Applying biodiversity planning principles to an urban landscape
Group work

• Scenario:
  – The city of cape town represents a landscape.
  – You are the planner for the city, and have just been informed that the city’s footprint needs to be reduced by half.
  – You need to design a landscape that remains representative of all sectors within the city, and also maintains the city as a functional landscape, despite this loss.

• Rules:
  – The city has been classified into a range of features (infrastructure, installations, land-use areas). In designing the reduced landscape:
    • You cannot alter the landuse of any area (e.g. convert urban to industrial). What is is now is what it must remain in the future
    • You need to maintain half of each type of feature in the future landscape.
    • You need to think about links to adjacent landscapes, but the city must remain representative and functional in itself (e.g. you can’t depend on the adjacent landscape for water provision).
Discussion

• How did you experience the exercise?
• Did anything about the exercise make you uncomfortable?
• How did you go about selecting your areas?
  – Numbers game, or eyeball 50% area?
  – What Principles did you apply?
  – Did you regard anything as irreplaceable?
  – What degree of sentimentalism/objectivity did you apply?
  – Is there any complementarity or efficiency in your plan?
Practical Demonstration
Applying biodiversity plans in assessing development applications
Group work – a hypothetical development proposal

- Short description of project
- Context
- Divide into groups
- Nominate a spokesperson for each group, who will present your findings.
- Answer a set of questions
- Present your findings
- Discussion
Proposed mining project: general information

- Open cast mining, risk of Acid Mine Drainage and dust.
- New access road and mine camp to be built.
- Mine to take water from river.
- Mined areas to be backfilled and ‘restored to natural vegetation’.
Proposed agri-village: general information

- Holiday Accommodation
- Smallholdings ("Speelplase")
- Genuine agricultural production
- Agri-industrial and Rural business nodes
Proposed ecotourism estate: general information

- 200 units
- Conference centre and Spa
- Golf course
- All inside a 200 ha nature reserve
An Endangered and Range Restricted Frog, the **Buffoon**, is found in wetlands and rivers.
Terrestrial Ecosystems
Strategic Biodiversity importance
Biodiversity – ‘footprint’ impacts

• Development in total will impact approx 200ha agricultural fields, 300ha of natural vegetation, and 20 ha riverine habitat.

• 295 ha of terrestrial Critical Biodiversity Area (CBA), 5 ha Other Natural Area and 20ha of freshwater CBA + Ecological Support Area lost.

  ✓ 250ha **Endangered** Koue Bokkeveld Alluvium Fynbos

  ✓ 25ha **Vulnerable** Cederberg Sandstone Fynbos

  ✓ 20ha **Vulnerable** Koue Bokkeveld Shale Fynbos

  ✓ Two River FEPAs (1 = EN+CBA; 1 = LT+CBA; 20ha in total)

• 75% of global population of **the Buffoon** is found here.
Biodiversity – context of impacts

- 5% of **KBV Alluvium Fynbos** lost p.a. to illegal cultivation.

- **Acacia** is invading **Cederberg Sandstone Fynbos** - losing 1% per year.

- There are important **ecological corridors** across the area.

- There are a number of **degraded wetlands** downstream.
Socioeconomic information

- Local communities have high poverty levels, rely on subsistence farming
- Existing Protected Area has no funds or capacity for its management
- Illegal conversion of natural areas for cropping

Use values of biodiversity

- *KBV alluvium Fynbos* vegetation is used for grazing by cattle, as well as flower and medical plant extraction by local communities.

- Downstream communities rely on river for clean drinking water

Cultural values of biodiversity

- *Buffoon* frog a cultural totem
Each group to present and discuss findings