

**A. Preparatory actions (elaboration of management/action plans, obtaining licences and permits, trainings, etc.)**

**ACTION A.1: Resource-efficient construction and housing in the Pori region - Preparatory actions**

***Beneficiary responsible for implementation:***

City of Pori, Environmental Agency

*Description (what, how, where, when and why):*

**What**

This action will contribute to NWP Aims 1.1., 1.3., 2.1., 2.2., and 7.1.

In this action a network of partners on resource-efficient construction and housing (developers, builders, construction companies, property owners, authorities, universities, professional colleges) is developed. The purpose of the network is to develop new concepts for construction, renovation and demolition and for the management and prevention of construction waste, to increase the role of green procurement, and to promote cooperation between the different actors. The aim of the action is to identify and select new projects for concrete implementation. The preparatory action is followed by concrete action C.3., where resource-efficient measures will be implemented with the help of the network through tangible measures.

The ultimate goal is to develop waste prevention and reduction throughout the entire construction chain. During the preparatory action, the aim is to develop construction and demolition waste recycling, restore building materials for reuse with the intention of extending the service life of buildings, promote best business practices and patterns in selected pilot areas, develop a method and testing of models of material identification and the possibility of establishing a soil bank, cooperate with property owners and construction companies in the implementation of restoration pilots, and to develop and promote new business models and service solutions.

Development of the network and new concepts are divided into four sub-actions: Activation of a resource-efficient construction network; identification of potential projects, potentiality studies and profitability calculations; and selection of the projects.

**How**

**Sub-action A.1.1. Activation of a resource-efficient construction network**

Relevant company and community actors related to all construction phases (zoning, planning, product, construction, housing, demolition) are identified and brought together by providing information and organizing meetings. Effective cooperation is enhanced between companies, communities, authorities and other actors through the network.

In the network, communication and awareness will be enhanced through several actions. An annual workshop or seminar open to all cooperation partners will be organized - in total 4. Meetings to raise awareness and to increase cooperation with local companies will be arranged 30 per year, 60 in total.

This action of the Life IP - project will have its own website and it will be updated regularly at least 4 times per year.

Social media is an easy and efficient way to spread knowledge about the results of the project. The project will utilise the Facebook account of the Pori Environmental Agency to announce news, events etc.

The Life project will make press releases at the beginning of the project and whenever there is something important to announce.

### **Sub-action A.1.2. Identification of potential projects.**

Potential projects will be sought in cooperation with the partner network. Suitable projects from the Pori region will apply for consideration. There will be implementation for best practices for both renovation and new construction. Suitable targets may be single-family houses, apartment buildings, public buildings (schools and educational institutions) and the Housing Fair in Pori 2018.

The practical actions of the demonstration projects will be carried out mainly in the concrete action C.3.

### **Sub-action A.1.3. Potentiality studies and profitability calculations**

In this sub-action, 6, profitability calculations and feasibility studies will be carried out for the suitable cases that are identified in sub-action 2. The number of studies will be six. Studies and calculations will be carried out mainly together with the Satakunta University of Applied Sciences and the resource-efficient construction network companies. For other tasks requiring special skills, qualified companies and experts will be invited to tender for service provision. Feasibility studies are made, especially in reconditioned college buildings in the city of Pori. Also study of how to minimize construction waste in housing fair area and in new buildings, co-operation with Satakunta University of Applied Sciences.

### **Sub-action A.1.4. Selection of projects**

The potential projects will be chosen according to the studies and calculations in sub-action 3. Complete plans for new demonstration, testing or piloting projects especially reconditioned public buildings, will be made for the selected demos (6) including a budget and financial plans in cooperation with the partner network in concrete action C.3.

### **Where**

The resource-efficient construction network actions will be carried out in nine municipalities in the Pori region (Pori, Ulvila, Nakkila, Kokemäki, Harjavalta, Huittinen, Luvia, Pomarkku, Merikarvia). The network of partners (developers, builders, construction companies, property owners, authorities, universities, professional colleges) come from the area or have a strong connection to the region. Other interested actors will also be included. The coordinator is located in the City of Pori, at the Environmental Agency.

### **When**

Action A.1 will be continued during the phase two of the LIFE IP project.

Schedule of activities:

Activation of the resource-efficient construction network: 10/2016-2/2017

Identification of potential projects: 12/2016 – 3/2017

Potentiality studies and profitability calculations: 1/2019 – 9/2019

Selection of projects: 6/2018 -9/2019

### **Why:**

The focus in construction is shifting from the construction of new buildings to the renovation of existing ones, though waste volumes are predicted to grow. The EU Waste Directive requires that by 2020 member states will recycle 70% of construction and demolition waste material.

Resource-efficiency in construction requires further development. Companies, authorities and educational institutions need a coordinating body for co-operation.

One of the driving forces is that Pori will organize the 2018 Housing Fair, which will offer an excellent opportunity to demonstrate material efficiency in new buildings, construction and demolition waste recovery and the reuse of soil materials. In 2017 also start a number of large real estate renovations (schools and educational institutions) at the City of Pori. The target is to improve resource efficiency by material recycling. Procurement guidelines the City of Pori says "Procurement should pay attention to the products / services throughout the life cycle: manufacturing, transportation, packaging, storage, use and recycling up waste." This confirms the Increase the proportion of green procurement. Project will create and ensure the use of the green procurement practices also in other municipalities, the city of Pori area.

Project cases will be carefully prepared (potentiality studies, profitability calculations) to ensure the suitability of the demonstration targets. The tangible benefits will be in concrete actions C.3.

### ***Constraints and assumptions***

It is assumed that the resource-efficient construction and housing network will be a powerful partner network that delivers excellent services and innovations. However, it is realistic to expect that conflicts of interest between different actors may arise concerning construction quality, utilization of materials, recycling and utilization of by-products. To overcome these conflicts, the resource-efficient construction and housing network will produce and disseminate relevant information on long-term sustainable solutions among the stakeholders to be used in regional decision-making.

The challenge lies in ensuring the financial rationale of the demo projects, therefore feasibility studies will be carried out for the projects.

Any company or actor in Finland can join the network if they have an interest in the Pori region. However, the resources of the network are limited. For this reason, the resource-efficient construction and housing network in the Life IP project will limit its action to the Pori region.

### ***Expected results (quantitative information when possible):***

- Six studies and profitability calculations or feasibility studies on the development issue. The results of studies will be implemented in C.3
- Knowledge of the reuse of building materials will increase
- All feasibility studies will be taken account the role of green procurement. Based on the procurement guidelines the City of Pori.
- Creating a regional cluster of building materials recycling
- Co-operation on resource-efficient construction between companies, university, authorities and municipalities will have improved

- o Implementation of waste management plan in accordance with the measures will be initiated

**Cost estimation:**

City of Pori, Environmental Agency:

Personnel: 212 566 €, Travel 11 930 €, External assistance 51 176 €, Consumables 11 700 € + overheads

The outsourced expertise required in the project will account for 10 % of the total costs of the project. This will be opened to tender as required for public acquisitions.

Estimated No. of attendees for all conferences / seminars / workshops in this action:

- o three seminars with estimated 30 attendees per each = 90 persons in total
- o eight meetings with about 10 attendees per each = 80 attendees in total
- o three workshops for specialists in Satakunta region with about 20 attendees per each = 60 attendees in total.

All public permanent staff will be specifically seconded to the project.

**Deliverables:**

- o Material of regional workshops or seminars (4)
- o Summary of local company meetings (30 per year)
- o Reports of potentiality studies and profitability calculations or feasibility studies for 6 demonstrations / pilots (30.9.2019)
- o Website information on most relevant actions and new solutions or services
- o Website information on Pori Housing Fair featuring new carbon-neutral technical building solutions or services
- o Website information on regional and national or EU-wide good practices implemented in the Pori region
- o Final report on the activities

**Milestones:**

- o Nomination of members of the advisory committee (by 31.10.2016)
- o Workshop or seminar at the end of 2016. Annual seminar held in the autumn (2017, 2018, 2019)
- o Identification of potential projects ready by 30.9.2019
- o Study of ideas for demonstrations of construction waste reduction at selected targets 30.6.2019
- o Report of selection of potential projects 30.9.2019

<b>Code of action</b>	<b>Name of the Milestone or Deliverable</b>	<b>Type</b>	<b>Deadline according to original project plan</b>	<b>New suggested deadline</b>
<b>A.1</b>	Material of regional workshops or seminars (4)	<b>Deliverable</b>		31.12.2019
<b>A.1</b>	Summary of local company / other actors of the field meetings (30 per year)	<b>Deliverable</b>		Completed
<b>A.1</b>	Reports of potentiality studies and	<b>Deliverable</b>		30.9.2019

	profitability calculations or feasibility studies for 6 demonstrations / pilots	<b>ble</b>		
<b>A.1</b>	Website information on most relevant actions and new solutions or services	<b>Deliverable</b>		Completed
<b>A.1</b>	Website information on Pori Housing Fair featuring new carbon-neutral technical building solutions or services	<b>Deliverable</b>		Completed
<b>A.1</b>	Website information on regional and national or EU-wide good practices implemented in the Pori region	<b>Deliverable</b>		31.3.2021
<b>A.1</b>	Final report on the activities	<b>Deliverable</b>		31.3.2020
<b>A.1</b>	Nomination of members of the advisory committee (by 31.10.2016)	<b>Milestone</b>	31.10.2016	Completed
<b>A.1</b>	Workshop or seminar at the end of 2016	<b>Milestone</b>	31.12.2016	Completed
<b>A.1</b>	Annual seminar held in the autumn (2017)	<b>Milestone</b>	31.12.2017	Completed
<b>A.1</b>	Annual seminar held in the autumn (2018)	<b>Milestone</b>	31.12.2018	Completed
<b>A.1</b>	Annual seminar held in the autumn (2019)	<b>Milestone</b>	31.12.2019	
<b>A.1</b>	Report of selection of potential projects 28.2.2018	<b>Milestone</b>	28.2.2018	30.9.2019
<b>A.1</b>	Identification of potential projects ready by 31.3.2017	<b>Milestone</b>	31.3.2017	30.9.2019
<b>A.1</b>	Study of ideas for demonstrations of construction waste reduction (at Pori Housing Fair 31.12.2017)	<b>Milestone</b>	31.12.2017	30.6.2019