

Arguing in favor of biodiversity: a case study in Small Island of Braila Natural Park, Romania

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Current crisis – research - participation



- ❖ The current crisis (on multiple levels) - urgent measures for our existence and future
- ❖ Inter&transdisciplinary research – crucial for an accurate and realistic approach of the natural capital
- ❖ Close collaboration between theory and practice
- ❖ A real stakeholder participation - based on effective communication of scientific information in an accessible and understandable way for different categories of stakeholders.

Aim of the research

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- ❖ investigate how different types of knowledge from multiple sources were included and with what efficiency in the process of development and implementation of strategies and plans for sustainable NSES-RoLDC management, by analyzing the arguments for conservation, restoration and sustainable use of biodiversity/natural capital.
 - ❖ achieving the triple current statute of the protection of Small Island of Braila (Natural Park, Ramsar and Natura 2000 site) - different types of arguments, supporting sustainable use of the components of the natural capital and biodiversity conservation → examples of the most representative used arguments.



Materials and method

Study Area



The case study was carried out in the Romanian Lower Danube River Catchment (RoLDRC) focusing on the Small Islands of Braila Nature Park (SIBr) area (Fig. 1)

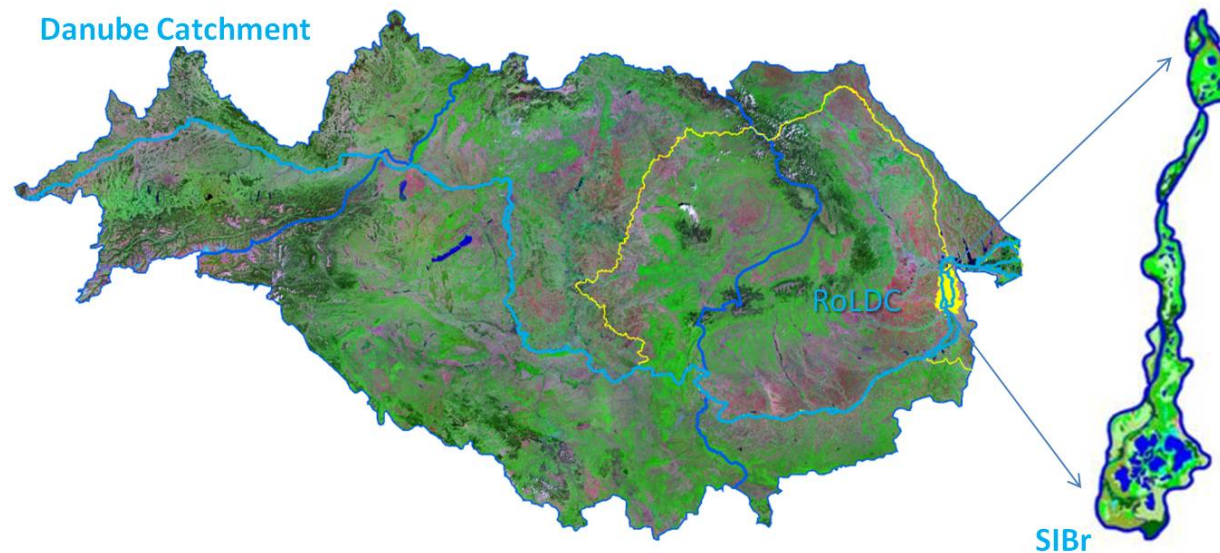
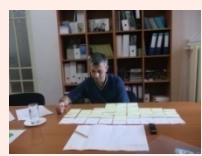
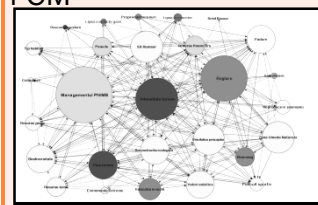


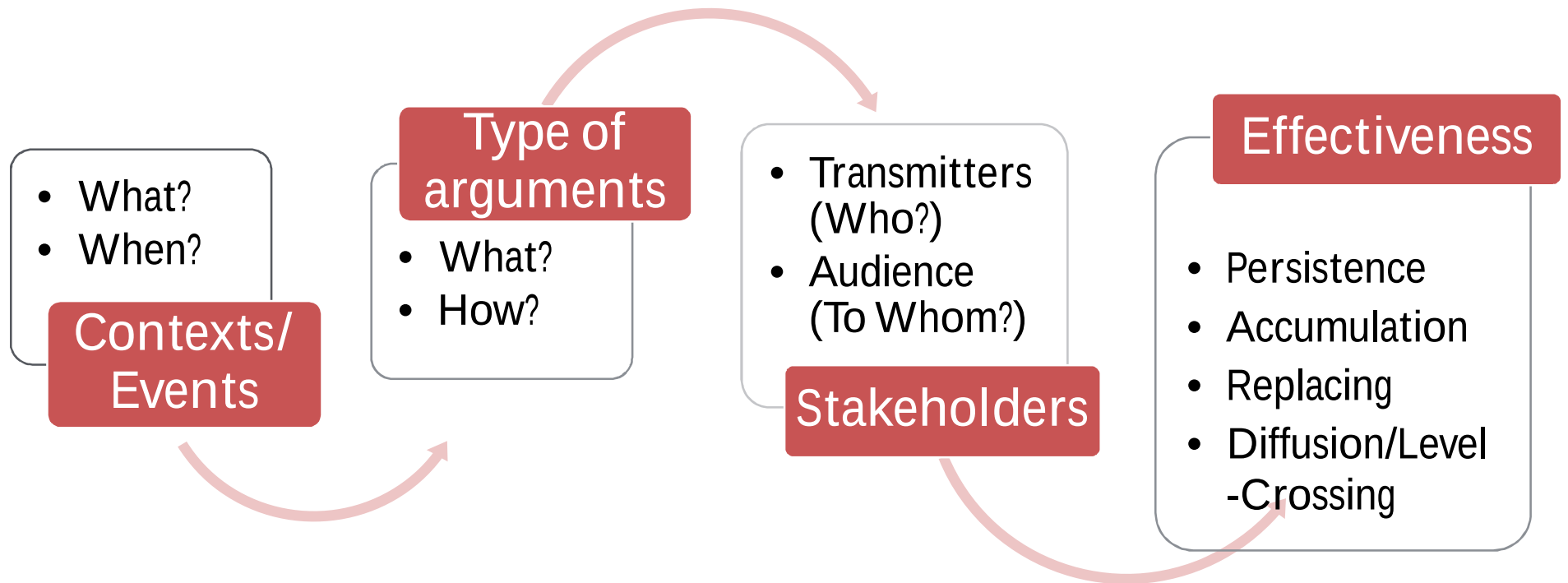
Figure 1: The study area – Small Island of Braila Nature Park in the Romanian Lower Danube River Catchment.

Materials and methods

Data collection and analyses

Method used	Brief description	Type of results/Information obtained
Document analysis 	Selection of relevant documents (issued between 1991-2012)/scientific literature and reports from previous research projects regarding conservation, restoration and sustainable use of biodiversity/natural capital	- description of events in which used arguments in favour of conservation, restoration and sustainable use of biodiversity/natural capital, in the SIBr NP area. - first list of the stakeholders that are in the area and that directly or indirectly are, or should be, involved in biodiversity conservation processes;
Semi-structured interviews 	Respondents: - primary stakeholders (fisherman and farmers); - secondary stakeholders (representatives from institutions/ authorities, academic institutions and NGO's responsible for biodiversity conservation). Period of application: August 2008; January - February 2014.	- the key stakeholders that directly or indirectly are, or should be, involved in policy development and decision-making concerning future management of the SIBr area; - the key biodiversity arguments used at local level; - identification of the role of arguments for biodiversity protection in framing and implementation of the processes regarding conservation and restoration of biodiversity/natural capital both at local and national level;
Focus groups 	Respondents: primary and secondary stakeholders. Period of application: August 2009; February 2014.	- different types of stakeholders' perceptions regarding ecosystem services, biodiversity and their values; - the most important issues related to biodiversity and ecosystem services for the identity/uniqueness of the area in the opinion of local stakeholders;
FCM 	Participants - primary, secondary and tertiary stakeholders: - local people/landowners, fisherman, farmers; - staff of SIBr NP Administration; - localities authorities; - scientists. Period of application: August 2008; February 2014.	the framework for analyzing the arguments in terms of efficiency, used in the implementation phase of action plans for sustainable management in the area.

Framework for assessing the effectiveness of arguments



Results and discussions

Context/ Events



National/ EU/ international

- 2006-2010: Ecologic and Economic resizing of Lower Danube Floodplain
- 2008-2011: Romanian contributions for elaboration of EU Strategy for the Danube

County and regional

- 1993-2002: Ecological restoration activities in RoLDC
- 2009-2012: Land development of SIBr area
- 2010-2012: Strategy for development in the fisheries area of Braila – Galati Counties

Local: Small Island of Braila

- 1968-zoological reserve for bird protection
- 1994-mix botanical and zoological natural reserve
- 2000-Natural Park
- 2001-Ramsar site.
- 2007- SPA and SCI sites (Natura 2000)

Results and discussions

Main argumentation lines

MAIN ARGUMENTATION LINES :	EXAMPLES
❖ uniqueness of the area arising from the rich diversity of landscape and species	"the existence of a unique and complex landscape diversity" with a "high biological diversity" - home "for rare species of plants and animals", "providing uniqueness and fragility of the area".
❖ natural importance of the area as remnant wetland from the large Lower Danube Wetland System	The SIBr importance ← " part of the lost paradise that was once Braila Islands area" ← remaining "the only unembanked area".
❖ importance of protected areas for providing resources and services to local communities which are highly dependent on them	"SIBr offers resources and services to the local population, but they need to use them in the traditional ways (eg. traditional fishing, farming) developed over time, ways that have no negative impact on the structure and functioning of ecological systems".
❖ compliance with national, European and international legislation for nature conservation.	"SIBr ensures the conservation of protected areas of national importance", being also "part of the Natura 2000 Network" and "an internationally recognized wetland (RAMSAR site)"; Note: 2000 – designation of SIBr as natural park, 2001 – designation as Ramsar site, 2007- designation as SCI and SPA sites.

Results and discussions

Argument types



Rights/values of nature

Legal obligations

Recreation, tourism

Achieving balance of nature

Productivity, resources

Sustainable development

Social, cultural

Other (support services)

Psychological/ spiritual/education

Options for future use

Regulation services

Meeting ethical, moral obligations

Provisioning services

Reputation, looking good

Livelihoods, employment

None specified

Results and discussions

Map of stakeholders (in SIBr area)

Stakeholders of the study area include both individuals and groups of people who influence the management measures in the area – “**influential stakeholder**” – and those who have **no influence**, but are directly affected by the planned changes, and whose interests should be considered by the decision-makers.

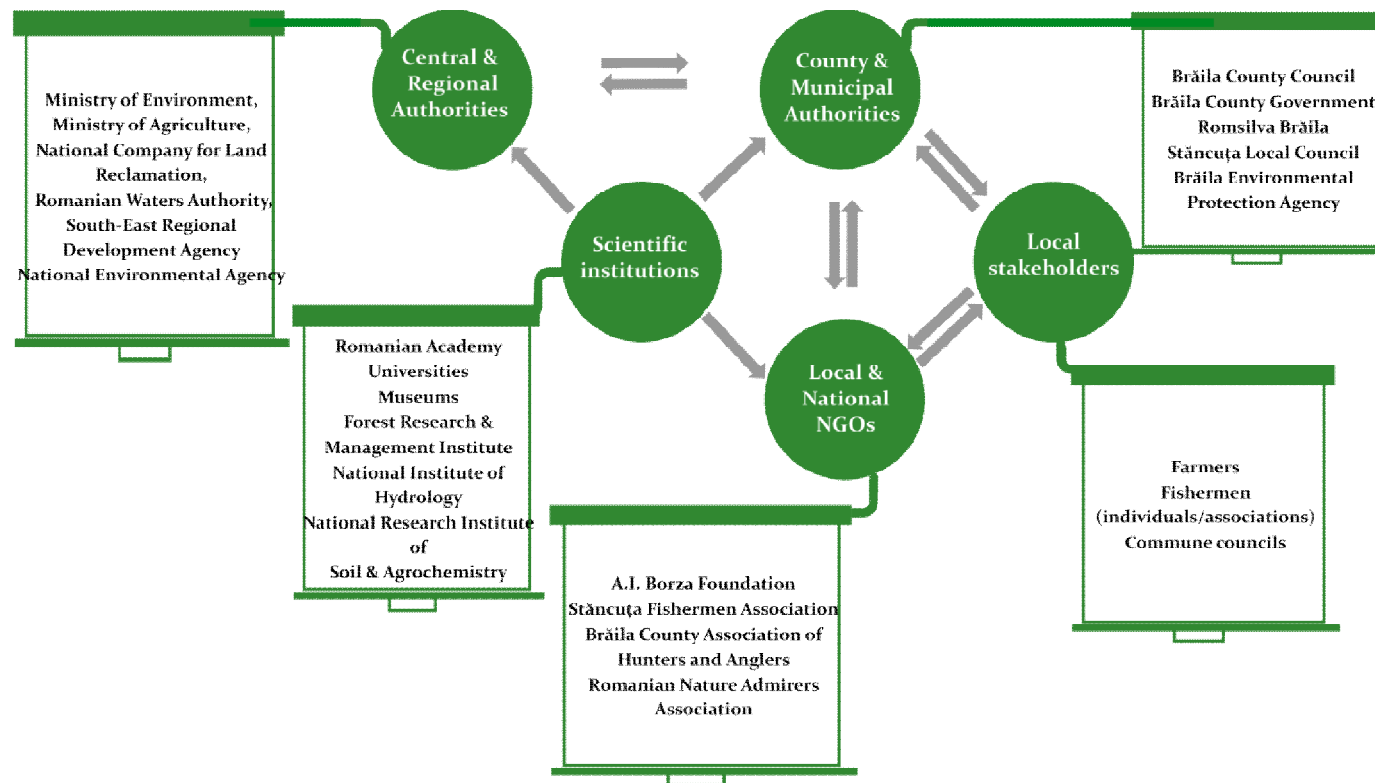


Figure 3: Stakeholders of SIBr area/ Note: → - one way influences; ↔ - both ways influences.

Results and discussions

Argument frequency per stakeholder category

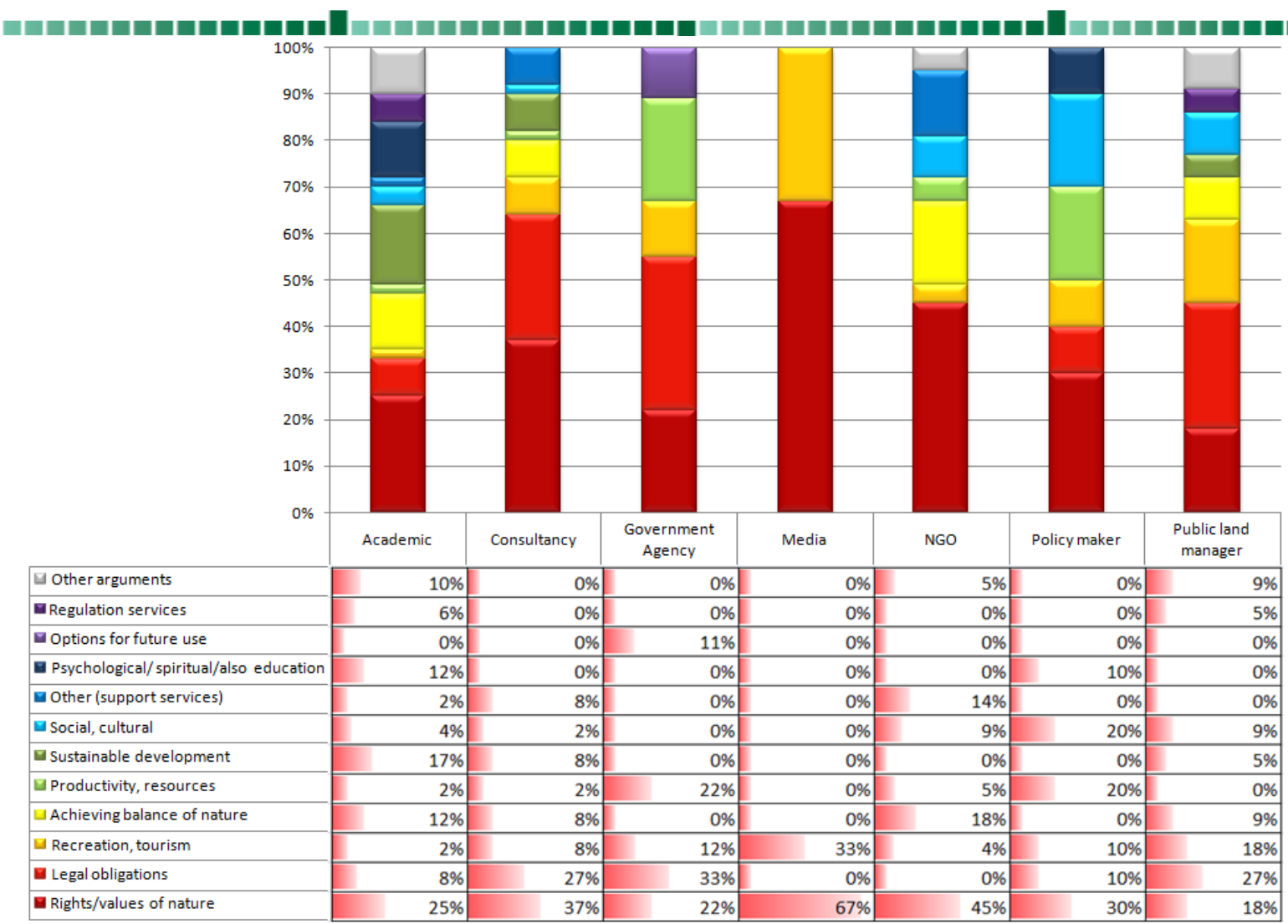


Figure 3. Frequencies of the different argument type categories put forward by each of the main stakeholder groups

Criteria for analysing the effectiveness of arguments

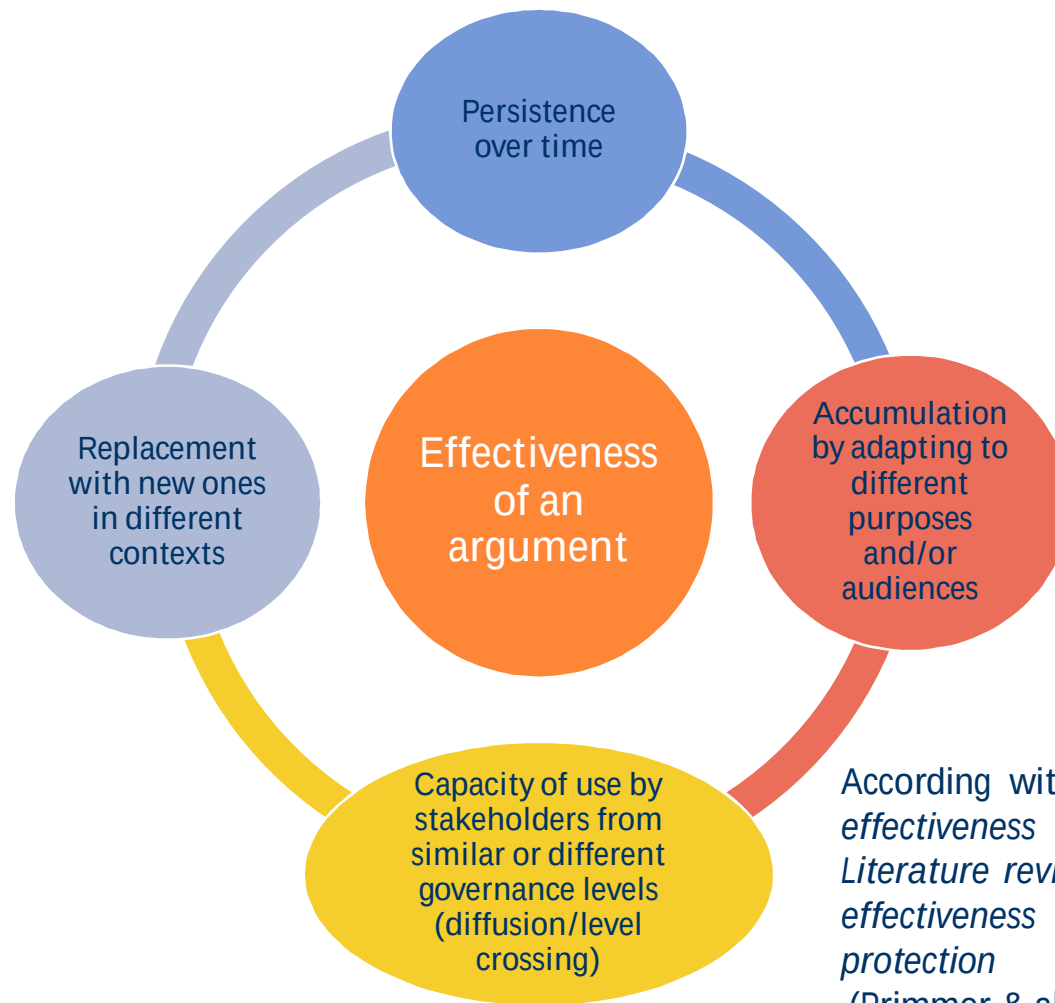


Figure 2. Criteria for analysing the effectiveness of arguments

Results and discussions

Effectiveness of arguments

Arguments regarding *Rights/values of nature itself (intrinsic value, rightness of pristine/natural state)*:

Important spawning site or International important wetland: **high persistence** over time ← **high trust of all stakeholders in emitting sources (academic)**

High biological diversity, Ecosystem mosaic, Habitats for nesting, feeding and resting of bird species, Remnant wetlands, Forest conservation: **low replacement** ← **high level of confidence in transmitter (mainly academic) and strong scientific base** of argument 'content'

High ornithological diversity, Vegetation diversity: **high contribution to final effectiveness** ← **facility of understanding information by audience and repetition** of argument in time

Habitats for nesting, feeding and resting of bird species: **low contribution to final effectiveness** ← **hard understanding/misunderstandings** of content information of the argument

Arguments regarding *Legal obligation*:

Mammals, amphibians and reptiles on list of the Habitats and Species EU-Directive: **high contribution to final effectiveness** ← **trust in emitting sources (academic)**

Requirements for the adoption of biodiversity protection and conservation measures: **mid contribution to final effectiveness** ← **lack of trust in emitting sources** (policy makers), even if academic stakeholders were supported (but the final contribution did not low due of the time and increase of the awareness regarding the need for conservation/protection)

Results and discussions

Effectiveness of arguments

Arguments regarding *Sustainable development, obligations or values for future generations*:

Key area for sustainable use of resources: **high contribution to final effectiveness** ← **high trust** of all stakeholders **in emitting sources** (academic) and **appropriate translation** of the transmitted information to audience level of understanding

Resources and services for local communities: **mid contribution to final effectiveness** ← **lack of confidence level for in transmitter** (public land managers) and **poor translation adjustment** to understandings of audience, that was a source for reception of argument like a slogan/propagandistic information

Arguments regarding *Social/cultural/heritage/collective well-being and welfare* :

Spiritual individual well being: **high contribution to final effectiveness** ← **content of the argument** that appeal to **pragmatic aspects** by emitting sources (academic) and adequate way to transmit the information through consideration of the audience as partner for discussions

Historical conscience: **low contribution to final effectiveness** ← **inappropriate way for transmission of the argument** by emitting sources (NGO's) and **the argument content** that appeal to **theoretical/idealistic aspects**

Results and discussions



Responses from the interviews validated our findings regarding the reasons for the level of contribution to final effectiveness → a number of requests for accomplishment in order to assure the efficiency of management measures imposed by the Management plan of the SI Br Natural Park:

Developing a common language and understanding of the biodiversity & ES concepts, conservation and sustainable use of biodiversity components.

Good collaboration between interested actors in biodiversity conservation, from decision-makers to the general public;

Involving, and taking into consideration, scientific opinion

Eliminating barriers for effective communication of science to the public and policy-makers;

Identifying more attractive ways to get people involved, convincing them that their opinion is important;

Selecting appropriate information (including scientific information – based on screening and assessment of its quality- and traditional knowledge);

Highlighting and using the management experience of the local population that takes into account hundreds of years of conservation in the area

Conclusions



Key recommendations:

- ❖ the important role played by the academic sector
- ❖ ecological research needs to become more cross, inter and trans-disciplinary, by integrating social sciences with natural sciences in order to:

improve understanding of how socio-ecological systems work;

gain a greater awareness of the social factors responsible for the success or failure of environmental management;

facilitate participatory approaches leading to a greater degree of trust and understanding between natural scientists and practitioners at local level;

establish a common language for all involved stakeholders (from decision makers to general public);

communicate biodiversity issues in a way that is related to people's everyday life experiences and in more popular terms to achieve an efficient and sustainable management of resources and services provided by natural ecosystems;

accept that without economic valuation of the human benefits provided by nature, biodiversity conservation cannot be fully understood and accepted by the general public or decision-makers with high utilitarian views;

biodiversity conservation depends on how it is properly adjusted to these perceptions.