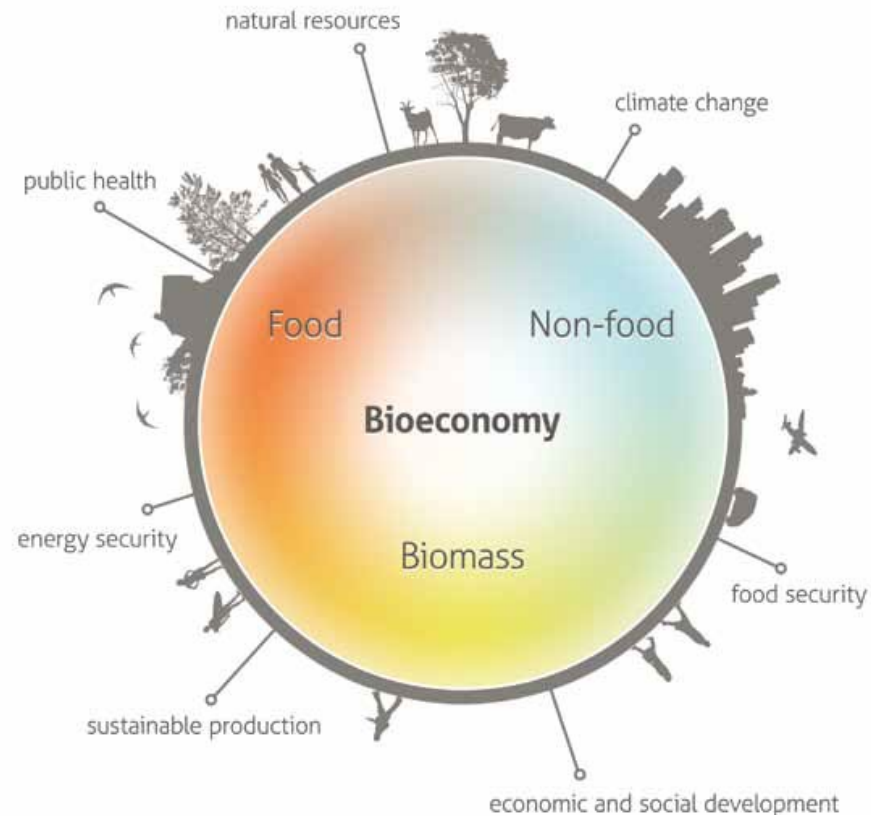




RN21 – Innovation in the Natural Resin Sector to Strengthen National Bioeconomy

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The European Bioeconomy in 2030



1. Sustainable management of natural resources;
2. Sustainable production;
3. Improving public health;
4. Climate change mitigation;
5. Integrating and balancing social developments;
6. Global sustainable development;

Challenge 1 & 2

Sustainable Management of Natural Resources & Sustainable Production



1. Managing natural resources sustainably is a crucial starting point;
2. Minimize unnecessary waste and efficiently recycle unavoidable waste;
3. The forestry sector holds significant potential for the cascading use of renewable raw materials to create a variety of innovative value-added products.

Recovery and Resilience Program

Component 12 - Sustainable Bioeconomy

Textile and Apparel sector



Footwear sector

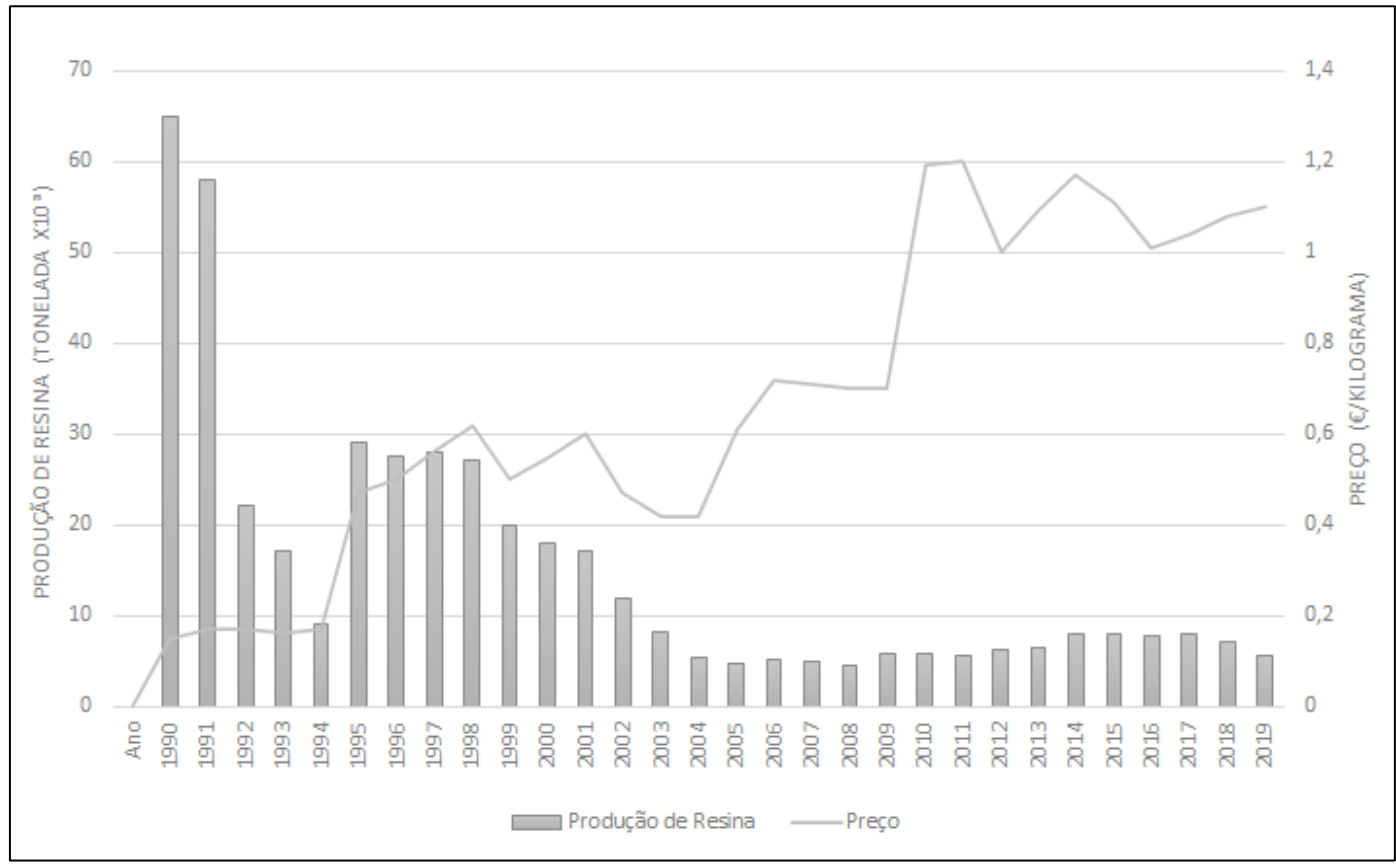


Natural Resin sector



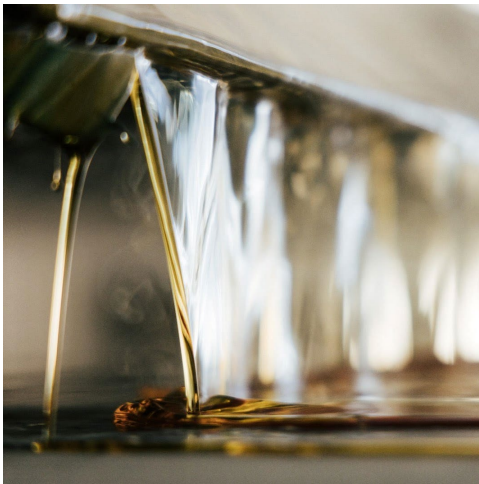


Integrated Project RN21



Evolution of resin production and prices (Source: Adapted from INE Portal)

Guiding principles



Enclose the entire **value chain of NR**, from the forest to the end user



Addresse the **key needs and specific opportunities** identified by NR stakeholders;



Contribute to **the goals of the PRR**, specifically within Component C12 - Sustainable Bioeconomy.



SUSTAINABLE GOALS
DEVELOPMENT



The RN21 Consortium



Integrated Project

Os pilares não estão por ordem!

Pillar

II

Strengthening the sustainability of the transformation industry

- Industrial investment and value chain support;
- Development of new products and applications for gum rosin derivatives;
- Industrial Simbioses.

Pillar

I

Promoting the production of portuguese Natural Resin

- Reinforcing the productive capacity of the pine forests;
- Increase resin extraction productivity;
- Training program for resin tapping;
- Make resin extraction more attractive to the forest owners.

Pillar

III

Positive differentiation of Natural Resin and its derivatives

- New brand to differentiate products containing Natural Resin;
- Technical journal;
- Marketing campaign.

Integrated Project Pillar I

R&D activities;
Genetic improvement;
Forest management;
Forest engineering;
Training



Integrated Project Pillar II

New formulations and new processes for the transformation of natural resin;

Optimization of industrial processes through digitization, better resource utilization, and efficiency gains.

Use of derivatives from Natural Resin instead of those from fossil origin.

Replace fossil origin materials by bio-based materials



Integrated Project RN21

Pillar III

Promote the valorization of Natural Resin

Create a brand for Natural Resin derived products

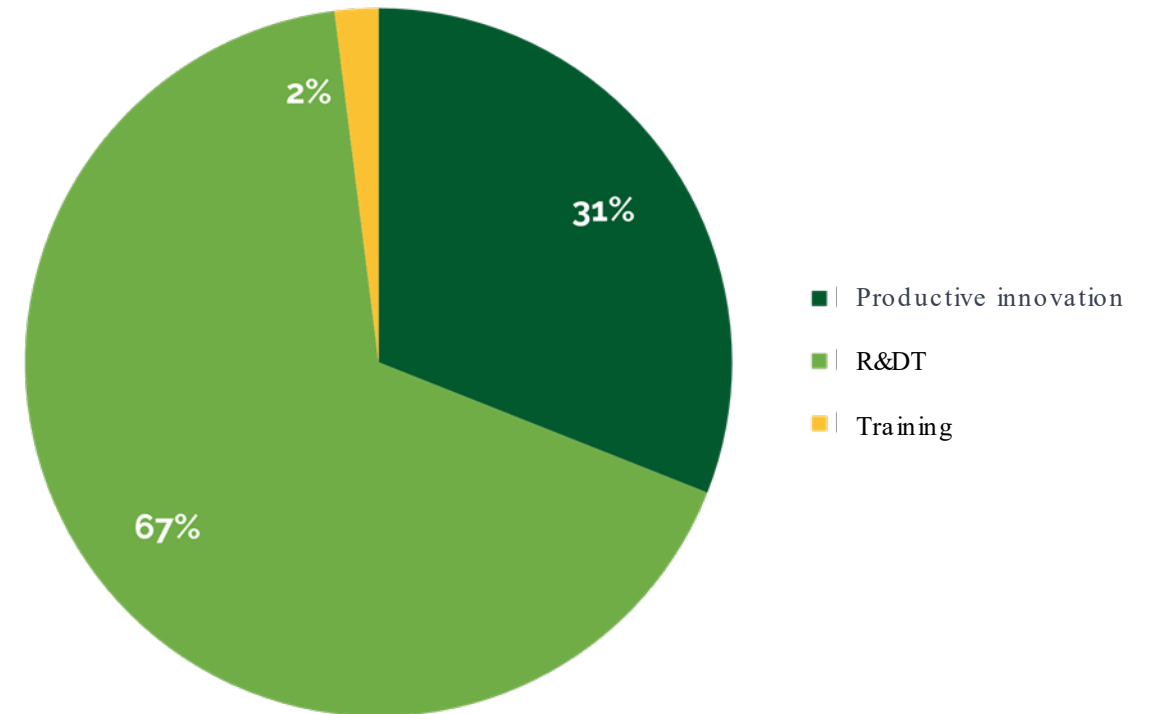
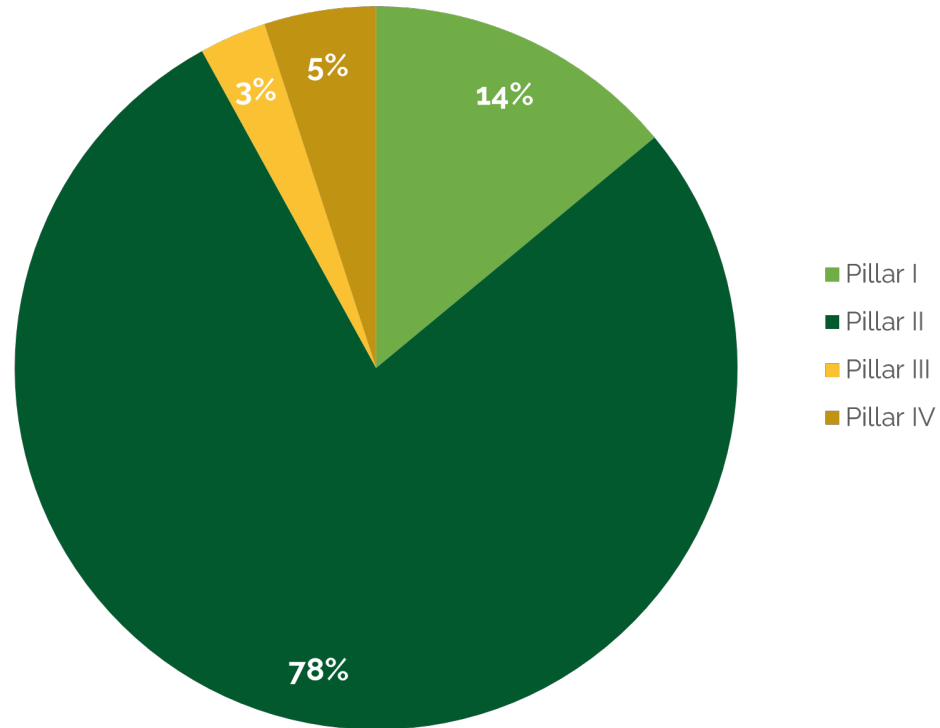




RN21 in numbers



RN21 in numbers



Expected Impact RN21

Contribute to territorial cohesion;

Promote Natural Resin as a 'bio' and sustainable product;

Environmental, economic, and social gains for the entire country;

Expanded range of market applications;

Natural Resin as a viable alternative to hydrocarbon-derived resins;



Thank you for the attention!

