„Agri-urban settlement models“
Student competition for the S.U.N. region
Announcement for the summer semester 2021
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Picture credits
All sketches by Anja Neuefeind
Occasion and challenge

The City of Cologne, the Rhine-Erft district and the towns of Bedburg, Bergheim, Brühl, Elsdorf, Erftstadt, Frechen, Hürth, Kerpen, Pulheim, Wesseling and Dormagen as well as the municipality of Rommerskirchen have joined forces in the “Stadt-Umland-Netzwerk” (S.U.N.) to coordinate regional development.

The region is growing rapidly. On the left bank of the Rhine, an increase of up to 170,000 people is expected in the next few years. New living space is urgently needed.

In the past decades, numerous land-intensive new housing estates have been built in the surrounding area of Cologne. Large building plots and car-friendly development met the demand for living space and the dream of owning a home in the countryside. The land demands of development and traffic are in strong competition with agriculture and the open space of the landscape. This is seen by the actors in the region as a considerable sustainability problem.

If settlement development were to “continue as is”, not only would more and more productive soil, which is valuable for agriculture, be sealed, but the identity of the 2,000-year-old cultural and agricultural landscape would also be lost.

Therefore, the NACHWUCHS research project, funded by the BMBF, is looking for innovative agri-urban settlement models for sustainable regional development. The term settlement is not understood here as a classic urban expansion on the outskirts or a newly created suburb. Rather, it is about a new structure of neighbourhood, agricultural landscape and natural space that recognises the value of land as a resource. Further information on the NACHWUCHS research project can be found at www.nachwuchs-projekt.de.
Competition objectives

In order to counteract a “business as usual” situation with considerable negative effects for regional development, the NACHWUCHS research project has developed a vision for sustainable spatial development for the region and manifested it in an agri-urban spatial image (see figure on p. 7). NACHWUCHS sees the spatial image as an action-guiding structural and development concept for the future of the region. As such, it takes up the existing structural characteristics and conditions of the region on the one hand and describes inter-communal strategies and innovative measures on the other. Essential approaches of the agri-urban spatial image are a land-efficient and climate-sensitive settlement development, a multicode cultural landscape, regional supply structures as well as innovative forms of mobility and work.

The municipalities of the S.U.N. region have a great interest in realising the future vision of the spatial image with new innovative neighbourhoods. To this end, they have proposed seven exemplary locations. These competition sites are distributed throughout the entire region (see map p. 5).

The competition is intended to provide prototypes for innovative development and open space forms in the sense of the spatial image. The aim is to develop new ideas for living, working and mobility in the future and to link these with forms of urban agriculture and consumer-oriented production and marketing.

The designs should therefore present the spatial relationships and functional interdependencies between urban development, including housing and building forms, open space and agricultural use in an integrated manner. Solutions are sought that sensitively address climatic, energy and social issues both materially and conceptually. The goal of reducing land use per inhabitant is to be achieved through innovative neighbourhood and housing concepts with a high quality of life. Also to be considered are adaptable structures that take into account changes in lifestyles and housing requirements, e.g. in different phases of life, the bundling and externalisation of functions and spaces (e.g. workshops, guest rooms, co-working areas), neighbourhood meeting spaces, and a demand- and generation-appropriate housing mix.
Competition sites*

Agri-urban districts are to be designed on the sites that feature dense development with an association to forward-looking solutions for mobility and work and to the open space that is worth preserving. At the same time, ideas for the integration of agricultural use are to be developed. The spatial image offers orientation with proposals for measures that are to be structurally and functionally concretised and creatively solved on the sites with the inclusion of the surroundings.

The agri-urban design should be forward-looking for the interplay of agriculture and settlement on different scales. Can the neighbourhood and the edge of the settlement be qualified by a multicoded cultivated landscape and forms of agriculture close to the market in such a way that further land use and sealing become less likely?

Ecology and biodiversity also play a major role here. What concepts can be developed in urban planning, rural architecture, agriculture and building construction to provide high-quality, appropriate living spaces for people, fauna and flora?

*The descriptions and basic information on the competition sites can be found as an attachment to the competition announcement on the website. https://www.nachwuchsprojekt.de/ideenwettbewerb/
Agri-urban settlement models

The term "agri-urban settlement model" refers to a structural, functional and creative connection of buildings, agricultural production and cultural landscape. Essential aspects of agri-urban districts are:

- Significant increase in residential density compared to the buildings in the surrounding area
- Exemplary development of new forms of housing, building typologies and density concepts
- Synergies from the neighbourhood of agricultural production and settlement
- Functional and design-related linking of the settlement areas with the existing cultural landscape
- Valorisation of agriculture as the dominant land use and protection of valuable cultivated area
- Multifunctional design of the public and semi-public spaces in the settlement area

The following requirements are to be considered in the design:

- Multifunctionality: mixture of Living, working Supply, culture etc.
- Multioptionality: opportunities for the realisation of different lifestyles
- Flexibility: enabling the adaptation of the building structure to changing requirements and uses
- Multi-coding: open spaces and roofs should provide for and allow multiple uses
- Urban agriculture: consideration of the surrounding agricultural structures and concepts for the integration of marketing opportunities and participatory forms of agriculture
- Mix: the housing should be designed for a generative and social mix
- Lifelong living: The housing offer in the neighbourhood should be tailored to the different requirements in the individual phases of life
Space efficiency: Reduce the use of space with compact building types and communal facilities

Ecological building: Building materials, building services, access and supply systems should contribute to decarbonisation

The participants in the competition are also explicitly called upon to develop their own innovative ideas for an agri-urban future.
Documents for participation

The participants' designs are to be presented on three sheets of paper, each in DIN A0 format, upright and north-oriented. The three sheets are to be submitted in print (rolled) and digitally as a pdf file. The three sheets will be hung up next to each other at the jury meeting.

**Sheet 1**
- Framework for integrating the development into the surrounding cultural landscape, the agricultural use and the neighbouring settlements.
- Access concept with integration of local amenities and neighbouring infrastructures.
- Presentation of the overall urban development idea.
- Presentation of the overall agricultural and landscape idea.

**Sheet 2**
- Draft for the presentation of the agri-urban development concept.
- Definition and allocation of the public, semi-public and private spaces.
- Development concept including information on the number of storeys, roof forms and housing density.
- Use and function specifications.
- Design formulation of the transitions into the surrounding cultural landscape and neighbouring settlement areas.

**Explanatory notes on the draft**

The plan illustrations should be as self-explanatory as possible. Necessary textual explanations on the agri-urban concept of the design are to be included in the plans. This includes descriptions of new housing forms and house types as well as information on achieving increased urban density and on the sustainability of the concept. The spatial representation can be implemented digitally or analogue (e.g. with model photos). The specifications for the scale of the plans can be found in the site descriptions on the competition homepage.
Excerpts from the main points of the design

Presentation of the architectural idea by means of sections and floor plans of building types and housing forms

Exemplary visualisation of the exterior and interior spaces and the transition to landscape and agriculture

Sectional perspectives on detailed sections in the neighbourhood with illustrations of the sustainable agri-urban ideas

Pedestrian perspectives of living situations (e.g. living, leisure, work) in the neighbourhood
Conditions for participation

Release of all processing bases: 15 March 2021
Start of processing: 1 April 2021
Deadline for submission: 31 July 2021

Eligible to participate are students of colleges and universities in the fields of urban planning, spatial planning, urban studies, architecture, landscape architecture and comparable courses of study with a focus on design. The competition language is German.

Allowed are individual entries or group entries with up to three students. As far as possible, interdisciplinary cooperation is desired. Within the framework of a competition submission, one site is to be worked on.

All necessary documents will be made available on the competition homepage https://www.nachwuchs-projekt.de/ideenwettbewerb/.

The participants in the competition grant the organiser the right to publicly exhibit the entries and to document them in print and online publications of the BMBF project NACHWUCHS and the BMBF funding measure Stadt Land Plus by filling out the entry form provided on the competition website.

The competition drafts must be sent in rolled paper form and as a pdf file on a storage medium together with the signed form (see homepage) to the following address by 31 July 2021:

Rheinische Friedrich-Wilhelms-Universität Bonn
Prof. Dr. Theo Kötter
Professur für Städtebau und Bodenordnung
Projekt NACHWUCHS
Nußallee 1
53115 Bonn
Selection procedure, award by the jury

The review of the admission criteria and the formal preliminary review of the competition entries are carried out by the competition coordinators. To ensure transparency, traceability and verifiability, the selection procedure will be documented.

The jury, consisting of personalities with professional expertise in the fields of urban planning, architecture, landscape architecture, agriculture and the housing industry will decide on the awarding of prizes to the designs in a jury session. The jury members are composed of the NACHWUCHS project team and external experts.

The jury will evaluate the entries according to the following criteria:
- Quality of the central idea of the agri-urban settlement model
- Quality of the urban development and open space planning
- Quality of the architectural and design concept
- Implementation of the sustainability principle with regard to the ecological, economic and social quality of the design

Rewarding the best competition entries

The authors of the winning competition entries will be rewarded in the form of work contracts. A total of 5,000 € is available for this purpose. The work contract includes the provision of a textual explanation and the presentation of the entry at the vernissage of the competition exhibition of the best designs. The outstanding works will be published as part of the research project.
Organisation

Organiser:
Prof. Dr. Theo Kötter, Project Manager BMBF Project Nachhaltiges Agri-Urbanes ZusammenWachsen (NACHWUCHS)

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Project partners