National Programme for Addressing Socio-Economic Challenges through R&D (RITA): bioeconomy

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Agenda

- National Programme for Addressing Socio-Economic Challenges through R&D (RITA)
- Bioeconomy Project:

  Bioeconomy value chain

  Biorefinery concepts and the use of primary/secondary resource streams in energy

  Sea as bioresource

National Programme for Addressing Socio-Economic Challenges through R&D (RITA)

Adopted on 31.12.2015.

RITA objectives:

1. Improve the role of state in setting priorities and strategic planning of R&D;
2. strengthen the capabilities of the Ministries in commissioning applied research needed by the state.
3. improve the capabilities of R&D institutions to conduct such research, thereby further strengthening the collaboration between state and R&D institutions.

We support the pursuit of socio-economical applied research, guided by the needs of the Estonian state in order to increase the role of the state in the strategic steering of research and the capabilities of R&D institutions in carrying out socially relevant research.

National Programme for Addressing Socio-Economic Challenges through R&D(RITA)

Total budget **28 063 051** €

ERF 85% ie 23 765 359 €;

Governmental cofinancing 5% ie 1 397 692 €;

Financing from ministries 10% ie 2 900 000 €.

RITA supports 5 topics:

1. Support of strategic R&D – 17 MEUR

2. Policy making through research – 5 MEUR

3. Support of scientific advisors in Ministries – 2,1 MEUR

4. Monitoring of implementation of R&D policy – 1,8 MEUR

5. IT systems (ETIS – Estonian Research Portal) – 1,5 MEUR

RITA

Support of strategic R&D :

top-down principle in selection of projects:

1. Ministries submit priority topics.
2. Research Council organizes discission with Ministries (scientific advisors), topics with highest level of common interest are selected (5-7 topics per call)
3. Proposal to finance topics to TAN (Governmental R&D Council) for opinion. RC responsible for finaal selection and wording of topics to be financed.
4. RC organizes calls (2016, 2018).
   Applicants consortia of R&D institutions.
   Budget of projects 0.5 – 1.5 MEUR (2 – 3 years), no cofinancing needed.
5. 2-stage evaluation (relevance + scientific evaluation).

RITA

Support of strategic R&D:

January 2016 info day for ministries

March 2016 collection of ideas from ministries, initial discussion

Each ministry could submit up to 3 ideas: 9 ministries submitted 16 topics (ideas)

May 2016 discission of consolidated topics, 16 topics were consolidated to 11

Voting, proposal for topics to be financed

Opinion from governmental R&D Council (TAN) – in September?

Proposal to finance 5 topics, including joint proposal from MoE, MoRA and MEC on bioeconomy

Bioeconomy value chains

Mapping the value chains, finding „bottle necks“ and components where public sector can help with measures, actions, financing etc.

6 value chains under review:

1. food and feed
2. wood
3. textile and clothing
4. chemicals, pharmacy and plastic products
5. fuels and energy
6. other ecosystem services connected to bioeconomy

Bioeconomy value chains - output

- Estonian bioeconomy value chains’ model
- Input for bioeconomy strategy – clear understanding of state’s role; specific measures, actions, suggestions.
- Understanding of bioeconomy potential in Estonia (market demand, production capability, technologies)
- Impacts from developing bioeconomy (migration, agriculture, industries, economy)

Biorefinery concepts and the use of primary/secondary resource streams in energy 1

- Around 90% of renewable energy in final consumption is bioenergy
- Bioenergy is impotant in electricity and heating BUT also as an exported commodity
- ENMAK 2030+ (energy strategy) draft points out that in 2030:
  - 10% local fuels in transport
  - 50% electricity from renewables
  - 0% imported electricity and 25% imported energy carriers
  - 66% reduction in energy intensity
- ENMAK 2030+ R&D needs in development already now

Biorefinery concepts and the use of primary/secondary resource streams in energy 2

- Bioresources in can be used to produce energy carriers of higher value or biochemicals with energy as a side-product
- Value chains analysed in
  - Thermochemical treatment of wood and other (solid) biomass for 2nd and 3rd generation biofuels and biochemicals
  - Anaerobic digestion and biogas/biomethane production
  - Biorefinery concept analysis

Biorefinery concepts and the use of primary/secondary resource streams in energy 3

- Output:
  - (pre-feasibility) analysis that can be used in policy and/or strategical development, done in collaboration with the industries and resource-holders
  - Feasible or proved nonfeasible biorefinery and regional primary/secondary feedstock use analysis
  - 1< projects that shall continue based on this work in collaboration with the industries and research institutions

Sea as bioresource

- The use of coastal and marine environment natural processes to decrease human induced environment pressures:
- Re-use of (incl human induced) exess of nutrients in the sea
- Knowledge and use of coastal and sea's natural processes can help decrease eutrophication
- Develops supplement opportunities for coastal communities, increase employment (vbl on niiviisi ka eesti keeles hea öelda – võimaldab tööhõivet suurendada), creates natural room of interaction between man and Nature (environment)
- Use of coastal and marine environment natural processes for improving environmental status can be treated as a specific environmental measure that State can support till it has roots in the socio-economic niche.

Discussion