## Graduation Plan: All tracks

Submit your Graduation Plan to the Board of Examiners (Examencommissie-BK@tudelft.nl), Mentors and Delegate of the Board of Examiners one week before P2 at the latest.

The graduation plan consists of at least the following data/segments:

<table>
<thead>
<tr>
<th><strong>Personal information</strong></th>
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<tbody>
<tr>
<td>Name</td>
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<tr>
<td>Student number</td>
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<tr>
<td>Telephone number</td>
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<td>Private e-mail address</td>
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<tr>
<th><strong>Studio</strong></th>
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<tbody>
<tr>
<td>Name / Theme</td>
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<tr>
<td>North Sea landscapes of co-existence (Delta Interventions)</td>
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<td>Teachers / tutors</td>
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<tr>
<td>Hamed Khosravi and Filippo Lafleur</td>
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- The North Sea as a historically and politically contested territory becomes an ideal test bed to understand geopolitical scenarios and its influence on global trade, systems of production and distribution.

- The North Sea also helps me challenge the idea of the definition of a territory – land vs water to understand better, the limits of cultural and political influence. It puts into perspective the limitations of systems of the land opens up immense possibilities within the sea.

- The North Sea also serves as an important meeting point for politics and territory, trade and sustainability, all of which I believe must be address to envision a viable future for both the environment and the community.

**North Sea and UK**: Over several centuries the North sea has played a pivotal role in shaping the modern world and it’s civilisation, especially around mainland Europe. Since the dark ages its vast expanse has embodied and encouraged new forms of art, science, religion, architecture, politics and other significant institutions. While on one hand the slate grey waters of the sea, cold and swarming with monsters became synonymous to the unknown and unfamiliar, it was also on the other hand, seen as a familiar territory of the outlaws who collectively created a new autonomy that could exist nowhere but in the depths of the sea. Till today the North Sea is seen as a contested territory. One of the most urbanised sea in the world the North Sea is at the heart of the geopolitical objectives of the present and a crucial resource bank for the future. Its fate is forever intertwined with the countries that
border it, especially the island of Great Britain and its impending future after Brexit. Historically, the overlapping of the systems of land and sea has witnessed mankind's greatest inventions. While the rigid boundaries of land have nurtured societal and cultural growth, the fluid sea has brought with it an abundance of knowledge and resources. Perhaps, the urgency for a new competitive market should be met by creating a new balance between the North Sea and the territory of UK. If UK's relationship with the North Sea is a projection of its geopolitical affiliation with the countries bordering the sea, then the sea becomes an important platform to link global interests and sustainable trade practices.

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**Graduation project**

<table>
<thead>
<tr>
<th>Title of the graduation project</th>
<th>Towards Global Food Security [TBD]</th>
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**Goal**

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<tr>
<th>Location:</th>
<th>London to Southend-on-sea coast, Thames estuary, North Sea</th>
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**The posed problem,**

According to farming leaders within the National Farmers Union of England and Wales (NFU) more than half of UK’s food will come from overseas within a generation. By the year 2040, the country will be able to produce enough food to feed only 53% of its current population (Harvey, 2018). Presently, the UK imports about half of the total food it consumes. While it is still one of the largest markets for commercial beverages it is primarily dependent on the overseas market for its basic food needs - coffee, tea, dairy eggs and most importantly for meat, fruits and vegetables. The EU contributes to 30% of this import, followed by Africa at 5% and Asia, North and South America at 4% each. One in three imported fruits comes from South America - particularly Costa Rica, Colombia and Dominican Republic, while Asian and African countries contribute almost 25% of the fresh fruits. Without a doubt, UK’s exit from the EU will consequently have far-reaching global impacts, especially on countries that are chiefly dependent on large markets like that of the UK and already face severe food/resource shortages.

Moreover, two-thirds of the total land needed for its production is based abroad. Yet its average consumption is so high that it is placed 20th amongst the top global food consumers, several places above its biggest importers. This increasing reliance on external resources is not only displacing the environmental impacts of its food supply overseas but is also entrenching a deep rift in the global production and distribution practices.

Currently, many policies of UK agriculture are cinched under the EU Common Agriculture Policy (CAP) laws - a scheme that has already been criticised for directing payments in the form of subsidies to wealthy landowners and not endorsing farm diversity. Being the largest international trading partner the
European Union is obligated to reconsider the existing CAP policies in a more holistic way so as to address several issues that are of global importance. Its agricultural subsidies are anti-development in nature as they preclude developing countries from exporting their produce to the EU on a level playing field. It is yet to get rid of the issue of oversupply and redistribution that continues to encourage a volatile market. Lastly, the CAP needs to find ways to support smaller farms that have been neglected under its scheme of rewarding large land owners. Such improvident policies are bringing us closer to the impending threat of global food insecurity.

By exiting the EU, the UK gives itself an opportunity to address the loopholes within the CAP policies and respond judiciously to the threat to global food security. A conducive effort needs to be made by the UK government to democratize the process of agricultural production and relieve it from the burdens of corporate monopoly if it wants to forge a more positive future for itself and the rest of the world.

[HYPOTHESIS]

It’s 2020, a year after UK’s exit from the single market. Although trade experts predicted a slump in the GBP value and a sharp rise in prices of consumer goods and products, the new UK market has not done too bad. After increasing pressure from other administrative counties regarding relaxation of port custom duties and a cutback in the high initial costs for setting port industries the government introduces a new Port Reform Policy. The policy allows smaller privatised ports along the Thames Estuary to function as ‘Free Ports’ to encourage trade with the non-european market while the bigger ports along its Northern coast continue to trade with the European market. This gradually helps ease the rising consumption demands in the larger urban cities of UK.

Meanwhile the year 2020 also marks the end of the CAP support via Brussels in the form of EU annual farming subsidies. This triggers unrest amongst the National Farmers Union (NFU) as lack of funds begins to put immense pressure on local farmers to match the demands of the international market. The burden falls especially on small scale farmers who were already struggling with inadequate subsidies, consequently forcing them to exit the NFU to form their own autonomous enterprise. The new enterprise unites with the existing free ports to invest in an innovative farm typology that can operate outside the territorial borders of the UK while still trading within the global market through the privatised free ports.
[Main Research Question]
The territorial edge of UK is where the political order of its land confronts the natural order of the North sea. Can this juxtaposition be used to create the ideal spatial conditions for a trans-national agriculture enterprise that combines sustainable production practices with competent strategies towards global food security?

[Sub-Research Questions]

01. Analysis
- What is global food security? Can it be achieved permanently?
  What are the main variables that influence the conditions for food security?
- What is the current state of agriculture policies in the UK and what influence does it have on food security globally?
- What aspects of UK’s agricultural production and trade must be addressed to create guidelines for food security that is equitable for all countries?

02. Risks and evaluation
- What aspects of the territorial edge can create the ideal parameters for a democratic, trans-national enterprise?
- What features of the proposed trans-national enterprise differentiate it from a multi-national corporation?
- How will the proposed agriculture production system respond to the threat of the sea including coastal floods, sea level changes and increasing urbanisation of the North Sea?
- How can strategies for global food security be implemented spatially?

03. Reflection
- How sustainable is a trans-national model in the present political context?.
- How will the current proposal prepare for the uncertain political and environmental contexts of the future?
- Can democratizing the process of agricultural production and distribution also help address the disproportionate global consumption patterns?
The goal of this project will be to develop a design for a democratic system of agricultural production that tries to incorporate sustainable trade practices with the core values of global justice in the form of strategies for global food security. The intention is to develop the design in different scales – both as an independent system and as a system embedded within the global context. Although understanding all the nuances of the concept of global justice may be beyond the scope of this project, the main intent is to try and understand how design can become an integral medium to reinforce this idea. The design will be developed keeping in mind different categories. The initial objectives within these categories are listed below:

- **Built Environment**: Designing with social justice, Understanding the influence of market forces through design, Using architecture as a system to enforce justice
- **Trade**: Trade via free ports, reducing state control, democratizing production, Logistics as a self-governing entity, Sustainable food production, Fair Trade,
- **Food and Agriculture**: Equable access to food, Mitigating misuse of food by formulating policies to reduce over-production, Standardising global food values by promoting self-sufficiency, Promoting farm diversity and designing for food security.
PART A
Scale 01: Macro
UNDERSTANDING FOOD PRODUCTION, SUPPLY AND SECURITY
Literature study and review, Data Analysis and comparison, Scenario building and testing

PART B
Scale 02: Mezo + Micro
DESIGNING AND RISK EVALUATION
Scenario building, simulating and testing with literature inference, case study analysis, designing and scaling, formulating guidelines and policies

PART C
Scale 03: Mezo + Macro
EVALUATING DESIGN AT GLOBAL SCALE
Literature study and review, Scenario building and testing, Formulating guidelines and policies

PART D
CONCLUSION AND REFLECTION
Testing and further research
Literature and general practical preference

A. Global trade and agriculture -

b) Oskam A., Meester G. and Silvis H., (2011). EU Policy for agriculture, food and rural areas

B. Territorial rights, Distributive Justice and Global Food Security


C. North Sea and Delta –


Reflection

Relevance

As UK begins to formalize its departure from the trade co-operation, its decision to leave will not only raise uncertainties about the future but will also destabilize trade temporarily. Presently, the UK contributes 1/6th which is 16.2% of the GDP of the EU market and exports 40 billion euro worth of goods every year (Eurostats, 2016). 5 out of the 10 biggest European companies by revenue invest in the oil and gas industry with a maximum turnover of almost 500,000 million US Dollars (Fortune Global 500, 2014). Each of these global companies has a fair share of investment in the UK North Sea and together with its service industry make the largest contribution towards it’s economy. It’s exit from the European Union single market and possibly its customs union indicates a shift in its tone towards international affairs and a need for exclusive trade privileges. This new predilection raises doubts about its earnestness in working with other nations towards an egalitarian future that is fair and accessible to all especially in the wake of rising corporate monopoly that is slowly taking over the functioning and distribution of the global market and its resources.
Not only is the UK searching for more trade liberties it also looking at tackling the issue of migration. Controlling Britain’s borders has been central to the Brexit push. The underlying concern here is the migration of unskilled or not so highly skilled labour from countries with either high unemployment, low pay or both (Russell K. and Lee J. 2016). The Eurostats in its 2014 survey found out that a large sum of European immigrants were coming from the countries of Romania, Poland, Spain, Portugal, Lithuania and Italy, with a net migration of 12,000 – 30,000 people each year (Eurostats, 2014). This mass inflow of labour, according to the UK government is negatively affecting access to jobs and more importantly access to resources within the UK.

But the age of the global city is witnessing an increasing participation of national economic actors in global markets that are opening their economies to foreign firms (Sassen S, 2005), including the ones within the UK and indirectly contributing towards their financial growth. In this light, while regulating human inflow might seem like a legitimate demand at a national scale it may have serious ethical implications on a global scale. As a result, two main questions have taken centerstage in the present Brexit negotiations - 1.) the protection of immigrant rights and interests and 2.) the nature of UK’s trade with the EU.

In the context of trade, the matter of utmost concern has been that of the food and agriculture industry. Presently, the UK imports roughly 43% of the total food it consumes and is also heavily dependent on EU’s Common Agricultural Policy (CAP) for its food and agriculture standards. While the biggest imports are from the EU - African, Asian and North and South American markets also make significant contributions. It’s exit from EU therefore raises important questions regarding the production, trade and access to agricultural products and consumer foods globally. If the opportunity to create a new market for the UK that accommodates a new framework for its agricultural laws and standards is not used judiciously there might be a serious threat to the global food security.

However, if we follow the recent Brexit negotiations it is becoming quite evident that the urgency for global food security is being underestimated. Infact agreements have already been made between the EU and UK prior to the WTO conference, regarding the splitting of tariff rate quotas to ensure the continued circulation of subsidised EU produce even as UK establishes its own market. This paints an even grimmer picture for a sustainable global future as it puts more pressure on the African, Asian and South American markets to gratify UK’s food demands and at the same time compete with inequitable prices of the global market. If UK’s new policies do not reject the idea of economic progress of one at the cost of others we may as well be looking at a modern ingemination of its colonial past.
Time planning

**PART A**
Scale 01: Macro
UNDERSTANDING FOOD PRODUCTION, SUPPLY AND SECURITY
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**PART B**
Scale 02: Mezo + Micro
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Scenario building, simulating and testing with literature inference, case study analysis, designing and scaling, formulating guidelines and policies

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