

Planning and design with soils (European SPADES project)

Opening for positions master students / trainees

In the European Soil Mission SPADES there are several positions for soil students with an interest in spatial planning and design, and planning/design students and.... with an interest in making use of soil (and water) in spatial planning and design. Our project involves 17 European pilots in urban, peri-urban and rural areas, with a variety of soil and planning related challenges.

Positions

1) Support in the inventory of boundary spanning instruments

(period now - August 2026, Supervisor Hsoc Mathai hsoc.mathai@deltares.nl)

This task will focus on Planners' Integration Instruments. It beholds an inventory of boundary spanning objects, policies agents and processes on format for integrating soil in planning and design processes. The activities will contribute to the task description below:

The public and professional structures of spatial planning have been developed over a century and their formal, written procedures and regulations have over time been adapted to contemporary challenges. Well known spatial challenges on European level are for example nature protection (Natura 2000) water quality and quantity (Water Framework Directive).

The new attention for soil health now addressed by the European Soil monitoring Law, is another challenge that needs to be mainstreamed into spatial planning and design. This task studies planners' instruments of integration of these challenges into policy and practice in Europe. The act of bridging, also known as boundary spanning, integration, interdisciplinary or transdisciplinary design and transition management, already is equipped with instruments, professionals and processes. They now need to be equipped to be able to integrate the professional soil field in the professional planning field. The results of the task will be used to analyse the distributed agency (the roles and responsibilities) of actors in the spatial planning systems and identify those agents and policies, who and which, are able to align integration instruments and how this can be done. This task will behold an inventory of boundary spanning objects, policies agents and processes on (already in planning integrated) topics like water and energy to serve as format for integrating soil in planning and design processes.

2) Evaluation of soil-inclusive instruments (and best practices)

(period now - August 2026, Supervisor Helena Hulsman
helena.hulsman@deltares.nl)

Sharing good instruments and best practices is essential to enable SPADES' end-users to work towards soil-inclusive planning. But which instruments and best practices are most appropriate, useful and inspirational, to be shared? Elaborate inventories of instruments and best practices have been made in the project, and an evaluation framework has been developed to allow for structured sifting of these long-lists. The current task will be to dive deeper in the instruments and best practices, and determine which are most suitable or exemplary to enhance soil-inclusive planning. This also includes an assessment on which instruments could be improved (and how) and which gaps there are in instruments. Furthermore, there is room for proposing new instruments. Short-listed instruments can be applied on [pilots in the project](#).

Examples of instruments are land take hierarchies, instruments that allow for visualisation of ecosystem services for planners, improved (soil) maps that are understandable for the planning practice, etc.

3) Pilots [Groene Hart](#) or [Ooststellingwerf](#)

(period now-end of 2026, Supervisor Mark Niesten mark.niesten@deltares.nl)

Two of the 17 pilots in the SPADES project are in the Netherlands: pilot Groene Hart and pilot Ooststellingwerf. In 2025 an inventory has been made of the soil and planning related challenges in both pilots. In 2026 we will further explore these challenges and work on the co-creation of solutions for these two pilots: how can soil and water be better integrated in the spatial planning, design and development of these areas? As a student you will actively participate in this process and experience how to connect spatial planning & design, soil and water on a regional and local level. Although reporting can be (also) in English, all communication in these two pilot projects is in Dutch, and therefore the descriptions below are in Dutch.

3a: Het [Groene Hart](#) is de grotendeels onbebouwde regio (met name veenweidegebied) tussen Amsterdam, Rotterdam, Den Haag en Utrecht. Over dit gebied is al veel informatie beschikbaar met betrekking tot bodem, water en ruimtelijke ontwikkeling. Zo zijn er bijvoorbeeld uitwerkingen van [Water en Bodem Sturend](#), zijn er sleutelprojecten voor de ontwikkeling van het gebied, is er een landschapsbiografie, én is er reeds veel informatie over het water- en bodemsysteem van het Groene Hart. Toch zijn bodems vaak nog ondervertegenwoordigd in deze studies en krijgen bodems nog niet de aandacht

in ruimtelijke planvorming binnen het Groene Hart die zij verdienen. Het meenemen van bodem (en water) in bijvoorbeeld omgevingsvisies en -plannen is immers belangrijk voor het duurzame, vitale en veilige leefomgeving.

In de komende periode richten we ons daarom op het opstellen van een 'bodemvisie' voor het Groene Hart, die als input kan dienen voor al deze ruimtelijke plannen en projecten. Welke bodemaspecten zijn belangrijk voor de stakeholders, en hoe zijn ze relevant voor de verschillende ruimtelijke ontwikkelingen in het Groene Hart? De opdracht voor de student / trainee kan zich richten op aspecten zoals het ondersteunen van de ontwikkeling van deze bodemvisie, het beschikbaar maken van bodeminformatie (GIS-vaardigheden) en onderzoeken hoe bodeminformatie (meer) aantrekkelijk gemaakt kan worden voor de planning- en ontwerpwereld, of bijvoorbeeld het aantonen van de waarde van bodem.

Voor deze positie is beheersing van de Nederlandse taal (lezen, schrijven, spreken) een voorwaarde!

3b Ooststellingwerf is een landelijke gemeente in Zuidoost-Friesland met zowel landbouw- als natuurgebieden. Gezonde bodems zijn voor Ooststellingwerf van groot belang voor duurzame productie van landbouwgewassen, behoud van biodiversiteit, natuurontwikkeling en bijvoorbeeld klimaatadaptatie. In het beleid van de gemeente, zoals de Omgevingsvisie, is het belang van bodems echter nog vaak onderbelicht. De gemeente werkt momenteel aan het opstellen van een Omgevingsplan, een concretere ruimtelijke uitwerking van die visie.

SPADES zal komende periode de gemeente ondersteunen bij het bepalen van hoe bodems richting kunnen geven aan ruimtelijke ontwikkelingen, in bijvoorbeeld het op te stellen Omgevingsplan van Ooststellingwerf. Als student / trainee draag je als onderdeel van het projectteam bij aan het onderzoeken van welke kansen bodems bieden voor die ontwikkelingen, maar ook welke randvoorwaarden zij stellen. Ook kan het onderzoeken van manieren waarop deze informatie gebruikt kan worden in het oplossen van de ruimtelijke opgaven in deze pilot onderdeel van je taak zijn. Bijvoorbeeld het toepassen van instrumenten die bodem-inclusief plannen kunnen verbeteren, het maken van verschillende toekomstscenario's voor het gebied, en het bedenken hoe niet-bodemexperts meer bewust kunnen worden gemaakt van de waarde van bodems.

Voor deze functie is beheersing van de Nederlandse taal (lezen, schrijven, spreken) een voorwaarde!

4) Policy briefs on soil and planning challenges

(period now-June and further, Supervisor Jort de Vries jort.devries@deltares.nl
(Gerald Jan Ellen geraldjan.ellen@deltares.nl))

To make policy recommendations applicable across diverse contexts, SPADES aims to use stakeholder archetypes that reflect common roles, capacities and constraints in relation to soil inclusive spatial planning. For example strategic policy shapers, such as the European Commission and national ministries, define regulatory frameworks and funding instruments but often operate at a distance from local implementation. Operational planners and regulators at regional and local level translate policies into concrete spatial decisions, frequently facing limited resources, data gaps and competing land use pressures. A third possible type are knowledge brokers and implementers, including research organisations, advisory bodies and networks, support evidence translation, learning and collaboration. To be able to use archetypes we are looking for a student who can do a literature review on this and validate the outcome of this literature review with real stakeholders. Thus enabling SPADES targeted recommendations that acknowledge institutional and stakeholder diversity.

5) Soil awareness

(period tbd, supervisor Gerald Jan Ellen geraldjan.ellen@deltares.nl / Linda Maring linda.maring@deltares.nl)

For the communication, dissemination and exploitation work in SPADES we are looking for a design student that could think 'out of the box' on 5a) objects/small exhibition on conveying the topics that have been identified in the policy briefs (position 4) and / or 5b) ways to improve soil awareness for politicians, planners/designers, citizens, land owners and managers etc. that deal with spatial transformations.

General information

As student / trainee you will be part of the project team of Deltares and SPADES project partners such as the TU Delft. We work together on the tasks described above and support you where needed. There is flexibility to (together) define the scope of your involvement based on your personal input and preferences. We do expect the ability to work independently at task level and encourage a proactive and creative work attitude.

Spatial planning and design are important instruments that guide the spatial development in European regions. By participating as student / trainee in SPADES you will contribute to a better recognition and integration of -the now underexposed contribution of- soils into spatial planning and design of urban, peri-urban and rural

areas. This will ultimately result in better addressing the soil, water and spatial planning challenges in Europe.

Contact persons: Linda Maring linda.maring@deltares.nl is coordinator of the SPADES project and can be reached for general info /questions. For each of the positions a specific contact person is included, who will act as main supervisor. This person can be reached for position-specific enquiries and applications.

Monthly compensation: 550 EUR/month (university) / € 350,- (applied university) per month, on the basis for 40 hours per week.

Location: Deltares Utrecht, working partially from home is allowed.