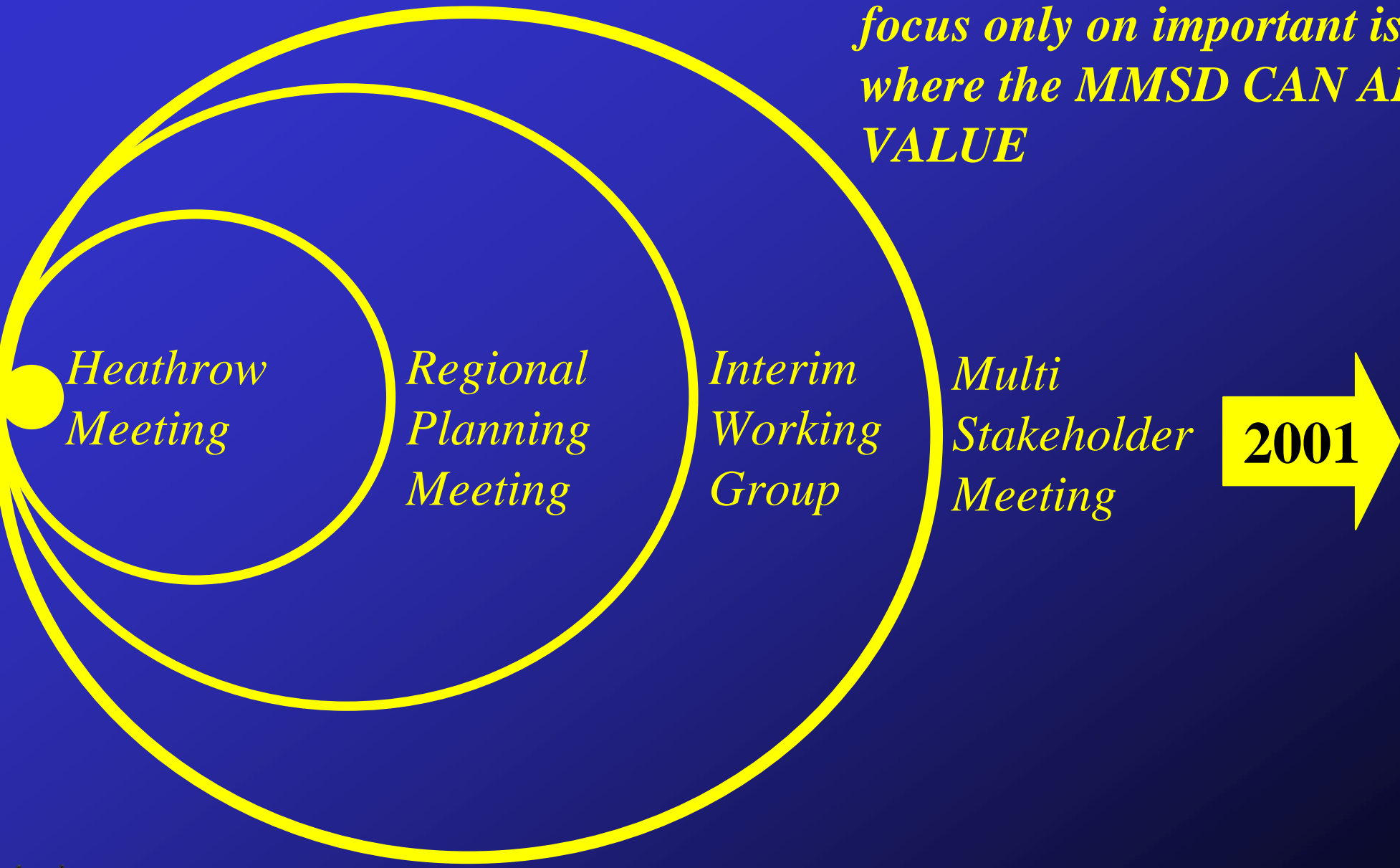


MMSD SOUTHERN AFRICA

- Outputs
 - Series of reports
 - Guidelines showing how to move towards sustainable development
 - Try to find consensus on key aspects
 - Right forum and content for taking issues forward
 - Network to build capacity to engage and to deal with the real issues – drive change. Platform built, network, ongoing work and engagement



The regional process must focus only on important issues where the MMSD CAN ADD VALUE



MMSD SOUTHERN AFRICA

- Objective: by December 2001, MMSDsa has in place a framework to enable the mining and minerals sector to meet the requirements of the global transition to sustainable development
- This will be achieved through:
 - Stakeholder engagement
 - Research



Small Scale
Mining

HIV/AIDS

Sustainable
Development
World
about
more
how

Rio +10

beyond

er
nop

Society

Economy



MMSD and SA Legislation

- The South African Constitution enshrines the right to a non-harmful environment. The constitution subscribes to the SD concept of inter-generational equity and explicitly states that individuals have the right to “...ecologically sustainable development...”



The Mineral Development Draft Bill

- “The development of mineral resources will take place within the framework of **SUSTAINABLE DEVELOPMENT** and environmental management will be regulated in accordance with national environmental policy, norms and standards.”



THE COST OF FAILURE IS HIGH

