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Greece 2.0 NATIONAL RECOVERY AND RESILIENCE PLAN
"BASIC RESEARCH FINANCING" (Horizontal support for all Sciences)
ID 16618 – Subproject 1 (MIS: 5163923)

D6.1 Dissemination, Communication, and Exploitation Plan (DCEP)

Spatially Explicit Digital Twin of the Greek Agro-Hydro-System

DT-Agro

14815

Greece 2.0 NATIONAL RECOVERY AND RESILIENCE PLAN
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Plan Details

Description Plan for managing the dissemination, exploitation, and communication generated in the project.
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1. Introduction

This document outlines the Communication Dissemination, and Exploitation Plan for Work Package 6 (WP6) of the DT-Agro project, designed to ensure that the project's results—including concepts, scientific findings, models, simulation tools, validated work, and problem awareness are effectively shared with relevant target audiences. The tools and channels to be utilized, including the project website and social media platforms are detailed. Additionally, the importance of participating in conferences, and events is highlighted. Stakeholder engagement is addressed as a crucial component, followed by a discussion of the targets established to assess the effectiveness of communication activities.

The primary objective of Work Package 6 is to maximize the impact of the project by effectively disseminating its activities, outputs, and results to a diverse range of stakeholders. This includes raising awareness, facilitating knowledge transfer, promoting the uptake and utilization of project findings, influencing policy decisions, and building the capacity of stakeholders to understand and utilize digital technologies in the agricultural sector. This aligns with SO.5 of the project.

This plan outlines the following key activities:

- **T6.1 Develop a detailed Communication, Dissemination, and Exploitation Strategy and Plan.** This involves a comprehensive analysis of target audiences, key messages, and dissemination channels, and the development of a detailed plan outlining the timeline, budget, and resources required for each dissemination activity. The target audiences for this dissemination effort include researchers, policymakers, practitioners (farmers, agricultural advisors), the general public, and industry stakeholders. Key messages will focus on the significance of digital twins in agriculture, the innovative approach of DT-Agro, the project's key findings and their implications, the importance of data-driven decision-making, and the project's contributions to addressing key challenges in the agricultural sector.
- **T6.2 Online and offline communication tools and campaigns.** This task includes the development and maintenance of the project website and social media pages, the

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organization of online and offline events, and the development of informative materials such as brochures and flyers.

- **T6.3 Documentation and dissemination of project outputs and outcomes.** Focuses on ensuring open access to project outputs, developing and disseminating policy briefs and reports, and establishing a repository for project resources.
- **T6.4 Scientific publications and presentations in journals and congresses.** Publishing research articles in peer-reviewed journals, presenting findings at national and international conferences, and participating in relevant industry events.

Key deliverables include the DCEP itself, the project website and social media pages, an open-access research database and portal, communication and dissemination materials and the publication of scientific articles.

2. Communication Strategy

The communication strategy for DT-Agro is designed to effectively engage diverse audiences, disseminate key findings, and maximize the impact of the project's outputs. By tailoring messages and activities to the needs of specific stakeholder groups, the strategy ensures that the project remains visible, relevant, and impactful throughout its duration.

A primary objective of the communication strategy is to raise awareness of DT-Agro's role in advancing sustainable agriculture and hydrology through the development of a spatially explicit Digital Twin of the Greek agro-hydrological system. Communication efforts will emphasize the scientific innovation behind the project and its potential to improve decision-making at both the policy and farm-management levels.

The strategy prioritizes the use of both online and offline channels to reach a broad audience. The project website will offer access to public deliverables and updates. Social media platforms, including Facebook, will amplify the project's reach by sharing news and event announcements to engage stakeholders in real time. Offline activities such as conferences and stakeholder meetings will complement the digital approach by fostering direct interaction and collaboration.

3. Dissemination

The dissemination strategy for DT-Agro focuses on ensuring that the project's findings, methodologies, and tools reach a wide range of stakeholders, fostering collaboration and maximizing the adoption of its outputs. This strategy is designed to effectively share the project's results with researchers, policymakers, farmers, industry representatives, and the broader public, ensuring that its contributions to agro-hydrology and sustainable agriculture are widely recognized and utilized.

A key priority of the dissemination strategy is the distribution of project deliverables and outcomes in formats tailored to specific audiences. Public deliverables, such as technical reports, and scientific publications, will be made freely available on the project's website, ensuring open access to the project's results. Additionally, interactive features, such as

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dashboards and visual summaries, will provide stakeholders with easy-to-understand insights into the project's progress and impacts.

Scientific dissemination will play a central role, with the DT-Agro team actively publishing research findings in peer-reviewed journals and presenting at national and international conferences. These efforts aim to contribute to the global scientific discourse on sustainable agriculture, agro-hydrology, and digital twin technologies while fostering collaborations with researchers in related fields.

The successful launch of the project website and social media pages (M6.1) in Month 6 marks a significant milestone. The overall success of the dissemination efforts will be evaluated based on the achievement of all planned activities, including the publication of scientific articles, the dissemination of policy briefs, and the organization of workshops and training events (M6.2).

This DCEP will be regularly reviewed and updated throughout the project to ensure its effectiveness in maximizing the impact of the DT-Agro project and achieving its communication and dissemination objectives. The updated DCEP will be developed by Month 18.

The DT-Agro project website, accessible at dt-agro.aua.gr, serves as the central hub for all communication and dissemination activities, providing stakeholders, researchers, policymakers, farmers, and the general public with easy access to the project's developments, results, and resources. The website is designed to be dynamic, user-friendly, and interactive, aimed at engaging a wide range of audiences and promoting transparency and collaboration. The website will incorporate relevant content from all work packages, ensuring a comprehensive and cohesive representation of the project's progress and results. It will be regularly updated to engage stakeholders and act as an entry point for learning about the project.

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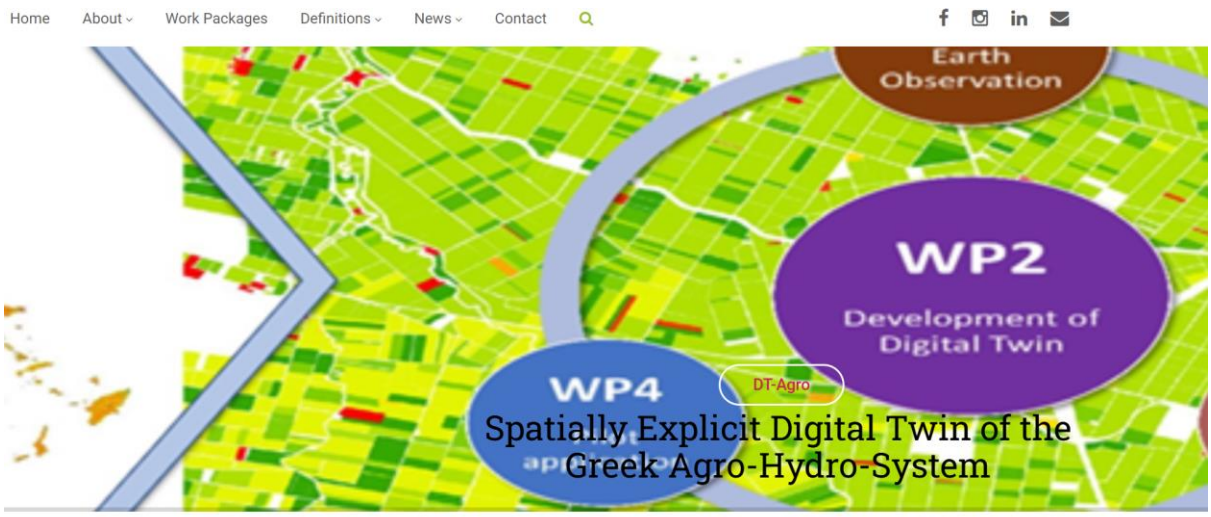

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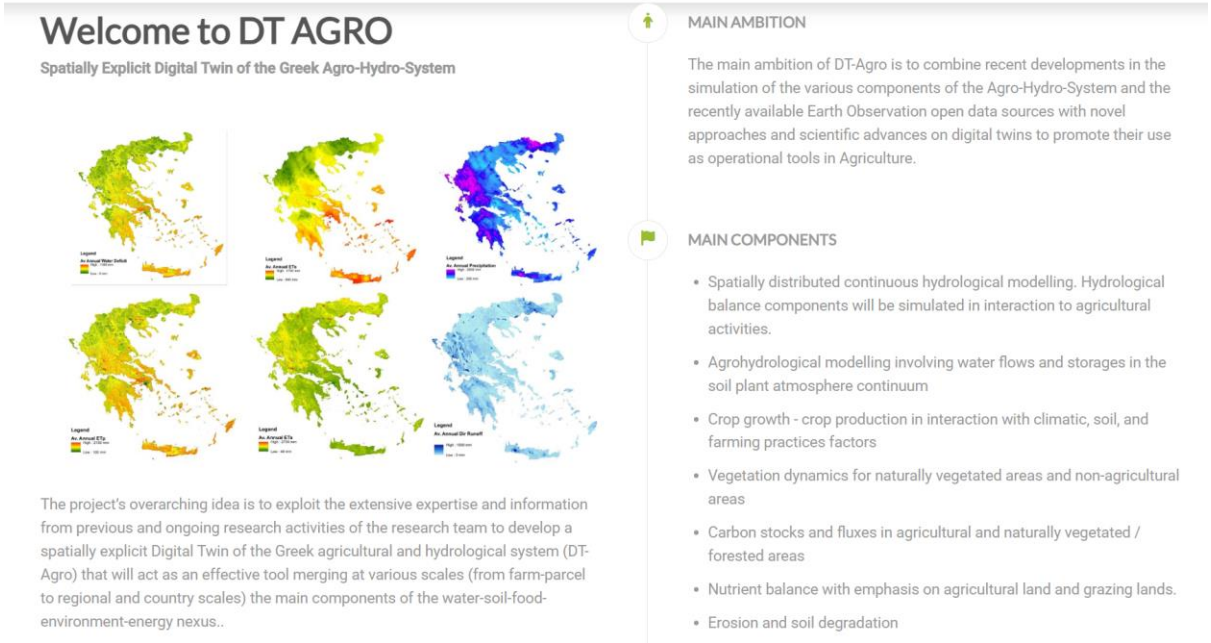

Key features of the DT-Agro website include:

• Access to Public Deliverables: The website will host all publicly available materials, such as project reports, technical documents, publications, and presentations, ensuring that key findings are easily accessible to all.

• Content Curation for Stakeholders: Regularly updated with case studies, infographics, and event announcements, the site will target stakeholders including farmers, policymakers, and researchers, encouraging active participation in the project.

• Showcasing Results and Impact: Interactive dashboards and visual content will highlight the project's milestones, scientific results, and the potential societal and environmental impacts, presenting complex data in an engaging and understandable format.

• Partner Contributions: Project partners are encouraged to contribute updates, success stories, and region-specific content, ensuring that the site reflects diverse perspectives and activities across the project.

Accessibility and inclusivity are integral to the strategy, ensuring that all materials are understandable and relevant to both technical and non-technical audiences. For example, researchers and policymakers will benefit from detailed reports and policy briefs, while farmers and agricultural professionals will be targeted with practical tools, user-friendly summaries, and demonstrations of the digital twin's applications. Visual content such as dashboards, animations, and infographics will make complex information more engaging and easier to understand.

The Facebook page will complement the website by targeting a broader audience, including farmers, agricultural organizations, and the general public. Posts will feature visual content, such as infographics, maps, and short videos explaining DT-Agro's progress and benefits. The page will also host live Q&A sessions and interactive polls to gather stakeholder input. Events like workshops and webinars will be promoted through Facebook to boost attendance, with boosted posts targeting specific audiences, such as policymakers or agribusinesses. Engagement metrics, including likes, shares, and comments, will be tracked to measure the page's effectiveness.

As part of their dissemination efforts, the study team actively participated in international events. The team is also planning to present two studies at a national conference. More specifically:

- At EGU 2024 in April, part of the team presented the paper "SCS-CN Parameter Determination from Observed Rainfall-Runoff Data: A Critical Review". This study gathered, organized, and carefully analyzed 30 years of research on the popular SCS-CN approach, which is a key component of the agrohydrological model in the core of DT-Agro.

- Furthermore, a poster titled "Assessing Global Climate Datasets for Small-Scale Agricultural Applications: The Case of Nemea, Greece" was presented at EGU 2024. This paper compared the performance of the AgERA5 and MERRA2 global climate datasets for irrigation management and precision agriculture in Nemea, highlighting the importance of geographical resolution in agricultural data accuracy. This research will significantly contribute by providing critical insights into the use of climate data, improving the accuracy of the project's digital twin, and ensuring the practical applicability of its results for sustainable agriculture.

- In May 2024, the team is planning to present two posters at the 5th Congress of Geographical Information Systems and Spatial Analysis in Agriculture and Environment in Athens, Greece. The first one titled "Spatially Explicit Digital Twin of the Greek Agro-Hydro-System (DT-Agro)", which will focus on the project's methodology and aim to develop a digital twin that integrates the water-soil-food-environment-energy nexus at various scales and a

Greece 2.0 NATIONAL RECOVERY AND RESILIENCE PLAN
Funded by the European Union NextGenerationEU

second poster titled "Assessing Global Climate Datasets for Small-Scale Agricultural Applications: The Case of Nemea, Greece".

In addition to the participation in scientific events, the team is also preparing articles to publish in scientific journals. These articles are about:

- Examination of empirical and Machine Learning methods for regression of missing or invalid solar radiation data using routine meteorological data as predictors.
- Conceptual disambiguation and systematic comparison of the PESERA and (R)USLE methodologies, applied in the NEMEA wine producing zone, Greece
- Assessing Global Climate Datasets for Small-Scale Agricultural Applications: The Case of Nemea, Greece.

Lastly, the team has been working on two other research papers focused on soil data evaluation, which are under preparation. These articles aim to contribute to the understanding and integration of soil data into the project's digital twin model.

4. Exploitation

The exploitation strategy for DT-Agro focuses on ensuring that the project's results, methodologies, and tools are effectively utilized to achieve long-term impact beyond the project's duration. By targeting key stakeholders such as policymakers, researchers, farmers, and industry representatives, the strategy ensures that DT-Agro's innovations contribute to advancing sustainable agricultural practices and agro-hydrological management in Greece and potentially in other regions.

Important to the exploitation plan is the operationalization of the DT-Agro Digital Twin as a practical tool for decision-making. Scenarios generated by the model, including climate adaptation and mitigation strategies, will serve as valuable resources for addressing challenges such as water scarcity, soil degradation, and climate variability.

For farmers and agricultural professionals, the exploitation plan includes the development of user-friendly tools and services derived from the Digital Twin. These tools will assist with operational farm management, such as optimizing water usage, enhancing crop productivity, and implementing sustainable farming practices. Training sessions and workshops will be organized to ensure that end-users can easily adopt and benefit from these tools in their day-to-day activities.

Researchers and academic institutions will benefit from open access to project data, models, and methodologies, which will be shared through the project's resource repository. This will support further research, foster collaboration, and enable the replication and adaptation of DT-Agro's approach in other geographical and environmental contexts. Industry stakeholders, including technology providers and agri-tech companies, will have opportunities to incorporate DT-Agro's tools and techniques into their products and services, driving innovation in the sector.

Greece 2.0 NATIONAL RECOVERY AND RESILIENCE PLAN
Funded by the European Union NextGenerationEU

The exploitation strategy also emphasizes sustainability and scalability. Plans will be developed to secure funding or partnerships to maintain and expand the Digital Twin platform beyond the project's completion.

By aligning the exploitation strategy with the needs of its stakeholders, DT-Agro aims to transform its scientific outputs into actionable tools and insights, fostering innovation, sustainability, and resilience in agricultural and hydrological systems.

5. Conclusion

In addition to that progress, dissemination has also been prioritized, with the successful launch of the project website and social media presence (D6.2) in M6. These tools allowed to successfully share updates and engage with the general public and stakeholders. Participation in scientific meetings, such as EGU 2024 in Vienna has increased project visibility. During this event, the team presented major research papers and the overarching goal of DT-Agro, generating useful input and collaborations from the scientific community.

All the achievements mentioned were made possible through the financial support of the National Recovery and Resilience Plan Greece 2.0, funded by the European Union – NextGenerationEU (Implementation body: HFRI). The team remains committed to acknowledging this support in all dissemination efforts and ensuring that the project's outcomes align with the objectives of the funding framework.