

ACTIVITY: Workshop3_TORNIO RIVER VALLEY_PILOT LANDSCAPE

DATE and TIME: 8.10.2019, 12:30 -16:00

PLACE: Bothnian Business house (meetingroom Kaari), Pakkahuoneenkatu 1, Tornio

ORGANIZERS:

- Juanjo Galan / Aalto University
- Sampo Kangastalo/ Tornio city
- Kirsi Hutri-Weintraub / Aalto University

PARTICIPANTS (12+2):

- Niina Karjalainen / ELY
- Katri Hendriksson / Lapland's school for applied sciences
- Sampo Kangastalo/ Tornio city
- Aapo Mäenpää / Tornio city
- Virve Sallialmi / Transboundary River Commission
- Pekka Pelttari / Tornio, fishing, Karunki
- Minna Heljala / Museum of Tornio river valley
- Robert Ekholm / Haparanda City
- Sofia Rosendahl /Haparanda municipality
- Martti Isto / MTK-Tornio, farmer
- Teija Ylimartimo / Museum of Tornio river valley
- Anne-Mari Söderström / MTK-Tornio (farmer)
- *Juanjo Galan / Aalto University*
- *Kirsi Hutri-Weintraub / Aalto University*

KEY OBJECTIVES and EXPECTED OUTCOMES of THE ACTIVITY (expected outcomes):

- Co-definition of key contents for a potential LACAP (Landscape Adaptation Plan for Climate Change) for the Tornio river valley (values to promote, goals to achieve, impacts to address, opportunities to consider, solutions & actions to propose, barriers to overcome)
 - Co-definition of a process for the definition of the potential LACAP and co-identification of required actors
 - Co-definition of next steps in the Tornio river valley and future works of the constituted Local Network
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AGENDA:

12:30 – 12:35 Welcome words – *Sampo Kangastalo (Tornio city) and Juanjo Galan & Kirsi Hutri-Weintraub (Aalto University)*

12:35 – 12:40 Presentation of participants

12:40 – 12:55 Results of the WORKSHOP 2 – *Juanjo Galan (Aalto University)*

12:55 – 13:10 Towards a Climate-KIC Demonstrator and a LACAP (Landscape Adaptation plan to Climate Change) – *Juanjo Galan (Aalto University)*

- What can be a LACAP? Examples of other Strategic Plans (Partners & Roles / Topic & Goals / Phases / Schedule / Outputs)
- Key contents of an application for a Climate-KIC Demonstrator: Table of Contents & Key ideas; possible ways to contribute

13:10 – 13:30 Key findings and opportunities of the AELCLIC project in relation to the City Plans of Tornio & Haparanda – *Sampo Kangastalo (Tornio City)*

- Suggestions for a future LACAP?

13:30 – 15:45 Teamwork around a big table + coffee (2 hours, approximately 20 min/task)

- TASK1: WHAT: Main Values, Key Goals & Themes/Topics (+ some IMPACTS & SOLUTIONS/ACTIONS) for a potential LACAP
- TASK2: Structure of a potential LACAP
- TASK2: HOW: Process, Key phases and schedule (e.g. identification and involvement of key stakeholders, analysis and diagnosis of critical issues, development of strategies & plan, definition of pilot actions...)
- TASK3: WHO: Partners: Possible distribution of roles, duties, contributions, etc.
- TASK5: Critical diagnosis of the existing Local Network and its capacity to promote the development of a Demonstrator application and a LACAP (administrative, financial, social, scientific)
- TASK6: Celebrating the end of the AELCLIC_pathfinder in Tornio

15:45 – 16:00 Summary and conclusions

1. WELCOME

- Welcoming words by Juanjo Galan (Aalto University), Sampo Kangastalo (City of Tornio), and Kirsi Hutri-Weintraub (Aalto University)

2. PRESENTATION OF PARTICIPANTS

NAME OF CONTACT	INSTITUTION	TYPE
Sampo Kangastalo	Tornio City	REGIONAL/LOCAL ADMINISTRATION
Aapo Mäenpää	Tornio City	REGIONAL/LOCAL ADMINISTRATION
Sofia Rosendahl	Haparanda City	REGIONAL/LOCAL ADMINISTRATION
Robert Ekholm	Haparanda City	REGIONAL/LOCAL ADMINISTRATION
Niina Karjalainen	ELY-centre	REGIONAL/LOCAL ADMINISTRATION
Minna Heljala	The Museum of Tornio Valley	PUBLIC BODY
Teija Yli-Martimo	The Museum of Tornio Valley	PUBLIC BODY
Virve Sallialmi	Transboundary river commission	PUBLIC BODY
Katri Hendriksson	Lapland University of Applied Sciences	RESEARCH
Anne-Mari Söderström	MTK	ECONOMY SECTOR
Martti Isto	Farmer	ECONOMY SECTOR
Pekka Pelttari	Fishers/Tornio City	ECONOMY SECTOR

CONCLUSIONS:

- The local network remains stable and all the required sectors are represented (governmental, economic, social and academic). However, the number of participants has decreased in this last workshop and the presence of civil/societal institutions, local businesses, and companies from the industry and energy sector needs to be reinforced.

3 RESULTS of the WORKSHOP2

- Juanjo Galan (Aalto University) summarizes the results of the WORKSHOP2 and the evolution of the AELCLIC-Pathfinder project in the 3 Pilot Landscapes located in Finland.

TOPIC 1: NATURE AND BIODIVERSITY

1) IMPACTS

- 1.1. SEASONAL CHANGES, SNOW, SOILS AND RIVER: Run-off and impact in water quality, Reduction of snow cover and effect in permanent frost (routa) / no permanent frost, No more distinct seasons, the river may stay unfrozen even in the winter
- 1.2. ECOLOGY AND ECOSYSTEMS: Arctic species are receding, Distribution areas of plants will change, Forest growth accelerates
- 1.3. ALIEN SPECIES, DISEASES AND PESTS

- 1.4. FISHES: Survival of salmonids
 - 1.5. REINDEERS: Reindeer food, pasture of lichens
- 2) OPPORTUNITIES
- 2.1 AGRICULTURE & FORESTRY: The growing season is getting longer, New crops, Forest growth is accelerating
 - 2.2 RESTORATION OF RIVER BASIN AND RURAL OPENESS: restoration of the river basin, Rural openness will be restored
 - 2.3 NEW CLIMATE AND REDISTRIBUTION OF SPECIES
- 3) SOLUTIONS
- 3.1. ELECTION OF CROPS, TECHNIQUES AND MACHINES
 - 3.2. SUPPLEMENTARY FEEDING FOR REINDEERS
 - 3.3. SEAL HUNTING
 - 3.4. CONTROL OF ALIEN SPECIES
- 4) BARRIERS
- 4.1. REGULATIONS /RESTRICTIONS FOR FISHING
 - 4.2. SMALL FARMS
 - 4.3. LACK OF RESOURCES

TOPIC 2: SUSTAINABLE ECONOMY & TRADES

1) IMPACTS

- 1.1. AGRICULTURE & FORESTRY: More flexibility in farming (changes in crop varieties or harvest season depending on weather conditions), Pests / attacks, Forestry - pests, storms, soft, wet forestland and roads, harvest/cutting time shortens
- 1.2. NEW CLIMATIC CONDITIONS: Less seasonal changes: warmer summers and winters, also the soil and its vegetation and organisms will change..
- 1.3. INFRASTRUCTURES & SAFETY: Damage to infrastructure / costs, The need for deepening the sea-lane is diminished due to rising sea levels, More and bigger floods
- 1.4. BUILDINGS AND CONSTRUCTION: Construction and maintenance becomes more difficult on the riverside, Regulations of construction become tighter
- 1.5. FISHING: Fish does not rise the river) / Salmon are affected by warmer water
- 1.6. TOURISM: Fishing tourism?, Less winter tourism?

2) OPPORTUNITIES

- 2.1. TOURISM: "Cooling" tourism, Summer travel >> incomes
- 2.2. GREEN ECONOMY: Green trades, "new" business and existing ones, Agriculture increases >> open landscape

3) SOLUTIONS

- 3.1. RESEARCH
- 3.2. REDUCE EMISSIONS OF SUBSTANCES HAZARDOUS TO THE ENVIRONMENT
- 3.3. REDUCE NUTRIENT RUNOFF: LANDS, SWAMPS, FORESTS, AGRICULTURE > DITCHES, TECHNOLOGY
- 3.4. ENVIRONMENTAL FRIENDLY BIOLOGICAL CONTROL METHODS
- 3.5 AGRICULTURE NEEDS INFORMATION ON NEW CROPS AND THEIR POSSIBILITIES (CROP/HECTARE) + EU REGULATION TO BE MORE FLEXIBLE IN ORDER TO MAKE CHANGES POSSIBLE DURING THE HARVEST SEASON

4) BARRIERS

- 4.1. LACK OF RESOURCES, FOR EXAMPLE FINANCING
- 4.2. EU DIRECTIVES

TOPIC 3: CULTURAL ENVIRONMENT, PEOPLE AND WAYS OF LIVING (LIFE IN THE NORTH)

1) IMPACTS

- 1.1. LANDSCAPE CHANGES: RIVER, FARMING, ROADS, BUILDINGS: New construction techniques required, Built places/buildings to high places, Damage in roads, Impacts in farming, shorter snow season and the river may stay unfrozen even in the winter
- 1.2. WAYS OF LIVING, TOURISM AND WARMER SUMMERS: Change in fish species: tourism, diet, hobby, changes in daily activities: walking, living, dressing, The ski season becomes shorter – a horrible idea
- 1.3. HEALTH & SAFETY: Floods, Diseases and pests, more slippery streets and paths, Snow season shortens - The amount of light does not increase - mental nausea
- 1.4. PEOPLE & SOCIO-CULTURAL STRUCTURE: Immigration?, Languages and dialects as nature information (meä-language, Saami), Climate refugees >> multicultural environment

- 1.5 DOUBTS: TIME SCALE AND SPEED OF CHANGE: What is the time scale?, risk of taking absurd decisions, changes have also occurred in Finland due to climate change.
- 2) OPPORTUNITIES
 - 2.1 PEOPLE & SOCIO-CULTURAL STRUCTURE: Climate refugees >> population growth and more multicultural environment
 - 2.2. SUMMER TOURISM: Summer travel >> incomes and new infrastructures
 - 2.3. ECONOMIC DEVELOPMENT: Agriculture increases >> open landscape
- 3) SOLUTIONS
 - 3.1 FLOOD WALLS
 - 3.2. BIOLOGICAL PEST CONTROL
 - 3.3. ARTIFICIAL SPAWNING PLACES
 - 3.4. ELIMINATION OF ALIEN SPECIES
 - 3.5. PROVISION: STRATEGY, MORE EUROPEAN CO-OPERATION, OPENNESS
 - 3.6. TRAVELLING OVER LAND
 - 3.7. DEVELOPMENT OF TRAIN SERVICES
- 4) BARRIERS
 - 4.1. MONEY & RESOURCES
 - 4.2. ENDLESS TASKS
 - 4.3. POLITICS

TOPIC 4: WATER SYSTEMS, FLOODS AND TORNIO RIVER

- 1) IMPACTS
 - 1.1. FLOODS AND DAMAGES: Erosion of the river banks, floods become more extreme and unpredictable, Beach construction becomes more difficult
 - 1.2. WATER QUALITY, QUANTITY & DROUGHTS: Nutrient runoff >> water quality, Water supply, drinking water, clean water, Regional drought
 - 1.3. RIVER ECOSYSTEMS & FISHING: Water temperature rises >> e.g. ice formation, Less fishing, Less biodiversity is changing., more alien species
 - 1.4. INFRASTRUCTURES: Damages in existing infrastructure, water and wastewater management
- 2) OPPORTUNITIES
 - 2.1 LESS ICE FLOODS & MORE FLOOD CONTROL
 - 2.2. HYDROPOWER AND NEW TECHNOLOGIES: Floating constructions, Flood power station, New innovations and technologies
 - 2.3. RIVER ECOSYSTEMS AND FISHING: More fishing, new biodiversity?
 - 2.4. RECREATION: The bathing season becomes longer
 - 2.5 NUTRIENTS AND SOIL FERTILITY
- 3) SOLUTIONS
 - 3.1. DEVELOPMENT OF (TOURISM) TRADE
 - 3.2. DEVELOPMENT OF ENVIRONMENTAL PROGRAMS
 - 3.3. AGRICULTURE
 - 3.4. PROTECTION OF RIVER SIDES + FLOOD CONTROL
 - 3.5. WATER AND WASTE WATER MANAGEMENT
 - 3.6. STORM WATER CONTROL/DELAY
 - 3.7. NEW INNOVATIONS & TECHNOLOGIES
- 4) BARRIERS
 - 4.1. MONEY
 - 4.2. POLITICS
 - 4.3. REACTION SPEED
 - 4.4. NORMS
 - 4.5. SLOWNESS

4.1 TOWARDS A CLIMATE-KIC DEMONSTRATOR AND A LANDSCAPE ADAPATION PLAN TO CLIMATE CHANGE (LACAP) FOR THE TORNIO RIVER VALLEY? (Juanjo Galan, Aalto University)

- Short lecture about the differences between Climate Change ADAPTATION and MITIGATION
- Short lecture about the basic contents and structure of a typical Strategic Plan



- Short introduction about the contents and structure of one application for a CLIMATE-KIC Demonstrator (possible future step for the AELCLIC in the Tornio river valley?).

4.2. Strategic Plans for the City of Tornio (Sampo Kangastalo (Town of Tornio)).

- Sampo Kangastalo (Town of Tornio) explains the connections between the AELCLIC project and the Strategic Plan of Tornio. Sampo also suggests some potential topics to be addressed in the AELCLIC project.



5 TEAMWORK

5.1. TASK 1: WHAT? – Main Values, Key Goals & Themes/Topics (+ some IMPACTS & SOLUTIONS/ACTIONS) for a potential LACAP

- For task 1 there was a poster made beforehand with the goal/objective of the AELCLIC project (A) and values, goals, themes, impacts, opportunities, solutions and barriers identified earlier in the AELCLIC-workshops 1 & 2 (A). In addition, the included also the most important values, goals and topics/themes of the strategy of Tornio city (TOR) and Tornio-Haaparanta vision 2021 (TOR-HAP).
- The participants made a critical revision of all the included Values, Goals, Themes/Topics, Impacts, Opportunities, Solutions and Barriers.

STEP1: Inputs from the 3 documents framing the Workshop3 of the AELCLIC project in Tornio:

	VALUES	GOALS	THEMES	IMPACTS	OPPORTUNITIES	SOLUTIONS	BARRIERS
From AELCLIC WORKSHOPS 1+2	<ul style="list-style-type: none"> OPEN- AND NATURAL LANDSCAPE SEA BETWEEN BORDERS RIVER & WATER TOWNS & VILLAGES CULTURE & NATURE LIVING IN THE FAR NORTH 	<ul style="list-style-type: none"> DEFINING A NETWORK OF LOCAL STAKEHOLDERS (AELCLIC-PROJECT) 	<ul style="list-style-type: none"> Topic1: NATURE AND BIODIVERSITY Topic2: SUSTAINABLE ECONOMY Topic3: CULTURAL ENVIRONMENT, PEOPLE AND WAYS OF LIVING (LIFE IN THE NORTH) Topic4: WATER SYSTEM, FLOODS AND TORNIO RIVER 	<p>On Topic1: NATURE AND BIODIVERSITY:</p> <ul style="list-style-type: none"> SEASONAL CHANGES, SNOW, SOILS AND RIVER ECOLOGY AND ECOSYSTEMS ALIEN SPECIES, DISEASES AND PESTS REINDEERS FISHES <p>On Topic2: SUSTAINABLE ECONOMY:</p> <ul style="list-style-type: none"> AGRICULTURE & FORESTRY INFRASTRUCTURES & SAFETY BUILDINGS AND CONSTRUCTION: TOURISM FISHING <p>On Topic3: CULTURAL ENVIRONMENT, PEOPLE AND WAYS OF LIVING (LIFE IN THE NORTH):</p> <ul style="list-style-type: none"> LANDSCAPE CHANGES: RIVER, FARMING, ROADS, BUILDINGS WAYS OF LIVING, TOURISM AND WARMER SUMMERS DOUBTS: TIME SCALE AND SPEED OF CHANGE PEOPLE & SOCIO-CULTURAL STRUCTURE HEALTH & SAFETY <p>On Topic4: WATER SYSTEM, FLOODS AND TORNIO RIVER:</p> <ul style="list-style-type: none"> FLOODS AND DAMAGES WATER QUALITY, QUANTITY & DROUGHTS RIVER ECOSYSTEMS & FISHING INFRASTRUCTURES 	<p>On Topic1: NATURE AND BIODIVERSITY:</p> <ul style="list-style-type: none"> AGRICULTURE & FORESTRY RESTORATION OF RIVER BASIN AND RURAL OPENNESS NEW CLIMATE AND REDISTRIBUTION OF SPECIES <p>On Topic2: SUSTAINABLE ECONOMY:</p> <ul style="list-style-type: none"> GREEN ECONOMY TOURISM <p>On Topic3: CULTURAL ENVIRONMENT, PEOPLE AND WAYS OF LIVING (LIFE IN THE NORTH):</p> <ul style="list-style-type: none"> PEOPLE & SOCIO-CULTURAL STRUCTURE SUMMER TOURISM ECONOMIC DEVELOPMENT <p>On Topic4: WATER SYSTEM, FLOODS AND TORNIO RIVER:</p> <ul style="list-style-type: none"> NEW TECHNOLOGIES LESS ICE DAM FLOODS & MORE FLOOD CONTROL RECREATION NUTRIENTS AND SOIL FERTILITY RIVER ECOSYSTEMS AND FISHING 	<p>For Topic1: NATURE AND BIODIVERSITY:</p> <ul style="list-style-type: none"> SELECTION OF CROPS, TECHNIQUES AND MACHINES PROTECTION OF RIVER SIDES + FLOOD CONTROL SUPPLEMENTARY FEEDING FOR REINDEERS SEAL HUNTING CONTROL OF ALIEN SPECIES <p>For Topic2: SUSTAINABLE ECONOMY:</p> <ul style="list-style-type: none"> RESEARCH AIM TO REDUCE EMISSIONS OF SUBSTANCES HAZARDOUS TO THE ENVIRONMENT REDUCE NUTRIENT RUNOFF: LANDS, SWAMPS, FORESTS, AGRICULTURE - DITCHES, TECHNOLOGY ENVIRONMENTAL FRIENDLY BIOLOGICAL CONTROL METHODS AGRICULTURE NEEDS INFORMATION ON NEW CROPS AND THEIR POSSIBILITIES (CROP/HECTARE) + EU-REGULATION TO BE MORE FLEXIBLE IN ORDER TO MAKE CHANGES POSSIBLE DURING THE HARVEST SEASON ARTIFICIAL SPAWNING PLACES <p>For Topic3: CULTURAL ENVIRONMENT, PEOPLE AND WAYS OF LIVING (LIFE IN THE NORTH):</p> <ul style="list-style-type: none"> FLOOD WALLS DEVELOPMENT OF TRAIN SERVICES TRAVELLING OVER LAND PROVISION: STRATEGY, MORE EUROPEAN CO-OPERATION, OPENNESS ELIMINATION OF ALIEN SPECIES BIOLOGICAL PEST CONTROL <p>For Topic4: WATER SYSTEM, FLOODS AND TORNIO RIVER:</p> <ul style="list-style-type: none"> DEVELOPMENT OF (TOURISM) TRADE NEW INNOVATIONS & TECHNOLOGIES DEVELOPMENT OF ENVIRONMENTAL PROGRAMS WATER AND WASTE WATER MANAGEMENT AGRICULTURE STORM WATER CONTROL/DELAY 	<ul style="list-style-type: none"> POLITICS ENDLESS TASKS MONEY & RESOURCES LACK OF RESOURCES, FOR EXAMPLE FINANCING REGULATIONS /RESTRICTIONS FOR FISHING SMALL FARMS LACK OF RESOURCES EU DIRECTIVES MONEY POLITICS REACTION SPEED NORMS SLOWNESS
From TORNIO CITY STRATEGY	<ul style="list-style-type: none"> SAFETY CONTINUOUS RENEWAL CUSTOMER ORIENTED APPROACH SUSTAINABILITY TRANSPARENCY 	<ul style="list-style-type: none"> CULTURE INFRASTRUCTURE BUSINESS AND TOURISM VITALITY OF TORNIO RIVER VALLEY INTERNATIONAL TWIN CITY CREATIVITY FUNCTIONAL CITY GROUP HAPPY AND ENGAGED RESIDENTS FUNCTIONAL AND INNOVATIVE SERVICES ATTRACTIVE BORDER CITY FUNCTIONAL = SUSTAINABLE: ENVIRONMENT, SOCIAL/COMMUNITY, CULTURE, ECONOMY CIRCULAR ECONOMY SUSTAINABLE TOURISM FISHING LAND USE AND FLOODS DENSE URBAN STRUCTURE 	<ul style="list-style-type: none"> TWIN CITY BY THE RIVER, THE SEA AND THE ARCHIPELAGO HABITS AND STORIES BORDER OF LIGHT AND DARKNESS STARTING POINT OF LAPLAND'S TOURIST EXPERIENCES 				
From TORNIO-HAAPARANTA -VISION 2021		<ul style="list-style-type: none"> EDUCATION & KNOWLEDGE 	<ul style="list-style-type: none"> SUSTAINABLE ENVIRONMENT DYNAMIC ENTREPRENEURSHIP AND BUSINESS LOGISTIC CENTER BORDERLESS EDUCATION LAND USE FLOOD PROTECTION EXCITING SHOPPING AND VISITING STOP SUSTAINABLE ENERGY 				



STEP2: CO-DEFINITION OF KEY LOCAL ATTITUDES, VALUES, GOALS, THEMES, IMPACTS, OPPORTUNITIES, SOLUTIONS AND BARRIERS FOR CLIMATE CHANGE ADAPTATION IN THE TORNIO RIVER VALLEY (LIST INFORMED BY AELCLIC-workshops 1 & 2 (A), by the strategy of Tornio city (TOR), by the Tornio-Haaparanta vision 2021 (TOR-HAP) and by NEW proposals (NEW):

VALUES	GOALS	THEMES	IMPACTS	OPPORTUNITIES	SOLUTIONS	BARRIERS
<ul style="list-style-type: none"> ON THE PEACEFUL BORDER IN THE NORTH (A+NEW) CULTURE AND NATURE (A) TRANSPARENCY (TOR) SUSTAINABILITY (TOR) SAFETY (TOR) 	<ul style="list-style-type: none"> WORKING WITH LOCAL STAKEHOLDERS (A) CIRCULAR ECONOMY (TOR) EDUCATION AND KNOWLEDGE (TOR-HAP) FUNCTIONAL = SUSTAINABLE: ENVIRONMENT, SOCIAL/COMMUNITY, CULTURE, ECONOMY (TOR) PROMOTING AGRICULTURAL ACTIVITY (NEW) 	<ul style="list-style-type: none"> TWIN CITY BY THE RIVER, THE SEA AND THE ARCHIPELAGO (TOR) CULTURAL ENVIRONMENT, PEOPLE AND WAYS OF LIVING (LIFE IN THE NORTH) (A) WATER SYSTEM, FLOODS AND TORNIO RIVER (A) SUSTAINABLE ECONOMY (A) SUSTAINABLE ENVIRONMENT (TOR-HAP) IMPROVING ENERGY PRODUCTION AND USE (NEW) 	<p>On TWIN CITY BY THE RIVER, THE SEA AND THE ARCHIPELAGO</p> <ul style="list-style-type: none"> Tourism (A) <p>On CULTURAL ENVIRONMENT, PEOPLE AND WAYS OF LIVING (LIFE IN THE NORTH)</p> <ul style="list-style-type: none"> Energy (A) People & socio-cultural structure (A) Ways of living, tourism and warmer summers (A) <p>On WATER SYSTEM, FLOODS AND TORNIO RIVER</p> <ul style="list-style-type: none"> Health & safety (A) Floods and damages (A) Seasonal changes, snow, soils and river (A) Buildings and construction (A) Doubts: time scale and speed of change (A) Ecology and ecosystems (A) <p>On SUSTAINABLE ECONOMY AND ENVIRONMENT</p> <ul style="list-style-type: none"> Agriculture & forestry (A) Fishes (A) Fishing (A) Water quality, quantity & droughts (A) Alien species, diseases and pests (A) River ecosystems & fishing (A) Landscape changes: river, farming, roads, buildings (A) <p>On IMPROVING ENERGY PRODUCTION AND USE</p> <ul style="list-style-type: none"> Infrastructures & safety (A) 	<p>In TWIN CITY BY THE RIVER, THE SEA AND THE ARCHIPELAGO</p> <ul style="list-style-type: none"> Summer tourism (A) <p>In CULTURAL ENVIRONMENT, PEOPLE AND WAYS OF LIVING (LIFE IN THE NORTH)</p> <ul style="list-style-type: none"> New climate and redistribution of species (A) Agriculture & forestry (A) Restoration of river basin and rural openness (A) Tourism (A) Recreation (A) People & socio-cultural structure (A) <p>In WATER SYSTEM, FLOODS AND TORNIO RIVER</p> <ul style="list-style-type: none"> Less ice dam floods & more flood control (A) River ecosystems and fishing (A) <p>In SUSTAINABLE ECONOMY AND ENVIRONMENT</p> <ul style="list-style-type: none"> Green economy (A) More nutrients and soil fertility (A) <p>In IMPROVING ENERGY PRODUCTION AND USE</p> <ul style="list-style-type: none"> Economic development (A) New technologies (A) 	<ul style="list-style-type: none"> Land use and construction management and control > sustainable and conserving building (NEW) Reduction of the emissions of substances hazardous to the environment (A) Improved Agriculture (A) Research (A) Storm water control/delay (A) Flood walls (A) Protection of river sides (A) Flood control (A) Development of environmental programs (A) Incentives, taxation, certification for industry and other companies (NEW) 	<ul style="list-style-type: none"> Politics (A) EU-directives (A) Regulations /restrictions for fishing and agriculture (A+NEW) Lack of resources, new ideas (A+NEW) New thinking and people, young people needed! (NEW) Money and resources, lack of time (A+NEW) Weak involvement of private and public sector (NEW) Are we missing our culture identity? (NEW) Existing structures and systems (for ex. the fossil fuels) (NEW)

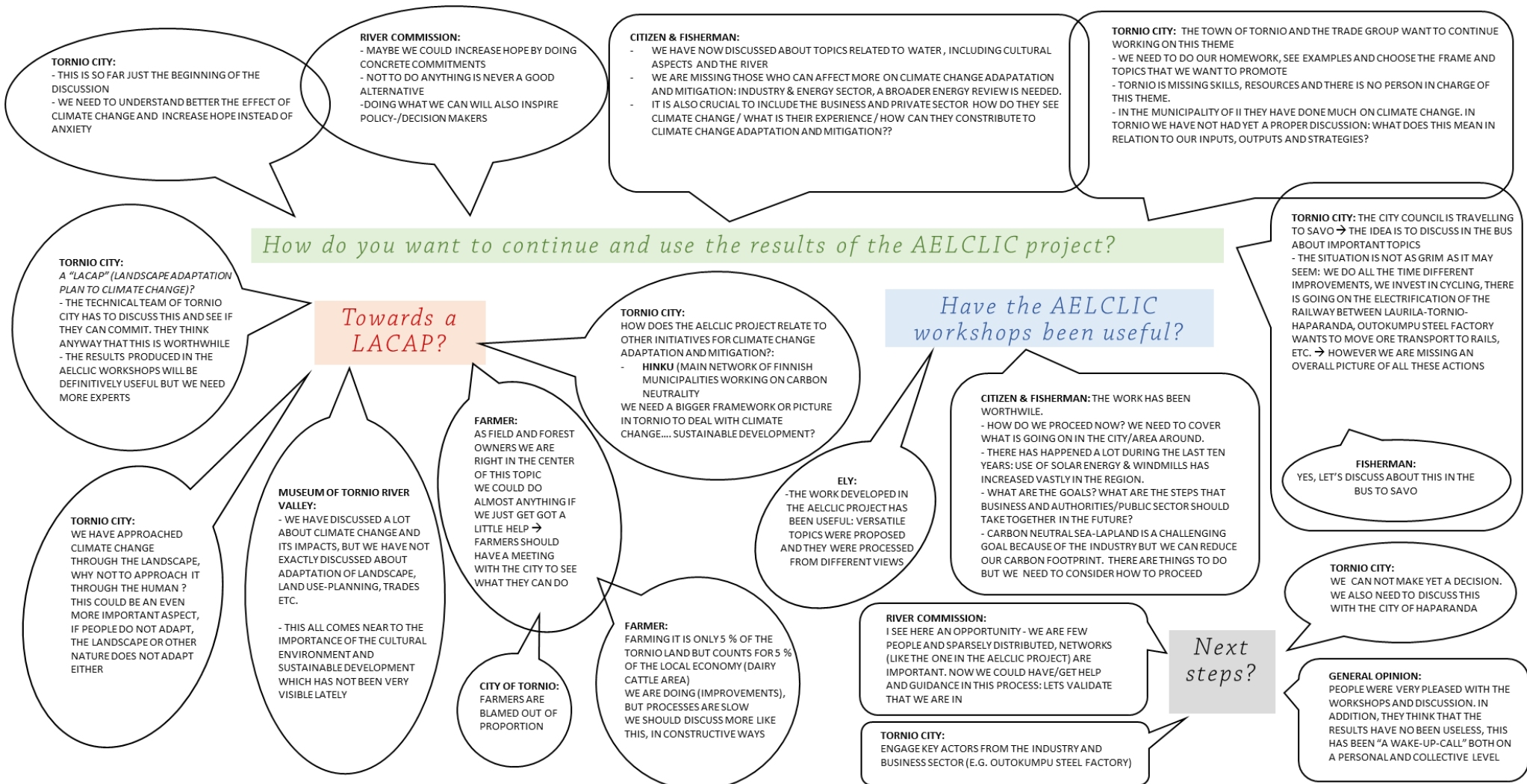


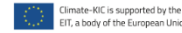
5.2. TASK 2: Structure of a potential LACAP: This task involved a deep synthesis of the information generated in the TASK1

PRELIMINARY CONTENTS for a potential LANDSCAPE ADAPTATION PLAN FOR CLIMATE CHANGE in the Tornio River Valley



5.3. TASK 3+4+5: Discussion about how to continue working with Climate Change Adaptation within the Tornio local network generated during the AELCLIC-Pathfinder project:





5.4 TASK 6: Defining next steps

- The results of the AELCLIC workshops were found useful and the City of Tornio and the Tornio local network might discuss in the future (with more time and information), how to continue working on climate change adaptation
- Some essential economic actors were missing (e.g. industry and energy sector) and more specific information /studies are needed. It would be essential to include climate change adaptation/mitigation in a broader regional or local framework: (Sustainable/Resilient Tornio?)
- the AELCLIC project has provided an open and transparent platform for discussion and some economic/social sectors were especially pleased with that
- all the materials produced in the AELCLIC workshops are public and will be fully available for the Tornio local network
- The Tornio local network designates the cities of Tornio (Finland) and Haparanda (Sweden) to lead the network in possible future actions within the AELCLIC (CLIMATE_KIC) project. Sampo Kangastalo and Göran Wigren would be their contact persons
- Sampo and Göran will be invited to the international meeting that will take place on the 13th of November in Bologna (Italy) in which all the representatives of the AELCLIC pilot landscapes will explore different options to continue working on climate change adaptation (one of that options might be to develop a LACAP (Landscape Adaptation Plan to Climate Change) with CLIMATE-KIC funding or with other sources of funding.
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SUMMARY:

- **Key CONCLUSIONS, Key DECISIONS and NEXT ACTIONS (By Whom and When):**
- CONNECTIONS WITH OTHER PLANS & PROGRAMMES: The AELCLIC project in Tornio is now more aligned with the **strategy of Tornio city and the Tornio-Haparanta vision 2021**. This alignment was based in the combination of the Values, Goals, Themes and Actions promoted by all these plans and in the subsequent definition of the structure of a future LACAP (Landscape Adaptation Plan to Climate Change) for the Tornio river valley. However, it is still unclear the **geographical scope of the work** (cities of Tornio and Haparanta? Urban areas and adjacent areas, mouth and last part of the Tornio river valley?). In addition, it would be important to frame a potential Climate Change Adaptation (and Mitigation) Plan in a wider framework (local or regional Plan for Sustainable and Resilient Development?) / **ACTIONS: the towns of Tornio and Haparanta might consider how to connect the findings and proposals of the AELCLIC project with their own plans. They might also consider how the Climate Change Adaptation topic could be framed in a wider vision or plan and the regional scope for it.**
- STRUCTURE for a potential LANDSCAPE ADAPTATION FOR TO CLIMATE CHANGE (LACAP) for the Tornio river valley:
 - o The 4 strategic topics proposed in the Workshop2 were increased to 5 in order to include the Twin-City vision and to incorporate the Energy concept more clearly in the discussion. These topics were also found valid to address the Goals and Values promoted by the strategy of Tornio city and the Tornio-Haparanta vision 2021. / **ACTIONS: Use the 5 defined topics to advance in the definition of a LACAP**
 - o Most of the values, goals and themes considered for a potential LACAP were considered valid to address both Climate Change Adaptation and Mitigation but this two different challenges were not considered separately/ **ACTIONS: Differentiate more clearly in the LACAP actions and solutions for Climate Change Adaptation, Mitigation and for both (the ideal situation)**
 - o The co-defined Solutions and Barriers covered well the identified impacts and opportunities but were highly based on personal opinions. / **ACTIONS: A potential LACAP should define the most relevant Solutions after identifying more consistently the expected Impacts and Opportunities of Climate Change in the Tornio river valley. However, the AELCLIC project includes some valuable ideas and detects adequately some of the principal barriers for the development and implementation of a LACAP.**
 - o In a general level, the final table including values, goals, topics, impacts, opportunities, solutions and barriers for a potential LACAP, looks complete and consistent. This table can provide a valuable bottom-up input for the definition of the final structure of a future LACAP and is the consequence of a participation (although quite limited) process within the Tornio river valley community / **ACTIONS: the towns of Tornio and Haparanta might consider how to connect the findings and proposals of the AELCLIC project in their own strategic, spatial or sectoral plans.**
- STAKEHOLDERS in the developed Workshops: Some essential economic actors did not participate in the workshops (e.g. industry, Outokumpu steel factory and energy sector. It must be noted that there were two specific conditions that became more relevant as the workshops in Tornio progressed: the transboundary character of the landscape and the importance of the industry sector in Tornio (despite its small population, Tornio, together with Helsinki, Jämsä and Lappeeranta, is one of the four Finnish municipalities consuming more than 3TWh, basically due to the presence of the Outokumpu steel factory), *source Statistics Finland 2015*) / **ACTIONS: Incorporate these actors in further discussions**
- SCIENTIFIC EVIDENCE AND TORNIO-BASED INFORMATION: In order to advance more it would be essential to get scientific evidence supporting decision making processes / **ACTIONS: Gather and generate more site-specific information about Climate Change. It is important to remember that the AELCLIC project was not expected to generate new scientific information but to share existing one and, mostly and mainly, to generate a local debate and joint commitment between different social, economic and governmental actors.**
- NEXT STEPS: The results of the AELCLIC workshops were found useful and the City of Tornio and the Tornio local network might discuss in the future (with more time and information), how to continue working on climate change adaptation / Some essential economic actors were missing (e.g. industry and energy sector) and more specific information /studies are needed. It would be essential to include climate change adaptation/mitigation in a broader regional or local framework: (Sustainable/Resilient Tornio?) / The AELCLIC project has provided an open and transparent platform for discussion and some economic/social sectors were especially pleased with that. / All the materials produced in the AELCLIC workshops are public and will be fully available for the Tornio local network / The Tornio local network designates the cities of Tornio (Finland) and Haparanta (Sweden) to lead the network in possible future actions within the AELCLIC (CLIMATE_KIC) project. Sampo Kangastalo and Göran Wigren would be their contact persons / Sampo and Göran will be invited to the international meeting that will take place on the 13th of November in Bologna (Italy) in which all the representatives of the AELCLIC pilot landscapes will explore different options to continue working on climate change adaptation (one of that options might be to develop a LACAP (Landscape Adaptation Plan to Climate Change) with CLIMATE-KIC funding or with other sources of funding.

DIAGNOSIS:

- **Level of Achievement of the expected outcomes (from 1 (min) to 5 (maximum)):**
 - o OUTCOME 1 (Co-definition of key contents for a potential LACAP (Landscape Adaptation Plan for Climate Change) for the Hyyppä river valley (values to promote, goals to achieve, impacts to address, opportunities to consider, solutions & actions to propose, barriers to overcome)). LEVEL OF ACHIEVEMENT: 5
 - o OUTCOME 2 (Co-definition of a process for the definition of the potential LACAP and co-identification of required actors). LEVEL OF ACHIEVEMENT: This TOPIC was postponed and will be discussed internally by the AELCLIC_Tornio network.
 - o OUTCOME 3 (Co-definition of next steps in Tornio and future works of the constituted Local Network). LEVEL OF ACHIEVEMENT: This TOPIC was postponed and will be discussed internally by the AELCLIC_Tornio network.
- **Main Shortcomings or barriers for the full achievement of the expected outcomes:**
 - o The production of the OUTCOME1 was highly based in the works developed during the Workshops 1 and 2 and therefore its achievement was easier
 - o The OUTCOME2 and OUTCOME 3 were not addressed in the Workshop3. The production of these two Outcomes added a completely new task to the AELCLIC project in Tornio (process and actors to develop a Landscape Adaptation Plan to Climate Change (LACAP). Although the objective was to produce a very basic proposal, the members of the local networks considered that they needed more time and information to discuss the potential process and actors for the production of a LACAP. During the Workshop3 it was also detected that some crucial regional and local actors had not participated in the discussions (mainly from the industry and energy sector).
 - o The OUTCOME3 implied future actions out of the AELCLIC-PATHFINDER project and it was difficult for the members of the Local network to commit themselves in future actions without knowing the implication, resources and timeframes. However, the political and administrative support to the project might guarantee its continuity and the participation of the local representatives in the AELCLIC International Meeting (Bologna, 13.11.2019) will give them the possibility to reflect a little more on the OUTCOME3.
- **Main Reasons for the successful achievement of the expected outcomes:**
 - o Deep involvement and commitment of the participants
 - o Organization of tasks for the allocated time (specially tasks 1 and 2), clear guidelines and effective methods
 - o Increasing leadership of the towns of Tornio and Haparanda
 - o Critical revision and synthesis of materials produced in the Workshops 1 and 2
 - o Generation of one group for the final discussion, open and fluid final discussion
- **Learnt lessons and recommendations for similar activities in other places:**
 - o See Shortcomings and Barriers and See main reasons for the successful achievement of the expected Outcomes.
 - o The use of the Mitigation and Adaptation concepts provided a useful and fruitful lens to analyze the multiple implications of Climate Change
 - o Eliminate or keep more time for the Tasks 3, 4 (How to develop a LACAP and Who should be involved) for the Task 5 (Critical analysis of the existing local network to lead the preparation of a LACAP)
 - o Give more time for the development of the Task 6 (Next Steps)
 - o Considering the uncertainties affecting the future development of a LACAP (funding, resources, timeframes, etc) it was difficult to require the members of the local network to sign a formal or symbolic agreement. Probably, in other cultural contexts the end of the AELCLIC project could be signified or celebrated in a more official manner.
 - o It would be advisable to give to the local network the possibility to designate an official representative for future actions or ventures within the AELCLIC (Climate-KIC) project. This local representative will be in most cases be a person from the local or regional administration. That was the case in Tornio and Haparanda, where Sampo Nangastalo (and Göran Wigren) were designated for that position
- **Learnt lessons and recommendations for future activities in the same place:**
 - o After the designation of an official representative of the local network within the AELCLIC project, all the discussions and initiatives to advance towards a LACAP (e.g. funding applications) will be developed in direct collaboration with the local representative.
- **Level of influence of the local characteristics (social, geographical, etc.) in the development of the activity:**
 - o The importance of the river and its dynamics, together with the highly natural character of the area might explain the special emphasis on natural processes and productive processes associated to the natural landscape (agriculture, forestry, fishing, etc.). This remark can be probably applied to other highly natural areas but in the Tornio case, this situation might be intensified by the wild character of the Tornio River and the connection of this wild character to the local identity. However there were two specific conditions that became more relevant as the workshops in Tornio progressed: the transboundary character of the landscape and the importance of the industry sector in Tornio (despite its small population, Tornio, together with Helsinki, Jämsä and Lappeeranta, is one of the four Finnish municipalities consuming more than 3TWh, basically due to the presence of the local steel factory)