

CESBA Alps

CESBA ALPINE SPACE - SUSTAINABLE TERRITORIES

ASP 151 - Priority 2 Low Carbon Alpine Space

Interreg
Alpine Space



European Regional Development Fund

CESBA Passport

CESBA Alps (online) Tool, Deliverable, **Rev.2.2**

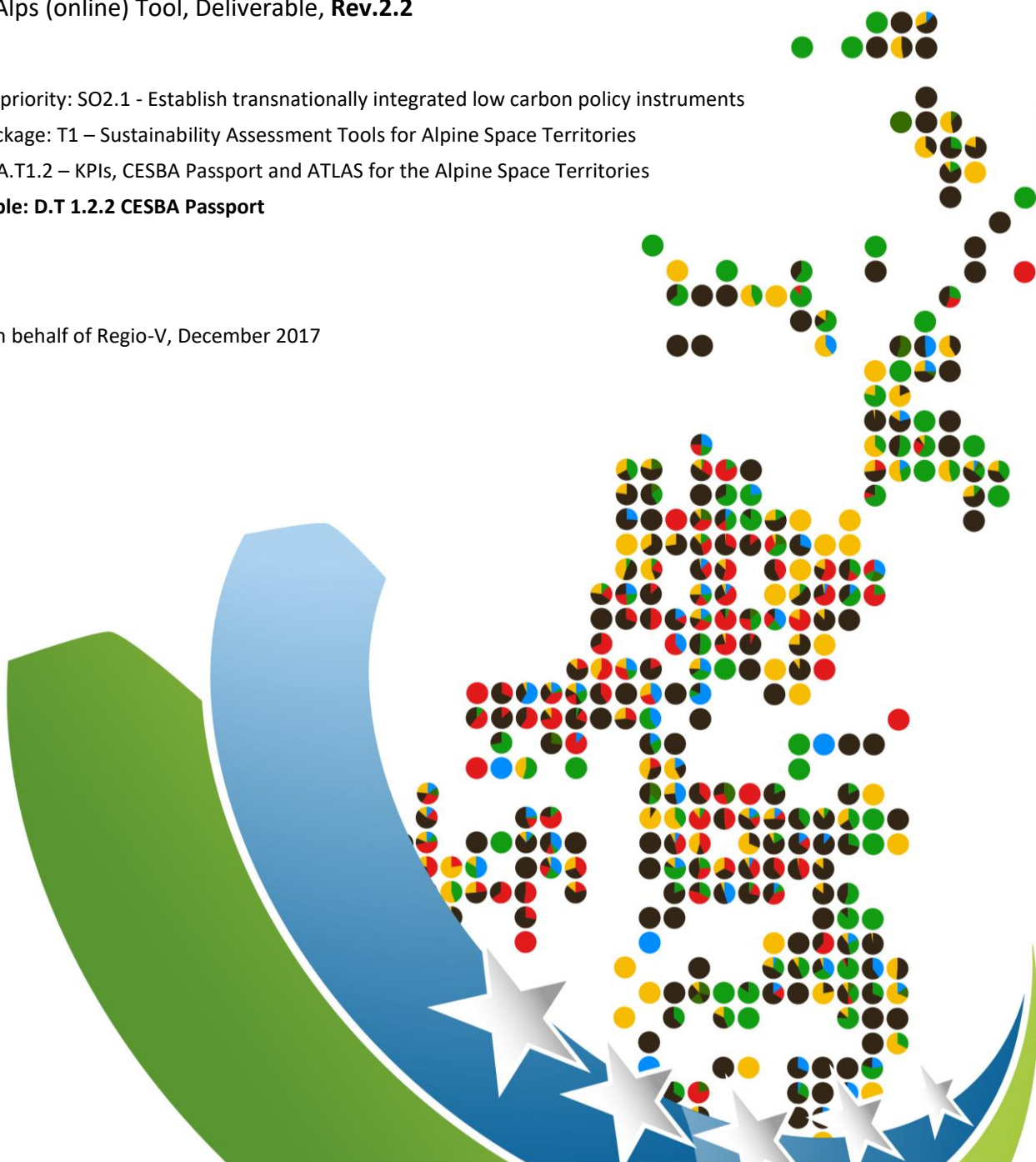
Program priority: SO2.1 - Establish transnationally integrated low carbon policy instruments

Work package: T1 – Sustainability Assessment Tools for Alpine Space Territories

Activity: A.T1.2 – KPIs, CESBA Passport and ATLAS for the Alpine Space Territories

Deliverable: D.T 1.2.2 CESBA Passport

Telesis on behalf of Regio-V, December 2017



Regionalentwicklung
Vorarlberg eGen

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1 Overview CESBA Alps Tool – 3 functions one tool

The **CESBA Passport** is like a “sustainability-ID” of a region/territory. It is a document that contains the CESBA KPIs (Key Performance Indicators) and some specific indicators that are intrinsically relevant for the region. The passport supports each region to describe its territory in a standardized way, regarding the performances in terms of indicators and aspects of sustainable policies and development. It also helps to monitor some critical environmental parameters, such as water quality, noise or PM content in air.

The **online tool** for the CESBA Passport is a web-based tool to create assessments based on indicator-sets of the Generic Framework, see D.T1.1.2. It allows to generate progress-graphs (and -tables) on different levels, like on the indicator-level (with its physical quantity), but also on the level of issues.

All CESBA Alps project partners and lead partner decided to develop and use the same online tool for their regional tool(s). They all agreed that the whole workflow (contextualization, assessment and analysis) shall be integrated and managed by one single tool. The last step helps with standardized charts to produce the passport document. The passport actually is edited as a MS Word document including all charts from the CESBA Alps Tool.

The online tool manages to:

1. store all data entered with each assessment done in every assessment period by assessors of all territories
2. implement the needs of the Generic Framework (normalization, weighting)
3. implement the needs of each single territory (contextualization)
4. implement a benchmarking feature, in order to enable territories to learn from each other
5. perform all data with graphs and their export files.

Hence, the online CESBA Alps tool actually can be considered as the online **CESBA STT Generic Framework Software**. This means all partners will use this online tool to generate their 9 regional tools. Take into consideration DT 1.4.1 and DT1.4.2, too, since all functions of these 2 deliverables are integrated in the this online CESBA Alps Tool!

Output: During the test/assessment, users will introduce the value of indicators in the online tool that will normalize them (-1, +5) and will aggregate the scores through weighted sums. The result will be a set of scores associated to each criterion, category and issue. Additionally, the total score of the territory will be the summarizing output.

2 Functions of CESBA Alps (online) Tool

Basic (User) functions	Extended (Administration) functions
<ul style="list-style-type: none"> • Creating Periodic assessments • Creating a regional Contextualization (advanced) • Creating Diagrams for the final passport document <ul style="list-style-type: none"> • “Single evaluation”-Diagram (e.g. Spider-Diagram) • “Indicator trend”-Diagram (Time-Beam-Diagram) • “Region-Comparison”-Diagram (e.g. Multi-Spider-Diagram) 	<ul style="list-style-type: none"> • Adding a Region • Creating an indicator • Setting its weighting factor in relation to other indicators • Creating an indicator-set

Figure 1: Functions of the Passport Online Support Tool

The CESBA Alps (online) Tool is and enables:
A database which directly collects the physical and economic core indicators.	Digitalisation of sustainable assessments.
It can compare, cluster, normalise and display data.	Automatisation of data processing; measurement of total performance.
With an export function graphs can be produced which are then integrated into the region’s reports.	Standardisation of evaluations in the reports.
With these standardised graphs, the production and structuring of all reports is facilitated.	Facilitation of work.
The reports are more reader-friendly and comparing reports is easier.	Facilitation of work.
More emphasis can be put on the discussion of key figures.	Focus on key figures.
The comparability of similar regions and of those which are totally dissimilar is ensured with common environmental indicators and is scientifically reliable.	Increase of quality.
In addition, each region can choose its own individual indicators which can also be recorded, normalised and pictured.	Individualisation and contextualisation.
All data can be displayed in a common time series (trend).	Standardisation.
Data can be blocked in a differentiated way or made accessible with reading authorisation only.	Data security.
It is an easy-to-use tool for all users, also for those who are not familiar with Excel and therefore might only be able to deliver weak indicator analysis and incorrect reports.	It is an easily accessible tool. Simplification.

Mind: The online tool is not the final passport document! Therefore, an additional MS Word template has been edited, see annex, which will be fed with some graphs and diagrams of the online tool and certainly still has to be edited individually by the author (assessor).

2.1 CESBA Alps Tool - review of its functions

After having closed the KPI definition meeting in October 2017 in Milan, the so-called “passport-online tool”, which actually is the online **CESBA STT Generic Framework Software**, was presented to all project partners. At the end of a short presentation one feedback has been given, namely to align the scoring scale to the Generic Framework -1 to 5. This has been implemented in December 2017.

Beside this, there was a common wish to make **trainings** for using the tool in 2018. General conventions for the harmonized and balanced use of the tool are recommended.

Mind, that the content of the **passport document** will finally be a personally edited MSWord document. Only recorded data can be downloaded from the CESBA Alps Tool. The Passport will basically contain:

- ✓ the value of the KPIs (in bar-charts or spider-diagrams, some trends and comparisons)
- ✓ some territorial specific indicators
- ✓ a verbal description of the territory
- ✓ some pictures.

To make sure that all regions can be compared to each other all regions has to choose one common indicator set. If they want to add specific indicators to their region, they have to:

- a. Either add them to the common set of indicators (all regions have to agree on this)
- b. Or create their own indicator set (which is the regional tool) as addition to the global set, and fill in two assessments:
 1. a global one with KPIs and
 2. their regional one with specific indicators.

3 CESBA Alps (online) Tool - access and users

The current **URL** of the Passport online tool is <https://tool.cesba.eu/login>.

Currently the following **user** types exist in the system:

1. “Admins” are allowed to edit indicators and indicator sets and can also create Regions.
2. “Users” can only create Periodic Assessments and generate Diagrams.

More users can be added and managed by the “Admins” with “Permission”.

Each Partner/Pilot region can have more than one user. Not to lose track of the user pool though, only as many users as necessary should be added to the system. Partners/Pilot regions can also be provided with one “Permission”-user, in order to manage users by themselves. For that purpose, one responsible person for each region has to be named. Certain rules must be considered though.

The **password** was sent to each user separately. If a user has forgotten his/her password, it can be reset via “Forgot password?” at the login-page.

4 CESBA Passport document

This overview divides and explains the 3 single steps (functions) of the CESBA Alps Tool:

1. Software implementation of the CESBA ALPS STT Generic Framework
2. Software implementation of regional tools (CESBA STTool)
3. Software implementation of the CESBA Passport

D.T1.4.1 CESBA STT Generic Framework Software Responsible PP: Regio-V	DT.1.4.2 Regional CESBA STT Software Responsible PP: Regio-V	DT.1.2.2 CESBA Passport Responsible PP: Regio-V
Software implementation of the CESBA ALPS STT Generic Framework Function: contextualization process for the development of regional tools (CESBA STTool) - Criteria selection - Benchmarks assignment - Weights assignment Project OUTPUT 9 CESBA STTools	Software implementation of regional tools (CESBA STTool) Function: assessment of the performance of a territory (sustainability level) - Characterization (input of indicators value) - Normalization (score assignment -1/+5) - Aggregation (categories, issues and global scores) Project OUTPUT 9 Assessments on pilot territories Assessment report with performance scores	Software implementation of the CESBA Passport Function: Passport production - Acquisition of KPIs values - Passport production as Word document Project OUTPUT CESBA Passports

Figure 2: The passport is derived from all inputs and calculation steps before, red boxes → green boxes. It is edited in MS Word. Its diagrams and charts are generated by the CESBA Alps Tool.

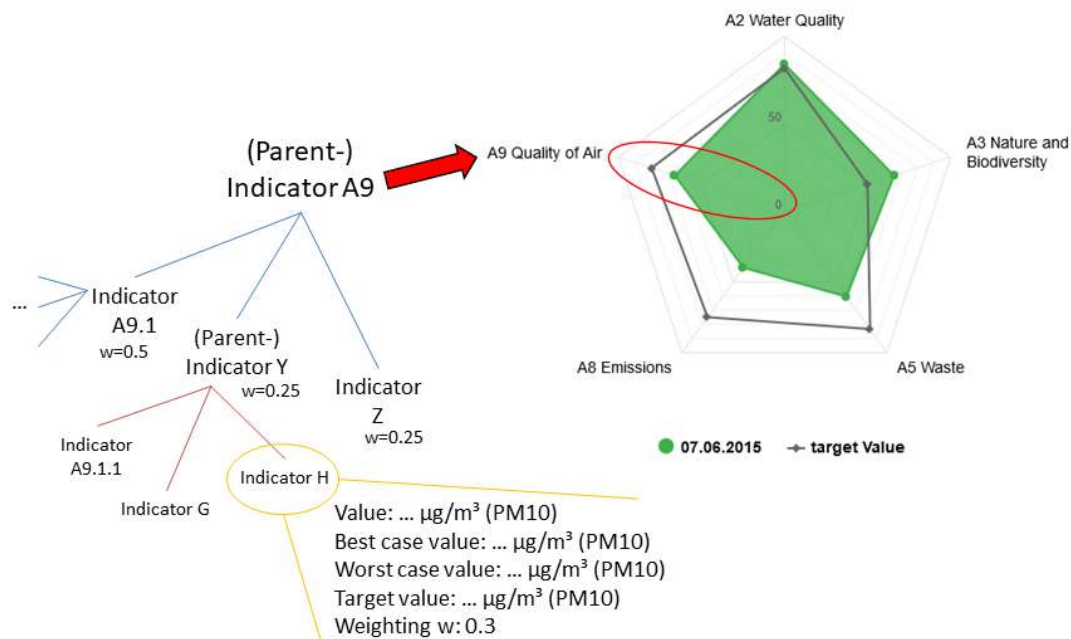


Figure 3: Architecture of the Generic Framework software, the so called CESBA Alps tool. “Child- and Parent-Indicators” work as criteria of categories within issues of the Generic Framework. Aggregation of the indicators allows to cluster indicators within more than only one issues. In order to compare different indicators with each other, normalization takes place, which actually make the Generic Framework operating as a value benefit analysis (Nutzwertanalyse).

5 Creating standardized Charts for the regional CESBA Passport

Once you have inserted all your data (KPIs and regional indicators), you may generate the output of CESBA Alps Tool. With these results you can generate some export files and use them in your passport template document (which is a MS Word file).

But first choose between Bar charts or Spider chart and configure the scale you want to display your charts.

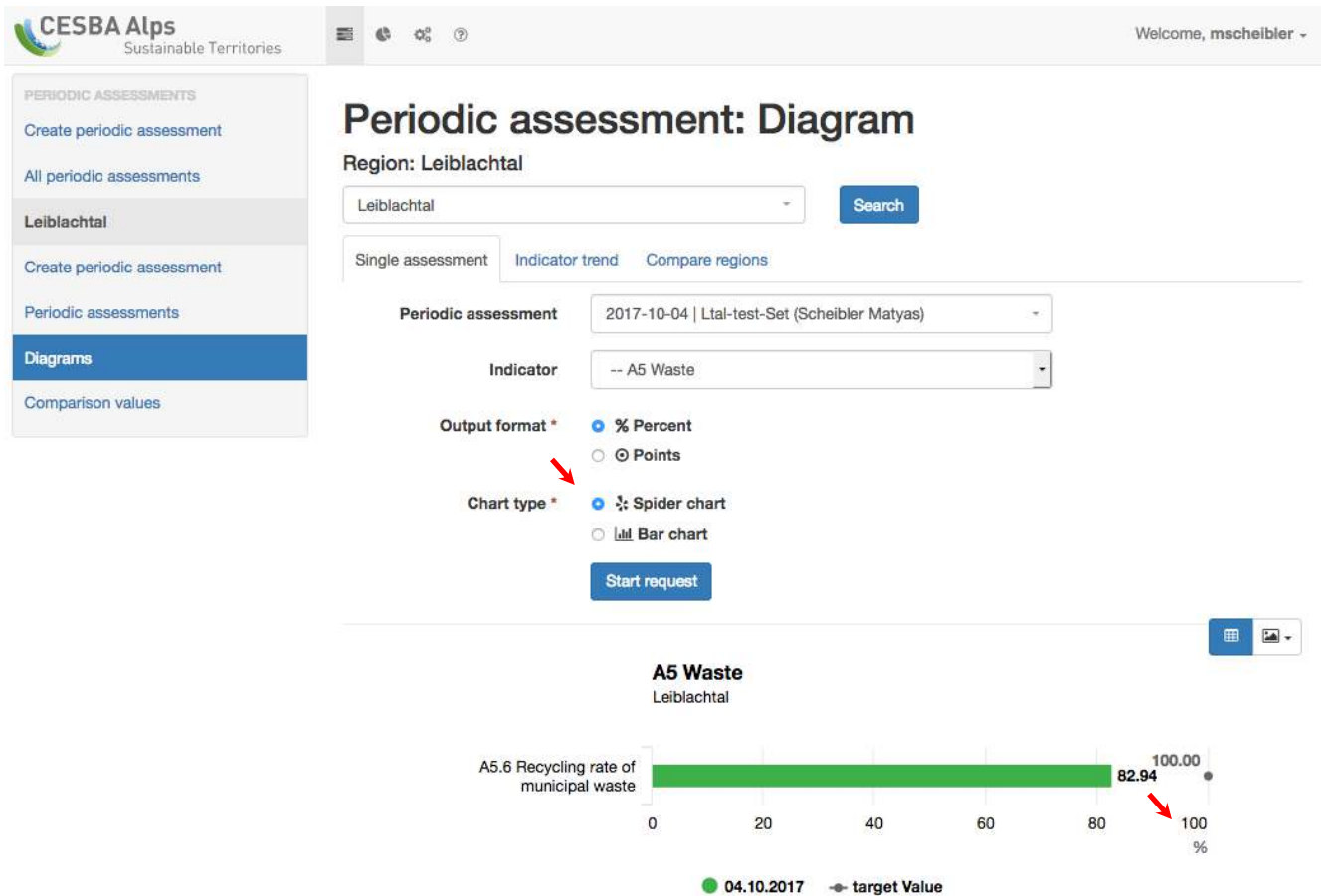


Figure 4: Choice between bar chart or spider diagram, 0 to 100%. Both can be exported into the final passport document.

CESBA Alps Sustainable Territories

Welcome, mscheibler -

Leiblachtal

Create periodic assessment
 Periodic assessments
Diagrams
 Comparison values

Single assessment | Indicator trend | Compare regions

Periodic assessment: 2017-10-04 | Ltal-test-Set (Scheibler Matyas)

Indicator: A Territories and Environment

Output format *
 % Percent
 Points

Chart type *
 Spider chart
 Bar chart

Start request

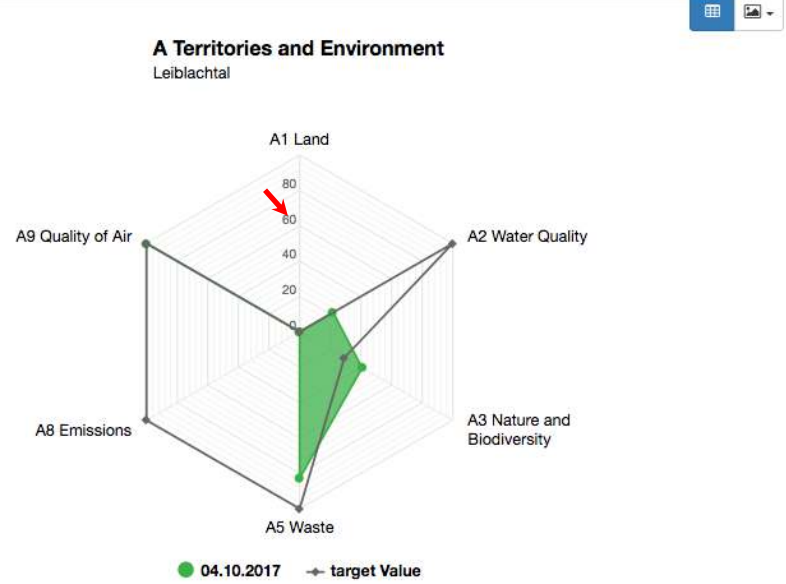


Figure 5: Choice between bar chart or spider diagram 0 to 100 %.

Search

Single assessment | **Indicator trend** | Compare regions

Periodic assessment: 2017-10-04 | Ltal-test-Set (Scheibler Matyas)

Indicator: A Territories and Environment

Output format * % Percent Points

Chart type * Spider chart Bar chart

Start request

A Territories and Environment
 Leiblachtal

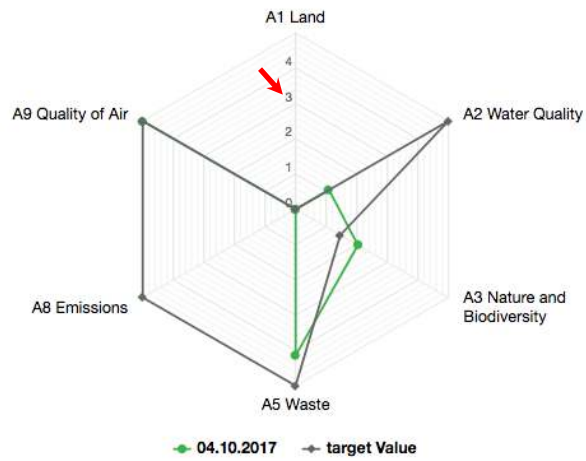


Figure 6: Choice between bar chart or spider diagram, Points 0 to 5.

6 Output: Evaluations and Diagrams

The Outputs of the passport online tool are:

1. Single evaluation
2. Indicator trend, historical trends in performance
3. Comparison of regions in order to learn from each other

Every single output can be exported, see Figure 7 and Table 1.



Figure 7: options for data output export files.

6.1 Single evaluation



Figure 8: Example for single evaluation with dummy data.

	A	B	C	D	E	F	G	H	I	J	K	L	M
1	Periodic assessments												
2	Type			default					target Value				
3	Date			04.10.2015					04.10.2015				
4	Region			Leiblachtal					Leiblachtal				
5	Author			Scheibler Matyas					Scheibler Mátyás				
6													
7	Indicator	Unit	Description	absoluteValue	scaledValue	worstValue	bestValue	weighting	absoluteValue	scaledValue	worstValue	bestValue	weighting
8													
9	A Territories and Environment					58,08%			1		71,54%		1
10	A1 Land				0,00%				1		0,00%		1
11	A2 Water Quality				28,13%				1		100,00%		1
12	A2.7 Water Quality in Rivers	A2.7 WATER QUALI	milligrams	4,5	28,13%	5,4	2,2	1	1,56	100,00%	5,4	2,2	1
13	A3 Nature and Biodiversity				26,93%				1		29,22%		1
14	A3.15 Common Bird Index	A2.7 COMMON BIR	% (year 19	74	26,93%	62,27	105,83	1	75	29,22%	62,27	105,83	1
15	A5 Waste				93,44%				1		100,00%		1
16	A5.6 Recycling rate of municipal waste	A5.6 RECYCLING RA	%	64	93,44%	28,4	66,5	0,5	90	100,00%	28,4	66,5	0,5
17	A8 Emissions				100,00%				1		100,00%		1
18	A8.1 Greenhouse gas emissions	A8.1 GREENHOUSE	Annual CO ₂	60	100,00%	100	72	1	50	100,00%	100	72	1
19	A9 Quality of Air				100,00%				1		100,00%		1
20	A9.7 Exposure to air pollution	A9.7 EXPOSURE TO	µg/m ³	16	100,00%	37,2	27,4	1	10	100,00%	37,2	27,4	1
21													

Table 1: Example for an Excel data export file. Data from Figure 8 has been exported.

6.2 Indicator trend

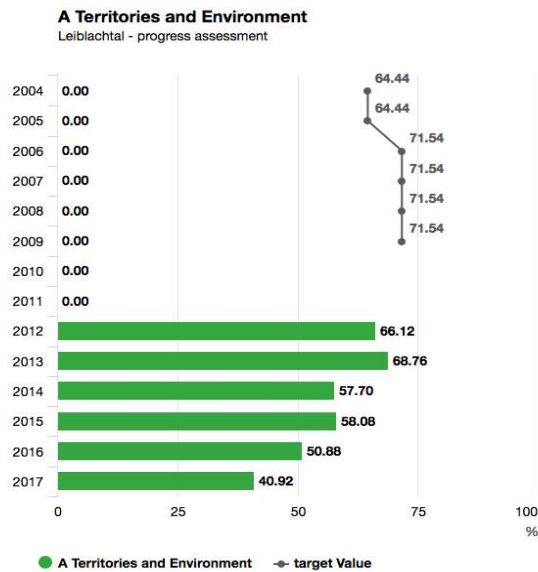


Figure 9: Example for indicator trend with dummy data. For demonstration purposes, the target value has been given in for a presuming period. The target value has been altered in 2006 by the Admin (contextualisation).

6.3 Comparison of regions

Different regions can be compared with each other.

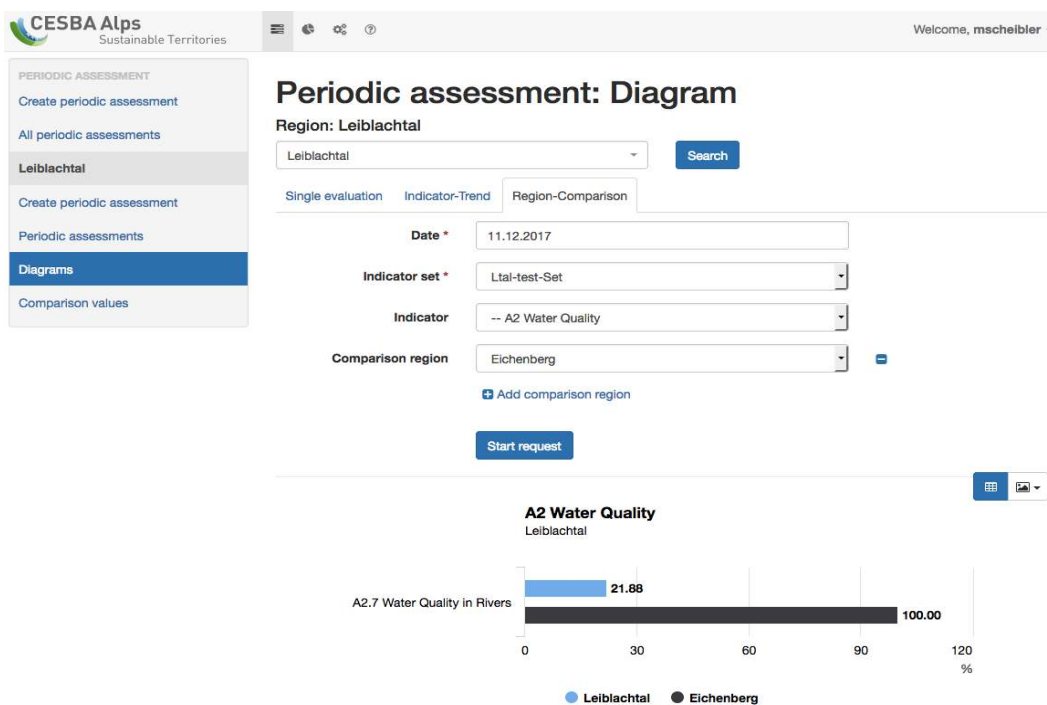


Figure 10: Example for region-comparison.

7 Video Instruction

So far, the following video instruction with the named content exist:

7.1 Video “Overview”

Content:

- How to log in
- How a **Periodic assessment** looks like (structure) and that the “*progress (towards best-case)*” and the “*progress (towards the target)*” are being calculated out of it
- How a **Diagram** (single Spider and trend Beam) is being generated out of an indicator set / a mother-indicator / a single indicator and how the diagrams can be saved as graphics.
- That **indicators** and **indicator sets** can be edited in the Administrator area (in case the user has administrative permissions)

Download link: https://www.youtube.com/watch?v=_zq9bLKXG4Y&feature=youtu.be

8 Annex

8.1 Standardized passport document, MS Word template

With the following annex, the appearance, namely a template, for a standardized Passport document is being submitted. Every project partner can adjust it to its needs. It mainly must contain the calculated or measured KPIs of the territory, specific indicators of the territory as well as a discussion of their historical trends.

The annex illustrates the standardized passport document with the example of Leiblachtal, Vorarlberg.

Regional Passport

of the CESBA Alps Pilot region **Leiblachtal (Vorarlberg / Austria)**

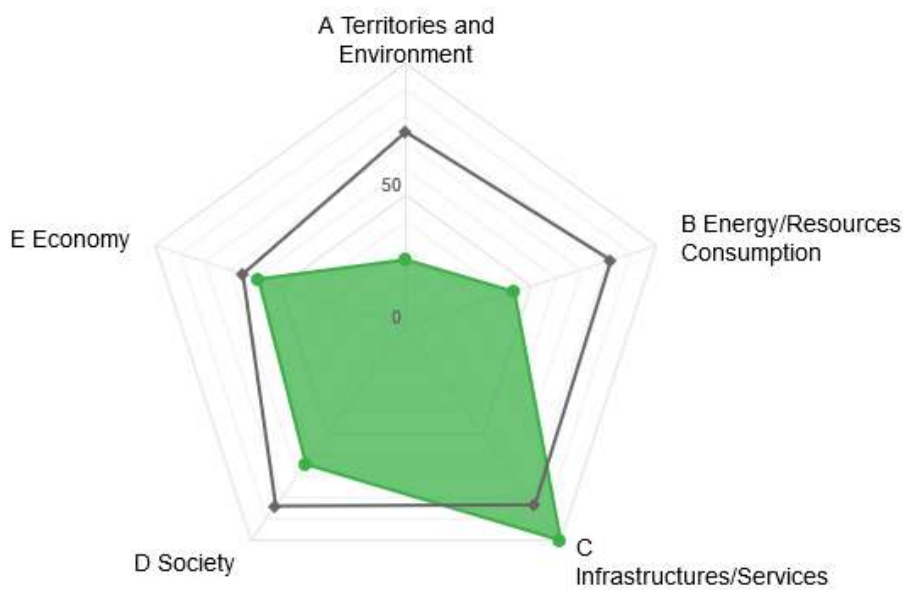
November 2017 by project partner Regio-V, final version for public use

Program priority: SO2.1 - Establish transnationally integrated low carbon policy instruments

Work package: T1 – Sustainability Assessment Tools for Alpine Space Territories

Activity: A.T1.2 – KPIs, CESBA Passport and ATLAS for the Alpine Space territories

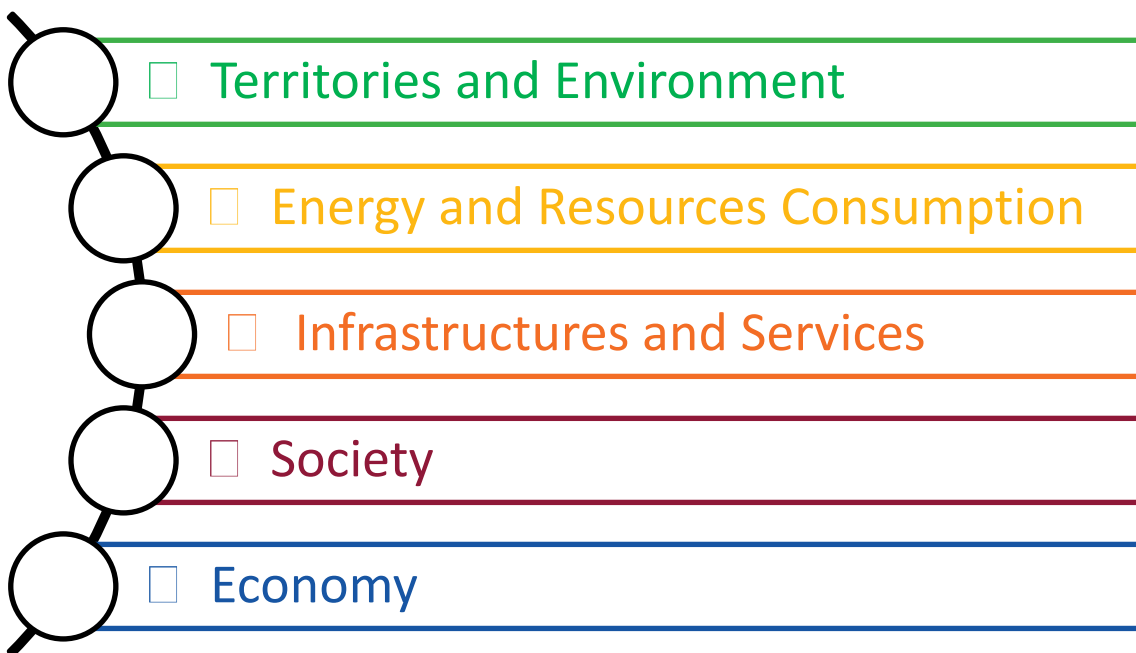
Deliverable: D.T1.2.2 – CESBA Passport



Preface

CESBA Alps While sustainability assessment tools are already well-established for buildings and small urban areas, such tools do not yet exist for the built environment at the level of territories. *CESBA Alps* aims to improve the sustainability of the Alpine built environment through the development of the first assessment tool at territorial scale, which will be contextualized to regional specificities (example text, alpine-space.eu).

The Generic Framework consists of ... indicators, of which 15 are so called KPIs (Key Performance Indicators). These are used to compare regions in the Alpine Space in terms of sustainability. All indicators are assigned to a certain category and to an issue. In the following figure you see all issues of the Generic Framework



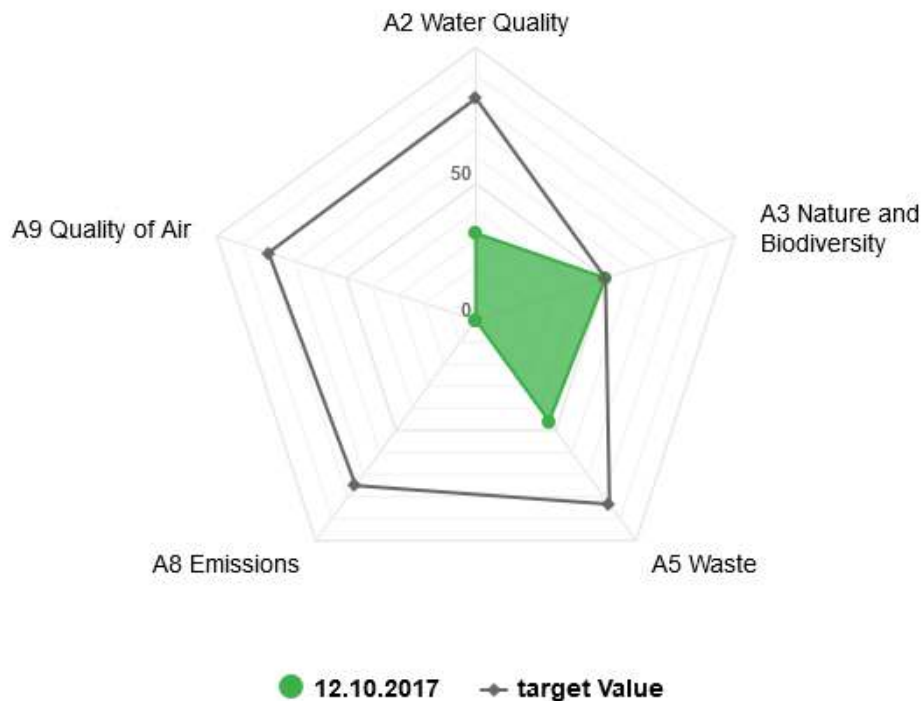
Blab la bal colors:

#3eb049 (62 176 73) #fdb713 (253 183 19) #f36d25 (243 109 37) #8f1838 (143 24 56) #1755a3 (23 85 163)



Territories and Environment

The issue “Territories and Environment” contains indicators which indicate the compartments forest, lake / sea, grassland etc. In the following figure you see all the categories of the issue. Each category has one or more indicators. These will be shown shown in the graphs of the following pages.



Besides “Nature and Biodiversity” there is a high potential in “Water Quality” and “Waste” to improve towards the regional target. In “Quality of Air” and “Emissions” there is a high need to act! In total, there should be a high effort put into all “dimensions” / categories towards a more sustainable future!

Regional activities / measures to be mentioned:

In Leiblachtal high efforts were put into wet land protection. A great achievement was the regional wet land protection agreement asdf asdf adf adf asdf asdf adf asdf asdf asdf asdf asdf asdf asdf adf asdf adf adf asdf adf adf adf asdf asdf asdf asdf asdf asdf adf asdf .

Water Quality in Rivers

Water is critical to life. Ensuring that our drinking water sources are protected—now and in the future—not only means safe drinking water for us, but for our children and grandchildren (example text, nesc.wvu.edu).

Here could be a text which tells something about water quality in rivers in the specific region. ...Furthermore, in its drinking water protection areas,

KWL bears the cost of water protection adjustments and revenue losses by farms associated with

prescribed land use restrictions, above and beyond its compensation obligations under water legislation

The compensation payments, including the administrative costs, amount to around 1 cent/m³ drinking water. This includes the cost of compliance with the operational guidelines for raw water quality, and

for meeting the environmental quality standards for groundwater (actually a government task), as required e. g. by the EU Nitrates Directive and EU Water Framework Directive.

By contrast, the potential savings from not having to treat the water are estimated at around 7 cents/m³ drinking water. On balance, these compensation payments are the most cost-effective means of ensuring raw water quality and hence of minimising nitrate levels (Loth, 2008) (example text, TEEB).

A2.7 Water Quality in Rivers

Leiblachtal - progress assessment

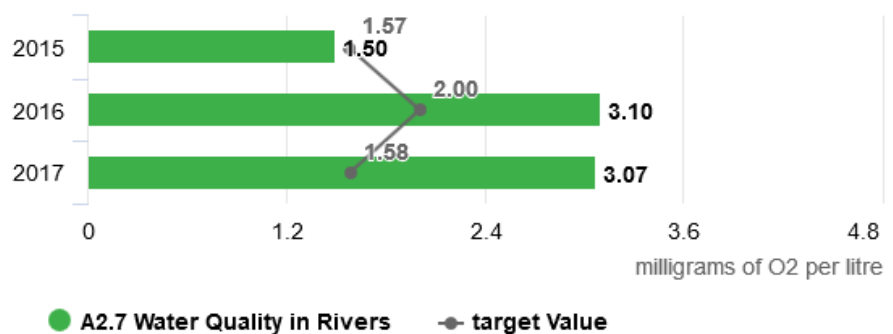
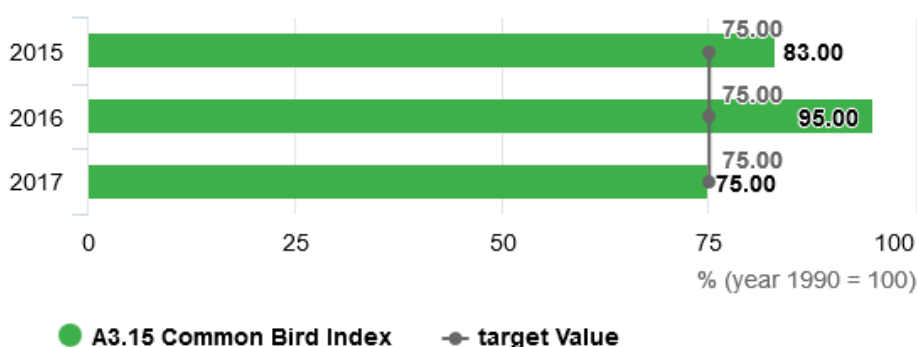


Figure 11: Water Quality in Rivers, Leiblachtal progress, with diagram heading

Common Bird Index

Example for general text: Index (1990 = 100). This indicator is an index and integrates the population abundance and the diversity of a selection of common bird species associated with specific habitats. Rare species are excluded. Three groups of bird species are represented: common farmland species (39 species), common forest species (34 species) and all common bird species (167 species) which include the farmland species, the forest species and a further 94 common species (generalists, as opposed to the farmland and forest specialists). Farmland birds have a high dependence on cultivated land during the nesting season and for feeding during most of the year, while forest birds are equally dependent on wooded areas (ec.europa.eu).



Region-specific text: The whole time series is re-calculated each time new data are added. Although this indicator has a narrow focus compared to EU policy objectives on biodiversity

Figure 12: Common Bird Index, Progress in Leiblachtal 2015-2017, without diagram heading

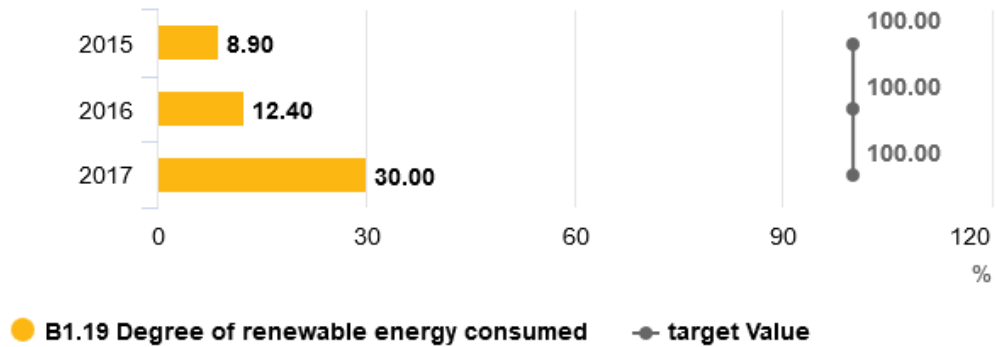
Degree of renewable energy consumed

Renewable energy resources and significant opportunities for energy efficiency exist over wide geographical areas, in contrast to other energy sources, which are concentrated in a limited number of countries. Rapid deployment of renewable energy and energy efficiency, and technological

diversification of energy sources, would result in significant energy security and economic benefits (IEA / Wikipedia "Renewable Energy"). While many renewable energy projects are large-scale, renewable technologies are also suited to rural and remote

areas and developing countries, where energy is often crucial in human development.[12] Former United Nations Secretary-General Ban Ki-moon has said that renewable energy has the ability to lift the poorest nations to new levels of prosperity (Wikipedia "Renewable Energy").

B1.19 Degree of renewable energy consumed
Leiblachtal - progress assessment



Land use

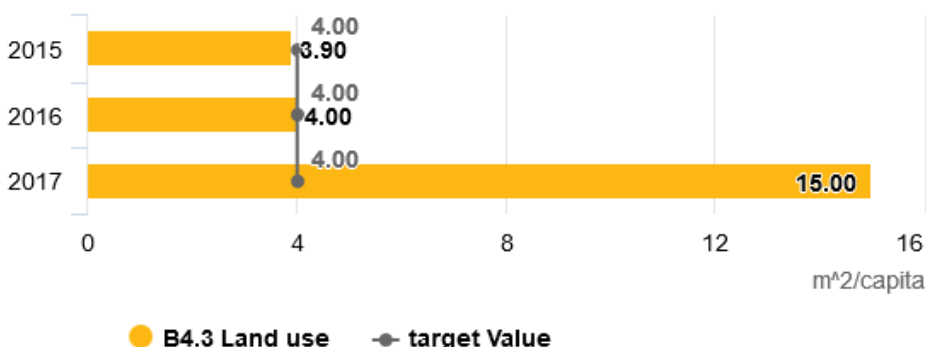
Land and soil are finite, non-renewable resources, which continue to degrade, affecting their ability to function and deliver services. Food growing, biomass and biofuel production, carbon storage, the hosting of soil biodiversity, the filtering of water and cycling of nutrients, and the provision of raw materials are under increasing pressure. The natural and archaeological heritage of soil is also being jeopardised.

A number of processes contribute to this degradation including soil erosion, the decline of soil organic matter, soil contamination and soil sealing (soil covered by impervious surfaces, also called imperviousness.) These are driven by human activities like land take, land use intensity (among others reflected in the amount of nutrients used on rural



B4.3 Land use

Leiblachtal - progress assessment



land) and land abandonment. Each process has an impact on the main dimensions of land: land cover/land use, vegetation and soil. These determine the land resource stocks and functioning, and the derived flows of goods and services. They also affect the intrinsic value of

land and its contribution to human wellbeing and welfare.

Infrastructures and Services

adfasdf jjkÖkjö asdf jÖlkjasdf asdf jÖjÖj asdfasdf jÖkjÖj asdfaf.

Society

Only two categories in C (C1 and C2), therefor no Spider-Graph possible to generate... maybe neglecting the category level??? ...as there are 5 KPIs to generate...

Economy

Only two categories (E4 and E5), with only one KPI each...

End of DT 1.2.2 Rev. 2.2
Alberschwende, Dec. 2017

