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GUIDANCE REPORT

Teaching integrated planning and design for coastal landscapes in Europe by exploring digital dimensions of transnational collaboration in higher education

CO-LAND. Inclusive Coastal Landscapes

Activating green and blue infrastructure for sustainable development of the urban-land interface

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This publication presents the key findings of a three-year cooperative study on sustainable coastal landscapes in Europe. The book results from an international and interdisciplinary team of teachers and researchers' collective effort in spatial planning and design. The project addresses innovation in higher education at the interface of disciplines, landscapes and digitalisation.

Co-funded by the Erasmus+ Programme of the European Union

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Guidance report : teaching integrated planning and design for coastal landscapes in Europe by exploring digital dimensions of transnational collaboration in higher education : CO-LAND - Inclusive coastal landscapes : activating green and blue infrastructure for sustainable development of the urban-land interface

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C. THE IMPLEMENTATION AND DISSEMINATION PROCESS

"Coastal zones are of strategic importance. They are home to a large percentage of European citizens, a major source of food and raw materials, a vital link for transport and trade, the location of some of the most valuable habitats, and the favoured destination for leisure time. Yet coastal zones are facing serious problems of habitat destruction, water contamination, coastal erosion and resource depletion. This depletion of the limited resources of the coastal zone (including the limited physical space) is leading to increasingly frequent conflict between uses, such as between aquaculture and tourism. Coastal zones also suffer from serious socio-economic and cultural problems, such as weakening of the social fabric, marginalization, unemployment and destruction of property by erosion."

CEMAT (2006). Glossary of key expressions used in spatial development policies in Europe, document presented at the 14th Session of the European Conference of Ministers responsible for Spatial/Regional Planning, Lisbon (Portugal), 26-27 October 2006

FOREWORD

This report is an outcome of the CO-LAND Project partially funded by the ERASMUS+ grant programme of the European Union.
CO-LAND stands for 'Inclusive coastal landscapes: activating green and blue infrastructure for sustainable development of the urban-land interface'. The project included the development and introduction of an online seminar on the topic as a study offer at universities and the implementation of four 'Intensive Study Programme' workshops at four different European seaside locations.

When we, the project team of nine consortium partners (seven universities and two NGOs) from six different countries started to design the online seminar in autumn 2017, we had no idea how relevant this project would become in its last half-year during the COVID-19 pandemic crisis.

At the beginning some of us had certain doubts, based on our experience in (face-to-face) university teaching study projects and design studios, as to how far planning and design can be taught online as a core competence at all. We all found it an exciting experiment to explore very different contexts of coastal landscapes in an online course networked throughout Europe and beyond and to develop planning solutions for their problems on site.

Now, at the end of the project period, we have learned how valuable this experiment was. The summer semester 2020 took place almost entirely digitally or online in all partner universities. Due to the pandemic, classroom teaching was severely limited. Consequently, the fourth and last student workshop at the North Sea was postponed to September 2020 and carried out in a combination of an on-site and online workshop. Even if the perception of the coastal landscape on-site cannot be completely reproduced digitally; the vastness of the horizon, the sound of the sea, the taste of salt and the typical seafood dishes, interactive teaching in planning and design was successful in these contexts.

Online teaching and digital dimensions of higher education will continue to gain in importance in all disciplines, including planning and design, in addition to the indispensable on-site studies. With this report therefore, we would like to share our experiences and the approaches and methods applied and newly developed within the project with colleagues at planning and design faculties and institutes worldwide. Moreover, we want to contribute to a more inclusive, resilient and sustainable development of the diverse landscapes and habitats at the sea.

The CO-LAND project team, October 2020

Pozzuoli beach

EXECUTIVE SUMMARY

This guidance report aims at supporting teachers and other interested parties in developing and innovating programmes for integrated spatial planning. The focus is on coastal landscapes, but the methods and techniques are also applicable to other subject areas. This report has been developed within the framework of CO-LAND project as part of the ERASMUS+ Strategic partnership.

The CO-LAND Toolbox, added as an online supplement, is intended to enhance the use of e-learning and to support the practical implementation of an online course. It compares different platforms and instruments, provides online tools, links, video clips etc. and is freely available as open access at the CO-LAND wiki: https://colandwiki.hfwu.de/index.php?title=Output_2_-_Toolbox

This report divides into three major parts; the why, the what and the how of the CO-LAND project

Part A describes the innovative teaching approach and methodology applied and further developed during the project. Chapter 2 contains the six dimensions of curriculum innovation, such as bridging the scales of planning, integrating academic disciplines, and including community and stakeholder perspectives. Chapter 3 highlights the underlying theories and teaching methods for integrated planning and design; the concept of landscape, educational constructivism, competences for sustainable development, the integrated planning and design framework and the principles of blended learning.

Part B explains the relevance of coastal areas for current global developments related to the UN Sustainable Development Goals (Chapter 4) and their suitability as a study and research issue for planning and design disciplines, illustrated by the examples of the Sand Motor and the BlueHealth project (Chapter 5). Moreover, it shows the subject-specific, methodical, (inter) personal and generic competences and learning outcomes that form the basis of the curriculum. It presents the topics, exercises and references to the main lectures of the online course. It concludes with the outline of the integrated CO-LAND Case Study Assignment that students carry out through all phases of the online course (Chapter 6).

Part C focuses on the implementation and dissemination process. Showing the practical steps based on the CO-LAND experiences, it describes how to set-up a blended learning project, presenting the elements of the online area and modes of student participation and the assessment strategy (Chapter 7). Chapter 8 presents the organisation of on-site workshops, with the selection of stakeholders, a preparatory visit, and schedule of the intensive programme. The fourth workshop presents a blended form that was able to deal with the challenges of the COVID-19 pandemic.

The process of monitoring and evaluation for quality management is explained in a process chart and an overview of the quality objectives and indicators. Examples of the results of the survey of students give an impression of the outcomes (Chapter 9). Chapter 10 presents the dissemination of the project: the objectives, target groups, methodology and actions for communication and sharing the results. An online multiplier event forms part of it.

The report concludes with the findings of the project and summarises recommendations for university teaching. The main recommendations are to improve the interactive learning platforms to allow for increased possibilities of participatory or collaborative design and more frequent iterative feedback to learners. In addition, one should be prepared to organise Intensive Student Programmes and workshops in a way that a blended form of on-site and online work can create a productive learning and working environment.


Photo: Ingrid Schegk

Rezumat

Prezentul Ghid își propune să fie un sprijin pentru profesori și alți specialiști interesați să dezvolte programe inovatoare pentru dezvoltare spațială integrată. Lucrarea se referă la zonele costiere însă metodele și tehnicile prezentate pot fi aplicate și altor tipuri de teritorii. Ghidul a fost elaborat în cadrul proiectului Co-Land finanțat prin programul ERASMUS+ 2017 – Parteneriate strategice.

Facilitatea „Co-Land Toolbox", accesibilă on-line, este realizată cu intenția de a stimula utilizarea sistemelor de tip e-learning și de a susține efectiv implementarea unui curs on-line. Facilitatea compară diferite platforme și instrumente, oferă mijloace de lucru on-line, link-uri, tutoriale audio-video și este accesibilă ca sursă de tip „open access" CO-LAND wiki: https://colandwiki.hfwu.de/index.php?title=Output_2_-_Toolbox

Ghidul este organizat în trei părți principale: motivul (the why), scopul (the what) și cadrul (the how) proiectului Co-Land.

Partea A descrie abordarea inovatoare de predare și metodologia aplicată și dezvoltată pe parcursul proiectului. Capitolul 2 descrie cele 6 dimensiuni ale curriculum-ului inovator printre care: integrarea multi-nivel a planificării, integrarea multidisciplinară, integrarea opiniilor și a perspectivelor comunităților, și a actorilor locali și teritoriali. Capitolul 3 evidențiază principalele teorii și metode de predare și învățare pentru proiectare și planificare spațială integrată, precum: conceptul de peisaj, constructivismul educațional, competențe pentru dezvoltare durabilă, planificare integrată și design precum și principii ale predării și învățării în sistem mixt („blended").

Partea B explică importanța zonelor costiere, pentru evoluțiile la nivel global din perspectiva Obiectivelor de Dezvoltare Durabilă ale ONU (Capitolul 4), și relevanța acestora din punct de vedere al studiului și cercetării pentru domeniul disciplinar al planificării spațiale, demonstrată și prin exemple de proiecte precum „Sand Motor" și „Blue Health" (Capitolul 5). Sunt descrise elemente care constituie fondul curricular precum: problematica specifică, metodele utilizate, competențele profesionale și transversale vizate și rezultatele învățării. Sunt de asemenea prezentate subiectele abordate, exercițiile propuse și referințele pentru prelegerile cursului on-line. Secțiunea se încheie cu prezentarea aplicațiilor pe care studenții participanți le-au realizat pe durata cursului (Capitolul 6).

Partea C se referă la procesul de implementare și diseminare. Sunt descrise etapele și sunt prezentați pașii parcurși în proiectul Co-Land cu referire la organizarea procesului de învățare în format mixt („blended"), la componentele cursului on-line, la modul de participare și la metodele de evaluare a studenților (Capitolul 7). Capitolul 8 prezintă organizarea atelierelor tematice, on-site, vizitele pe sit, identificarea actorilor locali și stabilirea calendarului de desfășurare a activităților pentru programe de studiu intensiv. Al 4-lea atelier prezintă un format de lucru hibrid, adaptat să facă față la provocările contextului generat de pandemia COVID-19.

Procesul de monitorizare și evaluare a calității managementului, este explicat prin intermediul unei diagrame de proces și printr-o perspectivă asupra calității obiectivelor și indicatorilor. Exemplele referitoare la concluziile și evaluările studenților oferă o imagine relevantă asupra rezultatelor obținute (Capitolul 9). Capitolul 10 prezintă modul de diseminare a rezultatelor proiectului, a obiectivelor acestuia, a metodologiei și modalităților de comunicare cu și către grupurile țintă vizate. Procesul de diseminare a fost susținut și de un eveniment de multiplicare organizat la finalul proiectului.

Prezenta lucrare se încheie cu o serie de concluzii și lecții învățate în urma implementării proiectului și cu un număr de recomandări pentru procesul de formare academică. Principalele recomandări se referă la optimizarea platformelor interactive de învățare astfel încât să asigure o creștere a posibilităților de proiectare participativă precum și de creare a unui mediu favorabil colaborării și îndrumării studenților. Se recomandă în mod special crearea capacității de organizare a unor programe de studiu intensiv și ateliere care să asigure printr-o formulă mixtă de tip „on-site" și „on-line" un mediu de lucru creativ și productiv.

Mangalia coast

Zusammenfassung

Dieser Orientierungsbericht hat das Ziel, Lehrende an Hochschulen und andere Interessierte bei der Entwicklung und Innovation von Studienprogrammen für die integrierte räumliche Planung zu unterstützen. Der Schwerpunkt liegt auf Küstenlandschaften, aber die Methoden und Techniken sind auch auf andere Fachthemen anwendbar. Dieser Bericht wurde im Rahmen des CO-LAND-Projekts, Teil einer strategischen Erasmus+-Partnerschaft, erarbeitet. Die online verfügbare CO-LAND Toolbox soll den Einsatz von E-Learning fördern und die praktische Umsetzung eines Online-Kurses unterstützen. Sie vergleicht verschiedene Plattformen und Instrumente, stellt Online-Tools, Links, Videoclips etc. zur Verfügung und ist im CO-LAND-Wiki als Open Access frei verfügbar: https://colandwiki.hfwu.de/index.php?title=Output_2_-_Toolbox Vorliegender Bericht gliedert sich in drei Hauptteile: das Warum, das Was und das Wie des CO-LAND-Projekts.

Teil A beschreibt den innovativen Lehransatz und die Methodik, die während des Projekts angewandt und weiterentwickelt wurden. Kapitel 2 stellt die sechs Dimensionen der curricularen Innovation vor, wie z.B. die Verbindung unterschiedlicher Planungsmaßstäbe, die Integration verschiedener Disziplinen einschließlich der Perspektive der Allgemeinheit und ihrer Interessensvertreter. Kapitel 3 beleuchtet die zugrundeliegenden Theorien und Lehrmethoden für integriertes Planen und Entwerfen, das zugrunde gelegte Landschaftskonzept, den angewandten konstruktivistischen Bildungsansatz, die für nachhaltige Entwicklung erforderlichen Kompetenzen sowie die Prinzipien des 'Blended Learning'.

Teil B erläutert die Relevanz von Küstengebieten für aktuelle globale Entwicklungen im Zusammenhang mit den Zielen der Vereinten Nationen (UN) für nachhaltige Entwicklung (Kapitel 4) und ihre Eignung als Studien- und Forschungsthema für Planungs- und Entwurfsdisziplinen, veranschaulicht am Beispiel des Sandmotors und des BlueHealth-Projekts (Kapitel 5). Darüber hinaus zeigt es die fachspezifischen, methodischen, (inter-) persönlichen und überfachlichen Kompetenzen und Lernergebnisse auf, die die Grundlage des Curriculums bilden. Es stellt die Themen, Übungen und Referenzen zu den Hauptvorlesungen des Online-Kurses vor. Es schließt mit der Skizzierung der integrierten 'CO-LAND Case Study' -Aufgabenstellung, die die Studierenden in allen Phasen des Online-Kurses bearbeiten (Kapitel 6).

Teil C konzentriert sich auf den Implementierungs- und Verbreitungsprozess. Er zeigt die praktischen Schritte auf der Grundlage der CO-LAND-Erfahrungen auf und beschreibt, wie ein Blended-Learning-Projekt durchgeführt werden kann. Die Elemente des Online-Bereichs und die Modalitäten der Beteiligung der Studierenden werden vorgestellt ebenso wie die Bewertungsstrategie (Kapitel 7). Kapitel 8 beschreibt die Organisation von studentischen Workshops vor Ort, einschließlich der Auswahl der beteiligten örtlichen Interessensvertreter, einem vorbereitenden Besuch und dem Zeitplan des Intensivprogramms. Der vierte dieser Workshops repräsentiert ein hybrides Konzept, mit dem die Herausforderungen der COVID-19-Pandemie bewältigt werden konnten. Der Prozess der Begleitung und Evaluierung im Rahmen des Qualitätsmanagements wird in einem Prozessdiagramm und einer Übersicht über die Qualitätsziele und -indikatoren erläutert. Beispiele für die Ergebnisse der Befragung der Studierenden geben einen Eindruck von den Ergebnissen (Kapitel 9). Kapitel 10 stellt die Verbreitung des Projekts dar, die Ziele, Zielgruppen, Methodik und Maßnahmen für die Kommunikation und den Austausch der Ergebnisse. Eine Online-Veranstaltung für Multiplikatoren ist Teil davon.

Der Bericht schließt mit den Ergebnissen des Projekts und fasst Empfehlungen für die Hochschullehre zusammen. Zu den Hauptempfehlungen gehört die Verbesserung interaktiver Lernplattformen, um mehr Möglichkeiten partizipativer und kollaborativer Gestaltung und für häufigeres iteratives Feedback an die Lernenden zu bieten. Darüber hinaus sollten intensive Studienprogramme bzw. studentische Workshops so organisiert werden, dass eine kombinierte Form aus Vor-Ort- und Online-Arbeit eine produktive Lern- und Arbeitsumgebung schaffen kann.

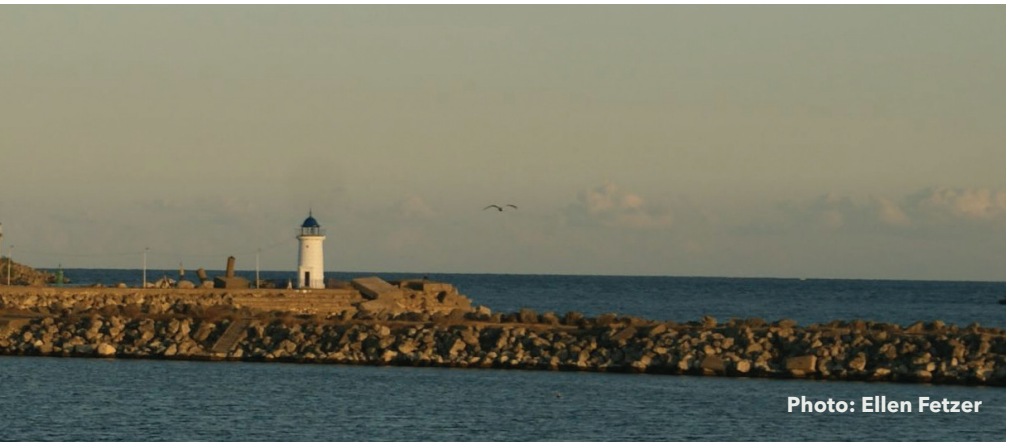


Photo: Ellen Fetzer

Kokkuvõte

Aruande eesmärk on toetada õpetajaid ja teisi huvitatud isikuid tervikliku ruumilise planeerimise programmide väljatöötamisel ja uuendamisel. Rõhk on rannikumaastikel, kuid meetodid ja tehnikad sobivad ka teistele valdkondadele. Aruanne on koostatud CO-LAND Erasmus+ strateegilise partnerluse raames.

Veebitäiendusena lisatud CO-LAND-i töövahendite pakett on mõeldud e-õppe täiustamiseks ja veebikursuse praktilise rakendamise toetamiseks. Selle abil saab võrrelda eri platvorme ja vahendeid, selles on veebitööriistad, lingid, videoklipid jne ning see on vabalt kättesaadav CO-LAND-i vikis.

Praegune töö on jagatud kolme põhiosasse, mis üldises mõttes käsitlevad CO-LAND-i projekti kolme aspekti: miks, mis ja kuidas https://colandwiki.hfwu.de/index.php?title=Output_2_-_Toolbox

A-osas kirjeldatakse uuenduslikke õpetusmeetodeid, mida projekti käigus kasutatakse ja edasi arendatakse. See koosneb kuuest õppekavauuenduse mõõtmest, näiteks planeeringu skaalade ühendamisest, akadeemiliste distsipliinide integreerimisest ning kogukonna ja huvirühmade perspektiivide kaasamisest (2. peatükk). 3. peatükis tuuakse välja tervikliku planeerimise ja disaini aluse moodustavad teooriad ja õpetusmeetodid: maastiku mõiste, hariduslik konstruktivism, kestliku arengu pädevus, integreeritud planeerimise ja disaini raamistik ning kombineeritud õppe põhimõtted.

B-osas selgitatakse rannikualade tähtsust praeguste ülemaailmsete arengute jaoks seoses ÜRO kestliku arengu eesmärkidega (4. peatükk) ja nende sobivust planeerimis- ja disainiteadusharu uurimisprobleemiks, mida täiendavad näited projektidest „Sand motor" ja „BlueHealth" (5. peatükk).

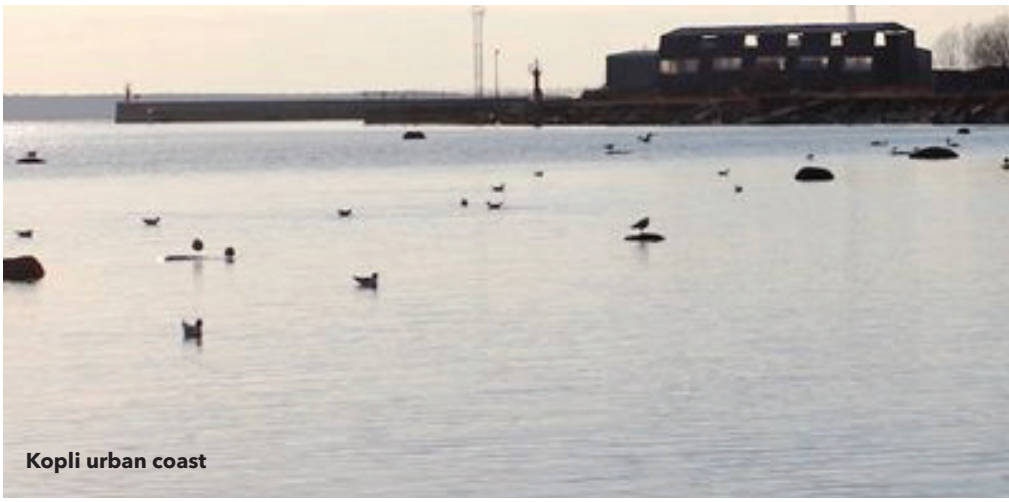
Lisaks eeltoodule tuuakse välja ainespetsiifilised, metoodilised, (inter) personaalsed ja üldised oskused ning õpiväljundid, mis moodustavad õppekava aluse. Selles esitatakse veebikursuse põhiloengute teemad, harjutused ja viited. Osa lõpus on ülevaade integreeritud CO-LAND-i juhtumiuuringu hindamisest, mida tudengid veebikursuse kõigi faaside ajal teevad (6. peatükk).

C-osas käsitletakse rakendus- ja levitamisprotsessi. CO-LAND-i kogemusel põhinevate praktiliste sammude abil kirjeldatakse, kuidas võtta kasutusele kombineeritud õppe programm, esitleda veebiala ja õpilaste osalusviiside elemente ning hindamisstrateegiad (7. peatükk). 8. peatükis kirjeldatakse kohapeal toimuvate töötubade korraldamist valitud huvirühmadega, mis hõlmab ka ettevalmistavat külastust ja süvendatud programmi ajakava. Neljandas töötoas esitatakse kombineeritud vorm, mis suutis pidada vastu COVID-19 pandeemia proovikividele.

Protsessiskeemil kirjeldatakse kvaliteedijuhtimise jälgimis- ja hindamisprotsessi ning antakse ülevaade kvaliteedieesmärkidest ja -näitajatest. Tudengite küsitlustulemuste näited annavad aimu projekti tulemusest (9. peatükk). 10. peatükis kirjeldatakse projekti levitamist: selle eesmärki, sihtrühma, metoodikat ning tegevusi tulemuste edastamiseks ja jagamiseks. Selle osa on ka veebis toimuv levitusüritus.

Aruanne võtab kokku projekti tulemused ning soovitused õppemeetoditeks ülikoolis. Peamised soovitused on arendada interaktiiveid õppeplatvorme, et võimaldada suuremat osalemist ja koostööd disainis ning anda tihedat ja korduvat tagasisidet tudengitele.

Lisaks peab olema valmis korraldama tudengitele intensiivset programmi ja töötubasid, mille ülesehitus ühendab endas kohapealse ja veebipõhise töö põhimõtted ning loob produktiivse õppe- ja töökeskkonna.



Kopli urban coast

Sintesi

Questo rapporto con funzione di manuale, ha lo scopo di supportare i docenti e gli altri soggetti interessati nello sviluppo e nell'innovazione dei programmi per la pianificazione spaziale integrata. L'attenzione si concentra sui paesaggi costieri, ma i metodi e le tecniche sono applicabili anche ad altre aree tematiche. Il manuale è stato sviluppato nell'ambito del partenariato strategico Erasmus + CO-LAND.

Il CO-LAND Toolbox, aggiunto come supplemento online, ha lo scopo di migliorare l'uso dell'e-learning e di supportare l'implementazione pratica di un corso online. Confronta differenti piattaforme e strumenti, fornisce strumenti online, collegamenti, videoclip, ecc. ed è disponibile gratuitamente come risorsa ad accesso aperto sul sito wiki del CO-LAND https://colandwiki.hfwu.de/index.php?title=Output_2_-_Toolbox

Il manuale si divide in tre parti principali: il perché, il cosa e il come del progetto CO-LAND.

La parte A descrive l'approccio didattico innovativo e la metodologia applicata e ulteriormente sviluppata durante il progetto. Il capitolo 2 contiene le sei dimensioni dell'innovazione del curricolo, come collegare le scale della pianificazione, integrare le discipline accademiche e includere le prospettive della comunità e degli stakeholders. Il capitolo 3 evidenzia le teorie di base e i metodi di insegnamento della pianificazione e della progettazione integrata; il concetto di paesaggio, il costruttivismo didattico, le competenze per lo sviluppo sostenibile, il quadro integrato di pianificazione e progettazione e i principi della didattica mista.

La parte B spiega l'importanza delle aree costiere per le trasformazioni globali in corso relative agli Obiettivi di sviluppo sostenibile delle Nazioni Unite (Capitolo 4) e la loro idoneità come tema di studio e ricerca per le discipline della pianificazione e della progettazione, illustrate dagli esempi dei progetti Sand Motor e BlueHealth (Capitolo 5). Inoltre, mostra le competenze specifiche di ciascuna disciplina, metodologiche, (inter) personali e generali nonché i risultati didattici che costituiscono la base del curriculum. Presenta gli argomenti, le esercitazioni e i riferimenti delle principali lezioni del corso online. Termina con lo schema di definizione del caso studio integrato del progetto CO-LAND, che gli studenti hanno svolto durante tutte le fasi del corso online (Capitolo 6).

La parte C si concentra sul processo di implementazione e disseminazione, mostrando i passaggi operativi basati sulle esperienze del CO-LAND, descrive come impostare un progetto di didattica mista, presentando gli elementi dell'area online e le modalità di partecipazione degli studenti nonché la strategia di valutazione (Capitolo 7). Il capitolo 8 presenta l'organizzazione dei workshop sviluppati in presenza nei siti di studio, con la selezione degli stakeholders, una visita preparatoria e il programma del workshop intensivo. Il quarto workshop presenta una formula mista che è stata in grado di affrontare le sfide della pandemia COVID-19.

Il processo di monitoraggio e di valutazione per la gestione della qualità è descritto in un diagramma e attraverso una panoramica degli obiettivi e degli indicatori di qualità. Alcune risposte selezionate dal questionario somministrato agli studenti danno un'idea dei risultati del progetto (Capitolo 9). Il Capitolo 10 presenta le azioni di disseminazione del progetto: gli obiettivi, i gruppi di destinatari, la metodologia e le azioni per la comunicazione e la condivisione dei risultati, incluso un evento di diffusione sviluppato on line.

Il rapporto si conclude con i risultati del progetto e riassume le raccomandazioni per l'insegnamento universitario. Le principali raccomandazioni sono finalizzate a migliorare le piattaforme di apprendimento interattivo per consentire maggiori opportunità di progettazione partecipativa o collaborativa e un più frequente feedback iterativo per gli studenti. In conclusione, con questo manuale si dovrebbe essere pronti ad organizzare programmi e seminari intensivi per gli studenti, secondo una modalità mista di lavoro in presenza e online capace di creare un produttivo ambiente di lavoro e di apprendimento.

Photo: Jekaterina Balicka

Résumé

Ce guide de travail a pour objectif d'aider les enseignants et autres collègues intéressés à développer et innover par des programmes sur le développement spatial intégré. Le focus du travail est orienté vers les paysages côtiers, mais les méthodes et les techniques sont également applicables pour d'autres thématiques. Ce travail a été élaboré dans le cadre du partenariat stratégique Erasmus+ CO-LAND.

Le Toolbox CO-LAND, en annexe en tant que supplément en ligne, est destiné à améliorer l'utilisation du e-learning et d'appuyer la mise en place en pratique d'un cours en ligne. Il compare les différentes plateformes et instruments, délivre des instruments en ligne, liens, clips vidéos, etc. et est aisément disponible en accès libre par le CO-LAND wiki https://colandwiki.hfwu.de/index.php?title=Output_2_-_Toolbox

Ce travail contient trois parties principales ; le pourquoi, le quoi et le comment du projet CO-LAND.

La Partie A décrit l'approche de l'enseignement innovant et méthodologie appliquée et approfondie durant le projet. Le Chapitre 2 contient les six dimensions de l'innovation du curriculum, tels que l'intégration des échelles de planification, l'intégration des disciplines académiques, et l'inclusion des perspectives de la communauté et des acteurs. Le Chapitre 3 souligne les théories de référence et les méthodes d'enseignement pour la planification et l'aménagement intégré ; la conception du paysage, le constructivisme éducationnel, les compétences du développement durable, la planification intégrée et le cadre d'aménagement ainsi que les principes de l'apprentissage mixte.

La Partie B explique l'importance des zones côtières pour les développements globaux actuels liés aux Objectifs de Développement Durable (ODDs) des Nations-Unies (Chapitre 4) et leur pertinence en tant que thématique d'étude et de recherche pour les disciplines de planification et d'aménagement, illustrées par les exemples du Moteur Sable (Sand Motor) et du Projet BlueHealth (Chapitre 5). De plus, elle montre les compétences et résultats de l'apprentissage spécifiques au sujet, méthodologiques, (inter) personnels et génériques qui forment la base de ce curriculum. Elle présente les thèmes, exercices et références aux principales conférences des cours en ligne. Elle conclut avec un sommaire du travail d'étude de cas intégrée CO-LAND, que les étudiants ont appliqué à travers toutes les phases du cours en ligne (Chapitre 6).

La Partie C se concentre sur le processus de mise en œuvre et de dissémination. En démontrant les étapes pratiques basées sur les expériences de CO-LAND, la partie décrit comment établir un projet d'apprentissage mixte, tout en présentant les éléments de la plateforme en ligne, les modes de participation étudiantes et la stratégie d'évaluation (Chapitre 7). Le Chapitre 8 présente l'organisation des ateliers sur terrain, avec la sélection des acteurs, la visite préparatoire, et l'horaire du programme intensif. Le quatrième atelier présente une forme hybride tenant compte des défis de la pandémie COVID-19.

Le processus de surveillance et évaluation pour la gestion de qualité est expliquée dans un diagramme de processus et un aperçu des objectifs de qualité et indicateurs. Les exemples des résultats du sondage auprès des étudiants donnent une impression des résultats (Chapitre 9). Le Chapitre 10 présente la dissémination du projet : les objectifs, les groupes cibles, la méthodologie et les actions de communication, ainsi que les résultats partagés. Un événement multiplicateur en ligne fait partie de celle-ci.

Le guide conclut avec les résultats du projet et résume les recommandations pour l'enseignement universitaire. Les recommandations principales sont l'amélioration de plateformes interactives d'enseignement permettant une augmentation des possibilités de design participatif ou collaboratif, ainsi qu'un retour itératif plus fréquent vers les étudiants. De plus, les programmes d'études intensifs ainsi que les ateliers étudiants devraient être organisés de telle manière qu'une forme hybride de travail sur site et en ligne peut créer un environnement d'apprentissage et de travail productif.

DePanne coast

Samenvatting

Deze handleiding is bedoeld om docenten en andere geïnteresseerden te ondersteunen bij het ontwikkelen en innoveren van programma's voor integrale ruimtelijke planning. De nadruk ligt op kustlandschappen, maar de methoden en technieken zijn ook toepasbaar op andere terreinen. Dit rapport is ontwikkeld in het kader van het CO-LAND-project, een ERASMUS + Strategisch partnerschap.

De CO-LAND Toolbox, toegevoegd als online aanvulling, is bedoeld om het gebruik van e-learning te versterken en de praktische implementatie van een onlinecursus te ondersteunen. Het vergelijkt verschillende platforms en instrumenten, biedt online tools, links, videoclips etc. en is vrij beschikbaar als open access op de CO-LAND wiki: https://colandwiki.hfwu.de/index.php?title=Output_2_-_Toolbox

Dit rapport is opgedeeld in drie delen; het waarom, het wat en het hoe van het CO-LAND-project.

Deel A beschrijft de innovatieve onderwijsaanpak en -methodologie die is toegepast en verder ontwikkeld tijdens het project. Hoofdstuk 2 bevat de zes dimensies van curriculuminnovatie, zoals het overbruggen van de schaalniveaus van planning, het integreren van academische disciplines en het betrekken van de gemeenschap en het perspectief van belanghebbenden. Hoofdstuk 3 belicht de onderliggende theorieën en onderwijsmethoden voor geïntegreerde planning en ontwerp; het concept van landschap, educatief constructivisme, de competenties voor duurzame ontwikkeling, het geïntegreerde planning- en ontwerpkader en de principes van blended learning.

In deel B wordt de relevantie van kustgebieden voor de huidige mondiale ontwikkelingen met betrekking tot de Duurzame Ontwikkelingsdoelen van de VN (hoofdstuk 4) en hun geschiktheid als studie- en onderzoeksvraagstuk voor planning- en ontwerpdisciplines toegelicht, geïllustreerd aan de hand van de voorbeelden van de Zandmotor en het BlueHealth-project. (Hoofdstuk 5). Bovendien toont het de vakspecifieke, instrumentale, (inter) persoonlijke en generieke competenties en leerresultaten die de basis vormen van het curriculum. Het presenteert de onderwerpen, oefeningen en verwijzingen naar de belangrijkste colleges en inleidingen van de onlinecursus. Het besluit met een schets van de geïntegreerde CO-LAND Case Study Opdracht die studenten gedurende alle fasen van de onlinecursus uitvoeren (Hoofdstuk 6).

Deel C richt zich op het implementatieproces en het delen van de kennis. Het toont de praktische stappen op basis van de CO-LAND-ervaringen en beschrijft hoe een internationale cursus als blended learning kan worden opgezet, waarbij de elementen van het online platform en de modi van studentenparticipatie en de beoordelingsstrategie worden gepresenteerd (hoofdstuk 7). Hoofdstuk 8 presenteert de organisatie van workshops op locatie, met de selectie van belanghebbenden, een voorbereidend bezoek en de planning van het intensieve programma. De vierde workshop presenteert een gemengde vorm die de uitdagingen van de COVID-19-pandemie met de daarbij horende restricties het hoofd biedt.

Het proces van monitoring en evaluatie voor kwaliteitsmanagement wordt toegelicht in een processchema en een overzicht van de kwaliteitsdoelstellingen en indicatoren. Voorbeelden van de resultaten van de enquête onder studenten geven een indruk van de uitkomsten (hoofdstuk 9). Hoofdstuk 10 presenteert de verbreiding van de resultaten en inhoud van het project: de doelstellingen, doelgroepen, methodologie en acties voor communicatie en het delen van de resultaten. Een online multiplier-evenement maakt daar deel van uit. Het rapport sluit af met de bevindingen van het project en vat de aanbevelingen voor universitair onderwijs samen. De belangrijkste aanbevelingen zijn om de interactieve leerplatforms te verbeteren om meer mogelijkheden van participatief of collaboratief ontwerp en frequentere iteratieve feedback aan studenten mogelijk te maken. Bovendien moet men erop voorbereid zijn om intensieve studentenprogramma's en workshops zo te organiseren dat een gemengde vorm van on-site en online werk een productieve leer- en werkomgeving creëert.

Photo: Didier Vancutsem

1 INTRODUCTION

This guidance report addresses academic teaching staff and intends to support university lecturers and teachers in adopting innovative approaches to teaching integrated planning and design in higher education. The guidance report might also be a useful tool for students and professionals. Coastal landscapes of Europe serve as a thematic framework. Due to their natural features, their outstanding importance for the development of society and its sensitivity to current global challenges such as climate change, demographic change, migration, etc., they are suitable in many ways as objects of study and research for planners and designers. However, the transfer potential is not only related to other coastal landscapes in Europe and the world. The approach applies to any other urban-land interface such as lakes and rivers, so practically any urban, sub-urban or peri-urban contexts. In addition, the use of ICT-tools is presented in order to enhance the use of e-learning and open online courses in this field.

The guidance report is based on three cycles of master level courses at seven universities and two NGOs cooperating from 2018 to 2020 and takes into account the evaluation results obtained. It is available as an open educational resource.

Fig. 1.1 CO-LAND Workshop location 2019: Pozzuoli sea front

1.1 OBJECTIVES OF THE PRESENT REPORT

Photo: Ingrid Schegk

The overall intention of this guidance report is to contribute to curricular innovation in spatial planning and design disciplines at universities with regard to methodological, content, organisational and media implementation. Its authors would like to encourage the promotion of blended and e-learning concepts and thus advance international cooperation at universities on globally significant project tasks.

The objectives in detail are:

- to show potentials and aspects of innovation in higher education and make it more relevant for the society;
- to offer a theoretical and methodical framework for blended learning approaches;
- to present the case of coastal landscapes as a highly relevant spatial challenge and content-related potential for planning and design studies and to exemplify its translation into a curricular framework;
- to illustrate the practical implementation process of a blended learning project, including online and on-site activities, their preparation, execution, evaluation and dissemination; and
- to provide a toolbox of new technological online-tools in e-learning such as online platforms, wikis, etc.

1.2 PROJECT BACKGROUND

This guidance report is part of the dissemination output of the project CO-LAND Inclusive coastal landscapes: activating green and blue infrastructure for sustainable development of the urban-land interface. The project was funded by the EU programme Erasmus+ Strategic partnerships and implemented by an international project consortium from seven universities and two NGOs. This strategic partnership developed an international blended learning environment, linking constructivist learning theories, synchronous and asynchronous methods and media (online and offline). The consortium developed and tested an open online course during which learners collaborated in interdisciplinary and virtual teams on local case studies in Romania, Estonia, Italy and Belgium.

The overall idea is to provide a framework for a system-based planning and design approach that will allow the collaboration of spatial planning disciplines, architects, urban planners, landscape planners and geographers. Through this collaboration, students can qualify themselves for addressing the specific spatial, social and environmental challenges of coastal landscapes in Europe with integrative, creative and inclusive methods. Moreover, the intention is to equip students not only with relevant knowledge and professional tools, but also encourage them in building visionary and democratic mindsets.

CO-LAND course participants develop a profound understanding of the specific character of coastal landscapes. They learn which driving forces are influencing the landscape system and which impact types are most relevant for planning and design responses at global and European dimensions. Participants further learn about various approaches to landscape assessment in order to specify the challenges and potentials of a coastal landscape. They have the opportunity to define and test assessment models and derive relevant knowledge for planning and design. The last phase of the course introduces different approaches to strategy building, planning and design in the context of coastal landscapes.

On this basis, course participants are able to draft a strategy and a master plan for a coastal area taking economic, ecological and social aspects and current policies into account. In addition to the subject-specific knowledge and methods, the CO-LAND course further aims to foster transversal skills at various levels. Above all, these skills include the following: virtual teamwork and creative application of ICT-tools for international cooperation, team building and democratic leadership, analytical thinking, intercultural communication and creativity.

Project-website:
https://www.coland.eu/

Collaboration platform for the transnational learning activities:
https://colandwiki.hfwu.de/index.php?title=Main_Page

Fig. 1.2 Tallinn seafront

1.3 STRUCTURE OF THE REPORT

The present work is divided into three major parts; broadly speaking the why, the what and the how of the CO-LAND project, narrated in 11 chapters. Part A and B are more content related and reflective, Part C is more process-related and descriptive.

Part A describes the innovative teaching approach and methodology applied and further developed during the project. It contains the six dimensions of curriculum innovation (Chapter 2) and the underlying theories and teaching methods for integrated planning and design based on these (Chapter 3).

Under the title 'The case of coastal landscapes: from spatial challenge to curriculum design', Part B explains the relevance of coastal areas for current global developments (Chapter 4) and their suitability as a study and research issue for planning and designing disciplines (Chapter 5). Moreover, it shows how the contents of the CO-LAND curriculum had been developed (Chapter 6).

Part C focuses on the implementation and dissemination process. Showing the practical steps based on the CO-LAND experiences, it illustrates how a blended learning project can be set up, both in the online area (Chapter 7) and in the on-site workshop (Chapter 8). Finally, the essential aspects of such a project are monitoring and evaluation (Chapter 9) as well as dissemination of the results (Chapter 10).

The report concludes with the findings of the project and formulates summary recommendations for university teaching (Chapter 11).

Since it does not seem sufficient to document a blended learning project exclusively in text form, especially in a time when the use of digital media in teaching is becoming increasingly important day by day, this report is supplemented with an online toolbox. The CO-LAND Toolbox is intended to enhance the use of e-learning and to support the practical implementation of an online course offering. It compares different platforms and instruments, provides online tools, links, video clips etc. and is openly available at https://colandwiki.hfwu.de/index.php?title=Output_2_-_Toolbox.

In a broader context, this part of the guidance report contributes to digital practices in planning and design disciplines, which goes far beyond just representation.

Photo: Ingrid Schegk

A. THE INNOVATIVE TEACHING APPROACH AND METHODOLOGY

Spatial planning problems are first of all complex problems or so-called "wicked problems", i.e., they have multiple, sometimes competing, dimensions such as ecological, aesthetic, social and economic dimensions, and they may have multiple possible solutions. Second, planning and design is mostly addressing spatial problems. Therefore, teaching spatial planning and design requires some form of spatial analyses.

The spatial planning and design professions have developed specific theoretical approaches for understanding, explaining and describing design knowledge and practice to address complex spatial problems. This guidance report presents a selection of approaches particularly suited for coastal landscape planning.

A key competence and learning objective for course participants is the ability to draft a strategy and a master plan for a coastal area taking into account economic, ecological and social aspects as well as current policies. In addition to the subject-specific knowledge and methods, courses should further aim to foster transversal skills at various levels. These essential skills include virtual teamwork and creative application of ICT tools for international cooperation, team building and democratic leadership, analytical thinking, intercultural communication and creativity.

Fig 2.1 CO-LAND Intensive Study Programme, Mangalia 2018

Photo: Gabriel Pascariu

2 DIMENSIONS OF CURRICULUM INNOVATION

The Erasmus+ programme aims to support universities in adjusting their curricula so they can meet new requirements and challenges. Innovation, though, is a complex process and typically requires a new combination of systems to overcome system boundaries. Digitalisation can be an important facilitator in this context. However, in order to make sense, the digital elements need to be embedded in a broader learning context, in which all innovation dimensions can effectively play together. The following six dimensions illustrate our entry points to curriculum innovation. We have tried to integrate all of them in the CO-LAND curriculum.

2.1 Bridging scales by integrating planning and design

Within the planning disciplines there is no real consensus regarding the question where planning ends and design starts, or if there is any difference between these two concepts. However, in practice, there are professional identities associated with planning and design and once these identities are set, collaboration becomes difficult. Within the CO-LAND approach, we follow the idea of merging both identities into something which we may call an 'integrated landscape approach'. We want to activate and apply both: the strategic and systemic power of spatial planning and the imaginary, creative and communicative power of design.

2.2 Broadening horizons by integrating academic disciplines

Within the CO-LAND consortium interdisciplinarity has been understood as different planning disciplines working in cooperation with the field of geography. Of course, interdisciplinarity can be designed in a much more diverse way, including for example social sciences, economics or technical professions. In our case, we are responding primarily to the challenge of having multiple planning professions acting on the same territory. The main planning disciplines involved are architecture, urban design, regional planning and landscape architecture, all of which interact with each other and with geography. These disciplines are very similar in their ideas and goals for sustainable territorial development. Nevertheless, their focus is on different scales, and they follow different methods and approaches. The CO-LAND curriculum provides them with an integrated process of knowledge generation in which all of them can effectively work together, join their strengths and benefit from broadening their perspectives.

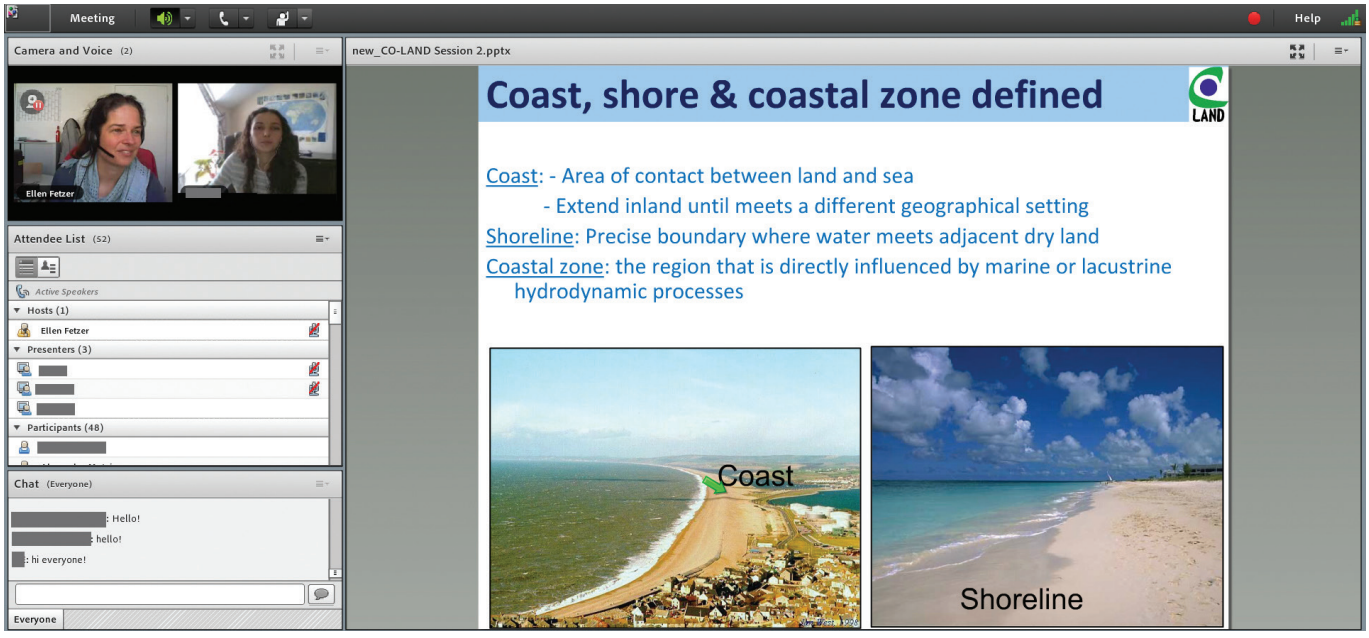


Fig 2.2 Using the online platform Adobe Connect (screenshot)

Table 2.1 Comparative matrix of different research fields involved in coastal integrated planning

Research / academic fields	Scale	Objective	Topics	Tools	Administrative level
Regional planning	Macro	Balanced development	Disparities, infrastructure, Growth poles	Statistics,GIS, maps, surveys	Central, regional, county level
Urban planning	Mezzo, micro	Sustainable land-use	Zoning, public transport, services	Statistics, GIS, maps, surveys	Local, metropolitan levels
Landscape planning	Macro, mezzo, micro	Landscape preservation	Landscape visual analysis, landscape character assessment, blue & green infrastructure, ecosystem services	Statistics, GIS, maps, surveys	Regional, county, metropolitan levels
Landscape architecture	Mezzo, micro	Landscape coherence	Coastal Landscape protection, landscape Identity	Statistics, GIS, maps, surveys	Local metropolitan levels
Architecture	Micro	Integrating built structures in the landscape, strengthening genius loci	Sustainable urban development, preservation of cultural heritage, investment for landscape improvement	Gordon Cullen, Lynch (The Image of the City)	Local and site level
Physical geography	Macro, mezzo, micro	Landscape functions	Land cover change, climate change, erosion, natural hazards, fluxes	Statistics, remote sensing, GIS, maps, models	Local, regional, central
Human geography	Macro, mezzo	Landscape organization	Land use change, population dynamics, urbanization, economic networks	Statistics, GIS, maps, surveys, space syntax	Metropolitan, regional, central
Economics	Sectoral	Landscape resources	Employment, growth, public finances, business opportunities	Statistics, surveys, models, business modeling	Local, county, metropolitan, regional, central
Social sciences	Sectoral	Inclusive landscapes	Equity, accessibility, social networks	Statistics, interviews, surveys, observation	Local, county, metropolitan
Ecology	Macro, mezzo	Biodiversity conservation and development	Heterogeneity, patterns, disturbance, fragmentation, succession, habitat connectivity	Statistics, surveys models	Metropolitan, regional

2.3 Working across institutional and national boundaries

The CO-LAND curriculum allowed for cooperation across institutions both within the same and between different European countries. In addition, universities were able to work with non-university partners from the NGO sector. These unique partnerships naturally bring new perspectives, professional knowledge and educational expertise together, contributing substantially to organisational and personal learning. The consortium was designed in such a way that the partners would complement each other. Some partners brought their more advanced experience with digital education into the project while others contributed to the diversity of coastal case studies or enhanced the disciplinary, cultural and geographical variety of the project. This diversity is also challenging, but substantially contributes to the learning experience of every participant.

2.4 Including community and stakeholder perspectives

Context-based learning is a must in planning and design education and there is no study programme of this domain without real-life project case studies. However, there are many different ways of dealing with these contexts. For the CO-LAND project, we had the ambition of getting as close as possible to the coastal communities of our case study areas. Therefore, the CO-LAND course has always been designed as a blended learning programme, combining a theory-oriented online course with an intensive study programme to be conducted on-site. The diversity and intensity of community and stakeholder involvement in those local programmes have been an essential qualitative criterion for the entire team. To enable as much community interaction as possible within the very limited ten-day workshop time frame, students were introduced to various methods ranging from formal stakeholder roundtables to artistic intervention.

2.5 Digitalisation as a driver of system change in higher education

Digitalisation in higher education is a widely discussed topic, not only since the recent COVID-19 crisis. In order to make strategic advancements in this field, it is very relevant to always be aware of the question: why digitalisation? Digitalisation is invariably a means towards an end, and this 'end' needs to be shared and understood by everyone involved. Within the context of the CO-LAND curriculum, the reasons why we integrated a digital dimension were mainly the following three: one, to teach effectively and synergistically across institutions; two, to provide students with an authentic environment to train their skills for virtual teamwork; and three, to develop open educational resources for EU-wide use. The digital strategy of the CO-LAND project, which this guidance report explains in detail, is derived from these three main goals, all of which relate to the six dimensions of curriculum innovation.

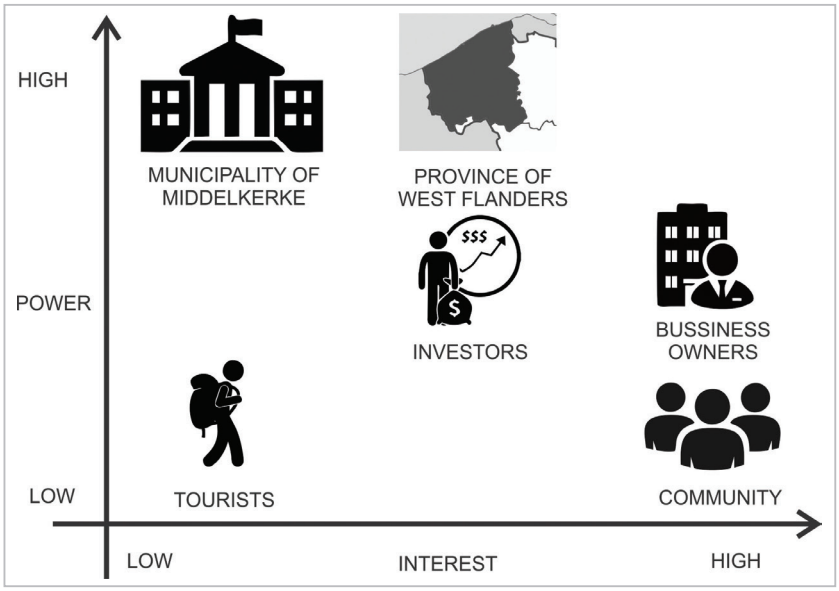


Fig 2.3 Power map (Student work: Middelkerke Team, CO-LAND workshop April 2020)

2.6 Academic and curricular integration

Last but not least, innovation is only sustainable if entry points into the existing education system are found. Therefore, the curricular integration aspect is crucial. On the one hand, this entailed the entire field of capacity building and staff development so that the team became ready for effectively delivering the course.

On the other hand, it was crucial to find room in existing study programmes so that students could participate in the innovative curricular elements without being overloaded. Assuring academic recognition can be quite challenging in some universities due to restrictive management cultures. Therefore, the involvement of persons in charge of the study programmes approval, ideally from the beginning, is critical.

Fig 2.4 CO-LAND 2018: Mangalia beach on-site activity **Photo: Gabriel Pascariu**

Table 2.2 Comparative matrix of master programmes of the academic CO-LAND partners and potential for curricular integration

No.	Characteristics	UAUIM	OVI	ULB	EMU	Naples	HSWT & HfWU (IMLA)
1	Duration (sem.)	4	4	4	4	4 10 (5UE)	03-Apr
2	ECTS / sem	30	30	30	30	30	30
3	Hours / week	14-15	14	40	41	18	25
4	Total theoretical courses	16-18	14	55%	27 ECTS	20	40%
5	Total practical courses	06-Aug	6	45%	55 ECTS	14	60%
6	Ratio practice / theory (hours)	0,8 – 1,2	0.65		2,0	0,7	
7	Graduation paper - Duration (w) - ECTS - Components - Defence	**5 10 2 July / Feb.**	**14 10 - July**	**16 25 1 June or Sept.**	**16 30 1 June or Jan.**	**8 10 - all year**	**16 25 2 all year**
8	Internship - Duration (w) - ECTS	**2-4 4-7**	**3 8**	**16 25**	**4-13 6-20**	**4 6**	**16 25**
9	Average no. of students / programme	15-20	15	20-30	15-20	Msc 80 5UE 200	25
10	Possible curricular integration	weak	weak	strong	medium	weak	strong

Master programmes
UAUIM (urban planning): Regional planning, Landscape and Territory, Urban Management, Urban Design, Urban Mobility; Bucharest, Romania
OVI (geography): Applied Geography and Tourist Resources Assessment; Constanta Romania.
ULB: Master Landscape Architecture, Master Urban Planning, Master Architecture; Brussels, Belgium
Naples: Architecture 5UE, Architectural Design, Territorial Urban Landscape and Environmental Planning; Italy
EMU: Master of Landscape Architecture; Tartu, Estonia
HSWT & HfWU: IMLA - International Master of Landscape Architecture (Joint Programme); Germany

3 METHODS FOR TEACHING INTEGRATED PLANNING AND DESIGN

3.1 Landscape and sustainable development in higher education

The design of the CO-LAND learning activities is indeed very ambitious. Our course aims to include the following dimensions: landscapes, sustainable development, interculturality and the digital world. One may claim that this is too ambitious, which may be true from a certain point of view. However, we claim that integrating these dimensions is mutually reinforcing because each one helps giving sense to the other, especially from the learner's perspective.
Our main arguments derive from learning theory and contemporary concepts of landscape and sustainable development. In that sense, we would like to point out the following:

- Landscapes are actively, constantly and individually constructed in and by our minds. This construction builds on previous knowledge while being nested and influenced by a cultural context and the values embedded therein. This construct makes landscapes a perfect conceptual context for interdisciplinary and intercultural learning activities as they provide a reflective platform for sharing knowledge, negotiating values and creating ideas. Furthermore, it is in our landscapes where sustainability challenges become evident and tangible; not only regarding effects, but also concerning envisioning alternatives.

- Following the theory of educational constructivism, learning results from an individual's conscious or unconscious connection of new knowledge to his/her existing mental schemes. This process cannot be imposed from outside; it is always an individual act. Therefore, it is highly important that educational environments, and also digital ones, are designed in such a way that they allow learners to externalise their existing knowledge, integrate the knowledge from others and construct new knowledge, ideally in a collaborative process. Educators find themselves in the roles of process designers, facilitators and, most importantly, coaches that provide constant and relevant feedback.

- Sustainable development has been defined as the ability to meet today's needs without compromising the needs of future generations. Tackling the dimension of sustainable development in education requires an overall alignment of instructional design with relevant learning objectives. The publication of Wiek, et al. (2015) provides an orientation by distinguishing the following five dimensions aimed at qualifying learners for putting sustainable development into practice. These are:

  - Systems thinking competence
  - Futures thinking (or anticipatory) competence
  - Values thinking (or normative) competence
  - Strategic thinking (or action-oriented) competence
  - Collaboration (or interpersonal) competence

In order to support knowledge construction of learners from different disciplines, geographic location and cultures, we introduced the seminar wiki and the CO-LAND case study framework to scaffold this complex process. The five dimensions of learning objectives for sustainable development are integrated in the entire CO-LAND learning process and also supported by the CO-LAND case study framework.

References:

Wiek, A., Bernstein, M., Foley, R., Cohen, M., Forrest, N., Kuzdas, C., Kay, B., & Withycombe Keeler, L. (2015). Operationalising competencies in higher education for sustainable development.

In: Barth, M., Michelsen, G., Rieckmann, M., Thomas, I. (Eds.) (2015). Handbook of Higher Education for Sustainable Development. Routledge, London. pp. 241-260.

3.2 The integrated planning and design framework

In his 'Framework for theory applicable for the education of landscape architects' (Steinitz 1990: pp.136), Carl Steinitz has described a six-level framework of core questions guiding the planning and design process. Though this framework is regarding landscape architecture, it is also applicable to the related planning disciplines involved in the CO-LAND project. Even if the model is presented linearly, Steinitz points out that in practice, there would be a continuous reflection process with implications from one phase to another, even in a non-linear way. The framework is very useful for communicating, designing and guiding interdisciplinary and transdisciplinary settings, such as the CO-LAND learning process. Iteration, feedback and collaboration are embedded in this overall scheme.

The following illustration shows how the different questions and planning phases are interrelated and further depicts the role of stakeholders and community in this context.

Author: Carl Steinitz, Quoted from: https://www.esri.com/news/arcwatch/0412/a-conversation-with-carl-steinitz.html

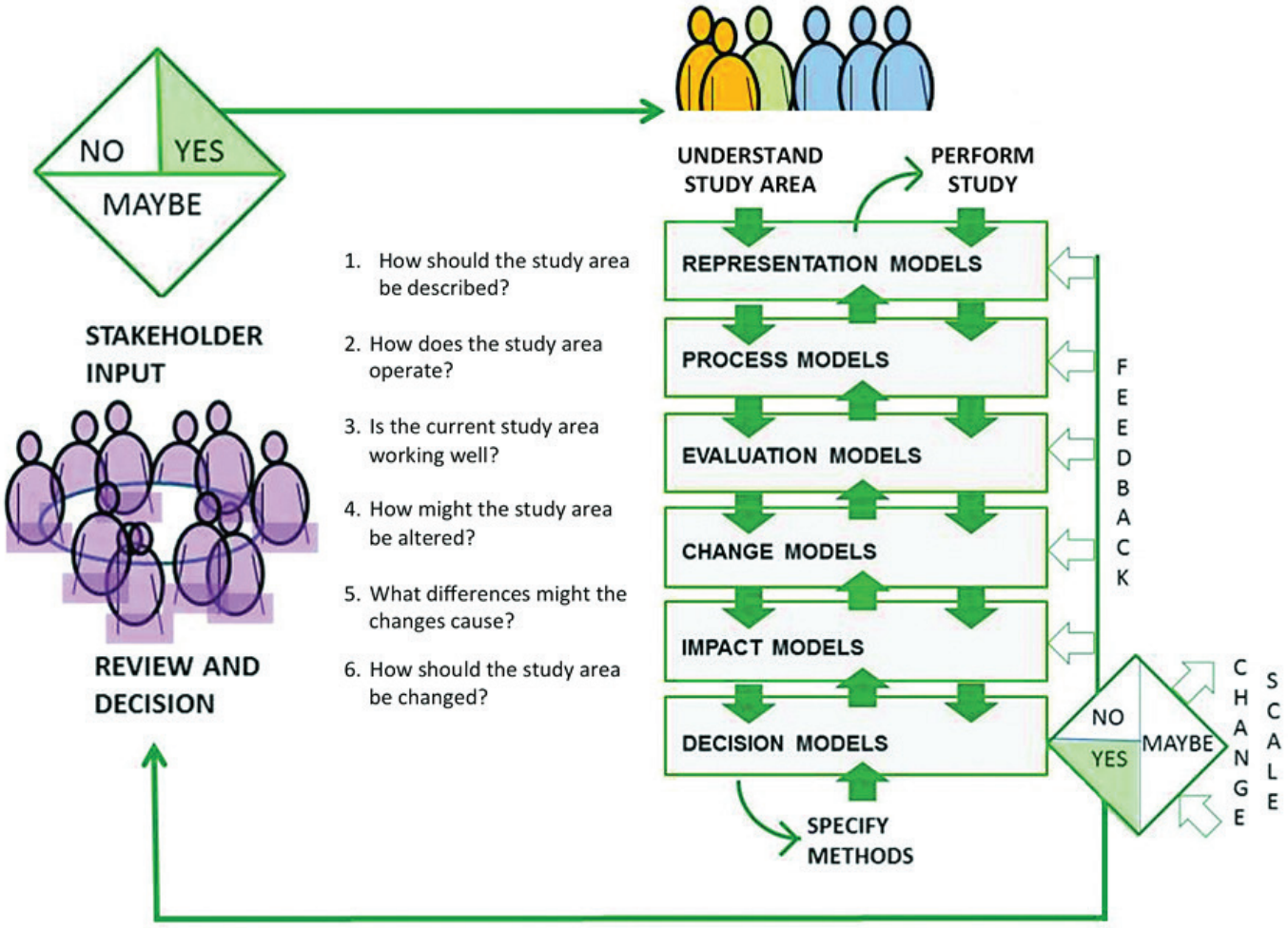


Fig 3.1 Six questions to ask. (Source: Carl Steinitz)

References:

Steinitz, C. (1990), A Framework for Theory Applicable to the Education of Landscape Architects (and Other Environmental Design Professionals), Landscape Journal, vol. 9, no. 2, CELA/ University of Minnesota, pp. 136-143.

3.3 Blended learning in academic education

There are differences in the process and the objectives between online and on-site educational activities. The methods of each activity have particular advantages and limitations, which makes them most efficient when applied in combination. The CO-LAND consortium has now gathered three years of experience running the online seminars, which were concluded with on-site training (for a smaller group of participants) and it is now possible to draw some conclusions from this experience.

The great advantage of an online course is that it can be accessible for a wide range and number of students and interested public. The knowledge can be spread across borders and also throughout different professional groups. Access and range are both very important since the development of approaches for coastal landscape planning involves a variety of "cross-border" situations as well as demands cross-disciplinary expertise. The online training, therefore, provides the possibility to meet all these conditions.

There are, though, also limitations, which confront online course organisers, teachers and students. While online training can provide the opportunity for receiving expert knowledge through lectures, to gather and analyse site-specific information available online, and to gain experience in online workgroups, it is not possible to get the full range of information and personal experience-impression of the site. Also, some processes like stakeholder or community involvement are hard if not impossible to organise within the frame of online training. In addition, the organisation of a student group, working together and communicating online can be challenging in terms of self-organisation, difference in time-management routines and language barriers.

On-site workshops are an excellent opportunity for intensive and thorough work with the planning area, enabling students a deep contact with the site, stakeholders and community. Students develop proposals based not just on area analysis begun in the previous online training phases but also based on their impressions, observations, narratives of the locals and in-depth interviews and conversations with the stakeholders and local experts. This direct connection with the site is crucial for developing solutions in design and planning of a coastal area. The greatest limitation of an on-site workshop format is that it can be accessible only to a limited number of students. Also, the on-site workshop has a limited timeframe, therefore participants are bound to strict deadlines for both analysis and design proposals. Therefore the on-site workshop format is very intensive and demands a full-time involvement for both students and teachers.

Thus, based on the three-year experience of CO-LAND educational activities, including three online courses and four on-site workshops in different European coastal areas, we conclude that these activities work best on a combination of both online and on-site courses. Online courses are most suitable for spreading the knowledge and expertise through online educational activities for an almost unlimited number of listeners and a large number and wide range of participants. This format is optimal for general site analysis as well as the discussion of the problems in an international and interdisciplinary context. The on-site course is a format for careful and thorough site analysis and design, based on the direct connection with the area, stakeholders and community. Therefore, the on-site workshop should be a logical continuation of processes and results of an online course.

Fig 3.2 Dissemination

Fig 3.3 International interdisciplinary group of students bonding during the intensive study programmes
Photo: Ingrid Schegk

B. THE CASE OF COASTAL LANDSCAPES: FROM SPATIAL CHALLENGE TO CURRICULUM DESIGN

This second part of the guidance report describes the process of topic selection related to the design of a curriculum for the CO-LAND programme. It was designed based on the innovative teaching methodology explained in Part A.

Online courses have to identify topics that represent current and future challenges of society and teaching environment that can further develop easily and in partnership with consortium members. Topics should also be representative and linked to personal identification. This is especially true for planning and design students not sufficiently equipped with methods and tools that empower them to envision, accompany and evaluate participatory processes. Online courses, combined with intensive on-site workshops, aim to fill this gap.

Fig 4.1 Teaching team visits CO-LAND site: DePanne, Belgium, 2019 Photo: Gabriel Pascariu

4 GLOBAL RELEVANCE OF THE TOPIC: MAJOR ISSUES AND CHALLENGES

The UN Sustainable Development Goals (SDGs) were born at the United Nations Conference on Sustainable Development in Rio de Janeiro in 2012. The purpose was to produce a set of universal goals to help combat the urgent environmental, political and economic challenges facing our world. Unlike their predecessor, the Millennium Development Goals, the SDGs explicitly call on all businesses to apply their creativity and innovation to solve sustainable development challenges. The 17 thematic areas that outline a roadmap for sustainable development until 2030 were the result of long-term negotiations and apply to all countries, recognising different priorities and different levels of development. Coastal landscapes relate to SDGs 3, 6, 11, 13, 14, 15 and 17, which is considerable.

The topic of CO-LAND, coastal landscapes, perfectly fulfils the SDG criteria mentioned above. Indeed, coastal areas in Europe are under pressure because of multiple and competing land-use demands. Assuring access to safe, healthy and meaningful coastal landscapes is an essential aspect of spatial and environmental justice for the many European citizens who are living along the coasts. This argument is not only valid for coastal settlements but also for any other urban-land-water interface such as along rivers and lakes, which makes the topic transferable to almost any city.

However, given the multiple demands on these areas, classical planning instruments such as master plans and urban designs are often not the right entry points. Instead, a combination of bottom-up and top-down processes leading ideally to a shared vision of multiple stakeholders is required first in order to set a common ground.

Coastal ecosystems and seas have experienced significant human exploitations in the last centuries, and human-induced changes to marine ecosystems have increased in the past 60 years. Seas have become busy places where technology, food and energy demands are becoming more and more visible. Globalisation effects show the rest of the challenges

Fig 4.2 The United Nations Sustainable Development Goals (source: https://www.un.org/sustainabledevelopment/news/communications-material/)

with harbours and the fish industry competing on a global level, wind power parks dominating the market of renewable energies and plastic pollution invading the oceans.

Consequently, coastal landscape topics touch all current themes such as climate change, sea-level rise, urbanisation, coastal management, environmental protection, renewable energies and green-blue infrastructure. Aspects of ecosystem services, sustainable mobility, heritage identity, as well as housing, working and community life along the coast all come together with tourism and landscape protection.

The map illustrated on the right has been mentioned several times in our course introductions.

We believe that it explains in a very concise way the challenges of coastal landscapes related to the climate crisis. Coastal territories, according to this map, are the highest impacted territories of the European Union dealing with climate change and are, therefore, the places where implementing climate adaptation should be a priority.

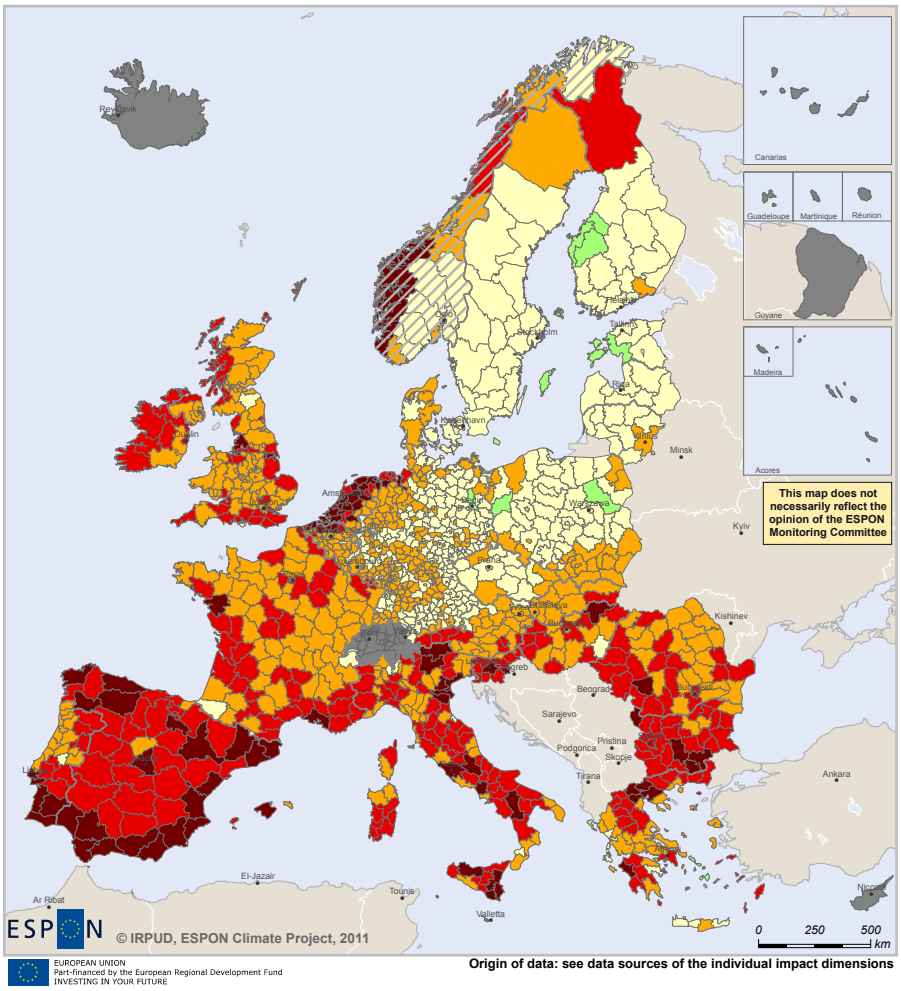


Fig 4.3 Aggregate potential impact of climate change (source: https://www.espon.eu/climate-2012)

"Sea level has been rising over the 20th century, and the tendency has accelerated in recent decades. This is due mostly to thermal expansion of the oceans as a result of warming, but also to extra water addition due to melting ice. As global temperatures rise, coasts will become more vulnerable to flooding and erosion.

Around a third of the EU population lives within 50km of the coast and these areas generate over 30% of the Union's total GDP. The economic value of assets within 500m of Europe's seas totals between €500-1,000 billion.

Sea-level rise, together with other projected effects of climate change such as changes in the dynamics and energy distribution of waters or on the frequency and intensity of storm surges will increase the risk of flooding and erosion in coastal areas, with significant consequences for the people, infrastructure, businesses and nature in these areas.

Among other potential impacts, sea-level rise is projected to reduce the amount of available freshwater, as sea water pushes further into underground water-tables; it will likely lead also to much more saltwater intrusion into freshwater habitats, affecting biodiversity and the services and goods that coastal areas provide. Many wetlands areas will be lost, threatening unique bird and plant species."

source: https://ec.europa.eu/clima/policies/adaptation/how_en

Fig 4.4 Wintertime port, Mangalia

Photo: Ingrid Schegk

5 COASTAL LANDSCAPES AS A RESEARCH MATTER

CO-LAND stands for Inclusive Coastal Landscapes. Coastal landscapes across Europe are often characterised by overlapping and competing land-uses. These areas are the focus for settlements and infrastructure, especially road and train networks, and many industries and commercial zones that benefit from close access to harbours.

Conversely, the tourism industry is a major driving force with its own development dynamics and typical spatial patterns. All these economic potentials have attracted people to settle on the coast. This process is ongoing, leading to unsustainable development such as urban sprawl and the irreversible consumption of soil and other natural resources. However, water-based recreation activities have various positive effects on human health, physical and mental well-being. On the one hand, people love to visit the seaside on vacation, while on the other hand, restricted access to waterscapes raises issues of social equity and spatial justice.

The urban-land interface is also an essential and often vulnerable habitat zone for flora and fauna, which brings additional demands on such areas and also places them at risk from damage and degradation. Being a pole of human settlement since early times, coastal landscapes are often extremely rich in cultural heritage and form part of our collective memory and identity. The sustainable and integrated planning, design and management of coastal landscapes is crucial for the mental, social, physical and economic well-being of many European citizens.

Design interventions in the dynamic coastal landscapes need to go hand in hand with research. Landscape analysis is a form of research for design, and testing the actual solution allows research by design. Then there is research that monitors the effect and impact of the design on the various aspects of the landscape. A well-known Dutch example of a nature-based solution for coastal defence by sand supplementation is the Sand Engine (also called the Sand Motor).

Coastal design and research go hand in hand, and both are carried out by multidisciplinary consortia. By monitoring the designs, one can take lessons for future spatial plans in order to have an integrated sustainable strategy to improve safety, biodiversity and opportunities for recreation and tourism so that coastal communities can flourish.

Fig 5.1 Zandmotor seen from the north 21 july 2015-07-21-452" by Zandmotor is marked with CC PDM 1.0

The Sand Motor

It is a large sandy peninsula, constructed in 2011 on the Dutch North Sea coast just south of the city of The Hague. This pilot project involved placing 21.5 million m3 of sand on and in front of the beach with the aim that it would spread along the coast by using the natural forces of tides, waves and wind. In a way, the Sand Motor is built to "disappear". Another unique aspect is that it combines the primary function of coastal protection with the creation of a new natural landscape that also provides increased leisure opportunities. The Sand Motor has also become a national hotspot for kite surfers and attracts recreational visitors in every season. It impacts local hydrology by providing water regulating services, and it serves as a fish nursery as investigations on fish stocks show. Large research consortia such as the NatureCoast programme were formed to conduct interdisciplinary research on the Sand Motor (Luijendijk et al., 2019). The programme was carried out by a large consortium of knowledge institutes, and the research conducted in cooperation with end-users from private companies, research institutes and governmental organisations. The research in NatureCoast focused on six themes: coastal safety, dune formation, marine ecology, terrestrial ecology, hydrology and geochemistry, and governance.
New spatial concepts build on the research findings of the Sand Motor and the outcomes of a research by design project called 'Atelier Kustkwaliteit'. Outcomes of this atelier research are to: one, strengthen the coast in a way that the natural dynamic (current, tide, wind, salt and freshwater) can contribute to it (Nature-Based Solutions); two, aim for an adaptive coastal system instead of a fixed situation: soft measures, temporary use and a changeable coastal landscape are preferred; three, reinforce the coast to strengthen the coastal fundament, the underwater foreshore. From an ecological and economic perspective, the coastal fundament is a very productive and profitable system; and four, apply coastal defences in a way that these result in differentiation of coastal towns and landscapes.
The office of West 8 Urban Design and Landscape (in collaboration with Svasek Hydraulics, Witteveen & Bosch, Altenburg & Wymenga ecologisch onderzoek) followed this strategy for the design at another weak spot in the coast near an old basalt and concrete dyke, the Hondsbossche Zeewering. There, a 300-metre wide new dune landscape was constructed in front of the old dyke in combination with the deposit of 35 million m3 sand. This dynamic landscape improves biodiversity and gives an impulse to the recreational value of the seaside towns of Petten aan Zee and Camperduin. The project is being monitored on the predictability of developing engineered habitats; optimising the design and understanding the morphological evolution and perception of local community and visitors (Bodde et al., 2019). The seaside villages use the newly designed landscape to promote tourism.

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The Sand Motor: A Nature-Based Response to Climate Change, Findings and Reflections of the interdisciplinary research program NatureCoast. Publisher Delft University Publishers, TU Delft Library, NUR 950, ISBN 978-94-6384-021-7.
Websites: Atelier Kustkwaliteit, 2013, http://www.hnsland.nl/nl/projects/atelier-kustkwaliteit. Deltaprogramma, 2017, https://deltaprogramma2017.deltacommissaris.nl/viewer/publication/1/1-delta-programme-.html. Sand Engine, 2016, https://publicwiki.deltares.nl/display/BTG/Sand+nourishment+-+Sand+Engine+Delfland%2C+North+Sea%2C+NL
Monitoring of the New Hondsbossche Dunes, 2019, https://www.dezandmotor.nl/en/research/results-after-five-years/, https://youtu.be/m1H-58W7QDk

"A notable example in this context is the BlueHealth project, a pan-European research initiative investigating the links between environment, climate and health. The programme focuses specifically on understanding how water-based environments in towns and cities can affect health and wellbeing, systematically exploring the impacts that urban waterways can have on human health. Led by Exeter University, the BlueHealth project brings together experts and researchers from nine institutions from across Europe, is funded by the European Union's Horizon 2020 programme and will be ending in 2020.
Between 2016 and 2020, the BlueHealth project conducted over 20 studies in different countries across the world. Furthermore, the research team designed and implemented interventions at several coastal and river sites in Europe and created a series of tools to assess these initiatives and develop protocols to motivate further research inquiries. In the largest study conducted, Bluehealth surveyed over 18,000 people across Europe to uncover population-level relationships between blue spaces and health.
The researchers have applied new technologies joining different existing databases to increase sources of information and analysis. Bluehealth utilized virtual reality to bring blue-space experiences to groups of people unable to access them physically and conducted workshops in cities across Europe with communities and different policy makers. Finally, Bluehealth has developed scenarios for future spatial planning models in this respective context and disseminated its finding worldwide."

See: www.bluehealth2020.eu

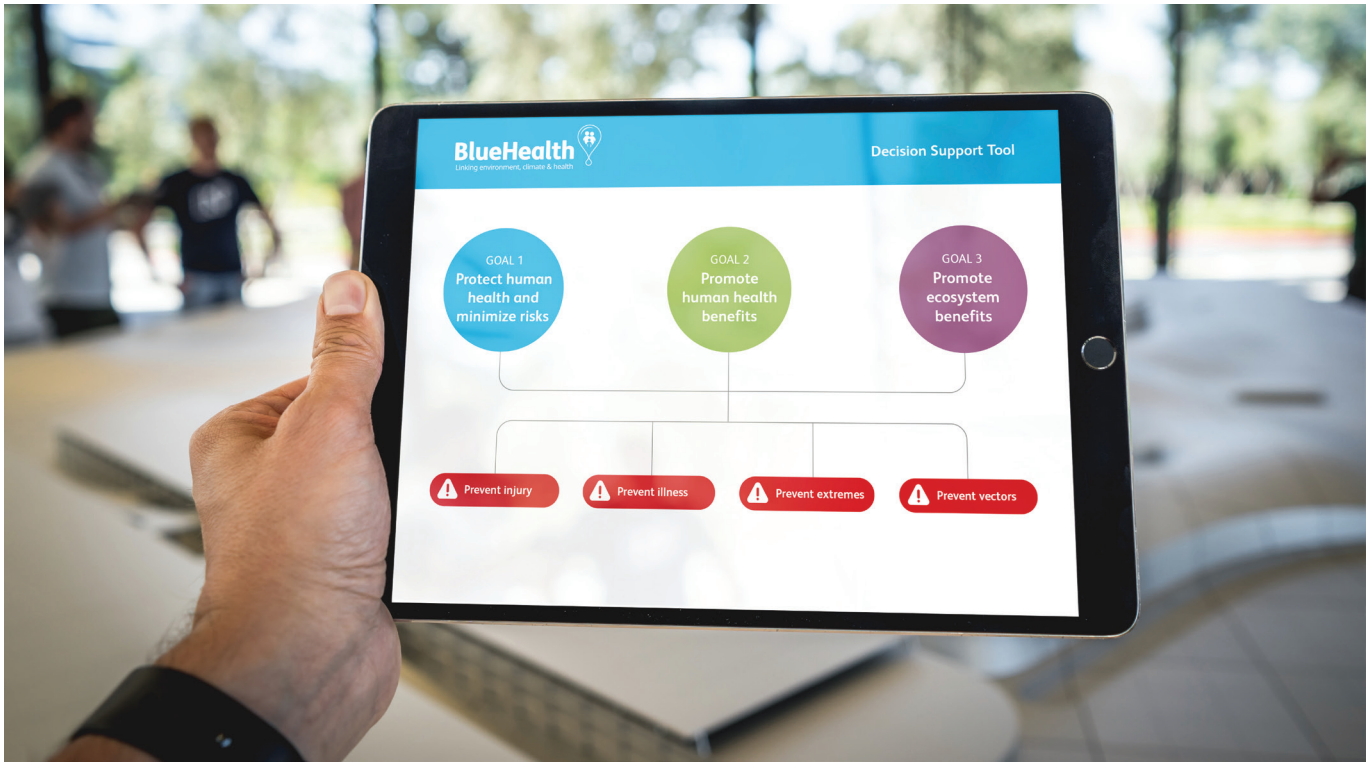

Fig 5.2 The BlueHealth DST is an online tool used to assess the risks and benefits of blue spaces

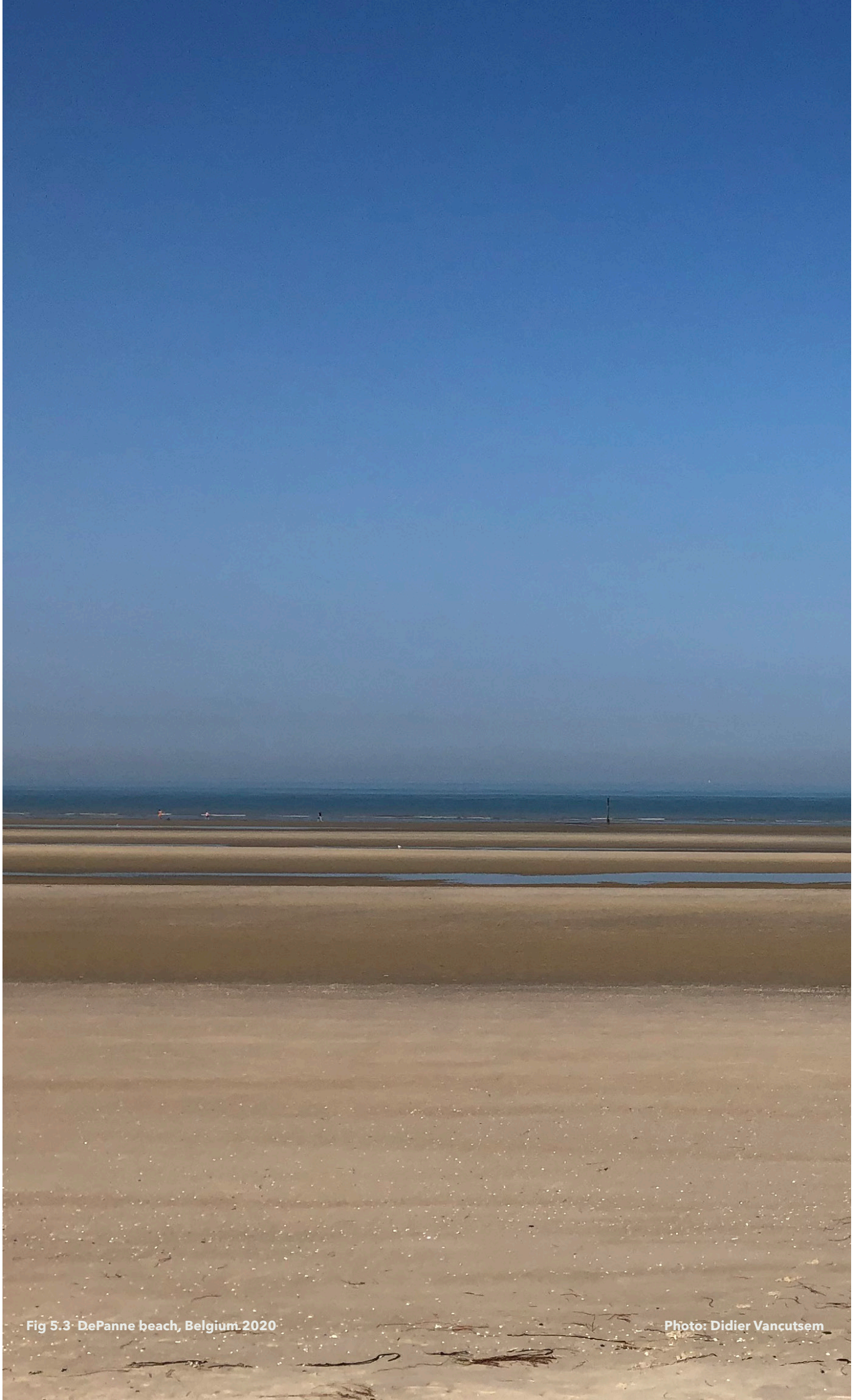

Fig 5.3· DePanne beach, Belgium 2020 Photo: Didier Vancutsem

6 COASTAL LANDSCAPES AS AN ACADEMIC FIELD OF STUDY

This chapter describes the learning objectives of the CO-LAND blended learning programme. These goals guide the instructional design by which learners are qualified to address the complex context of coastal landscapes and their sustainable development. The competences orient strongly towards sustainable development learning objectives such as systems thinking, anticipatory and normative capability, strategic thinking and collaboration.

6.1 CO-LAND competence framework and learning goals

Subject-specific competences

The student demonstrates knowledge and understanding of:

- the specific character of coastal landscapes and their relevance for society, the economy and the environment;
- the driving forces that are influencing the landscape system;
- the impact types that are most relevant for planning and designing responses;
- the approaches and methods for assessing coastal landscapes in order to specify the challenges and opportunities;
- the global, European and local dimension of coastal landscapes; and
- the challenges to the sustainability of coastal landscapes in relation to the United Nations Sustainability Goals (SDG's).

Methodical competences

The student can:

- carry out a landscape system analysis including the elements, layers and processes;
- assess coastal landscapes systematically and transparently taking into account change over time;
- translate sustainable development goals to the local and regional situation and integrate these in plans and projects;
- develop strategies and master plans for coastal landscapes taking into account current policies and governance approaches;
- make well-argued plans and designs for coastal landscapes that build upon social and environmental capital; and
- present ideas, proposals and plans in a transparent and convincing way to commissioners, stakeholders and professionals.

Social and personal competences / attitude

While the student works on coastal landscapes, he/she:

- takes the sensitive nature of coastal landscapes into account;
- assumes responsibility for sustainable development respecting social, economic and environmental quality;
- shows democratic leadership while developing plans and projects; and
- respects local social values and qualities of the existing landscape.

Generic learning outcomes

The student can:

- work in interdisciplinary and multicultural teams;
- make use of ICT and e-learning platforms for learning and group collaboration;
- make adequate use of ICT tools for preparing presentations, maps and reports; and
- effectively communicate and visualise the results.

Table 6.1 Constructive alignment of learning goals, thematic seminar sequence and seminar activities

Sequence	**Phase A: Understanding Coastal Landscapes**				**Phase B: Evaluation + Assessment of Coastal Landscapes**				**Phase C: Integrated Planning + Design for Coastal Landscapes**			
Week	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**
Classroom activities	Lecture A.1	Lecture A.2	Lecture A.3	Team Presentations	Lecture B.1	Lecture B.2	Lecture B.3	Team Presentations	Lecture C.1	Lecture C.2	Lecture C.3	Team Presentations
Assignment	To conduct a landscape system analysis and to set development targets				To develop and implement a landscape assessment strategy, to define problems and set priorities				To develop an integrated development strategy and to translate the strategy into a spatial vision			
Team activities	Mapping and analysing geomorphology, land use, green infrastructure, actors, heritage and landscape narrative, reflect on theory readings				Set assessment goals collaboratively, define objectives and indicators, do mapping and analyse the findings, set priorities on that basis, reflect on theory readings				Define strategic planning objectives, translate strategic goals into a spatial vision, exemplify the vision in the form of a transect with interventions, design a governance model, reflect on theory readings			
Formative and summative assessment				Oral and written				Oral and written				Oral and written
Competence development												
Subject-specific competences												
The specific character of coastal landscapes												
The driving forces that are influencing the landscape system												
The impact types that are most relevant for planning and design responses												
Approaches and methods for assessing coastal landscapes												
The global, European and local dimension of coastal landscapes												
Challenges to the Sustainable Development Goals												
Methodical competences												
Assess coastal landscapes in a systematic and transparent way												
Translate sustainable SDGs to the local and regional situation												
Develop strategies and/or master plans for coastal landscapes												
Make well-argued plans and designs for coastal landscapes												
Present ideas and plans												
Social and personal competences / attitude:												
Takes the sensitive nature of coastal landscapes into account												
Takes responsibility for sustainable development												
Shows democratic leadership												
Respects local social values and qualities of the existing landscape												
Generic learning outcomes												
Work in interdisciplinary and multicultural teams												
Make use of ICT for collaboration + design												
Communicate + visualise results												

6.2 Main lectures

A

Understanding coastal landscapes: Why and what?

In accordance with the Carl Steinitz framework (cf. chapter 3.2.), the first section of the online seminar is primarily concerned with answering the following guiding questions:

How should the study area be described?

How does the study area operate?

During the three online lectures, students discuss the global dimension of coastal landscapes and the sustainable development goals and strategies of the United Nations and the European Union. They learn about the dynamic character of coastal landscape spaces as well as their multi-layered cultural significance as narratives in society and art. Based on the theoretical lectures, students will analyse these issues for their case studies.

A.1 Why coastal landscapes matter

Lecture A.1 begins by linking the concrete case of the CO-LAND coastal landscapes course to the overall global framework of grand challenges such as climate change, urbanisation and natural resource protection.
We start by introducing the UN's 17 Sustainable Development Goals as the overarching framework of our activities. At that level, a link to the United Nations' Habitat Conference is made, including major documents such as the New Urban Agenda.
We then introduce relevant policy documents of the European Union which apply to the case of coastal landscapes. These policies cover not only specific coastal legislation such as the Maritime Spatial Framework Directive, but also general nature protection legislation like the Natura 2000 Directive, the Communication on Green Infrastructure and the EU Biodiversity Strategy. On the basis of this lecture and the associated readings and case study group work, learners should develop an advanced understanding of the global relevance of coastal landscapes and knowledge of the key international policy documents addressing the sustainability challenges.

Main topics:

- Introduction to the CO-LAND project, its goals and the seminar objectives
- Presentation of the main arguments for the relevance of coastal landscapes
- Introduction to the seminar process and assignments
- Review of the participants' learning goals
- Introduction to the UN Sustainable Development Goals
- Guest speaker from UN-Habitat on UN urban policy for sustainability
- Overview of EU Policies (to be studied in more depth individually)

Interactive poll:

Topic: Getting to know the 17 Sustainable Development GoalsTasks: Students are given two questions involving all 17 SDGs. The first question asks: Which SDGs do they think they have already contributed to in their life so far? The second question asks: Which SDGs would they like to contribute to in the future?

Duration: 15 minutes

References:

International Policy Documents, Guidance Reports + Frameworks

United Nations: Sustainable Development Goals (SDGs)
https://www.un.org/sustainabledevelopment/sustainable-development-goals/

UN-HABITAT: New Urban Agenda
http://habitat3.org/wp-content/uploads/NUA-English.pdf

UN-HABITAT: International Guidelines on Urban and Territorial Planning
https://unhabitat.org/books/international-guidelines-on-urban-and-territorial-planning

UN-HABITAT: Guiding Principles for City Climate Action Planning
https://unhabitat.org/books/guiding-principles-for-climate-city-planning-action

UN-HABITAT: Planner for Climate Change
https://unhabitat.org/wp-content/uploads/2018/07/Planner-for-Climate-Action-Communiqu%C3%A9.pdf

European Policy Documents, Guidance Reports + Frameworks

Council of Europe The European Landscape Convention
https://www.coe.int/en/web/landscape/the-European-landscape-convention

EU Water and Marine Policy

European Commission Water Framework Directive
http://ec.europa.eu/environment/water/water-framework

European Commission Marine Strategy Framework Directive
http://ec.europa.eu/environment/marine/eu-coast-and-marine-policy/marine-strategy-framework-directive/index_en.htm

European Commission Maritime Spatial Planning
https://ec.europa.eu/maritimeaffairs/policy/maritime_spatial_planning_en

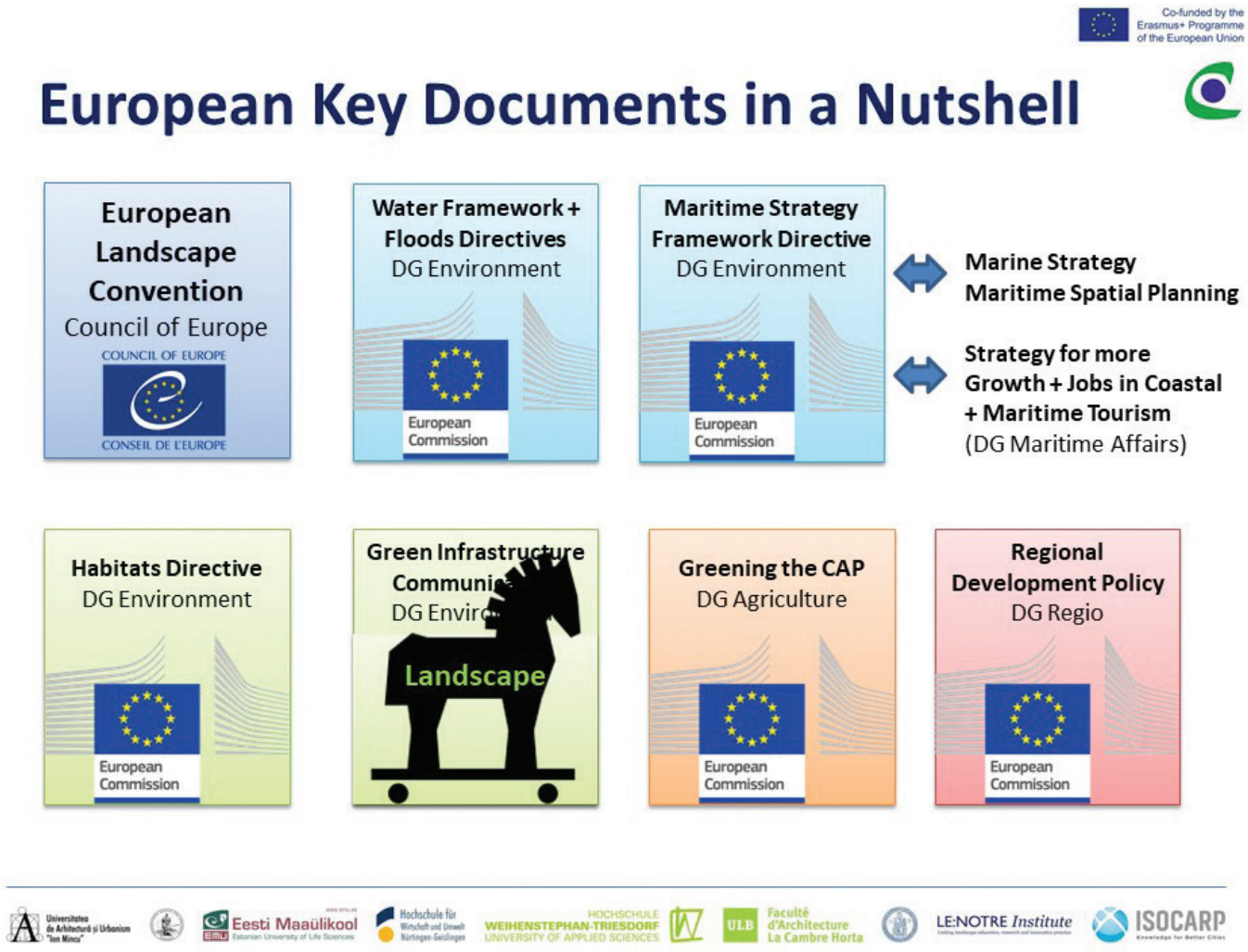

Fig 6.1 European key documents introduced in the online seminar

European Commission Maritime Spatial Planning European Strategy for more Growth and Jobs in Coastal and Maritime Tourism
https://ec.europa.eu/maritimeaffairs/policy/maritime_spatial_planning_en

European Commission Integrated Coastal Management
http://ec.europa.eu/environment/iczm/index_en.htm

A.2

Dynamics of coastal landscapes

Lecture A.2's primary goal is to familiarise students with the dynamics of coastal landscapes as well as to introduce them to the analytical framework developed by Carl Steinitz to study the utility of human interventions. The particular question from the Carl Steinitz framework is: How should the landscape be described? To answer this question, there are two critical issues to be taken into consideration in an online learning course: one, the interdisciplinarity of the theme and diverse background of the course attendees; and two, the large-scale use of various visualisation tools. The drivers, actors and human interventions in coastal areas group into four broad topics: a) nature, b) economy, c) society, and d) planning. Each of the topics requires a particular set of theoretical concepts, methodological tools and learning approaches.

The coastal landscape is a complex area, which constitutes an object of inquiry or the scenery for various processes studied by researchers who come from different fields; from natural science through social science to the humanities. Each domain has its vision of the area and uses specific research methods. Due to such a variety of approaches, keeping a balance between them is quite a challenging task. The main goal of this lecture is to set the scene of the future "performance", establish the rules, and introduce the actors. It means to develop the competences needed for building representation and process models of the coastal landscape as a part of Steinitz's landscape design framework (Steinitz, 1990).

At this point, students are becoming familiar with different types of coastal landscapes (Bird, 2010; Finkle, Makowski, 2019) and their dynamics (Davidson-Arnott, 2010). This lecture covers the most important forces that shape coastal landscapes (CLs), as studied by different disciplines, overlapping or not. An important issue to be addressed is related to the high interdisciplinarity of the theme. Personal contact with any of the coastal types is beneficial to comprehend the CL functions and their organisation. In the online teaching approach, personal connections with CLs (i.e. site visits) is challenging to establish. This is why a strong visualisation component, including all possible types of visuals (photo, video, 3D simulations, remotely sensed products, schemas, sketches etc.), should be involved to the maximum extent possible.

The lecture focuses on four topics that group the forces, actors and potential responses for implementation in the coastal areas. Each topic represents a particular mixture of theoretical background, methodological tools and learning approaches:

- Nature in CLs groups the forces that shape coastal zones and landscapes (drivers, processes, landforms, and environments). It includes the fundamental issue concerning the difference between coast/coastlines and shore/shorelines. Teaching this topic of a variety of coastal types requires strong visualisation tools.

- Economy in CLs focuses on the economy as a subject and agent of coastal landscape processes. Teaching human economic activity implies a mixture of theoretical background, causality, analytical and modelling approaches, visualisation and schematisation tools.

- Society in CLs implies the identification of what we want coastal landscapes to be (i.e., sustainability of coastal landscapes, in the context of the current paradigm). This topic requires a strong analytical approach (Drivers-Pressure-State-Impact-Response (Oesterwind et al., 2016; Patricio et al., 2016) is one of the possible analysis tools) rooted in a set of fundamental values such as the 17 Sustainable Development Goals.

- Planning of CLs presents targeted changes against the destructive forces, which help to achieve the desired objectives (Perillo et al., 2018; Portman, 2016). The ideas of hazard (Schwab et al., 2016) and management (Kay, Alder, 2005) are central to this topic. It focuses on the case-study approach with the exemplification of good and bad practices.

Teaching coastal landscape methods requires a complex approach, with significant contribution from both teachers and students. The online-teaching approach speeds-up the learning process, opens new teaching possibilities and increases flexibility. At the same time, in addition to the traditional drawbacks of remote learning, online-teaching amplifies the effects of the challenges faced by the classical approach to teaching, such as interdisciplinarity. Overcoming these drawbacks is possible to a great extent by involving novel digital methods, visualisation tools, etc.

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A.3

Coastal landscapes as a cultural phenomenon

Lecture A.3 on coastal landscapes is told from the perspective of a landscape architect. The narrative unfolds as space tangles-up between labour, recreation and despair, while appearance lays-out visually, iconically, culturally and aesthetically. The depiction of the coast can be understood using a hermeneutic approach. The suitable question from the Carl Steinitz framework is again: How should the landscape be described?

When facing the sea, one confronts the "beast" as exemplified in the novel Moby Dick. This relationship defines the coastal landscape as a limit and a border, depicted as a symbol and metaphor for the confrontation with the unlimited, unknown, boundless infinity of the sea. But at the same time, there is a space of "connection" as in a harbour. Seas and coasts are places of trade and exchange, arrival and farewell, inside and outside, order and chaos.

The coast is a home, an expectation, and can figure as a space of resurrection as in the Homeric saga in which Odysseus had to choose between Scylla and Charybdis. The coast can be sublime as depicted in the painting Monk by the Sea of Caspar David Friedrich, or transforming, as the fjord is depicted in The Scream by Edvard Munch.

Topics and themes approached

As the lectures are the main focus of the online course, lecture A.3 should develop a basis for perceiving, understanding and designing coastal landscapes. It starts with linking the appearance of coastal landscapes and its depiction to the topics mentioned in A.1 and A.2.

Fig 6.2 Odysseus facing the choice between Scylla and Charybdis
Henry Fuseli 1794-96

The main aim of this lecture is to connect the competences of understanding and developing. This is to encourage students to analyse and design coastal landscape as a process that emerges from the past while in need of a future. This process begins from the physical spatial context and elaborates to the narrative of a cultural landscape. Thus, students groups progress from their first main understanding of the coastal landscape systems to a more humanities-driven approach, actually understanding the geographical, spatial context more as a perceived, depicted, lively, poetic, phenomenon.

We introduce relevant terms and links to the previous lecture by introducing and interpreting iconic artefacts that are relevant for the case studies connected with the fore-mentioned topics of coastal landscapes, such as metaphors for waves, tides, harbours or cliffs.

On the basis of lecture A.3 and the case studies presented, learners should develop an advanced understanding of the cultural relevance of coastal landscapes and know about the cultural background for addressing their challenges.

A.3 merges theoretical and aesthetical inputs with case study examples by explaining artistic images (perceptions) and connected design projects at different coastal landscapes locations (experiences) as a basis for later, more proposed actions:

- The hermeneutic method as an approach to understanding a coastal landscape as a cultural phenomenon
- Depictions of coastal landscapes using paintings, novels, photography and film-stills of different heritage, style and contexts
- Key issues of a coastal landscape as an artistic topic and the connection of the artefacts with contemporary coastal design serving as metaphors or archetypes: seafront and harbours, discovery and possession, trade vs. recreation, immigration vs. emigration

Fig 6.3 The Monk by the Sea
Caspar David Friedrich 1808-1810

B

Evaluation and assessment of coastal landscapes

In accordance with the Carl Steinitz Framework (cf. Chapter 3.2.), the second section of the online seminar focuses on the central question of evaluation:

Is the current study area working well?

From different points of view, different approaches of landscape assessment are presented and discussed.
The aim of this lecture series is to provide students with methods and instruments of risk assessment and potential analysis, the application of which they can practice and test in their case studies.

B.1 and B.2

Integrated landscape assessment approaches: From risks to potentials – methods and instruments

B.1 and B.2 Integrated landscape assessment approaches: From risks to potentials – methods and instruments

These two lectures, B.1 and B.2, aim at leading the seminar groups from their first understanding of the coastal landscape system to an evaluation of this system. The suitable question from the Carl Steinitz framework is: Is the landscape working well? Students should understand that in order to assess if the landscape is working well, they need to understand what values this landscape should provide and for whom. Typically, different needs are at stake here, depending on if priorities are economic, social or ecological. At this point, the teams need to deliberate and agree which value schemes should guide their process. They can then specify goals that are leading the evaluation and assessment process. To assess if these goals are achieved, they need to define criteria and development objectives. Indicators would then provide evidence if these criteria and objectives are met. If for example the team values biodiversity protection as something a landscape should provide, their evaluation goal is to find out about the status quo of biodiversity in this landscape. Possible criteria could be the quality of habitats. Observable indicators could be the degree of soil sealing, the degree of landscape fragmentation, the size and connectivity of existing green spaces or the number of structuring landscape elements on agricultural land.

Main topics:

- Introduction to evaluation and assessment: assessment goals and strategy, the definition of criteria, indicators and mapping approaches
- Protective goods in the landscape (soil, water, biodiversity, etc.)
- Dynamics of coastal landscapes (tide, salinisation, flooding, silting-up, erosion,etc.)
- Environmental conflicts
- Land-use as an "overlay" of the socio-economic system with the natural system; on land, the shore and in the sea
- The concept of ecosystem services
- Impact analysis (Risk-analysis or conflict-analysis approach)
- Structural typologies (land-cover, land-use structures)
- Visual analysis (perception, preferences, views, etc.)
- Suitability assessment (suitability for land-use, potentials)
- Scenario-planning

Example of an interactive exercise

Topic: How to move from goals to development objectives

Tasks: Students receive a PPT template leading them through the exercise using four slides. They are then sent into random breakout session groups away from the plenary room. The template provides the student groups with a theoretical case and two random landscape development goals. For example: "To secure and improve the ecological functions of coastal landscapes'. On that basis, the group needs to define development objectives and link measurable indicators to each objective. They finish with a reflection on possible mapping and representation methods. The exercise leads the groups through the process they need to develop in-depth with their theme during this phase B seminar.

Duration: 40 minutes

References:

Landscape basics

Barry R.G., Chorley R.J. and Chase T. (2009) Atmosphere, weather and climate. Routledge

Brady N.C. and Weil R.R. (1999) The nature and properties of soils. Prentice Hall

Clowes, A. and Comfort, P (1987) Process and Landform. Oliver & Boyd

Goudie A. (2001) The Nature of the Environment. Blackwell

Johnson, B & Kristina Hill (eds) 2001 Ecology and Design: Frameworks For Learning. Island Press

Smithson, P., Addison, K., Atkinson, K. (2008) Fundamentals of the Physical Environment. Routledge

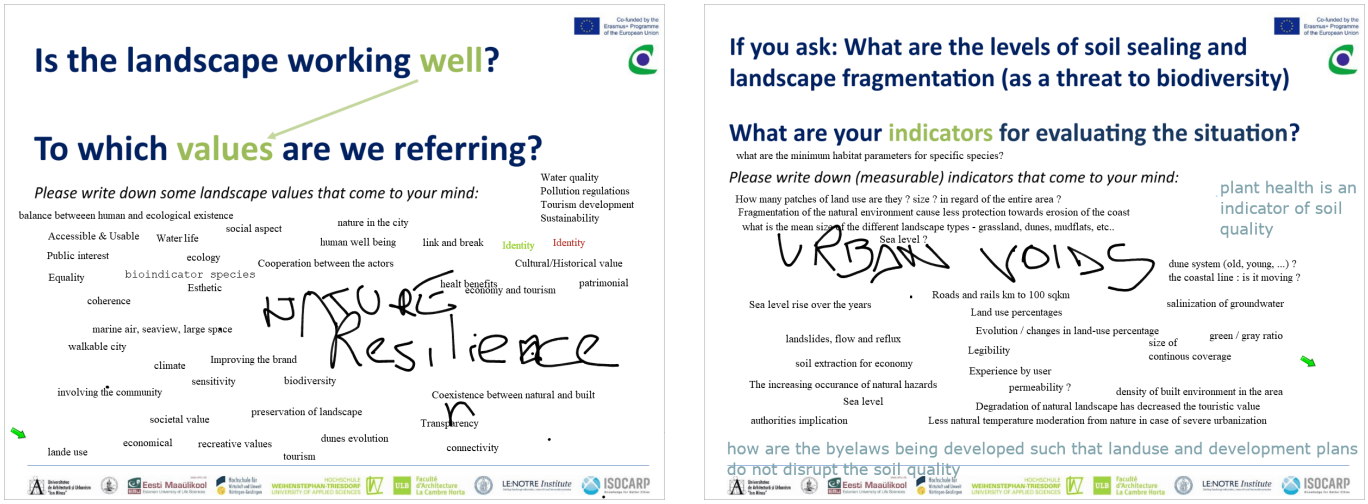


Fig 6.4 Whiteboard exercise example during the plenary session in which students were asked to note possible values according to which the status quo of coastal landscapes can be assessed.

Turner, Monica G., Robert H. Gardner (2015) Landscape Ecology in Theory and Practice: Pattern and Process

D. H. Wall (Editor in Chief), Soil Ecology and ecosystem services, Oxford University Press 2012

The European Union's Biodiversity Action Plan, Halting the loss of biodiversity by 2010 – and beyond, ISBN 978-92-79-08071-5, European Communities, 2008: http://ec.europa.eu/environment/nature/info/pubs/docs/brochures/bio_brochure_en.pdf

Landscape evaluation

Burkhard, Benjamin & Maes, Joachim. (2017). Mapping Ecosystem Services

Grunewald, Karsten, Bastian, Olaf (Eds.) 2015. Ecosystem Services – Concept, Methods and Case Studies. Springer

MAES Report, Mapping and Assessment of Ecosystems and their Services

European Commission. Environmental Impact Assessment of Projects-Guidance on the preparation of the Environmental Impact Assessment Report (2017)

TEEB: Economics of Ecosystem and Biodiversity. The Economics of Ecosystem and Biodiversity

A Framework for Geodesign: Changing Geography by Design by Carl Steinitz. Published Esri Pr. (July 2012). ISBN 1589483332 (ISBN13: 9781589483330)

A spatial assessment of ecosystem services in Europe: Methods, case studies and policy analysis - phase 1 by Maes et. al. Published by Partnership for European Environmental Research

What to Map? by Ralf-Uwe Syrbe, Matthias Schröter, Karsten Grunewald, Ulrich Walz and Benjamin Burkhard

Guidelines for Landscape and Visual Impact Assessment (GLVIA), Third Edition. Published by the Landscape Institute, I.E.M.A. ISBN 9780415680042

Nijhuis, S., Lammeren, R. van, Hoeven, F. van der. (2011) Exploring the Visual Landscape. Advances in Physiognomic Landscape Research in the Netherlands, DOI: 10.7480/rius.2, Publisher: IOS press, SBN: 978-1-60750-832-8

Landscape capacity study

Bell, S. (2012) Landscape: Pattern, perception and process (2nd Edition, Routledge, Abingdon

Scottish Natural Heritage: nature.scot. Landscape Character Assessment (LCA)

Scottish Natural Heritage: nature.scot. Guidance on Coastal Character Assessment July 2018

Landscape and seascape character assessments. Published by Natural England and Department for Environment, Food & Rural Affairs on 2nd October 2014

An Approach to Landscape Character Assessment by Christine Tudor, Natural England (October 2014)

BEAT Tool. Bluehealth Environment Assessment Tool

Bluehealth Toolbox: https://bluehealth2020.eu/resources/toolbox/

B.3

Integrated Landscape Assessment Approaches

Lecture B.3 analyses the concept of green-blue infrastructure (GBI) in coastal landscapes, one of the main focuses of the online course, proposing it as a tool for assessing and designing coastal areas. The scientific debate on critical issues of the contemporary landscape has highlighted the role of green infrastructure as a framework inspired by the vision of an integrated landscape planning strategy. The main definitions of green-blue infrastructure as proposed by the scientific literature and its main characteristics; multifunctionality, connectivity and multi-scalarity are briefly presented. The lecture stresses the systemic structure of green-blue infrastructure consisting of at least five networks: ecological, blue (water), agricultural, slow mobility and cultural heritage. The elements of such networks and their integration represent the values and objectives upon which the evaluation of the study areas is conducted to answer the questions of the Steinitz model. Within the frame of coastal green-blue infrastructure, a variety of landscape themes can be analysed to evaluate their current status and to delineate future scenarios in terms of new design, requalification and integration. The lecture's selected case studies aim to describe not only their individual strengths, but also their collaborative role to build green-blue infrastructure for more sustainable and healthy coastal settlements of tomorrow.

Main topics:

- Green-blue infrastructure definitions: American and European definitions; enhancement of its components
- Main features of green-blue infrastructure: multifunctionality, connectivity and multiscalarity
- Green-blue infrastructure strategy as an assessment tool: GBI sets values for coastal landscape assessment in order to fix design goals
- Network composition and main realms of green-blue infrastructure: ecological, blue (water), agricultural, slow mobility and cultural heritage
- Green-blue infrastructure assessment indicators: measurements of the GBI components (size, extension, etc.) become indicators and criteria of the landscape analysis in order to assess the current conditions and fix design goals
- Regeneration and risk mitigation as strategies to develop design goals
- Green-blue infrastructure design methodology: reference to design approaches of part C of the online course. As a territorial framework, GBI links transects and acupuncture hot spots
- Green-blue infrastructure design examples: green areas such as parks and gardens, including also open areas (squares, etc.) and other green features, i.e., tree avenues, infrastructural green, community gardens, urban forests, green roofs and green walls

Fig 6.5 Via Verde in Andalusia, Spain (Camilletti, 2006)

- Drosscapes, wastescapes, third landscapes: public and private grounds as key areas to implement GBI and to enhance biodiversity

References:

Open educational resources:

Lecture recordings, slides, glossary and learning materials: https://ilias.hfwu.de/goto.php?target=cat_9704&client_id=hfwu

Language training with expert interviews: https://ilias.hfwu.de/goto.php?target=lm_10201&client_id=hfwu

Green infrastructure case studies and policy directives of the European Union:

European Commission. Building a Green Infrastructure for Europe. Publication, 2013: https://ilias.hfwu.de/goto.php?target=lm_10201&client_id=hfwu

European Commission.The Multifunctionality of Green Infrastructure. Directorate General Environment News Alert Service, March 2012: https://ec.europa.eu/environment/nature/ecosystems/docs/Green_Infrastructure.pdf

European Commission. Towards a Green Infrastructure for Europe: Developing New Concepts for the Integration of Natura 2000 Network Into a Broader Countryside. EC Study ENV.B.2/SER/2007/0076: https://ec.europa.eu/environment/nature/ecosystems/docs/green_infrastructure_integration.pdf

Basic background on green infrastructure, guidelines for communities:

Landscape Institute. Green Infrastructure: An Integrated Approach to Land Use. Position statement, 2013.

Landscape Institute. Green Infrastructure: Connected and Multifunctional Landscapes. Position statement, 2013.

Landscape Institute. Local Green Infrastructure: Helping Communities Make the Most of Their Landscape. Position statement, 2011.

Fig 6.6 Corso Castelfidardo, Turin, Italy (Camilletti, 2008)

Acierno A. (2019), Chromatic City. Applying s-RGB Design to contemporary space, FedOA Press, Federico II University Press, Naples.

Austin G. (2014), Green infrastructure for landscape planning. Integrating human and natural systems, Routledge, New York.

Benedict M. A., McMahon E. D. (2006), Green Infrastructure: linking landscapes and communities, Island Press, Washington DC.

Camilletti P. (2015), Filling infrastructures and urban voids with nature: green areas typology. In Tria, 14, 01/2015, Naples, pp.183-192

Casagrande M. (2019), From urban acupuncture to the Third Generation City, in Nature Driven Urbanism, Springer, Berlin.

Dramstad W. E., Olson J. D., Forman R. T. T. (1996), Landscape Ecology Principles in Landscape Architecture and Land-Use Planning, Harvard University.

EEA report no 18/2011 - Green infrastructure and territorial cohesion. The concept of green infrastructure and its integration into policies using monitoring systems, European Environmental Agency

Mostafavi M., Doherty G. (2010), Ecological Urbanism, Harvard University Graduate School of Design, Lars Müller Publishers, Baden.

Saunders W. S. [ed. by] (2008), Nature, Landscape, and Building for Sustainability, University of Minnesota Press

Thompson J.W., Sorvig K. (2008), Sustainable Landscape Construction, Island Press, Washington.

C

Integrated Planning + Design for Coastal Landscapes

According to the framework of Carl Steinitz (cf. chapter 3.2) this third and last part of the online seminar offers methodical approaches to find answers to these guiding questions:

How might the landscape be altered?

How should the study area be changed?

What differences might the changes cause?

Here we introduce change, impact and decision models.

The three online sessions help to lead the students from goal setting to concrete spatial design interventions. The contents offered in these lectures can be applied to elaborate the online assignments of part C as well as the intensive on-site workshop planning and design proposals.

Important aspects of each lecture unit are the processual character of planning and design as well as the participatory approach; i.e., the involvement of people affected by the desired changes, even if the participation cannot or can only partially be carried out in reality.

C.1

From Goal Setting to Strategy Building

Lecture C.1 aims to assist the students in understanding the dialogue between a model and its applied version. This is both in the case of strategic planning as a process, and of strategy as a product. Particularly with respect to a specific situation, in terms of landscape (as a process and unstable "product") and of actors (numerous and not always power-balanced) is this dialogue meaningful.

Neither strategic planning as a process nor strategy as a plan should be the goal, but instead forging a strategic approach, in order to reach a strategic attitude oriented to sustainable behaviour in coastal regions at all spatial and social scales.

Thus, during the lecture, there is a continuous movement back-and-forth between general approach and aspects, and particular situations and issues. Visual examples are introduced from different parts of the globe within various socio-political contexts, together with examples of policies and with a large spectrum of degrees of human presence and interventions in coastal areas.

Even if planning a strategy as an in-step-model is the central topic, more time in the lecture is dedicated to the variety and needed balance between environmental, economic and social perspectives. Also discussed are "ideal intentions" and "implemented projects" (see Mintzberg's scheme below). Educating becomes a key issue in coastal areas, requiring from planners and designers not only knowledge and communication skills, but openness to various contradictory perspectives and capabilities to spark social mobilisation oriented towards sustainable changes.

As in other cases during the entire course, there is a mix of theoretical knowledge with examples of settings, practices and results, all highlighting achievements and failures.

Main topics:

- Strategic planning from corporate thinking to public domain issues; in search of specificity and adaptability; model, patterns, approach
- How a specific situation needs a particular approach in order to design a place-oriented strategy
- The pivotal role of setting strategic goals, as the critical articulation between findings, the results of analysis and understanding perceptions on one hand; and projections, the creative scenarios incorporating a degree of incertitude on the other hand
- The danger of wishful thinking in goal definition and the pitfalls of exaggerated optimism concerning comprehensive policies; introducing the risks associated with spatial fragmentation or project-by-project interventions
- Dynamics of the strategy-policies-programs-projects sequence; the unequal power of the expert in determining the various stages of the process, both in strategy formulation and adoption, and in its implementation and re-positioning
- How to bridge the chosen model with specificities, to include adaptability in terms of means and methods, timing, amplitude of intervention and also to become inclusive in terms of issues, stakeholders, new ideas or practices

Exercise:

Scope: Warm-up/ice-breaker at the beginning of the lecture to accommodate and evaluate the

students' different perceptions and perspectives

Task: Identify why good strategies are prevented in successful implementation – who and what are the culprits?

Answers are listed on the screen and students may advocate particular answers. There are also understanding and facilitation questions and remarks.

Duration: 10 - 15 minutes

References:

John M. Bryson – Strategic planning for Public and Nonprofit Organisation: a guide to strengthening and sustaining organisational achievement, 1995, New York

Joan Busquets – Barcelona - The urban evolution of a compact city, 2005, Harvard GSD

Andreas Faludi – European Spatial Planning, 2002, Lincoln Institute of Land Policy

John Friedmann – Planning in the Public Domain – from Knowledge to Action, 1987, Princeton NJ

Patsy Healey – Urban Complexity and Spatial Strategies – Routledge, RTPI, 2007

Henry Mintzberg – The Rise and Fall of Strategic Planning – reconceiving roles for planning, plans, planners, 1994, New York

Stijm Oosterlynck, Jef Van der Broeck, Louis Albrechts, Frank Moulaert, Ann Verhetsel – Strategic Spatial Projects, Catalysts for Change, Routledge, 2011

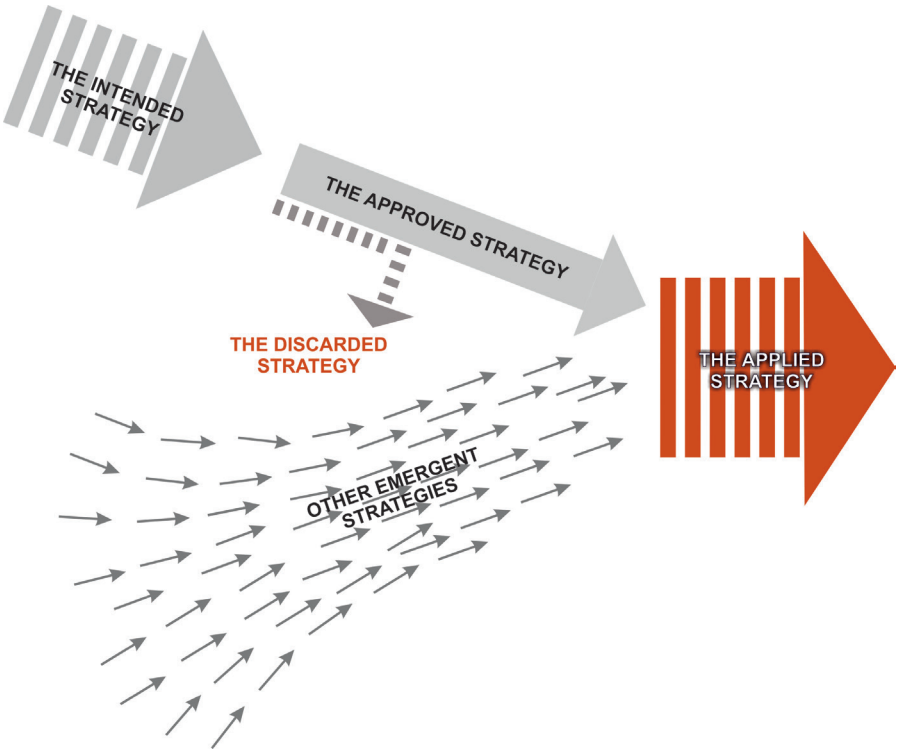


Fig 6.7 Placing the strategy in a "field of forces" adaptation after Mintzberg, 1994

C.2

From strategy to planning and design

Planning and design, in particular, requires reflexive competences based on research-based theory and methods (what we know, explicit knowledge) as well as perception and experience-based intuition and creativity (what we imagine, implicit knowledge). The main aim of the C.2 lecture is to bring both competences together and encourage the students to translate their strategies into landscape designs. This translation process leads in a circle or spiral from the physical and intangible context to an abstract concept, then to a spatial composition and finally to a concrete intervention or construction.

An essential tool during this design process is 'thinking with a pencil', i.e., hand-sketching and drawing. The online format has certain restrictions to overcome concerning hand-sketching. Spatial design needs drawings at different levels of abstraction and students must be encouraged to draw. The Transect-method seems particularly suitable for this and forms a central element of the lecture.

Against this background, the C.2 lecture contains the following topics mixing theoretical, respectively methodical inputs, with pictures (perceptions) and project (experiences) examples and interactive exercises.

Main topics:

- The circular design process from context to concept, composition and construction as a description of how to translate strategy into a spatial design
- The dimensions of the core term 'context' (global – regional – local, physical – intangible) with some examples and pictures of different coastal contexts
- Key issues of coastal landscapes and demands of contemporary coastal design (e.g., resilience, process-orientation, etc.)
- Place-making, social design: 12 questions a designer should ask according to Coffin and Young, 2017 (these questions are explained in the form of a video clip which can be viewed asynchronously in a self-determined way before or after the lecture)
- The Transect-method as a design tool, according to CATS and Diedrich et al., 2012, 2014

Exercise 1:

Scope: Warm-up/ice-breaker at the beginning of lecture C.2, reflecting the outcome of lecture C.1

Task: Summarise your strategy and/or spatial vision in a catchy phrase or slogan (type it into the chat), and a short discussion about the slogans

Duration: 5 - 10 minutes

Exercise 2:

Scope: Practical application of the presented theory/method

Task: Sketch your (design) transect and show places of potential point of interventions ('acupunctures'), share the results (send, upload or share a photo of your sketches) and a short discussion about the transects

Duration: 15 - 20 minutes

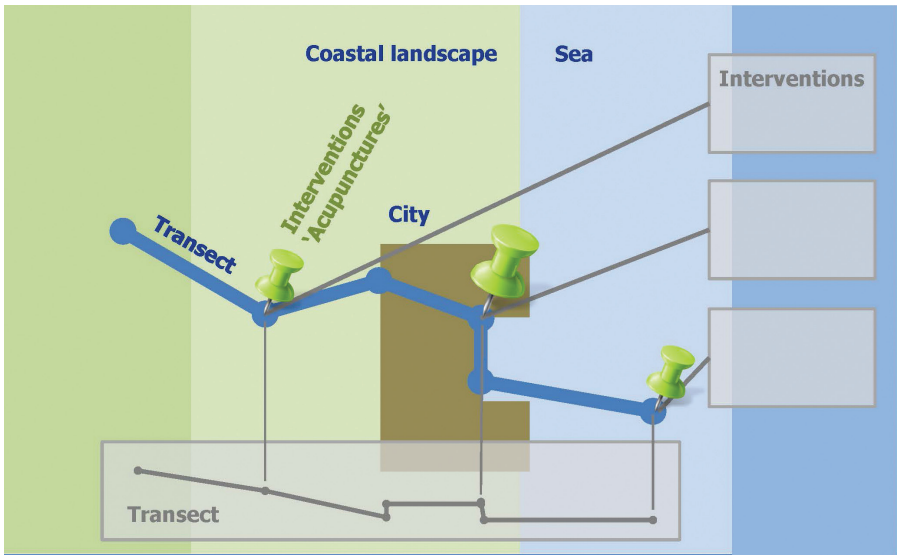
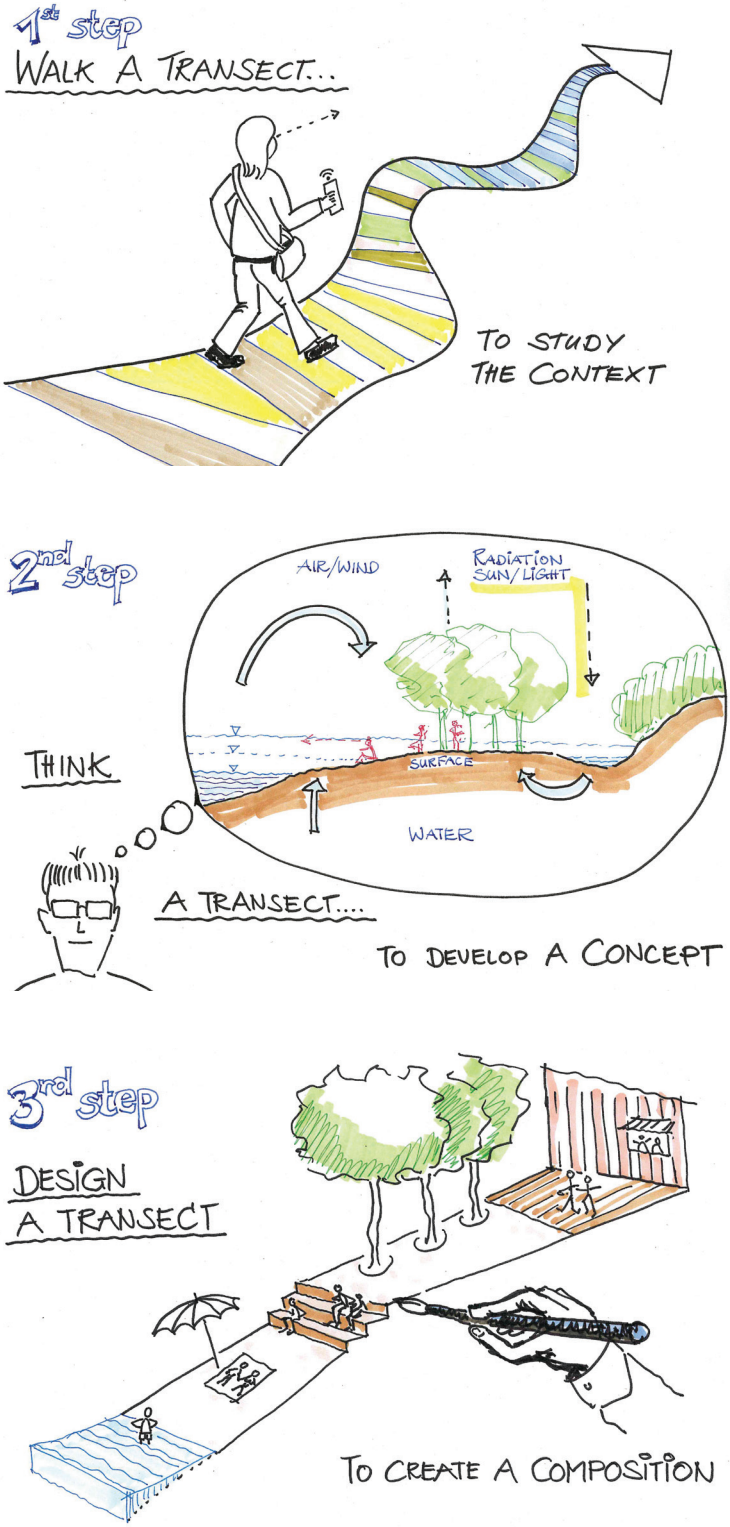


Fig 6.8 Abstract template of transect design



Figs 6.9 - 6.11 The 3 steps of transect design

References:

Christie Johnson Coffin, Jenny Young (2017): Making Places for People: 12 Questions Every Designer Should Ask.

Diedrich, L., G. Lee and J. Raxworthy (2012): "Transects: Developing an Experience-based Methodology for Design Education and Design Research" in Jonas & Monacella (eds). 2012. Exposure: Design Research in Landscape Architecture 2012, RMIT.

Lisa Diedrich, Gini Lee, Ellen Braae (2014): The Transect as a Method for Mapping and Narrating Water Landscapes: Humboldt's Open Works and Transareal Travelling: https://www.nanocrit.com/issues/issue6/transect-method-mapping-narrating-water-landscapes-humboldts-open-works-transareal-travelling

http://landscapeandurbanism.blogspot.de/2009/12/representing-transects.html

https://transect.org/

Mantho, Robert (2015): The Urban Section. An analytical tool for cities and streets. London and New York

Schegk, Ingrid (2019): 'Teaching landscape construction as part of a holistic design process', in Jorgensen, Karadeniz, Mertens, Stiles (eds), 2019: The Routledge Handbook of Teaching Landscape. Pg. 341-358

C.3

Design approach and the intervention: urban acupuncture

Lecture C.3 introduces the concept of tactical urbanism and in particular, urban acupuncture. It offers the main theoretical literature on urban acupuncture and discusses the reasons behind the choice for urban acupuncture as a planning tool. There are planning and design situations where, for different reasons, big changes are not possible or needed. Temporary interventions may catalyse further changes by raising awareness on particular issues or by solving the most urgent problems, such as improving spatial functions. Typically these small changes, that are achieved by the temporary intervention, are followed by larger improvements as a secondary benefit.

Depending on the context, designers working on the interventions might deal with different city planning aspects at different scales, spatially-related and non-spatially related. The lecture discusses these theoretical aspects and is supported by four case study projects.

The lecture additionally contains a built project review presentation of the Horizon 2020 project. One hundred seventy-two projects, built in urban environments near water, were investigated using analytical drawing. This analysis was helpful to understand the typology of the design approaches and speak to the questions: what is the main issue addressed by the design?; and, how was the design approach chosen to make spatial change tangible?

Main topics:

- Tactical urbanism and urban acupuncture
- The theoretical basis of the urban acupuncture terminology
- What impacts a site? Urban acupuncture might address diverse issues and scales from local to global, site-specific to general and spatial to non-spatial
- Four case study areas that illustrate how temporary interventions can resolve specific problems
- Review of 172 Horizon 2020 blue space projects and their main design approaches
- Design approaches and issues tackled by design: local and global, spatial and non-spatial, investment costs and the added value of the intervention, who the beneficiaries are and is the intervention temporary or permanent

Exercise:

The case study project is introduced and the students analyse their interventions via writing in chat groups. The key questions to be answered are: what are the main issues addressed by design?; and, what is the added value of the intervention and who is the beneficiary?

Duration: 5-10 minutes

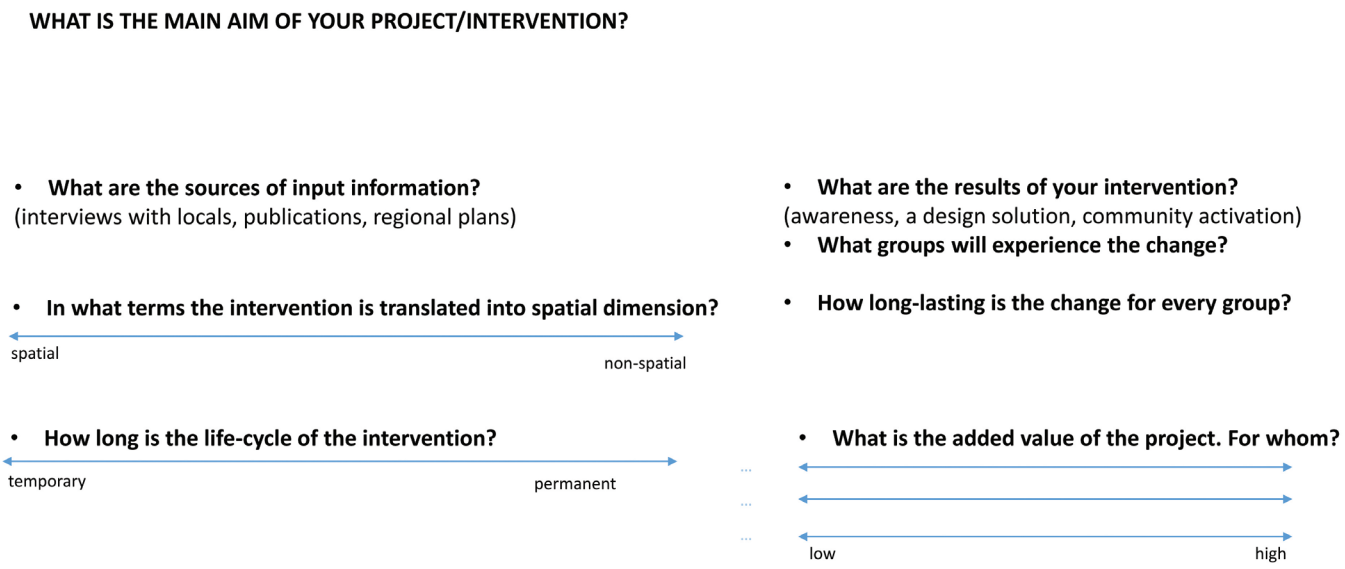


Fig 6.12 What is your main project intervention? Duration: 5-10 minutes. J. Balicka

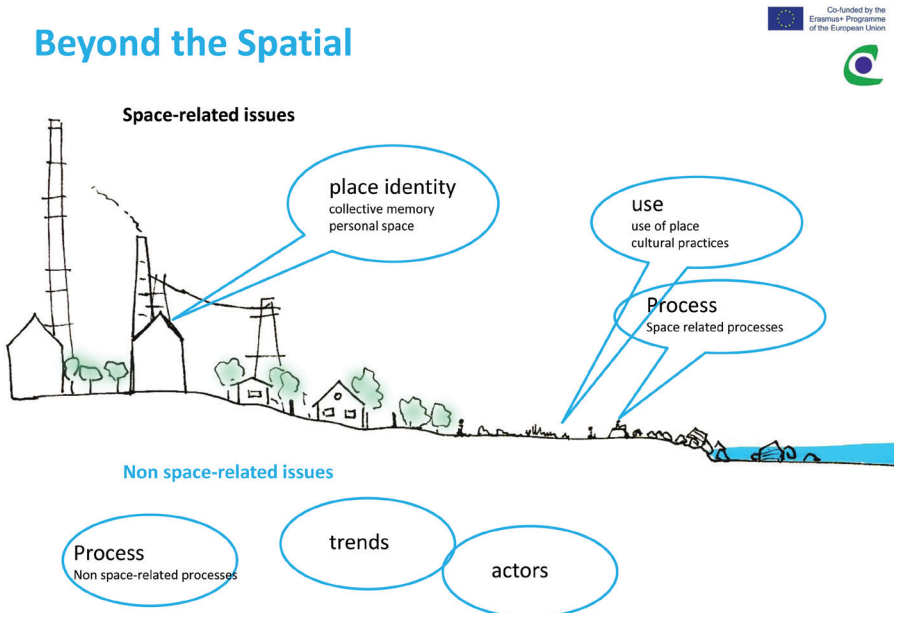


Fig 6.13 Aspects, problems and processes affecting the site. J. Balicka

References:

Helena Casanova, Jesús Hernández (2015): Public Space Acupuncture. Strategies and Interventions for Activating City Life.

Jaime Lerner (2016): Urban Acupuncture. Celebrating Pinpricks of Change that Enrich City Life.

Marco Casagrande (2013): Biourban Acupuncture. Treasure Hill of Taipei to Artena

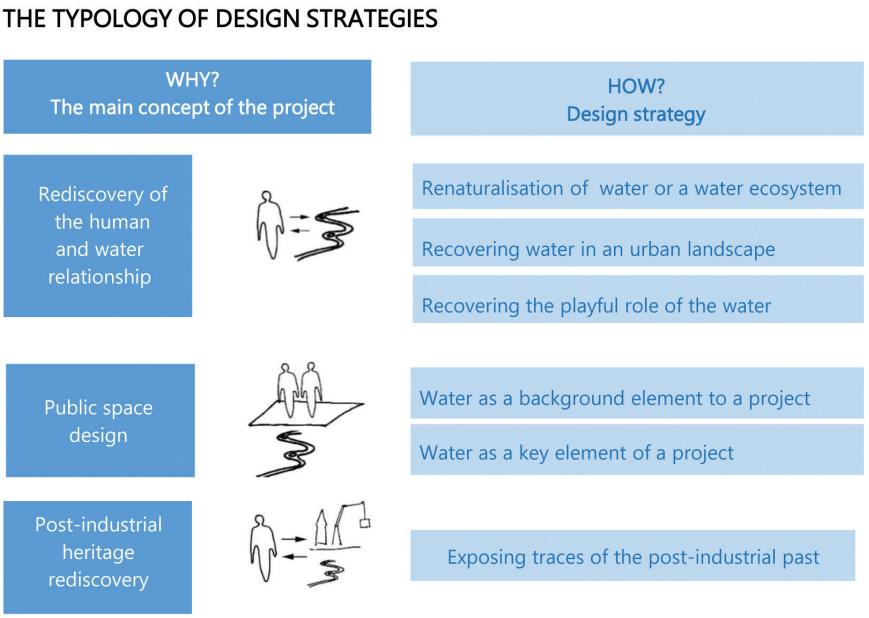


Figure 6.14: The BlueHealth project review: approached to design.
A. Wilczynska, J. Balicka

6.3 An integrated, process-oriented assignment: the CO-LAND case study template

The CO-LAND learning process is based on a case study approach. The case study template is intended to guide participants during their online collaboration and is made available via the CO-LAND seminar wiki. Every participating team received its own wiki page with an empty template to complete stepwise as they advance through the course. The template is structured according to the main seminar processes: (A) Landscape System Analysis, (B) Evaluation and Assessment and (C) Integrated Planning and Design.

The student case studies are public, openly available on the wiki at all times. This allows tutors and peers to provide formative feedback and support during the learning process. Currently, 70 case studies have been developed and can be accessed using this link:

https://CO-LANDwiki.hfwu.de/index.php?title=Category:Coastal_Landscapes_Case_Study

The case study template has the following general structure and guiding questions. Every section includes max 200 words explanatory text and 2-3 visuals:

Introduction

Rationale: Why do you think this case is relevant? What is your hypothesis considering the landscape challenges? format: 3-4 sentences

Location and scope: Possibility to add an interactive online map on the wiki

Phase A: Landscape system analysis

A.1 Landscape layers and their system context

Geomorphology, landscape units and coastal typology

- Description of evolution, status quo and driving forces, is the coastal typology changing? Why is that?

Land-use

- Settlements, infrastructure, agriculture, resource extraction, natural areas, energy production...
- Description of evolution, status quo and driving forces, is the land use likely to change? Why is that?

Green/blue infrastructure

- What are the major potential elements of a green/blue infrastructure network? Are these likely to change/disappear? Why is that?

Actors and stakeholders

- Who is driving changes in this landscape? Who is affected by those changes?
- Draw a stakeholder and/or power map: Who is affected highly but with low power? Who has high power but is not affected?

Sacred spaces and heritage

- Which places/elements hold cultural value and to whom?
- You may add a map and some images, please also explain in your caption why these elements are valuable

Visual appearance and landscape narrative

- Which elements are essential for the landscape character?
- Has the landscape been painted or otherwise depicted, when and whom? Which elements are essential?
- Which narratives exist? Who has written about this landscape or depicted it in some way?

A.2 Summary of your landscape system analysis and your development targets

- You can summarise your findings with a DPSIR Model or a Spider Diagram
- Link back to the Sustainable Development Goals: Which goals are at risk?
- What is your hypothesis for this landscape?
- Visualise your hypothesis with one graphic/image
- Are there any existing initiatives taking action in this landscape? Do you have a critical perspective regarding these actions?

A.3 Theory reflection

Reflect on at least three international policy documents in relationship to the local landscape case

choose one international, one European and one national policy document

A.4 References

Phase B: Landscape evaluation and assessment

B.1 Assessment strategy

- Based on the hypothesis derived from your previous landscape systems analysis, you are now asked to define the goals for assessing the landscape. Your assessment is the basis for evaluating the landscape status.
- Which elements and phenomena need to be mapped, why and how?

B.2 Mapping

- As defined by your assessment strategy, conduct the mapping and present your findings here
- As a minimum, map at least three different themes, you may choose more if needed

B.3 Problem definition and priority setting

- Give a summary of the major findings of your mapping process. What are the problems/potentials identified?
- Draw a problems/potentials map
- Set priorities for the most relevant issues

B.4 Theory reflection

- Please reflect the assessment and evaluation methods used based on at least three readings. What limitations did you encounter?

B.5 References

Phase C: Strategy and master plan

C.1 Goal setting

- Define strategic planning objectives based on the evaluation findings
- Link back to your original targets from section one and the Sustainable Development Goals: www.un.org/sustainabledevelopment/sustainable-development-goals/Sustainable

C.2 Spatial strategy and transect

- translate your strategic goals into a vision
- develop a spatial translation of your vision
- exemplify your vision in the form of a transect with concrete interventions
- add map(s) and visualisations

C.3 From theory of change to implementation

- For implementing your vision: What partnerships are needed? What governance model is required?
- Who needs to act and how? Draw and explain a change/process model/timeline
- What resources are needed? On what assets can you build?

C.4 References

Phase D: Process reflection

- Reflect within your intercultural and interdisciplinary team on the outcomes of your study
- What limitations were you facing?
- What have you learned from each other?
- What would you do differently next time?

C. THE IMPLEMENTATION AND DISSEMINATION PROCESS

This third and final part of the guideline describes the implementation process of the CO-LAND programme based on the innovative teaching methodology explained in Part A and the content orientation exemplified in Part B.

As a blended learning activity, the newly developed teaching programme consisted of an online seminar (OS), which was offered three times during the project period, and four on-site workshops held at four different European seas and coastal locations, the so-called 'Intensive Study Programmes' (ISP). The following chapters describe the implementation process for the OSs (Chapter 7), the ISPs (Chapter 8), the accompanying monitoring and evaluation (Chapter 9) and the continuous dissemination process (Chapter 10). On the one hand, these chapters can be understood to include the experiences made during the CO-LAND project, but they can also be read for primary recommendations.

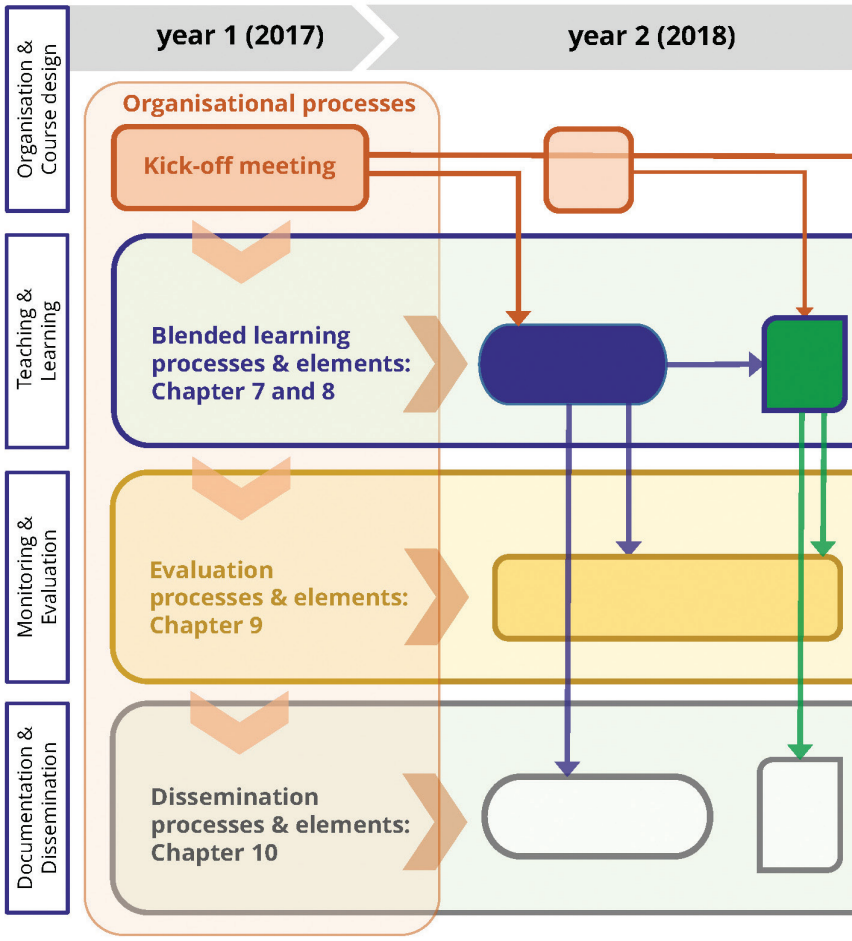


Fig 7.1 The general CO-LAND implementation process map

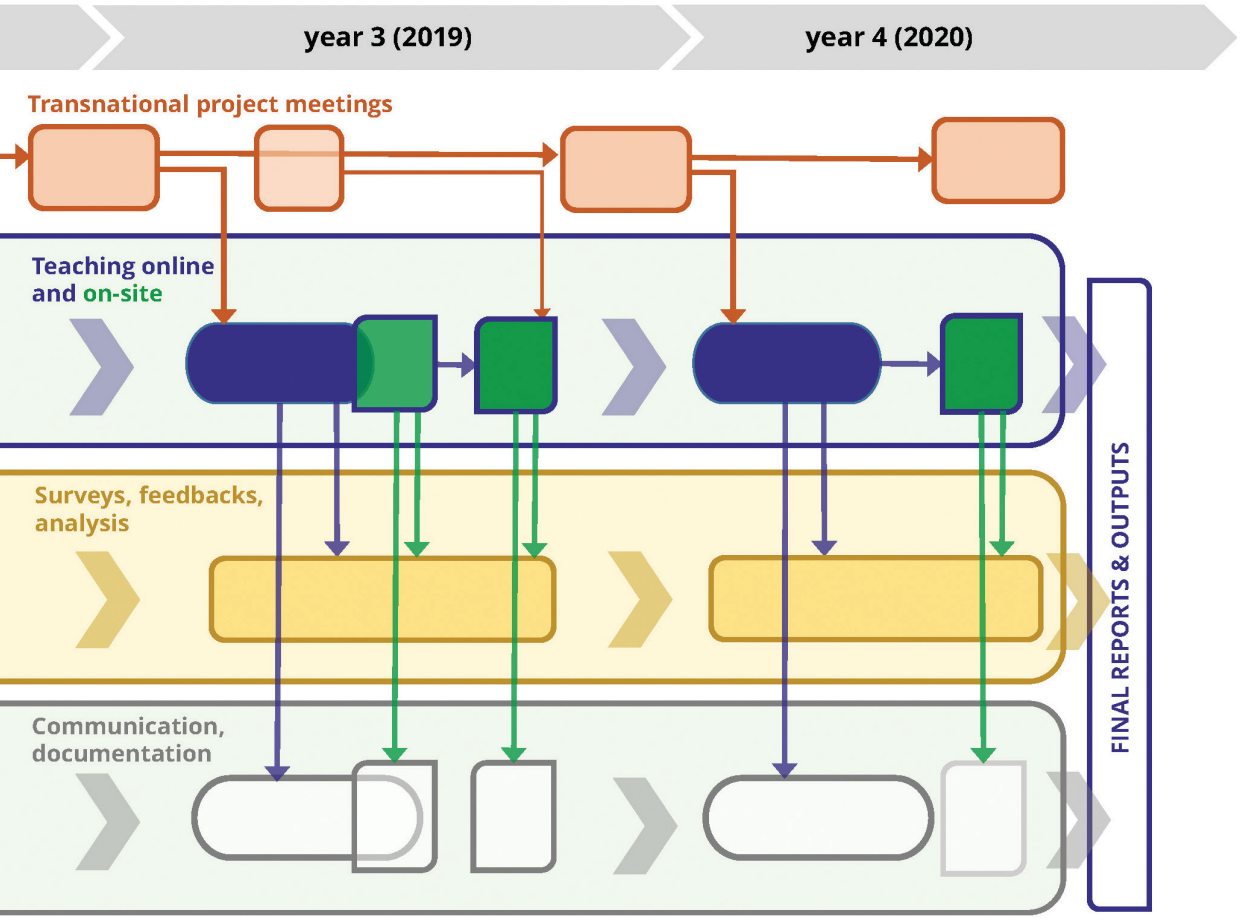


Fig 7.2: CO-LAND transnational project meeting, Brussels 2019 **Photo: Gabriel Pascariu**

7 DEVELOPING THE ONLINE SEMINAR

The aim in designing the CO-LAND online seminar (OS) was to implement the constructivist teaching theory approach with synchronous as well as asynchronous teaching methods, together with online and offline media. To illustrate, this chapter provides links to the CO-LAND Toolbox and the CO-LAND Wiki.

7.1 Target groups

The CO-LAND OS addresses two clear target groups: the teaching or tutoring team and the students. External participants are considered a third target group.

Each of the nine project partners sends experts to the course who together form the teaching and tutoring team of the CO-LAND course. Likewise, learners come from all institutions involved, mainly from the seven participating universities so that an international learning community is involved in the process of each course delivery. Furthermore, the consortium partners come from different disciplines and bring expertise in landscape architecture, regional planning, coastal geography, tourism geography, architecture and urban planning. This combination of expertise and diverse skills creates a unique and enriching learning environment, that is further characterised by its international and intercultural dimension.

Participation in the OS is possible in active and passive modes. In the first case, university students joining the course actively can receive academic credits for the regular attendance of the online classes and the completion of seminar coursework and group assignments (see Chapter 7.2). The online course is also passively available to the external audience of international planners and designers, who can audit the lessons to learn a new design methodology and improve their professional skills.

Not to be ignored is the perspective that the previous knowledge of online teaching on the part of the teachers and online studies on the part of the students is also very different. For both, participation in the OS therefore also means training new skills. A target group-oriented design of the online seminar must take this into account. For example, the teaching or learning units should not be too long, should offer options for different forms of teaching and presentation styles, and leave enough time for interactive teaching elements. A preparatory 'training for trainers' is especially important in this context

7.2 Preparing the course and the virtual learning environment

The course preparation includes the following steps:

- Determine the scope (according to ECTS) and the curricular integration into the study programmes of the partner universities;
- Determine a time and date schedule taking into account the semester plans of the partner universities;
- Identify and set up suitable online platforms and conference or meeting systems for implementation;
- Set the evaluation mode;
- Define the information flows, in particular the registration cost announcement;
- Set the enrolment and login mode.

To ensure easy curricular integration, the CO-LAND online seminar corresponds to a typical university module and has a scope of 5 credits according to the European Credit Transfer System (ECTS). This is equivalent to a total student workload of about 125 hours. Depending on the assignment, the on-site workshop, the ISP (see Chapter 8), may or may not be included in this workload.

The seminar consists of twelve weekly synchronous 90-minutes sessions of lectures that take place on a specific day for 1.5 hours during a period of about three months.

- Along with these synchronous sessions, learners get together in virtual teams and work on group assignments. For this purpose, there are asynchronously usable materials and tools available such as reading materials, collaborative group workspace, and tools for concept mapping, storyboarding and other diverse active and passive learning tools.
- The following key elements are needed to prepare the virtual learning environment:
- A **virtual classroom** for synchronous lectures and meetings of small groups up to large audiences, interactive exercises and presentations of working group results, i.e., a videoconferencing system that allows recording of lectures for asynchronous use, retrospective viewing or review
- An **online learning platform** to organise and coordinate the course, to communicate information and feedback, to provide learning materials for asynchronous study such as literature, lecture recordings, maps, etc., to submit assignments; partial access restrictions for copyright reasons must be possible

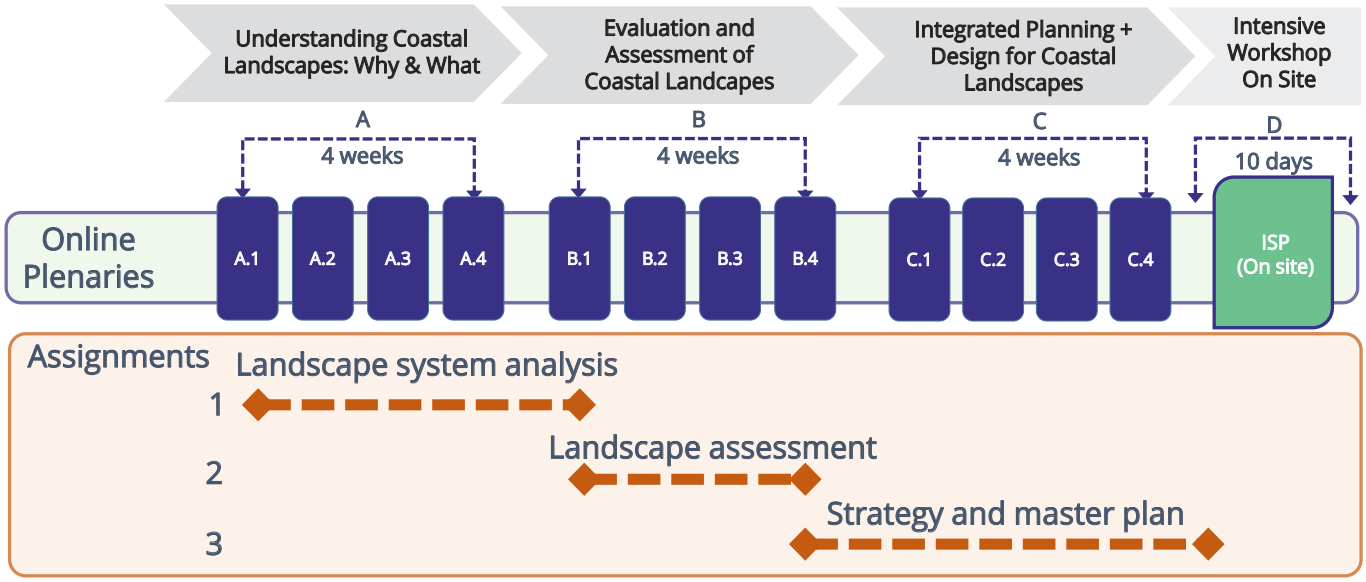


Fig 7.3 The CO-LAND schematic schedule

- A **knowledge management (and transfer) system** as a platform for the collaborative elaboration of assignments, case studies, etc., and to provide the knowledge as an open source without access restriction

- Different online tools and media for dissemination activities such as a project or course website, social media accounts etc.

The main three elements, virtual classroom, online learning platform and knowledge transfer system (Wiki), are complementary with each other, e.g., a lecture recording is provided on the online learning platform for students to prepare for an online live video conference or lecture. During the video conference, the students discuss and reflect on the content of the lecture. Afterwards, the students apply the new knowledge as part of an assignment. They then present using the Wiki template of the Wiki and submit it to the online platform, where they will also receive feedback.

Of course, some basic hardware requirements are also essential, such as a good web camera and even more, good headsets for all participants. External headsets often cause interferences with internal microphones and driver issues. Therefore, it is critical to remind all participants to test their headsets and microphone beforehand.

If lecture recordings and other video material is published, users can choose from various so-called codecs, i.e., software that compresses digital video. Please note that there is a strong relationship between the quality of the video and the amount of data. A good codec, for example, is the .mp4-format.

Another important aspect in this context is to clarify the data protection requirements for video recordings, e.g., anonymisation of participant names, etc. Most video conference systems have this option anyway.

Finally, accessibility and barrier-free use of all sources have increased in importance. Many universities now require the consideration of accessibility when designing online materials. An example of improved accessibility is an additional acoustic text describing an image or a video to support participants with visual impairment.

The next step is the announcement and dissemination of the teaching offer. The activities and information channels should reach both students and professionals, appropriately at different levels including:

1. at the local level of the university partners, where they publish and present their activities to the students;

2. at the national level, where the project partners publish their outstanding activities and information to the public; and

3. at the European level, where the consortium publishes through website announcements and social media which play a crucial role to reach external attention.

The dissemination should encourage the participation of a wide number and range of national and international learners from various backgrounds to enhance their knowledge and

Table 7.1: The CO-LAND virtual learning environment

Element	Function	CO-LAND	Alternatives[1]
Virtual classroom	synchronous lectures and meetings, interactive exercises and presentations	Adobe connect, Zoom (3rd cycle)	Meet DFNconf GoToMeeting
Online learning platform	asynchronous learning (recordings), course material, communication, organisation, coordination	ILIAS with an open and a password-protected team area	Moodle
Knowledge transfer and management platform	collaboration, working groups outcomes, open source knowledge transfer	CO-LAND Wiki, providing working templates	CMS, e.g. Typo3
Diverse online media	Dissemination and promotion[2]	Website LinkedIn Facebook Twitter	Instagram

1. For more details see the CO-LAND Toolbox: https://colandwiki.hfwu.de/index.php?title=Output_2_-_Toolbox
2. For more details see chapter 10

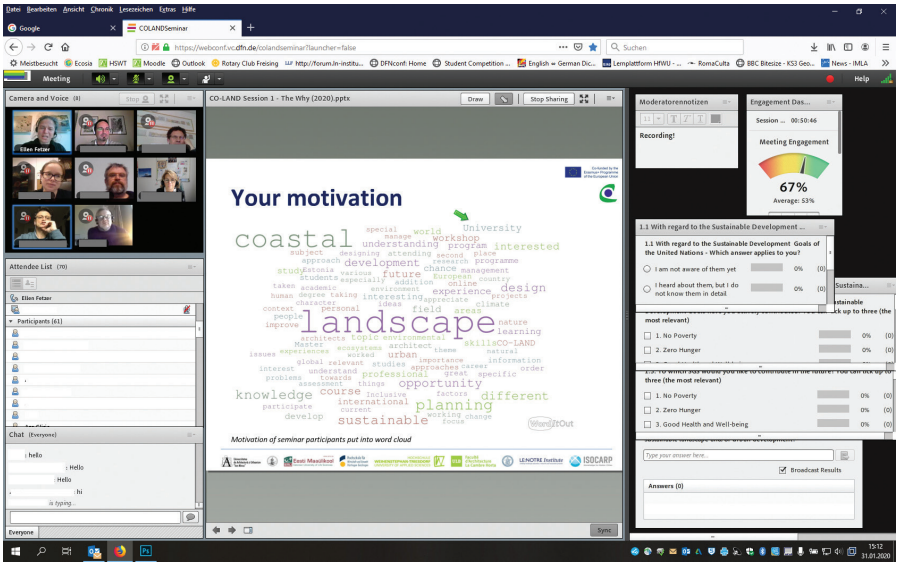


Fig 7.4 The CO-LAND virtual learning environment (screenshot)

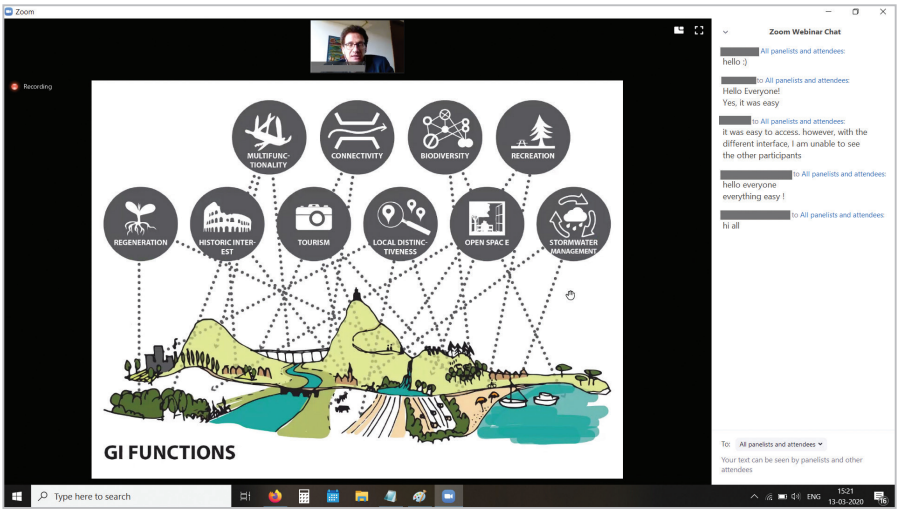


Fig 7.5 Lecture in the CO-LAND virtual classroom (screenshot)

expertise about contemporary approaches to coastal landscape planning and design. Professional bodies and associations can support this through direct notices to their members, by advertising on their websites and issuing grants for continuing professional development. Within the CO-LAND consortium, for example, the two NGOs, the International Society of City and Regional Planners (ISOCARP) and the LE:NOTRE Landscape Institute, take on this role.

Depending on the respective target group, open online lectures with 200 participants or more can be offered or workshops with small groups that allow interaction, conversation and feedback. In this context, it is essential to inform the potential audience about the availability of the course, registration conditions and deadlines. All dissemination activities are based on the dissemination plan. For details about all CO-LAND dissemination activities, see Chapter 10.

The final preparation step is the enrolment and registration procedure depending on the target groups (see 7.1). Participation in the online seminar is free and open to students at any institution as well as the public. Participation is possible in either active or passive mode.

Active participation includes:

- sufficient professional or academic ability and qualification;
- registration in the time and deadline announced;
- regular attendance of the online class (or working with the seminar recordings in due time);
- completion of the seminar coursework and group assignments; and

- academic recognition of up to 5 ECTS.

Passive participation includes:

- professional and academic interest;
- registration can be done any time, but preferably before the first session;
- visitation of online seminar sessions either in real-time or through video recordings; and
- no academic recognition granted.

7.3 Implementing the teaching and learning activities

Based on the teaching content described in Part B, the implementation of the online seminar within the prepared virtual learning environment includes the following aspects:

- Defining the framework for the promised **open educational resource** including all the consequences of open character without limited copyrights; formulating rules for the handling of resource material, e.g., regarding referencing and citation
- Structuring the achieved outcome of the course according to the learning objectives (see part B, Chapter 6.1.) with respect to the **assignments** and defining submission rules
- Structuring and organising the **collaboration** of the students in international and interdisciplinary working groups

The UNESCO defines "Open Educational Resources (OERs)" as "any type of educational materials that are in the public domain or introduced with an open license. The nature of these open materials means that anyone can legally and freely copy, use, adapt and re-share them."

The **CO-LAND Open Educational Resource** is provided under the CO-LAND Wiki: https://colandwiki.hfwu.de/index.php?title=Main_page

During the three cycles of the CO-LAND seminar, the following elements had been developed and made available:

- General information about the **CO-LAND project**
- General information (target group, goals, content etc.) and organisational details (schedule, registration etc.) about the **CO-LAND Online Seminars** 2018, 2019, 2020
- General information, organisational details and documentations of the **CO-LAND Intensive Study Programmes** (ISP)
- Further project outputs such as this guidance report and the CO-LAND toolbox
- The **CO-LAND Resources** which are the heart of the CO-LAND OER, include:
  - a thematically structured reading list;
  - all lecture recordings respectively linked to the open part of the ILIAS learning platform; and
  - as the central part of the resources, the **CO-LAND case studies** for 2018, 2019, 2020 elaborated by the student groups based on the course template as the main assignment.

The requirements of an OER implicate a couple of consequences for all outcomes and especially the students' assignments: Students need to create all texts and visuals that are embedded in the case study template by themselves:

- They should be willing to declare their materials creative commons (an open licensing format for the public domain), otherwise, the case study material cannot be reused by others (but it can still be part of a public wiki page)
- Materials from other websites cannot be uploaded to the wiki unless these are also creative commons or otherwise declared public
- Learners are however free to refer to other resources by links and reference lists
- Otherwise, common rules for good scientific practice apply as in any other context (correct referencing and citation)

Against this background, the **CO-LAND case study template** guides participants of the CO-LAND Online Course during their learning process. This framework structure is available on the wiki from the beginning of the seminar. Working groups and individual learners complete it with their research results stepwise as they are advancing through the course along the three core phases A, B and C (see part B). The case studies are public at all times, and their subsequent development allows teachers, tutors and peers formative feedback and support during the learning process. After the course, they will remain in the public domain and contribute to the body of the CO-LAND open learning resources.

The coastal case studies based on the template consist of explanatory texts in combination with graphics, images, maps and plans. The documentation needs to follow good scientific practice and include all references and

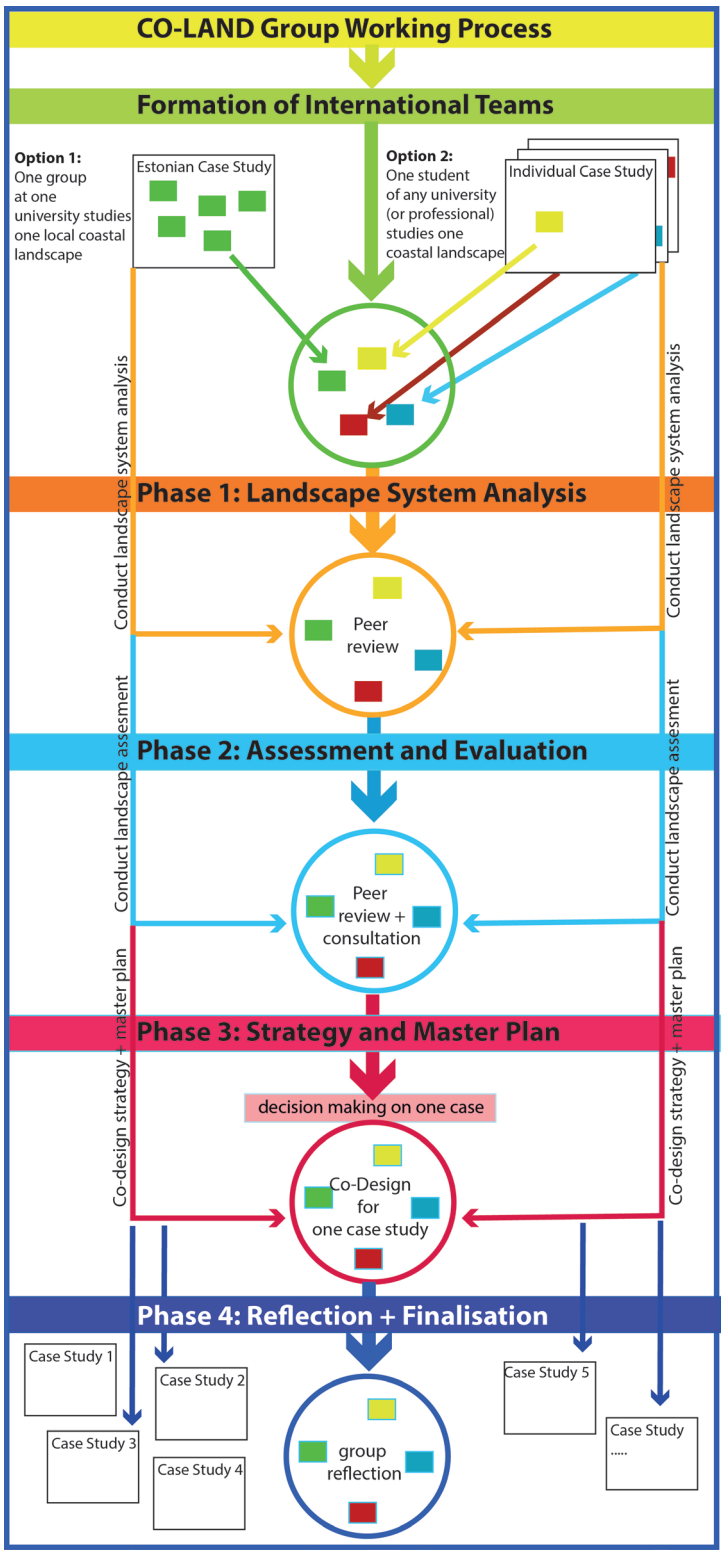


Figure 7.6 CO-LAND group working process

sources in one document.

Every case study needs to be elaborated by a mixed team of students with members from different partner universities. This mixture ensures a maximum of international collaboration and exchange. While local students have the opportunity to work directly on a coastal landscape, to which they have access, foreign group members can do mostly desktop research and both can learn from the exchange. Alternatively, these students can work on individual cases. Both participant types meet in an international virtual team for peer review, consultation and finally a co-design for one of the case study areas.

During the three cycles of the seminar, two different case study selection alternatives were tested:

- Only a few case studies are in the later project area of the IP Workshop, otherwise free selection of case study areas by the students (first cycle 2018)
- All case studies are more or less in the context of project area for the later IP workshops (second and third cycle 2019, 2020)

The second variant seems to produce the comparatively better and deeper work results (see Chapters 8 and 11.1).

7.4 Exam, assessment and grading

As detailed in Part B, the CO-LAND online seminar introduces students to the sensitive nature of coastal landscapes and their vital relevance to society, economy and the environment. Planners and designers learn how to manage these territories sustainably. CO-LAND course participants develop a profound understanding of the specific character of coastal landscapes. Students learn which driving forces are influencing the landscape system and which impact types are most relevant for planning and design responses. This includes the global and European dimension since coastal landscapes are receiving increased attention worldwide (see Figure C.2 Assignment A). Participants learn about various approaches to landscape assessment in order to articulate the challenges and potentials of a coastal landscape.

They have the opportunity to define and test assessment models and derive relevant knowledge for planning and design (see Figure C.2 Assignment B). The last phase of the course introduces different approaches to strategy building, planning and design in the context of coastal landscapes. On this basis, the course participants are able to draft a strategy and a master plan for a coastal area, taking economic, ecological and social aspects, and current policies into account (see Figure C.2 Assignment C).

As described in Section 7.3, the examination assignments in the CO-LAND OS consists of elaborating a case study on the basis of the template provided. This template is structured analogous to the course contents with respect to the synchronously held lectures:

A. Landscape System Analysis

B. Landscape Evaluation and Assessment

C. Strategy and Master Plan

D. Process Reflection

Part of the examination is also an oral online presentation after each thematic section of the seminar, i.e., held on the 4th (Unit A.4), 8th (Unit B.4) and 12th day of the course (Unit C.4). Each team member is required to speak and present one slide or more. Approximately four working groups are formed and together with the teachers and tutors, the working groups also form the presentation audience. The presentation is moderated and discussed within the working groups, evaluated by the teachers and tutors using a feedback form without grading (see Annex: Feedback Form), and the result is reported back to the four working groups in a timely manner. At the end of the seminar, the international teams also need to reflect on their collaboration process and document their findings in the template (see figure C.2 Assignment D).

The completed case study provided using the wiki template is evaluated and graded according to the following criteria:

- Comprehensiveness and depth of the research in general (in particular assignment A)
- Methodological conclusiveness and clarity (in particular assignment B)
- Consistency in the formulation of strategy and objectives as well as persuasiveness and creativity in spatial (landscape) vision and implementation ideas (in particular assignment C)
- Profoundness and seriousness in the process (assignment D)
- Competence in textual and graphic expression, visual appearance of graphics and maps
- Scientific quality of the elaboration, source work, citation method etc.

Students who actively take part in both the online seminar and the intensive study programme (ISP) workshop have the opportunity to take the graded assignment there. In this case, the focus is on strategic and spatial planning and the assessment criteria differ slightly (see Chapter 8.4).

Figure 7.7 Audience of community members, stakeholders, lecturers and examiners at the final presentation of group proposals. CO-LAND intensive study programme, Mangalia **Photo: Gabriel Pascariu**

8 ON-SITE: ORGANISING INTENSIVE STUDY PROGRAMMES

Even though the CO-LAND Online Seminar enables goal-oriented and successful learning, both synchronous and asynchronous, for a target group of almost any size, on-site workshops offer unique and unrepeatable experiences. For students as well as teachers of spatial planning and design, these experiences are irreplaceable, especially when dealing with a topic like coastal landscapes.

To justify the high travel expenses with their predominantly negative climatic and ecological effects, the on-site workshops must offer learning and teaching experiences whose quality can never be achieved online. These are in particular the direct physical and psychological perception of the landscape and its complexity, the contact with the people, their everyday life, their language and local as well as the social contact with other learners and teachers.

The CO-LAND Intensive Study Programmes (ISPs), focusing phase and assignment C of the seminar, took place in four different locations: Mangalia (Romania) in 2018, Tallinn (Estonia) and Naples (Italy) in 2019 and De Panne (Belgium) in 2020.

8.1 Participants and people involved

Participation in the intensive workshop is limited. A precondition for the participants is a successful engagement in the CO-LAND online seminar. Each participating university can offer a limited number of grants, covering costs for travel and overnight stay. Thus, the call for participation is competitive. The selection process must follow specific criteria, clearly communicated to the participants during their registration for the online course:

- The students' performance in the online part of the course
- Their skills in English as a working language
- Their personal motivation, including interest and experiences, creative and innovative potential, international–intercultural interaction skills, etc.

Applications must include a brief letter of motivation (max. 1 page), a curriculum vitae and certification of language skills, if available.

Different from the online seminar, the ISP workshops should not be purely academic events. It is very important to invite and integrate stakeholders, local experts and all interested

Fig 8.1 On-site experience during the ISP Mangalia, September 2018

Fig 8.2 On-site experience during the CO-LAND ISP, Pozzuoli 2019
Photo: Ellen Fetzer

Fig 8.3 On-site experience during the CO-LAND ISP, Pozzuoli 2019
Photo: Ingrid Schegk

groups of local people, at least for the presentation and dissemination events. Consequently, the ISP participant profile is composed of the following:

- Students (with travel grants) having the requested academic background, i.e., normally a completed bachelor degree in a spatial or landscape-related discipline such as urban planning, urban design, landscape architecture, architecture, regional development, geography, etc.
- University staff (with travel grants) having a similar background
- Experts (with travel grants) representing the NGO partners of the consortium
- Local stakeholders, representing the municipality or important local 'players'
- Local experts, involved in close cooperation with the municipality
- Invited experts and speakers for specific topics such as the coastal economy, green infrastructure, participatory design, tourism, history and heritage, etc.

The last three groups are mainly part-time participants as speakers, local guides or audience members during the presentations.

8.2 Preparing the workshop

The overall and common goal for all CO-LAND Intensive Study Programmes is to develop a strategy and a spatial vision for the sustainable and resilient redevelopment, protection and enhancement of the coastline by using green and blue infrastructure (GBI) as a guiding principle.

Against this background, the workshop preparation includes the following steps:

- Identifying **appropriate workshop landscapes** with typical problems and conflicts to solve and potentials to apply the GBI approach for the benefit of the local economy and quality of life
- Contacting local **stakeholders, experts and local interested parties***
- Identifying concrete **focus areas and focus themes** and topics together with stakeholders and other locals (see list below)*
- Checking the opportunities for **accommodation and working space**, e.g. at the host university, municipality or accommodation*
- Drafting a **schedule** and a **programme**
- Elaborating a **detailed manual** of the ISP, including background information about the coastal landscape, organisational details, programme, participants list, working groups, etc.

*For these activities a site-visit together with the teaching team and including a meeting with the municipalities and/or local stakeholders is recommended.

A possible **workshop programme** might look like this:

Day 1: Travel to the site

Day 2: Welcome at the host university, lectures on the project area: its economic, social, natural and cultural context; afternoon: joint travel to focus areas

Day 3: Thematic-interdisciplinary teams conduct landscape assessment (each study is prepared in advance by desk research during the online seminar)

Fig 8.4 Preparing the site visit : DePanne site visit by CO-LAND team, 2019. Photo: Gabriel Pascariu

Day 4: Landscape assessment results are discussed among the team and with local stakeholders, and then synthesised

Day 5: Teams design a first alternative future vision, and develop a consultation session with staff members and local experts

Day 6: Groups conduct a 'field test', they discuss their visions with local people and specify their design ideas

Day 7: Groups design concrete measures and processes, visualisations

Day 8: Groups prepare project presentations

Day 9: Presentation of project results to local stakeholders, discussion/ public panel; closure event

Day 10: Return travel home

8.3 Implementing the activities

For the on-site workshop, it is recommended to organise working groups according to the model explained in Chapter 7.3. It is important to have local students who are fluent in the local language (able to speak, read and translate) as members of every team.

To achieve the best results for the hosting municipalities and communities, and to ensure the highest motivation level of students stakeholders a successful principle is:

- every group works on a different spatial focus area; and
- every group works on a different thematic focus.

This helps to avoid too much competition between the teams and redundancies during the presentations and discussions with the local stakeholders. In typical academic study projects and design studios, students usually work competitively on the same study area to get the best results. But in these ISP workshops, the students

Fig 8.5 Spatial focus areas : CO-LAND Intensive Study Programme, Mangalia 2018. Photo: Gabriel Pascariu

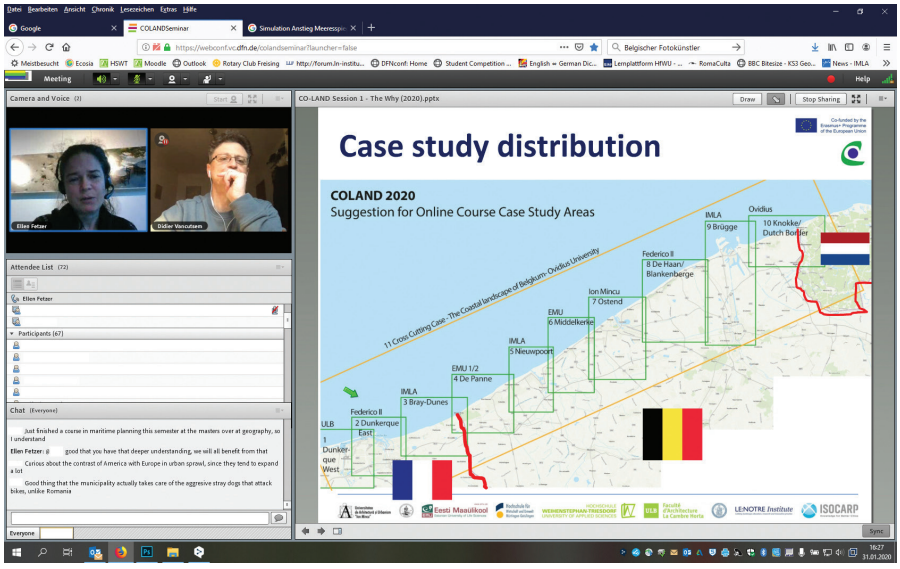


Fig 8.6 Case study focus areas distributed among working groups: CO-LAND 2020, France-Belgium-Netherlands coastal zone (screenshot)

and their tutors know each other, are more or less familiar with the planning context and there are no language barriers.

Table 8.1 shows the main themes of the four CO-LAND ISP workshops that have taken place. Depending on the particular spatial focus areas, additional concrete topics and sub-themes are reasonable, such as natural characteristics (dunes, volcanism, local habitats etc.), post-industrial landscapes or seascapes (brownfields, drosscapes, etc.) or tourism infrastructure (marinas, camping areas, holiday homes, beach bars and clubs etc.).

Against this background, the following activities are conducted in close cooperation with local stakeholders and the hosting municipalities:

- Identify local potentials by applying a holistic landscape assessment framework
- Use the green and blue infrastructure approach to improve the connectivity and multi-functionality of fragmented and competing spatial layers and structures
- Use people-centered and community-based planning and design methods
- Apply scenario techniques for envisioning alternative futures and discuss their ideas with the local community
- Use innovative communication and visualisation tools to support the community in envisioning alternative futures while ensuring a presentation and discussion in the local language
- Document the projects and hand the results over to the community (service-learning); for every CO-LAND workshop, a report documenting the workshop is made available

Table 8.1: The main themes of the CO-LAND ISPs

Mangalia 2018	Tallinn 2019	Pozzuoli 2019	De Panne 2020 (hybrid workshop)
Green and Blue Infrastructure	Green and Blue Infrastructure	Green and Blue Infrastructure	Green and Blue Infrastructure
Ecosystem Services	Ecosystem Services	Ecosystem Services	Ecosystem Services
Sustainable Mobility	Sustainable Transport	Sustainable Transport	Sustainable Transport
Heritage and Identities	Soviet Heritage	Archaeological Heritage and Identities	Heritage and Identities
Living on the Coast: Housing, working, community life and identities	Sustainable Urban Development	Sustainable Urban Development	Sustainable Urban Development
Productive Landscapes, Circular Economy and Landscape Protection	Accessibility	Urban Sprawl	Urban Sprawl
Nature-based Rural Tourism	Community-based Planning	Community-based Planning	Community-based Planning
	Transboundary Strategies	Resilience	Resilience
			Coastal Landscape Design

8.4 Outputs, results and grading

Based on the respective spatial and content-related focus, the outcome of the Intensive Study Programme workshop is a conceptual planning proposal. This proposal includes the planning strategy and goals titled with a proper phrase or catchy slogan, the spatial vision exemplified in a master plan, clearly visualised design ideas and a process/governance model and timeline for implementation. All projects are documented and published in a report. For the four ISP workshops that have taken place see the CO-LAND wiki: https://colandwiki.hfwu.de/index.php?title=Main_Page, under the respective ISP page.

The students' assignment output is the submission and the oral presentation of the proposal. The first presentation is in English for the audience of tutors with contributions of all group members and the second is for a public audience in the local language as presented by a local student member of the team. The proposal is evaluated and graded according to the following criteria (see the evaluation form in the appendix):

- **Response to specific challenges of coastal landscapes:** Including coastal landscape systems and processes, and the economic, ecological and social dimensions linking to UN SDGs & coastal policies
- **Spatial concept:** Quality of the translation of the scenario into a spatial concept;
- **Methodical coherence:** Consistency of structure and argumentation, logic, identifiable methods, innovative approach
- **Feasibility** (Is it realistic to implement the proposal?)
- **Sustainability** (in the economic, ecologic and social dimension)
- **Communication** (Presentation, Time Management, Visual Quality, Speech)
- **Level of completion of the task**

Fig 8.7 Public presentation : Final presentation at the CO-LAND intensive study programme, Mangalia, in the presence of local community members and stakeholders. **Photo: Gabriel Pascariu**

Table 8.2: Evaluation scale for the 'Spatial concept' and 'Communication' criteria

Criteria	Insufficient	Sufficient	Satisfactory	Good	Very good
Spatial concept Quality of the translation of the scenario into a strategy spatial concept / masterplan & design	Does not attempt or is unable to complete design solutions. Unsuccessful design solution due to lack of creative use of concept, limited exploration of technique and/or application of principles. Little effort to challenge creative boundaries resulting in obvious or poorly developed solutions.	Is able to complete design solutions that address the main challenges. Adequate design solution with moderately creative use of concept and scenario. Basic exploration of technique and/or application of principles. Little effort to challenge creative boundaries resulting in an obvious and not really integrative solution.	Fundamentally sound design solution with moderately creative use of concept, fundamentally appropriate technique and adequate application of principles. Solution is a logical consequence of the scenario and shows some effort to challenge creative boundaries with limited or uneven success.	Interesting design solution showing consistently creative development of the concept, scenario technique and original application of principles. Solution is well based on the scenario and shows ongoing creative inquiry and exploration of design potential with largely effective results.	Compelling design solution showing highly original creative development of the concept and the scenario, innovative application of techniques and exemplary use of principles. Solution shows rigorous creative inquiry and investigation throughout the design process with highly successful results.
Communication Presentation Time management Visual Quality Speech	Does not attempt, or is unable to complete design solutions. Significant problems with presentation materials and/or techniques resulting in unsuccessful level of design communication. Major errors, omissions, consistency or quality problems in drawings, process diagrams and models. Not keeping to the time schedule. Poor verbal communication inhibiting discussion beyond rudimentary level.	Showing some flaws in completing the design solutions. Some problems with presentation materials and/or techniques resulting in not fully adequate level of design communication. Some omissions, inconsistency or quality problems in drawings, process diagrams and models. Timing is not well organised but not seriously affecting the clarity and completeness of the presentation. Verbal communication providing enough clarification, enabling a basic discussion.	Basic competence in presentation materials and techniques resulting in an acceptable level of design communication with general completeness. Presentation materials showing basic elements of design organised and comprehensible. Minor errors in drawing, process diagrams or models. Adequate time management, well balancing the parts of the presentation. Verbal communication is understandable resulting in basic discussion on design solutions.	Advanced achievement in presentation materials resulting in successful design communication with systematic consistency. Presentation materials comprehensive, detailed and well organised with minimal minor errors and requiring no further explanation. Verbal communication well planned and executed with good time management and effectiveness resulting in further discussion of design solutions.	Exemplary presentation in materials and verbal presentation resulting in highly effective design communication of clarity, detail and precision. Presentation materials at portfolio quality suitable for transfer. No errors or omissions. Verbal communication is highly effective, with excellent time management allocating time to priority subjects, resulting in advanced discussion of design solutions.

Table 8.2 exemplifies the assessment scale for the 'Spatial concept' and 'Communication' criteria (see the full rubric evaluation sheet in the appendix and the CO-LAND toolbox: https://colandwiki.hfwu.de/index.php?title=Output_2_-_Toolbox).

Fig 8.8 CO-LAND ISP, Mangalia, 2018: Interactive discussions within working groups **Photo: Ellen Fetzer**

Fig 8.9 CO-LAND ISP, Pozzuoli, 2019: Interactive discussions within working groups **Photo: Ellen Fetzer**

9 MONITORING AND EVALUATION

Monitoring and evaluation are integral parts of each project that can be methodologically classified under the category of action research. The following section summarises the experiences with monitoring and evaluation in the CO-LAND project.

9.1 Definitions and implementation

Monitoring can be generally defined as the continual observation of a system and its development according to certain criteria.

Evaluation is the structured interpretation of results according to the original objectives, respectively, the measurement of the degree of achievement of these objectives.

In the terminology of quality management, monitoring is the determination of the status of an object (e.g., a system, a process, a product, a service or an activity), carried out at different stages or at different times. For the determination of the status, there can be a need to check, supervise or critically observe. In this sense, evaluation means the assessment made on achievement of the project objectives (ISO 9000, 2015). Section 9.2 of this chapter gives an overview of the CO-LAND quality objectives and appropriate indicators.

The first CO-LAND blended learning activities started as early as possible, only a few months after the project began. Therefore, it was possible to observe processes and effects in action, to evaluate them based on first-hand experience and then take the necessary measures for improvement still within the timeframe of the project. The project has included four cycles of teaching and learning events. The second cycle was in some ways a double cycle including two Intensive Study Programmes (ISP) related to one online seminar. All activities were intensively evaluated and monitored.

One of the principal topics for transnational project meetings has been reflecting on the information gathered through the ongoing monitoring and evaluation surveys. When necessary, concrete steps were agreed upon to improve the activities. Initiating this reflection process has been a principal task of the project coordinator, as well as the control of the improvement steps the team aims to undertake.

After three evaluation-reflection-improvement cycles an evidence-based and stable pedagogical model was established grounded in the profound knowledge and skills of the teaching team.

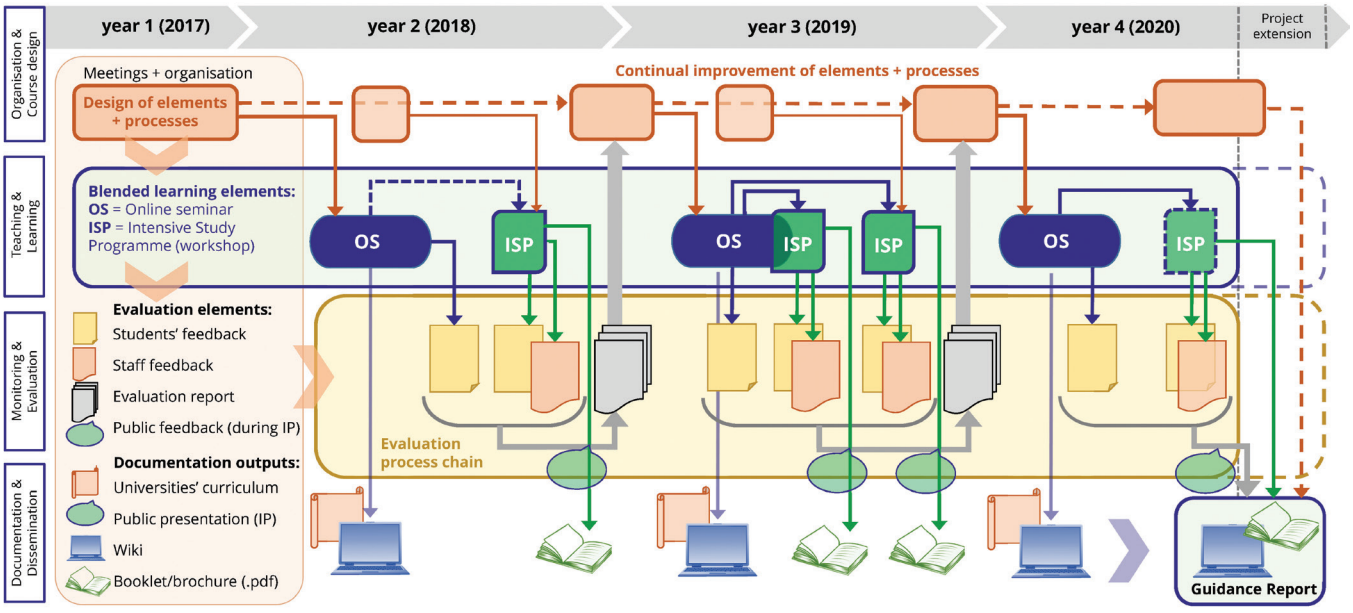


Fig 9.1 The detailed CO-LAND evaluation process map

9.2 Quality objectives and indicators

The benchmark for every evaluation is the degree of the achievement of the quality objectives. In this context, it is not compulsory that the quality objectives be the same as the learning objectives (see Chapter 6.1).

The following table shows the CO-LAND quality objectives, the used qualitative and quantitative indicators to evaluate the degree of their achievement as well as the appropriate assessment methods and tools.

Table 9.1: The CO-LAND quality objectives, indicators and assessment tools

Quality objectives	Qualitative indicators	Assessment methods and tools	Quantitative indicators
Blended learning elements			
Produce web-based teaching materials on integrated planning and design for coastal landscapes and the urban-land interface:	**Extent to which students gained knowledge, abilities and awareness**	Regular student surveys and continuous dialogue with the users	Number of page views (tracked automatically)
history, theory, core terminology, methods, tools, professional and research practice exemplified by European case studies			**Number of active course participants**
Overall integrative approach (chap. 2.1)	**Extent to which students find working conditions convenient** and materials well useable, informative and helpful for preparing them for the course assignments		**Frequency of lectures, use of recordings**
	Quality and **intensity of students' engagement during the course** and quality of their outputs	Assessment/marks by the teaching staff/evaluators of the students' work	Number of successfully completed online assignments, embedded in the digital learning units and completed on self-study basis
Enhance interdisciplinary cooperation for developing innovative, creative and sustainable ideas for coastal landscapes	**Extent to which participants are able to work in an interdisciplinary team** (i.e. integrated another discipline's knowledge and/or expertise in the problem-solving process)	Continuous online surveys	**Number of different disciplines participating in the blended learning activities**
Interdisciplinary dimension (chap. 2.2)	Extent to which the participants' work result show an interdisciplinary approach to problem-solving	Assessment by the teaching staff involved but also so some extent by external evaluators	
Enhance students' ability to work in international virtual teams	**Extent to which students were working successfully in this mode, extent of problem-solving, collaborative knowledge building and intercultural communication**	Online surveys covering different aspects of the virtual team work (problems, communication, time management, etc.)	**International mix of the students**
International dimension (chap. 2.3)			Number of virtual teams that have been formed as part of the blended learning activities
	Quality of the virtual teams' outputs	Assessment by the teaching staff involved (marks) and by the external evaluator	
Enable teaching staff to conduct a blended learning activity both technically and methodically	Extent to which staff felt capable of conducting the blended learning scenario	Assessment with surveys to participants and staff and bilateral interviews with staff members	Number of teaching staff attending the teacher-training embedded in the blended learning activities
Didactic and in particular digital dimension (chap. 2.5)	**Extent to which participants perceived the teaching quality (online and during the IPs)**		
Curricular integration of integrated planning and design for the urban-land interface/coastal landscapes at all partner universities	Integration intensity, e.g. whether the course is regarded as optional or compulsory	Curriculum analysis	**Number of curricula in which the module (OS, IP) can be integrated (of academic recognition)**
Academic dimension (chap. 2.6)			Number of achievable ECTS
For exemplary results for **these indicators (marked in blue)**, see chapter 9.4.			
Guidance report			
Develop a guidance report for academics on how to teach integrated planning and design in the context of coastal landscapes and the urban-land interface	Usability and successful application by the target groups, degree of dissemination	Assessment of external evaluators, feedback given before/during/after the multiplier event, where the report is going to be presented and discussed	Number of downloads of the report during the dissemination phase

9.3 Evaluation elements and process

During every single evaluation-reflection-improvement-cycle the quality assessment has been done both internally and externally, i.e., from outside the university sector.

Internal evaluation with qualitative indicators has been primarily based on the following main elements:

- Pre-survey of students before the start of the seminar.
- Detailed kick-off survey of staff before the start of the seminar.
- Interim evaluation of participants' work results by means of a feedback form during/after assignment/ presentation A, B and C.
- Final evaluation of participants' completed assignments by means of a feedback/evaluation and marking (depending on the partners' curricula) after the last presentation online and/or onsite after the IP.
- Detailed online survey of students after online course 1, 2 and 3.
- Detailed online survey of students after the IP.
- Detailed online survey of staff after the IP.

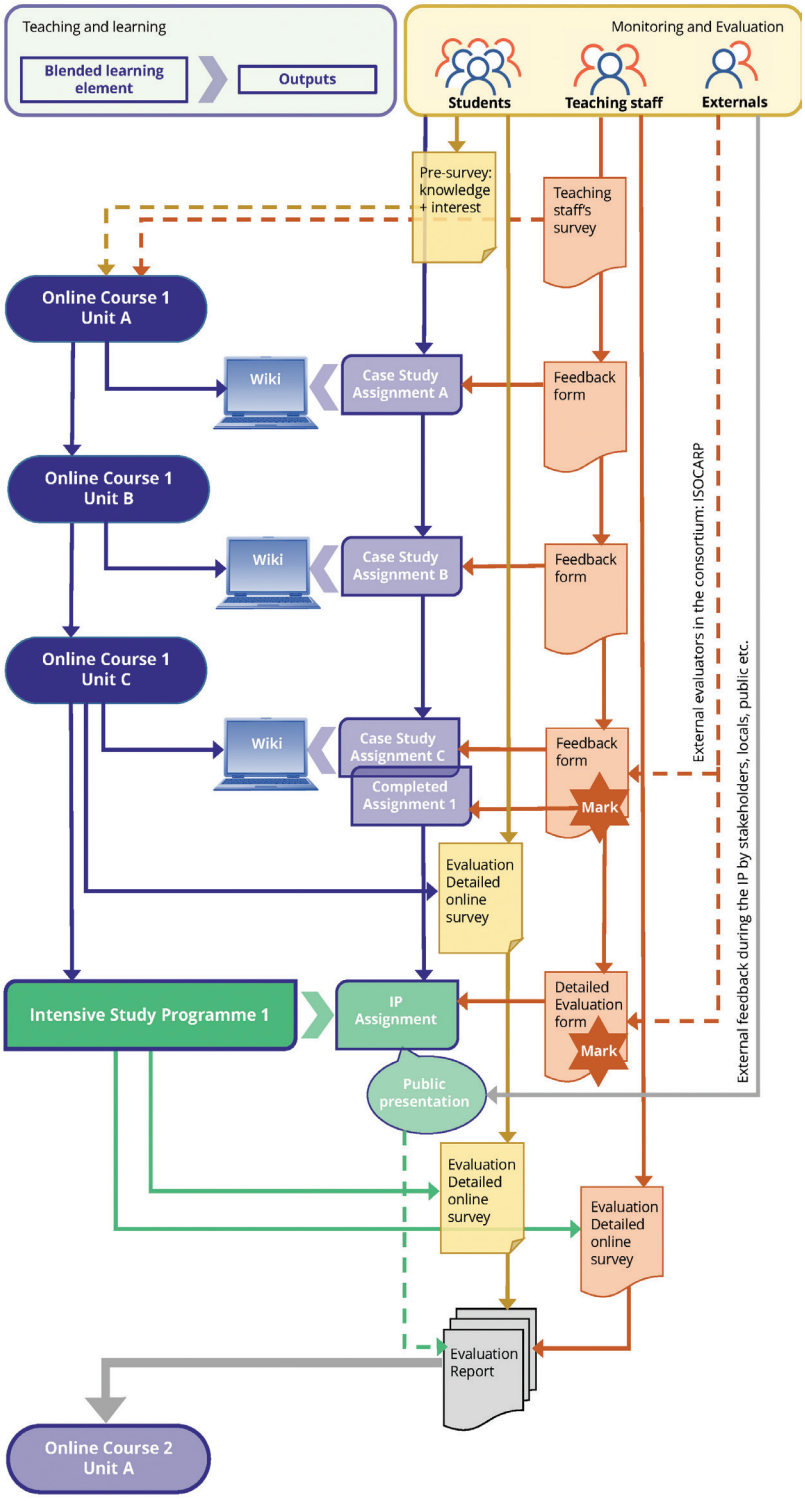


Fig 9.2 The CO-LAND evaluation process

External evaluation has been done continuously by the consortium member ISOCARP. This NGO has experience in the subject area. Its non-university perspective with a strong relationship to practice in the field has been a valuable viewpoint for external project evaluation.

Another form of external evaluation is the feedback from stakeholders, local project participants and the public during the ISPs, especially during and after the final presentations.

9.4 Evaluation results (exemplary)

The following explanations and tables summarise the results of the evaluation of the online seminar and the on-site ISP workshops according to the quality objectives. The basis are the online surveys of the students following the online seminars.

The quantitative indicator for the achievement of the overall objective 'Produce web-based teaching materials on integrated planning and design for coastal landscapes' is the number of active course participants. Table 9.2 shows the number of survey participants. Significant are the high percentage of female participants at more than two-thirds of the total and the very high ratio of active participation.

Table 9.2: Number of active course participants

Survey topic, survey question	2018	2019	2020	Trend
Basic data: number and gender of survey participants				
Number of records in the query, n =	61	59	61	o
Female	70,49 %	77,97 %	70,49 %	o
Male	24,50 %	20,34 %	29,51 %	o
no answer or not displayed	4,92 %	1,69 %	0,00 %	-
Activity: What was your participation mode in this seminar?				
active participation	91,80 %	96,61 %	100,00 %	+
passive participation	8,20 %	3,39 %	0,00 %	-
no answer or not displayed	0,00 %	0,00 %	0,00 %	o

A crucial qualitative indicator for the achievement of this goal is the extent to which students gained knowledge, abilities and awareness. Table 9.3, figure 9.3 and figure 9.4 summarise the improvements and the significant improvements for four exemplary competences. In all four cases the seminar 2020 achieves the highest improvement rates.

Table 9.3: Improvement of knowledge, abilities and awareness

Survey topic, survey question	2018	2019	2020	Trend
My knowledge about the specific character of coastal landscapes and their relevance for society, economy and the environment...				
...has remained the same	8,20 %	8,47 %	0,00 %	+/-
...has improved	57,38 %	72,88 %	65,57 %	+/-
...has improved significantly	34,43 %	18,64 %	34,43 %	-/+
Improvement	91,81 %	91,52 %	100,00 %	-/+
My ability to make well-argued plans and designs for coastal landscapes that build upon social and environmental capital...				
...has remained the same	13,11 %	28,81 %	6,56 %	+/-
...has improved	72,13 %	55,93 %	77,05 %	-/+
...has improved significantly	14,75 %	15,25 %	16,39 %	+
Improvement	86,88 %	71,18 %	93,44 %	-/+
My ability to make use of the internet and digital tools for learning and group collaboration...				
...has remained the same	14,75 %	20,34 %	11,48 %	+/-
...has improved	65,57 %	55,93 %	50,82 %	-
...has improved significantly	19,67 %	23,73 %	37,70 %	+
Improvement	85,25 %	79,66 %	88,52 %	-/+
My awareness of the sensitive nature of coastal landscapes...				
...has remained the same	6,56 %	10,17 %	4,92 %	+/-
...has improved	59,02 %	59,32 %	62,30 %	+
...has improved significantly	34,43 %	30,51 %	32,79 %	-/+
Improvement	93,45 %	89,83 %	95,09 %	-/+

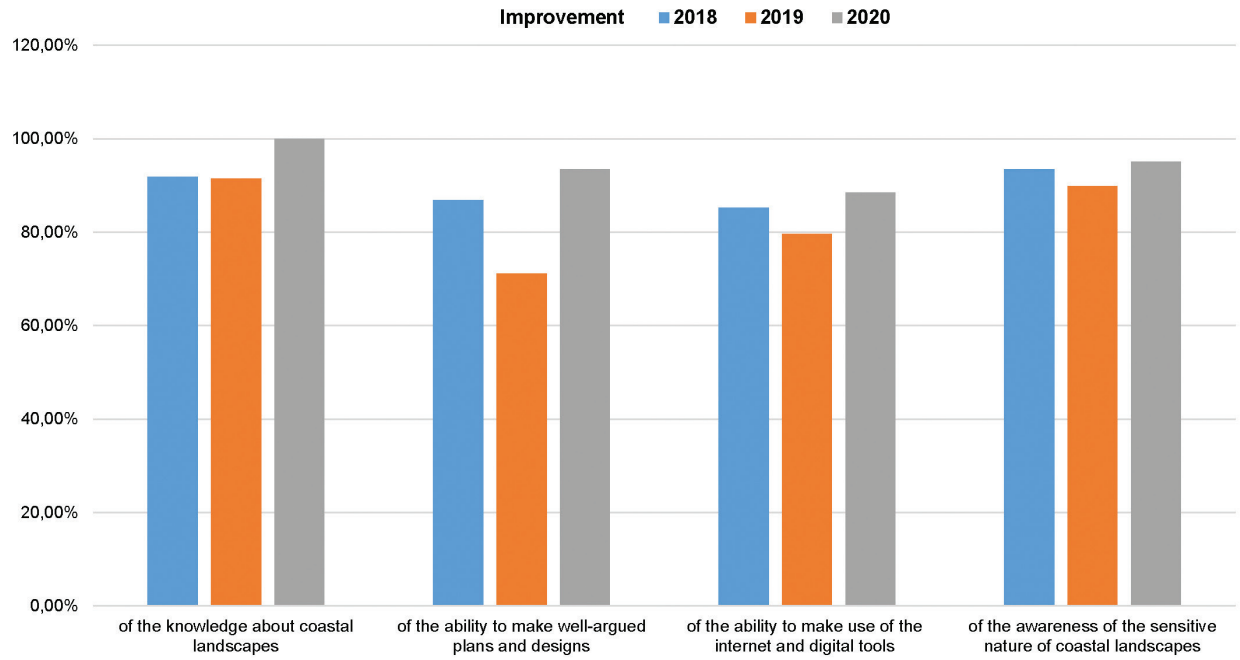


Fig 9.3 Improvement of knowledge, abilities and awareness

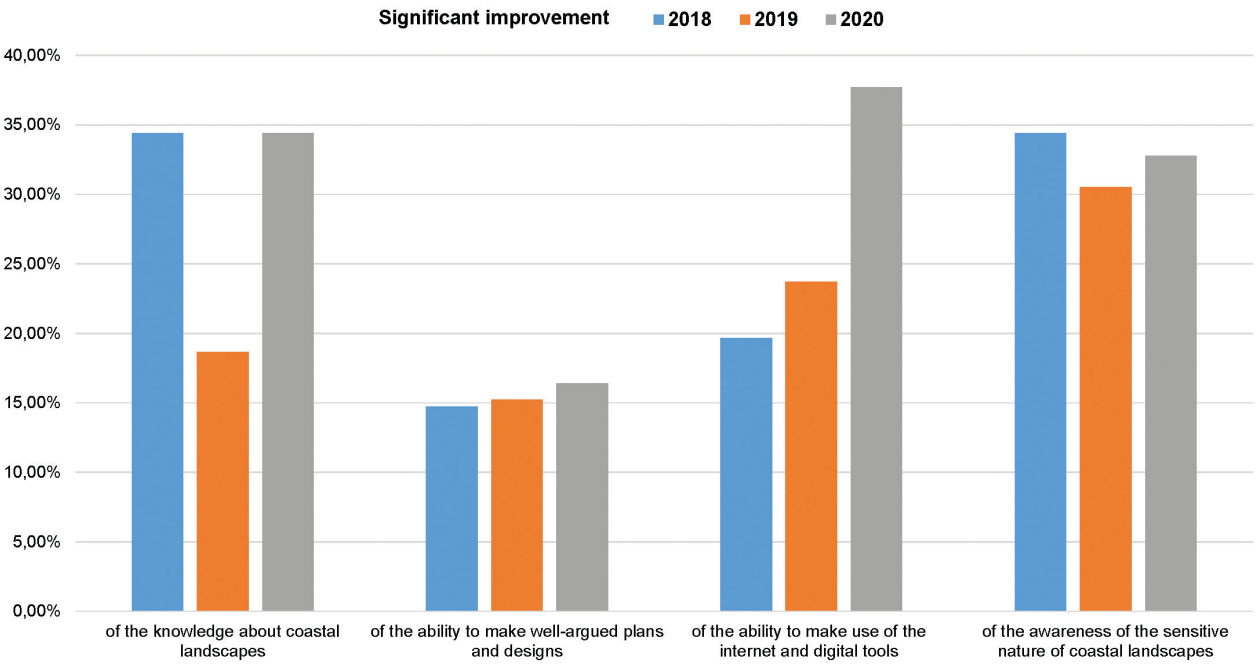


Fig 9.4 Significant improvement of knowledge, abilities and awareness

Another qualitative indicator is the **'Extent to which students find working conditions convenient'** and the extent to which materials were usable, informative and helpful for preparing them for the course assignments. The evaluation of the working conditions is summarised in Table 9.4. It is an interesting result that the online seminar 2020 received the highest score for all questions. The quality of the materials was assessed on the basis of an evaluation of the reading lists. The students' feedback on this was manifold.

A further qualitative indicator appraises the '**intensity of students' engagement during the online course'** which can be quantified by the **frequency of lectures** and the **use of the lecture recordings.**

About half of the students attended 9 to 12 lectures, with nearly 60% attendance (see Table 9.5) in 2019. Most students listened to the recordings 1 to 3 times with a significant increase from 2018 to 2020.

Table 9.4: Evaluation of the working conditions

Survey topic, survey question	2018	2019	2020	Trend
Please rank on this scale from 1 - 6 how much you agree with the following sentences (1 = total disagreement, 6 = total agreement); numbers show the average				
A virtual seminar can be as interactive as a face-to-face seminar.	3,54	3,17	3,95	-/+
I like to learn by collaborating in a group	4,41	4,39	5,08	o/+
I feel confident collaborating in a virtual environment.	3,56	4,24	4,34	+
I feel confident when expressing myself in English.	4,23	4,54	4,85	+

Table 9.5: Frequency of the online course and use of the lecture recordings

Survey topic, survey question	2018	2019	2020	Trend
How often could you attend the live sessions in Adobe Connect?				
1 - 3 times	13,11 %	8,47 %	14,75 %	-/+
4 - 8 times	40,98 %	33,90 %	36,07 %	-/+
9 - 12 times	44,26 %	57,63 %	49,18 %	+/-
never	1,64 %	0,00 %	0,0 %	-
How often did you listen to the recordings of the live sessions in order to catch-up or repeat the contents?				
1 - 3 times	57,38 %	62,71 %	80,33 %	+
4 - 8 times	21,31 %	16,95 %	11,48 %	-
9 - 12 times	6,56 %	0,00 %	0,00 %	-
never	14,75 %	20,34 %	8,20 %	+/-

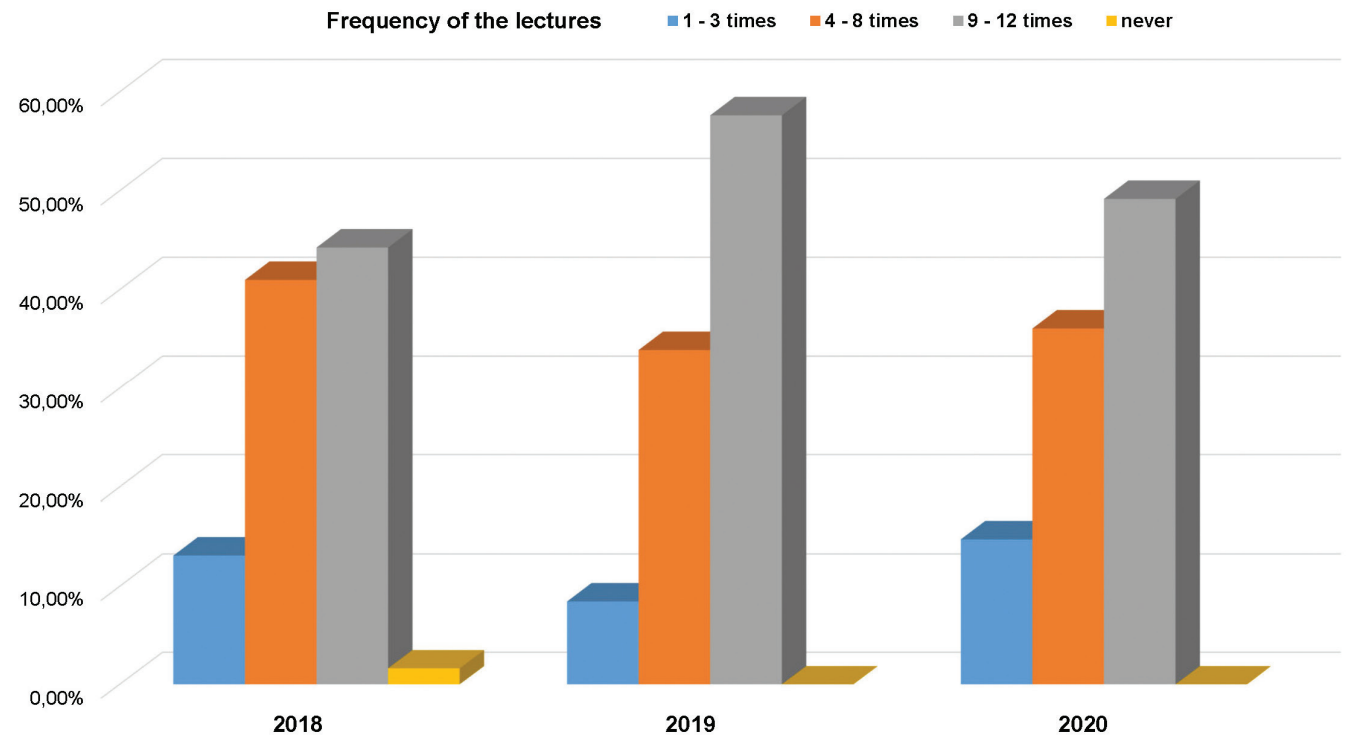


Fig 9.5 Frequency of the online lectures

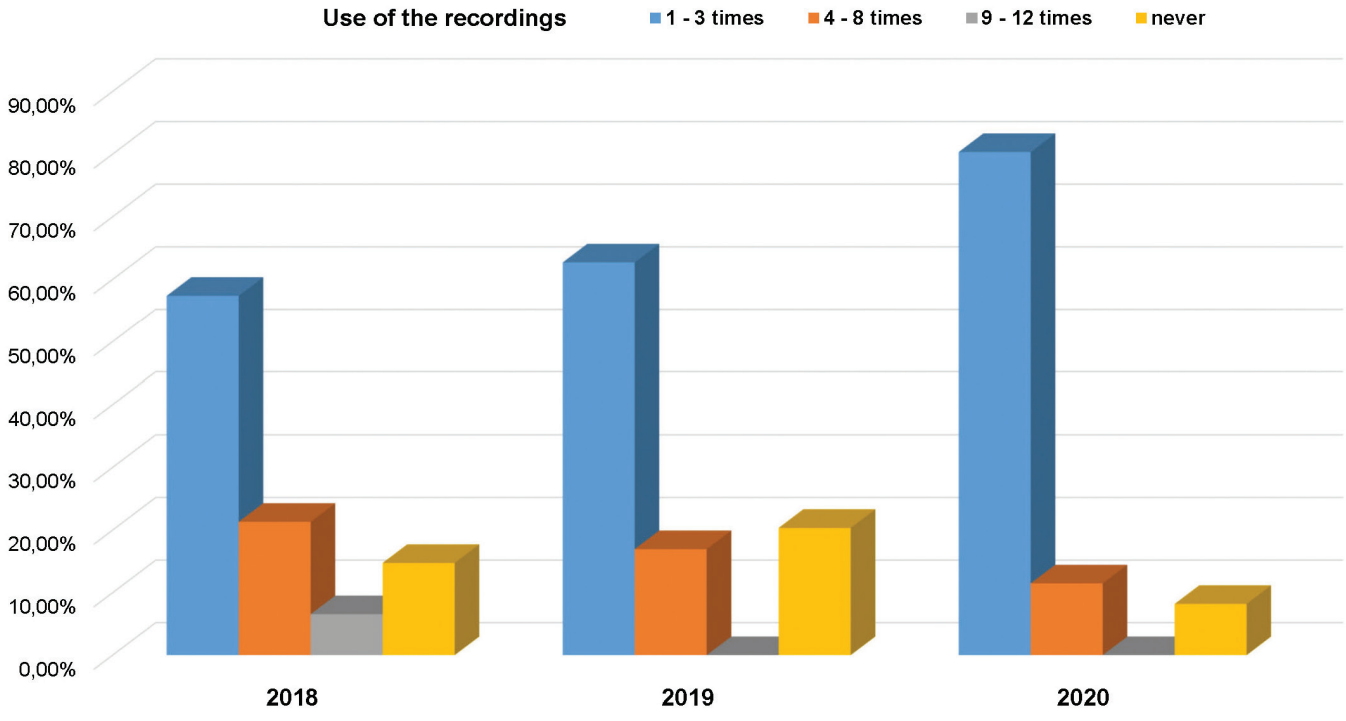


Fig 9.6 Use of the lecture recordings

For the qualitative objective **'Enhance interdisciplinary cooperation'** the main quantitative indicator is **the number of different disciplines participating in the blended learning activities**. Despite the rather limited number of different disciplines, a certain mix was always guaranteed (see table 9.6). Some participants indicated more than one discipline.

One of the qualitative indicators, the **'Extent to which participants are able to work in an interdisciplinary team'**, shows overall improvement, but has decreased by more than 10% from 2018 to 2020. However, significant improvement has increased by about 10 %

Table 9.6: Different disciplines participating in the online seminar

Survey topic, survey question	2018	2019	2020	Trend
Number of different disciplines or disciplinary backgrounds	7	9	9	+/o
Counts (from participants) in total	66 (61)	67 (59)	67 (61)	
Landscape architecture	**26**	**28**	**33**	+
Urban planning/urban design	**13**	**13**	**12**	o
Architecture	**19**	**17**	**11**	-
Geography	**5**	**4**	**6**	-/+
Others, such as...	**3**	**5**	**5**	+/o
Engineering (sustainable development, coastal, civil)	2		1	
Real Estate Planning, Business Administration	1		1	
Biology, Conservation Biodiversity		1	1	
Ecology, environmental protection		3		
Tourism		1		
Painting and restoration			1	
Veterinary public health (as a 2nd discipline)			1	

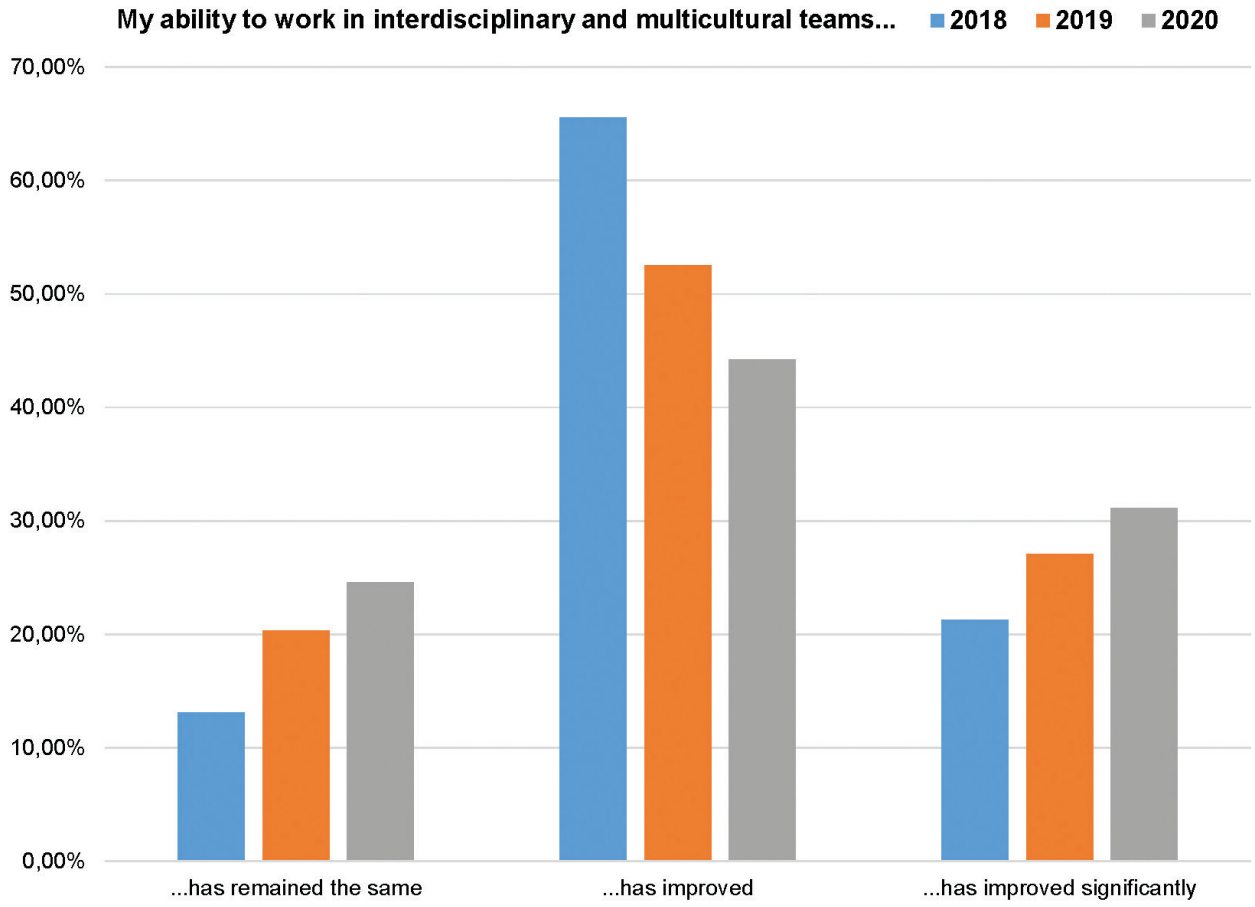


Fig 9.7: Improvement of the ability to work in interdisciplinary teams

Table 9.7: Improvement of the ability to work in interdisciplinary teams

Survey topic, survey question	2018	2019	2020	Trend
My ability to work in interdisciplinary and multicultural teams...				
...has remained the same	13,11 %	20,34 %	24,59 %	+
...has improved	65,57 %	52,54 %	44,26 %	-
...has improved significantly	21,31 %	27,12 %	31,15 %	+
Improvement	86,88 %	79,66 %	75,41 %	-

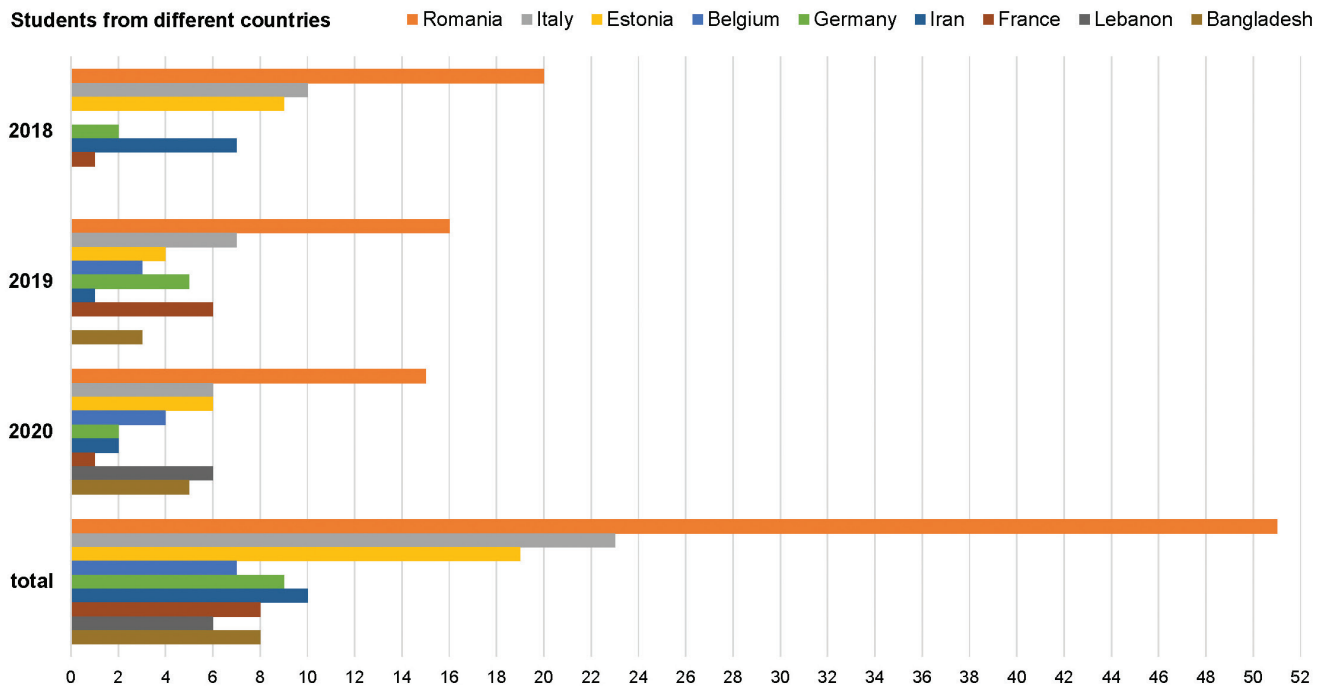


Fig 9.8: International mix of students

Table 9.8: International mix of students

Survey topic, survey question	2018	2019	2020	Trend
What is your country of origin?				
Number of different countries	15	19	20	+
Number of students from partner countries (and others with more than 5 students in one year)				
Romania	20	16	15	-
Italy	10	7	6	-
Estonia	9	4	6	-/+
Belgium	0	3	4	+
Germany	2	5	2	+/-
Iran	7	1	2	
France	1	6	1	
Lebanon	0	0	6	
Bangladesh	0	3	5	

In addition to interdisciplinarity, the internationality of the virtual teams was an essential quality objective, or rather, to **'Enhance the students' ability to work in international virtual teams'**. A quantitative indicator for this is the '**International mix of students'**, which increased slightly during the three project years (see table 9.8).

The already low or decreasing number of students from the partner countries is surprising. However, this can be explained by the fact that the proportion of international students of different nationalities in the participating Master's programmes is high, e.g., at EMU (Estonia) or HfWU and HSWT (Germany).

More important than the quantitative approach are the qualitative indicators, in particular the **'Extent to which students were working successfully in this mode'**.

This means for example the **'extent of problem solving, collaborative knowledge building and intercultural communication'**. In the 2020 survey, over 85% of students said they had had no problems or had solved them completely in the team (see Table 9.9).

Table 9.9: Successful teamwork with regard to problem-solving competence

Survey topic, survey question	2018	2019	2020	Trend
Did you collaborate in a team?				
Yes	83,61 %	100,00 %	100,00 %	+
No	16,39 %	0,00 %	0,00 %	-
No answer/not displayed	0,00 %	0,00 %	0,00 %	o
Which answer applies to your experience in the working group?				
We did not have any problems.	11,48 %	6,78 %	31,15 %	-/+
We had some problems but we solved them all.	63,93 %	54,24 %	54,10 %	-/o
We had some problems that we could not solve.	3,28 %	23,73 %	14,75 %	+/-
We had many problems that we could not solve.	0,00 %	11,86 %	0,00 %	+/-
Not displayed	21,31 %	3,39 %	0,00 %	o
Problem avoiding and solving competence	75,41 %	61,02 %	85,25 %	-/+

The learning effects and team-internal communication were also rated better from year to year (see Table 9.10).

Table 9.10: Successful teamwork with regard to collaborative knowledge building and intercultural communication

Survey topic, survey question	2018	2019	2020	Trend
Please rank on this scale from 1 - 6 how much you agree with the following sentences (1 = total disagreement, 6 = total agreement); numbers show the average				
I learned new analytical skills from my group.	3,29	3,46	4,41	+
I learned new communication methods from my group.	3,31	3,40	4,31	+
I gained new knowledge about the culture of my group.	3,19	3,72	4,08	+
We had very different communication skills.	2,02	3,61	2,75	+/-
We had different working styles.	3,25	4,32	3,43	+/-
Some people contributed much less than others.	2,77	4,39	3,13	+/-
I am more confident about working in an intercultural team.	3,80	3,96	4,81	+
It is now easier for me to express myself in English.	4,00	4,07	4,58	+
Working with my team members from different cultures has deepened my understanding of landscape democracy.	3,40	3,45	3,90	+
I think the cultural diversity improved the outcomes of our team.	3,60	3,95	4,68	+

Are there any further reasons causing problems in the group work you would like to mention? Please explain if you wish.

"We felt a little bit abandoned and frustrated because we (4 people) had to do the work of 6 people. And didn't understand why they were allowed to leave so easily the team from the start." (Student 2018)

"A member of the group wasn't active unless the others told him what to do and how to do it." (Student 2018)

"Too many people for a group and some people don't even care though they do participate at the very last moment with something anyway." (Student 2019)

"Lack of understanding/speaking English ... " (Student 2019)

"The commitment of certain people was really little, due to personal character or maybe different evaluation method of their university." (Student 2019)

"I was really annoyed with my group. We were eight members. Unfortunately, we were two members who worked in all presentations (...). Some did not cooperate smoothly (...). Some had no contribution in whole course at all (...)" (Student 2020)

"There was some problem with understanding. But we solved successfully:" (Student 2020)

The best indicator to measure the achievement of the objective **'Enable teaching staff to conduct a blended learning activity both technically and methodically'** is the extent to which participants perceived the teaching quality (online and during the ISPs). Table 9.11 shows the evaluation of some general aspects. Overall, the quality of teaching was assessed as good, with the best marks in the last round. At the same time, however, the desire for interactivity and discussion with the teachers has increased.

Table 9.12 illustrates the evaluation of the teaching quality during the intensive study programmes 2019 and table 9.13 the evaluation of the lectures themselves.

Table 9.11: Teaching quality - general evaluation

Survey topic, survey question	2018	2019	2020	Trend
Please rank on this scale from 1 - 6 how much you agree with the following sentences (1 = total disagreement, 6 = total agreement); numbers show the average				
The lectures were clear to follow.	4,31	4,42	4,90	+
The lecturers engaged well with the audience.	4,15	4,39	4,75	+
I could concentrate during the online course like in a real classroom.	3,82	3,71	4,23	-/+
There was a logical sequence between the individual lectures.	4,34	4,31	4,97	o/+
The seminar sequence and assignments were clearly presented.	4,61	4,54	5,20	-/+
I would have liked to engage more with the lecturers.	3,28	3,75	4,41	+

Table 9.12: Teaching quality – evaluation of the intensive study programmes 2019

Survey topic, survey question	**IP Tallinn 2019**		**IP Pozzuoli 2019**	
How satisfied are you with the academic activities and pedagogic aspects of the IP in terms of the following:				
The capabilities and expertise of the professors? (from 1 = not at all to 5 = very much)				
Answer	counts	%	counts	%
1 not at all	0	0,00 %	0	0,00 %
2	1	7,69 %	0	0,00 %
3	0	0,00 %	6	22,22 %
4	7	53,85 %	13	48,15 %
5 very much	5	38,46 %	8	29,63 %
no answer/not displayed	0	0,00 %	0	0,00 %
The overall teaching quality? (from 1 = not at all to 5 = very much)				
Answer	counts	%	counts	%
1 not at all	0	0,00 %	0	0,00 %
2	0	0,00 %	0	0,00 %
3	1	7,69 %	4	14,81 %
4	11	84,62 %	14	51,85 %
5 very much	1	7,69 %	9	33,33 %
no answer/not displayed	0	0,00 %	0	0,00 %

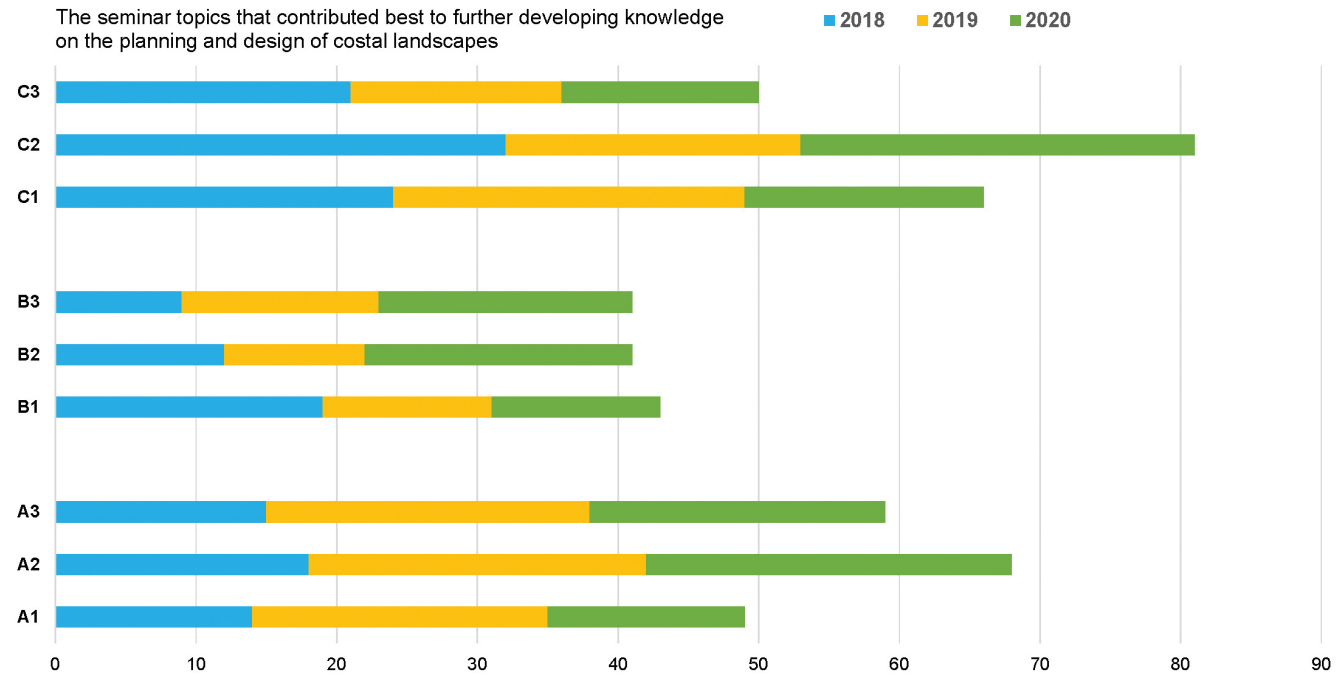


Fig 9.9 Teaching quality – evaluation of the lectures

Table 9.13: Teaching quality - evaluation of the lectures

Survey topic, survey question		**2018**	**2019**	**2020**	**overall**
Which of our seminar topics contributed best to further developing your knowledge on the planning and design of coastal landscapes? You may select three topics that were most relevant to you.					
Lecture title	Code	Counts	Counts	Counts	Sum (rank)
Understanding Coastal Landscapes: Why and what?					
Why Coastal Landscapes Matter	**A1**	14	21	14	49 (6)
Dynamics of Coastal Landscapes	**A2**	18	24	26	68 (2)
Coastal Landscapes as a Cultural Phenomenon	**A3**	15	23	21	59 (4)
Evaluation and Assessment of Coastal Landscapes					
Integrated Landscape Assessment Approaches (1)	**B1**	19	12	12	43 (7)
Integrated Landscape Assessment Approaches (2)	**B2**	12	10	19	41 (8)
Integrated Landscape Assessment Approaches (3)	**B3**	9	14	18	41 (8)
Integrated Planning and Design for Coastal Landscapes					
From Goal Setting to Strategy Building	**C1**	24	25	17	66 (3)
From Strategy to Spatial Vision	**C2**	32	21	28	81 (1)
From Design to Intervention	**C3**	21	15	14	50 (5)
Counts in Total		164	165	169	498

Please also let us know why the topic you selected were important for you.

"I find it important to have several tools in my suitcase for assessing the landscape I am dealing with to be able to pick suitable one. Transect drawing is a very easy, handy and effective tool to understand horizontal and vertical measures of landscape. Acupuncture – small but efficient way to make improvements in society." (Student 2018)

"I received a good overview of possibilities to assess landscape in session B.1. Session C.1 was a very important part to get the knowledge about how to get to the strategy. Unfortunately, this session was hard to follow and the idea was quite a loss for me although I'd like to know it deeper. Maybe I should listen to it again. The C.2 session was very practical and interesting. Introduced techniques were easy to use right in our case study." (Student 2018)

"For the project, the most important and useful topics were about setting up goals and strategy building. These were very important for completing the final phase." (Student 2019)

"I loved the transect technique as a tool for many projects and I think it will be very helpful. The first lectures made it clear for me the difference between coastal landscapes and how often they change. My personal understanding was limited to beaches and recreation – free and accessible to everyone – which is not true." (Student 2019)

"I found these themes deeply interesting because some of them were new topics for me (like the transect strategy). Also, they were well explained." (Student 2020)

"... The topic 'Coastal Landscapes as a Cultural Phenomenon' gave me a deeper view of the landscape and the many symbols it may have for people living there. ..." (Student 2020)

To ensure the future success of innovative courses like the CO-LAND Seminar, **curricular integration and recognition** must be ensured at as many universities as possible.

About four-fifths of the participants received credits for their participation, surprisingly with a slightly decreasing tendency (see Table 9.14) despite an increase in active participation (Table 9.2). The reasons for this may lie in the greater international diversity of students, but are not known exactly. For the ISPs in 2019, the figure was about three quarters. The financial support of the participants certainly plays a role here and justifies the interest in participation even without recognition of credits.

Table 9.14: Academic recognition of the online seminar

Survey topic, survey question	2018	2019	2020	Trend
Will you receive academic credits for attending this seminar? (Such as ECTS credits)				
Yes	88,52 %	83,05 %	78,69 %	-
No	11,48 %	16,95 %	21,31 %	+
No answer/not displayed	0,00 %	0,00 %	0,00 %	

Table 9.15: Academic recognition of the Intensive Study Programme

Survey topic, survey question	IP Tallinn 2019		IP Pozzuoli 2019	
Will you receive full academic recognition (ECTS, study points) at your home institution for taking part in the IP?				
Answer	counts	%	counts	%
Yes	10	76,92 %	20	74,07 %
No	3	23,08 %	7	25,93 %
No answer/not displayed	0	0,00 %	0	0,00 %

Please give us here your three most important recommendations for improving our seminar for the next year.

"Creating more intercultural groups. Let the students introduce their themes as short lessons to make the others understand better the different areas. Giving assignment on a more weekly basis to keep the involvement deeper and deeper." (Student 2018)

"More interaction between students. Shorter lectures." (Student 2018)
My only suggestion will be to mare interactive sessions. Besides, keep up the good work! Amazing experience!" (Student 2018)

"Sometimes the pronunciation of the teachers and the speakers and the students was hard to understand, which would be a pity since their subjects were quite interesting." (Student 2018)

"Making videos for explaining the way of working with WIKI page." (Student 2019)

"Nothing to say! It was nice!" (Student 2019)

"I think that groups should be gathering people from one university only. I also think it is important that students have frequent consultation with teachers to be helped but also to detect group problems (e.g. involvement/commitment). Feedback was also really light and could go deeper, it was also long to obtain it. ..." (Student 2019)

"I think maybe can members interact more with the tutors and presenters. I also find it crucial to add design phase after the masterplan." (Student 2020)

"Smaller working groups (3-4 persons)." (Student 2020)

"I am quite delighted by the Co-Land seminar. It was the first seminar I was participating at. So, I don't have any recommendations." (Student 2020)

"Overall, it was an interesting topic. I really liked the class schedules, time frame and enjoyed lectures." (Student 2020)

Co-Designing the Mangalia Intensive Programme during project kick-off meeting in Bucharest in December 2017

Photo: Ellen Fetzer

10 DISSEMINATION OF THE PROJECT RESULTS

The dissemination and exploitation of the results are integral parts of the Erasmus+ project. Making others aware of the project contributes to raising the profile of the organisations involved in Erasmus+ Programmes, and it enables the wider community to benefit from the EU funded project outputs in terms of implementing education and training. As there are dissemination activities of various types and topics, it is important to consider which kind of dissemination activities are fitted to the main goal of the present educational programme.

10.1 Definitions

Dissemination is an innovative concept beyond the well-established reporting of academic results, traditionally book publications, academic journals and meetings (conferences and workshops). Research dissemination is a planned process of communication and interaction that involves several target audiences. A target audience is a group of people, to whom the messages, results, strategies and methodologies are addressed. Each audience is labelled with specific attributes. Activities and messages must be tailored to the audience features. A dissemination plan provides information on the results, programmes and initiatives to the key actors who, as part of the target audience, have the political responsibility, the financial resources, the authority or the skills and expertise to actively influence local processes of social, urban and landscape transformation.

Although dissemination and exploitation are distinct concepts, they are closely interrelated.

Exploitation is the use of the project results for commercial purposes or in public policymaking. Its main aim is to convince individual end-users to adopt and apply the results of the project and its initiatives, so that the outcomes are used beyond the lifetime of the project.

10.2 Objectives: preliminary actions and dissemination plan

The project needs to define which partner is responsible for the dissemination activity, with the task of designing the plan and reports at different stages. Before starting the plan, there are some preliminary actions, i.e., the design of the project's logo, as agreed with the partners, and the website concept to publish the activities. Together with the logo, the project needs to develop templates, schemes, sheets and other tools useful for the communication of the contents and activities for the entire funding period. Moreover, the project needs visibility on social media (Facebook, Instagram, etc.) to communicate with the audience, especially the youth.

These preliminary activities are assigned to specific partners in the early phase due to their key role in making the project effective. This kind of project is based on webinar and online training, consequently a large part of the internal communication will be carried-out through a digital platform. Before starting the project, the partner responsible for the dissemination and the project coordinator will choose the application for the preliminary online meetings, preferably the same app will be used for the teaching activities. Subsequently, a drafted dissemination plan is essential during the proposal stage to indicate which activities are carried out during the project timeframe and how the various key actors are to communicate. Although one partner is responsible for the project dissemination, the other partners are involved for its implementation. Each partner has a role in the project and a responsibility to disseminate in his/her own country and university. Among such activities, there is information for students, teachers and professionals regarding launching the course, and selecting students to attend the online course and the intensive study programme. Moreover, each partner should organise local meetings for internal and external target audiences, conferences and seminars on the contents and reports at any stage of the project. The dissemination plan includes the contents, phases, motivations, means, channels, evaluation and monitoring of the dissemination activities (see following paragraphs). The dissemination and exploitation of results aim to maximise the effect of developed activities on the immediate participants to the project but, above all, they are intended to provide a methodological framework for those partners that, for years to come, are willing to carry out similar projects in the field of educational innovation, together with partnerships between institutions and international organisations.

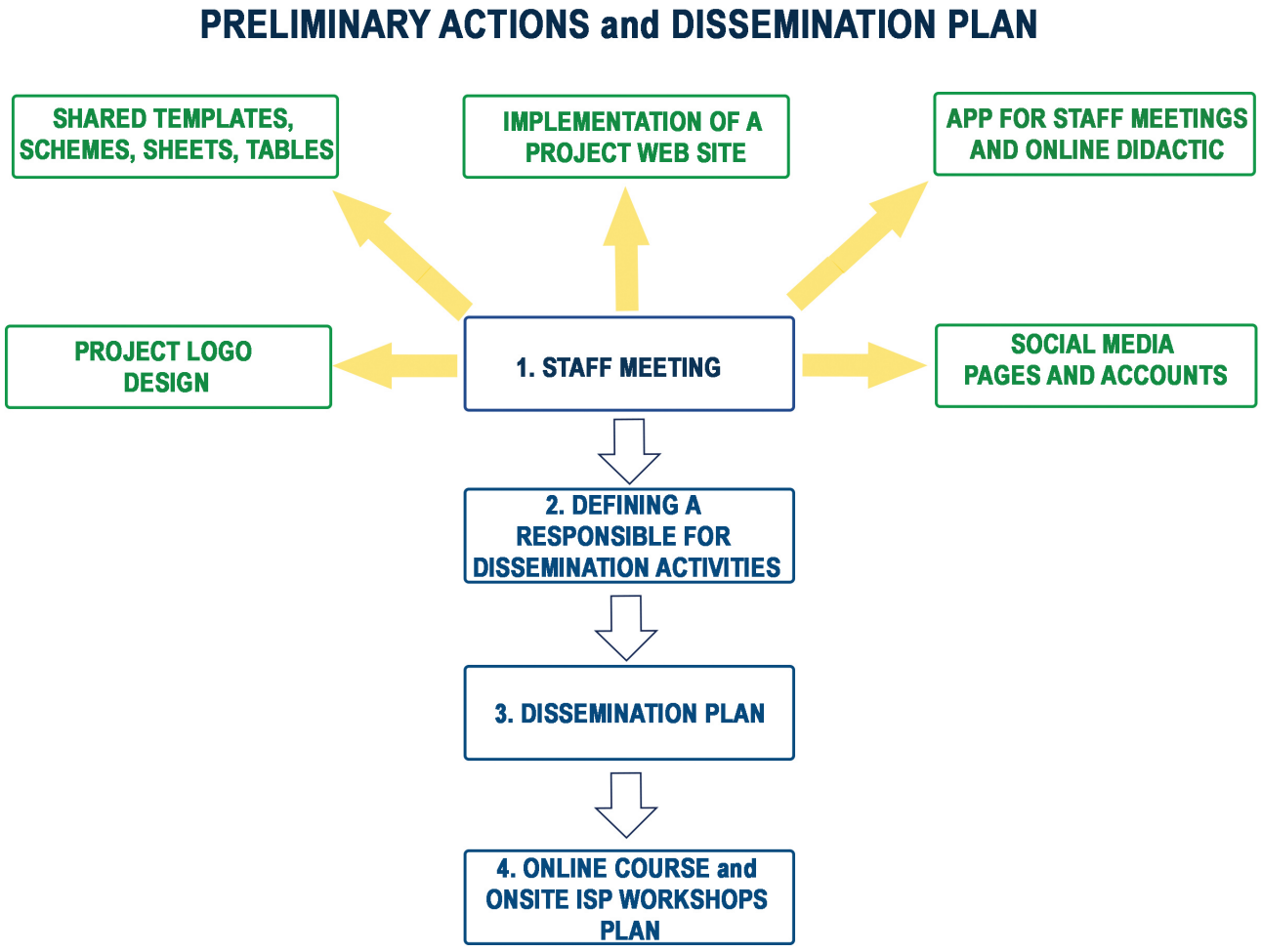


Fig 10.1 Preliminary actions and dissemination plan

10.3 Methodology

10.3.1 Key actors and target audience

In terms of the present Erasmus+ Programme, the target audience groups are both internal and external.

Internal target audiences are:

(1) IN1 – Teaching staff of all faculties to be actively involved in the teaching activities, in consideration of integrated planning and design methods in their teaching

(2) IN2 – Registered students who actively join the activities. Their feedback will be useful for improving the didactic methodology

(3) IN3 – University principals, deans/international coordinators/e-teaching staff/centres for academic instruction – to be informed about the developments at all stages of the project, about the module's methods and structure in order to enhance transfer of good-practise within the institution

External target audiences (outside the organisations) are:

(1) OUT1 – National/international teachers from various domains. Motive: raise awareness for the theme, enhance curricular development, support continuing education in the field of ICT-based instruction/learning

(2) OUT2 – National/international learners from various domains. Motive: encourage their participation in the online parts of the course in order to enhance the development of knowledge and skills

(3) OUT3 – The wider general public. Motive: enhance public discourse on integrated planning and design for coastal landscapes and the urban-land interface, encourage participation in open access learning activities

(4) OUT4 – Local and regional authorities: enhance public discourse on integrated planning and design for coastal landscapes and the urban-land interface as a relevant driving force for environmental protection, social cohesion and sustainable growth

(5) OUT5 – National/international networks as dissemination hubs such as thematic educational networks and European associations. Motive: raise awareness for project activities and its intellectual products. Amongst others, CO-LAND will cooperate closely with the European Landscape Network that brings together various actors for the implementation of the European Landscape Convention: Civilscape (network of NGOs), Uniscape (network of universities), ENELC (public and regional authorities). Other important target networks are: ECLAS (the European Council of Landscape Architecture Schools), AESOP (the Association of European Schools of Planning), IFLA-Europe (the European branch of the International Federation of Landscape Architects) and, of course, the project partner ISOCARP (the International Society of City and Regional Planners), which has a wide outreach

(6) OUT6 – National/international professionals. Motive: updating knowledge, spreading and sharing ideas, and feedback regarding the intellectual outputs

In both these activities, students and staff members are actively involved.

Given the presence of so many partners and students of different cultures, the first phase is the so-called "internal dissemination" to let the partners have a common understanding about the project and to agree on the main strategic activities. The internal dissemination plan should be drafted foreseeing the expected project results, targeting the groups for dedicated activities and tasks, scheduling an efficient calendar, and sharing information about the available resources – both human and financial.

10.3.2 Who, what, how, when

The current Erasmus+ project is composed of two main didactic activities:

1) An online course, hosted on a dedicated web platform

2) The intensive on-site workshops (Intensive Study Programme – ISP)

In both these activities, students and staff members are actively involved.

Given the presence of so many partners and students of different cultures, the first phase is the so-called "internal-dissemination" phase to let the partners develop a common understanding about the project and to agree on the main strategic activities. The internal dissemination plan should be drafted foreseeing the expected project results, targeting the groups for dedicated activities and tasks, scheduling an efficient calendar, and sharing information about the available resources – both human and financial.

DISSEMINATION ACTIONS:

ACTION no.1: Staff meetings

Referring to the internal target audience IN1 – Teaching staff of all faculties to be actively involved in the teaching activities, the planned actions are:

- Staff meetings regarding the study areas of the Intensive workshops (ISPs), to raise awareness for the theme, coordinate didactic activities, the contents of the lessons, the topics of the workshops and the expected results. Such coordination is necessary to

deliver clear communication to the students. Also, it is expected to collect reflections, best practices and other materials for the online course.

- Online staff meetings to coordinate the Erasmus+ planned activities, to monitor their development and to evaluate their advances. These meetings are arranged periodically to provide frequent exchange of information and ideas among the staff.
- Exchange of information and documents on a dedicated web platform, to create a common virtual dwelling space despite the physical distance between the various academic venues.

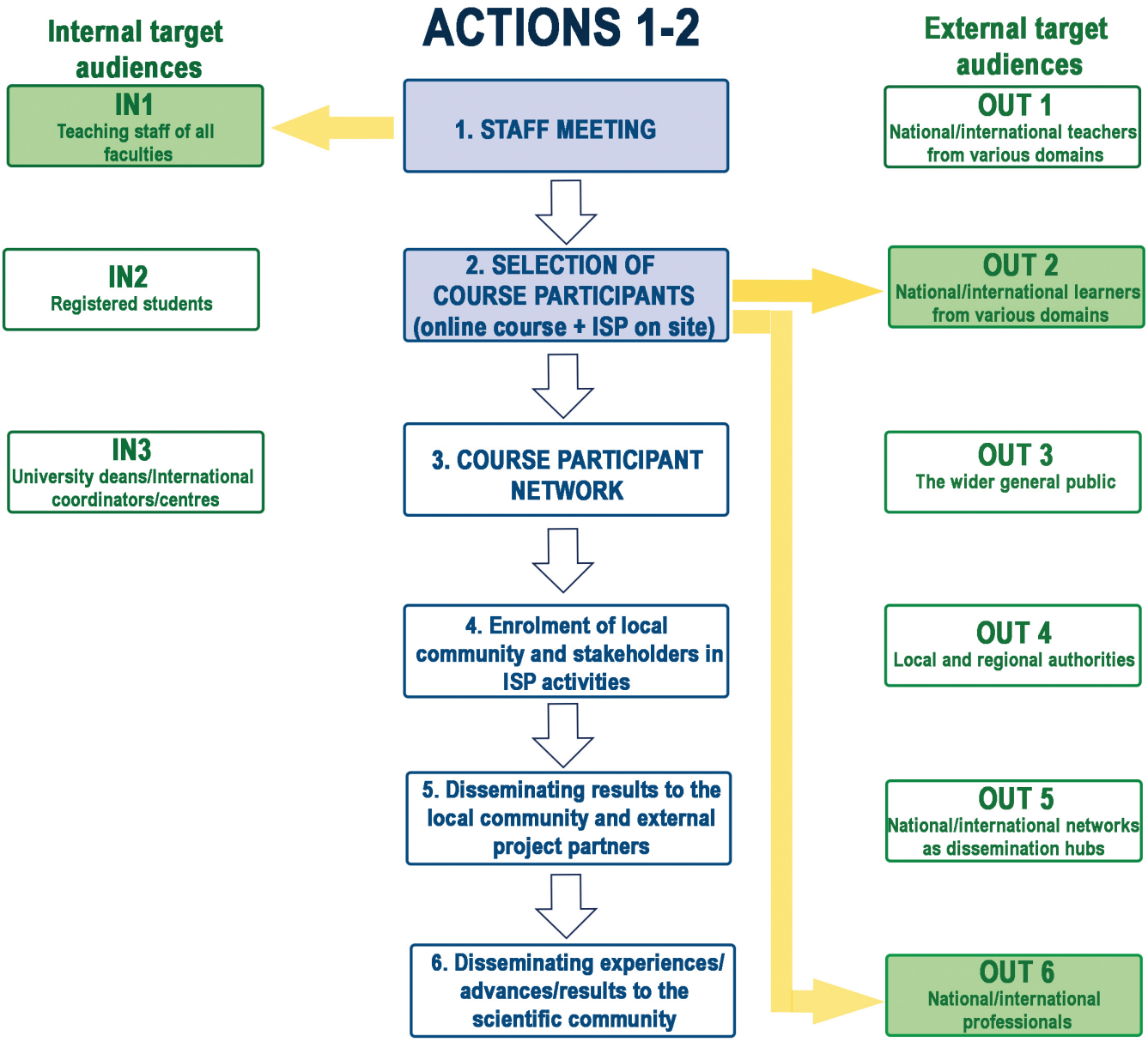


Fig 10.2 Actions 1 and 2

ACTION no.2: Selection of the course participants

Referring to the external audience OUT2 – National/international learners from various domains, the relevant tools of the innovative didactic methods are: virtual classrooms, wikis, and the learning management system. The dissemination should encourage their participation in the online course to enhance the development of knowledge and skills. The top priority is disseminating the online part of the module. It is not an open online course for an indefinite number of participants (i.e. 200+ active participants), because the size of the learning groups must be limited according to the characteristics of this learning process, which are: interaction, feedback and peer reviews. However, the online course is also available to the external audience OUT6 – National and international professionals can attend the lessons as auditors to learn a design methodology and improve their professional skills. For instance, professional bodies and associations can encourage the participation of their members in the online course in several ways, i.e. direct notices, website advertisements, grants for training credits to professionals who fulfil the planned activities (continuing professional development plans). The availability of the course will be communicated through various channels such as: project newsletter, press releases in multiple languages sent through the institutions' distribution lists and the strategic use of social media addressing the related interest groups.

Each academic partner should announce the call for participation to the didactic module directly to its students, also informing the landscape schools regarding the content of the project, in order to widen the internal participation in the online activities. In fact, the curricular integration aspect is a key factor to enhance the overall programme. This can be implemented with the international mobility part of the blended learning activities (ISPs). Due to the budget, the participation in international mobility should be competitive, by opting for a selection process with specific criteria, to be clearly communicated to the interested subjects during their initial online course registration. Another advantage of introducing an online course within the academic curricula lies in its flexibility. The learning activities can either be embedded in a blended learning activity or they can be done completely online. Finally, as to be ready for further use, the constant updating of the online contents guarantee a stable basis for continuing the activities beyond the project's timeframe.

ACTION no.3: Course participant network

It is of primary importance to develop a network of course participants, to sustain and disseminate the community experience gained during the blended learning activities. This community can be organised via social networks, i.e., Facebook. This activity contributes to the post-funding continuity of the course as well. Erasmus+ has an open-access requirement for all materials developed by the projects it funds. Open educational platforms are an effective means to ensure free public access to intellectual outputs, tangible deliverables, scientific results and didactic methodologies. A Wiki is an example of a collaborative web-based platform to build shared knowledge and to highlight the outcomes of Erasmus+ projects. The programme participants can easily upload their materials on the Wiki and the contents can be updated at any time. Such a platform, however, requires a full respect of copyright and web-sharing laws. The learning materials produced for each module will be made available under the Creative Commons (CC) license (Attribution-Noncommercial-Share Alike). In addition to their further development, other educators will be able to reuse the materials and adapt them to their specific contexts. Experience plays a big role in developing the best strategies. Learning from personal and other's experiences supports the achievements of better results. Reports, drawings, images and videos from international learning activities will be available for download from the project website and they will also be found via social media.

ACTION no.4: Enrolment of the local community and stakeholders both in the online course and the ISP (Intensive Study Programme) on site

At a later stage of the project, dissemination must overcome the limits of teachers and learners and it should be oriented towards tailored stakeholders, calling for interaction and cooperation between the research institutions and other institutions such as the mass media, schools, art institutions, communities with various beliefs and volunteer associations. The ISP learning and research activities include the active involvement of a large range of local and regional stakeholders: community members – local population, entrepreneurs, local and regional authorities, representatives of local and regional public social and cultural institutions, local and regional private companies, local and regional NGOs, local and regional professionals and researchers. This involvement is to ensure both a proper knowledge of the study area issues and development aims, and their ongoing participation and feedback for defining and outlining the projects and development proposals of the students.

Each partner is responsible for informing the relevant national stakeholders about the project activities via its distribution channels and for calling them to direct meetings (including mutual presentations and debates) with the students and

teachers attending the ISP. This also includes informing the local and regional authorities. The ISP activities start with detailed presentations of the local and regional public and private representatives, including authorities, institutions, professionals, researchers and companies, on the national coastal area and the specific study area while further meetings and debates take place with the local community and other stakeholders. Also, especially during the ISPs, the project has the chance to develop a wide communication campaign, through newspapers, local mass media, seminars and meetings about the activities carried on both in the workshop and the programme as a whole. The project partners hosting the ISP ought to prepare a written manual describing the aims, contents, schedule, activities, academic participants (students and teachers) and local stakeholders. At the end of the ISP, the hosting partner provides a booklet documenting the activities and their impacts on the local community. The format of the booklet is composed by the partners, along with coordination of its dissemination. Among the advantages of claiming the stakeholders' participation in the ISP's preliminary phase of design and planning, is a positive impact on the project outcomes. Unnecessary

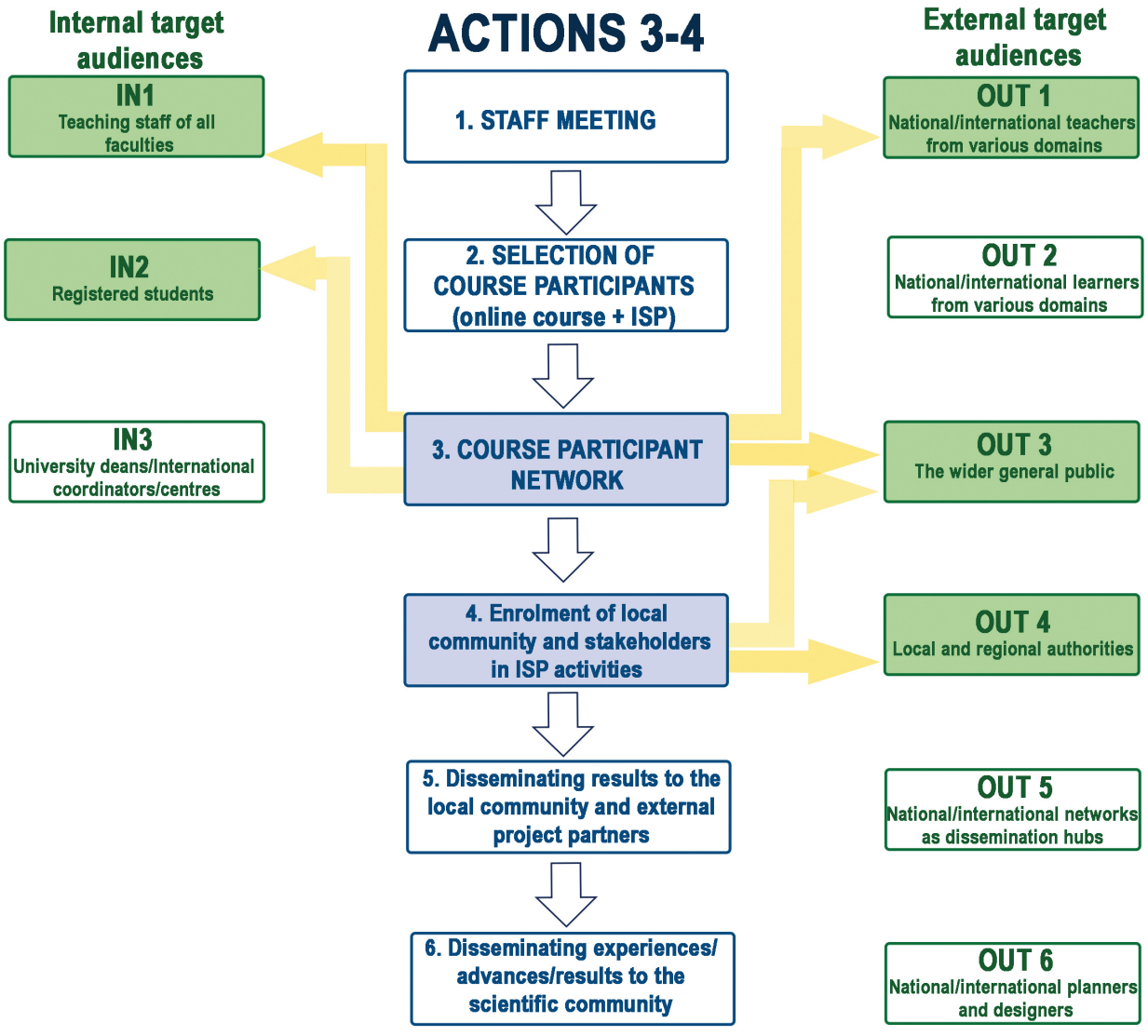


Fig 10.3 Actions 3 and 4

changes during later development stages are reduced. Furthermore, early knowledge about the end-users leads to higher customer satisfaction regarding the design functions, usage and customers' expectations.

ACTION no.5: Disseminating experiences/advances/results to the local community and external project partners

The intensive study programme (ISP) focuses on a specific study area chosen by each university partner responsible for organising such activity (host partner). Local communities are strongly interested in these programmes and their design outputs. The involved stakeholders who live in the study area expect effective solutions to the critical issues and problems analysed during the workshops. To meet such expectations, the dissemination must include a post-ISP phase with the publication of the workshop design proposals in the booklet described in Action no. 4. Moreover, the activities should be published in local newspapers and on broadcasting tv/ radio to reach a wider local public who, although interested, may not have found active involvement during the ISP's activities. The dissemination is carried on the project's website and social media, as part of the ongoing process of documentation. The host partner uses the ISP outputs to disseminate directly to the local and regional community and authorities. Also, to the local and regional professionals through thematic events, workshops and debates held on the occasion of international celebrations in the field (such as the World Town Planning Day) and for specific local and regional discussions of coastal area planning issues. The ISP output may be used as a basis for initial planning and development proposals and models for directing the public and professional consultations in the planning and decision-making process of involved communities and urban spaces in the coastal areas. Additional workshops may be organised within the host institution. This is to link the students with the local and regional professionals for knowledge, skills and competences exchange and for further debating and enhancing the sustainable development of national coastal areas while working with the ISP outputs as a starting point and as a discussion framework.

ACTION no.6: Disseminating experiences/advances/results to the scientific community

The scientific community is informed about the development of all the stages of the project, particularly about the methods and structure of the online courses and the workshops (ISPs), as to enhance the transfer of good practises within institutions. To achieve this goal, the dissemination is pursued with publications; scientific books and journals, and academic meetings such as conferences and seminars. These activities are complemented by mutual workshops and debates with professional networks and NGOs' representatives. Thus, the project achievements are translated into practice through the participation of the academic team members in the European and national policy-making processes.

The scientific dissemination is also useful to provide the partner institutions involved in the programme with ongoing feedback. Building expertise is a constant and never-ending process benefitting from discussions and critique. It cannot be excluded, for instance, that similar experiences might have been carried by other institutions, hence the exchange of ideas with colleagues can result in a process of implementation of the planned activities.

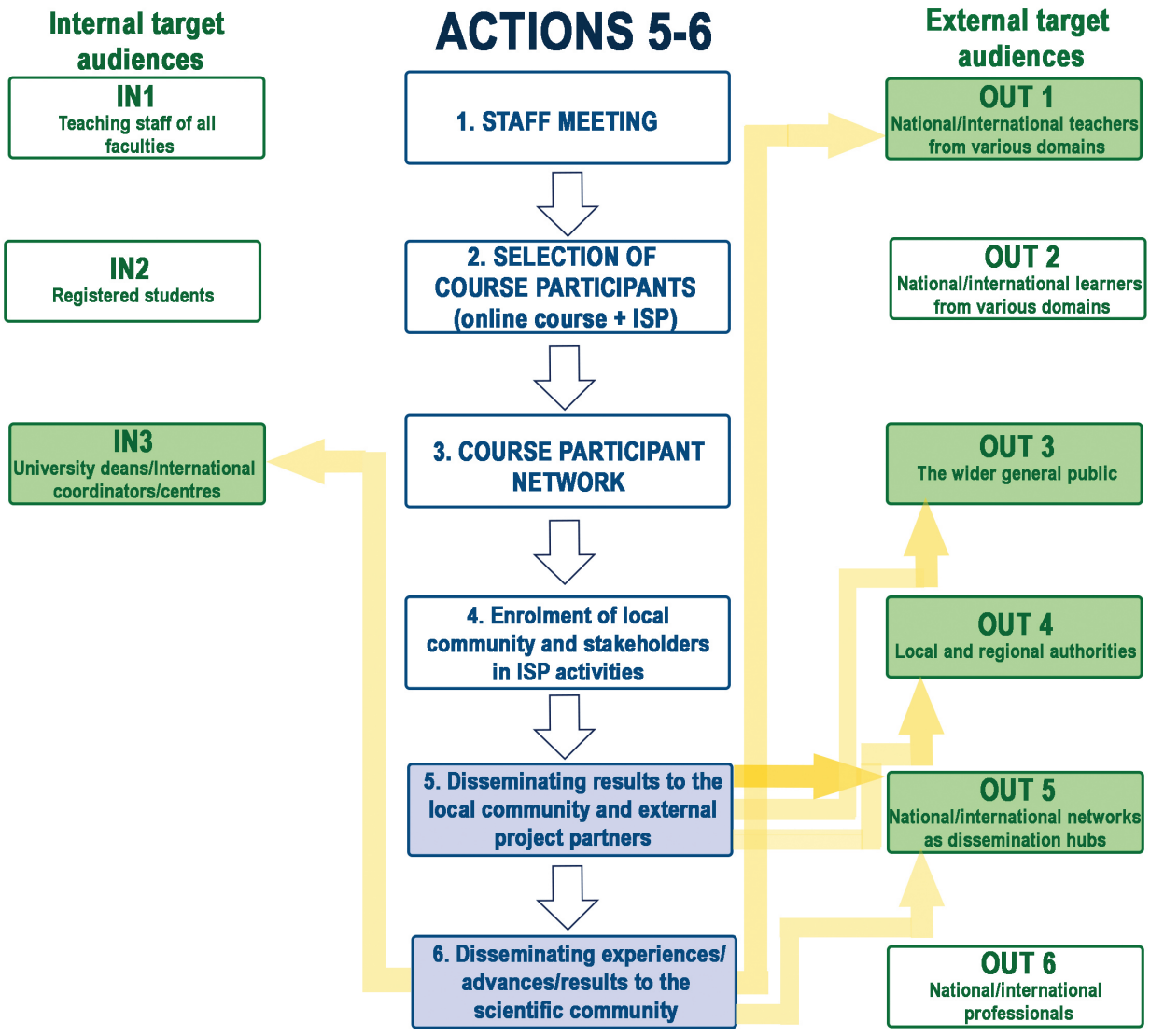


Fig 10.4 Actions 5 and 6

On the 31st of July, 2020, during the CO-LAND International Team Meeting (TPM Nr. 6) in Freising, DE a multiplier event took place on the internet meeting platform Zoom, involving the internal and external target audiences that have previously participated in the CO-LAND project, to summarise dissemination actions no. 5 and no. 6. The aim of the event was the presentation of the CO-LAND project outputs to a wider online audience.

10.4 Exploitation and follow-up

The project aims to develop a reviewed and tested online course useful to other teaching and academic contexts on coastal landscapes. The project is structured in fixed lectures and assignments for the students with specific attention to the phases and activities for all the attendees – either instructors, students, or external auditors. Similarly, the activities and schedules of the ISP are organised to involve the local communities and stakeholders. The nature and content of the online course is purposely designed and integrated to make its activities continue beyond its lifetime, particularly for the compulsory curricula in the Masters Degree Programmes in landscape and urban planning.

The online course can be integrated as part of landscape design and planning studios run by the university partners, preferably focusing on the design of green-blue infrastructures for European coastal territories. The network of partners will be reinforced by the follow-up activities sharing new projects, seminars and conferences developed online. All partners will sign a networking/cooperation agreement at the end of the project in order to ensure the continuous updating of the course content sharing their own specific activities on such topics.

The network is open to new partners and it provides the opportunity for additional participants to join and develop new fields of teaching based on local experiences and case studies. In doing so, the partners will maintain the exchanges and discussions about the European coastal landscapes. The participants will keep providing innovative contexts and ideas as they are expected to step into the community involvement to realise the proposals of the courses.

It is important to sustain the mobility between the partners' university locations to enforce the curricula on specific topics such as coastal areas. Moreover, excursions in the areas studied during the ISPs can be organised to highlight the strengths and weaknesses of the coastal landscapes. Erasmus+ programmes, strongly based on the mobility of teachers and students, suffered a sharp impact in 2020 due to local and international limitations adopted to counter the spread of the pandemic. It was, in fact, necessary to rethink the activities of the final year of the programme and design a new way of carrying out the ISP still to be done. The experience of the previous online courses carried out within this project anticipated, experimented and already tested the much-discussed online teaching methodologies that universities have been forced to adopt. This allowed the staff to quickly organise a new blended final ISP in De Panne, Belgium. The presence of local students and professors guaranteed the necessary experience of on-site project area inspections. They became ambassadors for the international groups forced to work remotely from their offices abroad. The virtual places for meetings between teachers, the tutoring methods for groups and the virtual spaces for synchronous work of the students were redesigned maintaining the original structure of the activities initially planned for the pre-COVID-19 ISP. This guaranteed the format of laboratory activities, albeit at a distance, adopting the platform best suited to specific communication needs. Ensuring the usual involvement of local key players and stakeholders in the early stages of the ISP, was also given particular attention, with readings and communications addressed to students, and the local community involved in the final presentation.

Based on the acquired expertise in workshops, it will be much easier to organise such activity in the future. This could be supported by Erasmus+ mobility agreements among all university partners, to be finalised within the lifetime of the project. Eventually, following the positive experiences of the ISPs, the cooperation with the coastal municipalities should continue in the future as well. It is also expected that the municipality partners will be interested in keeping and enhancing the synergy with the university partners by providing further facilities, knowledge and data for future 'living lab' experiences.

Fig 10.5 Online multiplier event poster

Winter beach, Mangalia 2018

Photo: Ingrid Schegk

11 CONCLUSIONS AND FOLLOW-UPS

11.1 Lessons learned from the CO-LAND project

A total of approximately 300 students and 30 teachers have participated in the CO-LAND project. In addition, various external lecturers have contributed to the online seminar, and numerous stakeholders and citizens were involved on-site during our Intensive Study Programmes (ISPs). After three years of active engagement, we are convinced that the intensive observation of coastal landscapes in Europe and the world has left many positive impressions and learning experiences with the majority of the participants.

The enthusiasm for this complex topic has led to several follow-up projects, e.g., various master theses, a study project for master students of landscape architecture in the coastal city of Pula, Croatia, etc. The LE:NOTRE Student Competition 2020/2021 and the LE:NOTRE Landscape Forum 2021 in the context of the city of Gdansk, Poland is also closely related to the CO-LAND project and benefits from the material and knowledge generated.

The main findings of the project are summarised in the following points, roughly structured according to parts A, B and C of this report.

A. Teaching approach and methodology

As an essential part of a 'blended learning' approach, synchronous and asynchronous online formats have become an integral part of university education. What seemed to be a real innovation at the beginning of the project has developed into an indispensable part of university teaching – admittedly also strongly promoted by the Covid-19 pandemic. Nevertheless, research and work must continue to improve both methodological and technical competence in this field.

International and intercultural cooperation is greatly facilitated by online teaching as it helps to overcome national and institutional boundaries and personal constraints. Yet, there are sometimes still difficulties in terms of genuine professional interdisciplinarity and, above all, the involvement and participation of local institutions and communities, even while working on-site during intensive programmes. A major reason for this is undoubtedly, apart from language barriers, the difficulty of translating abstract planning approaches developed with academic methodology into concrete design solutions on-site. However, this is the very essence of integrated planning and design.

Against this background, the spectrum of methods in the field of design deserves further exploration. This applies to the design methodology itself, including participatory design methods on the one hand, and on the other hand, to suitable teaching methods. In this respect the online format, in particular, still seems to have weaknesses compared to the traditional iterative design process with continuous face-to-face-discussion, evaluation, rejection and refinement accompanied by analogue sketching and drawing. Although the design-related course content taught in the CO-LAND seminar (Section C) was positively evaluated by the students, some of their elaborations still lacked sufficient depth and local relevance.

B. The case of coastal landscapes

Coastal landscapes have proven to be a valuable, highly relevant and at the same time, very demanding and complex study-subject. Hardly any other topic demonstrates the importance of sustainable local actions in the context of global developments as impressively. In this respect, coastal landscapes are suited excellently for interdisciplinarity and the integrated planning and design approach we aimed for. In addition, dealing with this topic has a fascinating and motivating effect on students and teachers alike, especially when the intensive exploration of the respective planning areas in the online seminar prepares for a later workshop on-site and what was explored from a distance can then be authentically experienced and verified at the local scale.

The model developed in the CO-LAND project can be transferred to other landscape contexts, in terms of both content and methodology, particularly to climate-sensitive areas with complex ecological and social interactions such as river landscapes, lakes or mountainous landscapes.

While a general validation of contents has proven to be of value for the online lectures, a timely and comprehensive provision of data is essential for the successful completion of tasks on actual coastal areas by the students. This provision must be organised by the local partner universities.

C. The implementation and dissemination process

The implementation of the CO-LAND teaching and learning model in three cycles of online seminars and four ISPs, the last of which was a hybrid programme due to the COVID-19 pandemic, has produced a high learning effect also from a technical point of view, especially for the teachers. Drawing on our experience and the assessment of the strengths and weaknesses of the CO-LAND implementation process, we would like to make the following recommendations:

It is fundamental to have a stable digital learning environment that is

well mastered by those involved, especially the teachers. Various efficient applications are now available for this (cf. CO-LAND toolbox). For online lectures, sufficient interactivity with the audience should be possible by using appropriate tools. The integration of independent, freely available open-source platforms is generally advantageous, provided there are guarantee requirements for the protection of personal data. Consultation and support for the students must be clearly defined in terms of assigned teaching personnel, their time dedication, and the assignments and examinations. Evaluation and grading must be based on clear, transparent criteria (cf. rubric-sheet in the CO-LAND toolbox).

On-site workshops need to be organised at an early stage. In particular, the involvement of diverse local stakeholders brings considerable added value. For the students, on-site work should have a different quality than online work. The on-site potential should be exploited with methods that cannot be applied online; e.g., site inspections and inquiries through walking, making observations, mapping, surveying, hand-sketching and preparing working models etc. These on-site methods may be at the expense of studio work. Therefore, it is advisable to have a completion phase for the project work after the on-site workshop.

Regular evaluation by students and teachers of the content and organisation of the courses is an essential element of academic teaching. In the case of innovative courses, this should include a before-and-after comparison to measure learning progress, and material for the short-term implementation of improvements. This calls for timely planning of the online evaluations and the follow-up of their results.

The same applies to the communication and dissemination of both the course offer itself and the results of the study projects. Dissemination by the students themselves plays an important role here, which usually works via popular social media. For the local stakeholders involved, other dissemination channels must be identified, such as local newspapers, exhibitions, etc.

This report is addressed to the academic community of spatial planners and designers. We hope that the CO-LAND project will inspire further curriculum innovation in the field of planning and design and eventually contribute to the sustainable development of our living environment.

11.2 Expected effects and impacts

At the end of this exciting project, as participants, we ask ourselves what effects and impacts the CO-LAND project leaves behind, for university education in general, for teachers, researchers and students, for the stakeholders involved as well as for practitioners.

We want to mention the following short-term effects on behalf of all participating universities. First of all, for the teachers:

- Becoming familiar with new methods of teaching and interacting with students utilising virtual-education platforms.
- Improving knowledge regarding coastal areas.
- Interacting with different academic and professional environments.
- Understanding how to better use wiki-pages as a tool for encouraging collaborative work and the rapid dissemination of students' ideas and results.

In the medium-term, we expect the following consequential impacts:

- Improving teaching methods by assimilating new developments in the fields of digital modes and e-learning, which have a greater attraction for students.
- Adapting the curricula for spatial planning programmes to the new blended–hybrid teaching systems.
- Developing new curricula for integrated spatial and landscape planning with a focus on coastal areas.
- Confronting the different methodological approaches to the subject of coastal areas.
- Improving communication between professionals and stakeholders.

We expect a variety of effects for the students:

- Improving integrated planning methods, landscapes, and coastal areas knowledge.
- Improving communication skills.
- Improving new educational virtual platforms knowledge.
- Experimenting with new learning techniques using virtual educational platforms.
- Improving teamwork abilities in an international environment and ensuring better integration of local stakeholder's feedback into the students' planning visions.
- Benefitting from work in an interdisciplinary learning environment.

Therefore, we hope for multiple impacts on students such as raising their interests in spatial planning issues, for new ways of learning, and in the development of their transversal competences, especially teamwork and communication skills. Students are confronted with the differences in understanding virtual space, the habits of using specific tools, the speed of assimilating computer novelty, etc. Dealing with all these issues characterises the key competences in our world of today and tomorrow.

The two German universities involved with their joint International Master's Programme in Landscape Architecture (IMLA) also see impacts with practical as well as strategic potential, such as:

- Possibilities for transferring knowledge about online education in international contexts.
- Broadening the IMLA campus to a broader European scale and opening up higher education.
- Increasing the flexibility of the curriculum to allow students to continue their education during internship periods.
- Improving cooperation with their European partners and the sustainability of jointly taught courses.
- Gaining synergy from the partners' subject-specific knowledge, local knowledge and methodical competences.

For the stakeholders involved, the CO-LAND project also has several positive effects and impacts:

- Increasing the exchange of new ideas for planning and design solutions in their focus areas.
- Establishing stronger communication channels between local administration, universities and professional associations.
- Advancing the change towards a more cooperative approach to spatial development issues.

For ISOCARP, participating in the CO-LAND programme has allowed for greater cooperation of the international professional association of city and regional planners with the multiple European university partners around the topic of integrated coastal planning. ISOCARP members participated as reviewers in the CO-LAND on-site workshops and contributed to the publication efforts, allowing for students a closer connection to practitioners. The knowledge gained from developing blended learning platforms will also benefit future ISOCARP educational programmes.

Finally, the LE:Notre Institute (LNI), one of two NGOs in the CO-LAND consortium representing researchers and professional practitioners alike, summarises the impact of the project as follows:

For the researchers and members of the LNI the impact is that we have greatly improved our knowledge of coastal landscapes, enriched by the various contexts of different coasts, cultural settings and policies. The project developed a body of knowledge on how to teach and learn online, and how to carry out international student workshops in combined online and on-site settings, using the supporting digital tools.

By promoting the online lecture series in an open-access mode, CO-LAND raised the awareness of European policies, the important challenges and the needs of society for coastal landscapes. We anticipate that members will continue to make use of the online Wiki and the tool-kit both for their teaching and research efforts. The LNI will make use of our CO-LAND experience to support the Landscape Forum in Gdansk we are organising in 2021. This will allow the students, teachers, professional practitioners, communities and local authorities to further benefit from the CO-LAND experience and use it for addressing their own local challenges.

11.3 Future developments

You may ask how we plan to move on from here. We are in the lucky situation, at the time of this writing, that we have a confirmation for a follow-up project in our hands. This project will allow our consortium to continue its search for educational innovation within the Erasmus+ Programme framework.

Our new project is called WAVE which stands for: Water Areas Visions for Europe. Thematically, we will remain in the world of integrated planning and design of the urban-land interface. However, our focus won't be only on coastal landscapes. Instead, each university will explore the water areas of their immediate community environment.

Sustainable development of water areas and floodplains is still not achieving its full potential, although relevant policy is already in place. To address these profound sustainability challenges, we will set up a transformative educational programme with the following innovative elements:

- Synthesise interdisciplinary knowledge about water areas and floodplains
- Active community involvement with a living lab approach
- Link universities with local

communities in joint learning environments

- Apply innovative methods for cross-sectoral assessment, strategy building and visioning for the sustainable development of water areas and floodplains

- Connect analysis, strategy building and design through innovative ICT approaches (Geodesign)

- Foster a generation of innovative solutions by bridging disciplinary, sectoral and institutional boundaries under the common framework of water areas and floodplains

The WAVE programme aims at involving an interdisciplinary student audience as agents of transformative change to benefit local water landscapes. Outreach to the local communities will be at the core of WAVE, which will make this project quite different from the previous one. We will explore new challenges, e.g., how to open up universities, how to create a local learning community, or how to involve the general public and various stakeholder audiences effectively in a transformative learning process. The WAVE Living Labs will be the next step in our curriculum innovation process.

DePanne beach

Photo: Didier Vancutsem

ANNEXES

Terminology / glossary

BLENDED LEARNING

The range of possibilities presented by combining Internet and digital media with established classroom forms that require the physical co-presence of teacher and students.

Norm Friesen, August 2012 (accessed on the 10th of August on https://www.normfriesen.info/papers/Defining_Blended_Learning_NF.pd)

BLUE AND GREEN INFRASTRUCTURE

Green infrastructure is a strategically planned network of natural and semi-natural areas with other environmental features designed and managed to deliver a wide range of ecosystem services such as water purification, air quality, space for recreation and climate mitigation and adaptation. This network of green (land) and blue (water) spaces can improve environmental conditions and therefore citizens' health and quality of life. It also supports a green economy, creates job opportunities and enhances biodiversity. The Natura 2000 network constitutes the backbone of the EU green infrastructure.

Green infrastructure planning is a successfully tested tool to provide environmental, economic and social benefits through natural solutions. In many cases, it can reduce dependence on 'grey' infrastructure that can be damaging to the environment and biodiversity, and often more expensive to build and maintain. The European Commission has developed a Green Infrastructure Strategy. This strategy aims to ensure that the protection, restoration, creation and enhancement of green infrastructure become an integral part of spatial planning and territorial development whenever it offers a better alternative, or is complementary, to standard grey choices.

https://ec.europa.eu/environment/nature/ecosystems/index_en.htm

Blue infrastructure refers to water elements, like rivers, canals, ponds, wetlands, floodplains, water treatment facilities, etc. Green infrastructure refers to trees, lawns, hedgerows, parks, fields, forests, etc. These terms come from urban planning and land-use planning. Blue-Green Infrastructure can also specifically refer to an urban planning approach in which design of naturalistic or completely artificial infrastructures in the city is intended to allow the whole water cycle to occur within the city. This can improve the delivery of water-related ecosystem services (reducing pollution in the air, irrigating parks, providing local drinking water), as well as preventing harms like flooding and spread of contaminants (e.g., from cars).

Meredith Root-Bernstein, http://bioveins.eu/

COASTAL LANDSCAPES

An area of sea, coastline and land, as perceived by people, whose character results from the actions and interactions of land with sea, by natural and/or human factors. (seascape)

EU Water Framework Directive (European Commission, 23 October 2000)

(…) areas of continuous character under natural, cultural/social, and perceptual/aesthetic factors.

European Landscape Convention (Council of Europe, 2000).

Coastal zones are the common natural and cultural heritage of the peoples living there and that they should be preserved and judiciously used for the benefit of present and future generations.

Protocol on integrated coastal zones. Management in the Mediterranean (Brussels, 2008)

Coastal areas (…) as ecosystems' providers of significant resources for transport, food security, economic prosperity, ecosystem services and resilience.

New Urban Agenda, Habitat III (United Nations, 2017)

COMPETENCE (professional, horizontal)

A dynamic combination of attributes - with respect to knowledge and its application, to attitudes and responsibilities - that describe the LEARNING OUTCOMES of an educational programme, or how learners are able to perform at the end of an educational process. These consist of subject-area related competences (specific to a field of study) and generic competences (common to any degree course). The European Qualifications Framework describes competence in terms of responsibility and autonomy. It refers to the proven ability to use knowledge, skills and personal, social and/or methodological abilities, in work or study situations and in professional and personal development.

CONSTRUCTIVISM (learning theory)

This theory assumes that there is no objective way of representing reality. Instead, there are as many constructions of reality as there are people in the world. In a learning

context this means: both learners and teachers are constantly constructing realities, meanings and concepts. There can be communication and exchange about these constructions but there is no final model that could be transferred from a sender to a receiver. A starting point is that the individual mind decides whether knowledge is viable or not. The precondition for viability is the possibility to connect new knowledge to existing mental concepts. Observation, differentiation and individual responsibility are thus crucial for the success of constructivist learning. In this context, the main role of the teacher is to offer opportunities for authentic encounter, diversity experience, discourse, communication and mutual awareness in order to facilitate and stimulate constructivist learning processes (Fetzer, 2013). The approach of interaction-based constructivism provides a practical model for specifying learning processes. There are three main phases of knowledge processing: reconstruction, construction and deconstruction.

DISSEMINATION

"The act of spreading news, information, ideas, etc. to a lot of people."
https://dictionary.cambridge.org/dictionary/english/dissemination

"Broadcast of an idea or message on a large scale to make it reach a wide audience."
http://www.businessdictionary.com/definition/dissemination.html

DPSIR

"A causal framework for describing the interactions between society and the environment: Human impact on the environment and vice versa because of the interdependence of the components. This framework has been adopted by the European Environment Agency. The components of this model are: Driving forces: e.g. industry, tourism, economic growth; Pressures: e.g. pollution, land-use change, population growth; States: e.g. water quality, soil quality, air quality, habitat, vegetation; Impacts: e.g. ill public health, habitat fragmentation, economic crisis, environmental damage, biodiversity loss; and Responses: e.g. taxes, environmental laws"
https://en.wikipedia.org/wiki/DPSIR accessed on the 10th of August 2020

DROSSCAPE

Drosscape is an urban design framework that looks at urbanized regions as the waste product of defunct economic and industrial processes. The concept was realized by Alan Berger, professor of urban design at MIT, and is part of a new vocabulary and aesthetic that could be useful for the redesign and adaptive reuse of 'waste landscapes' within urbanized regions. According to Berger, drosscape, as a concept, implies that dross, or waste, may be "scaped", or resurfaced, and reprogrammed for adaptive reuse.

https://en.wikipedia.org/wiki/Drosscape.

Also see: Drosscape. Wasting Land in Urban America, Alan Berger, 2006.

ECTS - European Credit Transfer System

A system for increasing the transparency of educational systems and facilitating the mobility of students across Europe through credit transfer. It is based on the general assumption that the global workload of an academic year of study is equal to 60 credits. The 60 credits are then allocated to course units to describe the proportion of the student workload required to achieve the related LEARNING OUTCOMES. Credit transfer is guaranteed by explicit agreements among the home institution, the host institution and the mobile student.

INTEGRATED COASTAL MANAGEMENT*

An integrated, participative territorial approach is required to ensure that the management of Europe's coastal zones is environmentally and economically sustainable, as well as socially equitable and cohesive.

It aims at resolving the conflicting demands of society for products and services, taking into account both current and future interests. Major objectives are to:

- strengthen sectoral management by improving training, legislation and staffing;
- preserve the biological diversity of coastal ecosystems by preventing habitat destruction, pollution and over-exploitation; and
- promote the rational development and sustainable use of coastal resources.

INTEGRATED PLANNING*

Integrated planning (as opposed to sectoral planning) is a process involving the drawing together of level and sector specific planning efforts which permits strategic decision-making and provides a synoptic view of resources and commitments. Integrated planning acts as a focal point for institutional initiatives and resource allocation. In the context of integrated (or comprehensive)

planning, economic, social, ecological and cultural factors are jointly used and combined to guide land- and facility-use decisions towards sustainable territorial development.

ISP – Intensive Study Programme

Short full-time course of one to four weeks concentrating on a particular topic. It may take place at another institution or in a summer school..

LANDSCAPE PLANNING

Landscape planning is an activity involving both public and private professionals, aiming at the creation, conservation, enhancement and restoration of landscapes at various scales, from greenways and public parks to large areas, such as forests, large wilderness areas and reclamation of degraded landscapes such as mines or landfills.

Landscape planning encompasses a variety of skills, such as landscape architecture and design, nature conservation, knowledge of plants, ecosystems, soil science, hydrology, cultural landscapes, etc. The provisions of the European Landscape Convention are important guidelines for the content and procedures of landscape planning.

The glossary of key expressions used in spatial development policies in Europe, October 2006

LANDSCAPE POLICIES*

According to the European Landscape Convention, "*landscape policy means an expression by the competent public authorities of general principles, strategies and guidelines that permit the taking of specific measures aimed at the protection, management and planning of landscapes*".

Under this general heading, various types of landscape policies can be identified:

- The European Landscape convention indicates that: "landscape protection means actions to conserve and maintain the significant or characteristic features of a landscape, justified by its heritage value derived from its natural configuration and/or from human activity;
- Landscape management means action, from a perspective of sustainable development, to ensure the regular upkeep of a landscape, so as to guide and harmonise changes which are brought about by social, economic and environmental processes;
- Landscape planning means strong forward-looking action to enhance, restore or create landscapes."
- The Guiding Principles indicate that "Spatial development policy can contribute to protecting, managing and enhancing landscapes by adopting appropriate measures, in particular by organising better interactions between various sectoral policies with regard to their territorial impacts". Various types of measures are likely to contribute to this aim, such as: the integration of landscape development into spatial planning as well as into sectoral policies, the examination and general assessment of landscapes, the implementation of integrated policies, the consideration of landscape development and protection in international programmes, in cross-border and transnational cooperation, the strengthening of awareness of people, private organisations and territorial authorities of the value of landscapes, the stronger integration of landscape development into training programmes.

MONITORING

Supervising activities in progress to ensure they are on-course and on-schedule in meeting the objectives and performance targets.

http://www.businessdictionary.com/definition/monitoring.html

To watch and check a situation carefully for a period of time in order to discover something about it.

https://dictionary.cambridge.org/dictionary/english/monitoring

PARTICIPATORY PLANNING*

Participatory planning is a specific form of planning activities practiced by public authorities mainly at local level which makes it possible for the citizens to play a part in the planning process.

The most common form of participatory planning is consultation of the population on projects before their formal approval. More substantial and creative forms of public participation are also in use, such as workshops, public debates, etc. The Internet plays an ever growing part in participatory planning, either for the dissemination of information on planning projects or in the context of interactive communication systems.

PEST ANALYSIS

A type of situation analysis in which political-legal (government stability, spending, taxation), economic (inflation, interest rates, unemployment), socio-cultural (demographics, education, income distribution), and technological (knowledge generation, conversion

of discoveries into products, rates of obsolescence) factors are examined to chart an organisation's long-term plans (see also SWOT analysis).

http://www.businessdictionary.com/definition/PEST-analysis.html

PHYSICAL PLANNING

Physical planning is strongly related to land-use planning, urban design, transport planning, landscape planning, building plans, etc. It addresses activities which immediately affect and programme the physical structure and environment of cities and neighbourhoods (as opposed to economic planning or social planning activities).

The glossary of key expressions used in spatial development policies in Europe, October 2006

POLICY

A set of ideas or a plan of what to do in particular situations that has been agreed to officially by a group of people, a business organization, a government, or a political party.

https://dictionary.cambridge.org/dictionary/english/policy

Politics: The basic principles by which a government is guided.

The declared objectives that a government or party seeks to achieve and preserve in the interest of the national community (see also public policy).

Management: The set of basic principles and associated guidelines, formulated and enforced by the governing body of an organization, to direct and limit its actions in pursuit of long-term goals (see also corporate policy).

http://www.businessdictionary.com/definition/policy.html

PRODUCTIVE LANDSCAPES

"*Productive landscapes are part of a resilient urban matrix, a fundamental issue due to natural and human-caused disasters, economic and ecological crises, etc. Integrating productivity in cities via landscape and planning tools and developing a sustainable infrastructure have a role in creating resilient cities. Urban agriculture is one of the major components of productive landscapes. Pioneering models of productive landscapes and urban agriculture go back to the 19th century with the works of Ebenezer Howard, Le Corbusier, Frank Lloyd Wright, and Ian McHarg.*"

Akyol, M., Tuncay, H.E., 2013. "Productive landscapes and resilient cities", A|Z ITU Journal of Faculty of Architecture 10(2):133-147

"Biodiverse production landscapes and seascapes that lie outside the protected area estate provide people with goods and services like food, pollination services, water, wood, energy and minerals. The use of natural resources in these landscapes and seascapes must be done sustainably in order to maintain biodiversity and the ecosystem goods and services it provides to society".

https://www.thegef.org/topics/productive-landscapes-and-seascapes

"Continuous productive urban landscape (CPUL) is an urban design concept integrating food growing into the design of cities through joining together existing open space and disused sites into a linear landscape that connects to the countryside. The term was first used by Bohn & Viljoen Architects in 2004 at a time when making the connection between food and the city was unusual. "

'Review of Foodprint symposium' in, VOLUME magazine blog, (July 2009)

RURAL LANDSCAPES

Rural landscapes are a vital component of the heritage of humanity. They are also one of the most common types of continuing cultural landscapes. There is a great diversity of rural landscapes around the world that represent cultures and cultural traditions…they provide multiple economic and social benefits, multifunctionality, cultural support and ecosystem services for human societies.

Rural landscapes are terrestrial and aquatic areas co-produced by human-nature interaction and within which renewable natural resources are produced, such as food and/or raw materials. At the same time rural areas have cultural meanings attributed to them by people and communities.

(ICOMOS 2017a)

The rural landscape is a renewable resource, changing as a result of different production measures.

(Ministry of agriculture and forestry, Finland)

Rural areas – a spatial phenomenon that extends across regions, landscapes, natural areas, agricultural land, villages and other larger urban centres, pockets of industrialization and regional centres. It encompasses a diverse and complex economic and social fabric. It is the home of a great wealth of natural and cultural resources and traditions. It is becoming more important as a place for relaxation and leisure activities.

Rural areas – our link to the land, European Commission, 1994 (Europe 2000+)

Agriculture and forestry are the main caretakers of rural landscapes. Its continued usage in a well-adjusted way is a prerequisite for maintaining its environmental worth.

Rural areas – our link to the land, European Commission, 1997

SPATIAL PLANNING*

Spatial planning refers to the methods used by the public sector to influence the distribution of people and activities in spaces at various scales as well as the location of the various infrastructures, recreation and nature areas.

Spatial planning activities are carried out at different administrative or governmental levels (local, regional, national), while activities of cooperation in this field are also implemented in cross-border, transnational and European contexts.

STAKEHOLDER

A person, group or organization that has interest or concern in an organization.

Stakeholders can affect or be affected by the organization's actions, objectives and policies. Some examples of key stakeholders are creditors, directors, employees, government (and its agencies), owners (shareholders), suppliers, unions, and the community from which the business draws its resources.

Not all stakeholders are equal. A company's customers are entitled to fair trading practices but they are not entitled to the same consideration as the company's employees.

http://www.businessdictionary.com/definition/stakeholder.html

STRATEGIC ENVIRONMENTAL IMPACT ASSESSMENT*

The Strategic Impact Assessment does not refer to the likely impacts of individual projects (as in the case of the EIA), but to the likely environmental impacts of certain plans and programmes.

The SEA Directive (EU legislation), adopted in 2001, ensures that environmental consequences of certain plans and programmes are identified and assessed during their preparation and before their adoption. The public and environmental authorities can give their opinion and all results are integrated and taken into account in the course of the planning procedure. After the adoption of the plan or programme, the public is informed about the decision and the way in which it was made. In the case of likely transboundary significant effects, the affected Member State and its public are informed and have the possibility to make comments which are also integrated into the national decision-making process. SEA aims at contributing to more transparent planning by involving the public and by integrating environmental considerations and therefore to achieving the goal of sustainable development.

* from the GLOSSARY OF KEY EXPRESSIONS USED IN SPATIAL DEVELOPMENT POLICIES IN Europe, Document presented at the 14th Session of the European Conference of Ministers responsible for Spatial/regional Planning, Lisbon (Portugal), 26-27 October 2006

STRATEGIC PLANNING

Strategic planning is a process undertaken by an organization to develop a plan for achievement of its overall long-term organizational goals.

What Is the Strategic Planning Process? - Model, Steps & Examples https://study.com/academy/lesson/what-is-the-strategic-planning-process-model-steps-examples.html

STRATEGY

- *A detailed plan for achieving success in situations such as war, politics, business, industry, or sport, or the skill of planning for such situations.*
- *A way of doing something or dealing with something.*
- *A long-range plan for achieving something or reaching a goal, or the skill of making such plans.*
- *The way in which a business, government, or other organization carefully plans its actions over a period of time to improve its position and achieve what it wants https://dictionary.cambridge.org/dictionary/english/strategy*
- *A method or plan chosen to bring about a desired future, such as achievement of a goal or solution to a problem.*
- *The art and science of planning and marshalling resources for their most efficient and effective use. The term is derived from the Greek word for generalship or leading an army. See also tactics.*

http://www.businessdictionary.com/definition/strategy.html

STRATEGY IMPLEMENTATION

Strategy implementation consists of putting plans in place by formulating a strategy to achieve the organization's goals and objectives. It can also be described as the way a business might develop, use, and integrate the organizational hierarchy, systems, and culture to pursue strategies that will result in competitive advantage and improved performance. In the example, the organization's goal is increased sales and regaining its market position. The strategy will be specific actions that will realize the goals.

Strategy Implementation: Plan, Process & Examples https://study.com/academy/lesson/strategy-implementation-plan-process-examples.html

SWOT ANALYSIS

Situation analysis in which internal strengths and weaknesses of an organisation, and external opportunities and threats faced by it are closely examined to chart a strategy. SWOT stands for strengths, weaknesses, opportunities, and threats (see also PEST analysis).

http://www.businessdictionary.com/definition/SWOT-analysis.html

TRANSECT

A transect, in its origins (Von Humboldt 1790), is a geographical cross-section of a region used to reveal a sequence of environments. Originally, it was used to analyze natural ecologies, showing varying characteristics through different zones such as shores, wetlands, plains, and uplands. For human environments, such a cross-section can be used to identify a set of habitats that vary by their level and intensity of urban character, a continuum that ranges from rural to urban. In Transect planning, this range of environments is the basis for organizing the components of urbanization: building, lot, land use, street, and all of the other physical elements of the human habitat.

Andrés Duany et al., SmartCode & Manual, Miami: New Urban Publications, Inc., 2005

The valley section is a term invented by Patrick Geddes and described in his book, "The valley section from hills to sea." (New York City, 1923) The valley section depicts an ideal regional-urban condition, whereas the Notation of Life embodies concrete architectural proposals on how to realise that ideal condition. Geddes expresses in the valley region that Enlightenment theory of social evolution describes mankind's development through the four stages of hunting, pastoral, and agriculture toward commercial societies. The valley section is a longitudinal section which begins high up in the mountains and then follows the course of a river down the mountains and through a plain toward its estuary at the coast.

(https://bit.ly/2YWqQid, accessed on the 4th of July 2020)

URBAN ACUPUNCTURE

Urban acupuncture is a socio-environmental theory that combines contemporary urban design with traditional Chinese acupuncture, using small-scale interventions to transform the larger urban context. Sites are selected through analysis of aggregate social, economic and ecological factors, and are developed through a dialogue between designers and the community. Just as the practice of acupuncture is aimed at relieving stress in the human body, the goal of urban acupuncture is to relieve stress in the built environment.

https://en.wikipedia.org/wiki/Urban_acupuncture.

Also see: Urban Acupuncture, Celebrating Pinpricks of Change that Enrich City Life, Jaime Lerner, 2014.

URBAN DESIGN

The art of making places. Urban design involves the design of buildings, groups of buildings, spaces and landscapes, in villages, towns and cities, and the establishment of frameworks and processes that facilitate successful development.

The Councillor's Guide to Urban Design, CABE. https://www.designcouncil.org.uk/sites/default/files/asset/document/councillors-guide-to-urban-design.pdf

The art of creating and shaping cities and towns. Urban design involves the arrangement and design of buildings, public spaces, transport systems, services, and amenities. Urban design is the process of giving form, shape, and character to groups of buildings, to whole neighborhoods, and the city. It is a framework that orders the elements into a network of streets, squares, and blocks. Urban design blends architecture, landscape architecture, and city planning together to make urban areas functional and attractive.

Urban design is about making connections between people and places, movement and urban form, nature and the built fabric. Urban design draws together the many strands of place-making, environmental stewardship, social equity and economic viability into the creation of places with distinct beauty and identity.

Urban design is derived from but transcends planning and transportation policy, architectural

design, development economics, engineering and landscape. It draws these and other strands together creating a vision for an area and then deploying the resources and skills needed to bring the vision to life.

http://www.urbandesign.org/home.html

VISION

- The ability to imagine how a country, society, industry, etc. could develop in the future and to plan for this.
- The ability to imagine how something could develop in the future, or the ideas that come from imagining in this way.

https://dictionary.cambridge.org/dictionary/english/vision

WATERFRONT

"Waterfronts are defined by their nodal position between local and global scales. Scale is the processes of negotiation and compromise; it is contested and fought over, the temporary, the transient, sometimes fragile, sometimes stable outcome of political tension"

(Randles and Dicken, 2004, 2012, in "Transforming Urban Waterfronts: Fixity and Flow" editors: Gene Desfor, Jennefer Laidley, Quentin Stevens, Dirk Schubert)

"Historically, waterfront developments have undergone various stages of development initiatives and become the most challenging tasks for planners and urban designers nowadays. It reflected a dynamic natural resources with special characteristics and regarded as the most important factors that influenced the growth and image of the cities and had a significant impact on urbanization and modernization of the most cities in the near future".

Al-Shams, A. R., et al, "Waterfront Development within the Urban Design and Public Space Framework in Malaysia", in Asian Social Science; Vol. 9, No. 10; 2013

Bibliography and references

Front cover page:
Images from left to right:

- Mangalia beach, Photo: Ellen Fetzer
- Kopli beach, Photo: Jekaterina Balicka
- Pozzuoli harbour, Photo: Ingrid Schegk
- Pozzuoli water front, Photo: Ingrid Schegk
- Mangalia winter beach, Photo: Ingrid Schegk
- DePanne beach, Photo: Didier Vancutsem

Quote before the Foreword:
CEMAT (2006) - Glossary of key expressions used in spatial development policies in Europe, Document presented at the 14th Session of the European Conference of Ministers responsible for Spatial/ Regional Planning, Lisbon (Portugal), 26-27 October 2006.

Summary pages in various languages:
p.10-15: Source of country flags: https://www.countryflags.com/

Summary images:
p.8-9: Pozzuoli beach, Photo: Ingrid Schegk

p.10-11: Mangalia coast, Photo: Ellen Fetzer

p.12-13: Kopli urban coast, Photo: Jekaterina Balicka

P.14-15: Depanne coast, Photo: Didier Vancutsem

1
Fig 1.1: CO-LAND Workshop location 2019: Pozzuoli seafront. Photo: Ingrid Schegk

1.2
Fig 1.2: Tallinn seafront.
Photo: Ingrid Schegk

Image on spread, The innovative teaching approach methodology:
Pozzuoli beach, Photo: Ingrid Schegk

p.22-23: Fig 2.1: CO-LAND Intensive Study Programme, Mangalia 2018.
Photo: Gabriel Pascariu

2
Fig 2.2: Using the online platform Adobe Connect (screenshot from the online course)

2.3
Fig 2.3 Power map (Student work: Middelkerke Team, Authors: Mana Taheri, Anna Maria Järvsalu, Maziar Bisheban. CO-LAND workshop April 2020)

2.4
Fig 2.4 CO-LAND 2018: Mangalia beach on-site activity
Photo: Gabriel Pascariu

3.1
Wiek, A., Bernstein, M., Foley, R., Cohen, M., Forrest, N., Kuzdas, C., Kay, B., & Withycombe Keeler, L. (2015). Operationalising competencies in higher education for sustainable development.

In: Barth, M., Michelsen, G., Rieckmann, M., Thomas, I. (Eds.) (2015). Handbook of Higher Education for Sustainable Development. Routledge, London. pp. 241-260.

3.2
Steinitz, C. (1990), A Framework for Theory Applicable to the Education of Landscape Architects (and Other Environmental Design Professionals), Landscape Journal, vol. 9, no. 2, CELA/ University of Minnesota, pp. 136-143.

Fig 3.1 Six questions to ask. (Source: Carl Steinitz)

3.3
Fig 3.2 Online disemmination of the course. Screenshot from the online course.

Fig 3.3 International interdisciplinary group of students bonding during the intensive study programmes. Photo: Ingrid Schegk

Image on spread, The case of coastal landscapes, from spatial challenge to curriculum design:
Tallinn beach, Photo: Ingrid Schegk

Fig 4.1 Teaching team visits CO-LAND site: DePanne, Belgium, 2019 Photo: Gabriel Pascariu

4
Fig 4.2 The United Nations Sustainable Development Goals. Source: https://www.un.org/sustainabledevelopment/news/communications-material/

Fig 4.3 Aggregate potential impact of climate change. Source: https://www.espon.eu/climate-2012

p.36, quote on sea-level rise: https://ec.europa.eu/clima/policies/adaptation/how_en

Fig 4.4 Wintertime port, Mangalia.
Photo: Ingrid Schegk

5
P.40: Fig 5.1: Zandmotor seen from the north 21 july 2015-07-21-452" by Zandmotor is marked with CC PDM1.0

P.41:
Bodde, W. et al. 2019. Innovatieproject Hondsbossche Duinen: eindrapportage, definitief 0.1ECOSHAPE def 0.1 / Wageningen

Marine Research Rapport nr.C002/19. Luijendijk, A. & A. van Oudenhoven (eds), 2019.

The Sand Motor: A Nature-Based Response to Climate Change, Findings and Reflections of the interdisciplinary research program

NatureCoast. Publisher Delft University Publishers, TU Delft Library, NUR 950, ISBN 978-94-6384-021-7.

Websites: Atelier Kustkwaliteit, 2013, http://www.hnsland.nl/nl/projects/atelier-kustkwaliteit. Deltaprogramma, 2017,

https://deltaprogramma2017.deltacommissaris.nl/viewer/publication/1/1-delta-programme-.html. Sand Engine, 2016,

https://publicwiki.deltares.nl/display/BTG/Sand+nourishment+-+Sand+Engine+Delfland%2C+North+Sea%2C+NL

Monitoring of the New Hondsbossche Dunes, 2019, https://www.dezandmotor.nl/en/research/results-after-five-years/,

https://youtu.be/m1H-58W7QDk

Fig 5.2: The BlueHealth DST is an online tool used to assess the risks and benefits of blue spaces. Source: https://www.bluehealth2020.eu

Fig 5.3: DePanne beach, Belgium 2020
Photo: Didier Vancutsem

6.2
A
A.1
International Policy Documents, Guidance Reports + Frameworks

United Nations: Sustainable Development Goals (SDGs) https://www.un.org/sustainabledevelopment/sustainable-development-goals/

UN-HABITAT: New Urban Agenda http://habitat3.org/wp-content/uploads/NUA-English.pdf

UN-HABITAT: International Guidelines on Urban and Territorial Planning https://unhabitat.org/books/international-guidelines-on-urban-and-territorial-planning

UN-HABITAT: Guiding Principles for City Climate Action Planning https://unhabitat.org/books/guiding-principles-for-climate-city-planning-action

UN-HABITAT: Planner for Climate Change https://unhabitat.org/wp-content/uploads/2018/07/Planner-for-Climate-Action-Communiqu%C3%A9.pdf

European Policy Documents, Guidance Reports + Frameworks

Council of Europe The European Landscape Convention https://www.coe.int/en/web/landscape/the-European-landscape-convention

EU Water and Marine Policy

European Commission Water Framework Directive http://ec.europa.eu/environment/water/water-framework

European Commission Marine Strategy Framework Directive http://ec.europa.eu/environment/marine/eu-coast-and-marine-policy/marine-strategy-framework-directive/index_en.htm

European Commission Maritime Spatial Planning https://ec.europa.eu/maritimeaffairs/policy/maritime_spatial_planning_en

European Commission Maritime Spatial Planning European Strategy for more Growth and Jobs in Coastal and Maritime Tourism https://ec.europa.eu/maritimeaffairs/policy/maritime_spatial_planning_en

European Commission Integrated Coastal Management http://ec.europa.eu/environment/iczm/index_en.htm

Fig 6.1 European key documents introduced in the online seminar

A.2

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Fig 6.12 What is your main project intervention? Duration: 5-10 minutes. Author: J. Balicka

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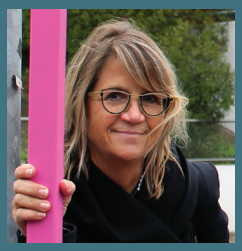

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The CO-LAND team at the kick-off meeting in Bucharest, 2017

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CO-LAND Intensive Study Programme, Mangalia 2018

Photo: Ellen Fetzer

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