Sustainable Utilization of herbaceous Biomass.

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The BESUB Craft-project

BIO-ENERGY
ENLARGED PERSPECTIVES

Budapest ,16-17 October 2003

Project Objectives

- Ascertain the availability of suitable biomass, it´s cost, quality and yields.
- Develop methodology and processes for extracting high value bio-chemicals from green biomass such as sparteine and its derivatives, lactic acid and ethyl lactate and to test-run the production of these.
- Develop a new continuous fermentation process for lactic acid.
- Develop a new ethyl-lactate production process.
- Select optimal economical processes and products that contribute to the biosphere and asses production in rural communities

The BESUB –Craft-project consortium:

Contractors:

The Icelandic Biomass Company, Iceland

tetra Ingenieure GmbH., Germany

Beltra Forestry Ltd. Ireland

RTD performers:

Rala, Iceland

Universität Heidelberg, Germany

Biorefinery.de. Germany

BIOPOS. Germany

AtB. Germany

Workpackages

Wp !: Biomass procurement:

WP 2: Sparteine separation and derivatives development.

WP 3: The evaluation of yields in fermentation processes:

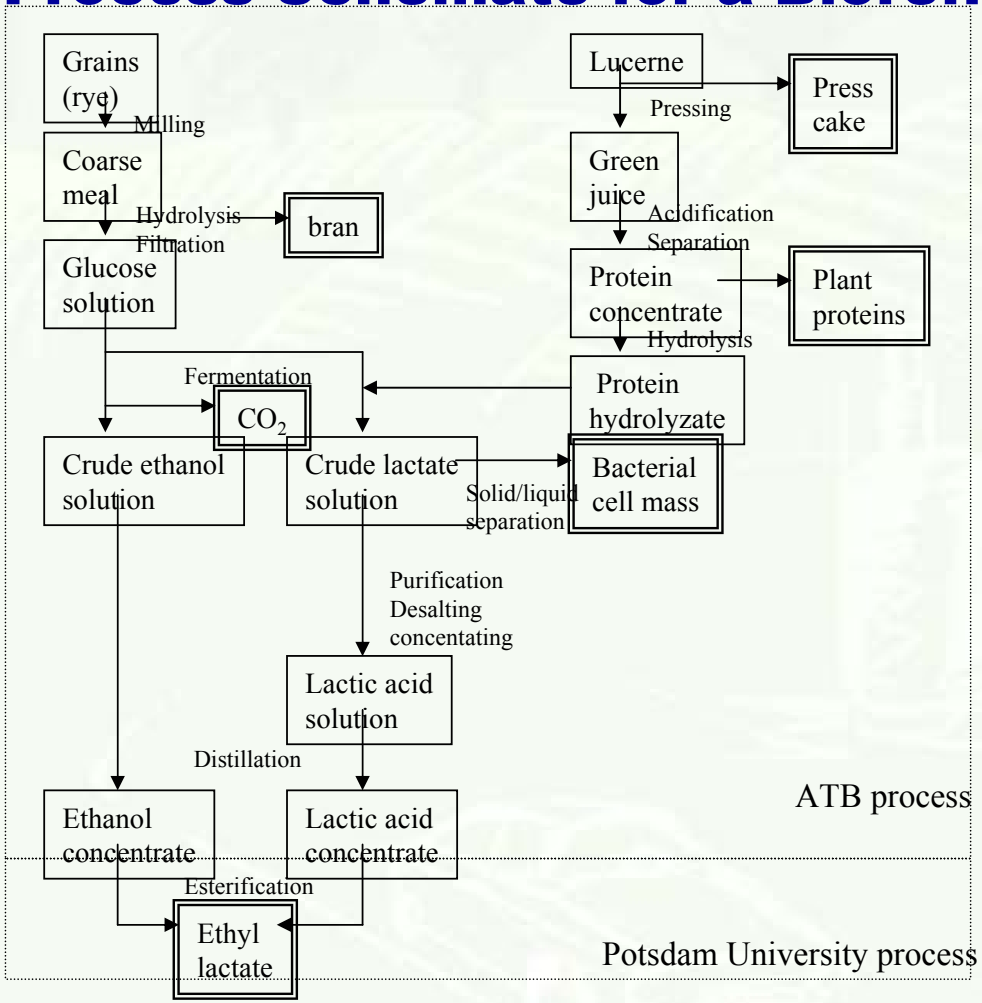
WP 4: The use of residue materials:

WP 5: Economic assessment:

WP 6: Project evaluation and the next steps:

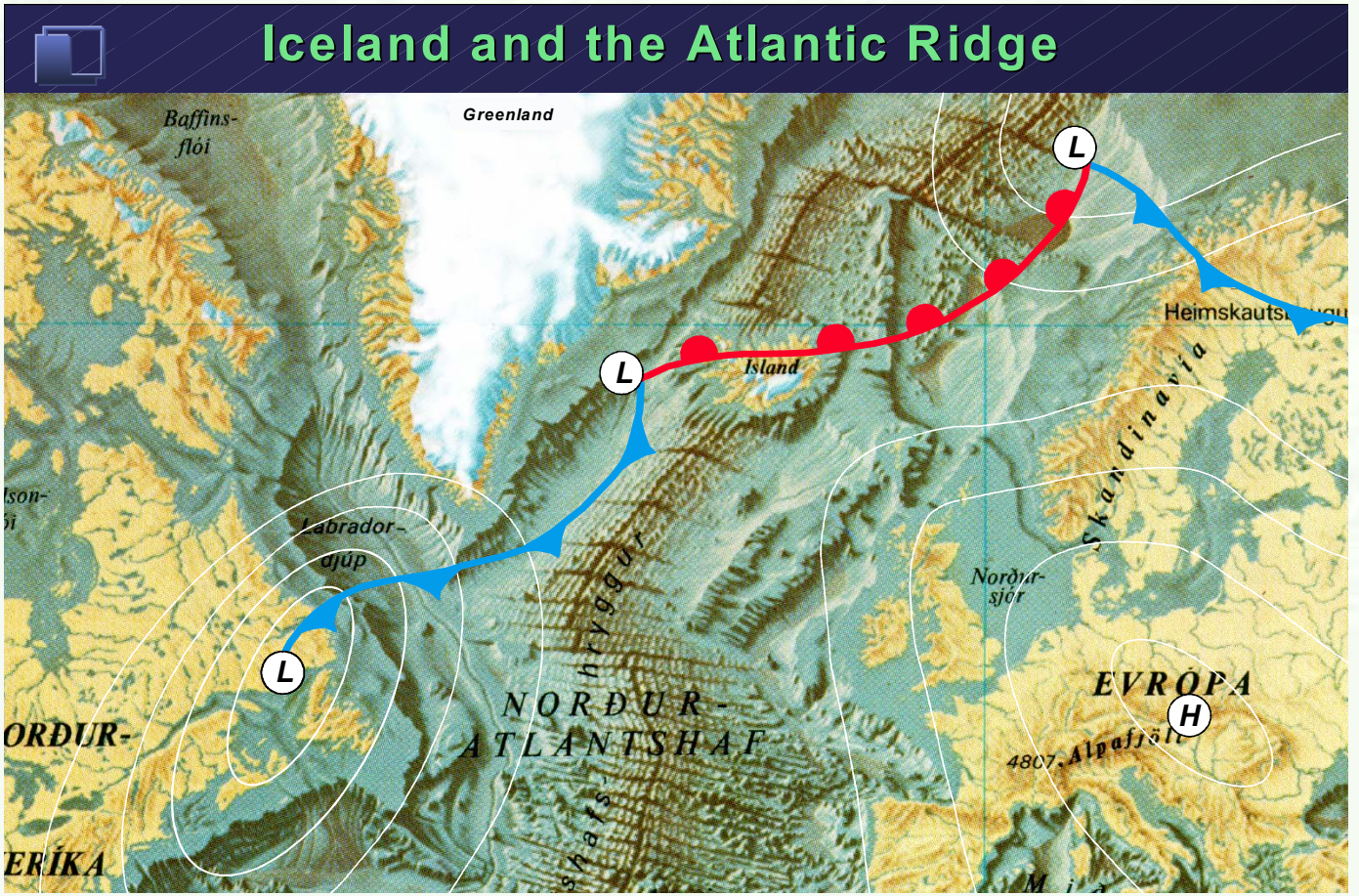
WP 7: Co-ordination and dissemination of results:

A Process Schemate for a Biorefinery.

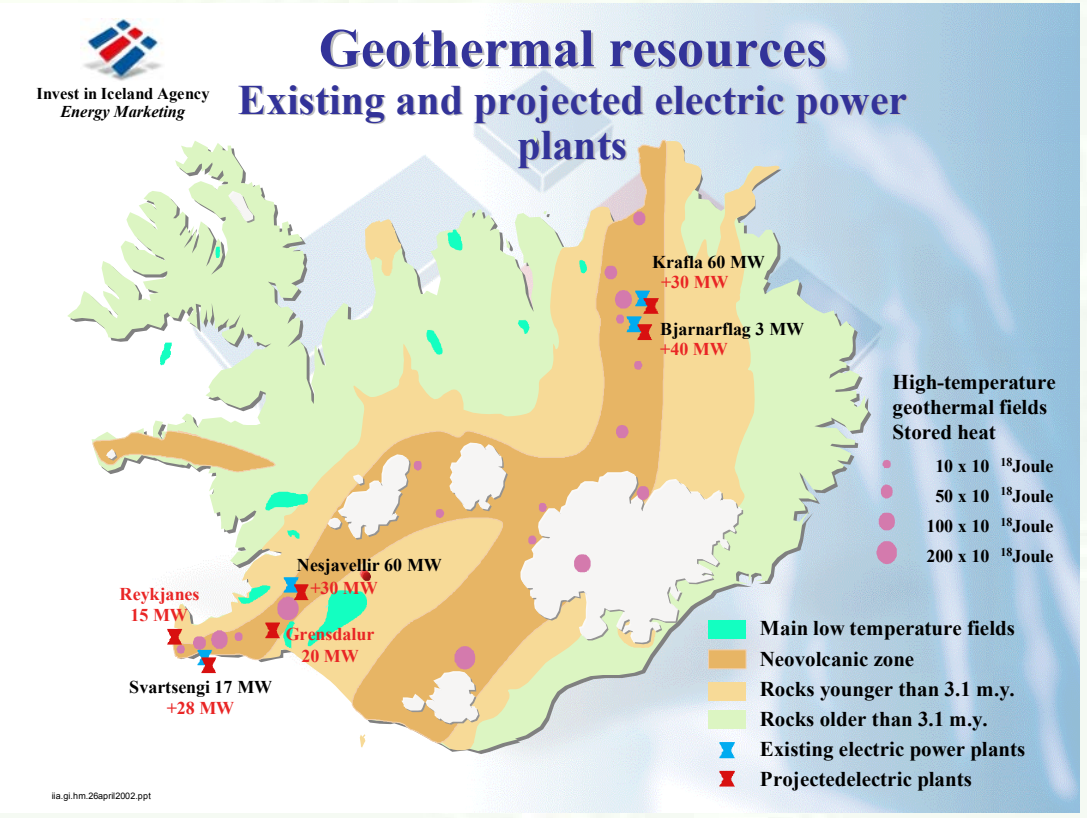


Simplyfied process diagram of the ATB/Potsdam University process

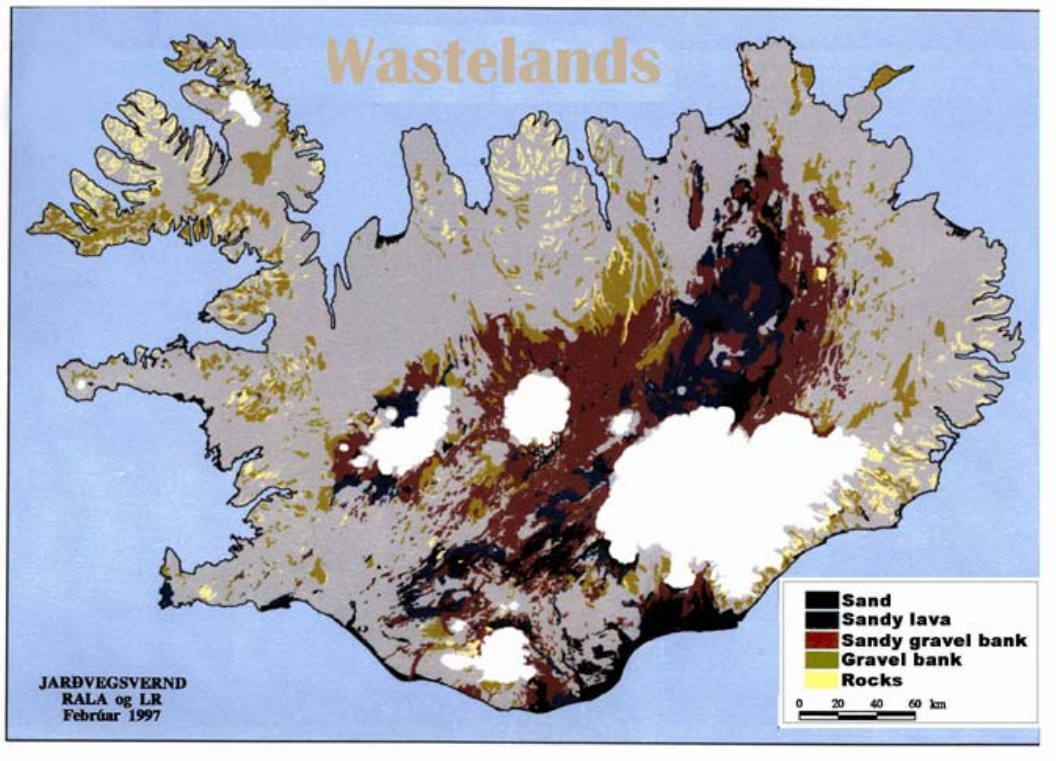
Iceland and the Atlantic Ridge



Geothermal potential in Iceland



Wastelands in Iceland



A Lupinefield in Iceland

Possible products:

- Ethanol.
- Carbon dioxide.
- Sparteine derivatives
- Animal feed
- Ethyl-lactate

Achievements

- Biomass procurement is being developed
- Alkaloid removal and sparteine derivatives processes are under development
- Ethanol and feed production processes hav been developed
- Development of new processes to produce

  Ethyl-lactate and Lactic acid are in development

Thank you all for listening