

# ESK FISHERIES RIVERS TRUST\*/BOARD PLANNING and PROJECT DESIGN

\*SCOTTISH CHARITY No. SC037764



natura  
2000

# ORGANISATIONAL TRAITS

Three things occur naturally in organisations:

- Confusion !
- Friction !
- Mal-performance !

# ESSENTIAL ELEMENTS IN PROJECT PLANNING

VISION - VALUES - STRATEGY - RESOURCES - CAPABILITY - MOTIVATION - FEEDBACK  
= PROGRESS

AN ABSENCE OF ANY ONE FACTOR LEADS TO:

VISION

CONFUSION

VALUES

CORRUPTION

STRATEGY

DIFFUSION

RESOURCES

FRUSTRATION

CAPABILITY

FATIGUE

MOTIVATION

DISINTEREST

FEEDBACK

DOUBT

**PLAN - DO - CHECK - ACT !**

# VISION

REHABILITATION OF THE HABITAT IN THE UPPER SOUTH ESK FOR THE BENEFIT OF ATLANTIC SALMON AND FRESHWATER PEARL MUSSEL

## TWO MAJOR DEGRADED HABITAT FEATURES

MAIN STEM  
EROSION



CANALISATION OF THE  
ROTTAL TRIBUTARY



# VISION



TO



TO



TO



# VALUES - PROVIDE PRINCIPLES AND STANDARDS WHICH GUIDE STRATEGY

## 1. PRINCIPAL LEGISLATIVE REQUIREMENTS

- A SPECIAL AREA OF CONSERVATION FOR SALMON (EXCLUDING TROUT) AND FRESHWATER PEARL MUSSELS
- WATER FRAMEWORK DIRECTIVE – CONTROLLED ACTIVITIES REGULATIONS
- HEALTH AND SAFETY LEGISLATION
- ACCESS LEGISLATION -THE LOCAL ACCESS FORUM
- AGRICULTURAL LEGISLATION - INCLUDING ANIMAL WELFARE
- ADMINISTRATIVE SYSTEMS - INTEGRITY, TRANSPARENCY AND ACCOUNTABILITY

# VALUES - PROVIDE PRINCIPLES AND STANDARDS WHICH GUIDE STRATEGY

## 2. STRATEGIC ISSUES

- PROFESSIONAL ASSESSMENT OF ENVIRONMENTAL ISSUES
  - *FLUVIAL AUDITS A USEFUL PROCEDURE*
  - RECOGNITION THAT SPATIAL AND TEMPORAL (SHORT- AND LONG- TERM) VARIATIONS IN LANDSCAPE PROCESSES CREATE A DYNAMIC MOSAIC OF RIVERINE HABITAT
    - *REMOVE HARMFUL CONSTRAINTS*
    - *HARD ENGINEERING A LAST RESORT*
    - *THE DOCTRINE OF UNFORESEEN CONSEQUENCES*
  - IMPORTANCE OF SOCIO-ECONOMIC FACTORS
    - *COMPROMISE - A FACT OF LIFE*

# STRATEGIC - ASSESSMENT

## 1. CANALISATION OF THE ROTTAL BURN

FLUVIAL AUDIT STRESSED MAJOR DIFFICULTIES AND HIGHLIGHTED:

- A HIGH LEVEL OF GEOMORPHOLOGICAL ACTIVITY
- HIGH SEDIMENT LOADINGS ARISING FROM THE STEEP TRIBUTARIES AND HISTORICAL DRAINAGE
- SIMPLE REMEDIAL MEASURES UNSUSTAINABLE

IDEAL SOLUTION:

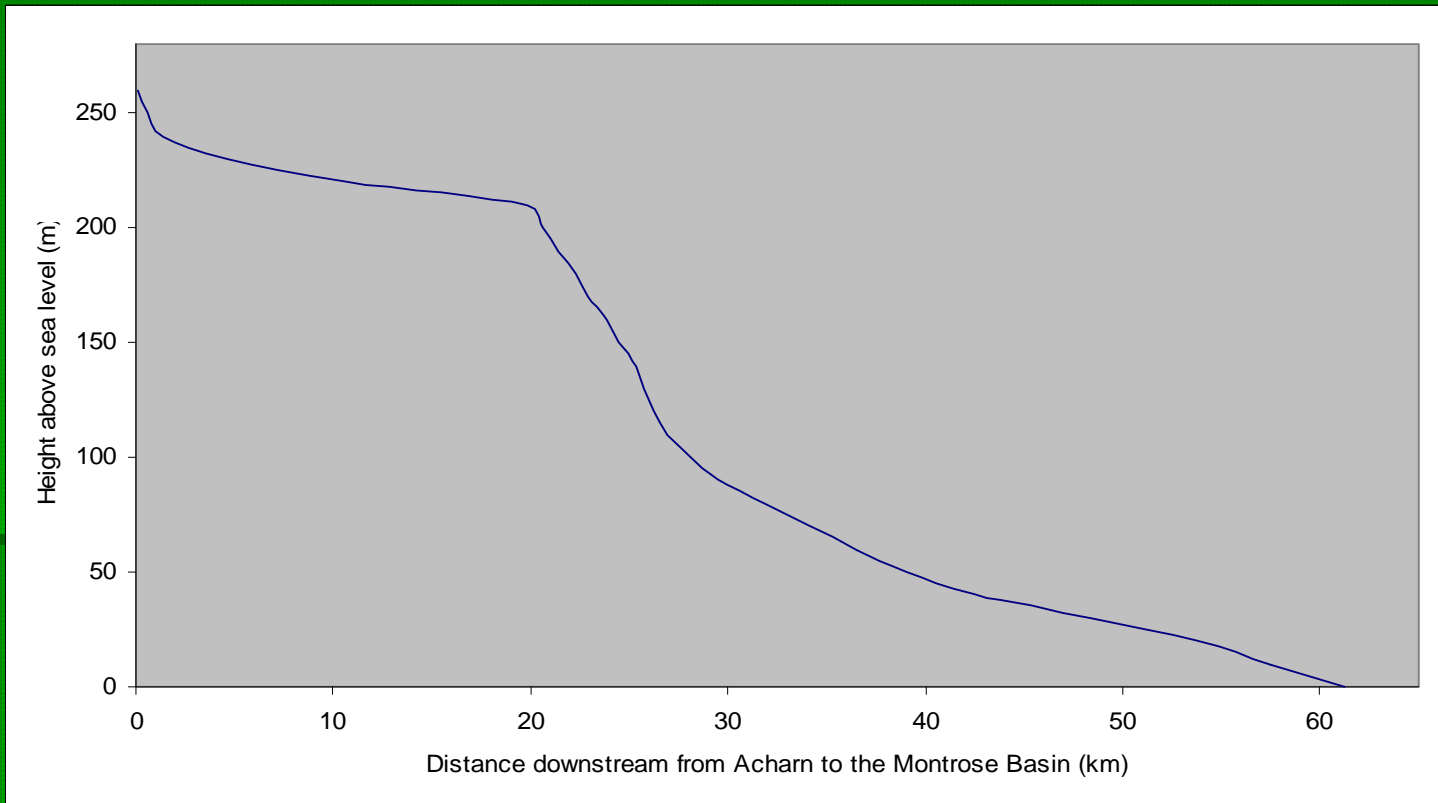
- ALLOW IT TO DEVELOP ITS OWN COURSE
- CURRENTLY IMPOSSIBLE WITH CURRENT LAND USE

PROJECT DEFERRED

# STRATEGIC ASSESSMENT

## 2. MAIN STEM EROSION

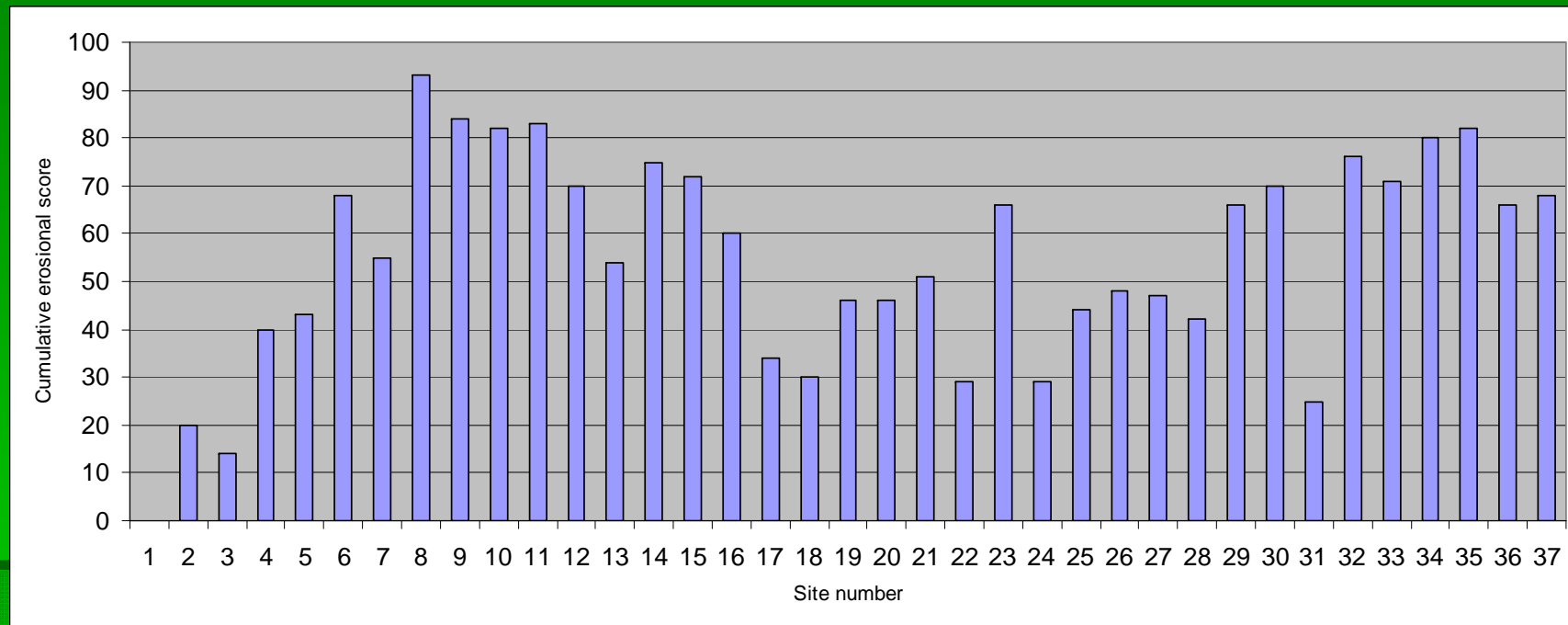
### GRADIENT PROFILE OF THE SOUTH ESK



# STRATEGIC - ASSESSMENT

## 2. MAIN STEM EROSION – GLEN DOLL/GLEN CLOVA

### FLUVIAL AUDIT HIGHLIGHTS MAJOR EROSIONAL FEATURES



- EACH SITE REPRESENTS A DISTANCE OF 500M
- SCORES OF EROSION > 20 ARE CAUSE FOR CONCERN!
- SCORES REPRESENT AN AVERAGE OF DEPOSITIONAL/ERSOIONAL FEATURES

# CONCLUSIONS FROM FLUVIAL AUDIT

## **The problem:**

- Uncontrolled grazing of the river banks
- General lack of established vegetation

## **Constraints:**

- Established farming practice
- Area subject to regular flooding
- River dynamics

- Sediment overload

# STRATEGY – CREATE BUFFER ZONE BY FENCING

## STRATEGY FOR FENCING - IDENTIFY LANDOWNERS AND TENANT FARMERS

- GAIN SUPPORT FOR PROJECT
  - DISCUSS CONCLUSIONS OF FLUVIAL AUDIT WITH ALL STAKEHOLDERS
  - UNDERSTAND LAND USE AND GRAZING PRACTICES
  - AGREE PERMISSIBLE FENCE LINE AND DESIGN
    - COMPROMISE BETWEEN THE IDEAL DISTANCE (10m) AND AGREED 6m AVERAGE (MINIMUM 4m)
    - AGREE ELECTRIC FENCE ONLY OPTION – RYLOCK INCAPABLE OF WITHSTANDING FLOODS
      - 4 WIRE FOR SHEEP
      - 1 WIRE FOR CATTLE
      - 10-YEAR MAINTENANCE PERIOD
      - STRICTLY LIMITED GRAZING IN RIPARIAN ZONE
      - WATERING POINTS FOR EACH FIELD – DESIGN ISSUES
      - FINALISE FENCE SPECIFICATION TO MINIMISE DAMAGE DURING FLOOD EVENTS
    - AGREE TIMING OF ACCESS FOR CONTRACTORS
- ENSURE COMPLIANCE WITH:
  - HEALTH AND SAFETY LEGISLATION
  - ACCESS LEGISLATION
- DISCUSS APPOINTMENT OF CONTRACTORS
- COMPLETE A MANAGEMENT AGREEMENT FOR EACH TENANT FARMER AND LAND OWNER – COVERS MAINTENANCE AND OPERATIONAL ISSUES

# FEEDBACK – THE AFTER-LIFE

FEEDBACK THROUGH ASSESSMENT IS THE KEY TO PROGRESS

## MAIN STEM EROSION

- MEASURE THE EFFECTIVENESS OF FENCING – FLUVIAL AUDIT
  - ANTICIPATE SOME EROSIONAL FEATURES WILL REMAIN
  - CONSIDER FURTHER ACTION IF APPROPRIATE
  - LIMITED BIOENGINEERING
  - PLANTING NATIVE SPECIES
  - IMPROVEMENTS IN STOCK WATERING ACCESS



## ROTTAL BURN – CANALISATION

- DISCUSS WITH STAKEHOLDERS OPTIONS TO CREATE HABITAT DIVERSITY THROUGH :
  - REMOVAL OF RESTRICTIVE BANK SIDE DEBRIS
  - CONSIDER GENERATING MEANDERS



# LEARN FROM POST-PROJECT AUDITS

CHANGES TO AN ECOSYSTEM CAN RESULT IN:

- VARIETY OF UNEXPECTED RESULTS
- UNFORESEEN CONSEQUENCES

FOR THESE REASONS MINIMISE INITIAL CHANGES AND  
MONITOR

PROMOTE THE PROJECT TO STAKEHOLDERS AND THE PUBLIC

- UNDERSTANDING SUCCESSES AND FAILURES ARE IMPORTANT

*REMEMBER:*

*PLAN – DO – CHECK – ACT - MONITOR*

FINALLY-

A BIG THANK YOU TO ALL WHO MADE THIS PROJECT POSSIBLE