EPFL

ENV- 462   Urban Green & Blue Infrastructure and Global Warming   Spring 2025
Final Group Project (09.05.25) – Guidelines

1. Step-by-step Approach for the Final Group Project

This chapter provides a step-by-step approach to establishing your group's grey-to-green final project. These steps are meant to help you build your group strategy but should not restrain or constrain your work.

A. Discussion of the Group's Grey-to-Green Sub-projects

   1. Discuss and become acquainted with the group members' sub-projects.

   2. Discuss the site's main grey/green characteristics, opportunities and constraints (annex 2.1).

   3. Discuss supportive, neutral, and conflictual interactions between the grey-to-green strategies (annex 2.2).

B. Definition, Desing, and Implementation of the Grey-to-green Group Strategy

   – To start with your group project, define for each of the 4 grey-to-green topics studied during the course, the overall goal, objective and measurable outputs you want to achieve:

Topics	Goal to achieve	Project objective	Measurable output
Urban Rainwater Management			
Urban Heat Island			
Urban Ecology and Biodiversity			
Urban Health and Well-Being			

   – Try to be as specific and precise in the formulation of your goals, objectives and measurable outputs (see annexe).

   – Based on your goal and objectives, assess the main strengths, weaknesses, opportunities, and limits of the green and blue infrastructure on the EPFL Learning Center's Esplanade (annexe 3.6).

   – Define a grey-to-green strategy to achieve your project goal and objectives.

   – Choose, size, and position your green and blue tools to design and implement your project strategy.

   – Asses in which way your project respond to the four strategic principles of UGBI planning:
       - Green-grey integration: combining green and grey infrastructure.
       - Connectivity: Creating green space networks.
       - Multifunctionality: Delivering and enhancing multiple functions and services.
       - Social inclusion: Enhancing social dynamics and cohesion.

C. Layout and Final Presentation of the Grey-to-green Group Project (annexe 3.6)

   1. Prepare a project booklet situation map to illustrate the result of your group's grey-to-green strategy.

   2. Prepare an oral presentation to explain the logic of your group's grey-to-green strategy.

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2. ANNEXES

2.1. Site Description and Constraints

Site description	*Briefly describe the study site* • Where is the site? • What is the site's green and grey ratio? • What green and grey infrastructures can be found on the site? • Describe the different regular or occasional uses of the site. • Other important information for your group project
Opportunities & Constraints	*What are the site constraints that will influence the stormwater management on site, respectively, that cannot be changed?* • Existing buildings, roads, and other grey infrastructures. • Green and blue infrastructures. • Existing or future uses of the site. • Other significant constraints for your group project

2.2. Interaction between the grey-to-green strategies

Tool to assess the supportive, neutral, and conflictual interactions between the grey-to-green strategies.

Effects of the strategy to ⇩	Rainwater management	Urban Heat Island	Urban Ecology and biodiversity	Health & Well Being
Rainwater management				
Urban Heat Island				
Urban Ecology and biodiversity				
Health & Well Being				

2.3. Integration of the site's opportunities & constraint in the grey-to-green strategy

Tool to assess how the site's opportunities and constraints influence into the grey-to-green strategy.

Tool to assess the supportive, neutral, and conflictual interactions between the grey-to-green strategies.

	Rainwater management	Urban Heat Island	Urban Ecology and biodiversity	Health & Well Being
Opportunities				
Constraints				

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2.4. Goals, Objectives, Outputs, and Outcomes (RECAP)[1]

Definition

- **Goals:** Overarching aims, generally not specific enough to measure.

- **Objectives:** Specific achievements that contribute towards reaching the goal(s). When writing objectives remember to make them S.M.A.R.T.: Specific, Measurable, Achievable, Relevant, and Time-Bound.

- **Outputs:** Tangible deliverables from the project.

- **Outcomes:** Changes in behavior, attitudes, perceptions, knowledge, skills, and/or behaviors as a result of your project.

Example

*To better understand these terms, let's imagine you are growing a strawberry patch in your backyard and you want to make a better one than the ones you have grown in previous years.[1] Your **goal** would be to "grow your best-ever strawberry patch." It is not measurable, but it is your aim to have a better strawberry patch than you have ever had before. You may have several **objectives** that will contribute towards your goal. For example:*

- *Increased survival rates of 20% compared to 2017's strawberry patch.*

- *By September 2018 attain .75 pounds or greater average plant yield of fruit.*

- *Plant growth is 20% larger than prior*

- *Better taste than 2018 store-bought strawberries as determined by neighbors.*

While each objective follows the S.M.A.R.T. model, not every goal may be obviously achievable. You may want to explain why you think you will achieve 20% larger plant growth here or in another section. Maybe you researched more efficient ways to grow strawberries. Alternatively, maybe a neighbor is using best practices, and tracked their objectives, so you can reasonably expect the results are duplicable. Information like this helps your reviewer know that the goal is ambitious but reasonably achievable.

*Your **outputs** for the project might be:*

- *Summary report and growth charts of test and baseline strawberry plots.*

- *Summary rating data from taste tests.*

- *Fruit production summary report.*

- *After season assessments of project and methods with recommendations for 2019.*

Your outcomes for the best-ever strawberry patch might be:

- *Learn which strawberry varieties work best in my yard.*

- *Develop practices for plant tracking to increase success.*

- *Learn more about plant resiliency in order to improve care for the future. Note that each outcome relates to a change, naturally leading the reviewer to understand that the program will not only have an impact now but one that will last into the future.*

[1] *Credit: Aly Sanchez, Director of Projects, The Grant Plant.*

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