ANNEX III

SUCCESSFUL AI-ENABLED PROJECTS ON SUSTAINABLE ENVIRONMENT AND ENERGY

RESET Restarting the Economy in Support of Environment, through Technology

ID: 101017857

From: 1 January 2021 to: 30 June 2024

Time is running out to achieve a more sustainable development. Post COVID-19 economic stimuli need to deploy a green new deal (GND) that ReSETs economic systems to create secure and meaningful employment whilst protecting nature for people, for climate change and flood...

Coordinated in: United Kingdom

Programme: EXCELLENT SCIENCE - Future and Emerging Technologies (FET), FET

Proactive

Last update: 28 December 2023

Add to my booklet

<u>Final Report Summary - UNDERSAFE (Wireless intelligent system for environmental evaluation, safety monitoring and guidance for recreational and Ecotourism underground activities)</u>

Undersafe is a system which will provide constant, round-the-clock monitoring of environmental and other conditions in underground sites open for recreational and tourist purposes. The UnderSafe system is based on wireless technologies. The objective is to...

Project: UNDERSAFE (ID: 286176)

Programme: Specific Programme "Capacities": Research for the benefit of SMEs

Last update: 13 November 2014

Add to my booklet

<u>Periodic Reporting for period 1 - SAFERS (Structured Approaches for Forest fire Emergencies in Resilient Societies)</u>

Forest fires are exacerbated by extreme weather conditions, which are increasing both in frequency and in magnitude due to climate change. Globally, massive fires have swept through forests and other landscapes in an alarming rate, resulting in the loss of human lives...

Project: SAFERS (ID: 869353)

Programme: <u>Developing comprehensive and sustained global environmental observation and</u> information systems

Last update: 22 September 2022

Add to my booklet

Final Report Summary - KLEAN (Knowledge-based EFB for green flight trajectory decision aid)

The objective of the KLEAN (Knowledge-based EFB for green flight trajectory decision aid) project has been the development of a custom knowledge-based EFB (Electronic Flight Bag) with SW packages implementing Advanced Weather Radar Post-processor (AWRP) and...

Project: <u>KLEAN</u> (ID: 306927)

Programme: Specific Programme "Cooperation": Joint Technology Initiatives

Last update: 29 December 2015

Add to my booklet

<u>CROWD4SDG Citizen Science for Monitoring Climate Impacts and Achieving Climate</u> Resilience

ID: 872944

From: 1 May 2020 to: 30 April 2023

The 17 Sustainable Development Goals (SDGs), launched by the UN in 2015, are underpinned by 169 concrete targets and 232 measurable indicators. Some of these indicators have no established measurement methodology. For others, many countries do not have the data collection...

Coordinated in: Switzerland

Programme: Integrate society in science and innovation issues, policies and activities in order to integrate citizens' interests and values and to increase the quality, relevance, social acceptability and sustainability of research and innovation outcomes in various fields of activity from social innovation to areas such as biotechnology and nanotechnology

Last update: 18 December 2023

Add to my booklet

<u>Final Report Summary - SMARTOPENDATA (Linked Open Data for environment protection in Smart Regions)</u>

The SmartOpenData project has completed the creation of a Linked Open Data -LOD-infrastructure extended throughout Europe. This research infrastructure has five different pilots as one of its most visible outcomes. Nevertheless, those tools and applications...

Project: <u>SMARTOPENDATA</u> (ID: 603824)

Programme: Specific Programme "Cooperation": Environment (including Climate Change)

Last update: 2 June 2016 Add to my booklet

Final ReportSummary - BOVINOSE (Pheromone-based sensor system for detecting estrus in dairy cows)

In order to control the calving interval, and therefore to optimise milk production and maximise offspring in dairy cattle, artificial insemination (AI) is widely used. Currently, the conception rate of AI varies from 30 % to 70 %, and a successful insemination depends mainly ...

Project: BOVINOSE (ID: 232460)

Programme: Specific Programme "Capacities": Research for the benefit of SMEs

Last update: 17 June 2013 Add to my booklet

Periodic Reporting for period 3 - IntelliAQ (Artificial Intelligence for Air Quality)

Status 31 May 2021Artificial Intelligence (AI) is experiencing a wave of enthusiasm, since ground-breaking results have been published on cognitive problems such as image and speech recognition, automated language translation, robotics, and strategic games. This has become...

Project: IntelliAQ (ID: 787576)

Programme: EXCELLENT SCIENCE - European Research Council (ERC)

Last update: 30 June 2023

GECKO building GrEener and more sustainable soCieties by filling the Knowledge gap in social science and engineering to enable responsible artificial intelligence co-creatiOn

ID: 955422

From: 1 January 2021 to: 31 December 2024

GECKO will focus on accountable, responsible, and transparent artificial intelligence (ART AI) to address urgent environmental needs and support the European Green Deal and AI ecosystem, ensuring that all citizens benefit from the sustainable green transition. The EC AI...

Coordinated in: Germany

Programme: <u>EXCELLENT SCIENCE - Marie Skłodowska-Curie Actions</u>, <u>Fostering new</u>

skills by means of excellent initial training of researchers

Last update: 29 January 2024

Add to my booklet

ANTARES Centre of Excellence for Advanced Technologies in Sustainable Agriculture and Food Security

ID: 739570

From: 1 March 2017 to: 28 February 2025

Agriculture is facing enormous challenges today. Not only does it have to provide enough safe and healthy food for the ever-increasing Earth's population, it is also expected to offer alternatives to fossil fuels and to protect the non-renewable resources such as soil, water...

Coordinated in: Serbia

Programme: Teaming of excellent research institutions and low performing RDI regions

Last update: 30 June 2023

Add to my booklet

NARSIS New Approach to Reactor Safety ImprovementS

ID: 755439

From: 1 September 2017 to: 28 February 2022

Probabilistic Safety Assessment (PSA) procedures allow to better understand and estimate the likelihood of the most causes prone to initiate nuclear accidents and to identify the most critical elements of the systems. However, despite of the remarkable reliability of current...

Coordinated in: France

Programme: Euratom, Support safe operation of nuclear systems

Last update: 6 February 2024

Add to my booklet

ACHIEF Innovative high performance Alloys and Coatings for HIghly Efficient intensive energy processes

ID: 958374

From: 1 October 2020 to: 31 March 2024

The ACHIEF project will develop novel efficient materials-based solutions enabling to meet extreme and fluctuating conditions currently employed in Energy Intensive Industries (EII) through the utilization of an Artificial Intelligent combined Modelling approach for the design...

Coordinated in: France

Programme: <u>Sustainable</u>, resource-efficient and low-carbon technologies in energy-intensive process industries, <u>INDUSTRIAL LEADERSHIP</u> - <u>Leadership in enabling and industrial</u> technologies - Advanced manufacturing and processing

Last update: 5 February 2024

TWAIN Integrated, Value-based and Multi-objective wind farm control powered by Artificial Intelligence

ID: 101122194

From: 1 November 2023 to: 31 October 2027

For reliable and affordable design and operation of wind power plants that also consider system-level stability and security as well as the surrounding natural and social environment, coordinated wind farm control (WFC) and asset management solutions play an important role...

Coordinated in: Denmark

Programme: Energy Supply, Climate, Energy and Mobility

Last update: 8 September 2023

Add to my booklet

Smart FDP Smart Digital Solution for Field Development Planning Optimization

ID: 101111369

From: 1 September 2023 to: 31 August 2025

To meet the world's energy demands specifically with "easy oil" reservoirs depleting, it is important to optimize production and field development planning (FDP). This will be even more pronounced in the years to come if pore space is to be used to store CO2 or hydrogen in...

Coordinated in: Norway

Programme: Marie Skłodowska-Curie Actions (MSCA)

Last update: 25 July 2023 Add to my booklet

NEXOGENESIS Facilitating the next generation of effective and intelligent water-related policies utilising artificial intelligence and reinforcement learning to assess the water-energy-food-ecosystem (WEFE) nexus

ID: 101003881

From: 1 September 2021 to: 31 August 2025

Water, energy, food, and ecosystems (WEFE) are interconnected, comprising a coherent system (nexus) dominated by complexity and modulated by climatic and socio-economic drivers. Resource constraints, and their interconnectedness could hamper economic development, including...

Coordinated in: Netherlands

Programme: <u>SOCIETAL CHALLENGES - Climate action</u>, <u>Environment</u>, <u>Resource Efficiency and Raw Materials</u>, <u>Fighting and adapting to climate change</u>, <u>Protection of the environment</u>, <u>sustainable management of natural resources</u>, <u>water</u>, <u>biodiversity and ecosystems</u>

Last update: 30 January 2024

Add to my booklet

AHEAD TowArd sustainable foresigHt capabilitiEs for increAseD Civil Security

ID: 101121338

From: 1 September 2023 to: 28 February 2026

With the rise of potentially disruptive technologies such as artificial intelligence and virtual reality, a particular challenge has emerged for LEAs and other civil security practitioners. Tasked with fostering safe societies and protecting European citizens from new forms...

Coordinated in: France

Programme: Disaster-Resilient Societies, Protection and Security, Civil Security for Society

Last update: 22 September 2023

FEROX Fostering and Enabling AI, Data and Robotics Technologies for Supporting Human Workers in Harvesting Wild Food

ID: 101070440

From: 1 September 2022 to: 31 August 2025

Wild berries and mushrooms are considered to be a national treasure of Nordic countries. These food products require zero resources to cultivate as they grow naturally in the forests. It is estimated that less than 10% of the total annual wild berry crop is harvested from the...

Coordinated in: Italy

Programme: Digital, Industry and Space, Artificial Intelligence and Robotics

Last update: 23 August 2022

Add to my booklet

SMART5GRID Smart5Grid - Demonstration of 5G solutions for SMART energy GRIDs of the future

ID: 101016912

From: 1 January 2021 to: 30 April 2024

5G is envisioned to be the first global technology standard that will address the variety of future use cases of the energy sector, by ensuring that both the radio and core network performance requirements can be met in terms of end-to-end latency, reliability and...

Coordinated in: Italy

Programme: INDUSTRIAL LEADERSHIP - Leadership in enabling and industrial

technologies - Information and Communication Technologies (ICT)

Last update: 5 February 2024

Add to my booklet

BioDT Biodiversity Digital Twin for Advanced Modelling, Simulation and Prediction Capabilities

ID: 101057437

From: 1 June 2022 to: 31 May 2025

With our planet facing an increasing reduction in biodiversity, it is of the utmost importance to understand the way climate, humans, pollution and other factors affect biodiversity. This need is urgent since biodiversity loss directly impacts our ability as humans to live...

Coordinated in: Finland

Programme: Research infrastructures, The innovation potential of European Research Infrastructures and activities for Innovation and Training

Last update: 4 May 2023 Add to my booklet

HiDALGO HPC and Big Data Technologies for Global Systems

ID: 824115

From: 1 December 2018 to: 28 February 2022

Developing evidence and understanding concerning Global Challenges and their underlying parameters is rapidly becoming a vital challenge for modern societies. Various examples, such as health care, the transition of green technologies or the evolution of the global climate up...

Coordinated in: Spain

Programme: <u>Development</u>, <u>deployment</u> and <u>operation</u> of <u>ICT-based e-infrastructures</u>, <u>EXCELLENT SCIENCE - Research Infrastructures</u>

Last update: 7 September 2023

Add to my booklet

BIM-SPEED Harmonised Building Information Speedway for Energy-Efficient Renovation

ID: 820553

From: 1 November 2018 to: 31 October 2022

'BIM for renovation of existing residential building stock' has been proven viable in innovative pilot projects by the members of BIM-SPEED consortium, among others in H2020 Smart Cities. The mission of BIM-SPEED is to take 'BIM for renovation' to a deep renovation...

Coordinated in: Germany

Programme: <u>Technologies enabling energy-efficient systems and energy-efficient buildings</u> with a low environmental impact, <u>INDUSTRIAL LEADERSHIP - Leadership in enabling and</u> industrial technologies - Advanced manufacturing and processing

Last update: 30 November 2023

Add to my booklet

NEANIAS Novel EOSC services for Emerging Atmosphere, Underwater and Space Challenges

ID: 863448

From: 1 November 2019 to: 31 October 2022

NEANIAS is an ambitious project that comprehensively addresses the 'Prototyping New Innovative Services' challenge set out in the recent 'Roadmap for EOSC' foreseen actions. NEANIAS will drive the co-design, delivery, and integration into EOSC of innovative thematic...

Coordinated in: Greece

Programme: <u>Development</u>, <u>deployment</u> and <u>operation</u> of <u>ICT-based e-infrastructures</u>, <u>EXCELLENT SCIENCE - Research Infrastructures</u>

Last update: 18 January 2024

Add to my booklet

INTCATCH Development and application of Novel, Integrated Tools for monitoring and managing Catchments

ID: 689341

From: 1 June 2016 to: 31 January 2020

INTCATCH will instigate a paradigm shift in the monitoring and management of surface water quality that is fit for global waters in the period 2020-2050. INTCATCH will do this by developing efficient, user-friendly water monitoring strategies and systems based on innovative...

Coordinated in: United Kingdom

Programme: <u>SOCIETAL CHALLENGES - Climate action, Environment, Resource</u> Efficiency and Raw Materials, Enabling the transition towards a green economy and society

through eco-innovation
Last update: 17 August 2022

Add to my booklet

RELIANCE REsearch LIfecycle mAnagemeNt for Earth Science Communities and CopErnicus users in EOSC

ID: 101017501

From: 1 January 2021 to: 30 June 2023

RELIANCE will extend the EOSC service offering with a set of industry-strong, innovative, interconnected services for the open, efficient, and cross-disciplinary management of the

research lifecycle. In accordance with FAIR and Open Science principles, it will adopt a holistic...

Coordinated in: Poland

Programme: <u>Development</u>, <u>deployment</u> and <u>operation</u> of <u>ICT-based</u> e-<u>infrastructures</u>, <u>EXCELLENT SCIENCE</u> - <u>Research Infrastructures</u>

Last update: 30 January 2024

Add to my booklet

sustAGE Smart environments for person-centered sustainable work and well-being

ID: 826506

From: 1 January 2019 to: 30 June 2022

"sustAGE aims to develop a person-centered solution for promoting the concept of ""sustainable work"" for EU industries. The project provides a paradigm shift in human machine interaction, building upon seven strategic technology trends, IoT, Machine learning, micro-moments...

Coordinated in: Greece

Programme: <u>SOCIETAL CHALLENGES - Health, demographic change and wellbeing</u>, <u>Active ageing</u>, independent and assisted living, <u>Individual awareness and</u> empowerment for self-management of health

Last update: 28 December 2022

Add to my booklet

<u>Water-Futures Smart Water Futures: designing the next generation of urban drinking water systems</u>

ID: 951424

From: 1 August 2021 to: 31 July 2027

The world population living in urban settlements is expected to increase to 70% of 9.7 billion by 2050. Historically, as cities grew, new water infrastructures followed as needed. However, these developments had less to do with real planning than with reacting to crisis...

Coordinated in: Cyprus

Programme: EXCELLENT SCIENCE - European Research Council (ERC)

Last update: 30 January 2024

Add to my booklet

SHIP2FAIR Solar Heat for Industrial Process towards Food and Agro Industries Commitment in Renewables

ID: 792276

From: 1 April 2018 to: 30 June 2023

SHIP2FAIR aims to foster the integration of solar heat in industrial processes (SHIP) from the agro—food sector, by developing and demonstrating a set of tools and methods for the development of industrial solar heat projects during its whole life-cycle. Thus, the project...

Coordinated in: Spain

Programme: SOCIETAL CHALLENGES - Secure, clean and efficient energy, Low-cost,

<u>low-carbon energy supply</u> Last update: 1 February 2024

Add to my booklet

BioMedaqu Aquaculture meets Biomedicine: Innovation in Skeletal Health research.

ID: 766347

From: 1 August 2018 to: 31 January 2023

Skeletal anomalies in farmed fish are a continuous problem for global aquaculture, affecting fish welfare, performance, and product quality. Aquaculture research has made considerable progress in reducing the incidence of deformities, but new species, intensified production...

Coordinated in: Belgium

Programme: EXCELLENT SCIENCE - Marie Skłodowska-Curie Actions, Fostering new

skills by means of excellent initial training of researchers

Last update: 1 February 2024

Add to my booklet

CHARTER Drivers and Feedbacks of Changes in Arctic Terrestrial Biodiversity

ID: 869471

From: 1 August 2020 to: 31 January 2025

CHARTER aims to advance state-of-the-art (SOTA) knowledge on Arctic biodiversity change and social-ecological systems (SES) on four critical fronts: i) Feedbacks: To understand transitions in vegetation cover, energy balance and cryospheric change at centennial, decadal, and...

Coordinated in: Finland

Programme: SOCIETAL CHALLENGES - Climate action, Environment, Resource

Efficiency and Raw Materials, Fighting and adapting to climate change

Last update: 19 January 2024

Add to my booklet

DRAGON Data Driven Precision Agriculture Services and Skill Acquisition

ID: 810775

From: 1 October 2018 to: 31 January 2022

"Precision Agriculture (PA) is an evolving farming management strategy using digital technologies & techniques to monitor and optimise agricultural production processes. PA methods, harnessing data streams from satellites, mobile phones, Internet of Things (IoT) and...

Coordinated in: Serbia

Programme: Twinning of research institutions

Last update: 11 October 2022

Add to my booklet

Tech4Biowaste A dynamic database of relevant technologies of bio-waste utilisation

ID: 101023200

From: 1 April 2021 to: 31 March 2023

"Bio-waste is a key waste stream in Europe with a high potential for contributing to a more circular economy. The Tech4Biowaste project will pave the way for deployment of bio-waste technologies and technology configurations by setting-up a database providing a comprehensive...

Coordinated in: Netherlands

Programme: INDUSTRIAL LEADERSHIP - Leadership in enabling and industrial technologies — Biotechnology, SOCIETAL CHALLENGES - Food security, sustainable agriculture and forestry, marine, maritime and inland water research, and the

bioeconomy, Bio-based Industries Joint Technology Initiative (BBI-JTI)

Last update: 14 November 2023

FLEXGRID A novel smart grid architecture that facilitates high RES penetration through innovative markets towards efficient interaction between advanced electricity grid management and intelligent stakeholders

ID: 863876

From: 1 October 2019 to: 30 September 2022

Future smart grids require the effective interaction between energy markets and electricity grid management systems in order to introduce new services and mitigate risks introduced by high RES penetration. FLEXGRID envisages the orchestration and integration of: i) advanced...

Coordinated in: Greece

Programme: SOCIETAL CHALLENGES - Secure, clean and efficient energy, A single,

smart European electricity grid Last update: 7 May 2023

Add to my booklet

EXCITE2 Enhanced X(cross)-disciplinary Community-driven Imaging Technologies for Earth and Environmental material research

ID: 101131765

From: 1 April 2024 to: 31 March 2028

The EXCITE² Network is revolutionizing Earth and environmental material science research by consolidating a critical mass of 18 research facilities in 12 European and associated partner countries into a unified infrastructure and providing transnational access to advanced...

Coordinated in: Netherlands

Programme: Research infrastructures, Opening, Integrating and Interconnecting Research

<u>Infrastructures</u>

Last update: 3 November 2023

Add to my booklet

DT-GEO A Digital Twin for GEOphysical extremes

ID: 101058129

From: 1 September 2022 to: 31 August 2025

With present computational capabilities and data volumes entering the Exascale Era, digital twins of the Earth system will be able to mimic the different system components (atmosphere, ocean, land, lithosphere) with unrivaled precision, providing analyses, forecasts, and what...

Coordinated in: Spain

Programme: Research infrastructures, The innovation potential of European Research Infrastructures and activities for Innovation and Training

Last update: 14 September 2022

Add to my booklet

LEWIS Landslide early-warning integrated system

ID: EVG1-CT-2001-00055

From: 1 March 2002 to: 31 August 2005

The LEWIS project develops a new integrated Earth Observation (EO) approach for producing landslide-warning maps. It first uses the analysis of historical multi-source satellite data for the detection of surface feature changes related to causative and triggering mechanisms th...

Coordinated in: Italy

Programme: Programme for research, technological development and demonstration on

"Energy, environment and sustainable development, 1998-2002"

Last update: 9 December 2005

Add to my booklet

PLASCAT Plasma-assisted catalysis for the removal of volatile organic compounds from waste gas stream

ID: 7801

From: 1 October 2005 to: 30 September 2007

The purpose of this project is to investigate the effectiveness of the novel hybrid technology of plasma-assisted catalysis as a means for environmental clean-up of polluted, waste gaseous emissions and to gain a fundamental understanding of the synergistic effects that result...

Coordinated in: United Kingdom

Programme: <u>Human resources and Mobility in the specific programme for research, technological development and demonstration "Structuring the European Research Area"</u> under the Sixth Framework Programme 2002-2006

Last update: 10 March 2023

Add to my booklet

NanoSolveIT Innovative Nanoinformatics models and tools: towards a Solid, verified and Integrated Approach to Predictive (eco)Toxicology (NanoSolveIT)

ID: 814572

From: 1 January 2019 to: 31 August 2023

NanoSolveIT will introduce a ground-breaking in silico Integrated Approach to Testing and Assessment (IATA) for the environmental health and safety of Nanomaterials (NM), implemented as a decision support system packaged as a standalone open software and a Cloud platform...

Coordinated in: Cyprus

Programme: <u>INDUSTRIAL LEADERSHIP - Leadership in enabling and industrial</u> technologies - Advanced materials, <u>INDUSTRIAL LEADERSHIP - Leadership in enabling</u> and industrial technologies - Nanotechnologies

Last update: 14 November 2023

Add to my booklet

REXUS MANAGING RESILIENT NEXUS SYSTEMS THROUGH PARTICIPATORY SYSTEMS DYNAMICS MODELLING

ID: 101003632

From: 1 May 2021 to: 30 April 2024

REXUS ambitious goal is to bring transformative change in the way our societies approach the Water Food Energy Climate Nexus. The project argues that this is possible only through the activation of inclusive nexus partnerships, the Learning & Action Alliances (LAAs).

The...

Coordinated in: Spain

Programme: <u>SOCIETAL CHALLENGES - Climate action, Environment, Resource</u> <u>Efficiency and Raw Materials, Fighting and adapting to climate change, Protection of the environment, sustainable management of natural resources, water, biodiversity and ecosystems</u>

Last update: 27 December 2023

Add to my booklet

RISE Real-time Earthquake Risk Reduction for a Resilient Europe

ID: 821115

From: 1 September 2019 to: 31 May 2023

The key concept and vision of RISE is to promote a paradigm shift in how earthquake risk is perceived and managed. We believe that by taking advantage of advances in scientific

understanding, and dramatically changing technological capabilities, earthquake hazard and risk will...

Coordinated in: Switzerland

Programme: Provide knowledge and tools for effective decision making and public engagement, SOCIETAL CHALLENGES - Climate action, Environment, Resource

Efficiency and Raw Materials
Last update: 1 February 2024

Add to my booklet

INSHIP Integrating National Research Agendas on Solar Heat for Industrial Processes

ID: 731287

From: 1 January 2017 to: 31 December 2020

Despite process heat is recognized as the application with highest potential among solar heating and cooling applications, Solar Heat for Industrial Processes (SHIP) still presents a modest share of about 0.3% of total installed solar thermal capacity. As of today's...

Coordinated in: Germany

Programme: <u>SOCIETAL CHALLENGES - Secure</u>, clean and efficient energy, <u>New knowledge and technologies</u>, <u>Low-cost</u>, <u>low-carbon energy supply</u>, <u>Alternative fuels and mobile energy sources</u>, A single, smart European electricity grid

Last update: 23 August 2022

Add to my booklet

MANGO MANGO: exploring Manycore Architectures for Next-GeneratiOn HPC systems

ID: 671668

From: 1 October 2015 to: 31 March 2019

MANGO targets to achieve extreme resource efficiency in future QoS-sensitive HPC through ambitious cross-boundary architecture exploration for performance/power/predictability (PPP) based on the definition of new-generation high-performance, power-efficient, heterogeneous...

Coordinated in: Spain

Programme: EXCELLENT SCIENCE - Future and Emerging Technologies (FET), FET

Proactive

Last update: 7 September 2023

Add to my booklet

SCORPION Cost effective robots for smart precision spraying

ID: 101004085

From: 1 January 2021 to: 31 December 2023

Spraying in agriculture represents a societal challenge due to its negative impact in human and animal health and in environment. Increasing spraying efficiency towards the objective of "right time, right amount, right place", involves reduction of losses and...

Coordinated in: Portugal

Programme: INDUSTRIAL LEADERSHIP - Leadership in enabling and industrial

technologies – Space, Enabling exploitation of space data

Last update: 15 January 2024

Add to my booklet

STORM Self-organising Thermal Operational Resource Management

ID: 649743

From: 1 March 2015 to: 31 March 2019

In STORM a generic district heating and cooling (DHC) network controller will be development and demonstration, with the ambition to increase the use of waste heat and renewable energy sources in the DHC network. The general applicability will be guaranteed by the following...

Coordinated in: Belgium

Programme: SOCIETAL CHALLENGES - Secure, clean and efficient energy, Reducing

energy consumption and carbon foorpint by smart and sustainable use

Last update: 15 August 2022

Add to my booklet

YADES Improved Resilience and Sustainable Reconstruction of Cultural Heritage Areas to cope with Climate Change and Other Hazards based on Innovative Algorithms and Modelling Tools

ID: 872931

From: 1 April 2020 to: 31 March 2025

YADES aims to efficiently train a network of fellows on the field of the resilience of Cultural Heritage (CH) areas and historic cities against Climate Change (CC) and other types of hazards. Towards this direction, YADES aims to introduce a research framework for downscaling...

Coordinated in: Greece

Programme: EXCELLENT SCIENCE - Marie Skłodowska-Curie Actions, Stimulating

innovation by means of cross-fertilisation of knowledge

Last update: 5 February 2024

Add to my booklet

<u>TURNkey Towards more Earthquake-resilient Urban Societies through a Multi-sensor-based Information System enabling Earthquake Forecasting, Early Warning and Rapid Response actions</u>

ID: 821046

From: 1 June 2019 to: 31 May 2022

TURNkey aims to make significant advances in the fields of Operational Earthquake Forecasting (OEF), Earthquake Early Warning (EEW) and the Rapid Response to Earthquakes (RRE), particularly when applying these systems in practice in Europe. The project will develop a flexible...

Coordinated in: Norway

Programme: Provide knowledge and tools for effective decision making and public engagement, SOCIETAL CHALLENGES - Climate action, Environment, Resource

Efficiency and Raw Materials Last update: 9 December 2022

Add to my booklet

SABER CULTURAL SAfeguarding Biodiversity and Ecosystem seRvices by integrating CULTURAL values in freshwater management: learning from Māori

ID: 748625

From: 1 January 2018 to: 31 December 2020

Freshwater ecosystems are essential to people's economic, cultural and social wellbeing, yet are still one of the most seriously threatened ecosystems on the planet. This conflict is reflected in political regulations that ask to halt the loss of, restore and safeguard...

Coordinated in: Spain

Programme: EXCELLENT SCIENCE - Marie Skłodowska-Curie Actions, Nurturing

excellence by means of cross-border and cross-sector mobility

Last update: 28 August 2022

Add to my booklet

CoEvolFramework Unified Framework for the Analysis of Co-evolutionary Systems

ID: 657027

From: 1 February 2016 to: 31 January 2018

Today's challenges are marked by more frequent and wide-spread episodes of social, economic, political and environmental crisis. Co-evolutionary systems offer a natural perspective and powerful tools to help us understand conditions that affect populations of agents whose...

Coordinated in: United Kingdom

Programme: EXCELLENT SCIENCE - Marie Skłodowska-Curie Actions, Nurturing

excellence by means of cross-border and cross-sector mobility

Last update: 8 August 2022

Add to my booklet

DCNextEve LV DC microgrids for evolved energy communities

ID: 708844

From: 1 July 2016 to: 15 October 2018

Microgrids are an important concept in the emerging power industry field. They are widely recognized as an innovative eco-system when it comes to a flexible and reliable option for the integration of distributed energy renewable resources (DER). The research on direct current...

Coordinated in: Romania

Programme: EXCELLENT SCIENCE - Marie Skłodowska-Curie Actions, Nurturing

excellence by means of cross-border and cross-sector mobility

Last update: 9 August 2022

Add to my booklet

SAFE4ALL Safeguarding African Foodsheds and Ecosystems for all Actors across Local, regional and international Levels to manage migration

ID: 101137814

From: 1 January 2024 to: 31 December 2027

Agriculture is the foundation of the livelihoods of billions of people worldwide, including African rural and urban households, farming communities, and cities. However, weather and climate risks have increased, creating a need for better access to climate and weather...

Coordinated in: Netherlands

Programme: Climate, Energy and Mobility, Climate Science and Solutions

Last update: 11 December 2023

Add to my booklet

Advancing satellite data integration for improved earth observation outcomes

Project: CALLISTO (ID: 101004152)

Programme: INDUSTRIAL LEADERSHIP - Leadership in enabling and industrial

<u>technologies – Space</u> Available languages: DEENESFRITPL

Last update: 10 May 2021

Final Report Summary - FOODINTEGRITY (Ensuring the Integrity of the European food

chain)

FoodIntegrity is a 5 year, interdisciplinary project funded under Framework 7, that aimed to assure the integrity of our food. The project comprised 60 participants from EU Member States, China and Argentina. FoodIntegrity was commissioned in 2014 against the background of...

Project: FOODINTEGRITY (ID: 613688)

Programme: Specific Programme "Cooperation": Food, Agriculture and Biotechnology

Last update: 3 July 2019 Add to my booklet

<u>CROWD4SDG Citizen Science for Monitoring Climate Impacts and Achieving Climate</u> Resilience

ID: 872944

From: 1 May 2020 to: 30 April 2023

The 17 Sustainable Development Goals (SDGs), launched by the UN in 2015, are underpinned by 169 concrete targets and 232 measurable indicators. Some of these indicators have no established measurement methodology. For others, many countries do not have the data collection...

Coordinated in: Switzerland

Programme: Integrate society in science and innovation issues, policies and activities in order to integrate citizens' interests and values and to increase the quality, relevance, social acceptability and sustainability of research and innovation outcomes in various fields of activity from social innovation to areas such as biotechnology and nanotechnology

Last update: 18 December 2023

Add to my booklet

Final Report Summary - SODSAT (Remote precision management of turf grass sod production by means of artificial intelligence and satellite imaging)

Sod or Turf Grass as it is more commonly known, is used extensively in sports and landscaping projects. Although natural sod has been replaced with synthetic turf in some cases, turf grass still is still the choice for many sports and landscaping projects. Just like any...

Project: SODSAT (ID: 605729)

Programme: Specific Programme "Capacities": Research for the benefit of SMEs

Last update: 12 August 2016

Add to my booklet

ADAPT Adaptive Decision support for Agents negotiation in electricity market and smart grid Power Transactions

ID: 703689

From: 1 January 2017 to: 31 December 2018

ADAPT explores the theme of decision support for agents negotiations in the complementary environments of electricity markets and smart grids. The EU priority of increasing the penetration of renewable energy sources in the power system has led to the wide acceptance of the...

Coordinated in: Spain

Programme: EXCELLENT SCIENCE - Marie Skłodowska-Curie Actions, Nurturing

excellence by means of cross-border and cross-sector mobility

Last update: 11 August 2022

<u>Final Report Summary - CROPS (Intelligent sensing and manipulation for sustainable production and harvesting of high value crops, clever robots for crops)</u>

The following results were obtained in the CROPS project. For the robotic middleware ROS was chosen as software framework. The supervisory control system as well as the high-level software architecture have been developed and tested. The design and...

Project: CROPS (ID: 246252)

Programme: Specific Programme "Cooperation": Nanosciences, Nanotechnologies, Materials

and new Production Technologies
Last update: 29 December 2015

Add to my booklet

<u>Periodic Reporting for period 1 - EnergySequence (Building data scientist to help us dive</u> deep into the very large amount structured time series data pertaining to building energy use)

Nearly 40% of final energy consumption and 36% of greenhouse gas emissions are produced by buildings. The actual process of improving building energy efficiency is time-consuming and cost intensive. Energy experts spend a lot of time walking around buildings, collecting...

Project: EnergySequence (ID: 739834)

Programme: INDUSTRIAL LEADERSHIP - Innovation In SMEs

Last update: 26 February 2021

Add to my booklet

SYNTHESYS PLUS Synthesis of systematic resources

ID: 823827

From: 1 February 2019 to: 31 July 2023

European natural history collections are a critical infrastructure for meeting the most important challenge humans face over the next 30 years — mapping a sustainable future for ourselves and the natural systems on which we depend — and for answering fundamental scientific...

Coordinated in: United Kingdom

Programme: Integrating and opening existing national and regional research infrastructures of

European interest, EXCELLENT SCIENCE - Research Infrastructures

Last update: 1 February 2024

Add to my booklet

ACTION Participatory science toolkit against pollution

ID: 824603

From: 1 February 2019 to: 31 January 2022

ACTION will transform the way we do citizen science (CS) today: from a mostly scientist-led process to a more participatory, inclusive, citizen-led one, which acknowledges the diversity of the CS landscape and of the challenges CS teams have to meet as their project evolves...

Coordinated in: United Kingdom

Programme: Integrate society in science and innovation issues, policies and activities in order to integrate citizens' interests and values and to increase the quality, relevance, social acceptability and sustainability of research and innovation outcomes in various fields of activity from social innovation to areas such as biotechnology and nanotechnology

Last update: 7 October 2022

Add to my booklet

HEROES Hybrid Eco Responsible Optimized European Solution

ID: 956874

From: 1 March 2021 to: 28 February 2023

Bridging the gap between HPC and IA/ML user communities and HPC Resources is key to unleash Europe's innovation potential. A lot of effort is done to build the European technologies able to deliver centralised, petascale/exascale HPC & ML. It is equally important to make...

Coordinated in: France

Programme: INDUSTRIAL LEADERSHIP - Leadership in enabling and industrial technologies - Information and Communication Technologies (ICT), Next generation computing: Advanced and secure computing systems and technologies, including cloud

computing

Last update: 16 September 2022

Add to my booklet

<u>ReTraCE Realising the Transition to the Circular Economy: Models, Methods and Applications</u>

ID: 814247

From: 1 November 2018 to: 30 April 2023

This network brings together an exceptionally strong team of world-leading experts from a wide set of beneficiaries and partners in order to achieve breakthroughs in understanding how the transition towards a Circular Economy (CE) can be realised in a successful way in the...

Coordinated in: United Kingdom

Programme: EXCELLENT SCIENCE - Marie Skłodowska-Curie Actions, Fostering new

skills by means of excellent initial training of researchers

Last update: 30 November 2023

Add to my booklet

ARAGORN Adaptive Reconfigurable Access and Generic interfaces for Optimisation in Radio Networks

ID: 216856

From: 1 January 2008 to: 30 August 2010

The primary aim of the ARAGORN project is to research and develop a Cognitive Resource Manager (CRM) that aims to ensure that efficient use is made of both node-local and shared resources in a collaborative wireless system. These include, for example, local energy consumption...

Coordinated in: Germany

Programme: Specific Programme "Cooperation": Information and communication

technologies

Last update: 16 July 2019 Add to my booklet

<u>PROVIDE Paris Agreement Overshooting – Reversibility, Climate Impacts and Adaptation</u> Needs

ID: 101003687

From: 1 September 2021 to: 31 August 2024

Overshooting the Paris Agreement temperature thresholds is a distinct possibility. The impacts of such overshoot scenarios would materialise globally, but be particularly consequential for vulnerable regions and systems for which thresholds of abrupt and possibly irreversible...

Coordinated in: Germany

Programme: SOCIETAL CHALLENGES - Climate action, Environment, Resource

Efficiency and Raw Materials, Fighting and adapting to climate change

Last update: 24 January 2024

Add to my booklet

SecureGas Securing The European Gas Network

ID: 833017

From: 1 June 2019 to: 30 November 2021

SecureGas focuses on the 140.000Km of the European Gas network covering the entire value chain from Production to Distribution to the users, providing methodologies, tools and guidelines to secure existing and incoming installations and make them resilient to cyber-physical...

Coordinated in: Italy

Programme: Improve cyber security, Secure societies - Protecting freedom and security of Europe and its citizens, Protect and improve the resilience of critical infrastructures, supply chains and transport modes

Last update: 29 July 2022 Add to my booklet

IPM Decisions Stepping-up IPM decision support for crop protection

ID: 817617

From: 1 June 2019 to: 31 May 2024

The 'IPM Decisions' project proposed here will accelerate impact from farm Decision Support Systems (DSS) for IPM, as advocated in the Sustainable Use Directive. The impact of DSS in crop protection has been constrained by regional and sectoral fragmentation of actors

Coordinated in: United Kingdom

Programme: Increasing production efficiency and coping with climate change, while ensuring sustainability and resilience, SOCIETAL CHALLENGES - Food security, sustainable agriculture and forestry, marine, maritime and inland water research, and the bioeconomy

Last update: 19 December 2023

Add to my booklet

TEMA Trusted Extremely Precise Mapping and Prediction for Emergency Management

ID: 101093003

From: 1 December 2022 to: 30 November 2026

TEMA will greatly improve Natural Disaster Management (NDM, e.g., for wildfires, floods) by automating precise semantic 3D mapping and disaster evolution prediction to achieve NDM goals in near-real-time. It will analyze and fuse many heterogeneous extreme data sources: smart...

Coordinated in: Greece

Programme: Digital, Industry and Space, Advanced Computing and Big Data

Last update: 10 March 2023

Add to my booklet

ADMIRAL Advanced multimodal marketplace for low emission and energy transportation

ID: 101104163

From: 1 May 2023 to: 30 April 2026

Freight transportation is responsible for large share of total GHG emissions in Europe. So far, majority of companies have concentrated on their primary emissions and those caused by their energy use, while indirect emissions from e.g. logistics services have received limited...

Coordinated in: Finland

Programme: Clean, Safe and Accessible Transport and Mobility, Climate, Energy and

Mobility, Smart Mobility
Last update: 13 July 2023
Add to my booklet

Morse Model-based optimisation for efficient use of resources and energy

ID: 768652

From: 1 October 2017 to: 28 February 2022

The process industry is continuously looking for new ways to improve resource efficiency due to high dependence on resources (energy, raw materials and utilities). In large scale production even small changes in using raw materials and in energy can significantly improve...

Coordinated in: Finland

Programme: Sustainable, resource-efficient and low-carbon technologies in energy-intensive process industries, INDUSTRIAL LEADERSHIP - Leadership in enabling and industrial technologies - Advanced manufacturing and processing

Last update: 9 November 2022

Add to my booklet

NATALIE Accelerating and mainstreaming transformative NATure-bAsed solutions to enhance resiLIEence to climate change for diverse bio-geographical European regions

ID: 101112859

From: 1 September 2023 to: 31 August 2028

NATALIE addresses the risks posed by climate change and its impacts and proposes to advance the concepts of "ecosystem-based adaptation" in Europe combined with climate resilient development pathways, as the means for impact driven Nature-Based Solutions (NBS), to...

Coordinated in: France

Programme: <u>Culture, creativity and inclusive society, Digital, Industry and Space, Civil Security for Society, Climate, Energy and Mobility, Food, Bioeconomy Natural Resources, Agriculture and Environment</u>

Last update: 5 June 2023 Add to my booklet

SALSA Small farms, small food businesses and sustainable food security

ID: 677363

From: 1 April 2016 to: 31 July 2020

SALSA will assess the role of small farms and small food businesses in delivering a sustainable and secure supply of affordable, nutritious and culturally adequate food. SALSA will identify the mechanisms which, at different scales, can strengthen the role of small farms in...

Coordinated in: Portugal

Programme: SOCIETAL CHALLENGES - Food security, sustainable agriculture and

forestry, marine, maritime and inland water research, and the bioeconomy

Last update: 22 August 2022

PROJECT

PROGRAMME

DiverSea INTEGRATED OBSERVATION, MONITORING AND PREDICTION ARCHITECTURE FOR FUNCTIONAL BIODIVERSITY OF COASTAL SEAS

ID: 101082004

From: 1 September 2023 to: 31 August 2027

DiverSea develops novel marine observation and monitoring technology by combining: 1a) The new DNA-based identification approach "DNA-marks": This approach will harnesses low coverage/cost genomic data to document genetic diversity and discriminate beyond species, to the...

Coordinated in: Norway

Programme: Seas, Oceans and Inland Waters, Food, Bioeconomy Natural Resources,

Agriculture and Environment Last update: 28 August 2023

Add to my booklet

BigDataGrapes Big Data to Enable Global Disruption of the Grapevine-powered Industries

ID: 780751

From: 1 January 2018 to: 31 December 2020

Big data is becoming a hype that is going to completely redefine industries within very traditional sectors like agriculture, food and beauty. The emergence of niche big data companies like Enolytics ("bringing big data insights to the wine industry") is threatening to...

Coordinated in: Greece

Programme: INDUSTRIAL LEADERSHIP - Leadership in enabling and industrial

technologies - Information and Communication Technologies (ICT)

Last update: 10 March 2023

Add to my booklet

SCARBOn SCARBO next step - Space CARBon Observatory's solution to improve monitoring of GHG emissions and help establishing reliable data for emission trends forecasts

ID: 101135301

From: 1 January 2024 to: 30 June 2026

SCARBOn (Space CARbon Observatory Next step) is the continuation of the Horizon 2020 SCARBO project. This multidisciplinary project is carried out by a gender-diverse team, through a consortium including the space industry, SMEs and scientific institutes. It is led from...

Coordinated in: France

Programme: Space, including Earth Observation, Digital, Industry and Space

Last update: 8 January 2024

Add to my booklet

RoBUTCHER A Robust, Flexible and Scalable Cognitive Robotics Platform

ID: 871631

From: 1 January 2020 to: 30 June 2023

Uptake of advanced robotics and automation in the Agri-Food sector, specifically in meat processing, has been stifled due to the perceived high cost as well as the lack of flexibility, robustness and scalability to suit different volumes, smaller in particular. This conflicts...

Coordinated in: Norway

Programme: INDUSTRIAL LEADERSHIP - Leadership in enabling and industrial

technologies - Information and Communication Technologies (ICT)

Last update: 14 September 2023

Add to my booklet

<u>SMARTLAGOON Innovative modelling approaches for predicting Socio-environMentAl</u> evolution in highly anthRopized coasTal LAGOONs

ID: 101017861

From: 1 January 2021 to: 31 December 2024

Coastal lagoons are ecosystems with great environmental and socioeconomic value. However, these natural systems are especially vulnerable to climatic and anthropogenic pressures, such as intensive agriculture and extensive urbanization as a consequence of the tourist...

Coordinated in: Spain

Programme: EXCELLENT SCIENCE - Future and Emerging Technologies (FET), FET

Proactive

Last update: 14 November 2023

Add to my booklet

ELIAS European Lighthouse of AI for Sustainability

ID: 101120237

From: 1 September 2023 to: 31 August 2027

We live in a crucial historical moment, with tremendous challenges ahead, from climate change to the energy crisis. ELIAS emerges from the belief that AI will be a key discipline to help us tackle these challenges. At the same time, the development of AI entails deep ethical...

Coordinated in: Italy

Programme: Digital, Industry and Space, Artificial Intelligence and Robotics

Last update: 18 September 2023

Add to my booklet

FindingPheno Unified computational solutions to disentangle biological interactions in multiomics data

ID: 952914

From: 1 March 2021 to: 28 February 2025

Animal and plant microbiome functions can be modulated, and thereby optimized, for sustainable food production. However, the outcome, i.e., the microbial response, can vary greatly depending on (e.g.)Animal and plant microbiome functions can be modulated, and thereby...

Coordinated in: Denmark

Programme: INDUSTRIAL LEADERSHIP - Leadership in enabling and industrial

<u>technologies – Biotechnology</u> Last update: 24 November 2023

Add to my booklet

<u>ELECTRO-POM From discovery to scale up of cluster based electrolytes for Ultra-high</u> energy storage flow batteries

ID: 790458

From: 1 March 2018 to: 31 August 2019

Large scale energy storage demands are set to increase dramatically during the next years due to the expansion of renewables. One of the most promising large-scale electrical storage technologies are Redox Flow Battery (RFB) systems, which can convert electrical energy to...

Coordinated in: United Kingdom

Programme: EXCELLENT SCIENCE - European Research Council (ERC)

Last update: 15 August 2022

Add to my booklet

SNUG Innovative methodology based in circular economy and artificial intelligence to foster the transition to Sustainable and very high eNergy performance bUildinGs at a cost optimal level

ID: 101123150

From: 1 November 2023 to: 30 April 2027

Buildings are responsible for over 40% of the energy consumption and CO2 emissions in EU. Accordingly, The CE has stablished ambitious building standard aiming to transform all existing buildings into ZEBs by 2050 to reach a fully decarbonised building stock.SNUG aims to...

Coordinated in: Spain

Programme: Climate, Energy and Mobility, Buildings and Industrial Facilities in Energy

Transition

Last update: 7 November 2023

Add to my booklet

<u>LiNaBioFluid Laser-induced Nanostructures as Biomimetic Model of Fluid Transport in the Integument of Animals</u>

ID: 665337

From: 1 July 2015 to: 30 June 2018

The integument of an animal body has various functions, which are often achieved by specific micro- and/or nano- hierarchical structures. Examples are the very low water friction and air retention of water spiders or the swim fern of salvinia and the outstanding adhesion...

Coordinated in: Greece

Programme: EXCELLENT SCIENCE - Future and Emerging Technologies (FET), FET Open

Last update: 25 October 2023

Add to my booklet

E-MUSE Complex microbial ecosystems multiscale modelling: mechanistic and data driven approaches integration.

ID: 956126

From: 1 January 2021 to: 30 June 2025

European dairy industry is an important agri-food sector; it represents more than 300,000 jobs and 10 billion € positive trade balance. Five out of the ten top global dairy companies are European and more than 80% of European companies are SMEs. More than 300 cheeses and...

Coordinated in: France

Programme: EXCELLENT SCIENCE - Marie Skłodowska-Curie Actions, Fostering new

skills by means of excellent initial training of researchers

Last update: 28 December 2023

MARCLAIMED Integrated Decision Support Tool for Reliable and Affordable Application of Manage Aquifer Recharge with Alternative Water Resources in River Basin and Drought Management Plans

ID: 101136799

From: 1 February 2024 to: 31 January 2027

MARCLAIMED will be a breakthrough addressing in an efficient, sustainable, and trustworthy way the water scarcity and water stress mitigation. MARCLAIMED will support decision makers to integrate Managed Aquifer Recharge (MAR) with Alternative Water Resources (AWR) in River...

Coordinated in: Spain

Programme: Food, Bioeconomy Natural Resources, Agriculture and Environment

Last update: 17 January 2024

Add to my booklet

BoSS Bauhaus of the Seas Sails

ID: 101079995

From: 1 January 2023 to: 31 December 2025

"The vision of the BoSS project is to demonstrate and archive solutions for climate neutrality with a particular focus on coastal cities as an interface to healthy seas, ocean and water bodies envisioning a new triangle of sustainability, inclusion, and design focused on the...

Coordinated in: Portugal

Programme: Culture, creativity and inclusive society, Health, Digital, Industry and

Space, Civil Security for Society, Climate, Energy and Mobility, Food, Bioeconomy Natural

Resources, Agriculture and Environment

Last update: 16 December 2022

Add to my booklet

ENTROPY DESIGN OF AN INNOVATIVE ENERGY-AWARE IT ECOSYSTEM FOR MOTIVATING BEHAVIOURAL CHANGES TOWARDS THE ADOPTION OF ENERGY EFFICIENT LIFESTYLES

ID: 649849

From: 1 September 2015 to: 30 November 2018

Taking into account the fact that buildings constitute the largest end-use energy consuming sector, the design and development of solutions targeted at reducing their energy consumption based on the adoption of energy efficient techniques and the active engagement of...

Coordinated in: Spain

Programme: <u>SOCIETAL CHALLENGES</u> - <u>Secure</u>, clean and efficient energy, <u>Reducing</u> energy consumption and carbon foorpint by smart and sustainable use

Last update: 19 August 2022

Add to my booklet

ANEMOS Development of a next generation wind resource forecasting system for the large-scale integration of onshore and offshore wind farms (ANEMOS)

ID: ENK5-CT-2002-00665

From: 1 October 2002 to: 30 September 2006

Objectives and problems to be solved :Accurate forecasting of the wind resource up to two days ahead is recognised as a major contribution for reliable large-scale wind power integration. Especially, in a liberalised electricity market, prediction tools enhance the position of...

Coordinated in: France

Programme: Programme for research, technological development and demonstration on "Energy, environment and sustainable development, 1998-2002"

Last update: 10 March 2023

Add to my booklet