Theme	Sub-theme	Research topic
1. Forest and fire management	**1.1 Landscape scale management**	1.1.1 Integrated Landscape Management and Planning 1.1.2 Tools for monitoring land use and land change 1.1.3 Preventive planning and forestry models
	1.2 Sustainable management of forests	1.2.1 Transfer results from genetic improvement programs for final users 1.2.2 New cloning protocols for genetically improved species 1.2.3 Improve forest management methods, models and tools for higher productivity and adaptability, and for addressing conservation goals 1.2.4 Forest management and planning at different spatial and temporal scales, including post-fire emergency stabilization 1.2.5 Plant-level resistance and adaptation to fire and climate change
	1.3 Multi-functional forestry and ecosystem services	1.3.1 New multi-functional forest models 1.3.2 Ecosystem services
2. Risk management	**2.1 Fuel management**	2.1.1 Fuel treatments, with and without fire (including agro-forestry practices) and fuel management performance (e.g., fuel breaks) 2.1.2 Fuel-complex load and structure and fuel dynamics (e.g., fuel load modeling)
	2.2 Community prevention	2.2.1 Human-caused ignitions management 2.2.2 Communities' preparedness (urban and house planning and construction in the WUI and fire wise communities)
	2.3 Fire suppression system design and management	2.3.1 Suppression system inefficiencies management and extreme fire behavior 2.3.2 Flexible redesign of the suppression system to mitigate the impact of inefficiencies 2.3.3 Fire meteorology
	2.4 Risks and impact management	2.4.1 Increase the resilience of forests through new silvicultural models 2.4.2 Next-generation of plans for forest health
	2.5 Ecosystem restoration	2.5.1 Guidelines and solutions to restore forests after the occurrence of natural hazards 2.5.2 Control of fire-resilient invasive species
3. Circular economy and value chains	**3.1 Mobilization and uses of biomass**	3.1.1 Design of sustainable and efficient biomass supply chains and logistics 3.1.2 Foster the adoption of adequate equipment for biomass collection and transport, specially for non-used biomass from DFCI 3.1.3 Characterize the biomass supply chains at national and regional level and provide support to the definition of sectorial strategies and policies 3.1.4 Harvesting, logistics and appraisal of burned wood
	3.2 Secured wood supply, forest operations	3.2.1 Design of sustainable and collaborative forest-based supply chains 3.2.2 Research on the use of electric vehicles in the transport forest-mill 3.2.3 Develop intelligent forest operation systems and new human-machine-terrain interactions linked to supply-chain systems
	3.3 Emergency logistics	3.3.1 Suppression Logistics 3.3.2 Occupational health of firefighters
	3.4 New challenges driven by circular economy	3.4.1 Rethinking forest-based products and production processes in the framework of circular economy 3.4.2 Supporting emerging biorefinery projects for converting forest biomass into bio-fuels and bio-products 3.4.3 New wood-based packaging solutions 3.4.4 Improve reutilization of industrial by-products for example in silviculture, in order to improve organic matter and soil conservation
4. Key enabling technologies	**4.1 Decision Support Systems**	4.1.1 Forecasting: fuel management planning, fire simulators and post-fire risk assessment 4.1.2 Risk management: rapid assessment of values at risk and probabilistic fire simulation 4.1.3 Integration of information systems in the fire suppression decision-making processes 4.1.4 Warning and communication systems for disaster management 4.1.5 Tools for optimizing forest logistics and securing supply
	4.2 IoT for Forests and Fire Management	4.2.1 Ignition detection and fire monitoring issues 4.2.2 Firefighters safety (remote sensing) 4.2.3 Technologies, models and tools for low-cost collection of forest-related data
	4.3 Forest 4.0 and mechanization	4.3.1 Forest 4.0. concepts and technologies to support daily activities of forest practitioners and small holders including smart apps for forestry inventory 4.3.2 Forest 4.0. concepts and technologies for the forest industry 4.3.3 Mechanization solutions for forest operations adapted to the national context
5. People, forests, and fire	**5.1 Risk attitudes and risky behaviours**	5.1.1 Attitudes and behaviors regarding fire prevention, including collaborative approaches and communities' protection and safety 5.1.2 Attitudes and behaviors regarding fire suppression, including collaborative approaches 5.1.3 Attitudes and behaviors regarding post-fire restoration, including collaborative approaches 5.1.4 Risk communication
	5.2 Socioecological systems	5.2.1 Social, economic and ecological interactions 5.2.2 Establish and communicate the value of rural areas 5.2.3 Social-economic studies of forestland owners and design new ways to promote higher engagement towards forest management
6. Policy and system design	**6.1 Natural resources governance**	6.1.1 Risk governance 6.1.2 Stakeholders management 6.1.3 Adoption barriers and implementation management 6.1.4 Training and collaboration in education programs
	6.2 Policy assessment and design	6.2.1 Policy recommendations and regulation on post-fire land management 6.2.2 (Economic) evaluation of the investment mix 6.2.3 Support the design of policies and incentives related to the forest sector 6.2.4 Assessment and design of instruments to support forest investment 6.2.5 Organizational models and tools for landowners collective action 6.2.6 Study the impacts of public policies on economy decarbonisation on the biomass sub-sector