research & educational center ‘baikal’

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paradigm: interdisciplinarity

- Approach 1: focused on a separate and important ***direction*** of investigations.

- Approach 2: focused on a separate and important ***object*** of investigation

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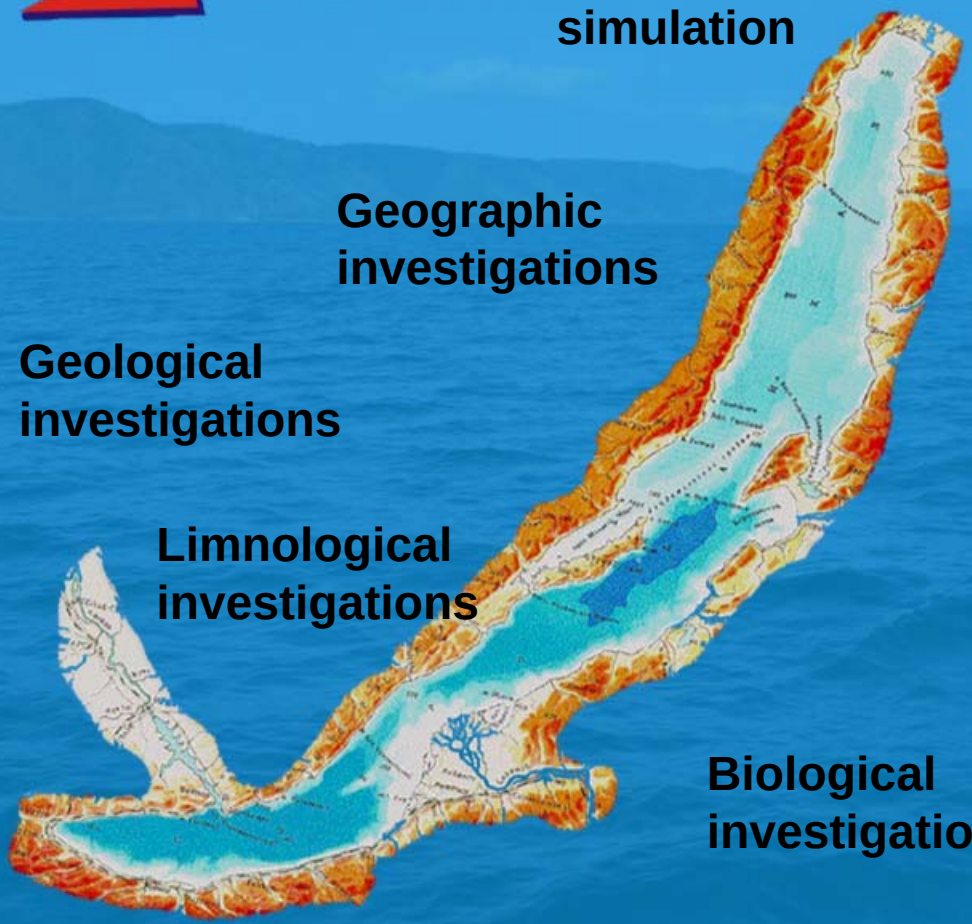
lake baikal

Math simulation

Geographic investigations

Geological investigations

Limnological investigations



Biological investigations

WHY INTERDISCIPLINARITY?

- an extremely important and complex natural object
- a number of separate and incoherent investigations
- conducted by different organizations
- a non-trivial situation around Baikal

importance of effort co-ordination

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basic activities

- multidisciplinary research coordination
- young researchers support
- multidisciplinary & joint advanced education
- networking
- lake.baikal.ru, a multipurpose portal

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external linkages

- institutes of RAS
- international
- horizontal (between RECs)
- regional

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potentiality

Russian Academy Of Sciences

+

Russian Universities

=

young blood for RAS institutes / research for education

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reality

Russian Academy Of Sciences

Russian Universities

=

bureaucratic frontiers

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paradigm: integration

a soft way for integration!

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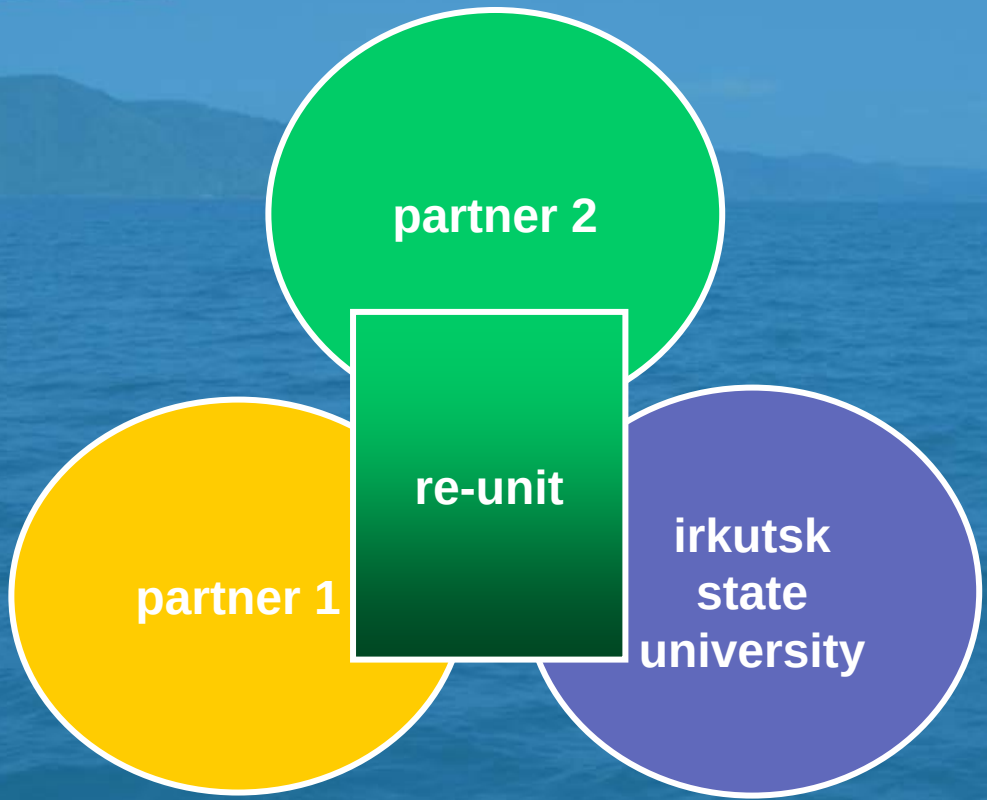
a research educational unit



- 6 REUs are working
- 14 REUs are being designed
- 11 instititutions are involved in collaboration

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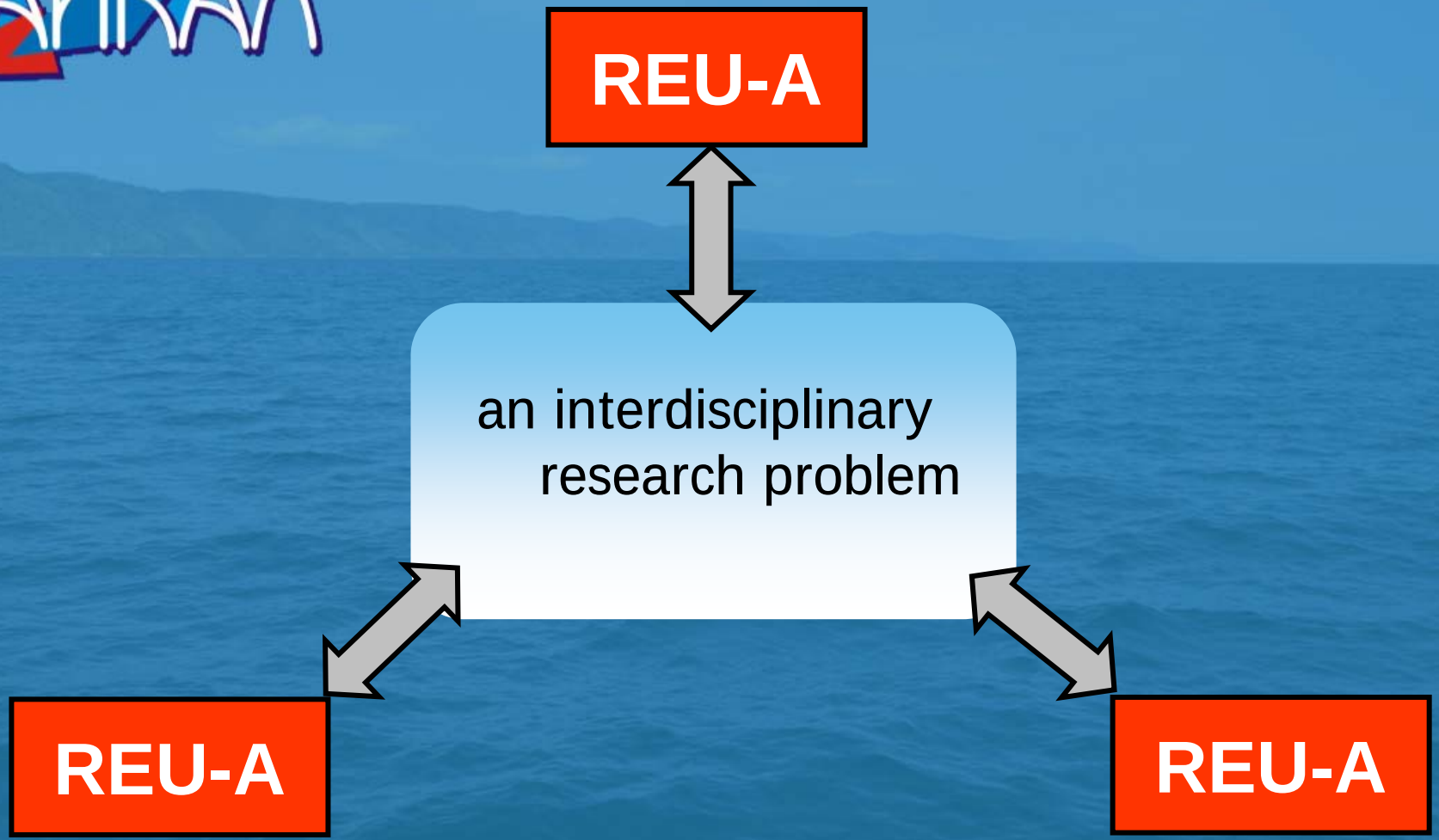
interdisciplinary interaction



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networking

- enormous territory ☛ distributed ISU infrastructure is needed
- 11 research stations – but MONODISCIPLINARY

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necessary to develop a MULTIDISCIPLINARY stations network

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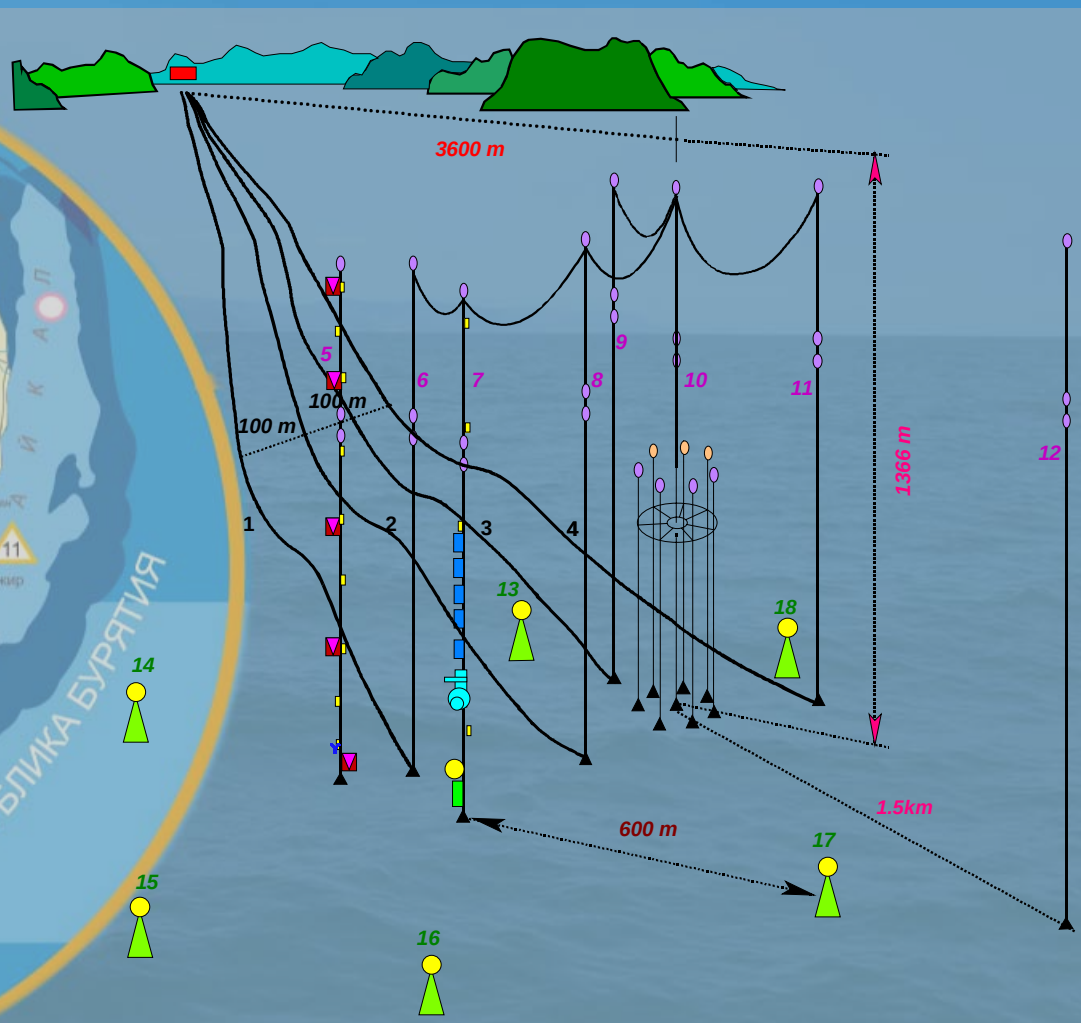
automated stations



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international cooperation

- monodisciplinary & interdisciplinary problem solving within REUs
- development of INPs and international student teams joint teaching
- virtual joint projects through lake.baikal.ru
- development of lake.baikal.ru resources

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starting point of limnoecology school

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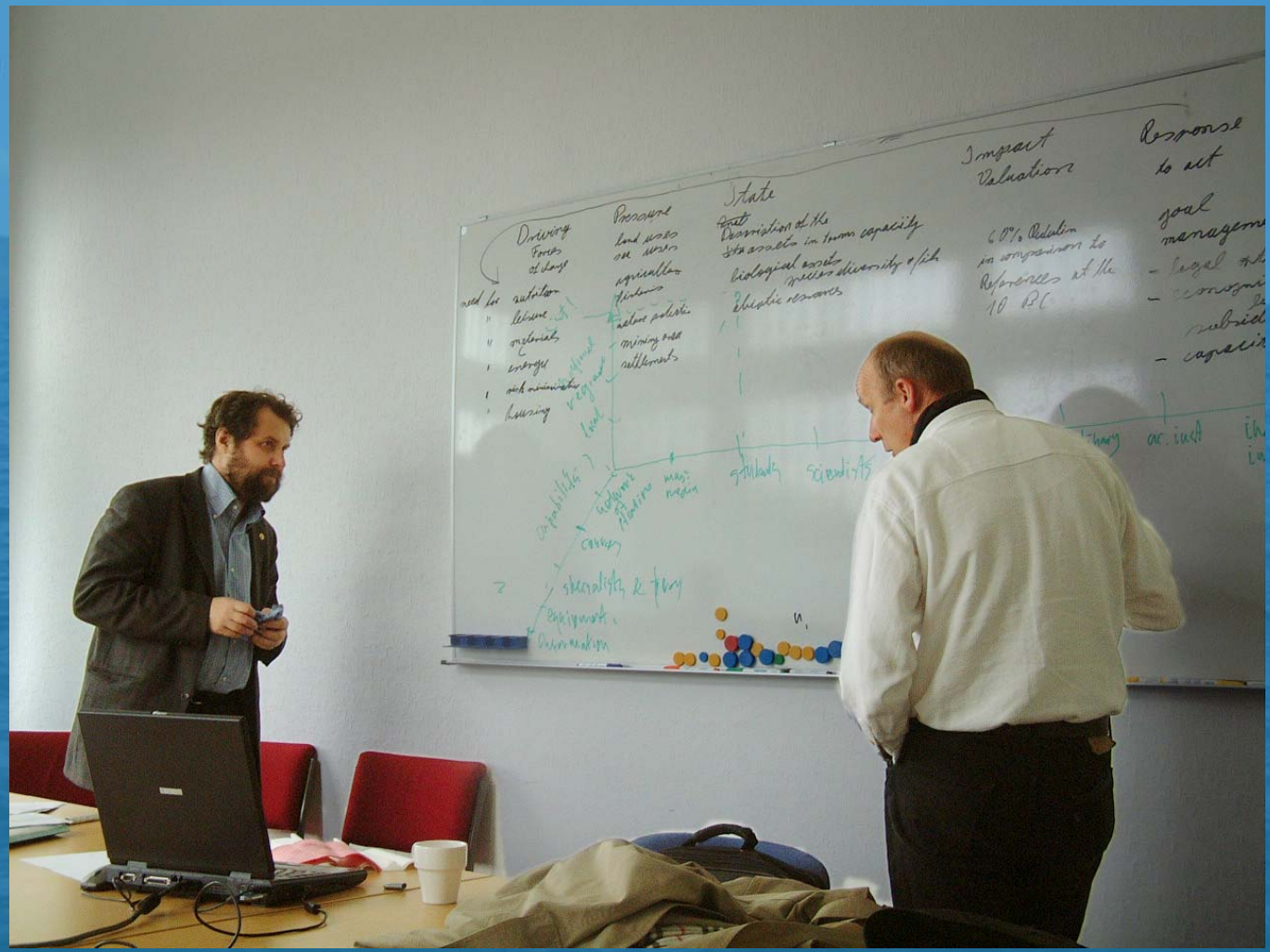
starting point of limnoecology school



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education through research

education through research

- postgraduate & PhD students
- interdisciplinary network packages of courses
- RE- & IE-labs
- competitions
- motivation increasing
- general public education

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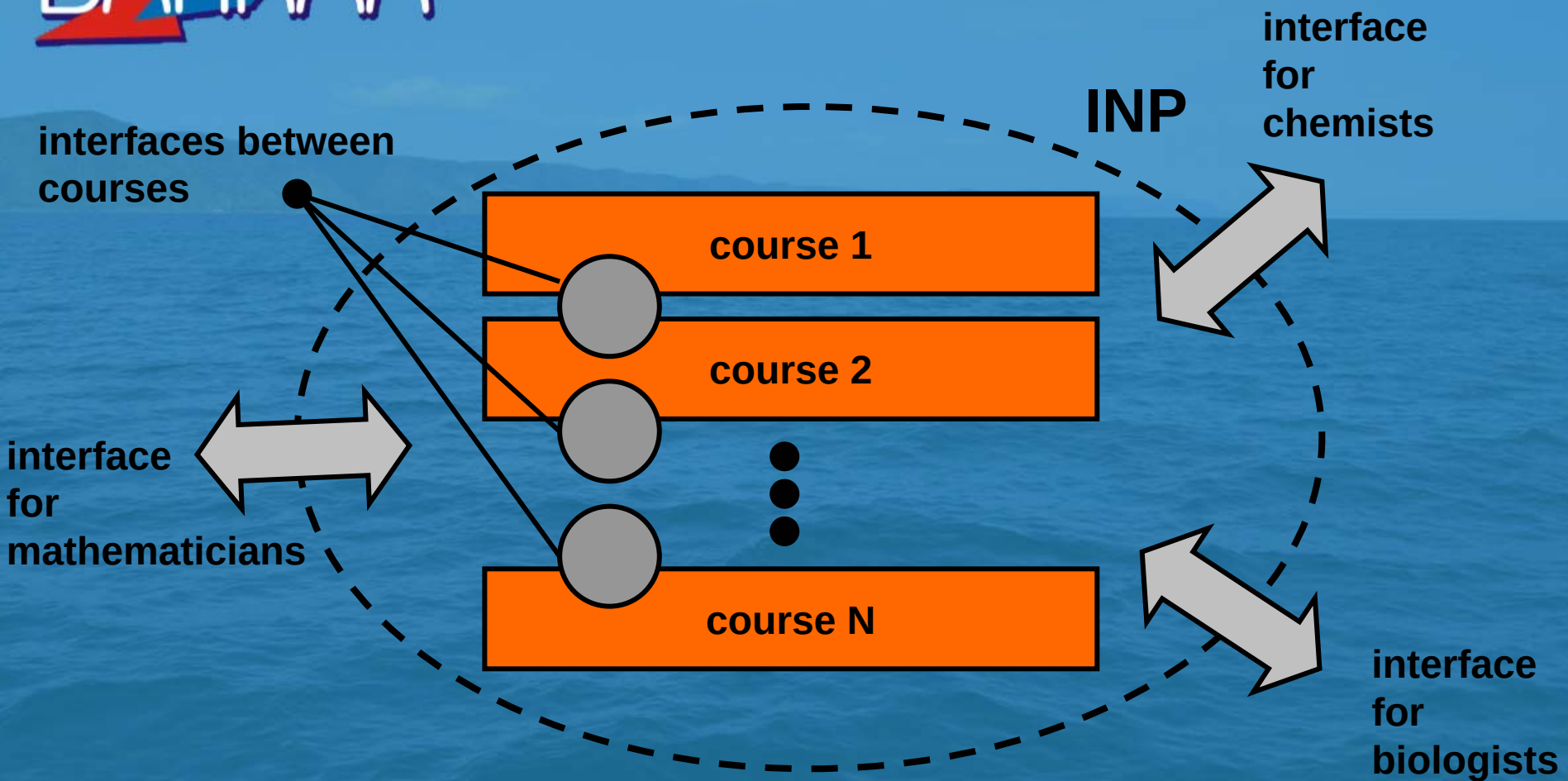
interdisciplinary network packages



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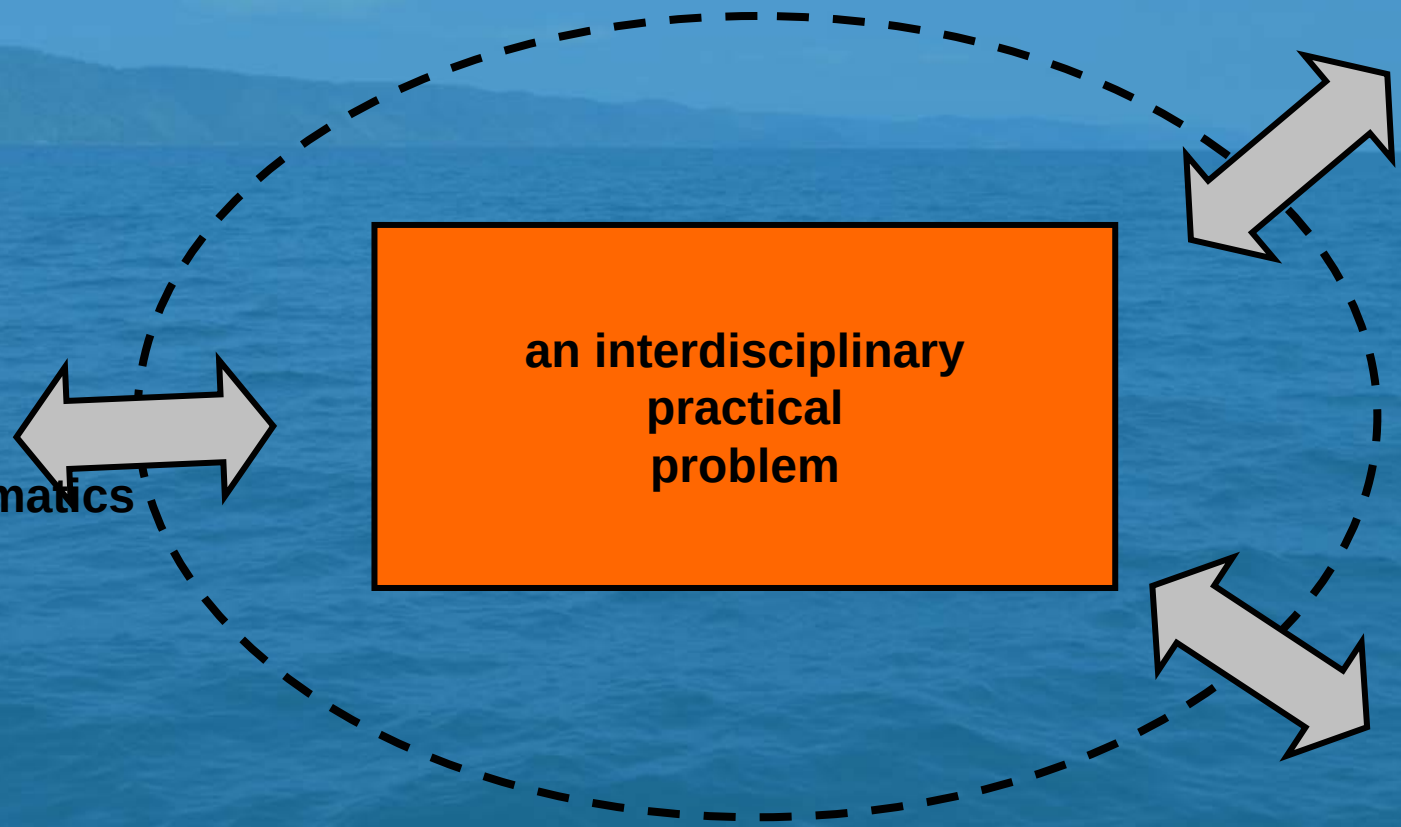
INP: joint problem solving



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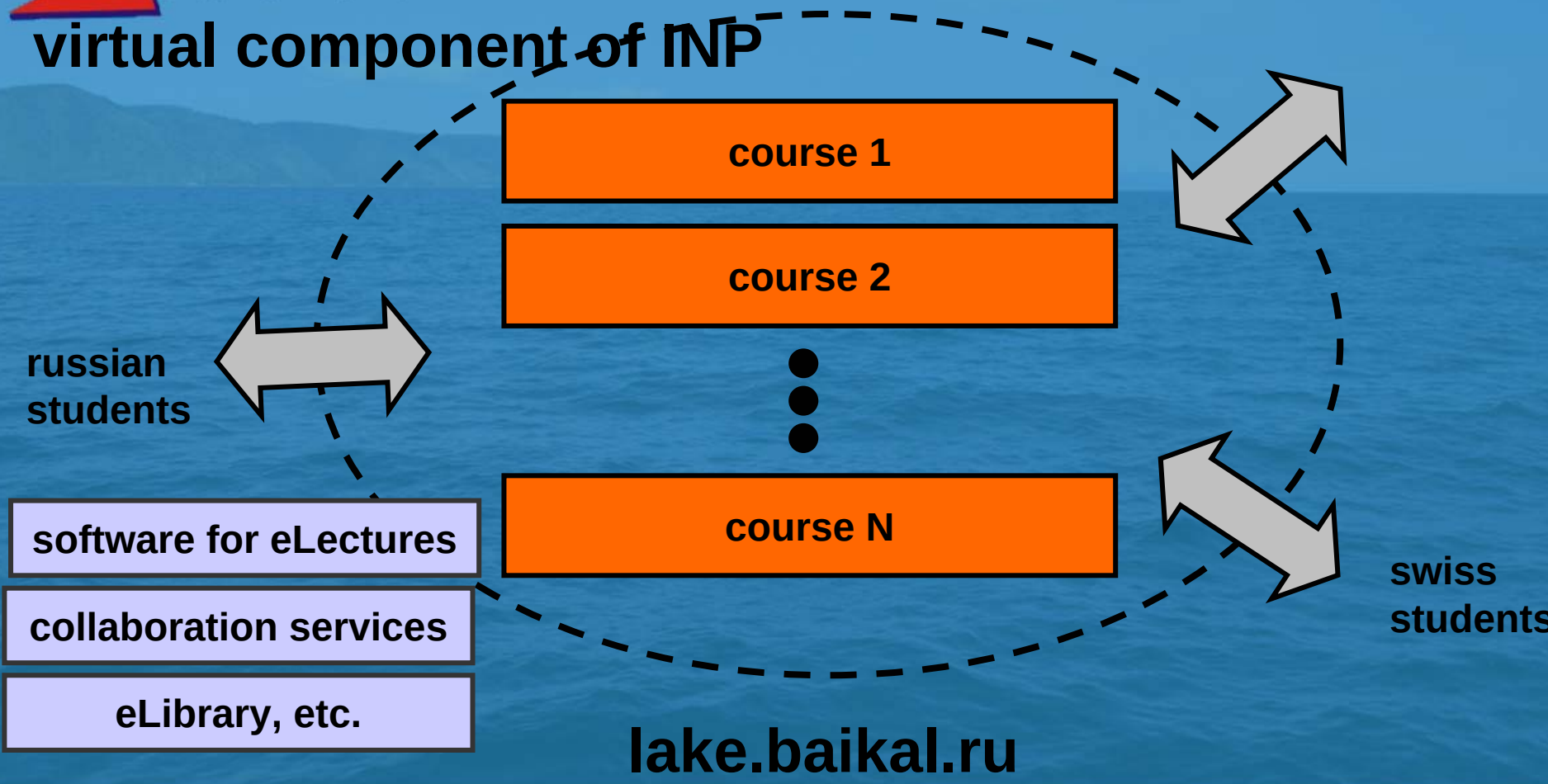
INP: a virtual component



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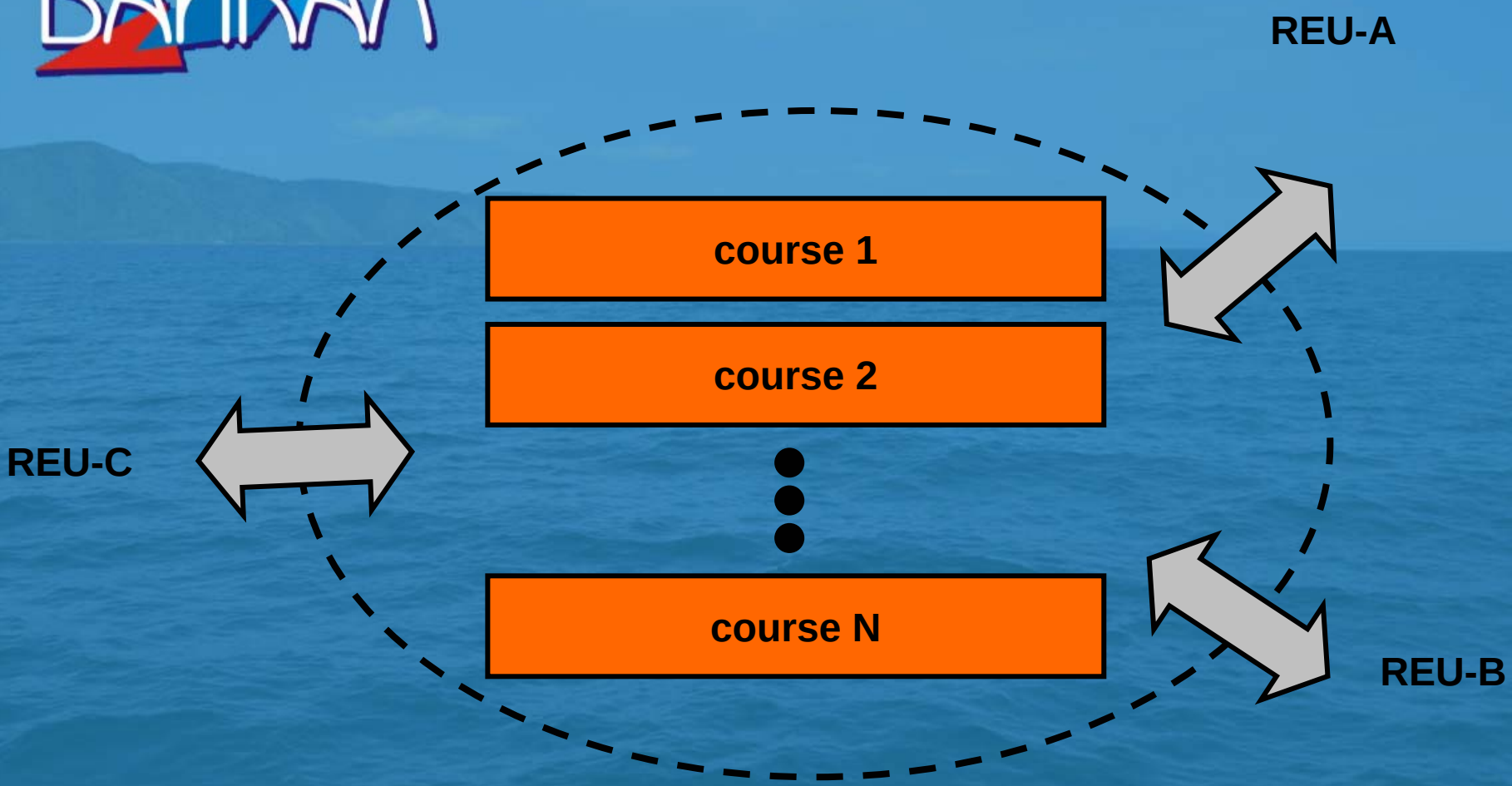
INP: REUs' collaboration



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INP: pilot projects

international summer school, Aug 2007

- limnoecology
- baikalian siberia

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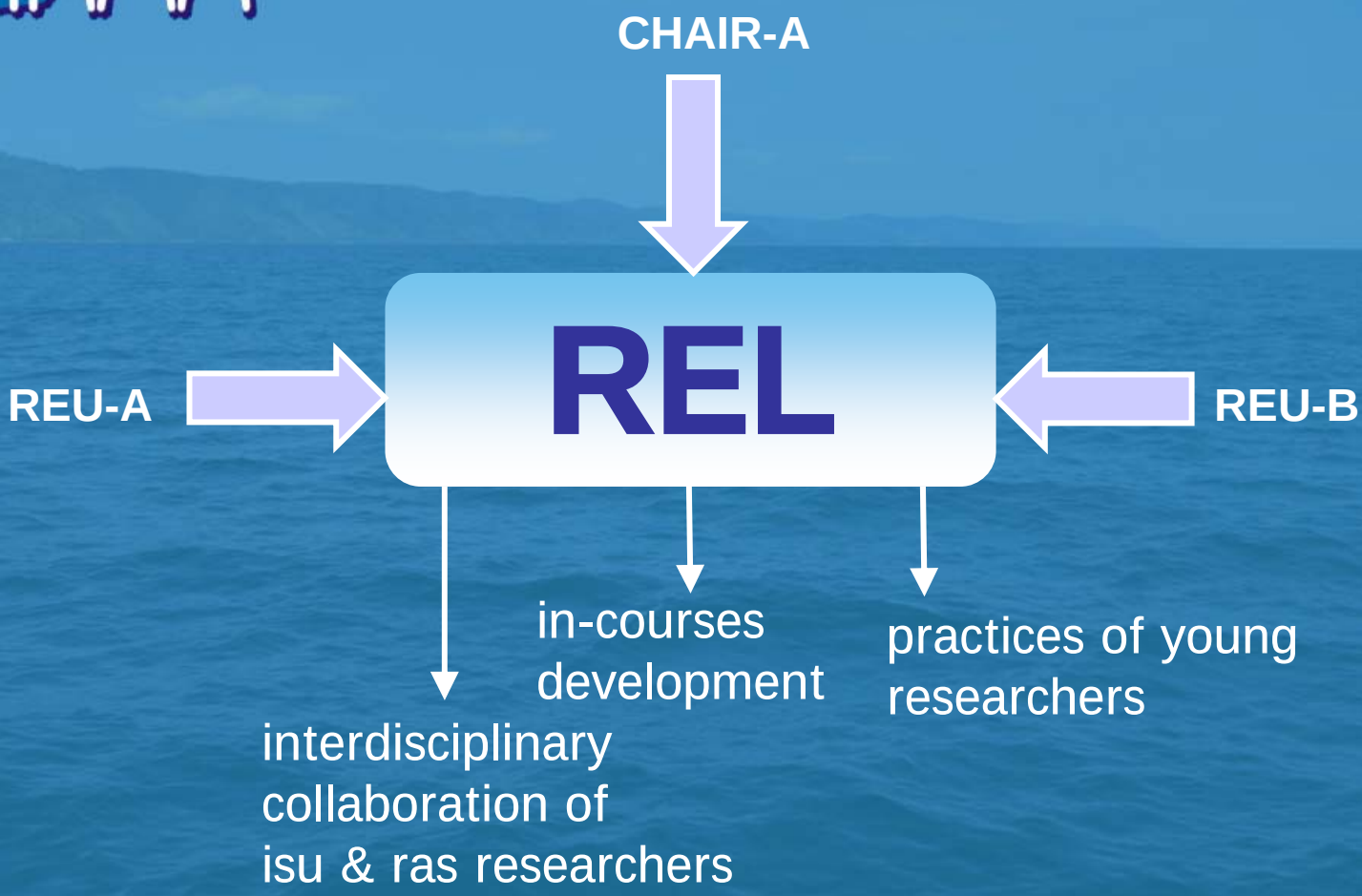
research & educational labs



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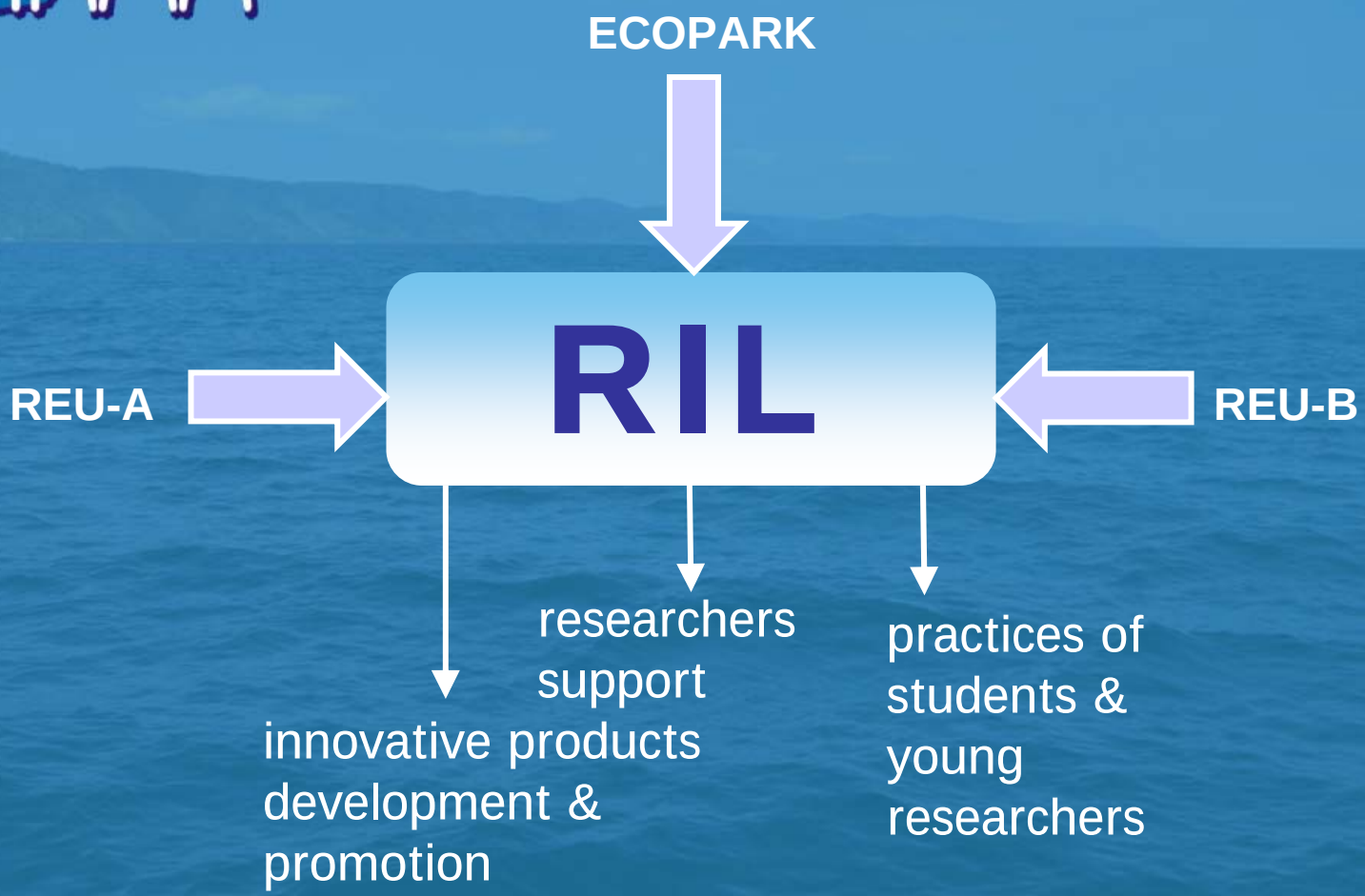
research innovational labs



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lake.baikal.ru

- the basic virtual platform of the center
- rus & eng versions

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eLibs, QA-systems, DBs, knowledge processing

project management, eLearning social projects

data & knowledge collection & distribution

specific web-services

networking

information support

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regional impact

the roundtable “REC ‘Baikal’ as an innovation model for the research and education integration”

at the Baikal Economic Forum

Feb 2007

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general public education

- ecological knowledge in common use
- lake.baikal.ru information resources
- education of local people through research stations
- special activities for secondary schools
- professional skills improvement

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future work

- large joint projects: sensor networks, db, processing & simulation
- multilateral projects (Germany, USA, Switzerland...)
- young researchers collaboration
- summer schools
- in-courses
- lake.baikal.ru: virtual projects, institutes, labs
- baikal future community

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thanks!