Transactional Environmental Support System

Bournemouth University

Work-package 3
Environmental information use at the local level – demand and supply

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WP3 aims – 1 & 2
Characterising demand for environmental information

Aimed to determine the level of demand & how that demand varied between different regions and different groups of stakeholders?

1. What are the information needs?
   Issues defined by interviewees –
   Needs for specific data types (e.g. habitat maps)
2. What determines the information needs?
   For instance, is the information required to comply with policy or regulations?

Data to address the aims collected in rural case studies in the partner countries

We focussed on information needs relating to environmental decisions made at the local level

Environmental hazards
Ecosystem services
Biodiversity conservation

Aim 1 - What are the information needs?

One of the WP3 approaches was to ask interviewees to identify the key environmental issues in their local areas

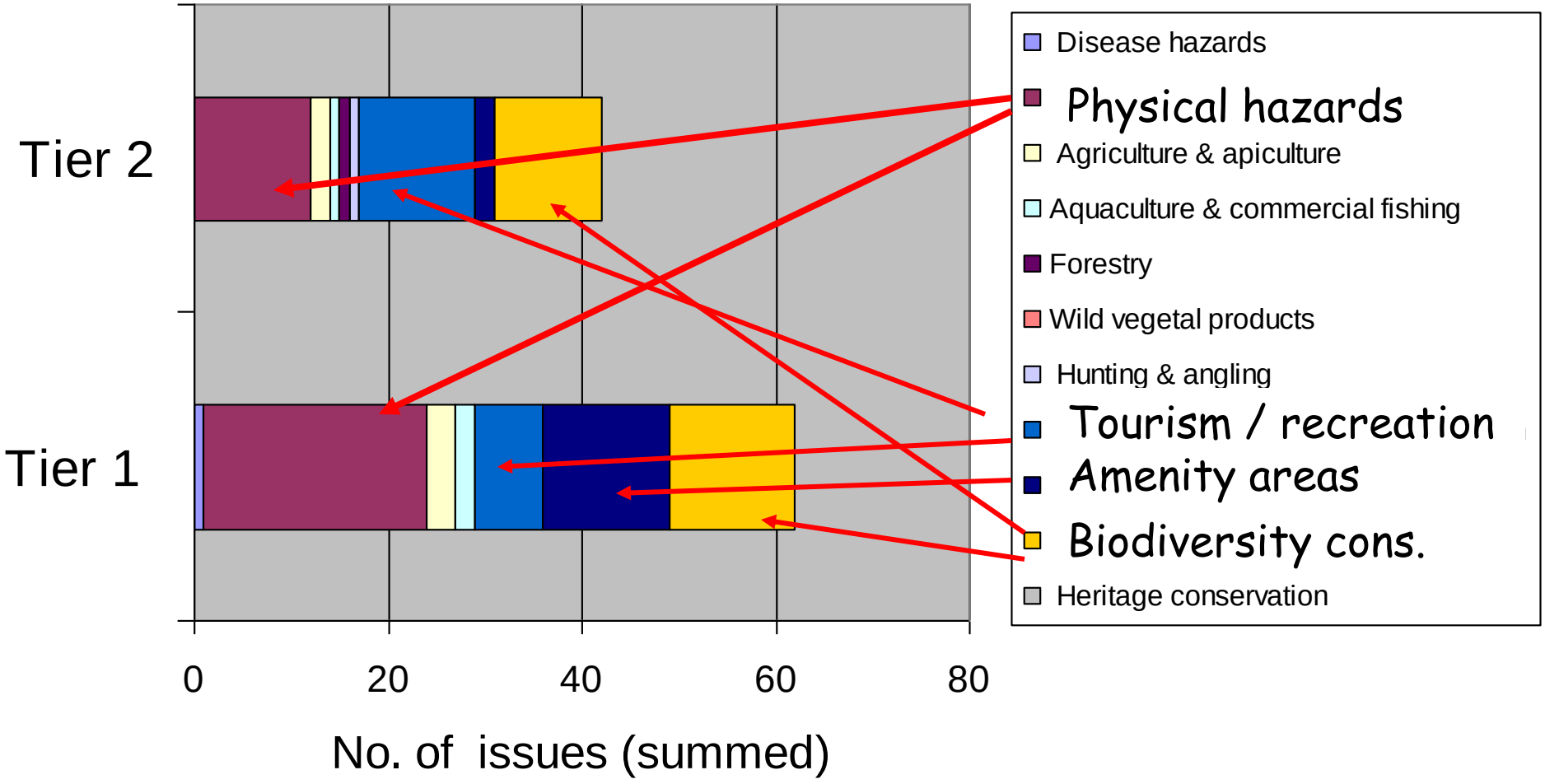
Interviewees typically identified c. 10 issues.

For analyses, categorising these is essential –
- it is also challenging….

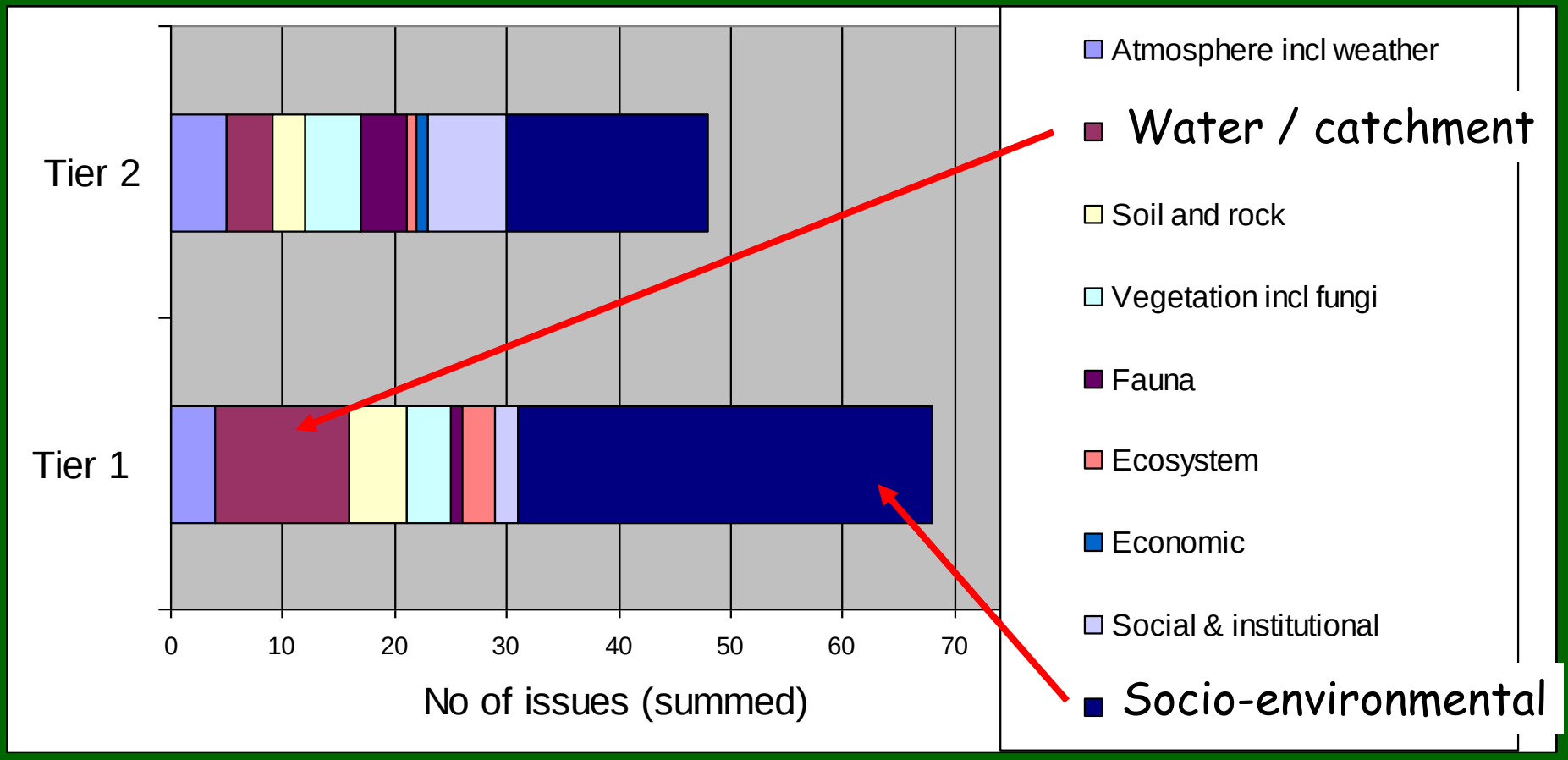
Selected 2 approaches to categorising issues:

1. Issue focussed - Biodiversity conservation, Ecosystem Services (MA system) & management of environmental hazards
2. Model focussed – based on environmental models – for compatibility with other TESS WP (modelling)

Issues categorised by – Biodiversity, Ecosystem services & management of environmental hazards



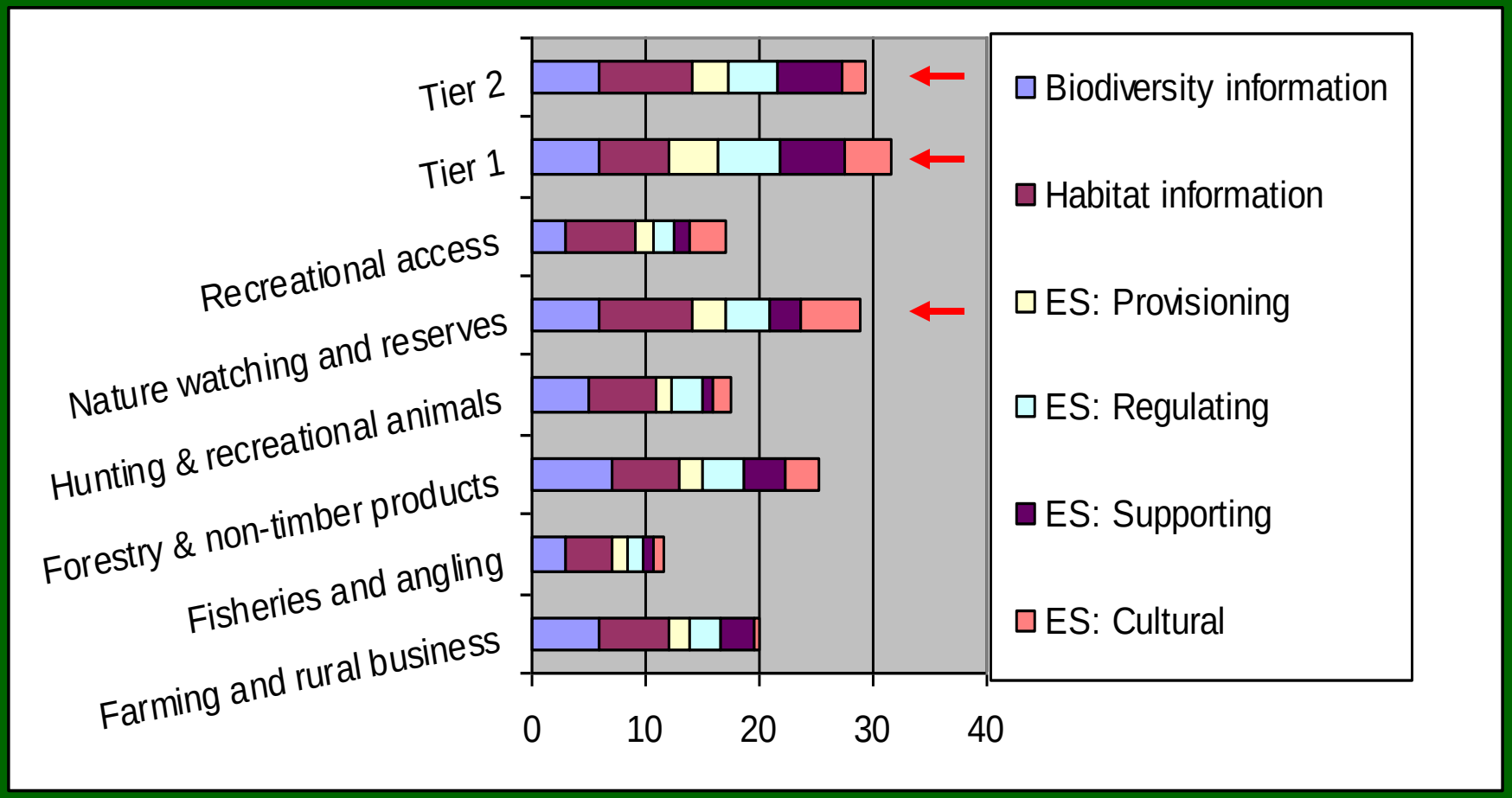
Issues identified - Categorised by types of environmental models - for compatibility with TESS WP4



What type of information is needed - all stakeholders

	More frequently required	**Less** frequently required
Biodiversity information	Species data Invasive species Habitat maps	Locally designated species Wild pest species
Ecosystem Services: Provision	Econ. exploited wild mammals/birds /fish Cultivated forest products (timber, fuels) Livestock & Aquaculture Air quality Water availability & quality	Econ. exploited wild plants / fungi Cultivated food crops
Ecosystem Services: Regulating & Supporting	Flood risk / protection Fire risk / protection Risk of disease from wildlife	Soil fertility, quality & retention Pollination Pest control (e.g. predators of crop pests) Carbon storage potential
Eco Services: Cultural	Amenity areas (parks, paths, verges) Capacity for tourism & recreation	Access Impacts of tourism & recreation

What type of information is needed by the different categories of stakeholder?



- All categories needed by all
- Local government & nature reserves indicated the greatest need

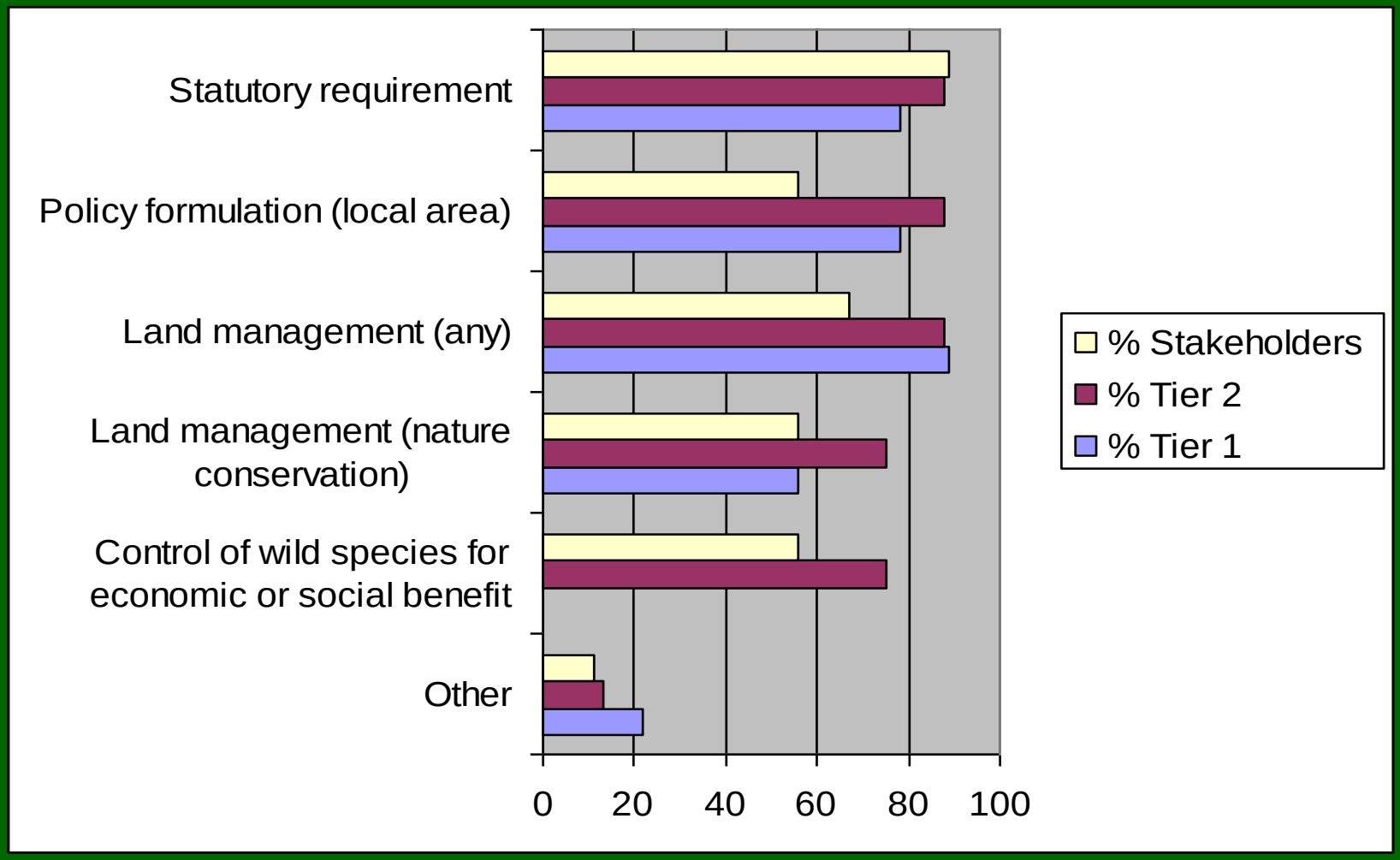
Aim 2 - What determines the information needs?

The survey was designed to determine the 'drivers' behind the need for environmental information:
e.g.

- to comply with policy requirements
- for land management
- for nature conservation
- for control of wild species / habitats e.g. agricultural pests

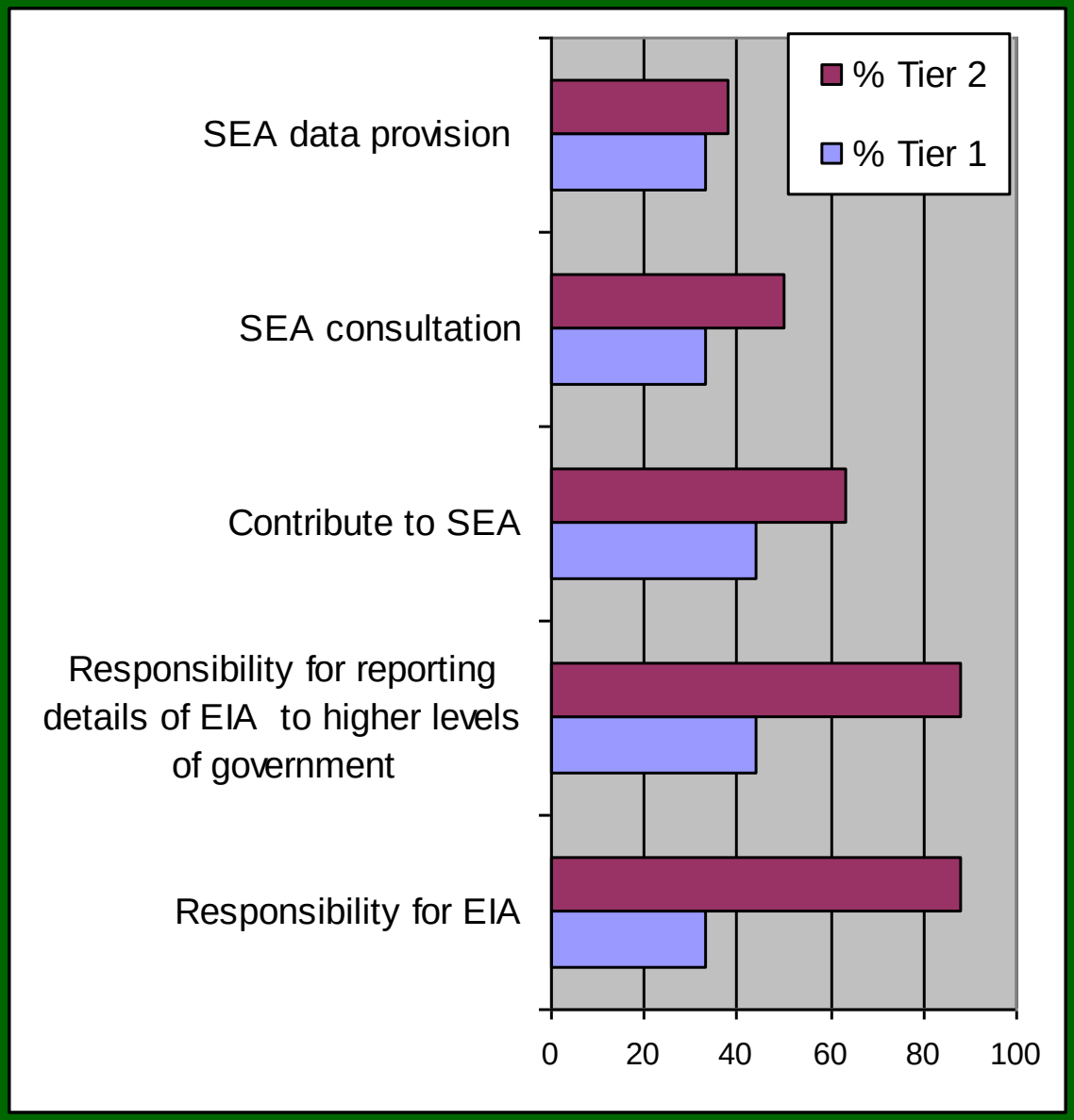
Also – aimed to determine the degree to which information was accessed to inform EIA and SEA

What determines the information needs?



All drivers were important – particularly statutory requirement

Do requirements for informing EIA/ SEA drive information needs?



Number EIA / year

Tier 1 –
6 countries = 0
Others = 1 or 2

Tier 2 -
Range = 1-30 (EU states)

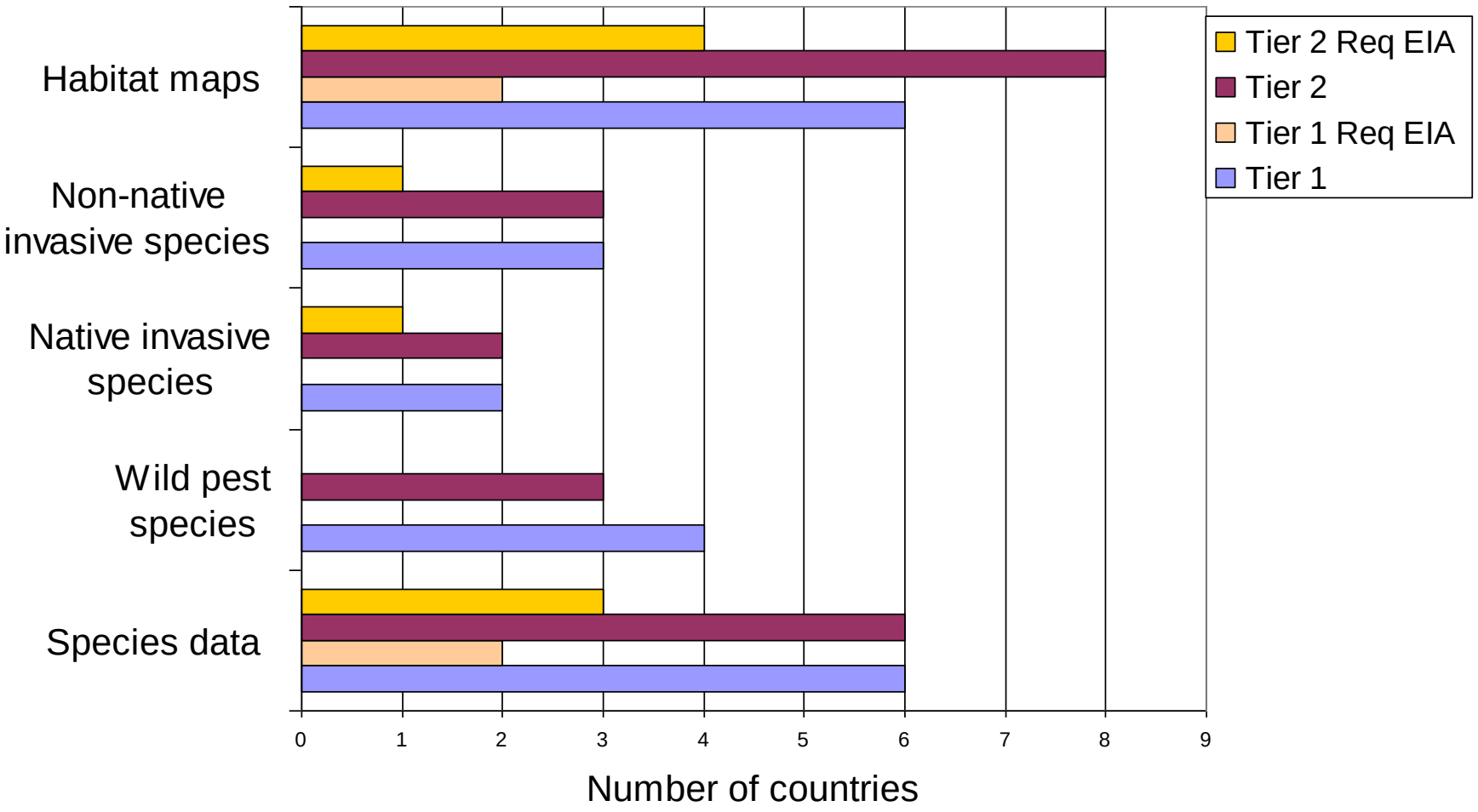
The enquiry also examined whether data on specific topics was required by local governments & whether it was required for EIA

Examples:

Chart 1: Biodiversity - species & habitat data

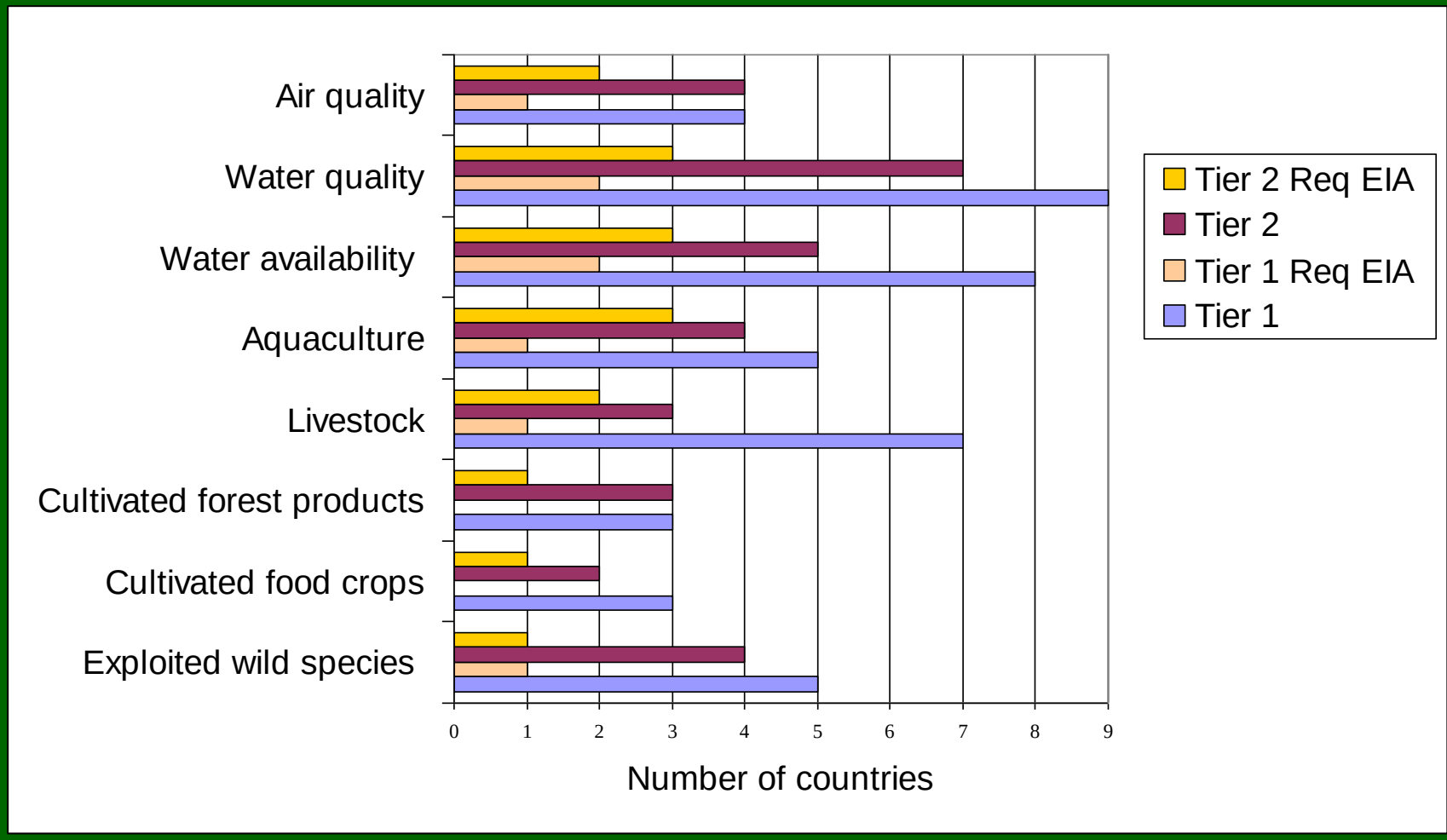
Chart 2 - Provisioning services

Biodiversity Information (Local Government)



EIA requirement only notes in < ½ case studies for all data types

Provisioning Ecosystem Services (Local Government)



EIA requirement only notes in < ½ case studies for all data types

WP3 - Aim 3 - What information is used?

We identified information sources in each partner country – i.e. information the interviewees could theoretically get access to -

However, this is likely to vary from the environmental information the interviewees in each case study use in practice

e.g.
Did they collect their own records, use databases from other sources, use spatially referenced data?

Information sources

The main themes to emerge from desk study of information sources were:

- National databases tend to be of a coarse scale which may be unsuitable for many decision makers
- Many countries lack coordinated information sources at the local / regional level
- Data may be fragmented, difficult to access and lack compatibility

Examples of national information sources – available at a local level

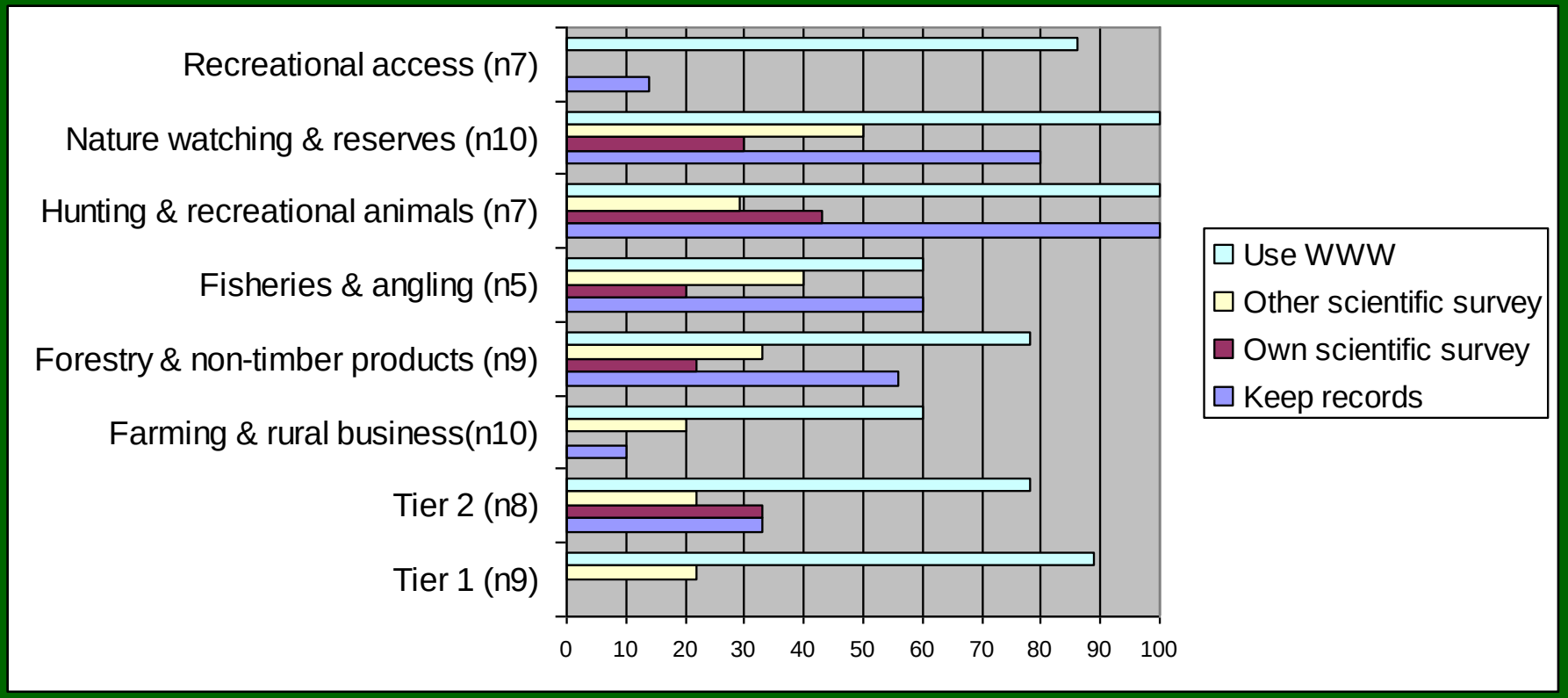
Country	National Database
Estonia	Environmental Monitoring Programme
Portugal	National Conservation Agency
UK	National Biodiversity Network / MAGIC/ MarLIN
Hungary	Conservation Information System (under development)
Poland	Integrated Monitoring of Natural Environment/ Biodiversity Clearing House Mechanism (under development)

Information sources

eNGOs & local government & researchers were important potential sources of information with some initiatives unique to certain countries (e.g.)

Local	Regional	National
Local government, Local eNGOs, Management authorities, Community groups, Business (e.g. Business & Biodiversity Initiative, Portugal), Research Institutes, Local Record Centres (UK only)	Regional government authorities/agencies, Research Institutes, Administration of protected areas, eNGOs, Regional information gateways (UK only)	National government agencies, National research institutes, National databases, Natura 2000 network, National networks of protected areas (e.g. Portugal)

What information is used in practice - where are data users finding the information needed?

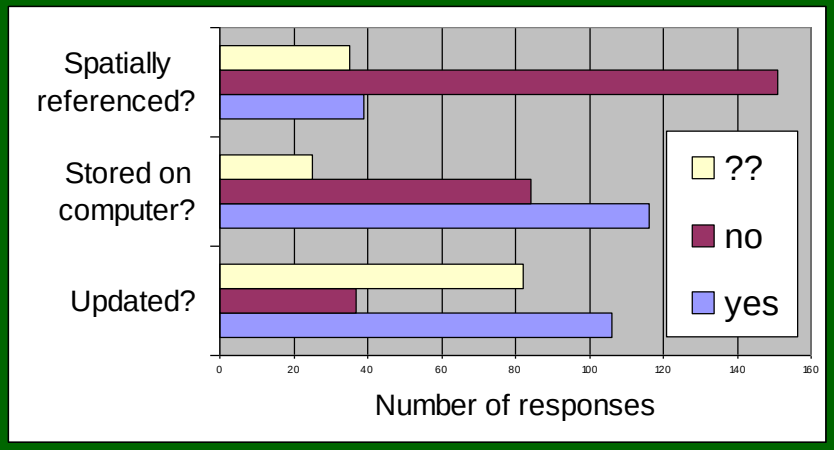


- Very wide use of the internet across all groups
- Record keeping and survey more limited – especially scientific
- NB Record keeping and own survey absent in tier 1 & limited in 'farming'

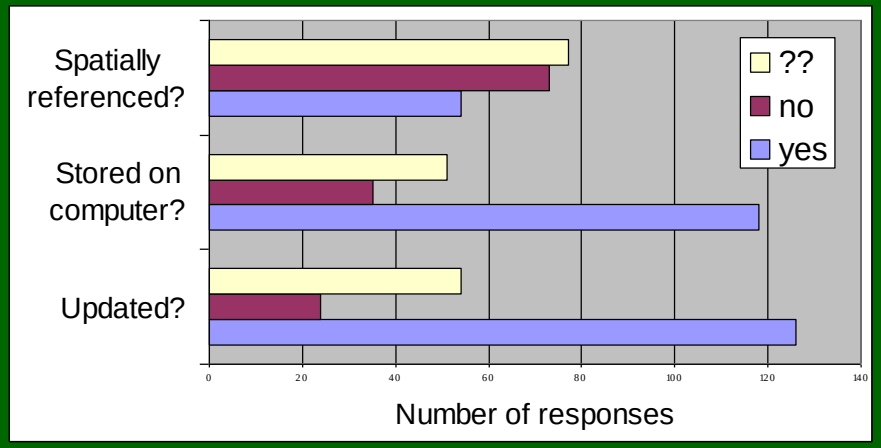
Characteristics of the information used

Response quality poor – nevertheless:
- Lack of spatial referencing at Tier 1
- Substantial % not digital & not updated

Tier 1



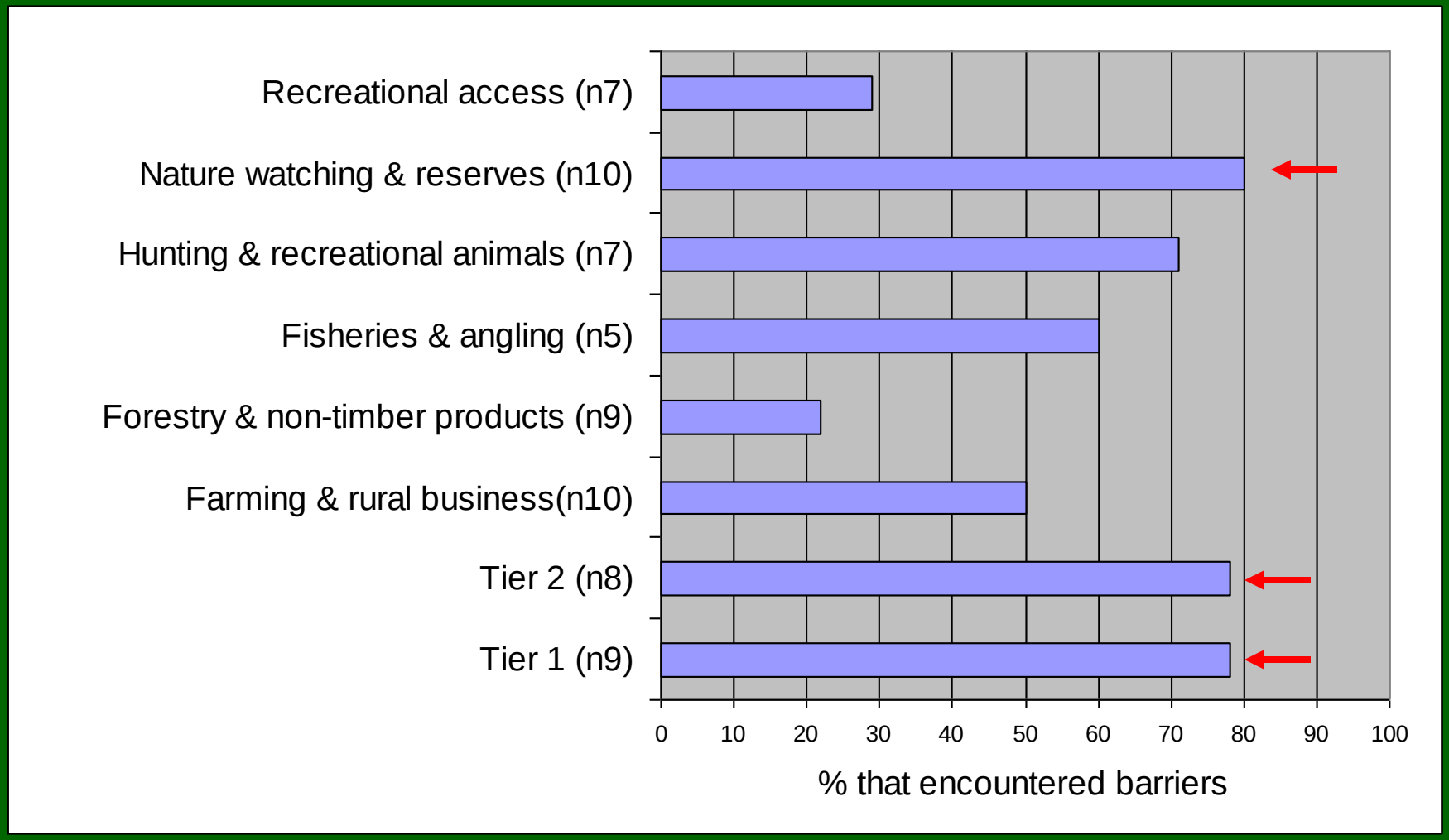
Tier 2



WP3 aims 4 & 5
Determine whether data users could find information needed to make informed environmental decisions

- What information is needed but currently unobtainable?
- What are the barriers to obtaining information?

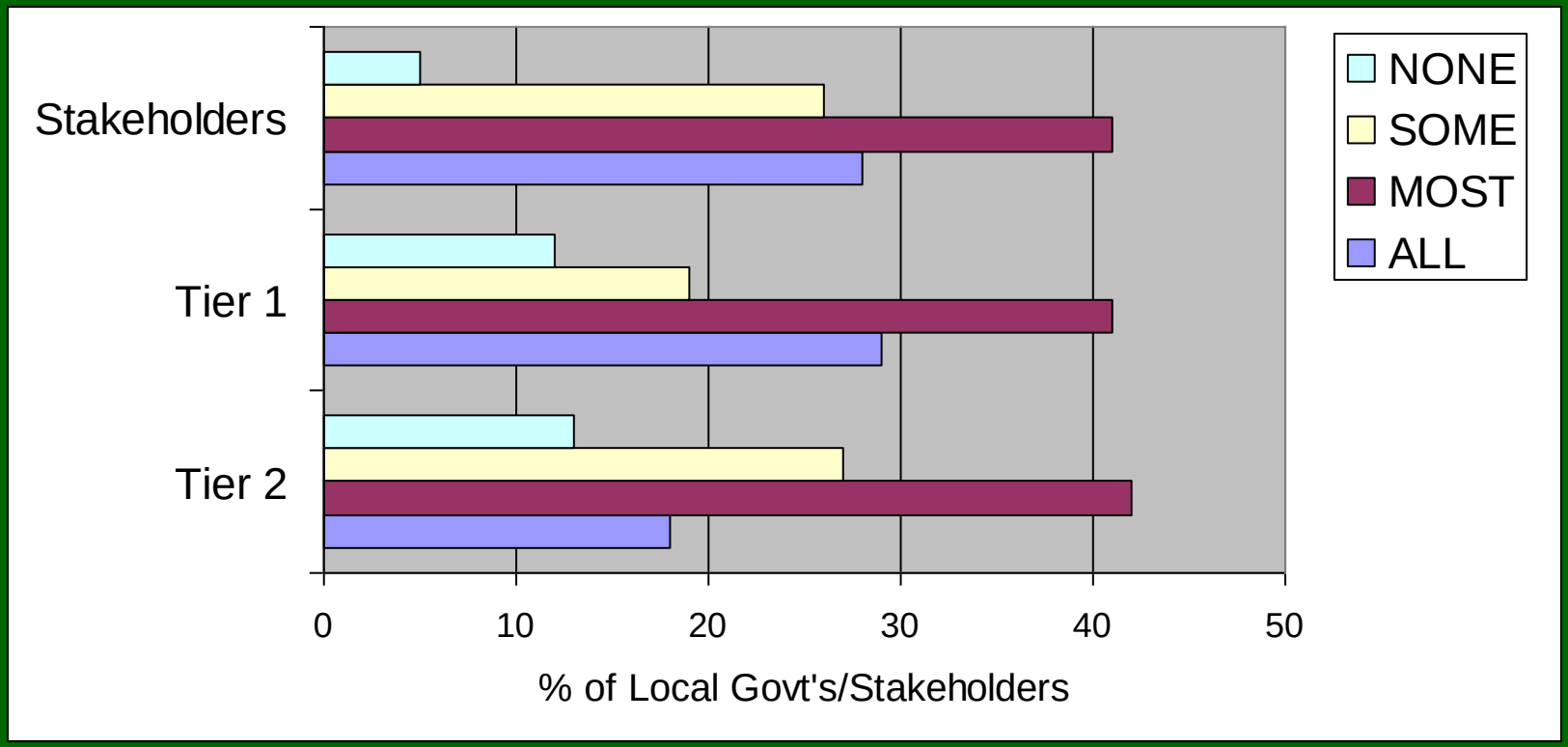
Are there barriers to obtaining data?



A substantial % reported difficulties in obtaining adequate information

Perception of barriers in same groups requiring the most

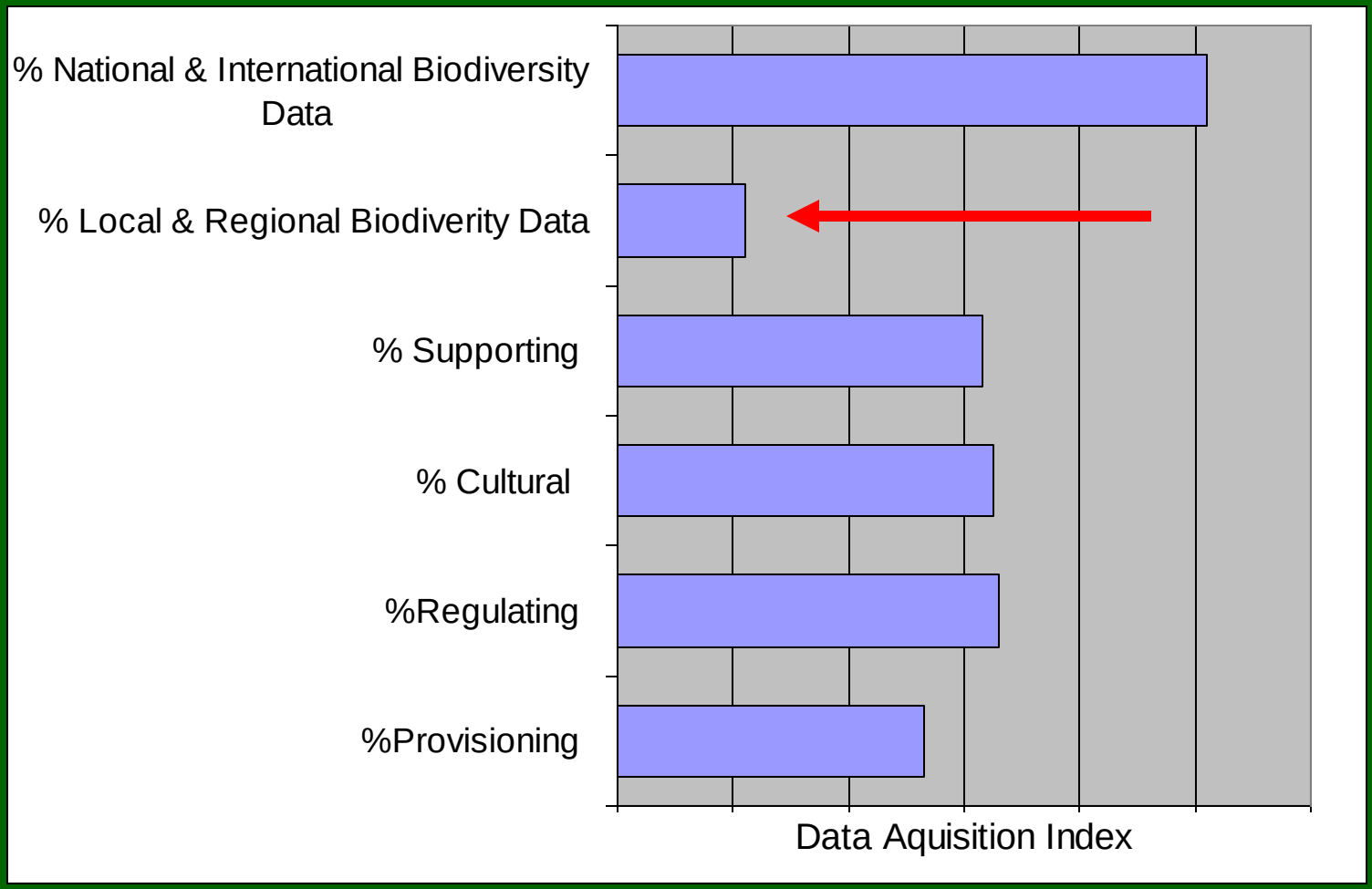
Availability of Required Data



Notably in all 3 categories there are many categories of information for which only some or zero information can be obtained

Adequacy of data supply - different categories of information

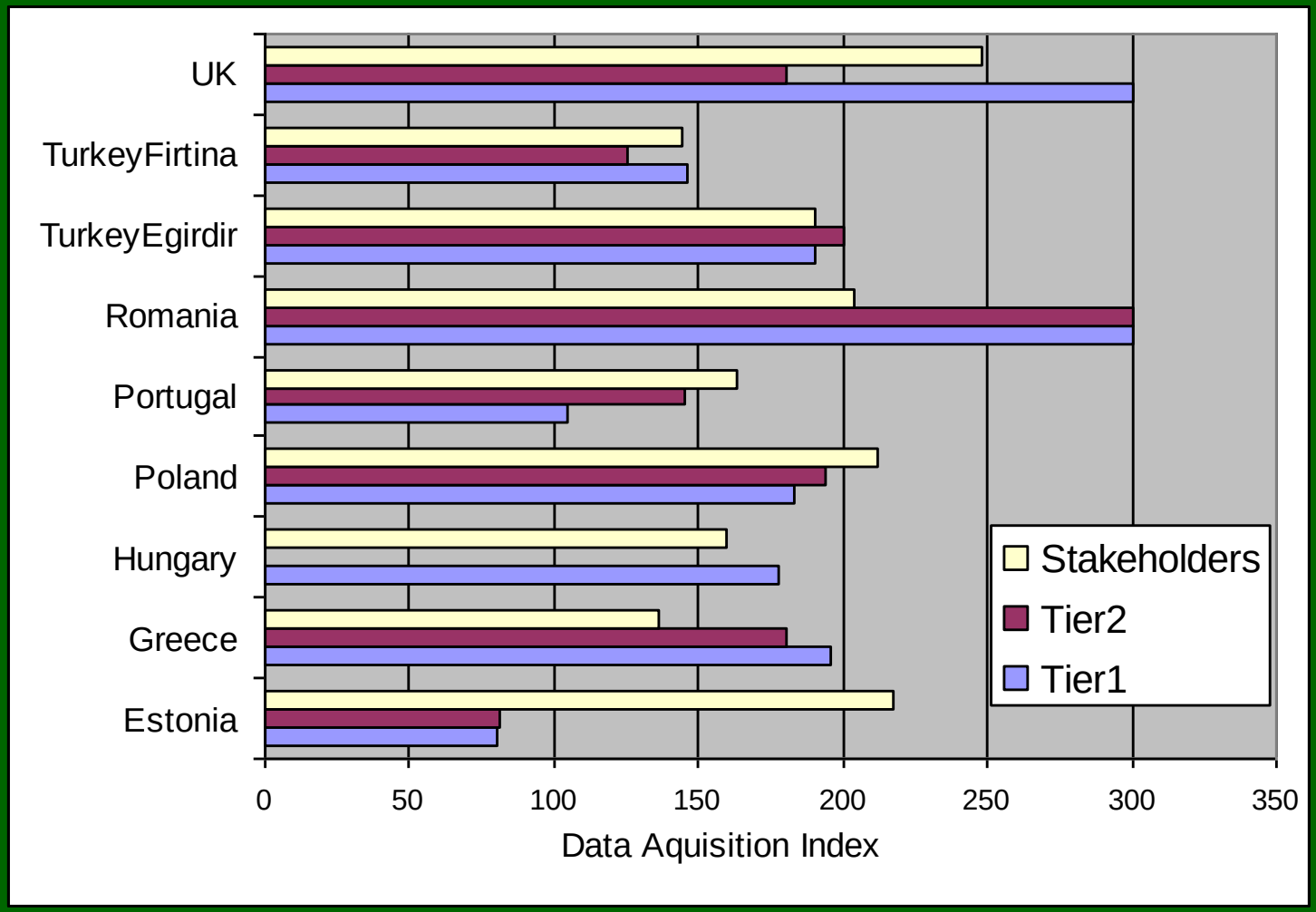
Accessibility of information grouped - all individual stakeholders using Daq
Local & regional biodiversity data particularly lacking



DAq Index = Σ (% responses * weight) where none= 0, some=1, most=2, all=3

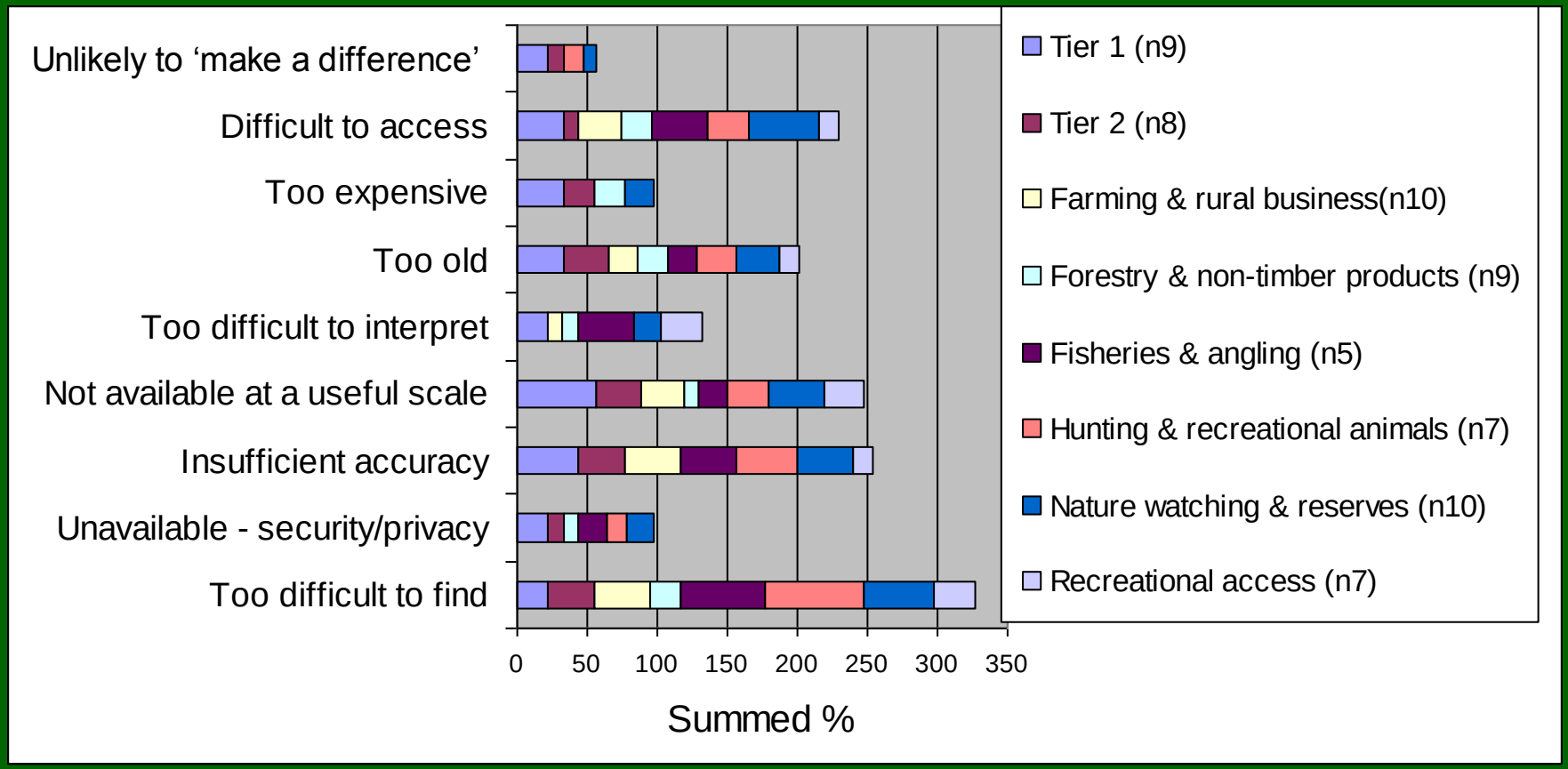
Can data users find enough information?

For each country & stakeholder category – how much of the requirement was met?



Some variation between countries in terms of the degree to which needs were met – this will depend on demand as well as supply

Reasons for difficulties in obtaining data



Each of the barriers was encountered by most of the stakeholder groups
Difficulty in finding information - major issue
Accuracy, scale, access & age – important

Conclusions

1. What are the information needs?

- Almost all categories of information required by all categories of stakeholder (heritage an exception)
- Physical hazards, biodiversity, tourism – key issues local govt

2. What determines the information needs?

- All 'drivers' were imp. – statutory, policy formulation & need to inform management decisions
- Direct involvement in EIA / SEA was markedly greater in Tier 2
- EIA requirements for specific data types relatively low – incl species & habitat data

Conclusions

3. What information is used?

- Across all government & other stakeholder categories there was wide usage of WWW sources and limited use of local survey data – especially of scientific survey
- Data used by local governments was often not stored on computers

4. What information is needed but currently unobtainable?

- A substantial % reported difficulties in obtaining adequate information in all stakeholder groups
- But the highest perception of barriers occurred in same groups that requiring the most information (Local government & Nature Reserves)
- Information on local & regional biodiversity appeared the most lacking

Conclusions

5. What are the barriers to obtaining information?

Many potential barriers to obtaining information were reported
This occurred in all countries and stakeholder groups

Key issues were: difficulty in finding & accessing information, accuracy, scale, access & age of data.

Points to

1. A need for the provision of environmental information that is locally relevant & fit for the local decisions

2. A need for systems to aid flow of information to enable ready access and regular update