

1. TARENTAISE VALLEY (France)

AELCLIC_PATHFINDER

ADAPTATION OF EUROPEAN LANDSCAPES TO CLIMATE CHANGE



Local Network

La Haute Tarentaise (France)



Climate-KIC

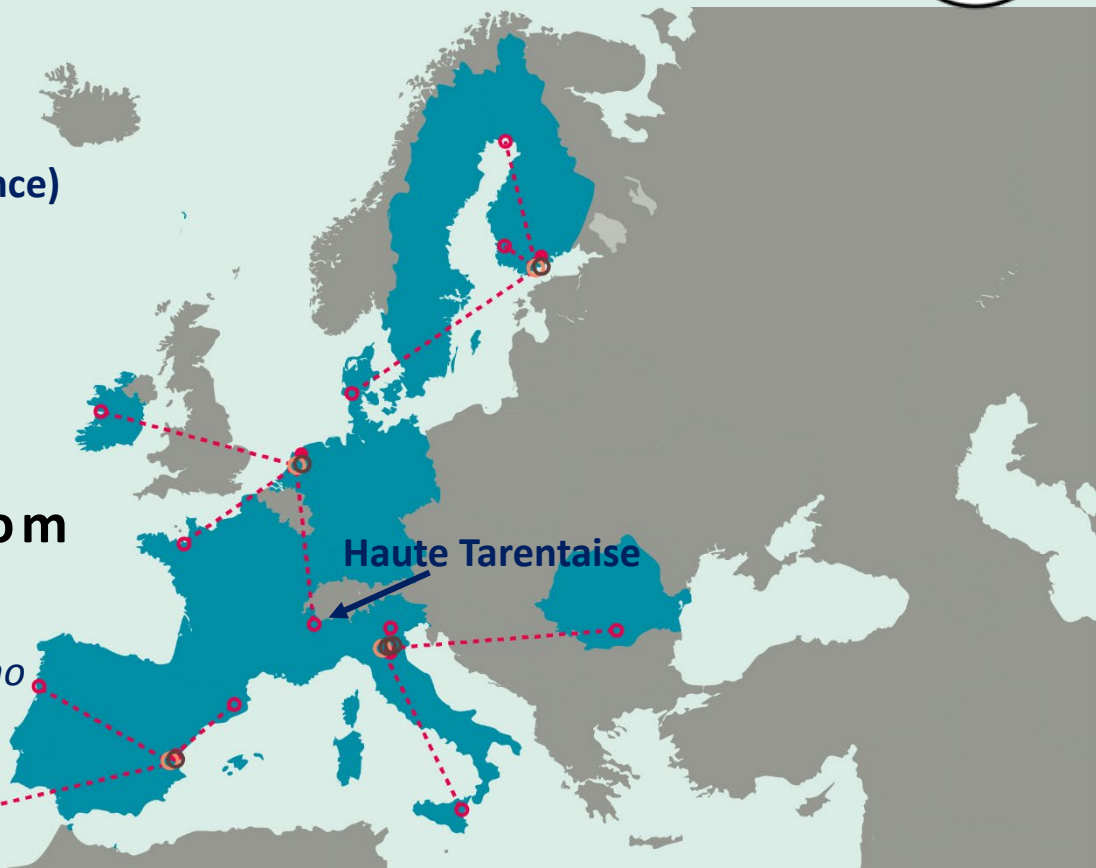


www.aelcllic.com

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The Netherlands



Climate-KIC is supported by the
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Résultats of the first Workshop (9 October 2019)

Bourg St. Maurice, Haute Tarentaise



- **Climate change is really a serious issue!**
- The first workshop focussed on a survey of:
 - phenomena related to climate change,
 - major impacts, and
 - priority challenges for the Vallée de la Haute Tarentaise.
- It is extremely difficult to foresee all consequences of climate warming,
- moreover: many interactions with socio-economic developments.
- To arrive at a balanced and sustainable future one would need an well-defined intersectoral vision of that future, to allow measures to be taken towards that future.
- Without integrated vision, the pathways towards that future cannot be assessed, and the only option is to arrive at a future that nobody has wanted.

Major issues

<i>Enjeu</i>	<i>Impacts paysage</i>	<i>Parties concernées</i>	<i>Potentiel d'adaptation</i>	<i>Enjeux liées</i>	<i>Actions envisageables</i>	
Fonte des glaciers ; insécurité de neige	<ul style="list-style-type: none"> • Rends les pentes plus fragiles • Chute des pierres • Biodiversité 	<ul style="list-style-type: none"> • Stations de ski • Guides de montagne • Touristes • Habitants 	<ul style="list-style-type: none"> • Neige de culture • Adapter les sentiers et routes d'escalade • Développer autres formes de tourisme 	<ul style="list-style-type: none"> • Compétition avec autres stations de ski • Pâturage pour mieux tenir la neige 	Vision du paysage de la Vallée à 2050	<ul style="list-style-type: none"> • Identifier les intérêts des parties prenantes • Définir des routes réalistes vers le future souhaité • Identifier des financiers potentiels • Division des subventions plus équitablement • Etc.
Sècheresse	<ul style="list-style-type: none"> • Sources et ruisseaux tarissent • L'herbe sèche plus vite • Biodiversité • Abandon des alpages et des montagnettes 	<ul style="list-style-type: none"> • Eleveurs • Habitants • Touristes 	<ul style="list-style-type: none"> • Irrigation • Déplacer les alpages vers la hauteur • Diminuer le nombre de vaches 	<ul style="list-style-type: none"> • Tourisme d'été • Patrimoine culturel 		
Augmentation de situations extrêmes météo	<ul style="list-style-type: none"> • Erosion • Inondation • Déstabilisation des sols • Chute d'arbres 	<ul style="list-style-type: none"> • Habitants • Eleveurs • Touristes 	<ul style="list-style-type: none"> • Bassins de rétention • Mesures d'ingénierie 	<ul style="list-style-type: none"> • Aménagement des services techniques 		
(non-climat) Manque de capacité de transport, particulièrement les weekends en hiver	<ul style="list-style-type: none"> • Pollution • Perte de temps • Durabilité 	<ul style="list-style-type: none"> • Habitants • Touristes • Entrepreneurs • Stations de ski 	<ul style="list-style-type: none"> • Favoriser le transport publique • Améliorer les routes • Adapter l'arrivée et départ des touristes 	<ul style="list-style-type: none"> • Gouvernance • Manque d'investissements 		

Results of the 2nd Workshop (22 October 2019)

Bourg St. Maurice, Haute Tarentaise

Participants:

- Céline Bourgeois, conseillère municipale
- Guillaume Desrues, conseiller municipal
- Marie-Thérèse Reinaudo, conseillère municipale
- Amélie Viallet, chargée de projet de développement territorial agricole
- Émeline Daumard, mairie du Val d'Isère
- Michel Giraudy, Maire de Bourg Saint Maurice
- Alexandre Daum, Office National des Forêts (ONF)
- Anthony De-righi, ONF
- Wilfried Guidet, ONF
- Vivek Kirpalani, MTB Consulting
- Cathy Naveaux, MTB Consulting
- Léonie Viallet, Coopérative Laitière



Four Priority Themes

- Transport and Energy:
 - improve accessibility through environmentally friendly means of transport
 - foster small scale local energy production (energy autonomy)
- Collaboration and landscape stewardship: build on proudness of the own landscape, ecology and diversity
- Agriculture: important motor of local identity, economy, cultural identity
- Tourism: other important motor of the economy



Actions identified (selection)

- Transport and Energy:
 - Lobby with state railway company for improved accessibility
 - Installation of local power station using local wood (and waste)
 - Electrical bike sharing
- Collaboration and landscape stewardship: build on proudness of the own landscape, ecology and diversity
 - Actively stimulating landscape stewardship by local volunteers
 - Improve participation in land use planning
 - Improve local production and marketing
- Agriculture: important motor of local identity, economy, cultural identity
 - Make maintenance of land obligatory for land owners
 - Organise land reallocation for better land management
- Tourism: other important motor of the economy
 - Better cooperation between local tourism entrepreneurs
 - Make ski resorts more environmentally friendly

Local Consortium

- Large interest from
 - Municipalities
 - Farmers (esp. the dairy cooperative)
 - Forest managers
 - Local tourist entrepreneurs



Accompagnement

La Fondation de l'Université Savoie Mont Blanc accompagne ce projet, puisque dans le cadre de la création d'une fondation partenariale, la fondation Val d'Isère serait sous leur égide.



<https://www.fondation-usmb.fr>

La fondation Val d'Isère souhaite qu'un maximum d'acteurs ou amoureux de la montagne puissent prendre part à ce projet.



2. PARC NATURAL ALT PIRINEU (Catalonia, Spain)

The AELCLIC EXPERIENCE

Pilot Landscape: Alt Pirineu Natural Park



**Parc Natural
de l'Alt Pirineu**



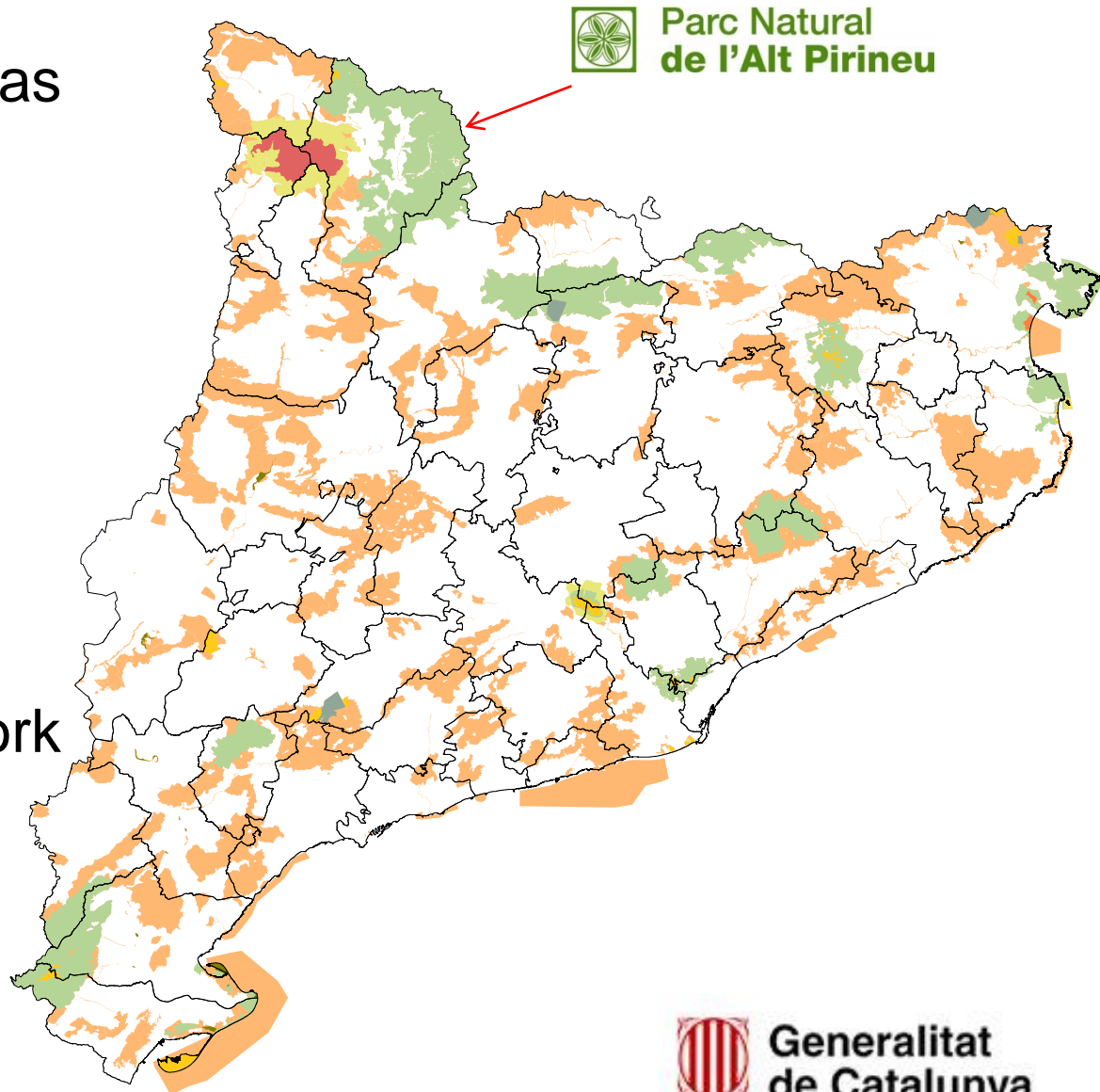
**Generalitat
de Catalunya**

The Catalan network of protected areas

Special Protection Areas

- 1 National Park
 - 13 Natural Parks
 - Natural Monuments
 - Natural and Marine Reserves
- 300.535 ha (9,4% of Catalonia)

EU Natura 2000 network
(30% of Catalonia)



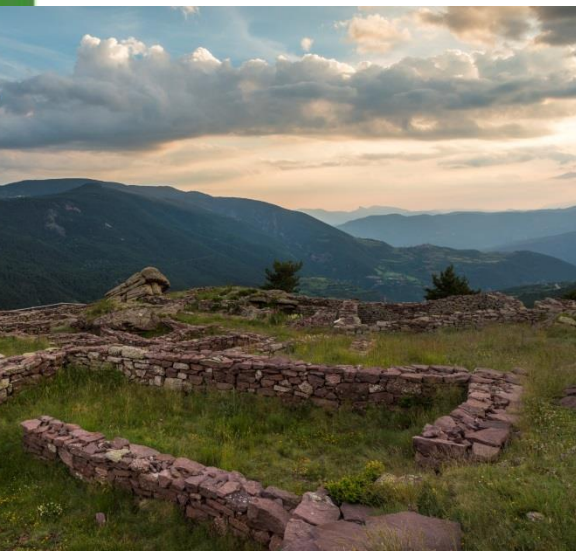
Alt Pirineu Natural Park

- Area: 79.317 ha (largest Park in Catalonia)
- Creation: 2003
- Includes 2 Natural Reserves
- 15 municipalities in 2 counties



Natural Park Objectives

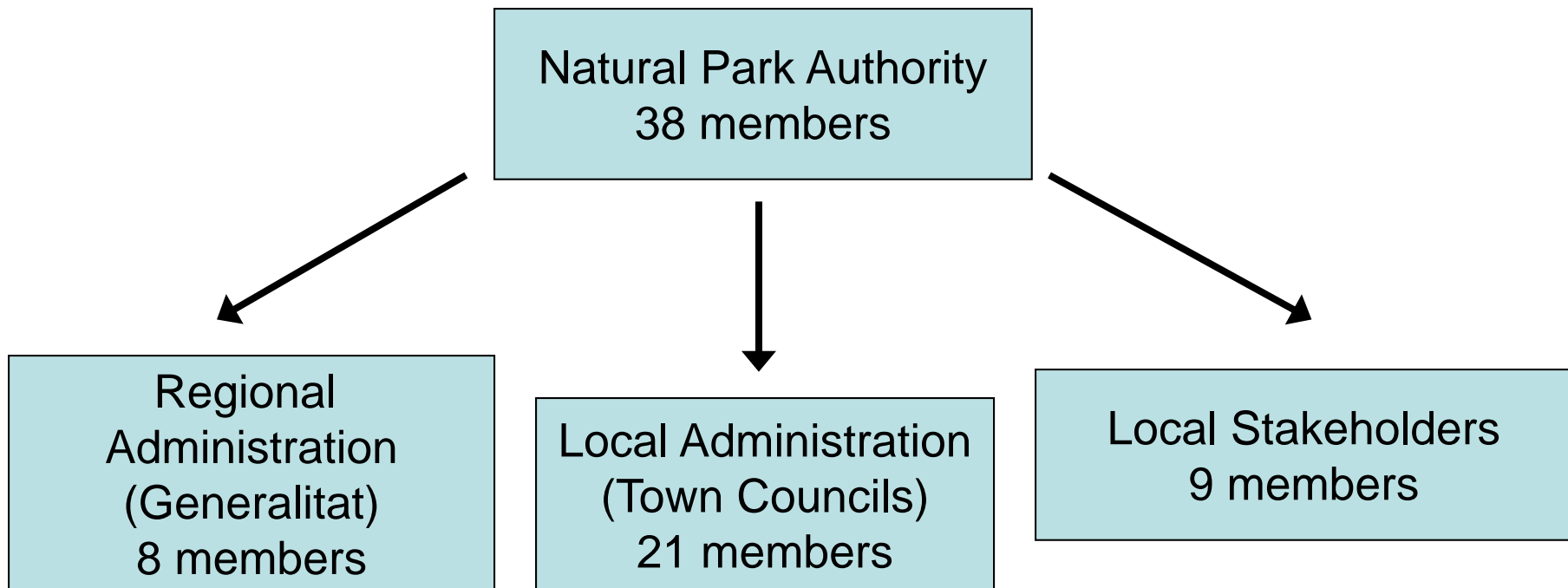
- 1 - The protection of geological, biological, ecological, landscape and cultural values included in its area.
- 2- The establishment of a management system and sustainable development that made compatible the protection of its values, the exploitation of its resources and activities of its inhabitants.



AELCLIC LOCAL NETWORK:

1st workshop

Park Administration Body



AELCLIC LOCAL NETWORK:

2st workshop

PARTICIPANT	SECTOR	INSTITUTION
Marc Garriga	REGIONAL AUTHORITY	Alt Pirineu Natural Park
Araceli Colomé	LOCAL AUTHORITY	Municipality of Lladorre
Cristina Simó	PUBLIC SECTOR	Ecomuseu Valls d' Àneu
Raquel Cunill	RESEARCH	Universitat Autònoma de Barcelona
Ramón Pérez	RESEARCH	Universitat Autònoma de Barcelona
Bernat Baylina	PRIVATE SECTOR	Ski station: FGC Espot i Port Ainé
Miquel Prat	PRIVATE SECTOR	Ski station: Sant Joan de l' Erm
Jesús Martín	SOCIETAL ORGANIZATION	Lo Pi Negre Associació Ambientalista
José Angel López	SOCIETAL ORGANIZATION	Volunteer at Parc Natural de l'Alt Pirineu
Lluís Pla	SOCIETAL ORGANIZATION	MeteoPirineu
Cristòfor Cuadras	SOCIETAL ORGANIZATION	Meteo Valls d'Àneu
Ramón Baylina	SOCIETAL ORGANIZATION	Meteo Pallars
Jaume Comas	SOCIETAL ORGANIZATION	Salvem Salau



The AELCLIC EXPERIENCE

How do you assess the experience of the AELCLIC project so far: what were the most positive aspects?

- To know the details of the effects of the climate change that is considered in the Alt Pirineu
- To participate different representatives from the public and private sector of the Park together first time in the climate change issue



Parc Natural
de l'Alt Pirineu



Generalitat
de Catalunya

What are the results and original contributions to the pilot landscape?

- To define which are the important environmental, natural, social and economic values of the Park by the participants
- To define which are the worst effects related to temperature, precipitations, flood risk, lost snow blanket,.. planned with the climate change in the Park
- To define possible opportunities to adapt to climate change
- To define the threats and weakness that prevent it being practiced



How do the works developed in the AELCLIC project relate to other Plans, projects or initiatives in your landscape?

- The data from the park's biodiversity monitoring plan related to climate change have been taken into account
- The work and studies done by the observatory of climate change of the Pyrenees has been taken into account



**Pla de Seguiment de la Biodiversitat
del Parc Natural de l'Alt Pirineu
PSB - PNAP 2005-2015**



NEXT CHALLENGES

What further results do you think the project should reach in the specific pilot case?

- To deep in the expected changes and how these will affect in detail to the values of the Park
- To determine what actions to take into consideration to achieve the slightest damage to this values
- To define what actions to promote to adapt as much as possible to climate change and plan them in a specific plan of the Natural Park

Are there particular problems, areas, issues with respect to which the LACAP can be configured as an effective joint instrument to offer solutions?

- Yes, the actions to adapt to climate change that depends of the natural park management and planning



NEXT STEPS

How does the local network hope that the LACAP can be fulfilled in the near future?

- Achieving the maximum implication and participation of the public, economic and social stakeholders of the Natural Park and the research centers that work in this area
- Creating a website where to report regularly the progress of the LACAP and allow remote participation
- Obtaining complementary funds for the LACAP, specially from the Catalan environment administration from the new climate change tax to the cars



**Parc Natural
de l'Alt Pirineu**



**Generalitat
de Catalunya**

What will the role of the network and its members be?

- To plan, coordinate and track the development of LACAP
- To facilitate the involvement of the other agents in the territory of the Natural Park
- The final approval of the LACAP by the administration body of the Natural Park



**Thank you for your attention
and welcome to Alt Pirineu Natural Park!**

parcsnaturals.gencat.cat/altpirineu



/pnaltpirineu



@pnaltpirineu



@pnaltpirineu



/pnaltpirineu

3. TORNIO RIVER VALLEY (Finland)

WHY?: The inclusion of the Tornio Pilot Landscape in the AELCLIC project was based on its location in the highly sensitive Boreal area, on its exceptional environmental and cultural values, on its transnational character and on the deep connection between local economy and natural landscape.

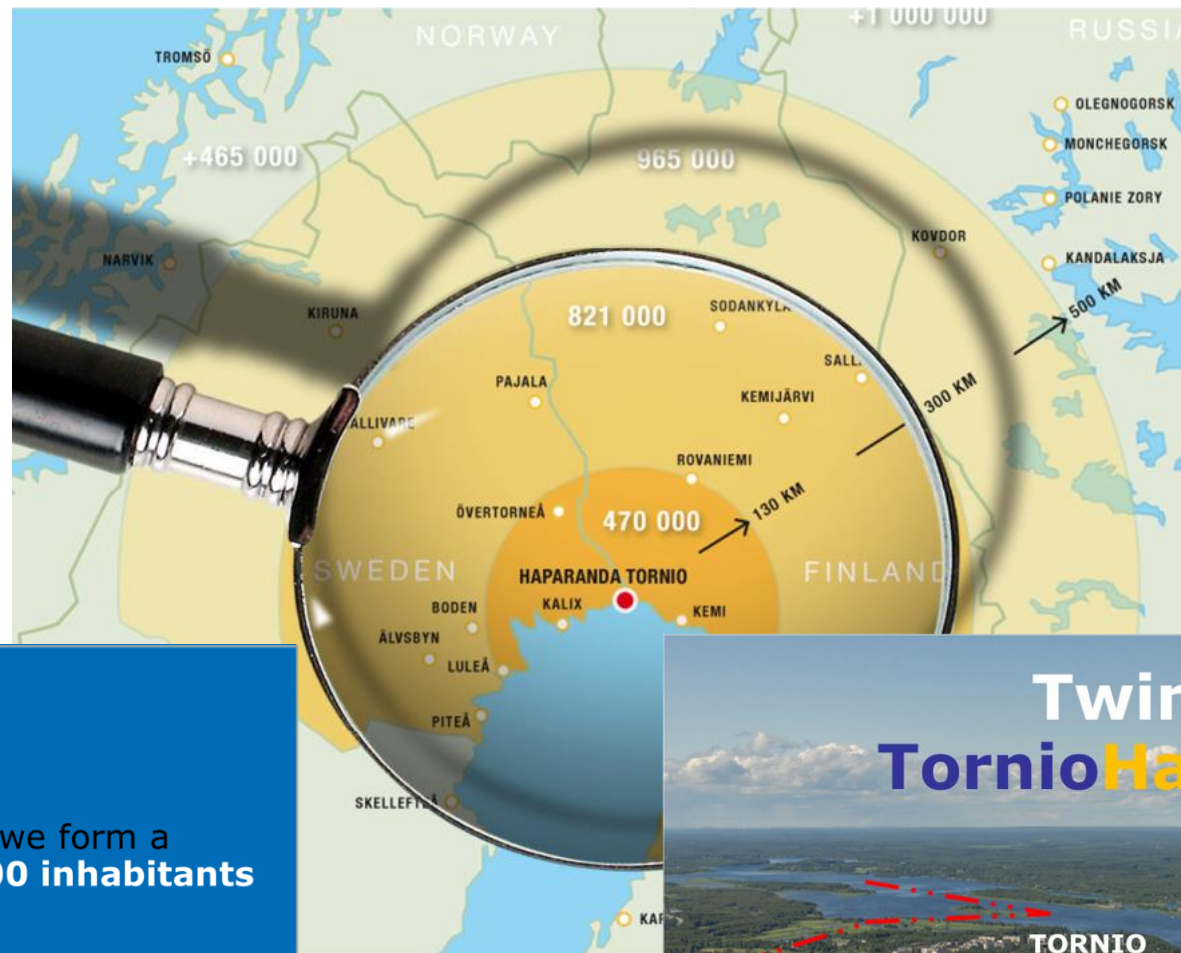
WHAT?: The AELCLIC-Pathfinder was expected to create a local network for the future development of a Landscape Adaptation Plan to Climate Change (LACAP). This network or Consortium will be integrated by local authorities, civil organizations, economic actors (e.g. companies working with tourism, fishing, forestry, etc.) and academic/scientific institutions.



AELCLIC_project
TORNIO RIVER_Pilot Landscape

1. THE TORNIO RIVER VALLEY LANDSCAPE and ITS LOCAL NETWORK

AELCLIC_PATHFINDER project
TORNIO RIVER VALLEY_ Pilot Landscape



TORNIOHAPARANDA
= AN INTERNATIONAL TWIN CITY

Together **with Sweden's Haparanda** we form a unique, international twin city of **32,000 inhabitants** on the border of two states.

The Finnish and Swedish **languages and cultures** meet here, as do the river and the sea, **the border trade**, as well as a lively stream of traffic and tourists.

Our joint city center is growing on the national boundary of Finland and Sweden.



AELCLIC_PATHFINDER project
TORNIO RIVER VALLEY_ Pilot Landscape



AELCLIC_PATHFINDER project TORNIO RIVER VALLEY_ Pilot Landscape



Climate-KIC

Climate-KIC is supported by the EIT, a body of the European Union

WORKSHOP1: CREATING A LOCAL NETWORK + CO-DEFINING A WORK PLAN

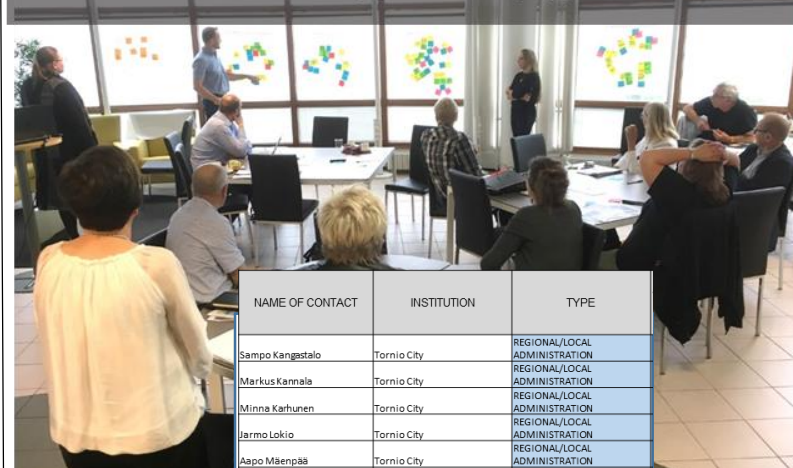
TORNIO RIVER VALLEY_workshop1_10.5.2019



NAME OF CONTACT	INSTITUTION	SECTOR
Sampo Kangastalo	Tornio City	REGIONAL/LOCAL ADMINISTRATION
Anu Rautiala	Tornio City	REGIONAL/LOCAL ADMINISTRATION
Aapo Mäenpää	Tornio City	REGIONAL/LOCAL ADMINISTRATION
Göran Wigren	Haparanda City	REGIONAL/LOCAL ADMINISTRATION
Tiina Elo	Lapin Liitto	REGIONAL/LOCAL ADMINISTRATION
Riikka Pyykkö	The Museum of Tornio Valley	PUBLIC BODY
Virve Sallisalminen	Tranboundary river comission	PUBLIC BODY
Marika Saranne	Lapin ammattikorkeakoulu	RESEARCH
Anne-Mari Söderström	MTK	ECONOMY SECTOR
Petri Leinonen	Farmer	ECONOMY SECTOR
Martti Isto	Farmer	ECONOMY SECTOR
Markku Vaaranemi	Fishers	ECONOMY SECTOR

WORKSHOP2: CO-IDENTIFYING CLIMATE CHANGE IMPACTS & OPPORTUNITIES, SOLUTIONS AND BARRIERS

TORNIO RIVER VALLEY_workshop2_30.9.2019



NAME OF CONTACT	INSTITUTION	TYPE
Sampo Kangastalo	Tornio City	REGIONAL/LOCAL ADMINISTRATION
Markus Kannala	Tornio City	REGIONAL/LOCAL ADMINISTRATION
Minna Karhunen	Tornio City	REGIONAL/LOCAL ADMINISTRATION
Jarmo Lokio	Tornio City	REGIONAL/LOCAL ADMINISTRATION
Aapo Mäenpää	Tornio City	REGIONAL/LOCAL ADMINISTRATION
Timo Nousiainen	Tornio City	REGIONAL/LOCAL ADMINISTRATION
Birgitta Tamminen	Tornio City	REGIONAL/LOCAL ADMINISTRATION
Anu Rautiala	Tornio City	REGIONAL/LOCAL ADMINISTRATION
Göran Wigren	Haparanda City	REGIONAL/LOCAL ADMINISTRATION
Jimmy Henriksson	Haparanda City	REGIONAL/LOCAL ADMINISTRATION
Sofia Rosendahl	Haparanda City	REGIONAL/LOCAL ADMINISTRATION
Robert Ekholm	Haparanda City	REGIONAL/LOCAL ADMINISTRATION
Stina Almkvist	Region Norrbotten	REGIONAL/LOCAL ADMINISTRATION
Nilina Karjalainen	ELY-centre	REGIONAL/LOCAL ADMINISTRATION
Tiina Elo	Lapin Liitto	REGIONAL/LOCAL ADMINISTRATION
Tuula Ajanki	Tornionlaakson neuvosto	REGIONAL/LOCAL ADMINISTRATION
Minna Heljala	The Museum of Tornio Valley	PUBLIC BODY
Riikka Pyykkö	The Museum of Tornio Valley	PUBLIC BODY
Teija Yli-Martimo	The Museum of Tornio Valley	PUBLIC BODY
Virve Sallisalminen	Tranboundary river comission	PUBLIC BODY
Tero Mustonen	Uumi IPCC	RESEARCH
Marika Saranne	Lapin ammattikorkeakoulu	RESEARCH
Sanna Tyni	Lapin ammattikorkeakoulu	RESEARCH
Anne Anttila	Outokaira	ECONOMY SECTOR
Anne-Mari Söderström	MTK	ECONOMY SECTOR
Petri Leinonen	Farmer	ECONOMY SECTOR
Martti Isto	Farmer	ECONOMY SECTOR
Johannes Makitaavola	Farmer	ECONOMY SECTOR
Markku Vaaranemi	Fishers	ECONOMY SECTOR
Pekka Peltari	Fishers/Tornio City	ECONOMY SECTOR
Jarmo Niskala	Pro Siika Village - / city district associations	SOCIETAL GROUP/CIVIL ORGANIZATION
Elja Tervahauta		SOCIETAL GROUP/CIVIL ORGANIZATION
Anu Davidila	4H	SOCIETAL GROUP/CIVIL ORGANIZATION

WORKSHOP3: CO-DEFINING KEY CONTENTS OF A FUTURE LACAP + DECIDING NEXT STEPS

TORNIO RIVER VALLEY_workshop3_8.10.2019



NAME OF CONTACT	INSTITUTION	TYPE
Sampo Kangastalo	Tornio City	REGIONAL/LOCAL ADMINISTRATION
Markus Kannala	Tornio City	REGIONAL/LOCAL ADMINISTRATION
Aapo Mäenpää	Tornio City	REGIONAL/LOCAL ADMINISTRATION
Birgitta Tamminen	Tornio City	REGIONAL/LOCAL ADMINISTRATION
Katriina Huikari	Tornio City	REGIONAL/LOCAL ADMINISTRATION
Sofia Rosendahl	Haparanda City	REGIONAL/LOCAL ADMINISTRATION
Robert Ekholm	Haparanda City	REGIONAL/LOCAL ADMINISTRATION
Andreas Lind	Länsstyrelsen	REGIONAL/LOCAL ADMINISTRATION
Lizah Lund	Region Norrbotten	REGIONAL/LOCAL ADMINISTRATION
Nilina 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
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Sanna Tyni	Lapin ammattikorkeakoulu	RESEARCH
Anne-Mari Söderström	MTK	ECONOMY SECTOR
Petri Leinonen	Farmer	ECONOMY SECTOR
Martti Isto	Farmer	ECONOMY SECTOR
Risto Leinonen	Fisher	ECONOMY SECTOR
Pekka Peltari	Fishers/Tornio City	ECONOMY SECTOR
Anne Anttila	Outokaira	SOCIETAL ORG / ECONOMY SECTOR
Erica Mattson	Swedish Lapland Visitors Board	SOCIETAL ORG / ECONOMY SECTOR
Jouni Valikainen	Lounais-Lapli	media
Anna-Erika Heikkilä	Tornio city	communication

2. THE AELCLIC RESULTS & EXPERIENCE IN TORNIO-HAPARANDA?

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

VALUES

- ON THE PEACEFUL BORDER IN THE NORTH
- CULTURE AND NATURE
- TRANSPARENCY
- SUSTAINABILITY
- SAFETY

GOALS

- WORKING WITH LOCAL STAKEHOLDERS
- CIRCULAR ECONOMY
- EDUCATION AND KNOWLEDGE
- FUNCTIONAL = SUSTAINABLE: ENVIRONMENT, SOCIAL/COMMUNITY, CULTURE, ECONOMY
- PROMOTING AGRICULTURAL ACTIVITY

THEMES

- TWIN CITY BY THE RIVER, THE SEA AND THE ARCHIPELAGO
- CULTURAL ENVIRONMENT, PEOPLE AND WAYS OF LIVING (LIFE IN THE NORTH)
- WATER SYSTEM, FLOODS AND TORNIO RIVER
- SUSTAINABLE ECONOMY
- SUSTAINABLE ENVIRONMENT
- IMPROVING ENERGY PRODUCTION AND USE

EXPECTED IMPACTS

ON TWIN CITY BY THE RIVER, THE SEA AND THE ARCHIPELAGO

- TOURISM

ON CULTURAL ENVIRONMENT, PEOPLE AND WAYS OF LIVING (LIFE IN THE NORTH)

- ENERGY
- PEOPLE & SOCIO-CULTURAL STRUCTURE
- WAYS OF LIVING, TOURISM AND SUMMERS
- HEALTH & SAFETY

ON WATER SYSTEM, FLOODS AND TORNIO RIVER

- FLOODS AND DAMAGES
- SEASONAL CHANGES, SNOW, SOILS AND RIVER
- BUILDINGS, CONSTRUCTIONS AND INFRASTRUCTURES
- TIME SCALE AND SPEED OF CHANGE?
- RIVER ECOLOGY AND ECOSYSTEMS

ON SUSTAINABLE ECONOMY AND ENVIRONMENT

- AGRICULTURE & FORESTRY
- FISHES AND FISHING
- WATER QUALITY, QUANTITY & DROUGHTS
- ALIEN SPECIES, DISEASES AND PESTS
- RIVER ECOSYSTEMS & FISHING
- LANDSCAPE CHANGES: RIVER, FARMING, ROADS, BUILDINGS

ON ENERGY PRODUCTION AND USE

- EXISTING INFRASTRUCTURES & SAFETY

OPPORTUNITIES

IN TWIN CITY BY THE RIVER, THE SEA AND THE ARCHIPELAGO

- SUMMER TOURISM

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

- NEW CLIMATE AND REDISTRIBUTION OF SPECIES
- AGRICULTURE & FORESTRY
- RESTORATION OF RIVER BASIN AND RURAL OPENNESS
- TOURISM
- RECREATION
- NEW PEOPLE & SOCIO-CULTURAL STRUCTURE

IN WATER SYSTEM, FLOODS AND TORNIO RIVER

- LESS ICE DAM FLOODS & MORE FLOOD CONTROL
- RIVER ECOSYSTEMS AND FISHING

IN SUSTAINABLE ECONOMY AND ENVIRONMENT

- GREEN ECONOMY
- MORE NUTRIENTS AND SOIL FERTILITY

IN ENERGY PRODUCTION AND USE

- ECONOMIC DEVELOPMENT
- NEW TECHNOLOGIES

SOLUTIONS/ACTIONS

- LAND USE AND CONSTRUCTION MANAGEMENT AND CONTROL > SUSTAINABLE AND CONSERVING BUILDING
- REDUCTION OF THE EMISSIONS OF SUBSTANCES HAZARDOUS TO THE ENVIRONMENT
- IMPROVED AGRICULTURE
- RESEARCH
- STORM WATER CONTROL/DELAY
- FLOOD WALLS
- PROTECTION OF RIVER SIDES
- FLOOD CONTROL
- DEVELOPMENT OF ENVIRONMENTAL PROGRAMS
- INCENTIVES, TAXATION, CERTIFICATION FOR INDUSTRY AND OTHER COMPANIES

BARRIERS

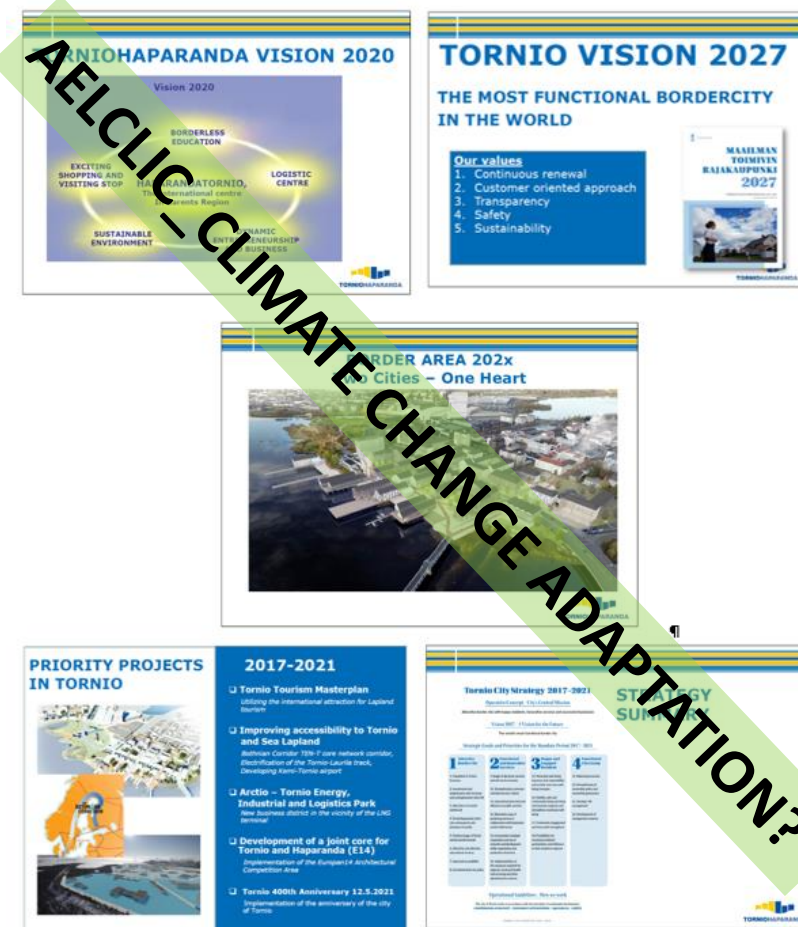
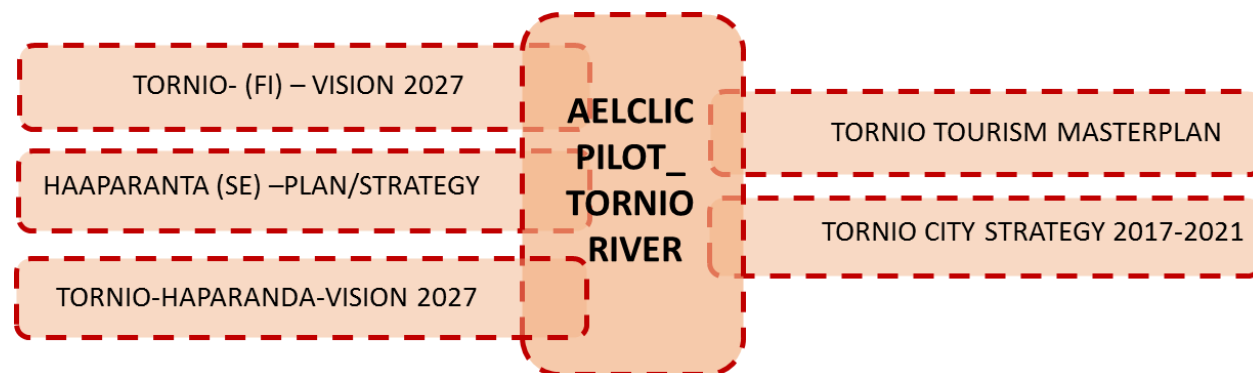
- POLITICS
- EU-DIRECTIVES
- REGULATIONS /RESTRICTIONS FOR FISHING AND AGRICULTURE
- LACK OF RESOURCES, NEW IDEAS
- NEW THINKING AND PEOPLE, YOUNG PEOPLE NEEDED!
- MONEY AND RESOURCES, LACK OF TIME
- WEAK INVOLVEMENT OF PRIVATE AND PUBLIC SECTOR
- ARE WE MISSING OUR CULTURE IDENTITY?
- EXISTING STRUCTURES AND SYSTEMS (FOR EX. THE FOSSIL FUELS)

RESULTS AND EXPERIENCE?

- THE WORK DEVELOPED IN THE AELCLIC PROJECT HAS BEEN USEFUL: VERSATILE TOPICS WERE PROPOSED AND THEY WERE PROCESSED FROM DIFFERENT VIEWS
- THE AELCLIC PROJECT HAS PROVIDED AN OPEN AND TRANSPARENT PLATFORM FOR DISCUSSION
- SOME ESSENTIAL ECONOMIC ACTORS WERE MISSING (E.G. INDUSTRY AND ENERGY SECTOR) AND MORE SPECIFIC INFORMATION /STUDIES ARE NEEDED
- ALL THE MATERIALS PRODUCED IN THE AELCLIC WORKSHOPS ARE PUBLIC AND WILL BE FULLY AVAILABLE FOR THE TORNIO LOCAL NETWORK

CONNECTIONS TO OTHER PLANS, PROJECTS OR INITIATIVES IN THE TORNIO LANDSCAPE?

- HOW DOES THE AELCLIC PROJECT RELATE TO OTHER INITIATIVES FOR CLIMATE CHANGE ADAPTATION AND MITIGATION? (e.g. HINKU)
- “WE NEED A BIGGER FRAMEWORK OR PICTURE IN TORNIO TO DEAL WITH CLIMATE CHANGE.... SUSTAINABLE DEVELOPMENT?”



3. NEXT CHALLENGES & STEPS?

NEXT CHALLENGES AND STEPS?

- THE TORNIO LOCAL NETWORK MIGHT DISCUSS IN THE FUTURE (WITH MORE TIME AND INFORMATION), HOW TO CONTINUE WORKING ON CLIMATE CHANGE ADAPTATION: FUNDING? EXISTING NETWORKS, KNOWLEDGE GAPS?
- THE TORNIO LOCAL NETWORK DESIGNATES THE CITIES OF TORNIO AND HAPARANDA TO LEAD THE NETWORK IN POSSIBLE FUTURE ACTIONS

TORNIO CITY:

- THIS IS SO FAR JUST THE BEGINNING OF THE DISCUSSION
- WE NEED TO UNDERSTAND BETTER THE EFFECT OF CLIMATE CHANGE AND INCREASE HOPE INSTEAD OF ANXIETY

RIVER COMMISSION:

- MAYBE WE COULD INCREASE HOPE BY DOING CONCRETE COMMITMENTS
- NOT TO DO ANYTHING IS NEVER A GOOD ALTERNATIVE
- DOING WHAT WE CAN WILL ALSO INSPIRE POLICY-/DECISION MAKERS

CITIZEN & FISHERMAN:

- WE HAVE NOW DISCUSSED ABOUT TOPICS RELATED TO WATER, INCLUDING CULTURAL ASPECTS AND THE RIVER
- WE ARE MISSING THOSE WHO CAN AFFECT MORE ON CLIMATE CHANGE ADAPTATION AND MITIGATION: INDUSTRY & ENERGY SECTOR, A BROADER ENERGY REVIEW IS NEEDED.
- IT IS ALSO CRUCIAL TO INCLUDE THE BUSINESS AND PRIVATE SECTOR HOW DO THEY SEE CLIMATE CHANGE / WHAT IS THEIR EXPERIENCE / HOW CAN THEY CONTRIBUTE TO CLIMATE CHANGE ADAPTATION AND MITIGATION??

TORNIO CITY: THE TOWN OF TORNIO AND THE TRADE GROUP WANT TO CONTINUE WORKING ON THIS THEME

- WE NEED TO DO OUR HOMEWORK, SEE EXAMPLES AND CHOOSE THE FRAME AND TOPICS THAT WE WANT TO PROMOTE
- TORNIO IS MISSING SKILLS, RESOURCES AND THERE IS NO PERSON IN CHARGE OF THIS THEME.
- IN THE MUNICIPALITY OF II THEY HAVE DONE MUCH ON CLIMATE CHANGE. IN TORNIO WE HAVE NOT HAD YET A PROPER DISCUSSION: WHAT DOES THIS MEAN IN RELATION TO OUR INPUTS, OUTPUTS AND STRATEGIES?

How do you want to continue and use the results of the AELCLIC project?

4. BERTRA DUNE SYSTEM (Ireland)



NUI Galway
OÉ Gaillimh



Climate-KIC is supported by the
EIT, a body of the European Union



MURRISK
Murrisk Development Association Ltd



Comhairle Contae Mhaigh Eo
Mayo County Council

CLIMATE ACTION
REGIONAL OFFICE



National Parks & Wildlife Service

Bertra and its Environs: Groundwork for a Landscape Climate Adaptation Plan

[Dr Kevin Lynch](#)

Coastal Geomorphologist
Head of Geography
School of Geography and Archaeology
National University of Ireland Galway
kevin.lynch@nuigalway.ie

[Ms Jo Ortelli](#)

Murrisk Development Association
Murrisk, Co Mayo
mario@anu.ie



THE PILOT LANDSCAPE



THE PILOT LANDSCAPE

Whole area is a Natura 2000 site

So implications for protected species and habitats

Barrier breached at these points – linked to storms (and possibly human trampling pressure)

Erosion & hazards of old collapsed rock armour

Sand inundation of aquaculture infrastructure

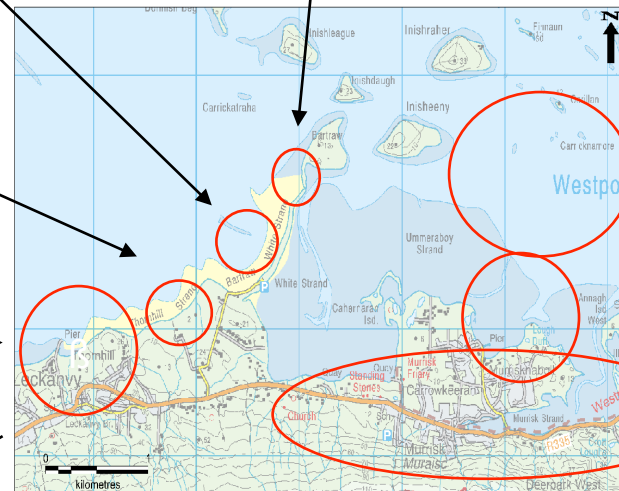
Old carpark
destroyed by
storm, now
moved off the
barrier onto
mainland

Erosion & hazards of old under-mind rock armour

Erosion as a result of pier

Flooding of houses and main road to Westport

A few miles further west at OLDHEAD beach, tall eroding cliffs (~30m height) a problem (not strictly part of study area though)



Map Showing Bertra Beach - OSi Discovery Mapping

© Donalca Harvey Ireland. All rights reserved. License No. 2016-17 CCMA/ Maps County Council

THE AELCLIC EXPERIENCE

- 1) Landscape focus
- 2) Clear achievable objective – creation of *formal* local network
- 3) Very strong alignment with existing project level work (GREY DOTS)
- 4) Perfect fit and timing for new national level initiative for regional to local action
- 5) Small funding contribution from Aelcllc invaluable for final KEY event



THE LOCAL NETWORK

Working Group

- 21 members
- committed to 1 further year of work
 - groundwork for: plan & funding, short & long term action
- review at that stage

Pat	Westport Tidy Towns / Coastal Communities for Climate Action
Catriona	Public Participation Network
Dearbhla	NUIG / Climate Action Regional Office
Axel	NUI Galway
Kevin	NUI Galway
Eoin	National Parks & Wildlife
William	National Parks & Wildlife
Jenefer	Murrisk Development Association
Jo	Murrisk Development Association
Chris	Murrisk Development Association
Laura	Mayo County Council, Climate Action
Cuala	Mayo CoCo (not Climate section)
James	Local Resident / Extinction Rebellion
Grace	Local Resident
Denise	Local Resident
Niall	Local Resident
Alan	Local Farmer
PJ	Local Farmer
Eamon	Community Futures Louisburgh
Caroline	Climate Action Regional Office
David	Climate Action Regional Office

NEXT CHALLENGES

Aelclic outputs

The outputs to date were perfect for achieving the goal – local network formation
Within that context no further work necessary

The academic output (2 proposed papers) though, should certainly be duplicated in a form that can be used by similar initiatives – Guidelines from experiences

Our pilot has put a plan in place to continue work and seek funding, but that is a Plan B, FUNDING will be required at some stage soon if real climate action is to take place on the ground

Some very clear barriers to effective action have been identified that could form the basis for a FOLLOW ON project: a good example is, finding ways to action ecosystem services/green solutions in current seemingly intransigent agri systems

NEXT STEPS

Pilot Landscape local network WORKING GROUP, 4 Objectives for year:

Awareness: Raise awareness regarding 1) the work of the WG and 2) wider issues

Data: Gather existing data, knowledge & reports: e

A need for a study to gather local kn

scientific work was id

**Objectives are short term options,
for long-term SUCCESS
funding for major transitional change will need to be secured**

Adaptation guidelines framework to
p
m
same time see if a communities Fututre

Op compiling a robust list of short term options (implementable within a year) and long term
options 2) as a priority, specifically developing a plan of action to look at fencing & educational boards

5. HYYPPÄ RIVER VALLEY (Finland)



Elinkeino-, liikenne- ja ympäristökeskus
Närings-, trafik- och miljöcentralen
Centre for Economic Development, Transport and the Environment

Hyypä River Valley – Nordic Rural Production Area

AELCLIC PATHFINDER – PROJECT Hyypä River Valley Pilot Landscape

International Meeting in Bologna Nov 12th 2019

Marketta Nummijärvi /Finland



Hyypä Workshops' Results

AELCLIC_PATHFINDER project

HYYPÄ RIVER VALLEY_ Pilot Landscape_RESULTS_WORKSHOP3 (Kauhajoki, 6.9.2019)



Climate-KIC

Climate-KIC is supported by the EU-activity of the Horizon 2020

PRELIMINARY CONTENTS for a potential LANDSCAPE ADAPTATION PLAN FOR CLIMATE CHANGE in the Hyypä River Valley (#=adaptation; @=mitigation)

ATTITUDES

- CO-OPERATION
- ENTREPRENEURSHIP
- POSITIVITY

VALUES

- EMPLOYMENT AND QUALITY OF LIFE (#, @)
- STRENGTHENING OF THE COMMUNITY AND LOCALITY (#, @)
- PRESERVING VALUES AND LANDSCAPE (#, @)

GOALS

- FUNCTIONAL, DURABLE AND COMFORTABLE ENVIRONMENT (#, @)
- DIVERSITY + NATURE + CULTURE (#, @)
- STRONG LOCAL INVOLVEMENT (#, @)

THEMES

- AGRICULTURE, FORESTRY, NATURAL ENVIRONMENT & RURAL TRADES (#, @)
- PEOPLE, WAYS OF LIVING & ENERGY (#, @)
- PLANNING, BUILT ENVIRONMENT & INFRASTRUCTURES (#, @)

EXPECTED IMPACTS

IN AGRICULTURE, FORESTRY, NATURAL ENVIRONMENT AND RURAL TRADES

- IN TOURISM
- IN AGRICULTURE, CATTLE BREEDING AND FORESTRY
- IN NATURAL ECOSYSTEMS
- IN RURAL ECONOMY AND RURAL TRADES
- IN CARBON EMISSIONS
- IN THE LANDSCAPE

IN PEOPLE, WAYS OF LIVING & ENERGY

- IN ENERGY CONSUMPTION
- NEED OF NEW ENERGY SOURCES
- IN CARBON EMISSIONS
- IN ECONOMIC ACTIVITIES

IN PLANNING, BUILT ENVIRONMENT & INFRASTRUCTURES

- IN THE LANDSCAPE
- IN THE OBJECTIVES OF LAND USE PLANNING
- IN THE FUNCTIONALITY OF EXISTING AND NEW BUILDINGS
- IN PERSONAL LIFE AND SAFETY
- IN INFRASTRUCTURE AND MOBILITY

OPPORTUNITIES

IN AGRICULTURE, FORESTRY, NATURAL ENVIRONMENT AND RURAL TRADES

- DIGITAL SOCIETY
- DEVELOPMENT OF BETTER AGRICULTURAL PLANS
- INCREASE OF GREEN ECONOMY
- AGRICULTURE AS A SOLUTION TO CLIMATE CHANGE
- CATTLE BREEDING IS LESS SENSITIVE

IN PEOPLE, WAYS OF LIVING & ENERGY

- RENEWABLE ENERGIES
- NEW ENERGY AND TRANSPORT
- NEW ENERGY SOURCES DIGITAL SOCIETY
- NEW INHABITANTS

IN PLANNING, BUILT ENVIRONMENT & INFRASTRUCTURES

- BETTER SPATIAL AND LAND-USE PLANNING
- NEW ARCHITECTURE

SOLUTIONS/ACTIONS

FOR AGRICULTURE, FORESTRY, NATURAL ENVIRONMENT AND RURAL TRADES

- RESTORING/FAVORING NATURAL ENVIRONMENTS (E.G RIVER, RECREATIONAL ROUTES, MIXED FORESTS. ETC))
- CARBON SEQUESTRATION THROUGH AGRICULTURE & FORESTS
- NEW AGRICULTURAL TECHNIQUES (DRAINAGE, SOIL MANAGEMENT, CROP ROTATION, MEADOWS)
- ORGANIC FARMING
- MONITORING LANDSCAPE MAINTENANCE
- SOIL AND GROUNDWATER RESEARCH & IMPROVEMENTS
- IMPROVING AND DEVELOPING NEW TOURISM SERVICES
- MORE INFORMATION and MORE INNOVATIONS

FOR PEOPLE, WAYS OF LIVING & ENERGY

- TOWARDS A CARBON NEUTRAL HYYPÄ RIVER VALLEY
- SUSTAINABLE & GREEN ECONOMY + SHARING ECONOMY
- FINANCING GOOD PROJECTS
- PROMOTING HEALTH AND WELLBEING
- REVITALIZATION OF TRADITIONS
- NEW TECHNOLOGIES : ENERGY, REMOTE WORK, ETC
- MORE INFORMATION and MORE INNOVATIONS
- MORE COMMUNICATION & MARKETING

FOR PLANNING, BUILT ENVIRONMENT & INFRASTRUCTURES

- NEW BUILDING REGULATIONS
- NEW AGRICULTURAL PRACTICES & PLANS
- TECHNICAL AND DIGITAL DEVELOPMENT
- JOINT USE, SHARED VEHICLES AND SHARING ECONOMY
- NEW STRATEGY FOR THE NATURAL ENVIRONMENT & NEW RECOMMENDATIONS FOR LANDSCAPE MAINTENANCE
- DEVELOPMENT OF TRAFFIC SERVICES, LANDSCAPE ROUTES
- MORE INFORMATION AND MORE INNOVATIONS

BARRIERS

IN AGRICULTURE, FORESTRY, NATURAL ENVIRONMENT AND RURAL TRADES

- LACK OF READY INNOVATIONS/SOLUTIONS
- MONEY & RESOURCES (COST-EFFECTIVENESS)

IN PEOPLE, WAYS OF LIVING & ENERGY

- LACK OF INFORMATION

IN PLANNING, BUILT ENVIRONMENT & INFRASTRUCTURES

- BUREAUCRACY

NEXT STEPS:

- THE HYYPÄ LOCAL NETWORK MIGHT DISCUSS IN THE FUTURE (WITH MORE TIME AND INFORMATION), HOW TO CONTINUE WORKING ON CLIMATE CHANGE ADAPTATION
- ALL THE MATERIALS PRODUCED IN THE AELCLIC WORKSHOPS ARE PUBLIC AND FULLY AVAILABLE FOR THE USE OF HYYPÄ LOCAL NETWORK
- THE HYYPÄ LOCAL NETWORK DESIGNATES THE CITY OF KAUAJOKI TO LEAD & REPRESENT THE NETWORK IN FUTURE ACTIONS WITHIN THE AELCLIC (CLIMATE_KIC) PROJECT AND MARKETTA NUMMIJÄRVI TO BE ITS CONTACT PERSON .
- MARKETTA 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 (WITH CLIMATE KIC FUNDING OR WITH OTHER SOURCES OF FUNDING



Hyypä River Valley – Nordic Rural Production Area

Cities = Consuming Areas
Countryside = Production Areas

We are Producers!

primary production

food, raw materials, manure

crop, meat, dairy products, feed, timber, peat, gravel,
boulder, manure, insect protein, ground water

energy, (local) heat

electricity, remote & geothermal heat
wind power, solar power, biogas, woodchip, peat

ecological services

recreation, O₂, biodiversity, CO₂ storage
GeoPark, recreation routes, forests, meadows,
eco-tourism, swamps, floodwater detention

low-tech processing

groceries

linseed, "meadow meat",
bakery, berries, insect protein

wood products

CLT, building materials/ products,
woodpanel, furniture

fuels, dressing

biogas, biochar,
biofuels

metal

machines
production lines

RUNOFF DETENTION AREAS

gain chain -> flood prevention,
ground water, biodiversity

LOCAL FOOD AUTOMATON

gain chain -> better &
concentrated
availability of local
food products,
advantage of
ethicalness of
production, better sales
for local producers

ENTERING GLOBAL BUILDING PRODUCT MARKET W/ WOOD PANEL & CLT

gain chain -> increasing use of
wood products in building ->
CO₂ sequestration,
replacement of plastic,
concrete & metal as building
material, jobs in rural
production chains

BIOCHAR PLANT

gain chain -> CO₂ sequestration,
side product heat w/ biofuel ->
replacement of fossil fuels,
runoff filtering, dressing, reason
for willow farming ->
substituting usage of peat fields
-> substituting jobs for peat
producers, jobs in rural
production chains

BIOGAS PLANT

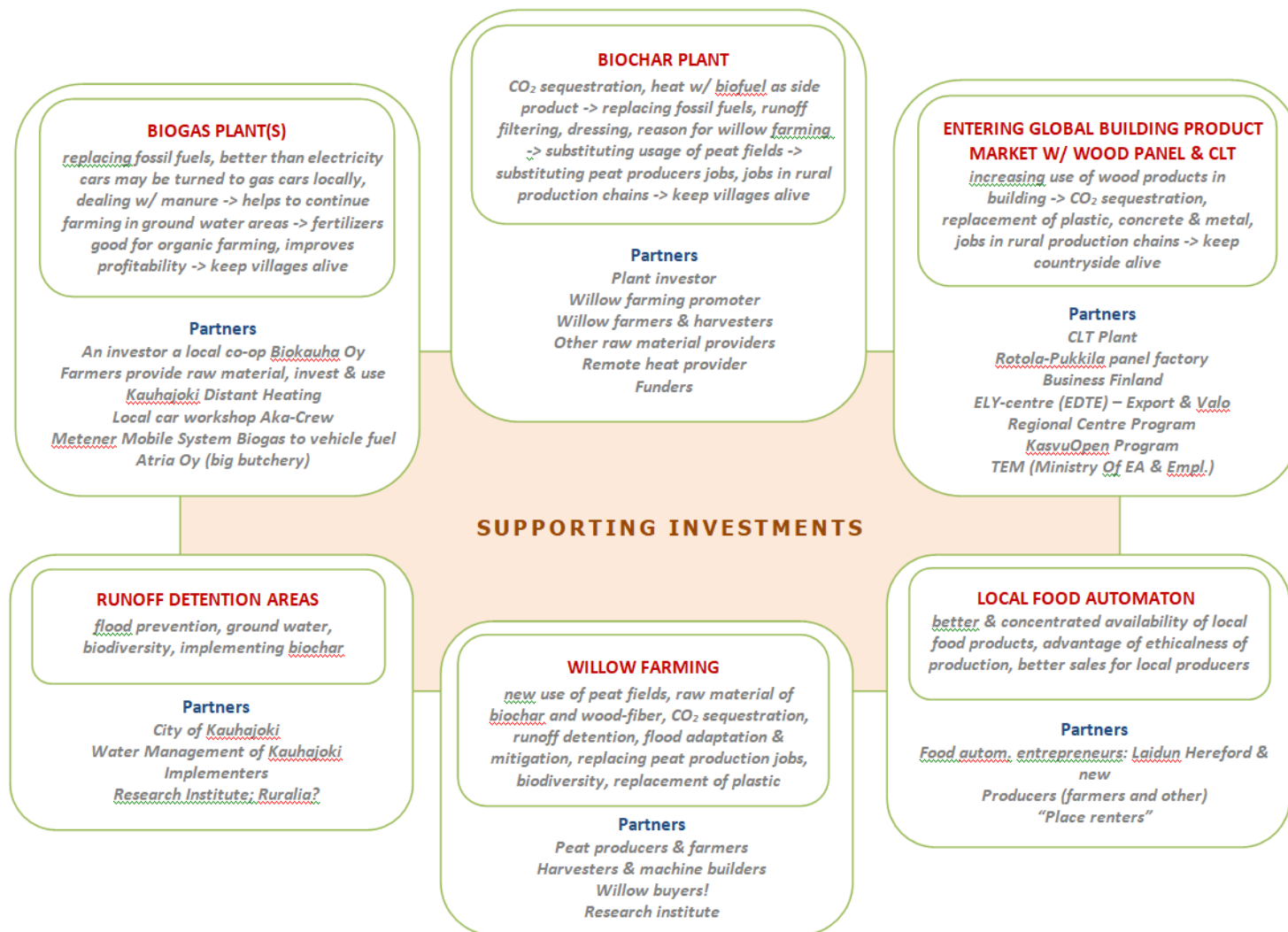
gain chain -> replacement of
fossil fuels, easier option w/
vehicles than electricity,
solution for dealing w/
manure -> helps to continue
farming in ground water
areas such as Hyypä,

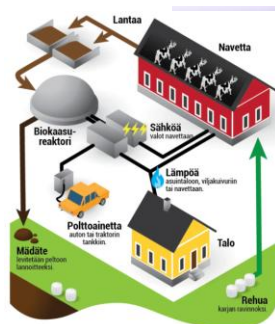
WILLOW FARMING

gain chain -> new use of peat
fields, raw material for
biochar and wood-fiber, CO₂
sequestration, runoff
detention, flood adaptation &
mitigation, replacing peat
production jobs, biodiversity,
replacement of plastic

LOCAL INFRASTRUCTURE & NETWORK, STRATEGIES AND PROGRAMS

data connections, know-how, funding, research, alliances, tutoring & support, business networks
Kauhajoki Town's S., Energy & Climate S., Regional Center P., Vocational Education P., EU/Leader P., County S., Hyypä Preservation Pln, Forestry S.





6. SERRES D'ANCOSA (Catalonia, Spain)



THE AECLIC LOCAL NETWORK – SERRES D'ANCOSA

ACTIVITY: Workshop1_SERRES D'ANCOSA PILOT LANDSCAPE

PARTICIPANT	SECTOR	INSTITUTION
Yolanda Ruiz	LOCAL/REGIONAL AUTHORITY	Ajuntament Miralles
Pere Argelich	LOCAL/REGIONAL AUTHORITY	Ajuntament Miralles
Marta Salamé	LOCAL/REGIONAL AUTHORITY	Consell Comarcal Alt Penedès
Nuria Ruiz	LOCAL/REGIONAL AUTHORITY	Diputació de Barcelona
Pol Bacardit	LOCAL/REGIONAL AUTHORITY	Diputació de Barcelona
Silvia Escolano	LOCAL/REGIONAL AUTHORITY	Diputació de Barcelona
Helena Perxacs	LOCAL/REGIONAL AUTHORITY	Diputació de Barcelona
Gabriel Borràs	LOCAL/REGIONAL AUTHORITY	Oficina Catalana del Canvi Climàtic
Iñaki Gili	LOCAL/REGIONAL AUTHORITY	Oficina Catalana del Canvi Climàtic
Teresa Cervera	PUBLIC SECTOR	Centre de la Propietat Forestal
Joaquim Garcia	PUBLIC SECTOR	Centre de la Propietat Forestal
Teresa Baiges	PUBLIC SECTOR	Centre de la Propietat Forestal
Juan Luis Abian	PUBLIC SECTOR	Centre de la Propietat Forestal
Antoni Munné	PUBLIC SECTOR	Agència Catalana de l'Aigua
Francesc Farré	PUBLIC SECTOR	Consorti per al desenvolupament de la Catalunya Central
Cristina Vega	RESEARCH	Universitat de Lleida
Pere Casals	RESEARCH	Centre de Ciència i Tecnologia Forestal de Catalunya
Santiago Cerdà	PRIVATE SECTOR	Cal Viaella
Simó Serra	PRIVATE SECTOR	Bosquerols SCCL
Mónica Prieto	PRIVATE SECTOR	AirBnB
Rosa María García	PRIVATE SECTOR	Masia Sapera
Agustí Pelfort	SOCIETAL ORGANIZATION	EDUVIC
David Vivet	SOCIETAL ORGANIZATION	Unió de Pagesos
Joan Mas	SOCIETAL ORGANIZATION	Unió de Pagesos
Lluis Vich	SOCIETAL ORGANIZATION	Associació de propietaris forestals Serralada Prelitoral Penedès
Agustí Guilamany	SOCIETAL ORGANIZATION	Associació de propietaris forestals Serralada Prelitoral Penedès
Jaume Olivella	SOCIETAL ORGANIZATION	Associació de propietaris forestals Serra Miralles-Orpinell
Jordi Reixach	SOCIETAL ORGANIZATION	Associació de propietaris forestals Serra Miralles-Orpinell

ACTIVITY: Workshop2_SERRES D'ANCOSA PILOT LANDSCAPE

PARTICIPANT	SECTOR	INSTITUTION
Daniel Gutiérrez	LOCAL/REGIONAL AUTHORITY	Consell Comarcal de l'Anoia
Silvia Escolano	LOCAL/REGIONAL AUTHORITY	Diputació de Barcelona
Teresa Cervera	PUBLIC SECTOR	Centre de la Propietat Forestal
Joaquim Garcia	PUBLIC SECTOR	Centre de la Propietat Forestal
Teresa Baiges	PUBLIC SECTOR	Centre de la Propietat Forestal
Asier Larrañaga	PUBLIC SECTOR	Bombers GenCat
Robert Savé	RESEARCH	IRTA
Santiago Cerdà	PRIVATE SECTOR	Cal Llens
Georgina Saumell	PRIVATE SECTOR	Celler Mas Rodó
Rosa María García	PRIVATE SECTOR	Masia Sapera
Lluis Cuadras	PRIVATE SECTOR	Can Morei
Marc Talavera	SOCIETAL ORGANIZATION	Col·lectiu Eixarcolant
Joan Amado	SOCIETAL ORGANIZATION	Agrupació de Defensa Forestal Castellví de la Marca
Lluis Vich	SOCIETAL ORGANIZATION	Associació de propietaris forestals Serralada Prelitoral Penedès
Ferran Roses	SOCIETAL ORGANIZATION	Associació de propietaris forestals Serralada Prelitoral Penedès
Jaume Olivella	SOCIETAL ORGANIZATION	Associació de propietaris forestals Serra Miralles-Orpinell
Francesc Sabaté	SOCIETAL ORGANIZATION	Associació de propietaris forestals Serra Miralles-Orpinell
Jordi Reixach	SOCIETAL ORGANIZATION	Associació de propietaris forestals Serra Miralles-Orpinell



2. THE AELCLIC EXPERIENCE:

What were the most positive aspects?

- The positive response of the majority of the local actors that were approached during the process
- To downscale the impacts of Climate Change in the area.

What are the results and original contributions to the pilot landscape?

- The gathering together of a real cross-sectoral range of local actors, in a region where there is no a unifying public governing body.
- The engagement of the local actors on the proposal of the project: to work together in a multidisciplinary climate adaptation plan.

How do the works developed in the AELCLIC project relate to other Plans, projects or initiatives in your landscape?

- The first workshop was held as a networking action with the project **LIFE CLIMARK**, which works in forest adaptation/mitigation actions, and that has the LU Serres d'Ancosa as one of its pilots sites. Other projects such as **LIFE CLINOMICS** and local project **CLIMATIV21** working in surrounding areas or similar topics were also presented. The **Catalan Office for Climate Change** (OCCC) and the **GRAF** (The Catalan Forest Firemen specialised group) have participated in the workshops, both of them showing how the LACAP could be aligned with their own strategies.

3. NEXT CHALLENGES:

What further results do you think the project should reach in the specific pilot case?

- Identification of **priority work lines** within the local adaptation strategy.
- Identification of the **key actors** (including the leading ones) and the **existing instruments** that could be used, promoted or adapted.
- Securing **financing** for the development of pilot initiatives

Are there particular problems, areas, issues with respect to which the LACAP can be configured as an effective joint instrument to offer solutions?

- **Define a common vision for the socio-economic development of the area** in the present context of global change
- **Fire prevention**, which is linked to the maintenance of a **mosaic-type kind of landscape**, which includes the promotion of economically viable and climate-adapted agriculture and forestry.
- **The integration of sustainable rural tourism** linked to the territory, as part of the solution for the previous problems.

4. NEXT STEPS:

How does the local network hope that the LACAP can be fulfilled in the near future?

- With the engagement of a leader local institution and the support of the key members.
- With financial support for the development of some pilot actions

What will the role of the network and its members be?

- Provide a sound diagnosis of the local context
- Identification of priorities and objectives
- Identification of new key members depending on the objectives
- ...

7. ETNA LANDSCAPE (Italy)



AELCLIC Project

CLIMATE-KIC action in Bologna, Italy

Piante Faro and Radicepura Foundation's role

One of Europe's leading nursery plant (est. 1970)

Analysis of climate changes for growing plants

Organization of an international garden festival

Active in territorial environment

The Etna
Pilot
LANDSCAPE
and
ITS LOCAL
NETWORK

WE INVOLVED:

-Institution- University of Catania, Mayor of Acireale and Riposto- horticulture park of Catania, municipality of Giarre and Catania cultural office, Piccolo Foundation, la verde la malfa foundation

-Association- Coldiretti Sicilia, Inarch Sicilia, Legambiente Catania, FAI Sicilia, garden clubs of Sicily, Lions club Catania, associazione musicale Etnea, idea attiva

-Company- manufacturing, farmers, agricultural holding

AELCLIC Pathfinder Workshop Experience

- Forum for stakeholders to voice different perspectives on climate changes
- Brainstorming about the visible change: extreme events, loss of water, tropicalization, hydrogeological instability, temperature increase,
- Increasing awareness of climate challenges and what can be done in a local setting
- Building of a network and potential new partnerships
- Developing future project concepts
- Emerging complementarities and common interests

NEXT CHALLENGES

- Maintaining continuity and sustainability of the local network
- Collecting relevant local information and data for identify the principle obstacles
- Analysing policies and regulation
- Developing an evidence base for future adaptation plan about:
policy integration, new model of governance, financial incentives, recycle strategy, circular economy, revival of trades, care and protection of the landscape, new green area in town, renewable energy, management of water resources, avoid the consumption and soil sealing, education of citizens
- Creating linkages with other local stakeholders

NEXT STEPS

First of all define the role and the real support of institutions about landscape governance and protection

adaptation experiments in the field of agriculture and nurseries

improve the use of renewable energy

improve the public open space

improve education and awareness raising of citizen

Examining funding or support options (Horizon 2020, LIFE, Interreg Europe, Central Europe, etc.)

Learning from less successful examples

8. PEAT AND POLDER LANDSCAPES OF HOLLAND (The Netherlands)

Multi-level approach on climate-adaptation in South-Holland

Werncke Husslage & Caroline Ammerlaan

Province of Zuid-Holland, The Netherlands

Daan Willems

Water Authority Rivierenland



provincie **ZUID** **HOLLAND**



Our main focus:

“Create an excellent location for settlement and ensure a high standard of living”



Our challenges:

Increasing urbanisation



Sustainable energy



Healthy and green



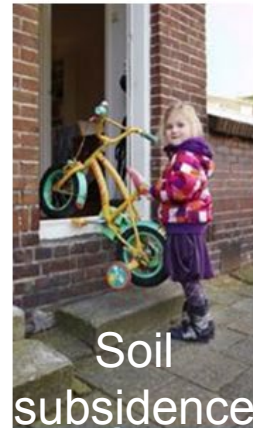
Modern mobility



Modern economy

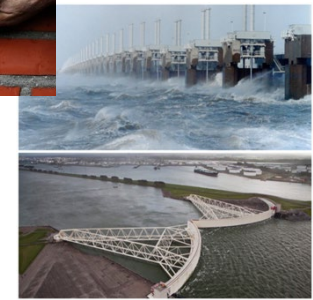
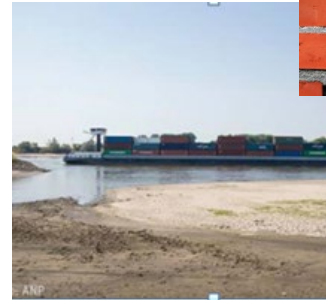
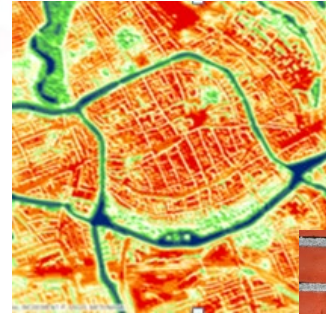
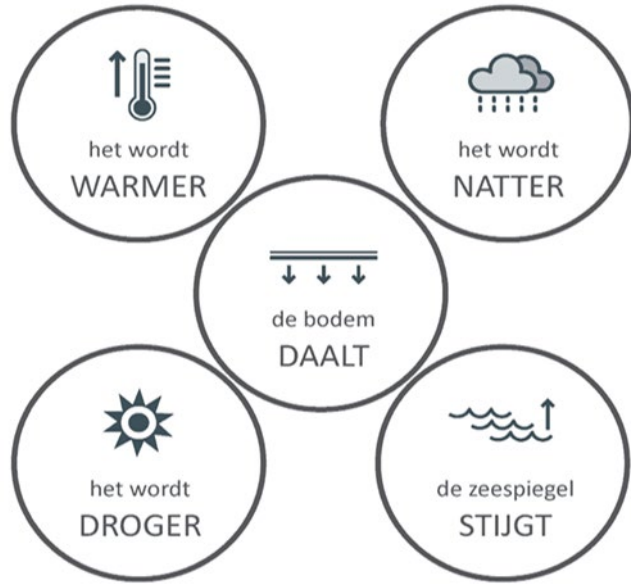


Climate change



Soil subsidence

The impact of climate-change and soilsubsidence

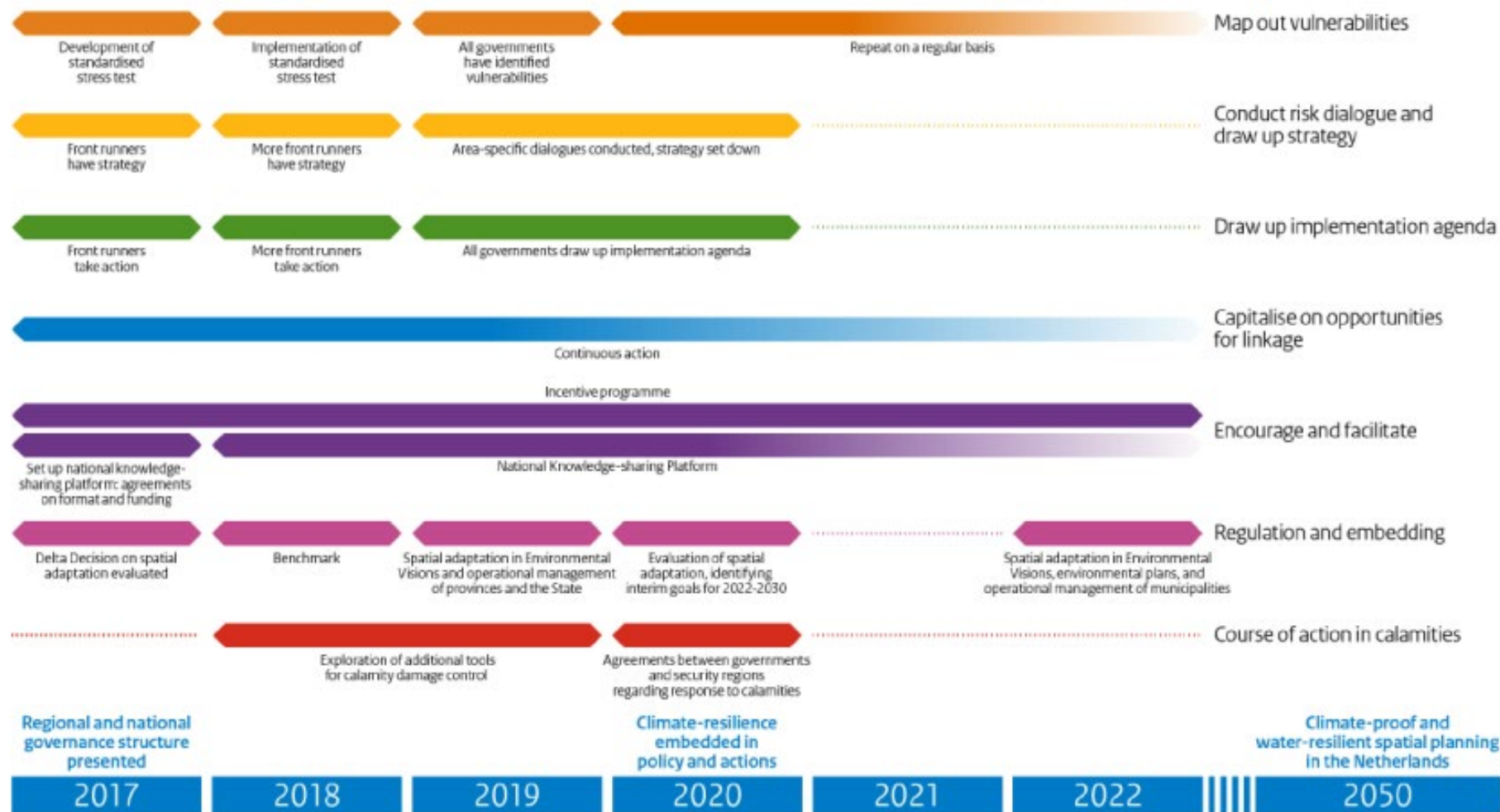


National common goal:

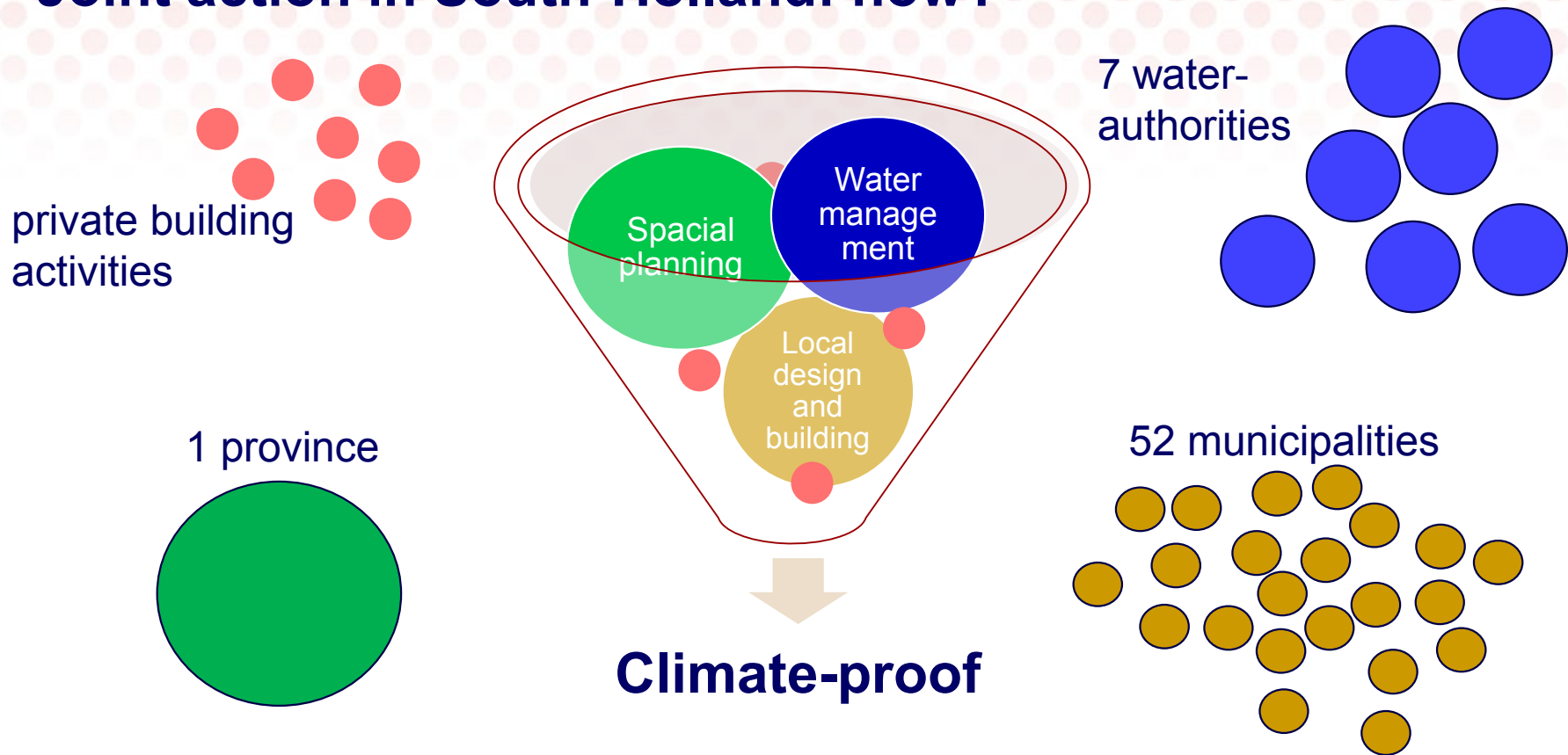
“By 2050 the Netherlands wil be designed in a climate-proof and water-resilient manner”



—Interim goals of the Delta Plan on Spatial Adaptation—



Joint action in South-Holland: how?



Our actions (1):

7 regional multi-level boards on climate adaptation:

Bestuurlijke regio's
Provincie Zuid-Holland



Regional Process



Climate Stress Test
(ready by Q2 2019)



Risk Dialogue
Q3/4 2019



Adaptation Strategy

Q2 2020



Implementation Agenda

Q4 2020





Thema droogte

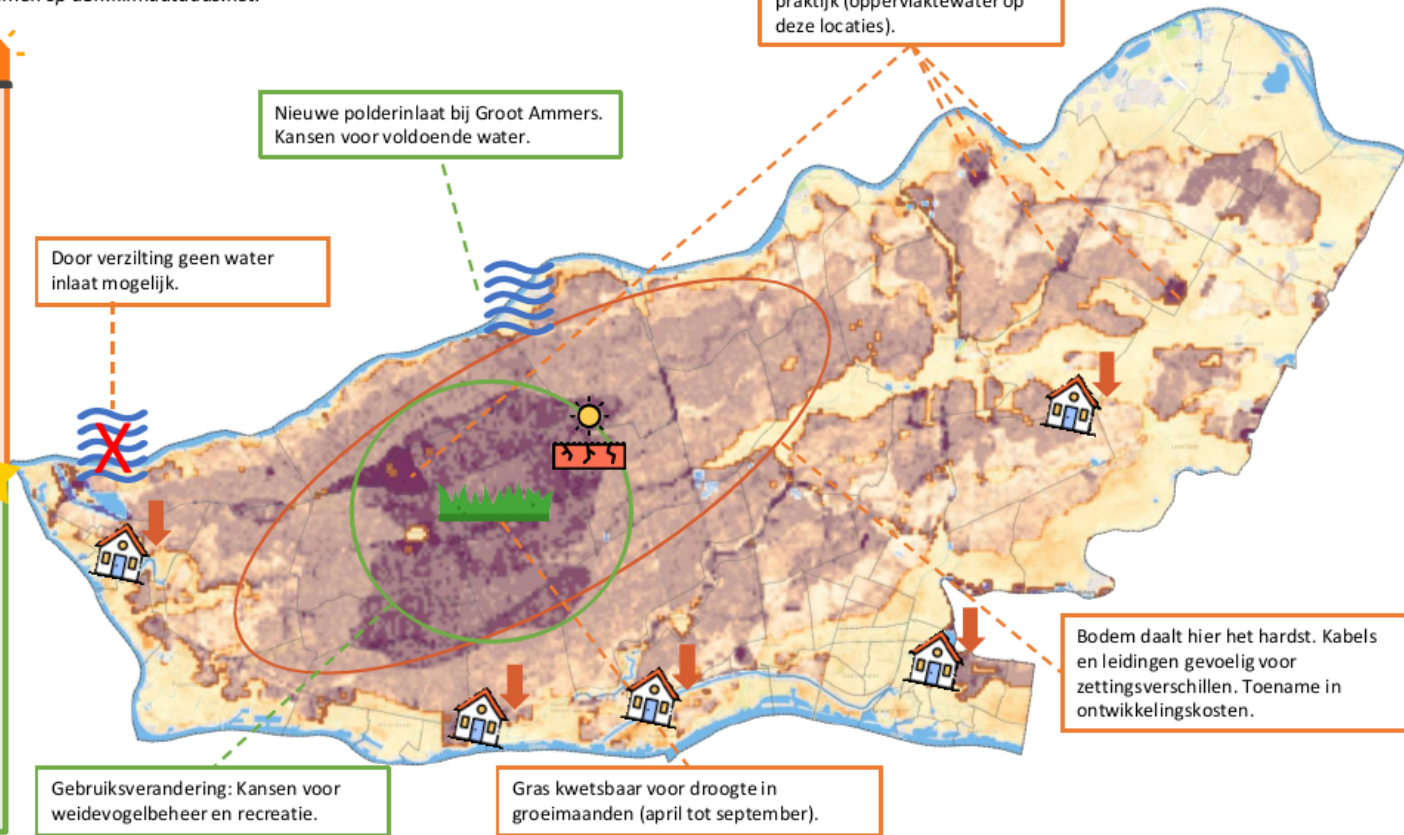
De kaartlaag 'Droogte' geeft aan waar bodemdaling de grootste schade kan veroorzaken. De kaart is gebaseerd op het klimaatscenario WH2050. Details en uitgangspunten zijn opgenomen op a5h.klimaatatlas.net.

Grootste knelpunten en opgaven:

- Scheefstand en zakken van niet onderheide woningen.
- Water tekort voor peilbeheer, dalende grondwaterstanden, bodemdaling en zetting.
- Hogere verzilting van rivierwater met beperkte water inlaat vanuit de Lek.
- Slechtere oogsten door droogte. Gras vooral kwetsbaar voor droogte in groeimaanden (april tot september).
- Slechte kwaliteit oppervlaktewater in relatie tot veedrenking.
- Bodemdaling valideren met de praktijk.
- Toename ontwikkelingskosten door bodemdaling. Kabels en leidingen gevoelig voor zettingsverschillen.

Grootste kansen:

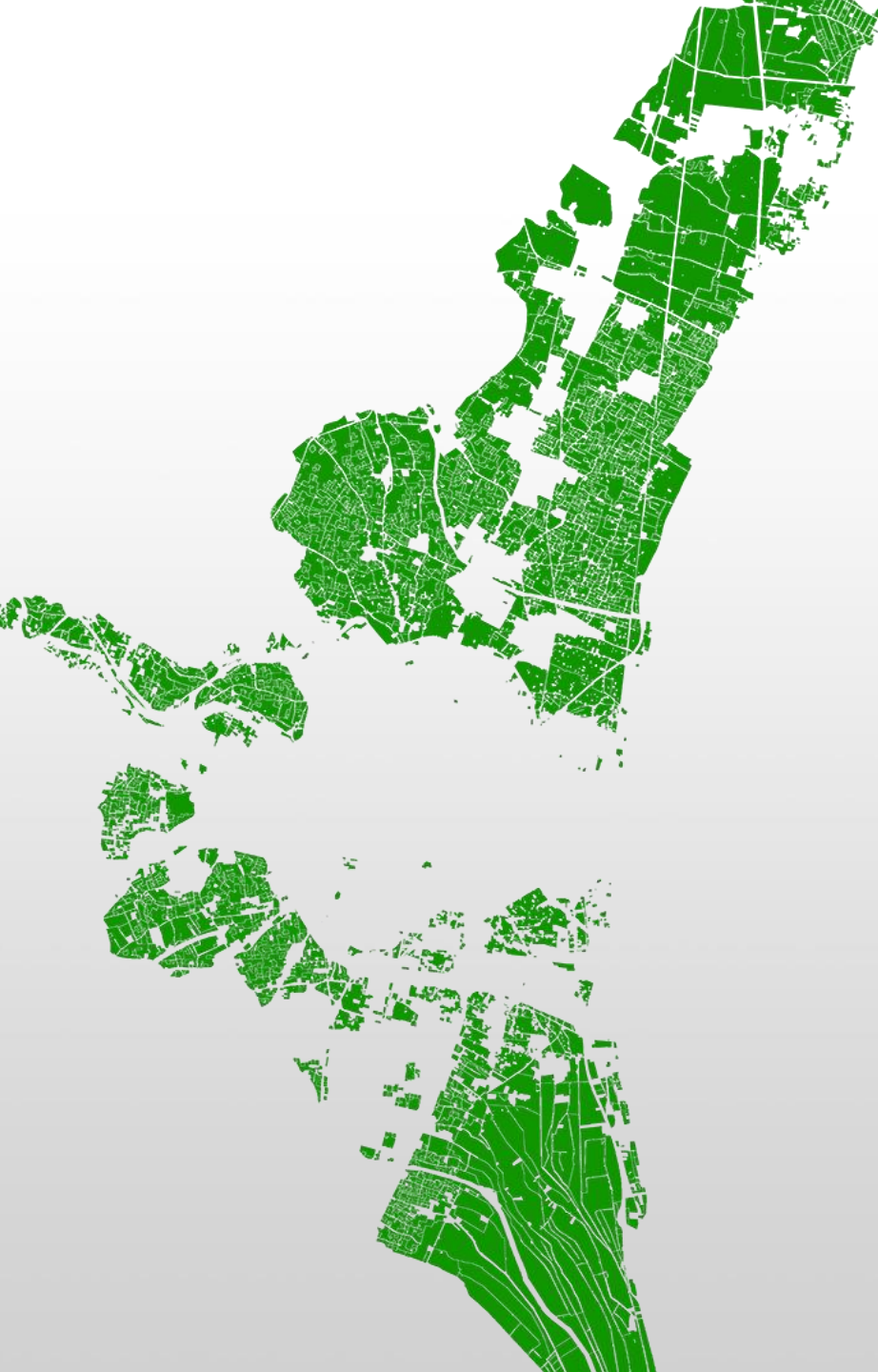
- Nieuwe polderinlaat bij Groot Ammers. Kansen voor voldoende water.
- Grootchalig onderzoek naar regio specifieke oplossingen voor bodemdaling. Verbinden aan lopende RMA opgave bodemdaling
- Meer onderzoek naar de onttrekking van water uit veen door bomen in natuurgebieden en stedelijk gebied.
- Door bodemdaling kansen voor innovatieve pilots, zoals drukdrainage, woningbouw en natuurlijke waterzuivering.
- Gebruiksverandering: Kansen voor weidevogelbeheer en recreatie.





provincie **HOLLAND**
ZUID

9. HUERTA DE VALENCIA (Comunidad Valenciana, Spain)



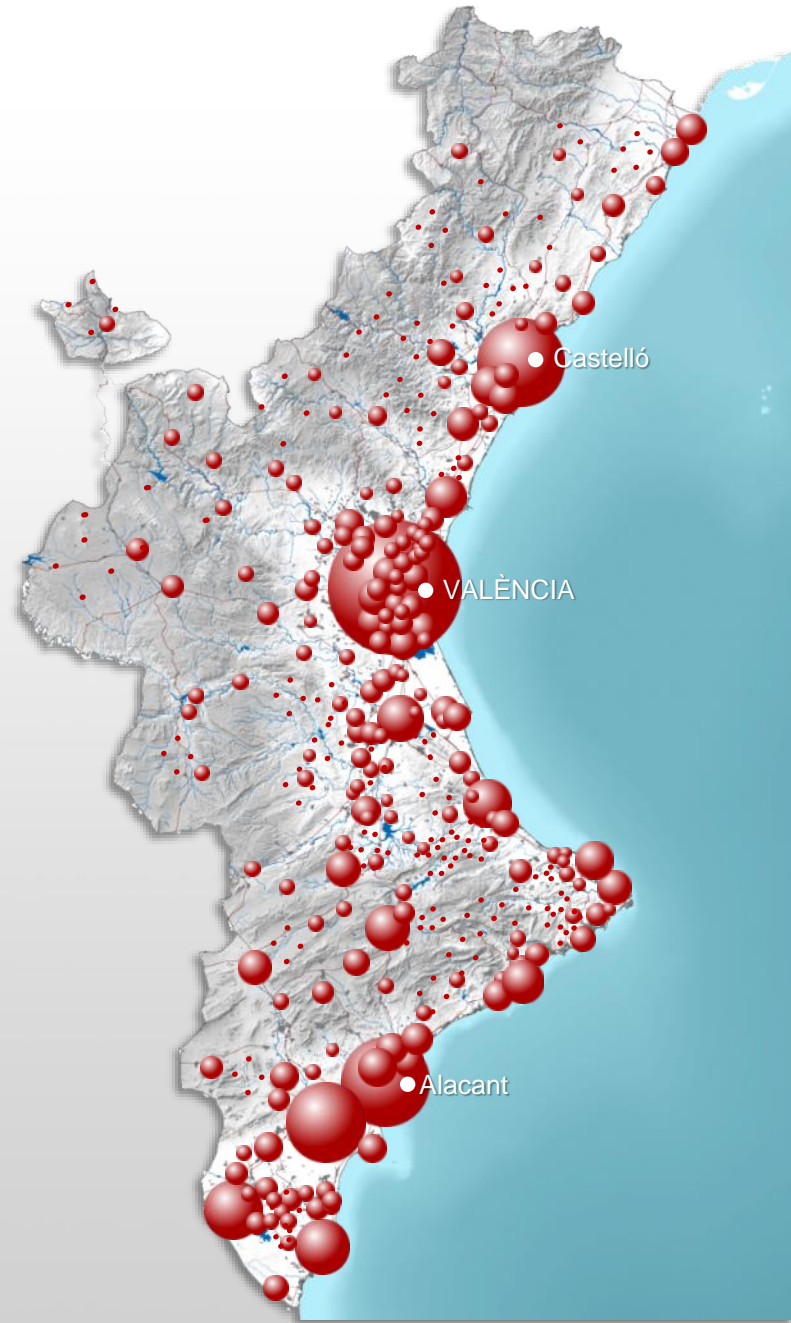
GENERALITAT VALENCIANA

HUERTA OF VALENCIA

General overview



5 million residents
542 municipalities
23,000 km²
85% urban population



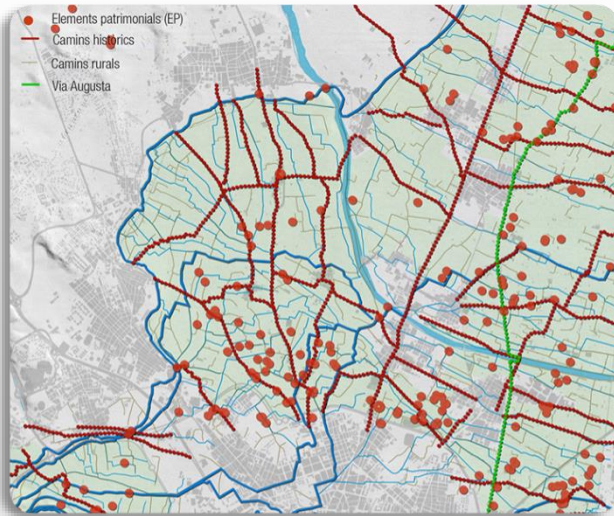
La Huerta: a unique space

Four major ecosystems of the metropolitan area of Valencia

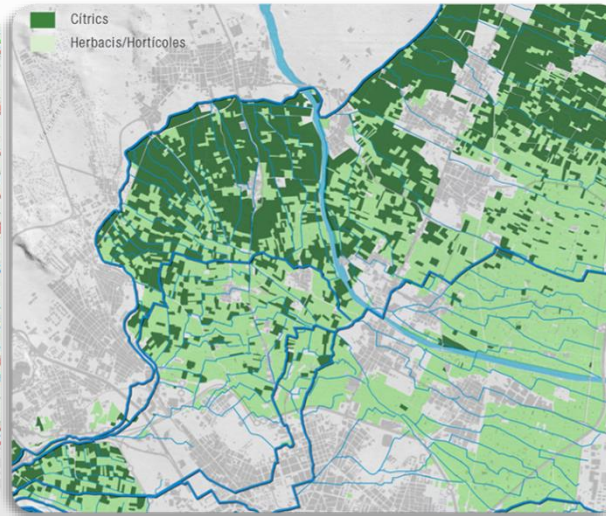
Huerta European Landscapes



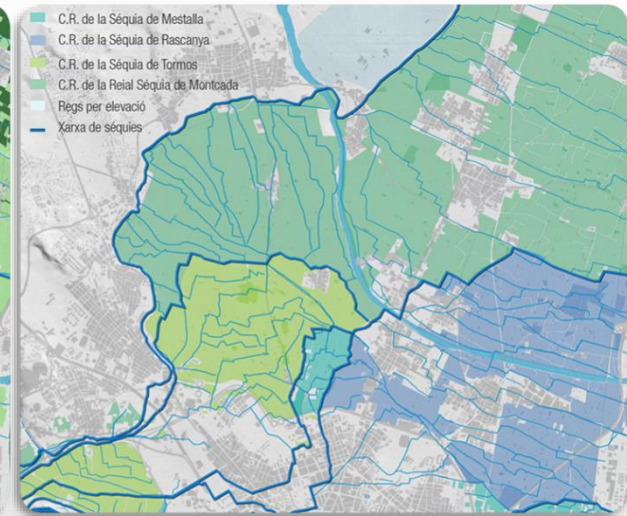
What is the Huerta of Valencia?



IT'S THE HISTORICAL STRUCTURE: rural roads, traditional buildings (alquerías, barracas, etc.)



IT'S THE AGRICULTURAL ACTIVITY, whose crops have changed over the centuries



IT'S THE LAND IRRIGATED by the Turia River under the control of the Tribunal de las Aguas



What is the Huerta of Valencia?

As a cultural landscape:

1

A CONTINUOUS AND HARMONIOUS SYSTEM

2

A LIVELY AND CHANGING LANDSCAPE

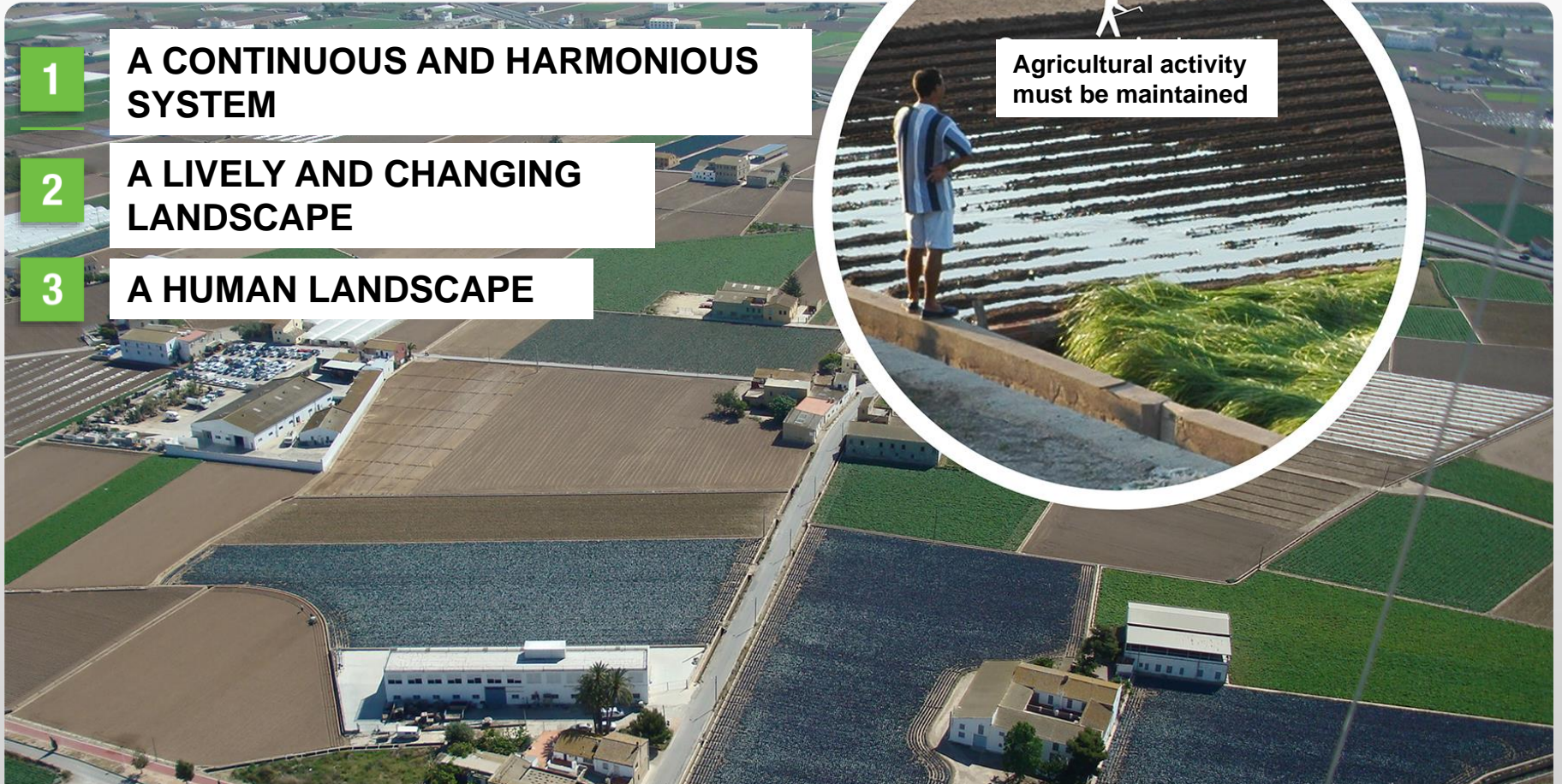
3

A HUMAN LANDSCAPE

THE FARMER



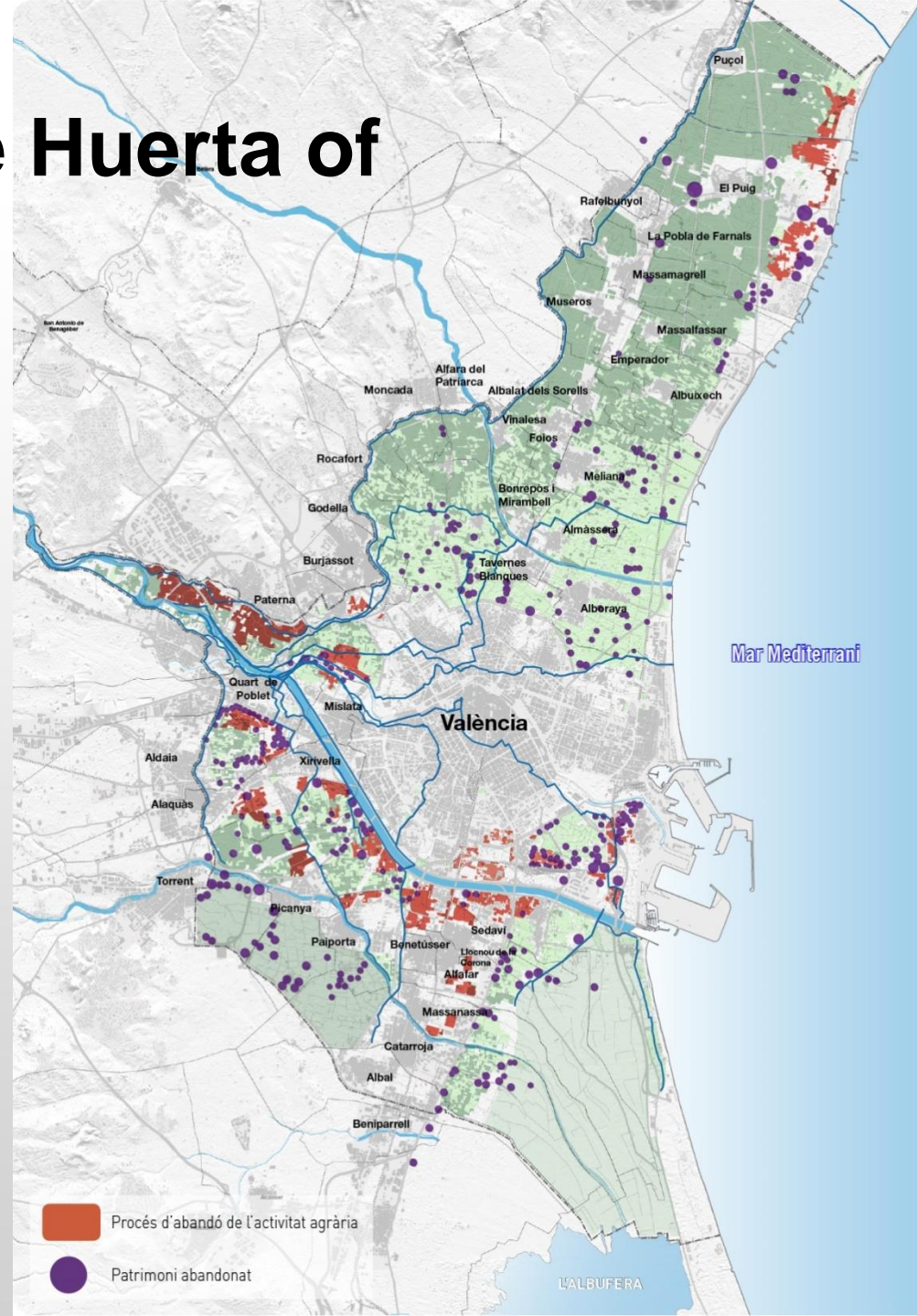
Agricultural activity must be maintained



Main problems of the Huerta of Valencia

ABANDONMENT OF AGRICULTURAL ACTIVITY

- Low profitability
- Lack of generational renewal
- Urban sprawl
- Unattractiveness of agricultural jobs



Main problems of the Huerta of Valencia

FRAGMENTATION OF THE LAND AND THE LANDSCAPE

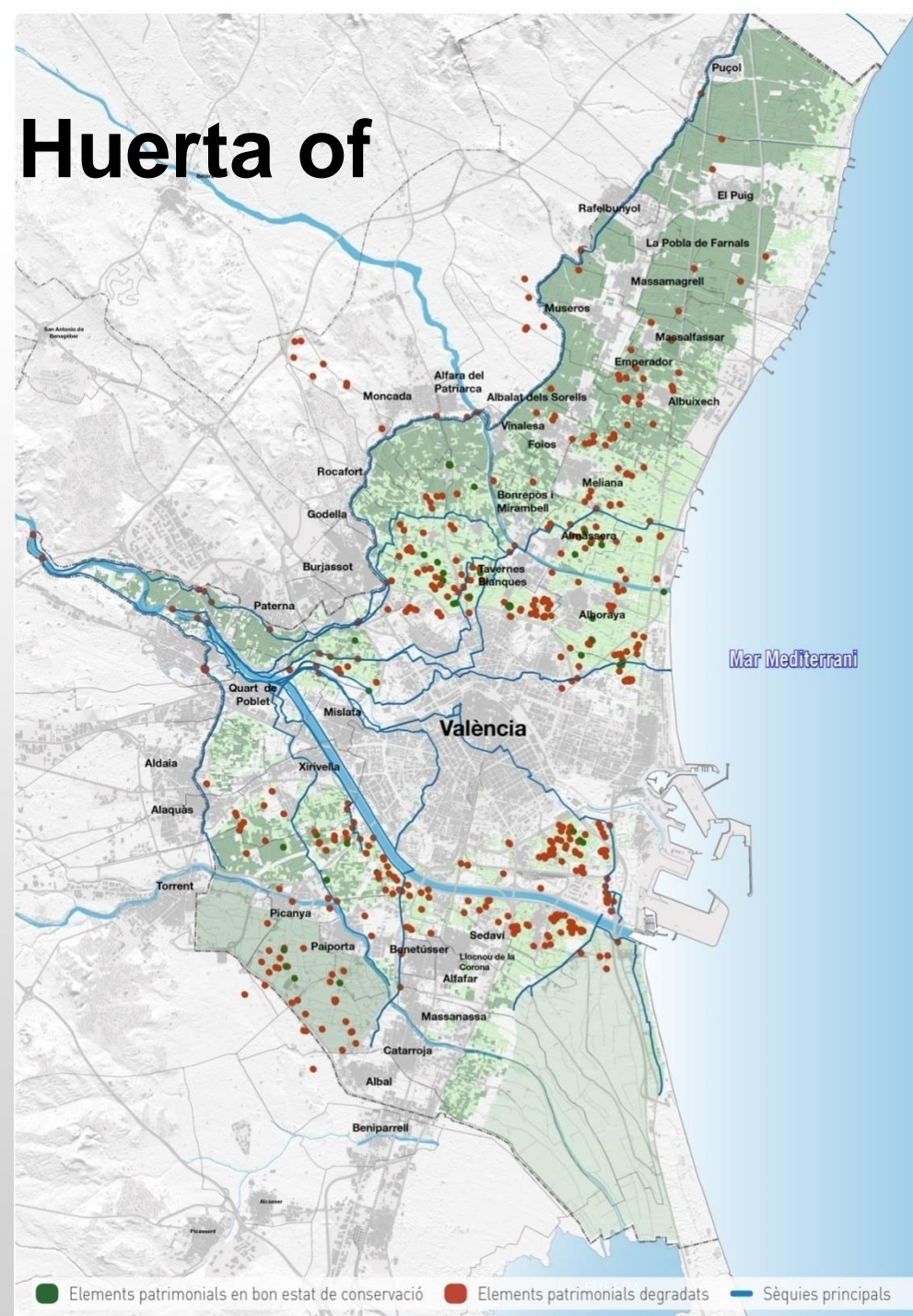
- Unrealistic urban growth expectations
- New infrastructures
- Lack of planning at the metropolitan scale
- Disorganized location of industrial activities and services



Main problems of the Huerta of Valencia

CULTURAL HERITAGE DETERIORATION

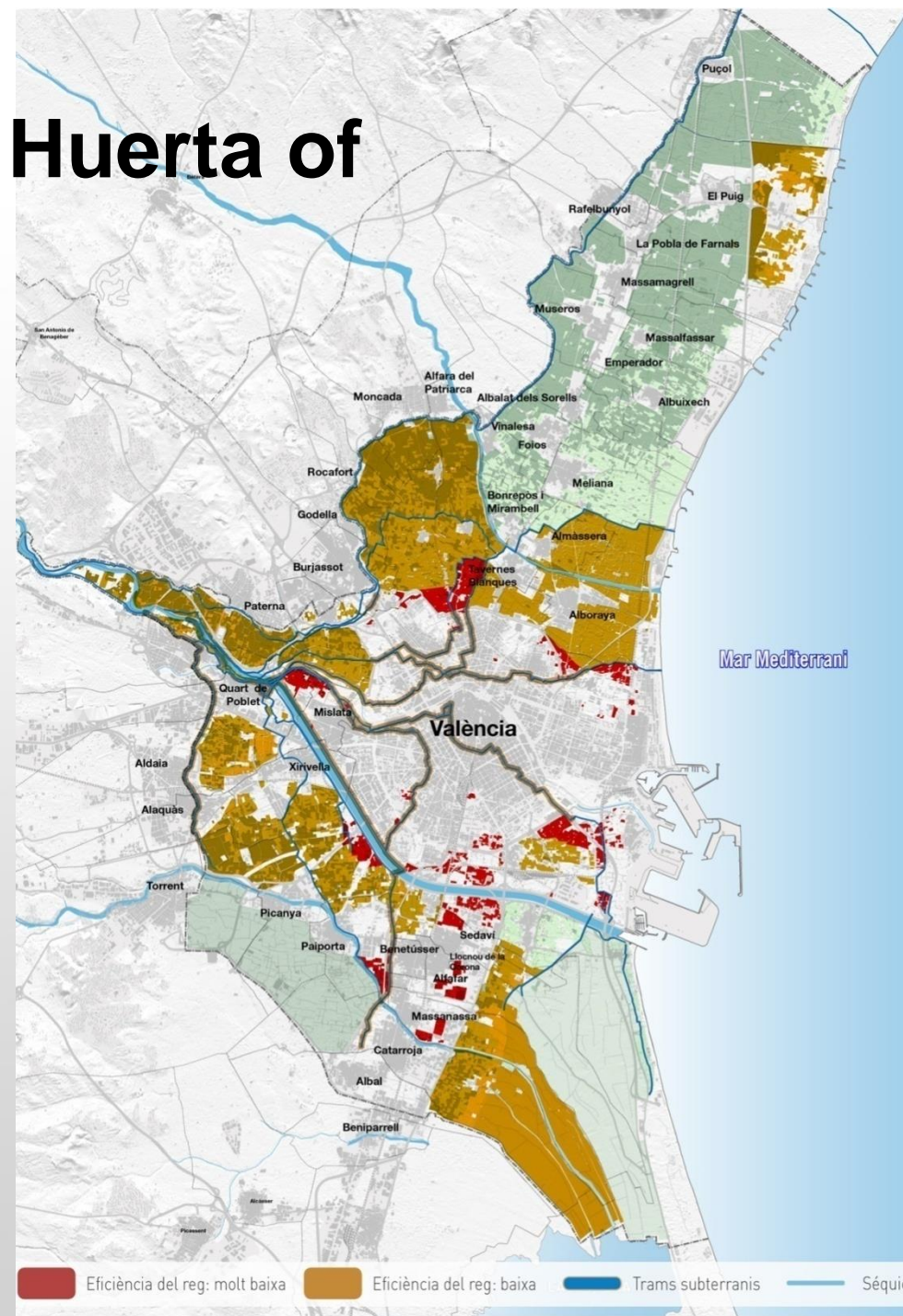
- One of the richest areas regarding cultural heritage
- More than 1,000 historical buildings listed
- 70% of the buildings need restoring
- Intangible cultural heritage threatened



Main problems of the Huerta of Valencia

IRRIGATION WATER POLLUTION

- Uncontrolled urban and industrial waste dumping
- New irrigation policies
- Salinization of underground water
- Inadequate water treatment



Regional Government responses

The Law of the Huerta of Valencia

```
graph TD; A[The Law of the Huerta of Valencia] --> B[Regional Plan for the Huerta of Valencia]; A --> C[Management board for the territorial governance]; A --> D[Agricultural Activities Plan];
```

Regional Plan for
the Huerta of
Valencia

Management board
for the territorial
governance

Agricultural
Activities Plan

The future of the Huerta

HUERTA - CITY REUNION

- New events about the Huerta
- Make the Huerta visible
- Improve public awareness
- Respect for the Huerta and the farmer

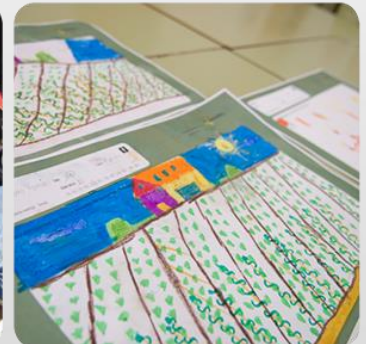


Foto: www.samarucdigital.com



Foto: Ajuntament de Godella



Foto: Ajuntament de Godella



Foto: www.samarucdigital.com

The AECLIC Local Network

ACTIVITY: Workshop1



PARTICIPANT	SECTOR	INSTITUTION
Miquel Jordà	LOCAL/REGIONAL AUTHORITY	Conselleria de Agricultura, Desenvolupament Rural, Emergència Climàtica i Transició Ecològica
Andreu Escrivà	PUBLIC SECTOR	València Clima i Energia
Celsa Monrós	PUBLIC SECTOR	Climate-KIC Spain
Joan Damià	PUBLIC SECTOR	Climate-KIC Spain
Pilar Martínez	PUBLIC SECTOR	Climate-KIC Spain – AIJU
Ángeles Calatayud	RESEARCH	Valencian Institute of Agricultural Research (IVIA)
José Miguel de Paz	RESEARCH	Valencian Institute of Agricultural Research (IVIA)
Maria Vallés	RESEARCH	Universitat Politècnica de València
Antonio Lidón	RESEARCH	Universitat Politècnica de València
Miquel Minguet	PRIVATE SECTOR	Horta Viva
Raquel Aguilar	SOCIETAL ORGANIZATION	Colegio Oficial de Ingenieros Agrónomos de Levante
Alba Herrero	SOCIETAL ORGANIZATION	Fundació Assut
Pepe Castro	SOCIETAL ORGANIZATION	La Unió de Llaureadors i Ramaders
1 remote participant via online form	UNKNOWN (ANONYMOUS)	

The AECLIC Local Network

ACTIVITY: Workshop2_



PARTICIPANT	SECTOR	INSTITUTION
Celsa Monrós	LOCAL/REGIONAL AUTHORITY	Conselleria de Agricultura, Desarrollo Rural, Emergencia Climática y Transición Ecológica
Rosa Pardo	LOCAL/REGIONAL AUTHORITY	Conselleria de Política Territorial, Obras Públicas y Movilidad
Marilda Azulay	RESEARCH	Universitat Politècnica de València
Antonio Lidón	RESEARCH	Universitat Politècnica de València
José Miguel Ferrer	PRIVATE SECTOR	Green Urban Data
Raquel Aguilar	SOCIETAL ORGANIZATION	Colegio Oficial de Ingenieros Agrónomos de Levante
Regina Monsalve	SOCIETAL ORGANIZATION	Colegio Oficial de Ingenieros Técnicos Agrícolas de Valencia y Castellón
Vicente Sales	SOCIETAL ORGANIZATION	Fundació Assut
Josep Gavalda	SOCIETAL ORGANIZATION	Per L'Horta
Lola Vicente Almazán	SOCIETAL ORGANIZATION	CERAI
Raquel Álvarez	SOCIETAL ORGANIZATION	Justicia Alimentaria

Climate changes effects on the Huerta de Valencia

Regional Government is aware of the severe impacts on the productive and cultural landscape of the Huerta:

- Lack of water supply.
- Environmental services depletion.
- Threats to peri-urban and proximity agriculture.
- Breaking farmers communities strongly rooted in the territory.
- Fragmentation of the green belts which make possible a compact urban model of the metropolitan area of Valencia, etc.

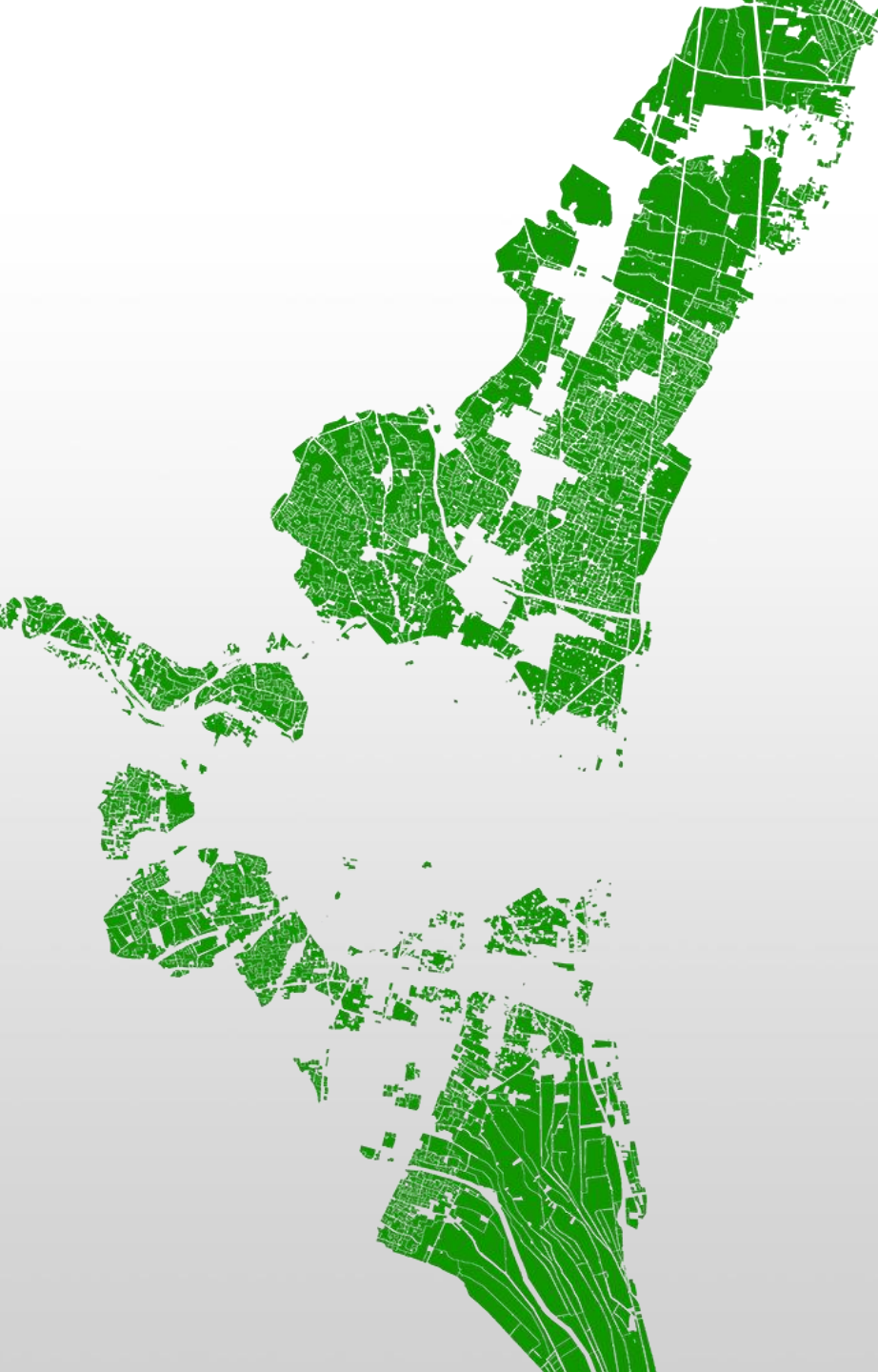
Regional Government responses

Giving priority to all the measures which can contribute to the sustainable management of the Huerta:

- Region of Valencia Climate Change Strategy 2030.
- Managerial Board of the Huerta de Valencia (Consell de l'Horta).
- Agricultural Development Plan of the Huerta de Valencia.
- Territorial Action Plan in the Metropolitan Area of Valencia.

Regional Government Commitments

- Enhancing the knowledge on the evolution of the cultural landscape of the Huerta, and its responses to the climate change effects.
- Fostering and backing all kind of projects which can improve the resilience of the Huerta.
- Involving in multiregional alliances and networks which main goal is the sustainable management of this kind of peri-urban landscapes and its close relationship with the metropolitan spaces.



GENERALITAT VALENCIANA

HUERTA DE VALENCIA

10. URBAN FRINGE BOLOGNA (Italy)



AELCLIC Project

CLIMATE-KIC action in Bologna, Italy

Nomisma's role in the local socio-economic system

- One of Italy's leading private socio-economic research companies (est. 1981)
- **Multi-sectoral and interdisciplinary:**
- Active in territorial studies, socio-economic analyses, sectoral studies, real estate and urban development, agri-food, consumer surveys, technical assistance to public authorities at local, regional, national and EU level
- Local clients include Metropolitan City of Bologna, Emilia-Romagna Region, local businesses including some of the stakeholders in the AELCLIC Pathfinder workshops

The Bologna Pilot LANDSCAPE and ITS LOCAL NETWORK

Local landscape with mixed profile:

- Agricultural, industrial, commercial, university activities

Local stakeholders from different disciplines:

- Public and private entities representing different parts of the social, political, economic and infrastructural fabric of the local territory
- Complementarity of stakeholders

- The varied nature of the activities and their impact on the territory makes it challenging to find solutions suitable for all stakeholders: farmers, shopping mall, office park, local residents, etc.
- Climate change has **different levels of impact** on different stakeholders
- Bologna has already initiated **Climate Adaptation planning** but needs to do more as challenges due to weather increase (heatwaves, drought, dramatic rain/hail events, wind, etc.)

AELCLIC Pathfinder Workshop Experience

Forum for stakeholders to voice different perspectives on climate change impact and adaptation :

- Diagnosis of impacts
- Identification of Possible solutions
- Topics, objectives and actions of an Adaptation Plan and roles of stakeholders

- Brainstorming—Idea exchange
- Increasing awareness of climate challenges and what can be done in a local setting
- Stimulating critical thinking
- Building of a network and potential partnerships
- Developing future project concepts
- Emerging complementarities and common interests
- Mobilisation of capacities

NEXT CHALLENGES

- Maintaining continuity and sustainability of the local network
- Developing an evidence base for future initiatives
- Creating linkages with other parts of the Bologna territory
- Ongoing engagement to maintain awareness and commitment
- Supporting development of future plans and projects by:
 - Collecting relevant local information and data
 - Analysing policies and regulations
- Developing synergies with the larger Bologna territory and relevant experiences of stakeholders (i.e. Consorzio Bonifica Renana)

NEXT STEPS

- Mapping of opportunities
- Building on existing synergies between participants and developing new linkages in EU
- Co-development of project concepts and proposals

Examining funding or support options (Horizon 2020, LIFE, Interreg Europe, Central Europe, Erasmus+, etc.)

- Pilot and demonstration projects
- Knowledge networks
- Sharing of good practice examples
- Learning from less successful examples

11. BARCELONA METROPOLITAN AREA, RIU BESÒS (Catalonia, Spain)



BESÒS RIVER (METROPOLITAN AREA OF BARCELONA)

November 2019

0. BESÒS RIVER (METROPOLITAN AREA OF BARCELONA)

0. METROPOLITAN AREA OF BARCELONA

Metropolitan area:
3.2 million people
636 km²



- 1 million people
- 81 km²
- 4 municipalities + 3 districts of Barcelona

0. TERRITORY OF THE BESÒS RIVER



0. TERRITORY OF THE BESÒS RIVER



0. TERRITORY OF THE BESÒS RIVER

Meeting space

Territorial identity



0. TERRITORY OF THE BESÒS RIVER



The river as a pedagogical resources



0. TERRITORY OF THE BESÒS RIVER

The river is a biodiversity pool





- Few green spaces inside urban area
- The green infrastructure is very important to improve the quality of public space and the quality of life of the citizen

LES 3 XEMENEIES

- Area: **300.000 m2**
- Mouth of the river Besòs
- Presence of the 3 chimneys (architectural heritage) as a reminder of the industrial past
- **Last constructible area of the metropolitan coastline.**



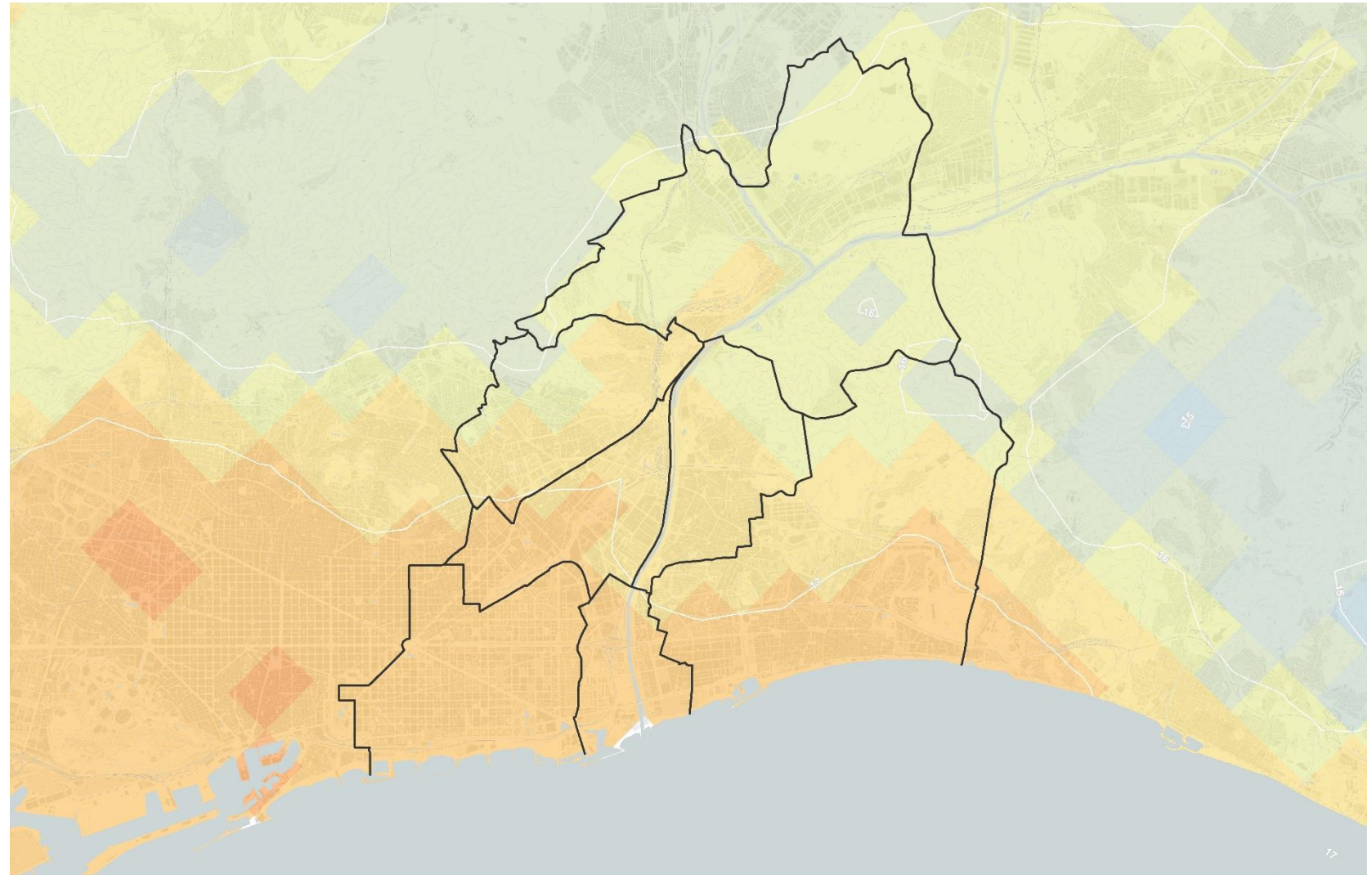
LES TRES XEMENEIES



CURRENT CLIMATE



- Typical mediterranean climate coastline
- Annual average temperature: **15,5 °C**.
- The hottest area is the coastal zone



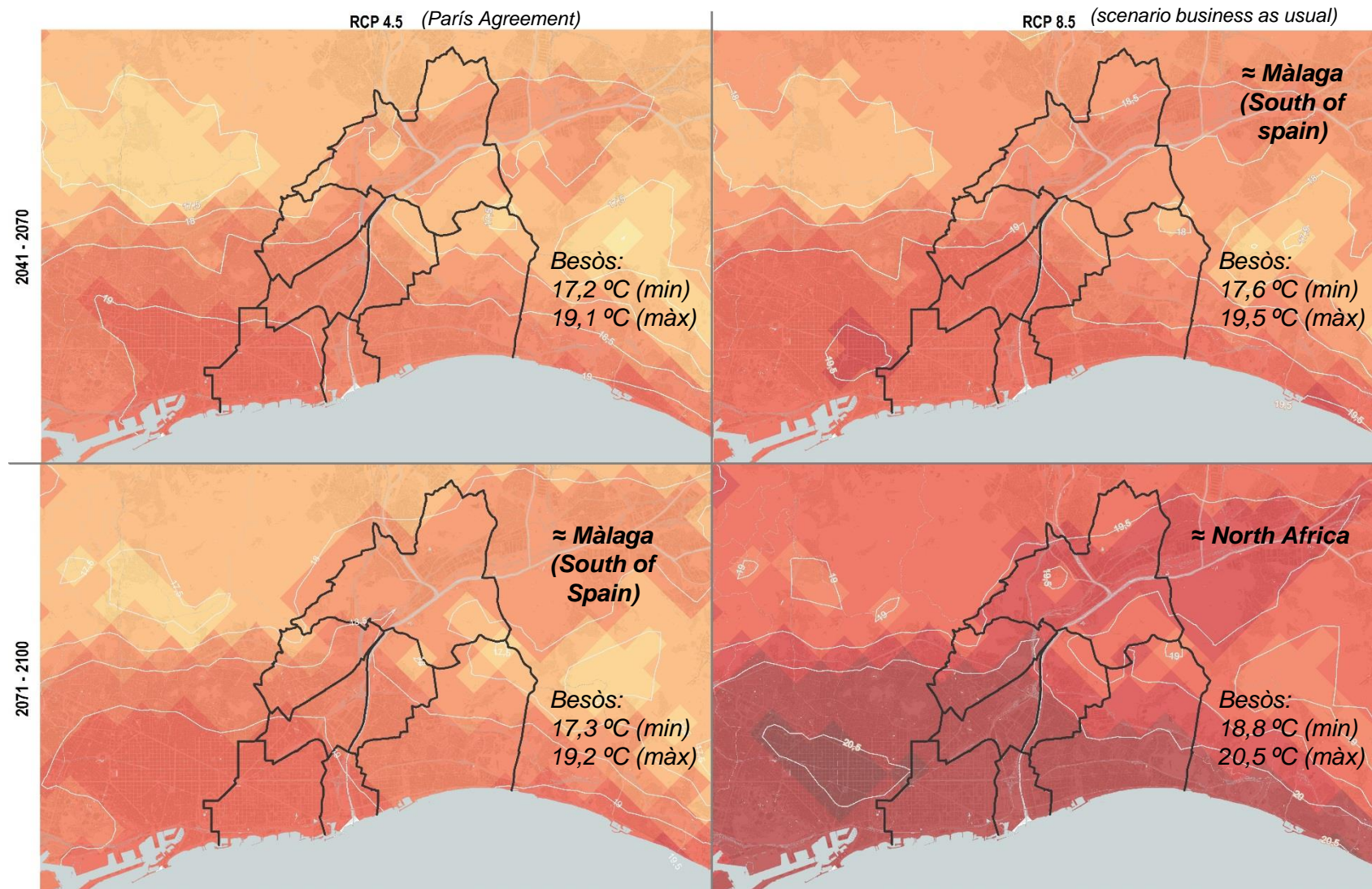
Font: Escenaris climàtics regionalitzats a l'Àrea Metropolitana de Barcelona (Projecte ESAMB) SMC, AMB i BR (2016)

CLIMATE CHANGE



FUTURE CLIMATE:

- The increases of **+ 1.9 °C** and **+3 °C** are expected at the end of the century. This is equivalent to having a similar climate in **Malaga**, in the most favorable case, or in **North Africa**, in the most unfavorable case.
- Significant increase in nighttime temperatures in the coastal zone



Source Escenaris climàtics regionalitzats a l'Àrea Metropolitana de Barcelona (Projecte ESAMB) SMC, AMB i BR (2016)

MAIN EFFECTS OF CLIMATE CHANGE ON THE RIVER BESOS TERRITORY:

- Reduction of public use for a greater exposure to risks (heat, flood risk)
- Worsening of health of citizen to heat waves and new diseases
- Loss of biodiversity

1. THE AELCLIC EXPERIENCE



Climate-KIC



Climate-KIC is supported by the
ETI, a body of the European Union

consorcibesòs



BARCELONA
REGIONAL



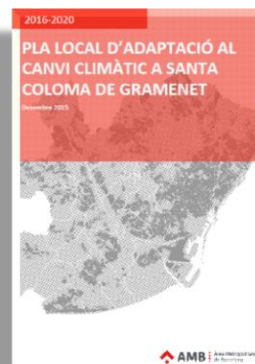
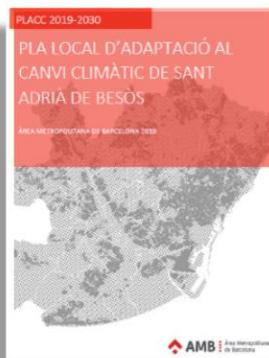
Before Aelclíc:

- Work network had been at the institutional level
- The management system without the climate change vision

After Aelclíc:

- Incorporates the productive and social sector
- Brings a different landscape look

sector	participants
Local/regional authority	9
Public sector	9
Research/ University	2
Productive sector	2
Social organization	6

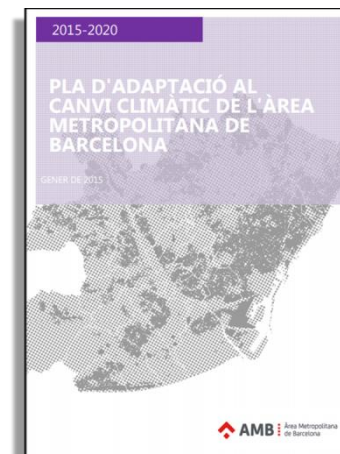


Plans Locals
D'Adaptació

LACAP_Pla
d'Adaptació del
Paisatge de
L'Eix Besòs al
Canvi Climàtic



Pla Director
Urbanístic de
les Tres
Xemeneies



•Agenda
Besòs



2. NEXT CHALLENGE



Climate-KIC



Climate-KIC is supported by the
EIT, a body of the European Union

consorcibesòs



BARCELONA
REGIONAL



- To get the involvement of supramunicipal administration (Governance)
 - An effective instrument for introduce the climate key of the urban development of the last undevelopment sector of the metropolitan coast
 - the opportunity to recover the natural function of the river as a climate refuge
 - Adapting the Besòs landscape and improving the green infrastructure will improve the quality of public space and above all improve the health of the population
 - Strengthen the network can help the LACAP to be a real Plan, not a written plan in an office and really be a co-responsibility space of the fight against climate change

3. NEXT STEPS





- The most important role of the network and its members is continue working to identify the effects of climate change and the measures that can be implemented

The history of the Besòs river is the story of an urban river that is reborn because it seizes opportunities. We would like to share our dreams with other networks, With YOU.

12. LA MATA-TORREVIEJA

(Comunidad Valenciana, Spain)



nov-2019



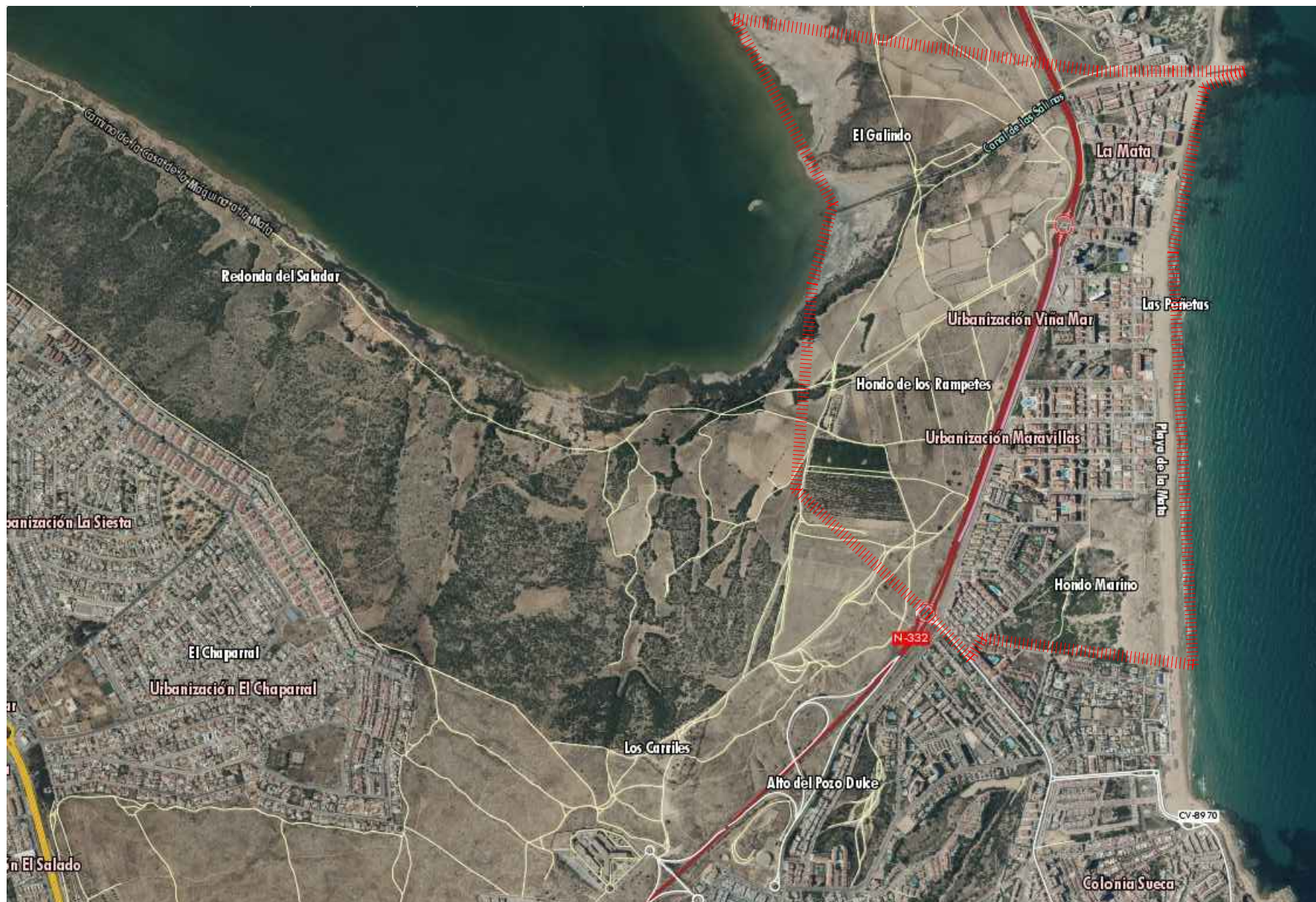
VÍCTOR M. COSTA MAZÓN. ARCHITECT.

TECHNICAL RESPONSIBLE OF PLANNING OFFICE OF ORIHUELA CITY HALL.

Adaptation of European Landscapes to Climate Change

AYUNTAMIENTO DE TORREVIEJA

AYUNTAMIENTO DE TORREVIEJA



nov-2019



VÍCTOR M. COSTA MAZÓN. ARCHITECT.

TECHNICAL RESPONSIBLE OF PLANNING OFFICE OF ORIHUELA CITY HALL.

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AYUNTAMIENTO DE TORREVIEJA



nov-2019



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Adaptation of European Landscapes to Climate Change

AYUNTAMIENTO DE TORREVIEJA



Coordinación de sistemas de movilidad



Conexiones peatonales



Ramblas



Cruces peatonales con infraestructuras

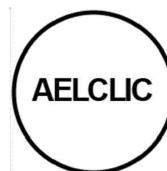


Cruces ramblas con infraestructuras

nov-2019

VÍCTOR M. COSTA MAZÓN. ARCHITECT.

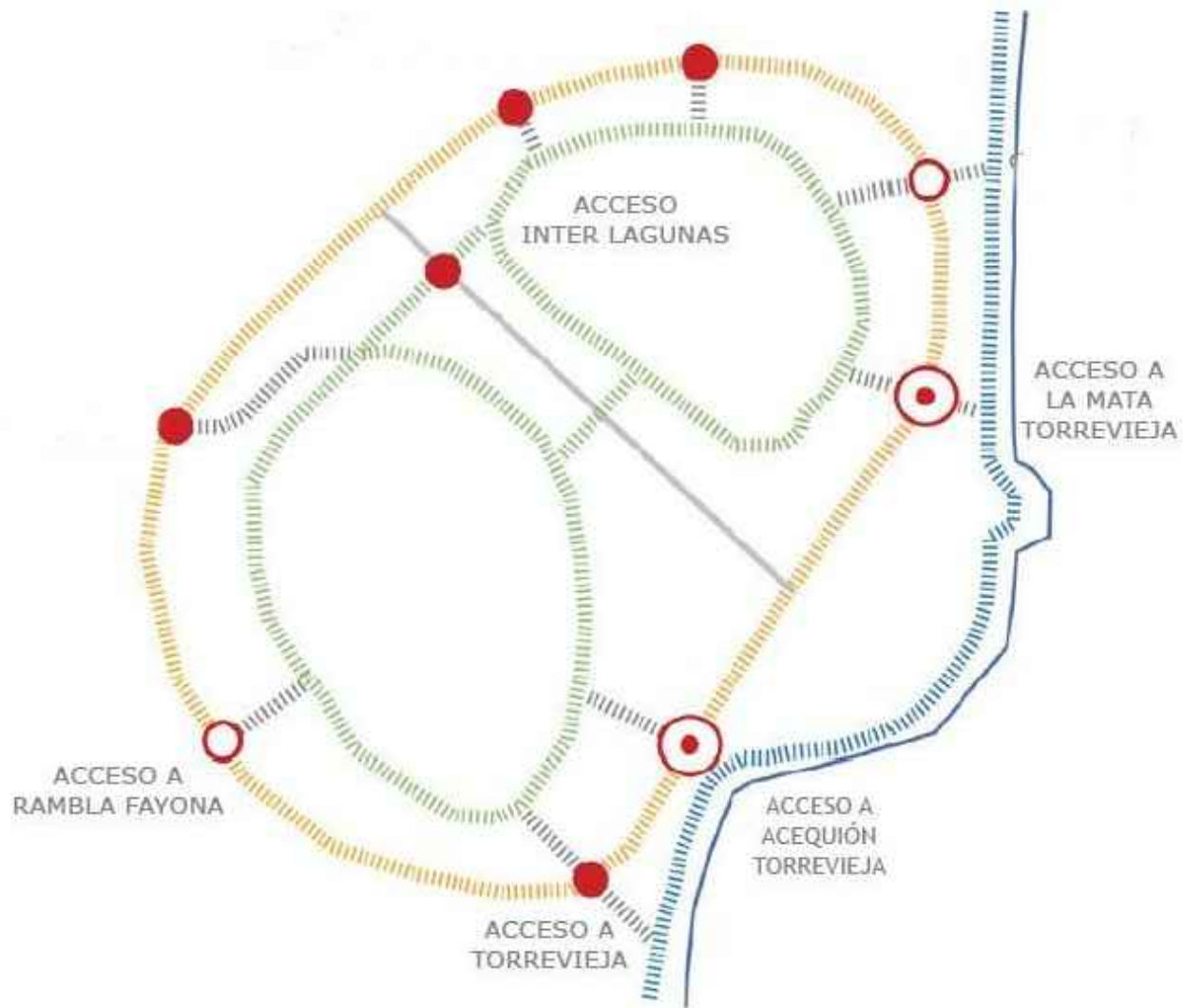
TECHNICAL RESPONSIBLE OF PLANNING OFFICE OF ORIHUELA CITY HALL.



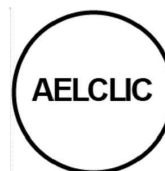
Adaptation of European Landscapes to Climate Change



AYUNTAMIENTO DE TORREVIEJA



nov-2019



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Adaptation of European Landscapes to Climate Change



AYUNTAMIENTO DE TORREVIEJA



nov-2019

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Adaptation of European Landscapes to Climate Change



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Adaptation of European Landscapes to Climate Change



AYUNTAMIENTO DE TORREVIEJA

13. MALMI DISTRICT of HELSINKI (Finland)

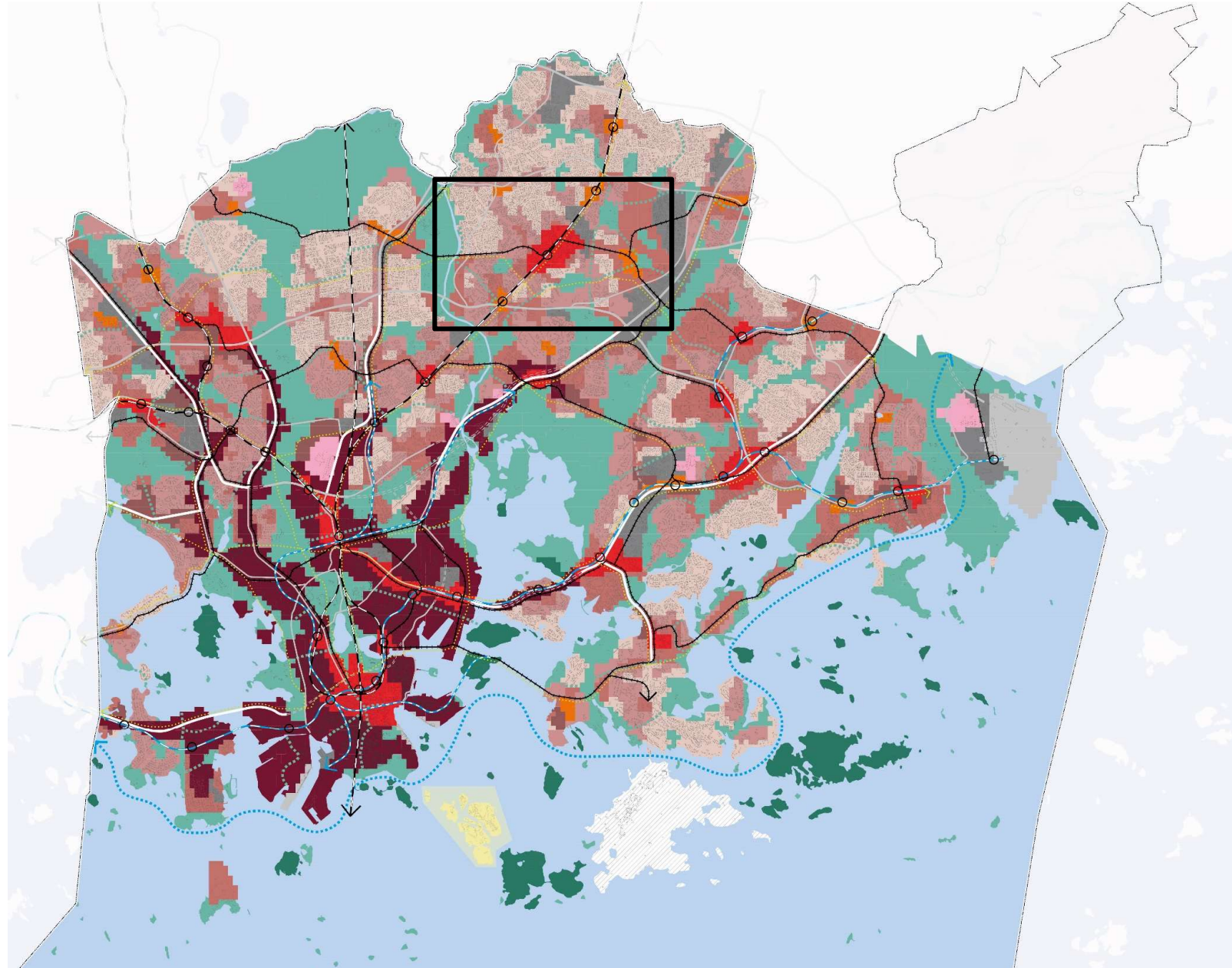
Malmi pilot landscape

AELCLIC-meeting, Bologna/ 13.11.2019

Susanna Kankaanpää & Antti Mentula / City of Helsinki

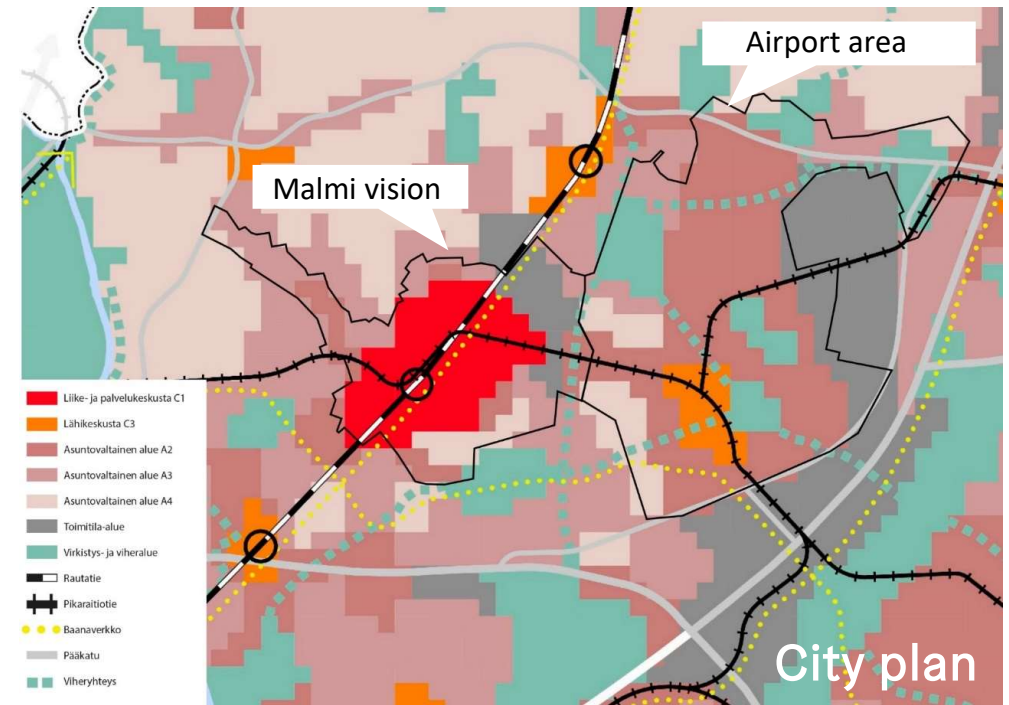
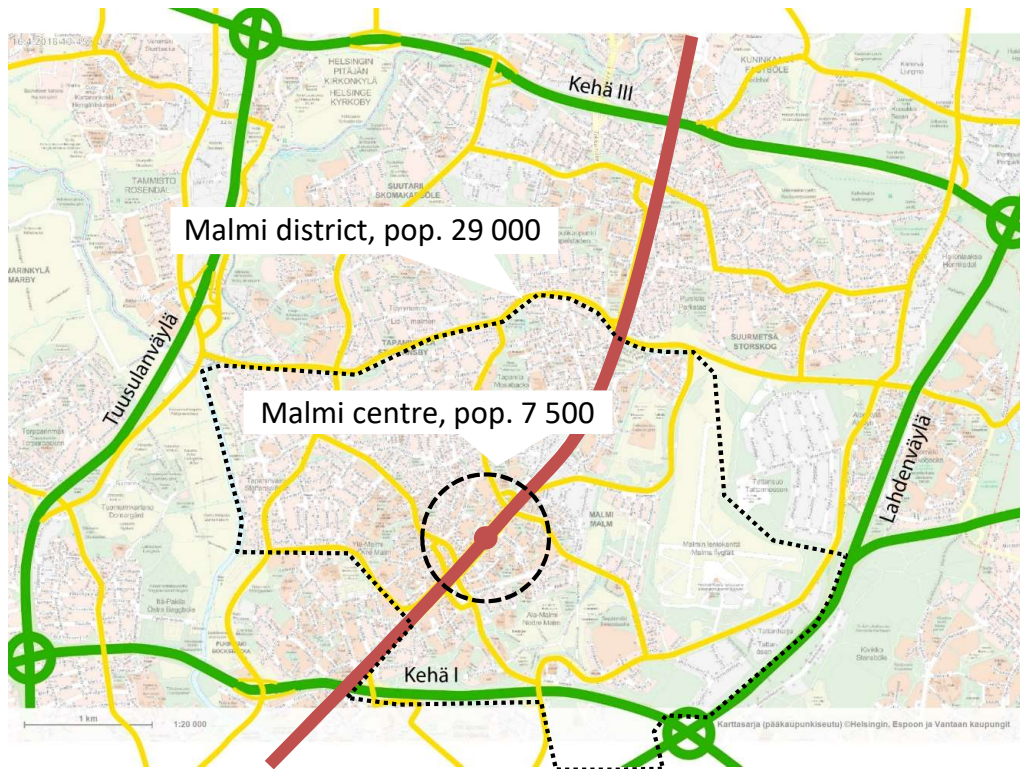
Malmi pilot landscape Helsinki city plan

- Centre of North-east Helsinki in city plan
- One of three defined urban renewal districts
- Next to Malmi airport site with 25 000 new inhabitants



Malmi pilot landscape

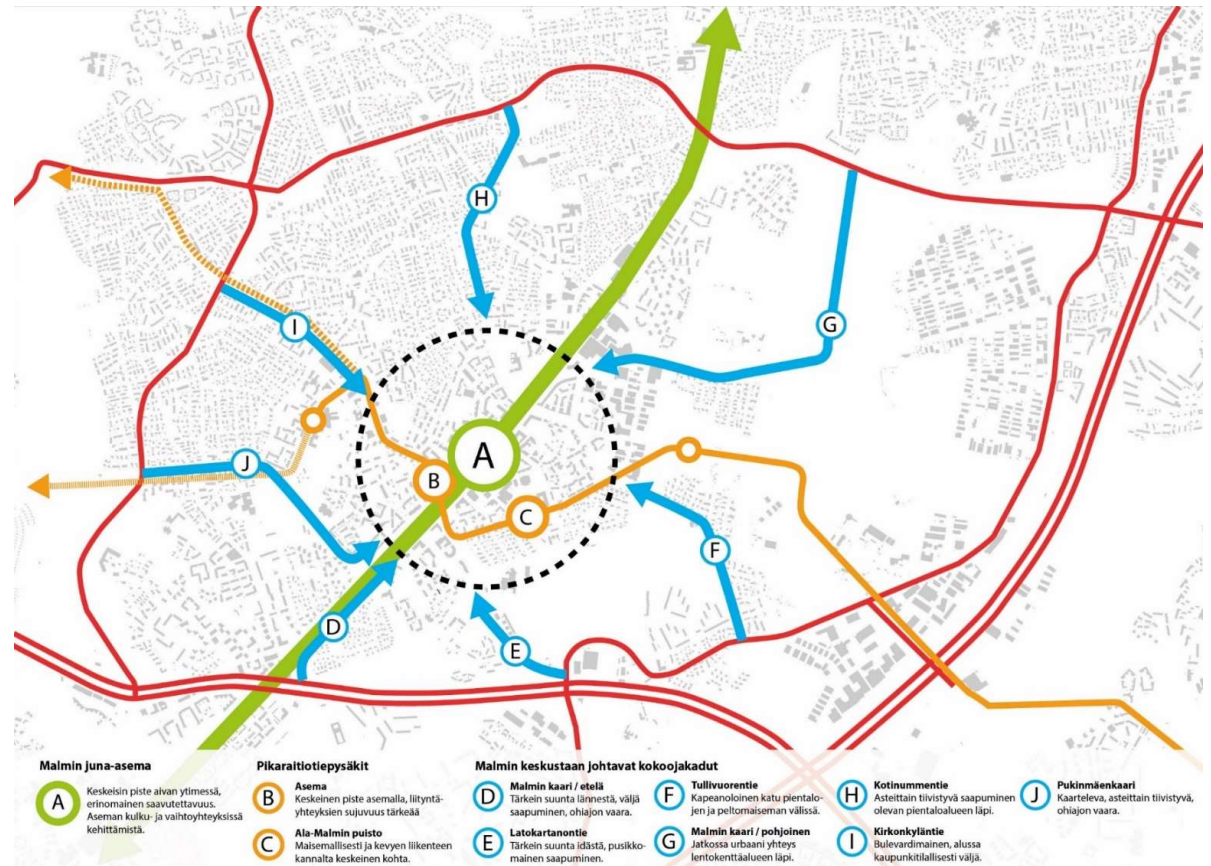
Background



- Located along the main railway line to north, surrounded by main highways

Malmi pilot landscape Challenges

- Discreet area profile
- Negative identity
- Complicated orientation
- Dividing railway
- Low intensity



Malmi pilot landscape

Malmi vision concept



- From division to a versatile and unified centre of north-east-Helsinki

Malmi pilot landscape

Malmi resident vision

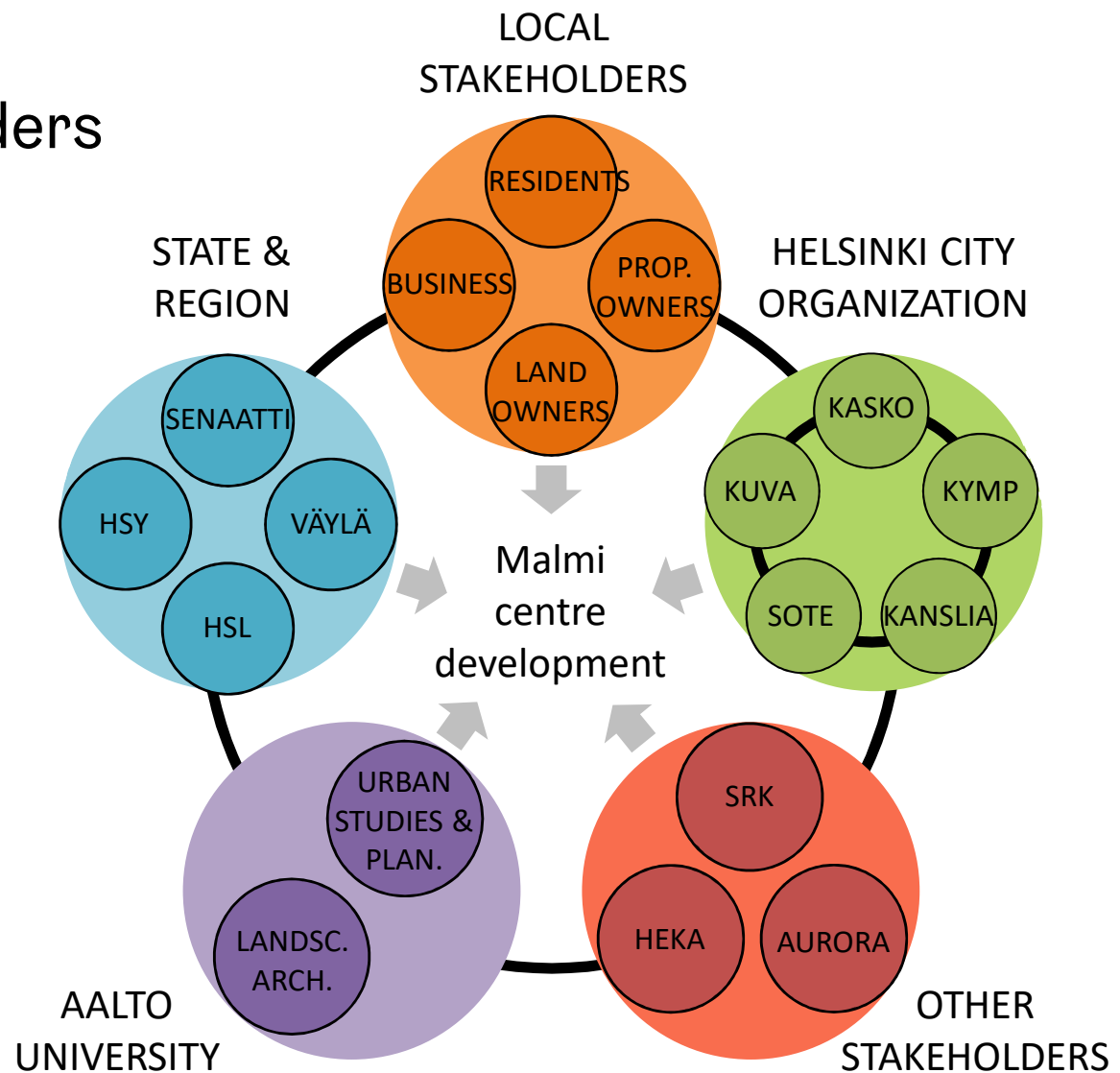
- A city co-ordinated sparring group formed a resident vision based on organized map survey



Malmi pilot landscape

Malmi vision stakeholders

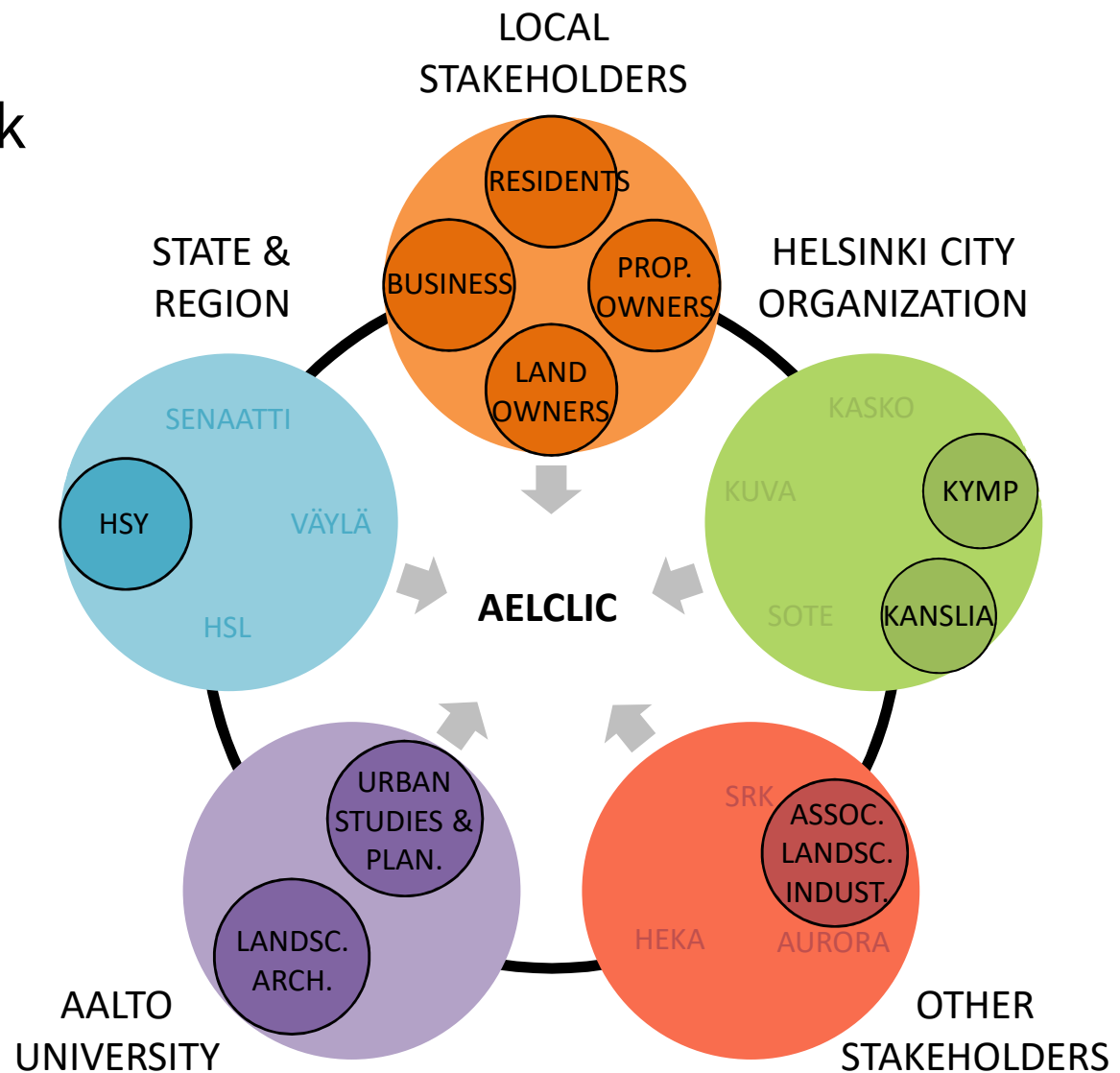
- Malmi vision has been formed in co-operation with a wide network of stakeholders



Malmi pilot landscape

AELCLIC: local network

- AELCLIC-network includes participants from all the of vision's main stakeholder groups



Malmi pilot landscape

AELCLIC: positive aspects

- **Fortification of Malmi vision stakeholder network** with a parallel project
- **Creation of a local forum** to raise climate change awareness
- **Concretisation of city's climate change goals** in an important urban centre
- **Source of information** for Malmi vision planning: local values, solutions, obstacles, actions



Malmi pilot landscape

AELCLIC: contributions

- **Creation of climate change information on Malmi** that will be directly merged into Malmi vision → climate change theme pages
- **A chance to promote the climate change battle through AELCLIC-project** in the vision and support local grass-root organisation



Kerrokset: Ilmastovarautuva Malmi

Keskustan kehittäminen on keskeinen osa Malmi-pilottikokousta. Malmi on alue, joka on valittu pilottikokouksen keskeiseksi alueeksi. Malmi on alue, joka on valittu pilottikokouksen keskeiseksi alueeksi. Malmi on alue, joka on valittu pilottikokouksen keskeiseksi alueeksi.

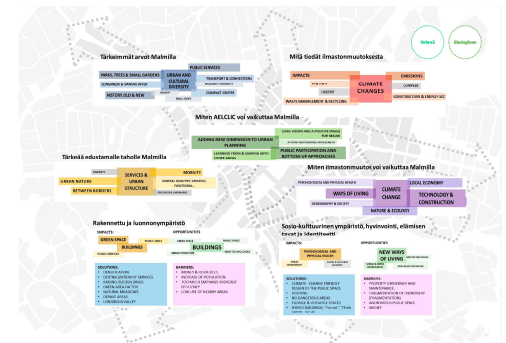
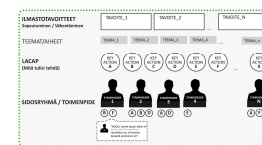
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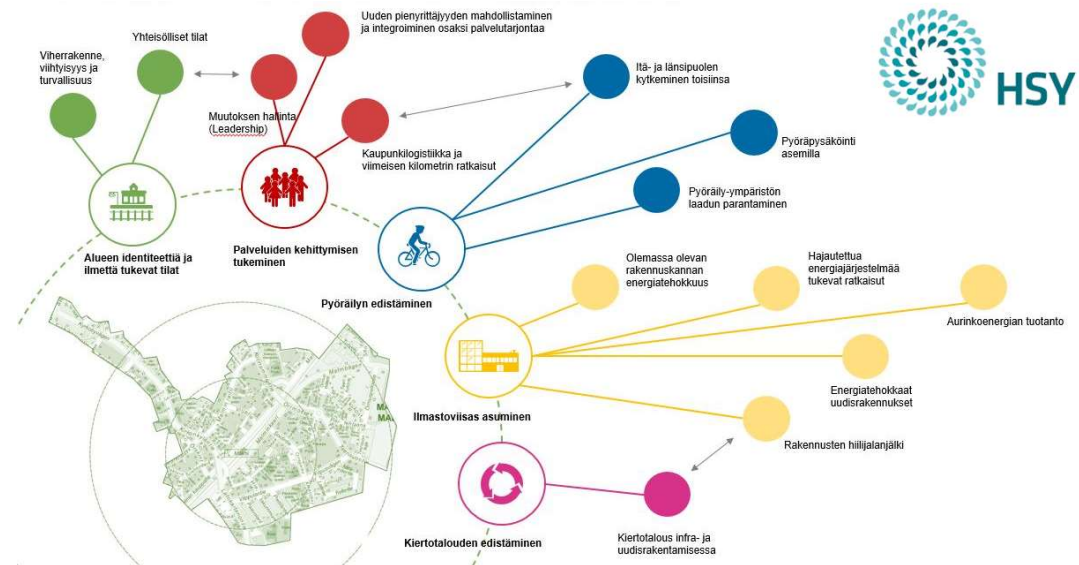
Malmi on alue, joka on valittu pilottikokouksen keskeiseksi alueeksi. Malmi on alue, joka on valittu pilottikokouksen keskeiseksi alueeksi. Malmi on alue, joka on valittu pilottikokouksen keskeiseksi alueeksi.



Malmi pilot landscape

AELCLIC: relation to plans

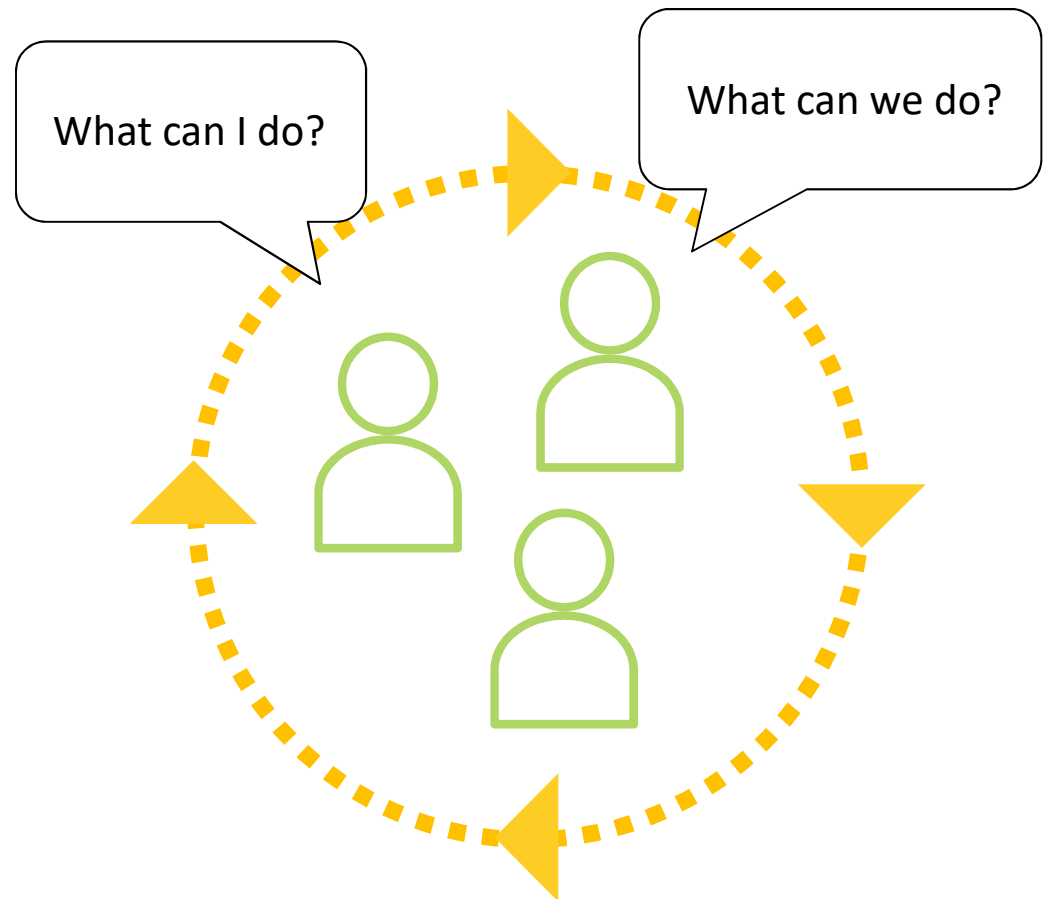
- Supports **Malmi vision**
- Supports **resident vision**
- Supports **Carbon neutral Helsinki 2035 and City's Climate Adaptation targets**
- Links to **HSY carbon neutral Malmi pilot**



Malmi pilot landscape

AELCLIC: next challenges

- **Continuing the support for formation of local network** → towards implementing projects in co-operation with city of Helsinki
- **Deeper research** to broaden the climate change aspect in Malmi planning
- **Creating concrete examples** of possible stakeholder actions – from high level goals to everyday solutions
- **LACAP as a tool** of long term co-operation building – the start of a joint forum for action planning



With co-operation from information to actions

Malmi pilot landscape

AELCLIC: next steps

- **LACAP fulfillment** done in joint co-operation with Aalto university and city of Helsinki
- **Role of the AELCLIC network** in best case both directly integrated with the city's projects and simultaneously advancing things at grass-root level independently



1. Set & expand group



2. Define objectives, aims
& purposes of LACAP

14. MANTOVA CITY CENTER (Italy)



AELCLIC_LOCAL NETWORKS

Wednesday 13th Novembre 2019 - Bologna - Palazzo D'Accursio, Sala Tassinari



Climate-KIC is supported by the
EIT, a body of the European Union



COMUNE DI
MANTOVA

MANTOVA

arch. Giulia Moraschi – Director of Environment Department of Mantova



Mantua's inhabitants **49 409**

In 2007, Mantua's Historical Centre (old town) and Sabbioneta were declared by Unesco to be a World Heritage Site. In 2016, Mantua became Italian Capital of Culture. In 2017, it was the European Capital of Gastronomy, included in the Eastern Lombardy District



In 2017 and 2018, LEGAMBIENTE (an ecologist movement of Italy) ranked Mantua as the best Italian city for the quality of the life and environment.



Efficient City

Con città efficiente si intende è una città che è in grado di disaccoppiare la propria crescita dell'uso delle risorse e all'impatto sull'ambiente

Resilient City

è una città che è capace di resistere a shock e minacce ed utilizzare gli stress come opportunità e svilupparsi adattandosi ai mutamenti sociali politici economici ed ambientali

Circular City

è quella che applica i principi della circolarità nell'uso delle materie per diventare modelli di economia circolare



Rigenerazione urbana sostenibile per il futuro che risolva i problemi derivanti dagli impatti climatici

Impatti globali aumento temperatura +2°

Impatti locali

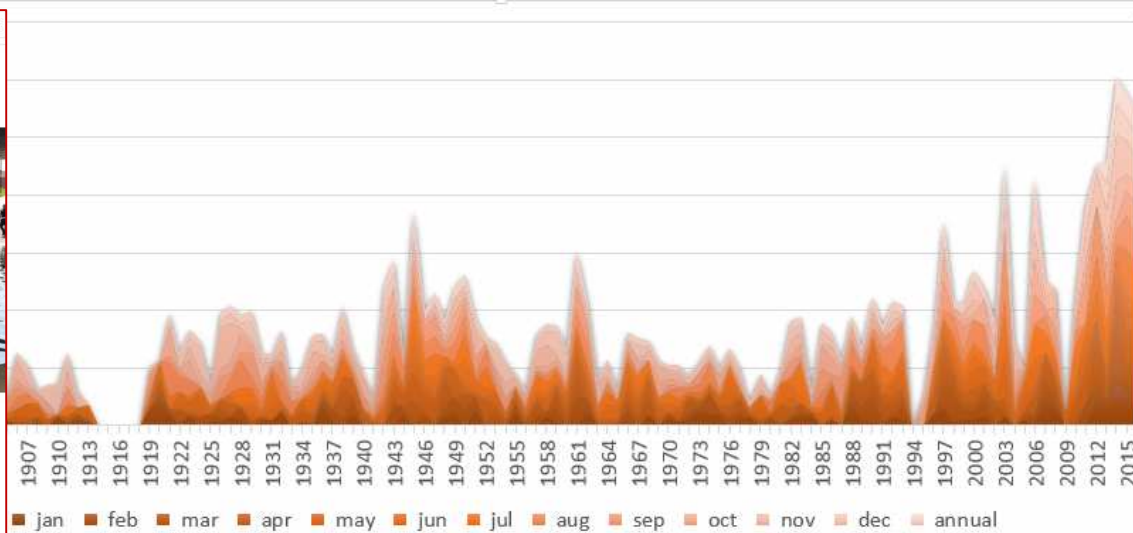
GAZZETTA DI MANTOVA ACCEDI

Con l'auto nel sottopasso allagato, a Tea e Comune arriva il conto



Tunnel di via Gaber, dopo un temporale due automobilisti intentano una causa di risarcimento. «Il sistema di pompe idrauliche e allarme semaforico era disattivato»

02 Ottobre, 2017



ilgiorno.it

IL GIORNO

MANTOVA CAMBIA CITTÀ PREVISIONI METEO GUIDA TV

CRONACA

Febbre del Nilo, la zanzara killer uccide ancora: 11 morti

Morta una donna di Mantova

di LUCA BALZAROTTI

Publicato il 25 agosto 2018

Ultimo aggiornamento: 25 agosto 2018 ore 07:48

GAZZETTA DI MANTOVA ACCEDI

GAZZETTA DI MANTOVA ACCEDI

GAZZETTA DI MANTOVA

Noi EVENTI NEWSLETTER LEGGI IL QUOTIDIANO SCOPRI DI P

Nubifragio devasta il Mantovano



Verso le tre della notte tra il 15 e il 16 luglio una tromba d'aria si è abbattuta nella zona tra Castel d'Ario, Roverbella, Cavriana, Castelforte, Bigarello, Volta Mantovana e Marmirolo. La prefettura coordina gli interventi. Black-out per

Muore travolta dall'albero che crolla in strada



Il luogo dell'incidente

Diventa tragico il bilancio dei danni provocati dal nubifragio della notte tra il 14 e il 15 giugno: una donna di 57 anni è deceduta a Due Pini per una pianta crollata in strada a causa del vento e della

Mantova » Cronaca

Afa e caldo, raffica di malori. A Mantova il record del disagio



Sfiorati i 38 gradi, superlavoro al pronto soccorso per svenimenti e capogiri. L'Arpa: 4 giorni di bollino rosso nella scala che registra i rischi per la salute

Mantova HUB - Ricucitura ambientale

2017-2018

GREEN INFRASTRUCTURE - GREEN ECONOMY - ECOECCELLENZA

MANTOVA RESILIENTE

linee guida per l'adattamento
climatico

Intervengono

Andrea Murari, Giulia Moraschi, Roberta Marchiore,
Elisa Parisi, Comune di Mantova
Francesco Musco, Giulia Lucertini, Denis Maragno, Vittore Negretto,
Carlo Federico Dall'Omo, Università Iuav di Venezia

25.10.2018
Mantova,
Palazzo Soardi
sala degli
Stemmi
ore 14.30



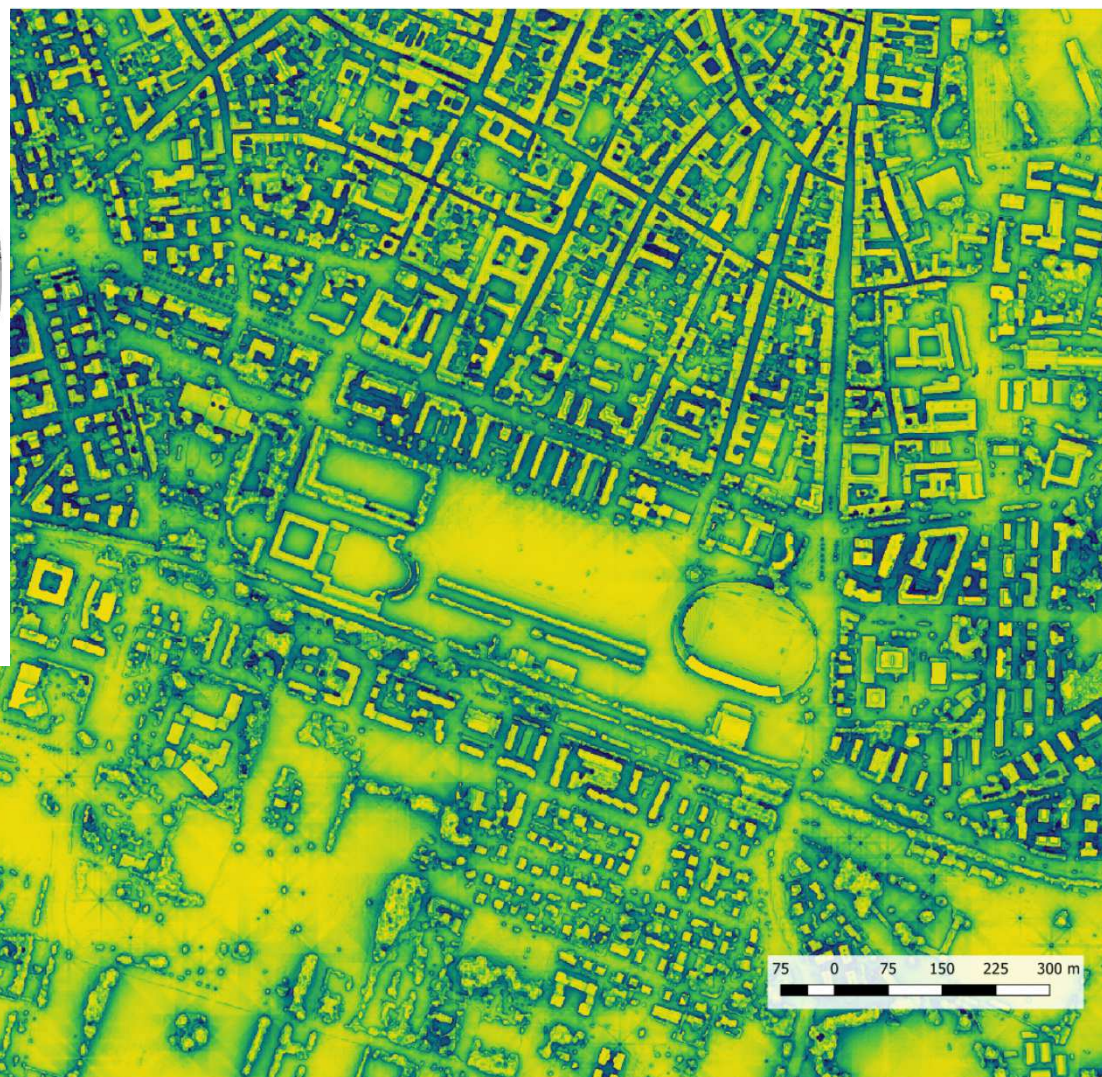
World Forum on Urban Forests

Mantova
27/11 –
01/12/2018

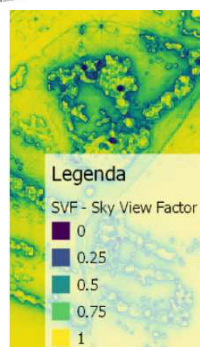


CLIMATE CHANGE ADAPTATION GUIDELINES





- Sky View Factor
- building density
- % impervious areas
- land solar radiation
- roof solar radiation
- LST Land Surface Temperature
- % draining soils



Climate change adaptation guidelines and AELCLIC



December 2018

General Urban Plan

2020

PUMS Sustainable Urban Mobility Plan

Traffic Plan

2019

SECAP Sustainable Energy and Climate Action Plan

Urban Water Plan

Water Plan - 2020

Green and Trees Plan

Green infrastructure - 2018

Mincio River contract

Action programs

Every 5 year

Private building regulation

Public building Maintenance Plan

Every year

AELCLIC



- ❖ Internal actions :
Involvement of other municipality departments/sectors (UNESCO, Public works, Green department, local emergency office, Welfare and social department) on the topics of climate change, re-naturalization, forestation
- ❖ External actions:
Involvement, education and public awareness

AELCLIC

13 th may 2019

**1 th Workshop:
focus on Mantova's
Stakeholders**

CAMBIAMENTI CLIMATICI E PAESAGGIO

**workshop AELCLIC, Adaptation
European Landscapes**

coordinamento
Anna Marson, Francesco Musco,
Denis Maragno, Università Iuav di Venezia
Daniele Torreggiani, Università di Bologna

**13.5.2019
Comune
di Mantova,
Palazzo Sardi,
Sala degli
Stemmi
ore 10**



AELCLIC

16 th july 2019

**2 nd Workshop:
co-identify the consequences of
landscape climate change**

CAMBIAMEN- TI CLIMATICI E PAESAGGIO

**II° workshop AELCLIC, Adaptation
European Landscapes**

coordinamento
Anna Marson, Francesco Musco, Denis Maragno Iuav
Daniele Torreggiani Università di Bologna

**16.7.2019
Via Ardigò 13
Mantova
Sala Vedute**





AELCLIC

13 th may 2019



AELCLIC

16 th july 2019

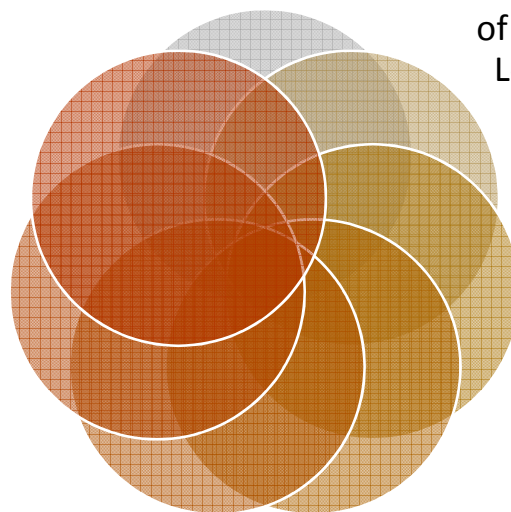
Main stakeholders

Municipality departments/sectors (UNESCO,
Public works, Green department, local emergency
office, Welfare and social department

**Gazzetta di
Mantova's**
journalist/reporter

Tea group
(Integrated Water,
Green and waste
management
Service of the
Municipalities)

**Consorzi di bonifica territori del
Mincio** (public undertakings that
manage drainage areas)



Institutional representative
of the regional authorities as
Lombardy ad Mincio's lake
Park

University, study
centre PIM

Professional associations as Architects and
Landscape planners, doctors of agronomy and
Forestry

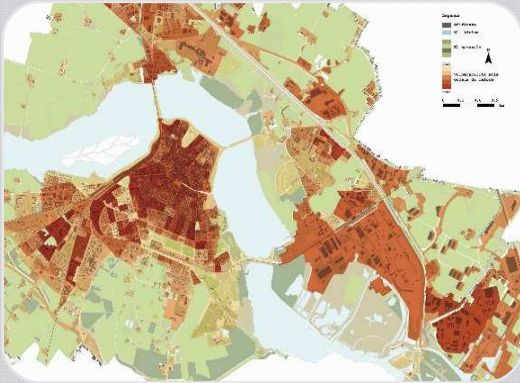
Open discussion and feedback in the AELCLIC two workshops focused on:



- **water plan**
government for the lake
- **tree board** for the management of the community trees and the **green area**
- social management of **heat waves**
- expansion of habitats for southern **disease vectors**
- sustainable **mobility**



NEXT STEPS



Step 1

Climate change
adaptation
guidelines and
SECAP

A member of



Step 2

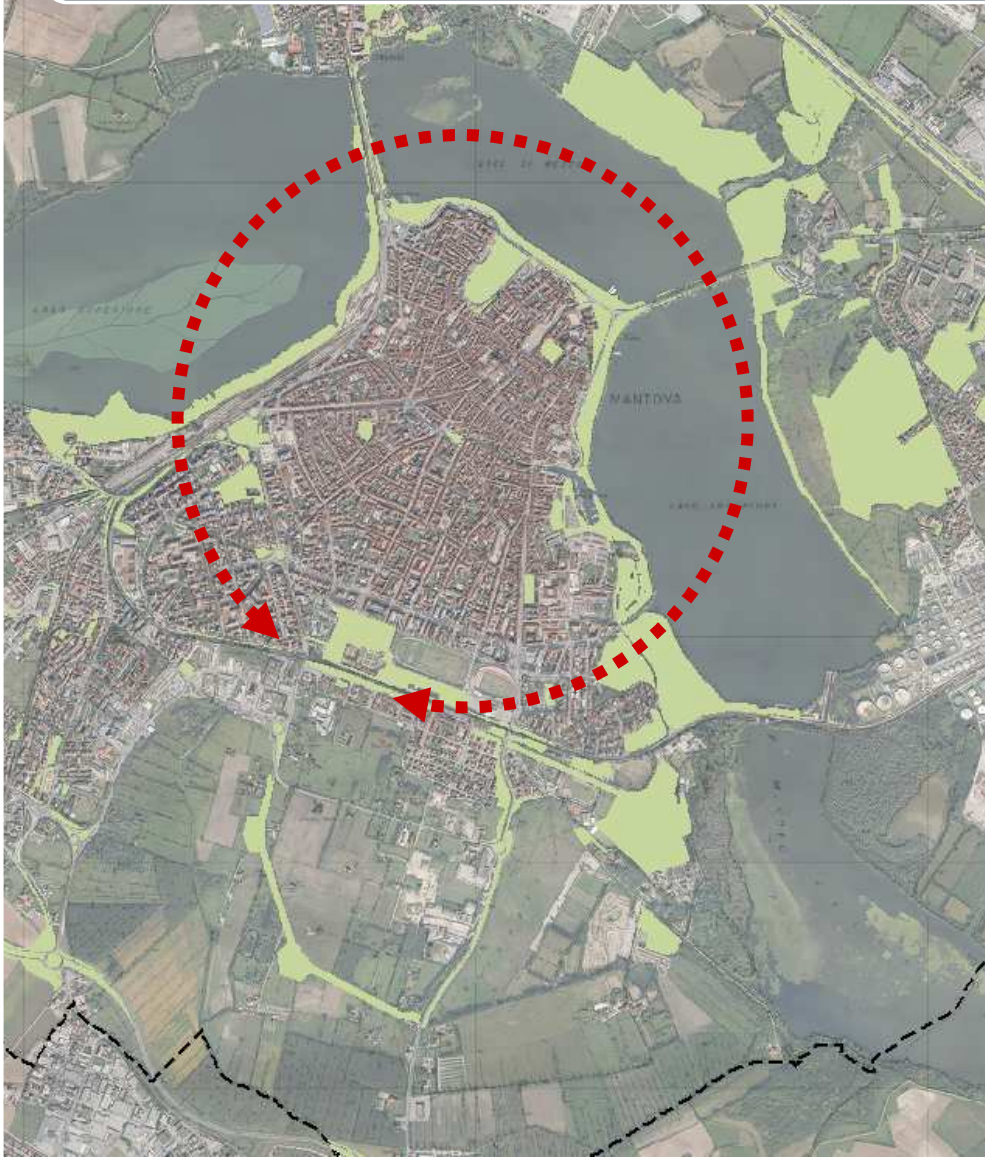
City green up:
localization
priority areas and
selection of NBS
from «NBS
Catalogue» for
each area



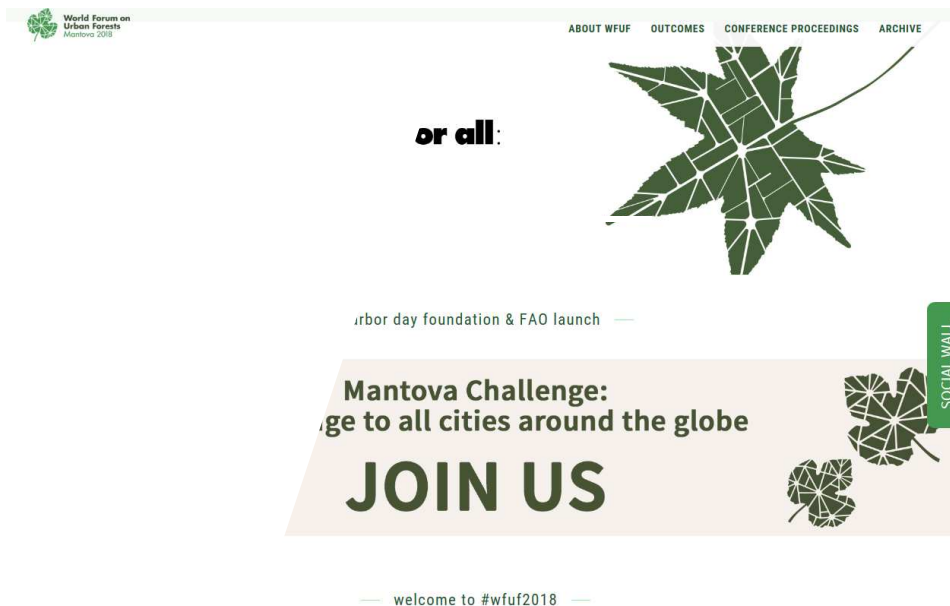
Step 3

Landscape
Adaptation Plan to
Climate Change

Strategic Actions linked to Climate change adaptation guidelines



- Establishment of the Tree Board Office (after Mantova Challenge Manifesto)
- “Interno Verde” Event – Working with Private garden
- 2 resilient parks and ride (Piazzale Montelungo and Campo Canoa)
- The cycle path “Lungolago Gonzaga”
- Consolidation lake banks with chestnut’s wodden poles
- Science Public Park and Participatory Budget
- European project C-Change : awareness on climate change with culture
- Plastic free Policy and Climate and Environmental Emergency Declaration



Become a Tree City

Join a growing network of cities, towns, and villages committed to caring for their urban forests — and the planet.



Find Resources to Support You

Discover helpful materials and inspiration for meeting the five core standards.



Make the Case for Tree City Status

Encourage fellow community members and leaders to embrace this recognition programme.



Take the Pledge to Become a Tree City

Sign up now so we can support your community as you work to become a Tree City.



a partnership between:



The tree board office

Standards for Recognition

Recognition through the Tree Cities of the World programme represents the first step toward achieving a green vision for the community. To receive recognition, a town or city must meet five core standards:

- Standard 1: Establish Authority**
 The community has a written statement by city leaders delegating responsibility for the care of trees within the municipal boundary to a staff member, a city department, or a group of citizens—called a Tree Board.
- Standard 2: Know the Rules**
 The community adopts policies, best practices, or industry standards for managing urban trees and forests. These rules describe how work must be performed, where and when they apply, and penalties for noncompliance.
- Standard 3: Know What You Have**
 The community has an updated inventory or assessment of the local tree resource so that an effective long-term plan for planting, care, and removal of city trees can be established.
- Standard 4: Allocate the Resources**
 The community has a dedicated annual budget for the routine implementation of the tree management plan.
- Standard 5: Celebrate Achievements**
 The community holds an annual celebration of trees to raise awareness among residents and to acknowledge citizens and staff members who carry out the city tree programme.

Mantova Tree Board Office is composed by one member of UNESCO and Culture, Public works, Green department, Environment, local emergency office, Welfare and social department



Private gardens

Interno Verde Event (14/15 September 2019):
The private gardens of the city open for two days for public visits.

Increase citizens' awareness on their own gardens, looking for incentives to maintain green areas performance and increase urban resilience.

During the event we asked to private owners their availability to create a census of private gardens

Mantova apre i suoi giardini



Sabato 14 e Domenica 15 Settembre



Resilient Actions



- Consolidation lake banks with chestnut's wooden poles
- The cycle path "Lungolago Gonzaga" (Cool pavement)





Resilient Actions

2 resilient parks and ride (Piazzale Montelungo and Campo Canoa) outside city centre according to the PUMS (Sustainability Urban Mobility Plan)

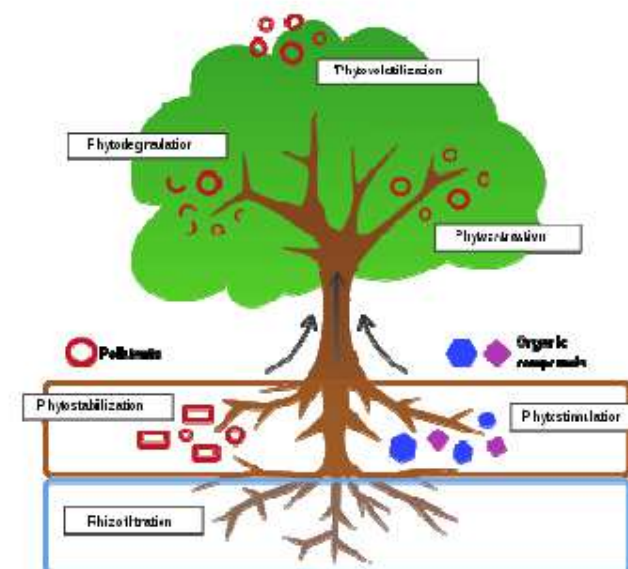




Phytoremediation

Experimental project using of green plants and the associated microorganisms, along with proper soil amendments and agronomic techniques to either contain, remove or render toxic environmental contaminants harmless

1. *Arundo donax*
2. *Festuca arundinac*
3. *Populus alba* + Fes
4. *Salix alba*
5. Controllo



ERSAF
ENTE REGIONALE PER I SERVIZI
ALL'AGRICOLTURA E ALLE FORESTE

Regione Lombardia

New urban forest planted

INAUGURAZIONE NUOVO BOSCO URBANO DI FORMIGOSA



SABATO 29 GIUGNO
Strada Formigosa 36
presso sede WWF

7000
NUOVI ALBERI

SPECIE
AUTOCTONE
TIPICHE DEI
BOSCHI DI PIANURA



ore 11.00
**SALUTI DELLE
AUTORITÀ**

Nicola Martinelli
Assessore ai Lavori
Pubblici del Comune
di Mantova

Mattia Palazzi
Sindaco del Comune
di Mantova



ore 11.30
**PRESENTAZIONE
DEL PROGETTO**
Nuove infrastrutture verdi
in Comune di Mantova:
Riva Sinistra Lago Inferiore
e bosco di Formigosa



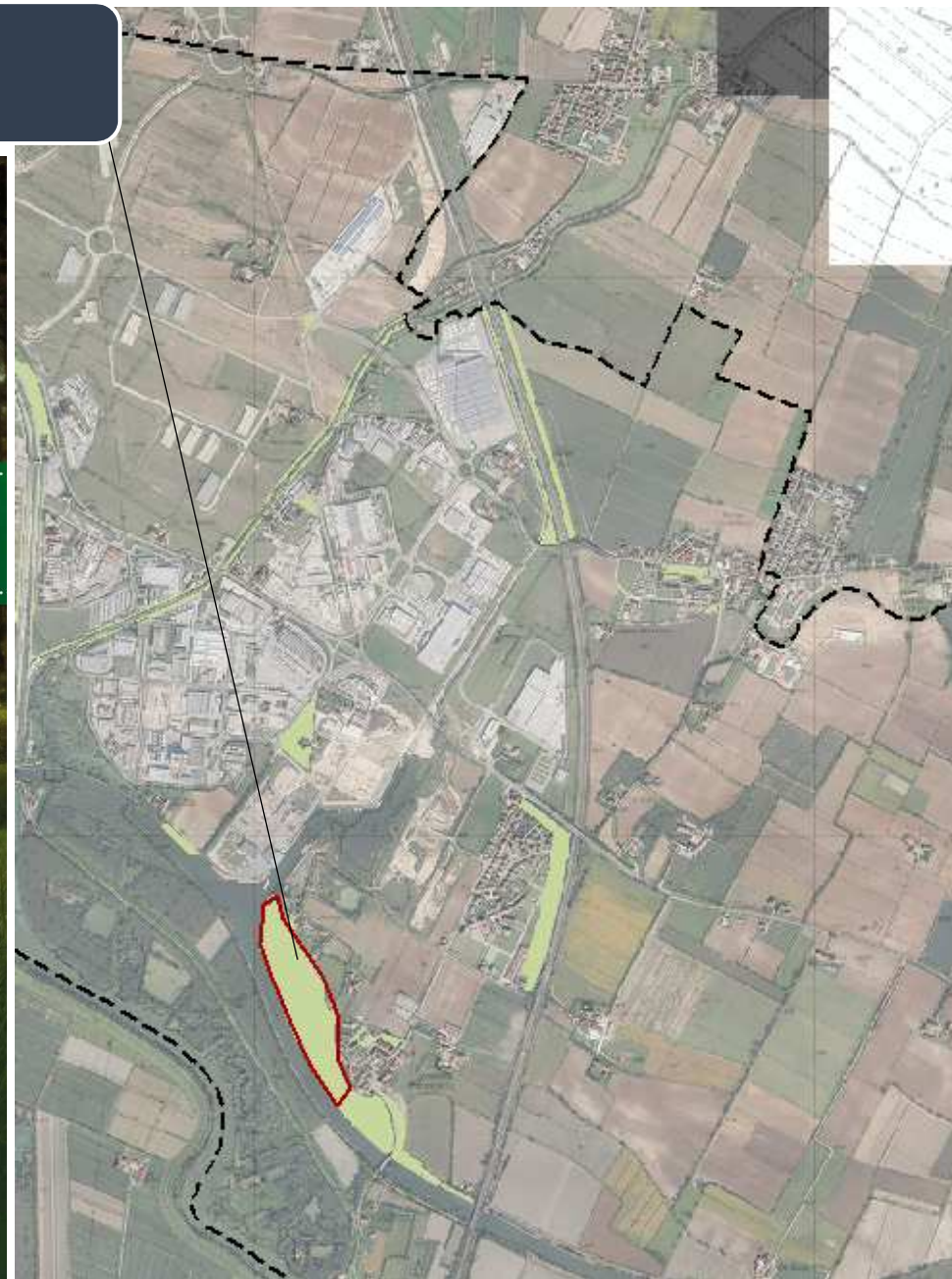
**INTERVENTO
WWF MANTOVANO**
Funzione ecosistemica del
Bosco di Formigosa;
applicazione dell'indice QBS



**PASSEGGIATA
INAUGURALE**
all'interno del
Bosco Urbano



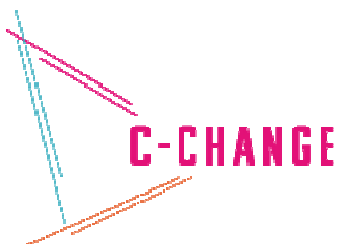
RISOTTO OFFERTO
dal Consorzio Forestale
Padano



MANTOVA CITTÀ D'ARTE E DI CULTURA

BOLOGNA WORKSHOP 11/11/2019 AELCLIC
MANTOVA - arch. Giulia Moraschi





NEXT STEPS

- *H2020 Urban Green up*
- *H2020 Innovate*
- *C- Change Urbact*
- *Interreg Bhenefit*

Aims of the projects : Involvement of the cultural and artistic sector in environmental, climate change, resilience aspects, empowerment the existing greenery public and private, new green infrastructure project

Output: Local policies for the CO2 reduction , adaptation and mitigation plan focused on cultural organizations and their activities; To built a strategic plan to involve citizens on environmental subject thanks to cultural and artistic sector.



MUNICIPALITY OF MANTOVA
 giulia.moraschi@comune.mantova.gov.it
 roberta.marchioro@comune.mantova.gov.it

15. CAROL PARK OF BUCHAREST (Romania)



AELCLIC International Meeting, Bologna, 13 November 2019

Carol Park – between nature and history

Oana Emilia Budău, URBASOFLA SRL. & Alexandru Mexi, ARCHÉ Association

PLAN URBANISTIC ZONAL-PARCUL CAROL

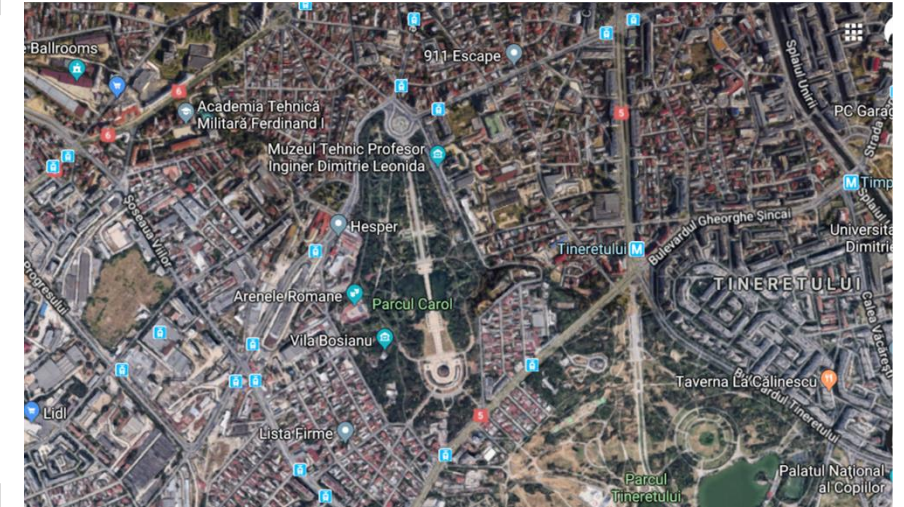
INCADRARE IN SISTEMUL DE SPATII PLANTATE AL ZONEI CENTRALE



0 100m

- LIMITA P.U.Z. "PARCUL CAROL"
- ZONA STUDIATA
- PERIMETRUL CENTRAL AL MUNICIPIULUI BUCURESTI
- ZONA CENTRALA A MUNICIPIULUI BUCURESTI
- LIMITA ZONEI CONSTRUITE PROTEJATE A MUNICIPIULUI BUCURESTI CONFORM P.U.Z. "ZONE CONSTRUITE PROTEJATE"
- LIMITA ZONEI DE INTERES NATIONAL "BUCURESTI 2000"
- LIMITA CENTRULUI ISTORIC CF. H.G. 129/29 aug. 1998
- MONUMENTE
- SPATII PLANTATE EXISTENTE SI SAU PROPUSE PRIN P.U.Z. - ZONA CENTRALA
- ARTERE CAROSABILE EXISTENTE CU IMPORTANTA PENTRU TRAFICUL MAJOR AL ORASULUI, PRIORITAR DE INTRETINUT SI AMENAJAT
- ARTERE CAROSABILE PROPUSE SPRE SUPRALARGIRE
- ARTERE CAROSABILE NOU PROPUSE
- TRASEE SI DIRECTII PRIORITARE PIETONALE PROPUSE PRIN P.U.Z. - PERIMETRUL ZONEI CENTRALE
- DIRECTII PRINCIPALE DE RELATIONARE A SPATIILOR PLANTATE LA NIVELUL VICINATILOR PARCULUI CAROL

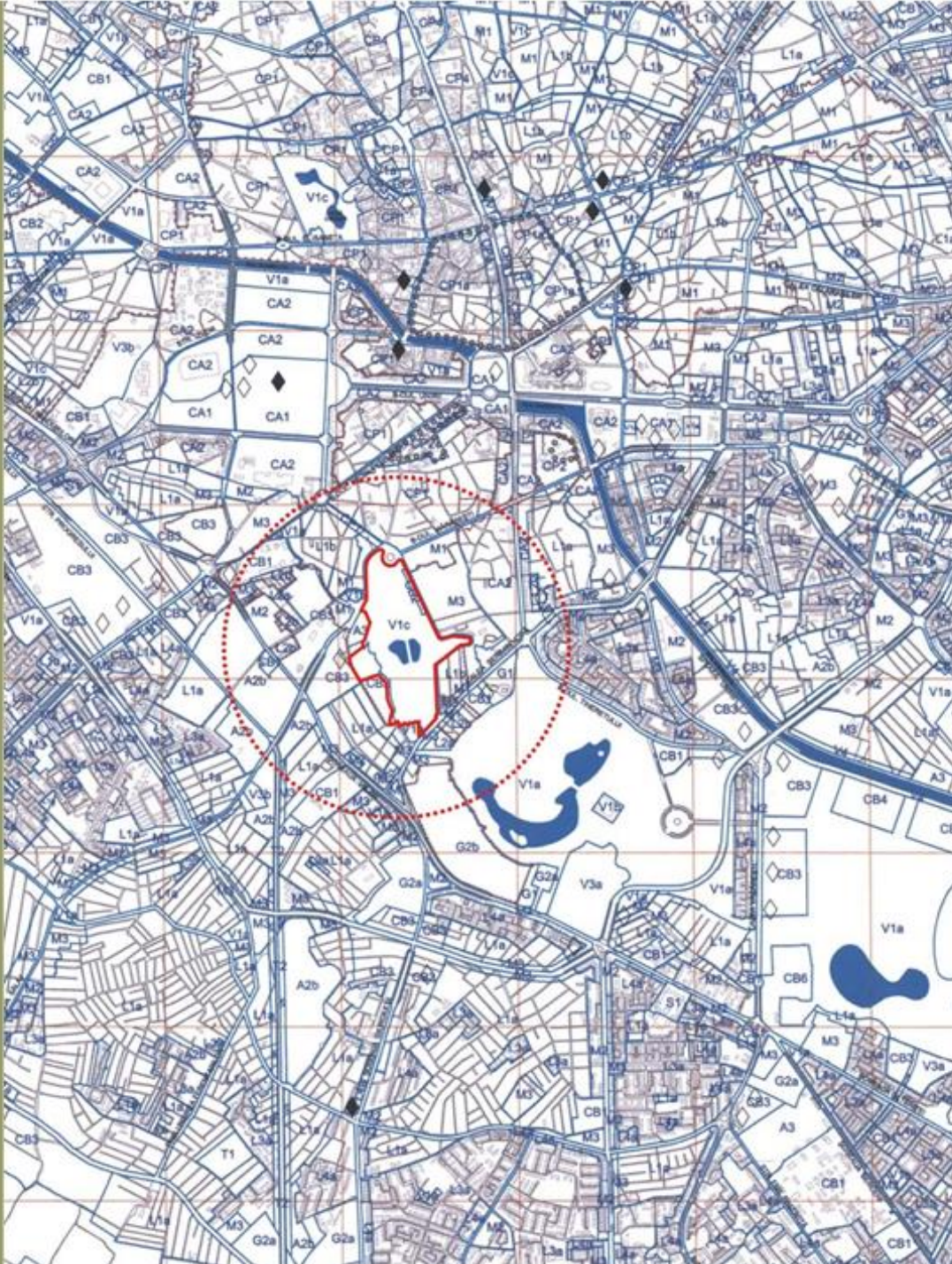
SCALA: 1:1000 DATA: 2010 AUTORI: C. ENACHE, C. CRACIUN, C. UAUIM	
MUNICIPIUL BUCURESTI PRIMĂRIA MUNICIPIULUI BUCURESTI DIRECȚIA DE PROIECTARE, PROIECTARE SI CONSTRUCTII	MUNICIPIUL BUCURESTI PRIMĂRIA MUNICIPIULUI BUCURESTI DIRECȚIA DE PROIECTARE, PROIECTARE SI CONSTRUCTII
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Carol Park – urban context

- **Location:** southern part of Bucharest (close to the North-South circulation axis);
- **Surrounding neighbourhood:**
 - North-East: industry and mixed-use urban tissue;
 - South-East: low-rise housing area, Tineretului Park;
 - North-West: former railway (Filaret) and low-rise housing;
 - South-West: low-rise housing area.

AELCLIC International meeting,
Bologna, 13 November 2019



Following the functional areas and sub-areas (reference territorial units with general characteristics) from the **General Urban Plan (PUG) of Bucharest**, Carol Park is surrounded by: **M1 and M3** – mixed-use area from low to high-rise buildings and **CB** – public service areas; **V1** – Green and planted areas; **A** - Industrial areas and productive units area; **L1** – housing area (mostly individual housing units).

Source: Carol Park – between nature, history and urbanity, Cristina ENACHE, Cerasella CRĂCIUN, CCPEC-UAUIM



**AELCLIC International meeting,
Bologna, 13 November 2019**



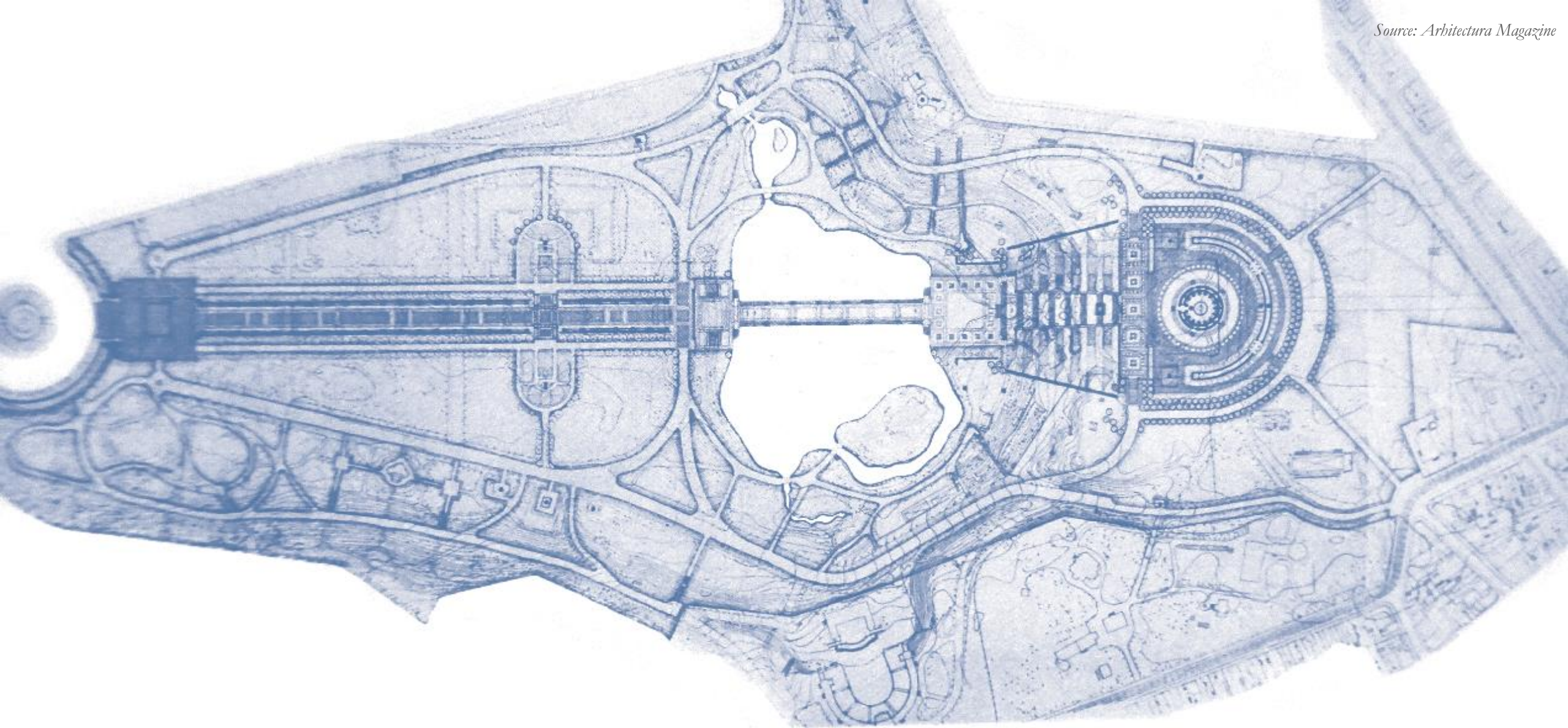
AELCLIC International meeting,
Bologna, 13 November 2019



AELCLIC International meeting,
Bologna, 13 November 2019



AELCLIC International meeting,
Bologna, 13 November 2019



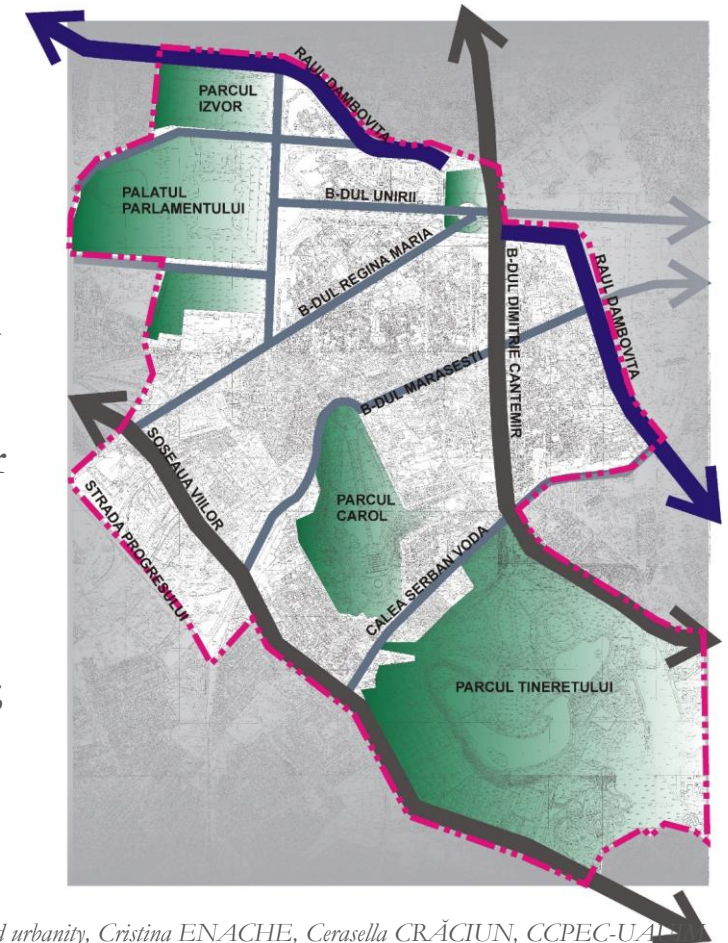


**AELCLIC International meeting,
Bologna, 13 November 2019**

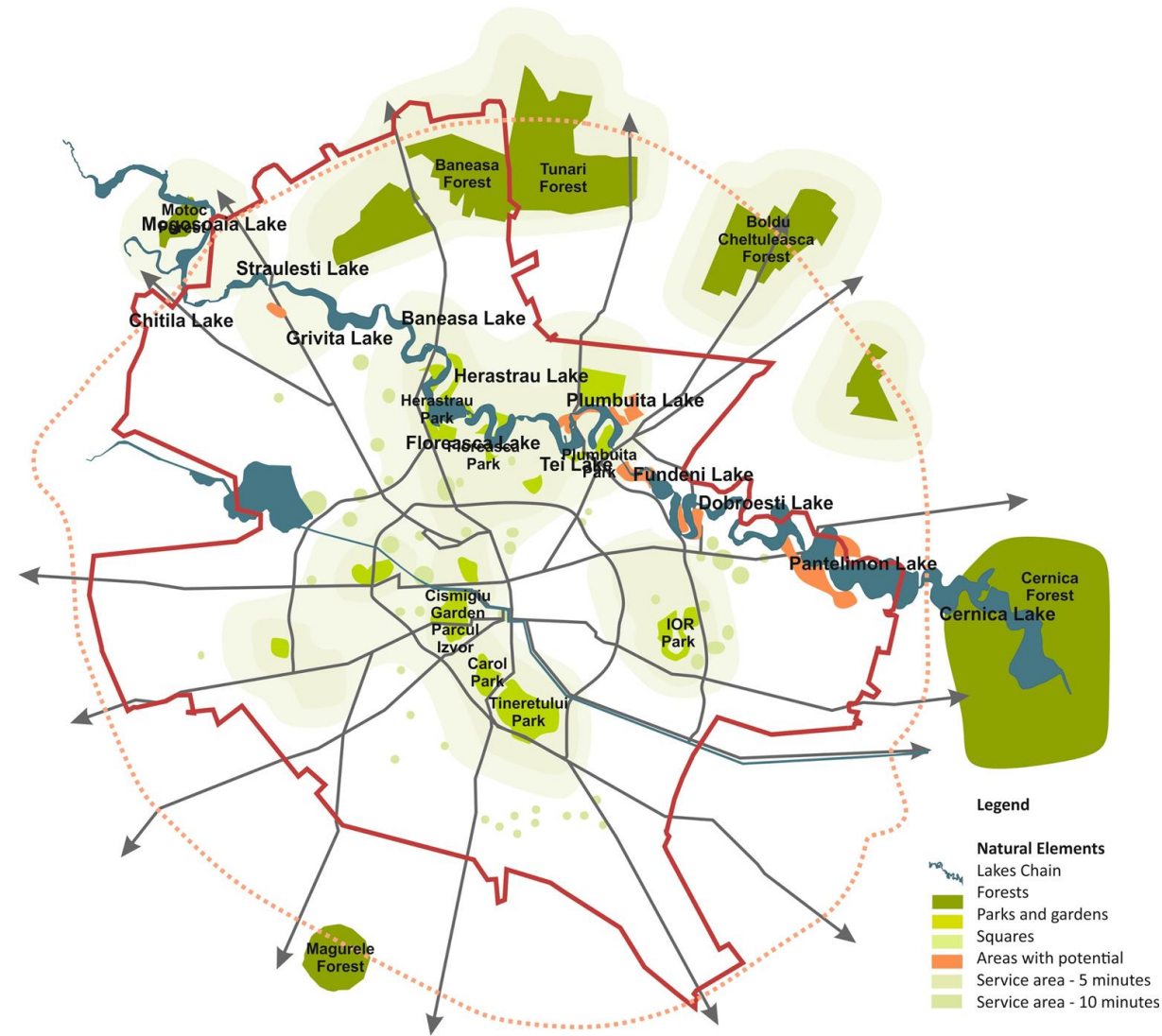
GREEN-BLUE SYSTEM OF BUCHAREST

Relation to the other spaces planted in the green-blue system of the city

- Green axis comprising of Carol Parc alongside Tineretului Park, Văcărești Delta, Izvor Park (and Parliament Palace), Cișmigiu Park, Opera Park, Cotroceni Park and the Botanical Garden;
- Parallel to the blue axis of the Dâmbovița river.

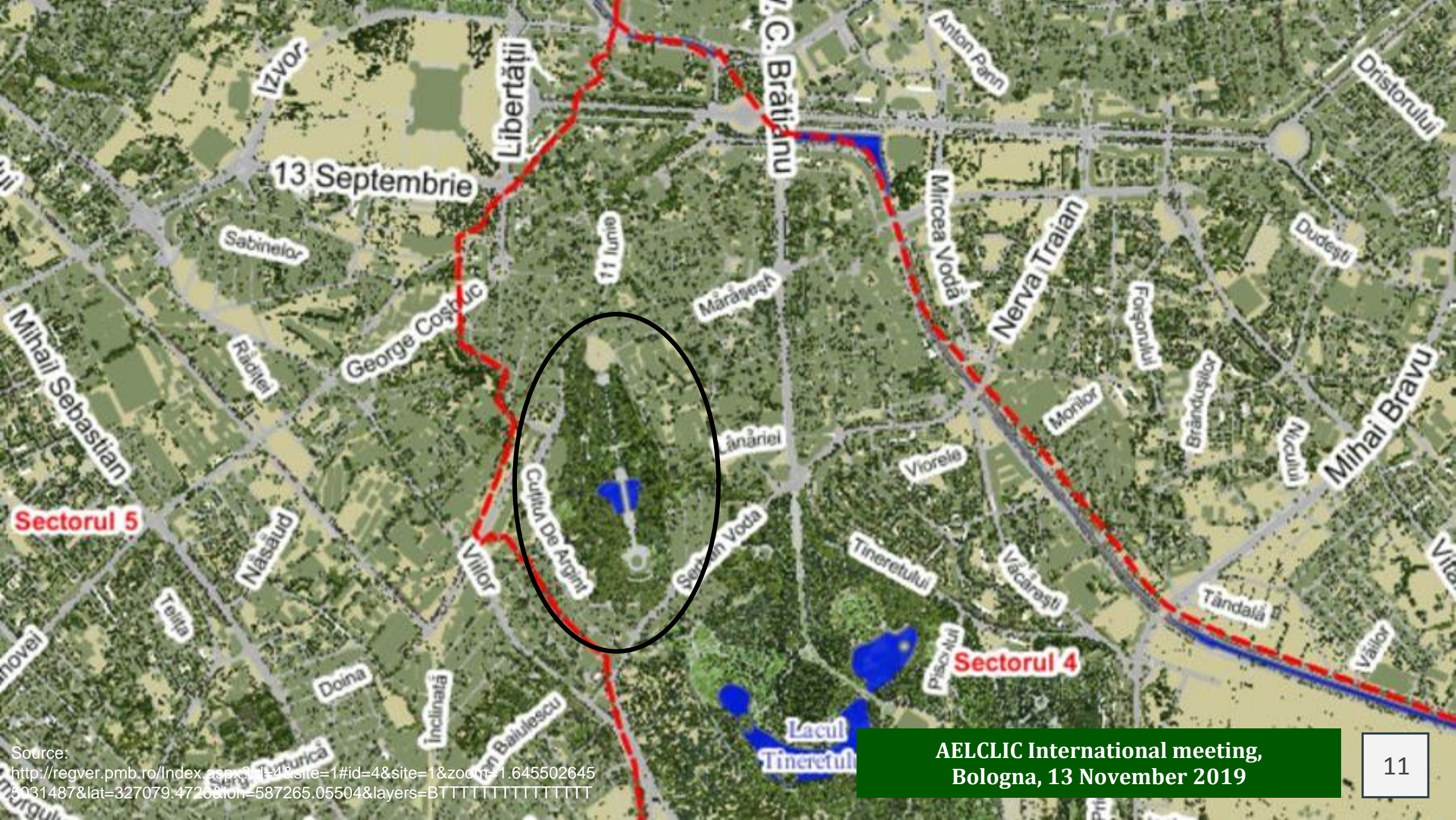


Source: Carol Park – between nature, history and urbanity, Cristina ENACHE, Cerasella CRĂCIUN, CCPEC-UIA



Source: own elaboration





An aerial photograph of a city street grid, likely Bucharest, is the central focus. It is covered with numerous colorful sticky notes in shades of pink, orange, and yellow. Some of the visible text on the notes includes 'AIR POLLUTION', 'HEAT ISLANDS', 'WATER SHORTAGE', 'INCREASE of CRIME & EVENTS', 'TRAFFIC', 'Noise', 'Lack of green spaces', 'Lack of public transport', 'Lack of parking', 'Lack of security', 'Lack of social services', 'Lack of cultural services', 'Lack of sports facilities', 'Lack of recreational areas', 'Lack of public spaces', 'Lack of public lighting', 'Lack of public art', 'Lack of public furniture', 'Lack of public infrastructure', 'Lack of public services', 'Lack of public facilities', 'Lack of public amenities', 'Lack of public utilities', 'Lack of public safety', 'Lack of public security', 'Lack of public order', 'Lack of public cleanliness', 'Lack of public hygiene', 'Lack of public health', 'Lack of public education', 'Lack of public culture', 'Lack of public entertainment', 'Lack of public recreation', 'Lack of public sports', 'Lack of public leisure', 'Lack of public relaxation', 'Lack of public rest', 'Lack of public refreshment', 'Lack of public information', 'Lack of public communication', 'Lack of public consultation', 'Lack of public participation', 'Lack of public engagement', 'Lack of public involvement', 'Lack of public contribution', 'Lack of public support', 'Lack of public cooperation', 'Lack of public collaboration', 'Lack of public partnership', 'Lack of public alliance', 'Lack of public coalition', 'Lack of public union', 'Lack of public confederation', 'Lack of public federation', 'Lack of public league', 'Lack of public association', 'Lack of public organization', 'Lack of public institution', 'Lack of public authority', 'Lack of public body', 'Lack of public office', 'Lack of public department', 'Lack of public ministry', 'Lack of public department', 'Lack of public ministry', 'Lack of public department', 'Lack of public ministry'.

Workshop – Participants

Representatives of:

- NGOs (environment, heritage)
- Ministry of Environment
- Local & wider community (Hesper factory, Bucharest citizens)
- National Institute for Material Physics
- Urban planning organization (Urbasofia)

Workshop – Identified themes

Key themes to focus on in Carol Park, within AELCLIC workshop:

- A better maintenance of the park;
 - High temperatures and thermic discomfort (summer);
 - Vegetation management (no long-term plan);
 - The ecosystem balance;
 - Industrial heritage management;
 - Management of extreme events;
 - Mobility;
 - Tourism.
- Important: municipality's involvement needed, but they are not currently in the network





Thank
You!