university of groningen

University Medical Center Groningen

University of Groningen

Synopsis of Learning Sessions on Sustainable and Area-based Energy Landscapes

Salemink, Koen; Zuidema, Christian

IMPORTANT NOTE: You are advised to consult the publisher's version (publisher's PDF) if you wish to cite from it. Please check the document version below.

Document Version
Publisher's PDF, also known as Version of record

Publication date:
2018

Link to publication in University of Groningen/UMCG research database

Citation for published version (APA):
Salemink, K., & Zuidema, C. (2018). *Synopsis of Learning Sessions on Sustainable and Area-based Energy Landscapes*.

Copyright
Other than for strictly personal use, it is not permitted to download or to forward/distribute the text or part of it without the consent of the author(s) and/or copyright holder(s), unless the work is under an open content license (like Creative Commons).

The publication may also be distributed here under the terms of Article 25fa of the Dutch Copyright Act, indicated by the "Taverne" license. More information can be found on the University of Groningen website: https://www.rug.nl/library/open-access/self-archiving-pure/taverne-amendment.

Take-down policy
If you believe that this document breaches copyright please contact us providing details, and we will remove access to the work immediately and investigate your claim.

Downloaded from the University of Groningen/UMCG research database (Pure): http://www.rug.nl/research/portal. For technical reasons the number of authors shown on this cover page is limited to 10 maximum.

Download date: 02-03-2024

INTENSSS PA

Integrated Sustainable Energy Planning

SYNOPSIS OF LEARNING SESSIONS ON SUSTAINABLE AND AREA-BASED ENERGY LANDSCAPES

Version 1.1

19.07.2018

Funded by the Horizon 2020 Framework Programme of the European Union

INTENSSS PA
Integrated Sustainable Energy Planning

CONTRACT N°: **695982**

ACRONYM: **INTENSSS – PA**

Project title: **A SYSTEMATIC APPROACH FOR INSPIRING TRAINING ENERGY-SPATIALSOCIOECONOMICSUSTAINABILITY TO PUBLIC AUTHORITIES**

Project Coordinator	**BPM SA (EL)**
Project Partners	SEMPXPA (EL)
	A.L.E.S.S.CO srl (IT)
	AN.KA SA (EL)
	S.O.S. (SI)
	LEA Pomurje (SI)
	UVA-IUU (ES)
	CaR (IT)
	BEF (LV)
	CeNSU (IT)
	EcNetworks (DK)
	RUG (NL)
	Middelfart Kommune (DK)
	JCyL (ES)
	GT (EL)
	ZPR (LV)
	Gesment Groningen (NL)

INTENSSS-PA REGIONAL LIVING LABS CONTEXT AND POTENTIALS FOR INNOVATION

PUBLIC

PROJECT START DATE: 01.02.2016 **DURATION**: 30 months

DATE OF ISSUE OF THIS REPORT: July 2017

Document Control Sheet	
Project Coordinator	BPM S.A.
Responsible Author(s):	RUG
Organisation:	RUG
Subject / Title of Document:	SYNOPSIS OF LEARNING SESSIONS ON SUSTAINABLE AND AREA-BASED ENERGY LANDSCAPES
Related Task('s):	WP4
Deliverable No.	D 4.1 – 4.7
Date of Issue	
Version Number:	1.1
Ref./File Name	D4.1 Synopsis Learning Sessions.docx
Number of Pages	t.b.e.
Distribution Category: (PU/CO)*	PU
Nature of the Deliverable**	Deliverable (D)
Target Date	31-05-2018

*Type: **PU**: Public, **CO**: Confidential

**Nature: Type of deliverable could be a F: Flyer, B: Brochure, WP: working paper, P: Paper, D: Deliverable, MD: Management Document, S: Slides, PR: Press Release, CD: Cd-rom, C: conference, W: workshop, TR: training, ME: Media Event, WW: website/webtool

SYNOPSIS OF LEARNING SESSIONS ON SUSTAINABLE AND AREA-BASED ENERGY LANDSCAPES: Experiential learning from the INTENSSS-PA Regional Living Labs

Dr. Koen Salemink & Dr. Christian Zuidema

1 INTRODUCTION

This document contains the synopsis of activities and outcomes of Work Package 4 of INTENSSS-PA. It describes the methods and approach that were used, and it presents two main building blocks that constituted the experiential learning related to Integrated Sustainable Energy Planning (ISEP).

The dynamic development of the project demanded a fair degree of flexibility of all partners, also those who were involved in organizing and capturing the learning experiences. The initial project approach, and the revised logic behind WP4, are described in section 2. Here we justify why we had to deviate from the initial approach, and how we ensured that we would nevertheless deliver the agreed outcomes.

Then we continue by providing a brief overview of the learning experiences that took place within the Regional Living Labs (RLL's) of INTENSSS-PA. In section 3 we present the first Building Block, which mainly relates to the content of the planning activities in the RLL's. In section 4 we present the second Building Block, which mainly relates to the RLL approach as a process and what one can learn and earn from working in this way.

The brief overview of the results was presented to the project partners during the final partner meeting of the project in Regione Calabria on June 28 2018. Here the project partners acknowledged the validity of the findings we presented. Therefore, we are confident to state that the results in this report are supported by the people who ran the RLL's.

Per sub-topic we have distilled a 'key learning'. These key learnings can help INTENSSS-PA project partners to take their future ventures further, and support colleagues who are interested in working with a Regional Living Lab approach. Furthermore, other professionals and organizations can use these learnings to improve their projects or their regular everyday work.

All in all, this document provides insights into how to run a Regional Living Lab for Integrated Sustainable Energy Planning. It shows what one can learn from this, and how one can capture this experiential learning. We hope that professionals and organizations in other (national) contexts will benefit from the experiences from INTENSSS-PA.

2 METHODOLOGICAL APPROACH OF INTENSSS-PA: EXPERIENTIAL LEARNING IN REGIONAL LIVING LABS

Experiential learning in RLLs is about the learning that RLL partners – most notably the RLL coordinators – take from the experiences they go through. Experiential learning depends on specific processes each RLL goes through. Each RLL chose their own path, while having different ambitions, degrees of stakeholder involvement and socio-economic, geographic and institutional circumstances. Due to these differences, the RLLs also went through some clearly different experiences. As such differences were expected, the approach to experiential learning in INTENSSS-PA aimed for a flexible methodological approach towards supporting and capturing learning in the RLLs; an approach that was both allowing for specific needs and circumstances and could change over time as RLLs made adjustments to their approach and desires.

2.1 Organizing and supporting learning

INTENSSS-PA operated on the notion of experiential learning being closely attuned to RLL learning needs. As such, central to its methodology was to be flexible in attuning guidance and support to individual RLL learning needs. Our methodology did so by using three distinct tools for identifying learning needs throughout the project, focused on allowing changing RLL learning needs to also influence support given for experiential learning (see table 1). The intention was to explicitly ensure that changing learning needs would be closely monitored so as to better adjust support to the distinct RLL process of experiential learning. In the meantime, three different tools were used to provide the RLLs with an overview of available expertise, experiences and examples (best practices) that might inspire their learning needs (see table 2). The intention was to ensure RLLs would have access to the state of the art of integrated energy planning and hence, could better identify possible gaps of knowledge and experience themselves.

Moment	**Tool**
Jan-May 2017; 1 month after RLLs were established	Gap Analysis (within Task 3.2), with clear appendix containing table on learning needs (see Appendix Y)
May-July 2017; 3-6 months after RLLS were established	Planning Vision protocol (within Task 3.2); questions 11 and 13
Jan 2017 – March 2018	Ongoing conversations between RUG (WP coordinator) and RLL coordinators, notably through mail, Skype and during coordinator meetings

Table 1: tools to identify RLL learning needs

Tool	**Method**
Database of practices, including database of materials (outcome WP2)	Easy access database linked to website for all RLL partners to use (WP2)
INTENSSS-PA bookshelf	List of available expertise of all RLL research partners and consultancy partners available for RLL partners
Coordinator meeting tutorials	Targeted tutorials on specific issues presented during coordinator meetings for RLL coordinators to inform coordinators

Table 2: tools to highlight learning materials

Responding to identified RLL learning needs was based on a flexible approach inspired by the expected differences in learning needs. Despite this flexibility, the approach was based on four separate elements

that were a-priori identified as possible supportive tools for experiential learning. These included (I) a database of practices and learning materials, (II) interactive lecturing and tutorials, (III) on-site guidance regarding the development of Area Based Sustainable Integrated Energy Concepts and (IV) feedback by Skype, mail and phone on working and experimenting with the energy concepts developed.

Practice indeed proved that a very flexible approach was needed within WP4 to accommodate experiential learning in very different RLLs. Practice even urged for more flexibility than initially expected. The RLLs typically demanded learning adjusted to their unique physical, socio-economic and institutional realities. The result was a more 'loose' use of the four supportive tools and in some cases a partial addition to these tools. Central was the desire of the INTENSSS-PA team to ensure actual experiential learning took place, rather than forcing learning experiences predesigned by the coordinating INTENSSS-PA team.

To begin with, the RLLs showed only limited interest in the general learning materials presented within the database of practices and learning materials (tool I). Within the context of the INTENSSS-PA WP2, the database was developed and also made accessible to RLL partners. In practice, it soon turned out that most RLLs were only modestly interested in the database or in active tutorials or support related to these learning materials (tool II). Most RLLs indicated that such tutorials would likely be too general for the specific needs of regional RLL partners, while also language barriers existed. While the database of practices learning materials remained available and on-site tutorials were still on offer and sometimes used, additional actions were taken in conformance to the desire to allow our methodological approach to adjust to RLL needs.

One the one hand, on site tutorials were partly replaced by tutorials during INTENSSS-PA project meetings where RLL coordinators and regional INTENSSS-PA research or consultancy partners were present. The idea was that general knowledge regarding the state of the art of sustainable integrated energy planning would thus still be highlighted, with the RLL coordinators and regional research or consultancy partners being able to translate these into the fine-grained regional realities (figure 1). Such translation specifically occurred based on direct involvement in the RLL, rather than through language translation. In the meantime, some tutorials on more general learning materials did take place in RLLs provided by INTENSSS-PA partners. Furthermore, also tutorials of regional organizations within or linked to the RLL that had specific relevant (regional or national) expertise took place to partly replace more general tutorials on the international state of the art. This shift in our methodology thus explicitly aimed to accommodate RLL learning needs, while also ensuring key lessons regarding the international state of the art would be actively highlighted to RLLs.

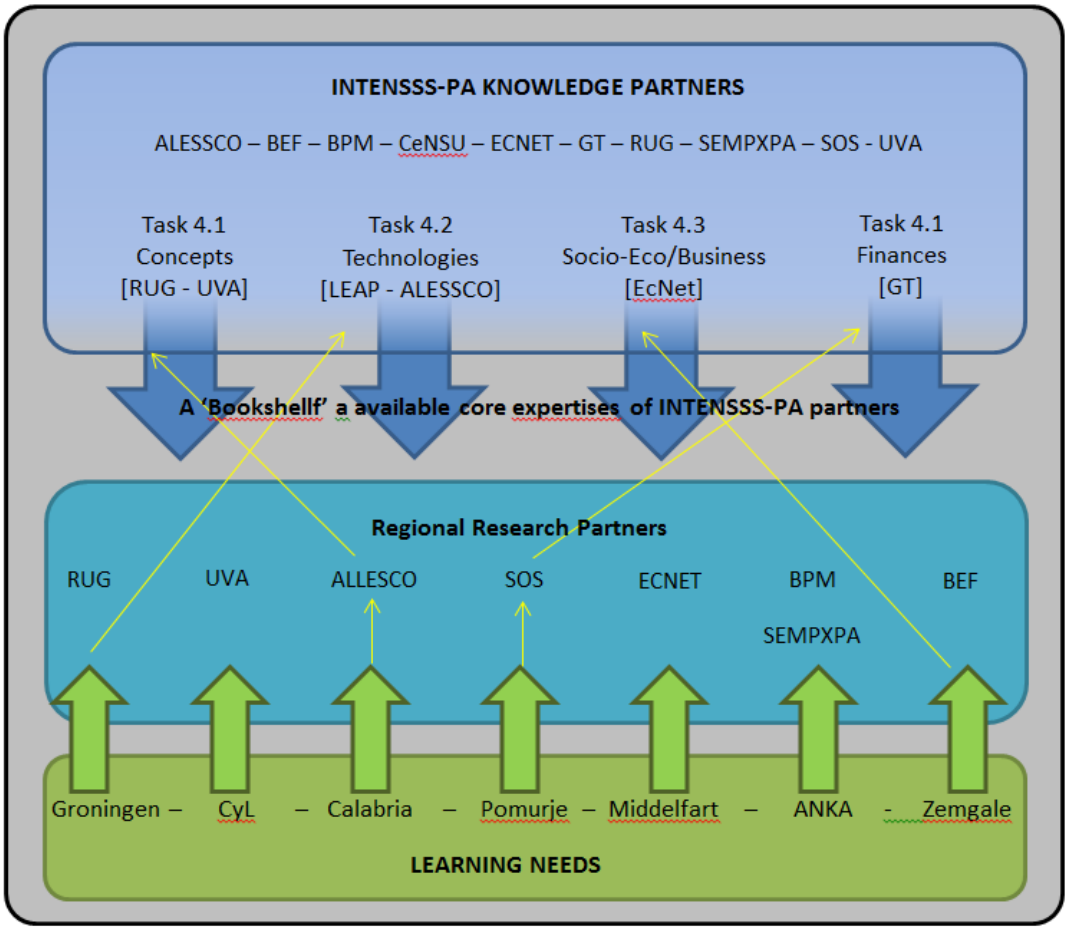

Figure 1: connecting learning needs to a bookshelf of knowledge partners

While tools I and II where modestly used, there was a notable exception. All RLL coordinators expressed the need to learn more about sustainable integrated energy planning in general and the idea of an 'area based sustainable integrated energy concept' in particular. This led to both explicit presentations by the University of Groningen (RUG) on both aspects during RLL coordinator meetings and the explicit use of written learning material to be used within the RLLs as part of the guidance in WP3 for developing and experimenting with an 'area based sustainable integrated energy concept'. It also fueled a closer conversation between RLL coordinators and RUG regarding RLL experiences and lessons learned on developing such concepts. The result of the tutorials, dissemination of learning materials and conversations (skype, mail, during coordinator meetings) was that the format for on-site guidance (tool III) needed some changes as well.

First, RLL partners requested guidance to take place very structured and not targeted on a short visit of on-site guidance regarding the development of an 'area based sustainable integrated energy concept'. Instead, they opted for protocols regarding 'how to' develop area based integrated energy concepts and the subsequent experimentation with these in practice. Such a protocol would allow them a 'step-by-step' approach where they could with their own RLL partners collectively pursue the development and experimentation with these concepts. The developed protocol provided such a step-by-step approach, although it explicitly allowed for each RLL to pursue their own path; i.e. the steps did not dictate

outcomes, they indicated choices to make and options to consider. As a result, the protocol developed again aimed for flexibility so as to be attuned to regional RLL needs. The protocol was developed by RUG with help of CyL and BPM and became part of WP3 (Task 3.2 and 3.3). Second, where on-site guidance was requested, regional research and consultancy partners became the preferred advisors. As the on-site learning sessions and on site guidance were not requested abundantly, the method for providing feedback (tool IV) was adapted accordingly, with the feedback targeting the process of going through the protocol for developing and experimenting with area based integrated energy concepts.

2.2 Capturing learning

The higher degrees of difference between the RLLs also urged for some adjustments to the initial plans regarding the capturing of learning. Notably, most RLLs operated on the notion of stakeholders being able to freely enter and leave discussions within the RLL. In doing so, stakeholders would particularly be involved where it was more in their interest. The initial intent for capturing learning *within each RLL* was to survey all involved stakeholders in each RLL with a similar format and, for each RLL, distinguish between the experiences and learning of each stakeholder, the core group and the main organization coordinating the RLLs. This distinction was difficult to maintain due to the relatively 'loose' stakeholder involvement. Furthermore, various RLLs indicated that the fragmentation of involvement on various expects also would render many stakeholders unsuitable to ask questions other than on specific experiences.

In the meantime, experiences on working within an RLL and using the RLL model were increasingly considered central to the project. Hence, the choice was made during the project to enhance the methodological rigor on capturing experiences and lessons regarding *working in living labs*. The format used was considered best to be linked to the work related to Task 3.4, which was about evaluating each individual RLL and the area based intergraded sustainable energy plans they developed. Hence, experiences and learning regarding the process of working within a RLL are part of the report "INTENSSS-PA Assessment approach D3.5". These results and the detailed method are not discussed here.

For capturing the learning in relation to the learning sessions, first a survey was developed that would target key messages for RLL based on interactive tutorial sessions provided in Groningen by several invited experts. The survey was sent in November 2017 and filled in by the RLLs between December 2017 and February 2018 (see survey in Appendix). Secondly, an interactive session was organized in March 2018 (Maribor workshop) with all RLL coordinators and supporting research and consultancy partners. All were asked to indicate the main lessons and experiences from their RLLs on five separate themes: (I) Combining interests and budgets, (II) Energy technology and practices, (III) The Regional Living Lab (RLL) as a planning process, (IV) Engaging society and market players, and (V) Integrated energy planning. These themes cover all the four key tasks of WP4, but do so by being more adjusted to the main aspects the seven RLLs addressed and an overall assessment of the RLL as a planning process itself.

2.3 Structure of the results

In the following sections 3 and 4 we will briefly set out the learning experiences, i.e. the learning we captured, from the seven Regional Living Labs (RLL's) of INTENSSS-PA. The results are set out briefly, and in a briefing style, which makes it more to the point, also for policy makers and influencers. Most of the learning experiences are valid for either all or most of the participating regions, but in some cases we highlight specific learnings from one or two regions that could be relevant in other contexts as well.

3 BUILDING BLOCK 1: EXPERIENTIAL LEARNING ON SUSTAINABLE INSTRUMENTS AND MEASURES

3.1 Combining interests and budgets

3.1.1 Sectoral disjoint

It became clear that the regions participating in INTENSSS-PA had to face sectoral disjoint. This observation is also valid for regions that have worked on integral policies for a longer time now, such as Groningen (NL) and Middelfart (DK). This disjoint at the regional level actually stems from national sector-specific policies and regulatory frameworks. A key learning for the regions here is that it is counterproductive to try and change nationally set conditions, whereas it is more fruitful to focus on regional issues that can be influenced from the start.

Key Learning:

Establishing a clearly defined playing field for an RLL in which there is potential to combine budgets and interests, without being hindered by external (national, EU) policies and regulations

3.1.2 'Wishful thinking'

A general feature coming from the participating regions is that, quite often, combining interests and budgets is more 'wishful thinking' than a tangible and feasible objective. In fact, some RLL coordinators indicated that aiming for more integration in some cases can be seen as a way to postpone measures, or at least postpone having to decide on financing particular measures. In this light, talking about integration and combining interests and budgets can come across as 'wishful thinking', i.e. hoping that other stakeholders will take financial responsibility, reducing the costs for (leading) stakeholders.

Key Learning:

'Wishful thinking' can divert from measures that are needed

3.1.3 Potential of cooperatives

Some of the RLL's, especially Karditsa (GR) have explored the option of working with cooperatives. A cooperative requires the participating stakeholder to think about financial participation at the start of a trajectory. At the moment of officially registering the cooperative, clear agreements about 'who pays what' should be made. The cooperative approach therefore seems appealing, yet the process before one can start with a cooperative can be very time-consuming.

Key Learning:

A cooperative can be a good, yet potentially time-consuming, approach to deal with fragmented interests at the start of a project or experiment

3.2 Energy technology and practices

3.2.1 Everything is possible?

Overall, the RLL coordinators are aware of the various technological options for renewable energy production. In fact, some coordinators claimed that 'technologically anything is possible'. However, it is important to keep 'network logic' in mind when planning renewable energy production (sites). Sometimes a locally very appealing solution can have a negative impact on overall network efficiency, or in fact hinder new production facilities elsewhere in the (regional) network. Hence, integrated sustainable energy planning requires regional steering, and sometimes even national steering or guidance. Furthermore, working with smart grids forms another topical challenge. This has remained unexplored within INTENSSS-PA, yet some RLL coordinators have pointed to the relevance of smart grid thinking in the context of local and regional energy planning.

Key Learning:

When developing local and regional renewable energy solutions, one should keep the overall network logic and efficiency in mind

3.2.2 See it, experience it

A solid (scientific) evidence base is not always enough when it comes to convincing citizens and policy makers. Oftentimes people need to see it and experience it first, before they will be convinced of, for example, the feasibility, applicability and durability of a specific technology. It is important to stress here that this applies to both citizens ánd policy makers; it is not uncommon that a renewable technology is met with skepticism by local and regional policy makers. Furthermore, regions have their own specific socioeconomic, physical, political and demographic profile, resulting in a region-specific fit when it comes to technologies.

Key Learnings:

1 An evidence base becomes more valuable if it is complemented by experiential learning

2 Experiencing a renewable energy technology in practice, in the direct local environment, can take away some of the skepticism towards that technology

4 BUILDING BLOCK 2: EXPERIENTIAL LEARNING ON REGIONAL LIVING LAB PROCESSES

4.1 The Regional Living Lab (RLL) as a planning process

4.1.1 RLL as 'room to manoeuvre'

The RLL coordinators used many different words to describe the role and importance of a Regional Living Lab approach. It could be seen as an 'enabler', 'test bed', 'real life laboratory', and even as an alternative meeting place. Overall, the coordinators seem to point to how an RLL provides 'room to manoeuvre'. This refers to the RLL setting facilitates 'out of the box' thinking, away from existing – and sometimes fixed – ways of working. An RLL provides a safe setting in which experts – from various level of government, market players, and also citizens – can test how a particular measure can be designed, planned and implemented. Furthermore, insights from the RLL can be used to assess how a measures would fit into society. In this light, it provides some elements of that other trend in spatial planning – serious games – but the real life setting of an RLL makes its results better transferable to actual plan making.

Key Learning:
Regional Living Labs provide 'room to manoeuvre' in mature and sometimes inert policy settings

4.1.2 Learning by doing?

The facilitators of the RLL learnings, i.e. the expert organization who were responsible for initiating the learning, ran into an interesting misconception about learning. Learning is often still seen as something one achieves in a classroom setting, with tutors/lecturers who explain and students who consume the information. Within INTENSSS-PA though, we aimed for experiential learning, meaning that learning will be based on experiences of professionals. Once this was clear among the project partners, it proved to be rather challenging to capture the experiential learning. Most RLL's seemed to like the learning by doing approach, yet capturing the learning required deliberate and explicit reflection on decisions, actions, outcomes and impacts. Here INTENSSS-PA ran into a recurring and seemingly universal challenge in the everyday work of policy makers: how to find time for reflection in the 'perpetual motion' of local and regional government? The positive side to this is when one actually manages to reflect on one's work, it can be quite rewarding to see what one has learned.

Key Learning:
Capturing experiential learning is challenging, but if one succeeds it can be very rewarding

4.1.3 Core and periphery

Another interesting challenge that the RLL coordinators experienced is how to manage the balance between the core stakeholders of an RLL, and the more peripheral stakeholders. In order for an RLL to proceed one needs a core group who takes care of the everyday progress of lab. Next to this, one needs a group of more peripheral stakeholders for whom it is not necessary to be involved continuously, but at

certain decisive moments they should be involved in order to ensure maximum commitment to the ventures of the RLL. This two-track strategy demands a lot of process management skills and also quite a bit of agility, as at some moments the two groups are composed of different stakeholders.

Key Learning:

An RLL can benefit from a two-track strategy, dividing between core and peripheral stakeholders, but this strategy requires communicative process management

4.2 Engaging society and market players

4.2.1 Stakeholder roles

An RLL is, among others, a vehicle to involve societal partners and market players in the designing and planning of new measures, in INTENSSS-PA regarding measures for renewable energy production. The participating regions have particular histories when it comes engaging society and market players. In some cases, this means that local and regional governments have fixed expectations about how a certain stakeholder should engage, and for what reason. However, some RLL coordinators pointed out that it is important that stakeholders can engage on their own terms, and for their own reasons. Prescribed roles are not easily accepted, and can often lead to friction within a living lab when a stakeholder crosses the boundaries of this prescribed role. To put it more critically, RLL coordinators carry the challenging responsibility to make sure that regional stakeholders move away from long-established and sometimes overly-determined roles. More importantly, RLL coordinators should safeguard that stakeholders allow others to play a renewed role. This is for example the case with citizens or citizen representative groups. Governments and market players expect a certain role from these groups, but in an RLL these expectations could frustrate progress and innovation.

Key Learning:

In order to facilitate innovation, RLL partners should allow for renewed roles of stakeholders

4.2.2 Timing of stakeholder involvement

Following from the core-periphery distinction we described under 4.2.1, it is important to consider the timing regarding the involvement of stakeholders. Who to involve, and at which point in the process? To effectively deal with this question, RLL coordinators need to be open to input from stakeholders. Next to this, the coordinator needs to maintain an ‘open line of communication’ with stakeholders. In this light it is also key to keep an open line with more peripheral stakeholders, as they might not be fully up to date on the progress of the lab, while their mandate might be needed.

Key Learning:

Be conscious of the timing of stakeholder involvement, and be keep in touch with both core and peripheral stakeholders

4.2.3 Public leadership

In order to ensure commitment to Regional Living Lab, it is important that leaders show leadership and act as advocates for the lab. There are two levels at which this is of relevance: 1) the political level, and 2) the organizational level. Firstly, at the political level politicians are needed who support the idea of the living lab. Political leaders could stress, for example, the importance of testing new measures in a clearly delineated yet realistic environment, or they could back-up their civil servants/policy makers by helping to persuade other stakeholders to become involved in the lab. Political support can then help to keep the momentum. Secondly, organizational leaders such as managers and directors can also act as advocates of the RLL. They can especially help in getting support from colleagues and other departments within the organization.

Key Learning:
Public leadership by politicians and managers/directors is important in generating broader commitment to the RLL

4.2.4 Citizens as experts

A key finding from especially the Regional Living Labs in Groningen (NL) and Middelfart (DK) is that citizens who participate in policy and plan making, should be considered experts on the topic. Quite often these citizens have longstanding experience with their own neighborhood, with the technological and financial issues, and with the political developments over time. In a way, the citizens can be seen as the stable factor in the region; i.e. sometimes it seems there is less turnover in citizens than in staff from governments and market players. Citizens can bring forward valuable knowledge about which measures can be implemented in their neighborhood, and in what way.

Key Learning:
Treat citizens as experts and be open to the knowledge and expertise they can add

4.3 Integrated energy planning

4.3.1 Energy-minded people vs. Spatial planners?

A general observation in the Regional Living Labs is that there is somewhat of a divide between energy-minded frontrunners – e.g. specific citizen groups, NGO's and some civil servants – and less energy-minded people. This divide can also be found within governmental organizations, with energy-minded professionals stressing the urgency measures to boost renewable energy production, while spatial planners stress the importance of 'prudence' and 'good governance'. In a way, the energy-minded professionals can be seen as target-oriented, while spatial planners are more process-oriented. More critically, one could say that the RLL's stumbled upon the problem of integrated policy and plan making: disciplines expect the other to integrate into their realm, accepting their way of working and their norms and values. Yet integration hardly ever goes without friction, as most entities try to safeguard their own identity. This inevitable friction is also found in integrated energy planning and delays the progress, in

this case of the Regional Living Lab. The positive side of this is, though, that the RLL facilitated this friction, i.e. the process towards integration started.

Key Learning:
Integration leads to frictions, but this friction is an inevitable first step towards further integration

4.3.2 Sectoral fragmentation echoes in governments

The friction described above is partly fueled by sectoral fragmentation which echoes in governments. Energy is often a separate sector, with sector-specific laws and regulation, and therefore governments often have a separate energy department. Many of these regulations are set at a European or national level, yet the impacts of these regulations are found locally, especially the physical impacts. These physical impacts interact with local social, economic and demographic systems, meaning that the further integration of the energy sector with other domains starts at the local level. RLL coordinators stated that it was difficult to organize integration at the regional and local level, as long as external regulations still largely determine the toolbox of regional and local governments. The gap analysis that was conducted prior to the RLL – to establish which tools and instruments were not yet available in the region – helped in deciding on which planning efforts should be targeted first, giving focus to the Regional Living Lab.

Key Learning:
Regional Living Labs benefit strongly from setting a clear focus at the start; establishing the gap in planning instruments and tools can contribute to this

4.3.3 Energy sector inertia

Another issue that the RLL's had to deal with, is the inertia of the energy sector. This mainly has to do with the economic character of the sector. Energy production, especially fossil energy production, requires great investments and offers only limited marginal revenues. This means that market players have to wait relatively long to get a return on investment. This also means that market players are not that eager to invest in new production facilities, even if these would use renewable sources. This especially the case in countries where market players recently have invested in new coal-fired power stations. Reluctantly, some market players are willing to accept their previous investments as sunk costs, or they accept to do a depreciation, but this depends heavily on the finances behind the investment and the time which is left to reach the break-even point.

Key Learning:
Energy sector inertia can frustrate investments in renewable energy productions, thereby hampering the planning of the energy transition

4.3.4 RLL to overcome institutional gaps

Regarding integrated energy planning, the Regional Living Lab approach proved to be very valuable in regions where regional cooperation was not yet well-established. Within INTENSSS-PA this was the case in Pomurje (SI) and Zemgale (LV). These regions are both situated in post-socialist states and since the transition to the new state organization, only two levels of democratic government are in place: national and municipal. Regional planning agencies were placed in between these two levels so as to be able to work regionally, for example on a project basis. The RLL's of INTENSSS-PA contributed to intensifying regional cooperation between municipalities and facilitated the discussion regional energy planning. In Castilla y León (ES), an autonomous region consisting of 9 provinces and 2248 municipalities, functional energy planning regions were established in order to give a boost to more integrated forms of energy and spatial planning. In Middelfart (DK), a cooperation between neighboring municipalities was intensified during the time of the RLL. All in all, this shows that a Regional Living Lab approach can help to overcome institutional gaps, and intensify already existing forms of cooperation. In this light, Regional Living Labs can be a valuable vehicle for bolstering regional planning.

Key Learning:

Regional Living Labs can help to foster regional cooperation for specific challenges, thereby creating or improving institutional tissue

5 SYNTHESIS AND CONCLUSION

5.1 Achieving integration

Many of the learning experiences and challenges from the Regional Living Labs are related to the question *how to achieve integration between energy planning and spatial planning*? Moreover, RLL coordinators struggles with the question whether integration should be achieved before the actual start of the lab, or whether integration could be achieved during the running of the lab? INTENSSS-PA did not enable us to judge what works best – integration up front or incremental integration? However, we did see that most RLL's strived for one of the two approaches. Altogether, the RLL coordinators learned that both approaches have clear advantages and disadvantages. Therefore, we would recommend other projects and professionals to use a dialectic approach to Integrated Sustainable Energy Planning (ISEP): by exploring both extremes one can advance the understanding of the problem at hand and, eventually, determine for oneself what works best. It is therefore important that professionals have the 'room to manoeuvre' and experiment, preferably with the support of partner professionals or organizations who can fuel the discourse about integral planning. It is also important that, like during INTENSSS-PA, professionals reflect deliberately and explicitly on how their notion of integral planning evolves. Capturing this learning, however, should then also be safeguarded.

5.2 Capturing learning experiences

As Work Package leaders of WP4, we experienced the difficulties of capturing experiential learning of practitioners. Professionals have to get going with their work and actually experience how ISEP works in practice in order to learn, but in a governmental organization this can consume all the available time, and sometimes more. In other words, the 'experiencing' takes center stage, whereas the learning and reflecting takes a back seat. Optimistically speaking, experiential learning always takes place in case a professional experiences something, but in order to learn from it and effectively advance the quality of future actions and policies, more systematic reflection is needed.

RLL coordinators in INTENSSS-PA have helped us to elaborate on their key learnings from the project, and hopefully this will help other professionals who are working with integrated energy planning, or with (regional) living labs. The paradox behind experiential learning, though, is that for people to actually learn from something and take action accordingly, they have to experience it themselves. In this light, we are not naïve and we know that many challenges will remain to exist, and many mistakes will be made again. However, we hope that this synopsis of learning experiences can help other professionals in speeding up their learning process. The overall key learning of INTENSSS-PA for us is therefore:

Overall Key Learning from INTENSSS-PA:

The long-term impact of the experiential learnings from INTENSSS-PA is the potential these learnings have for accelerating experiential learning elsewhere, therewith potentially accelerating the energy transition throughout Europe

APPENDIX: Survey example

Reflecting on Experiential Learning in Regional Living Lab

Please reflect on the experiential learning that takes place in your Regional Living Lab. Provide concise answers, yet feel free to adapt the size of the tables and text boxes.
Team RUG

Regional Living Lab: (region)
Filled in by: (name RLL coordinator)
Date:
Questionnaire Number 1

1. Consider the presentation by BEF on **environmental issues regarding renewables**

a. what insights are already familiar to you and which of these do you already apply in your RLL?

Text

b. with regards to these insights, to what extent did you acquire these through working within your Regional Living Lab?

Text

c. with regards to these insights, to what extent did you acquire these through working within the transnational context of the INTENSSS-PA project?

Text

d. are there also new insights that you took from the presentation and if so, which?

Text

2. Consider the presentation by BEF on by Grant Thornton on **financing renewable energy production (initiatives)**

a. what insights are already familiar to you and which of these do you already apply in your RLL?

Text

b. with regards to these insights, to what extent did you acquire these through working within your Regional Living Lab?

Text

c. with regards to these insights, to what extent did you acquire these through working within the transnational context of the INTENSSS-PA project?

Text

d. are there also <u>new insights</u> that you took from the presentation and if so, which?

Text

3. Consider the presentation by ECNet on **participatory decision making** and **multi-level governance**:

a. what insights are already familiar to you and which of these do you already apply in your RLL?

Text

b. with regards to these insights, to what extent did you acquire these through working within your Regional Living Lab?

Text

c. with regards to these insights, to what extent did you acquire these through working within the transnational context of the INTENSSS-PA project?

Text

d. are there also new insights that you took from the presentation and if so, which?

Text

4. Consider the presentation by LEAP on **renewable energy technologies, social acceptability and priorities**

a. what insights are already familiar to you and which of these do you already apply in your RLL?

Text

b. with regards to these insights, to what extent did you acquire these through working within your Regional Living Lab?

Text

c. with regards to these insights, to what extent did you acquire these through working within the transnational context of the INTENSSS-PA project?

Text

5. Consider the presentation by RUG on the **overall insights from WP4**

a. what insights are already familiar to you and which of these do you already apply in your RLL?

Text

b. with regards to these insights, to what extent did you acquire these through working within your Regional Living Lab?

Text

c. with regards to these insights, to what extent did you acquire these through working within the transnational context of the INTENSSS-PA project?

Text

d. are there also new insights that you took from the presentation and if so, which?

Text

Other remarks regarding WP4 and Experiential Learning:

Text