UNIVERSITÄT LIECHTENSTEIN

Winter semester 2014-2015

29.08.2014

	NR.	MO	TU	WE	TH	FR	SA		CW	Comments
	1	Public holiday **08.09.2014**	Cross-Faculty Electives **09.09.2014**	Cross-Faculty Electives **10.09.2014**	Cross-Faculty Electives **11.09.2014**	Cross-Faculty Electives **12.09.2014**	Cross-Faculty Electives **13.09.2014**		37	**Bachelor Beginner Start: 01.09.14** **Welcome Event for Beginners: 04.09.14** **Start Cross-Faculty Electives: 09.09.14**
Block 1	2	**15.09.2014**	16.09.2014	17.09.2014	Studio Pres. **18.09.2014**	19.09.2014	20.09.2014		38	**Start of lectures: 15.09.2014** **Studio Presentation: 18.09.2014**
	3	22.09.2014	23.09.2014	24.09.2014	25.09.2014	*Graduation* 26.09.2014	27.09.2014		39	**Graduation ceremony: 26.09.2014**
	4	29.09.2014	30.09.2014	01.10.2014	02.10.2014	03.10.2014	04.10.2014		40	
	5	06.10.2014	07.10.2014	08.10.2014	**LECTURE** 09.10.2014	10.10.2014	11.10.2014		41	**Lecture Alan Berger 6 p.m.**
	6	13.10.2014	14.10.2014	15.10.2014	16.10.2014	17.10.2014	18.10.2014		42	**Seminar week**
Block 2	7	20.10.2014	21.10.2014	22.10.2014	23.10.2014	24.10.2014	25.10.2014		43	
	8	27.10.2014	28.10.2014	29.10.2014	30.10.2014	31.10.2014	Public Holiday **01.11.2014**		44	
	9	03.11.2014	04.11.2014	05.11.2014	Midterm R. **06.11.2014**	Midterm R. **07.11.2014**	08.11.2014		45	**Midterm Review**
	10	10.11.2014	11.11.2014	12.11.2014	13.11.2014	14.11.2014	15.11.2014		46	
	11	17.11.2014	18.11.2014	19.11.2014	20.11.2014	21.11.2014	22.11.2014		47	
Block 3	12	24.11.2014	25.11.2014	26.11.2014	27.11.2014	28.11.2014	29.12.2014		48	
	13	01.12.2014	02.12.2014	03.12.2014	04.12.2014	05.12.2014	06.12.2014		49	
	14	Public Holiday **08.12.2014**	09.12.2014	10.12.2014	11.12.2014	12.12.2014	13.12.2014		50	
	15	15.12.2014	16.12.2014	17.12.2014	18.12.2014	19.12.2014	20.12.2014		51	
	16	22.12.2014	23.12.2014	Public Holiday **24.12.2014**	Public Holiday **25.12.2014**	Public Holiday **26.12.2014**	27.12.2014		52	
	17	29.12.2014	30.12.2014	New Year's **31.12.2014**	Public Holiday **01.01.2015**	02.01.2015	03.01.2015		1	
	18	05.01.2015	Public Holiday **06.01.2015**	07.01.2015	BA **08.01.2015**	BA **09.01.2015**	10.01.2015		2	**Hand in of studio Plans**
	19	MA **12.01.2015**	13.01.2015	Final review **14.01.2015**	Final review **15.01.2015**	Final review **16.01.2015**	17.01.2015		3	**FINAL REVIEW**
	20	**Examination week Bachelor and Master 19.01.2015 - 23.01.14**					24.01.2015		4	**Examination week Bachelor and Master**
	21	26.01.2015	27.01.2016	28.01.2015	29.01.2015	30.02.2015	31.02.2015		5	
	22	02.02.2015	03.02.2015	04.02.2015	05.02.2015	06.02.2015	07.02.2015		6	
	23	09.02.2015	10.02.2015	11.02.2015	12.02.2015	13.02.2015	14.02.2015		7	**Summer semester 2015** **16.02.2015 Start of lectures**

		Lecture day		xxxxxxx	examination		
		Review			Special lectures		
		Cross-Faculty/Seminar Week			Project Studio		
		Public Holiday			Studio Presentation		
		University Holiday					

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MountEE sustainable public building

Energy efficient and sustainable building in municipalities in European mountain regions

University of Liechtenstein
2.10.2014

Wolfgang Pfefferkorn

IEE/11/893

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2. CIPRA
3. The context of sustainable building in the Alps
4. MountEE
5. The service package
6. The case of Vorarlberg …

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Living in the Alps

Commission International pour la Protection des Alpes

- An umbrella over the Alps
- Politically motivated
- Incentives for towns, cities and municipalities
- In-depth information across the Alp
- Mediating and fostering

CIPRA LIVING IN THE ALPS

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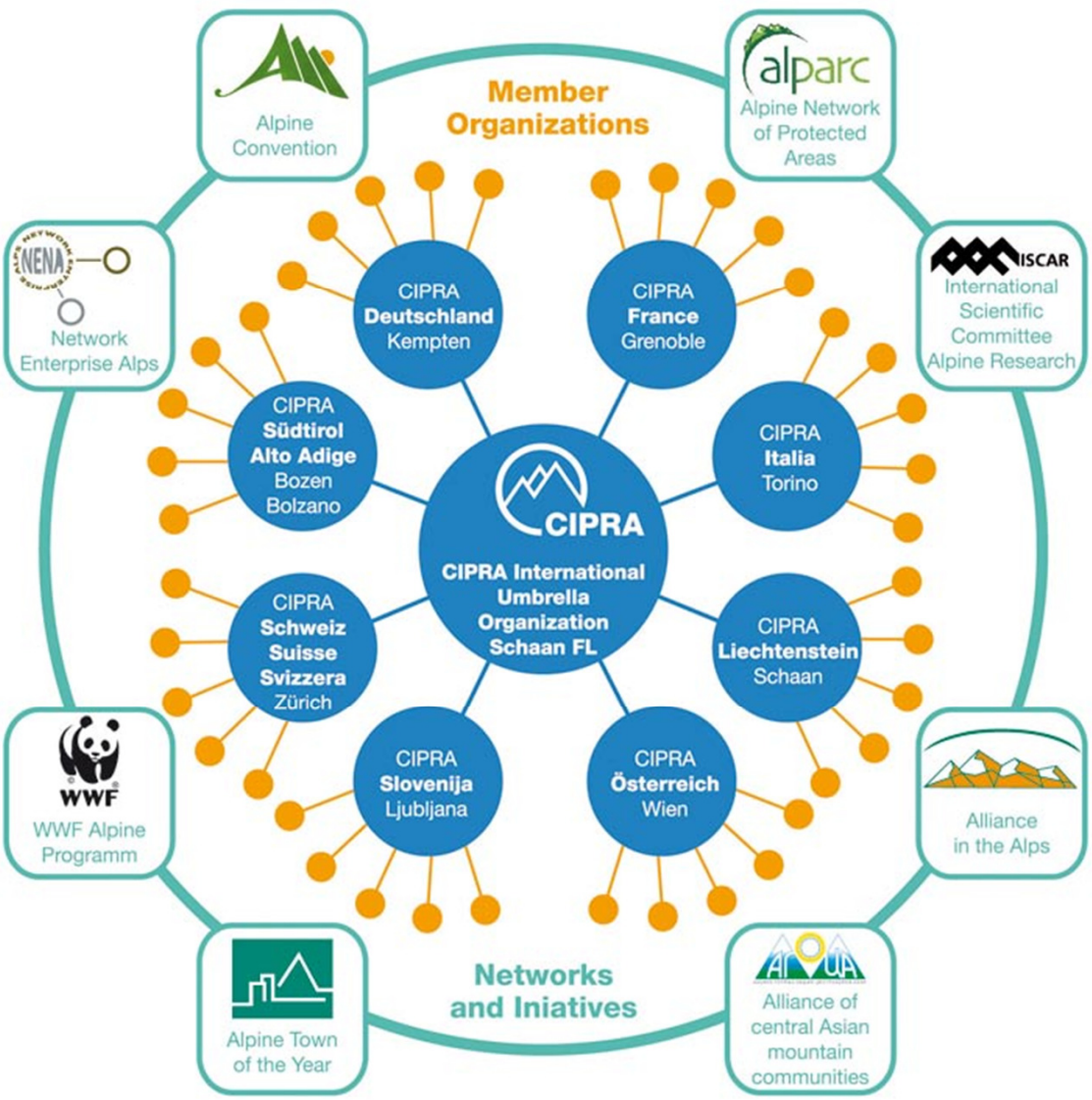
CIPRA Network



CIPRA:

- since 1952
- 7 countries
- 100 NGOs
- 40.000 adresses

CIPRA LIVING IN THE ALPS

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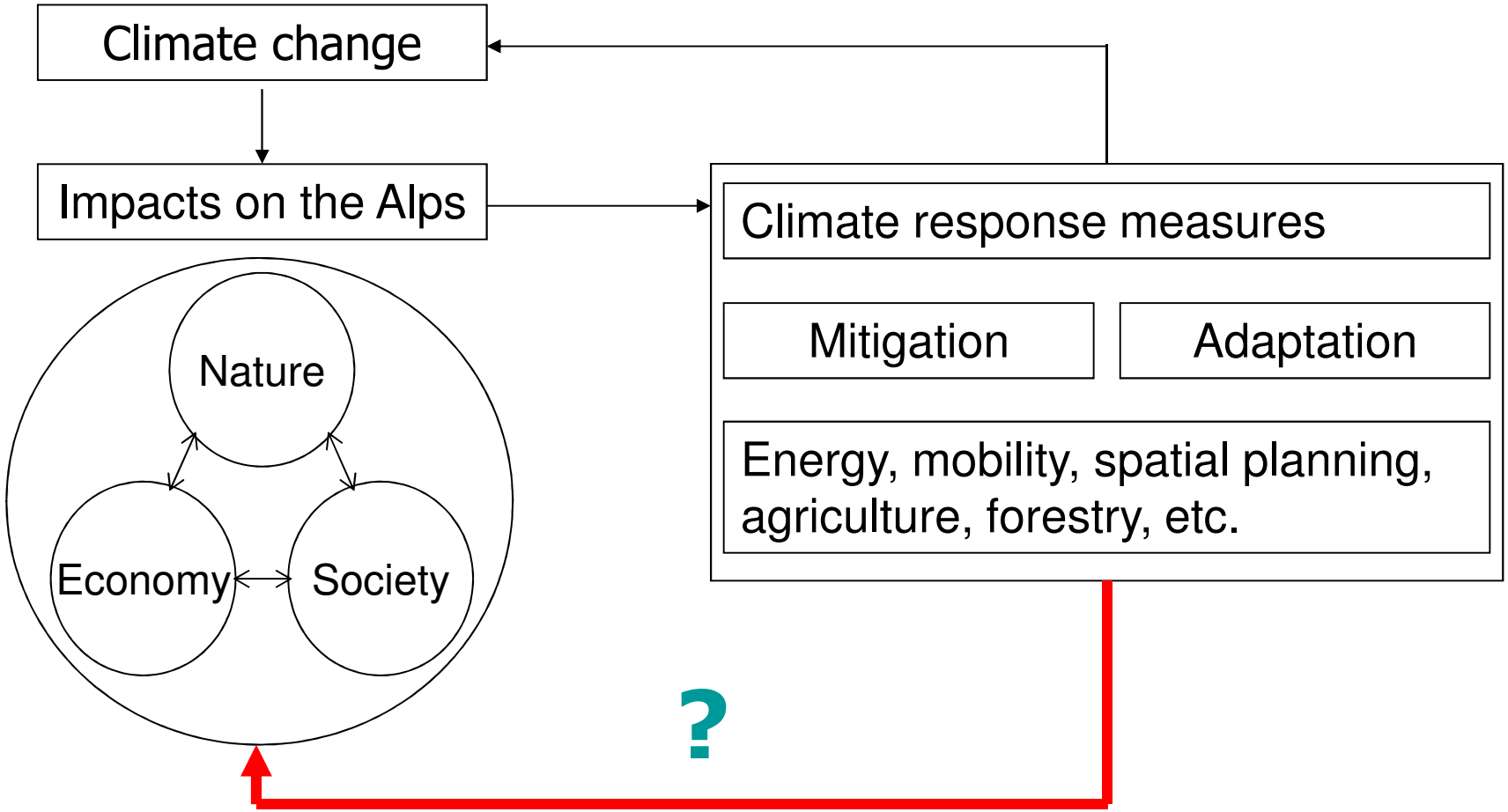
CC: Alps highly concerned!

- Increase of temperatures between late 19th and early 21st century: 2 °C
- Until 2100: ca. +4 °C: more than double of average of northern hemisphere!
- Wide range of consequences
- cc is the key challenge of the 21st century
- Complex issue, many players, interests, conflicts
- Governance challenge: research <-> planning <-> implementation
- Need for action – but: keep a cool mind!

CC policy approaches in the Alps

- cc is on top of political agenda, but less important due to crisis
- Research on national and EU level (young area, natural sciences dominant)
- Implementation: legal measures, support programmes and projects at regional, national and EU level
- Adaptation and mitigation measures -> “climate response measures” (CRM)

CC: think a step forward!



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CRM in the Alps: overview 2009

- Analysis of 300 CRM (implemented!)
- Plus 120 standards, labels, legal regulations
- Evaluation of impacts on climate, nature, economy, society
- **Main fields: energy, buildings, transport**
- Only 10% really good
- 90% have (some) negative side effects
- Many target conflicts!
- Mitigation : adaptation 9:1

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CRM in the Alps: results

- Adaptation: often reactive, isolated, not integrated, not prospective
- Technical measures: easy, local scale, often little climate impacts
- Strategic measures: integrated, regional scale, good effects, long duration
- Combination required!

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CRM in the Alps: conclusions

- The Alps are on the way, BUT:
- Not enough CRM!
- Impacts not satisfying!
- Lacking of integrated and strategic approaches
- Lacking of knowledge transfer
- All in all: still a long way to go

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CIPRA key messages 1

Energy

- Not only increase efficiency, reduce consumption! -> sufficiency concepts!
- Use renewable energy, but be careful with biomass, water, wind … target conflicts!
- De-centralise the energy sector!

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CIPRA key messages 2

Buildings

- Force renovation of existing buildings, not only construction of new buildings!
- Passive house standards all over the Alps!
- Financial incentives – related to energy standard!
- No more oil and gas heatings!
- Public bodies have to set a good example!

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CIPRA key messages 3

Transport

- Reduce mobility!
- Make individual car traffic more expensive, take care on regional disparities!
- Promote public transport and soft mobility
- Reduce alpine transit traffic and introduce the alpine transit bourse

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CIPRA key messages 4

Spatial planning

- Zoning plans: at regional, not local level
- Define hazard zones in all alpine municipalities
- Use the wide spectrum of measures against urban sprawl in order to reduce mobility!
- Improve regional governance and financial transfers

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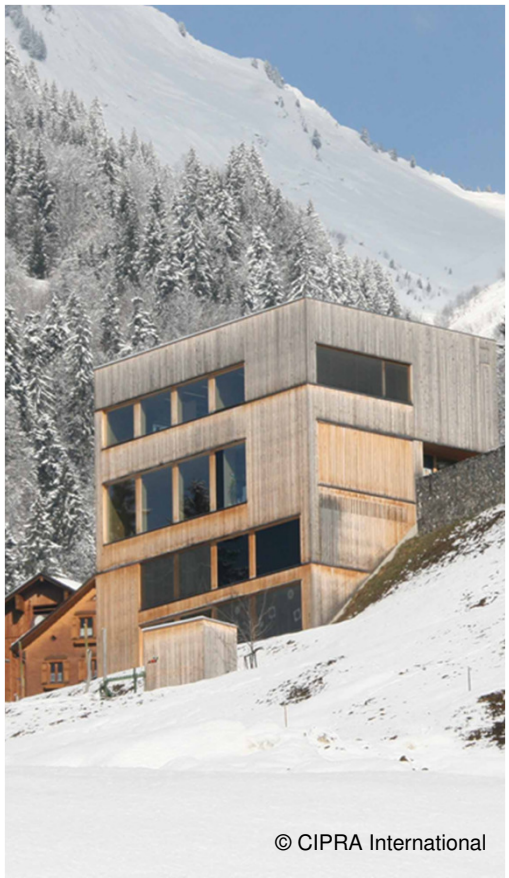
MountEE summary

PARTNERS in 3 European mountain areas:
- Sweden: Dalarna County, Norrbotten E. A.
- Pyrénées: PNR des Pyrénées Catalanes
- Alps: CIPRA, ARES, RAEE, AidA

AIMS: Support municipalities to construct or renovate public buildings in a more energy-efficient way and to better use renewable energy

OUTPUTS:
- 5 regional strategies on „service packages"
- Expertise on 30 building/renovation projects
- Training activities for professionals
- Improvement of funding instruments
- Transfer of experience



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Background

EPBD: all new construction and existing buildings undergoing major renovation will have to meet Nearly Zero Energy Building (NZEB) standards by 2018.

MOUNTAINS: special challenges extreme climate, low accessibility, small entities, low population density and brain drain.

MUNICIPALITIES: lack of know-how, experience and funding in the building sector.

MountEE aims to give support to municipalities, help them achieve their objectives and transform them into front runners, involving all the relevant players in the regional actions. MountEE will use existing knowledge to develop regional strategies, financial tools and to support building projects.

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Objectives and main steps

OUTPUTS

- Raise awareness and initiate action of decision makers on municipal level and social building with regards to sustainability
- Facilitating change in the building habits
- Anchor a multi-level governance approach in the building sector
- Encourage the funding of ecological and energy efficient buildings

MAIN STEPS

- Analyse existing knowledge, gaps and needs in each region
- Develop and implement regional strategies for ecological and efficient building and renovation including renewable energy in 5 regions
- Select and realise 30 public/social buildings/renovation projects
- Develop and organize training activities for professionals
- Evaluate and improve funding instruments
- Transfer knowledge (communication, trainings, events, excursions)

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Expected results

RESULTS

- Develop and implement regional strategies on energy efficiency, ecological building and renewable energy in 5 mountain regions, involving all relevant regional players
- Realise 30 building/renovation projects in the partner regions
- Develop and organize training activities for 650 professionals
- Evaluate and improve 50 funding instruments
- Transfer the experiences gained in the project to the main actors of the building chain in various mountain regions

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Activities so far (05.2012-09.2014)

CAPITALIZATION

- Barriers and knowledge gaps in the regions have been analyzed and summarized in an overall report
- Good Practice examples have been collected on buildings (18), strategies (14), financial instruments (17) and uploaded to the webpage

STRATEGIC DEVELOPMENT

- Regional committees have been installed and involved in project activities
- Service package on maintaining has been developed
- Regional funding instruments have been analyzed and suggestions for improvement have been made

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Activities so far (05.2012-07.2014)

REGIONAL IMPLEMENTATION

- 33 pilot buildings have been selected
- All partners implement and accompany their pilot projects
- Implementation concepts are available at www.mountee.eu

TRANSFER ACTIVITIES

- Blog: 183 posts from 23 experts
- All partners are carrying out transfer activities like study trips, events, workshops, exchange platforms, etc.

COMMUNICATION

- Production of a film with examples of each region
- Regularly update of the webpage (e.g. implementation concepts)
- Regularly communication (newsletters, social media) and media work at regional and EU-level

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Partners and contacts

LEAD PARTNER/COORDINATOR:

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PARTNERS:

- Lansstyrelsen Dalarna, Sweden
- Nenet Norrbottens Energy Agency – NENET, Sweden
- PNR des Pyrénées Catalanes, France
- Agenzia Regionale per l'edilizia sostenibile - ARES, Italy
- Rhônalpénergie-Environnement – RAEE, France
- Alliance in the Alps – AidA, Germany

WEBSITES: www.mountee.eu; www.blog.mountee.eu

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Service Package Sustainable Construction – the team

- **Umweltverband Vorarlberg:** process coordinator, support in questions of tender law
- **Energy Institute Vlbg.:** energetic optimization
- **Spektrum GmbH:** ecological optimization

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Sustainable building – service package

Modules

Module 0 **Presentation of modules and results**

with the communal authorities

Module 1 **Preliminary planning**

definition of ecological aims in a program, supervision in competition

Module 2 **Optimization of planning, tendering procedure**

monitoring of offers

Module 3 **Realisation**

Information for craftsmen, Product declaration, Product control,

Module 4 **Control of success**

Building site control, Measurements

Module 5 **Building operation and maintenance**

Energy performance, cleaning

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Module 1 – Preliminary planning

- Development of specific energy efficient and environ-mental criteria together with the decision makers (and planners)
- Formulation of an « eco-program », usually basis for a decision in a political board
  All criteria have to be fulfilled by all planners and crafts-men
- Supervision in architectural competition: support in developing tendering documents, validation of projects in the competition

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Modul 2 – Optimization of planning, tendering procedure

- Development of a material-, construction and energy concept
- Basis for call for tender
- Environmental check of all call for tender documents
- Generation of specific eco-criteria with the database « baubook – ökologisch ausschreiben »
- Assistance in tender law

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Sidestep: baubook

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The baubook offers

- **Product-Database**
  - Ecological Criteria
  - LCA Data
  - Building physics (Calculate Energy Passes)
  - Descriptive Information
  - Producer and retailer information
- **Tender specifications**
  - Criteria for product-groups
  - Corresponding products
  - Personal and social benefits
  - Explanations
  - ...
- **Tools**
  - Construction calculator
  - Passive-House constructions
  - Building platform
- **Current Information**
  - Newsletter
  - ...

Quality Assurance

- Producers enters the products
- For each indicator / criteria is defined what is necessary for declaration
  - Test certificate
  - LCA Analyses
  - Safety data sheet
  - Ecolabel
  - Producer confirmation
  - ....
- Before being listed, declarations are checked

Green Tender Specifications

⇒ Easy to use

⇒ In conformity with the law and European standards

⇒ Defined for product groups (materials)

Used in

⇒ City of Vienna

⇒ Vorarlberg

⇒ Bavarian Region

⇒ Tirol

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Criteria illustration

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baubook öffentliche gebäude

ökologisch bauen in schwarzwald-baar, allgäu, bodensee, hochrhein, schwaben, vorarlberg

Suche! öbox

Home Kontakt Favoriten Anmelden

criteria PRODUKTE FIRMEN AUSSCHREIBUNG PLANUNG ARCHIV

nur mit allen Kriterien

- 1. Technische Kriterien
  - 1. 1. Einbau
  - 1. 2. Pflege, Beständigkeit, Langlebigkeit
- 2. Inhaltsstoffe
  - 2. 1. organische Zusatzstoffe
  - 2. 2. Gefährliche Inhaltsstoffe
  - 2. 3. Schwermetalle
  - 2. 4. PVC und halogenorganische Verbindungen
  - 2. 5. VOC
    - 2. 5. a. VOC-arme Zubereitungen (76)
    - ...innenräumen (67)
  - ...
  - 2. 9. Sonstige
- 3. Herstellung
  - 3. 1. Sekundärrohstoffe
  - 3. 2. Natürliche Rohstoffe
  - 3. 3. Nachhaltige Gewinnung
- 4. Anwendung
  - 4. 1. Verlegung
- 5. Emissionen
  - 5. 1. Kohlenwasserstoffe
  - 5. 2. Emissionen: Radioaktive Eigenstrahlung
  - 5. 3. Fasern und Staub
  - 5. 4. Emissionen: Geruch
- 6. Entsorgung
  - 6. 1. Vermeidung von Verbundprodukten

Eg. Avoid VOC

2. 5. a. Zubereitungen arm an flüchtigen organischen Verbindungen (VOC)

Beschreibung | Produkte | Relevante Produktegruppen

Ziel

Unter flüchtigen organischen Verbindungen (Volatile Organic Compounds = VOC) werden gem. [2002/739/EG] alle organischen Verbindungen mit einem Siedepunkt (oder Siedebeginn) von höchstens 250 °C bei normalen Druckbedingungen (Standarddruck: 101,3 kPa) verstanden.

VOC werden vor allem a...stimmten Kunststoffen sowie von diversen Haushaltsc...n an die Raumluft abgegeben. Die VOC-Emissionen ver...vom Charakter der einzelnen Verbindung und den räu...er Raumtemperatur ab.

Auswirkungen einzelner ...n des Menschen umfassen ein weites Spektrum, das vo...igen Konzentrationen bis hin zu meist erst bei höhere...er Bedeutung ist die Tatsache, dass es sich bei einem Teil der für niedrigere Konzentrationen angegebenen Effekte um Sinneswahrnehmungen oder andere Wirkungen handelt, die sich der Überprüfung im Tierversuch weitgehend oder vollständig entziehen [BMLFUW 2003]. VOC-Gemische können bereits in niedrigen Konzentrationen unspezifische Effekte auslösen. Von besonderer Bedeutung ist dabei die Reizung der Schleimhäute der Augen, Nase und Atemwege. Auch Kopfschmerzen, Müdigkeit, Konzentrationsschwäche, Übelkeit, erhöhte Körpertemperatur und andere unspezifische Symptome können auftreten [Molhave 1991].

Motivation:
- Whats the aim of the measure?
- Why it was implemented?

Ausschreibungstext

Es sind Produkte mit möglichst geringem Gehalt an flüchtigen organischen Verbindungen anzubieten. Insbesondere sind folgende Maximalwerte für den Gehalt an flüchtigen organischen Substanzen (VOC) in can (unverarbeiteter Putzmörtel („im Gebinde")) einzuhalten:

- Wandfarben: max. 1 M.-%
- Lacke, Lasuren, Öle, Wachse: max. 10 M.-%
- Lacke, Lasuren, Öle, Wachse, Dichtungsmassen und Kleber im Innenraum: max. 5 M.-%
- Trennmittel: max. 10 M.-%
- Putze: max. 1 M.-%

Nachweis: Herstellerbestätigung und Sicherheitsda...er oder englischer Sprache. Auf Verlangen des Auftraggebers kann zusätzlich einer der folgen...

- Prüfgutachten nach Headspace GC/MS - Unt...ufungsdatum max. 3 Jahre vor Ausschreibungsdatum)

Tendering Text

Produkte, die mit einem der folgenden Umweltzeichen ausgezeichnet sind, erfüllen die Anforderungen.

- natureplus-Qualitätszeichen gem. Richtlinien RL0600ff für Wandfarben und RL0700ff für Oberflächenbeschichtungen aus nachwachsenden Rohstoffen
- Österreichisches Umweltzeichen (Richtlinie UZ 01 „Lacke, Lasuren und Holzversiegelungen" und Richtlinie UZ 17 „Wandfarben")
- Deutscher Blauer Engel (Richtlinie RAL 102 „Emissionsarme Wandfarben" und Richtlinie RAL 12a „Schadstoffarme Lacke", mit Ausnahme von High-Solid-Lacken)

Produkte, die im baubook (www.baubook.info/oeg) zu diesem Kriterium gelistet sind, erfüllen die Anforderungen.

Module 3 – Realisation

- Craftsmen information
- Checking of all products the craftsmen are going to use (product declaration list)
- Approval of product declaration list

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Module 4 – Control of success

- Controlling of products in use on the building site
- Diverse measurements: blower door test, indoor air quality …

- **Main aim: We support municipalities by achieving their goals.**
  We help them getting what they want.

New: Module 5 – Operation and maintenance

- Energy evalulation: check day to day performance together with users
- Cleaning: optimisation of products also during day to day use: ckeck products together with users

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How to convince decision makers?

- Focus on lifecycle costs and not on investment costs (taking subsidies into consideration when proving economic feasibilty)
- Make sustainable construction cost efficient: define energetic/ecological standard at early stage
- Better air quality and less environmental impact for only 2% extra costs due to an environmental choice of materials
- Competition among municipalities!
- Make sustainable construction easier than doing it in a conventional way

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Referencens

54 public buildings since 2006:

- Municipality centers
- Schools
- Kindergardens
- Social centers
- Fire stations

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Vorarlberg on the way to energy autonomy
How it works

Adolf Gross (2012)

Head of energy, climate protection and efficient resource use

State Government of Vorarlberg, Austria

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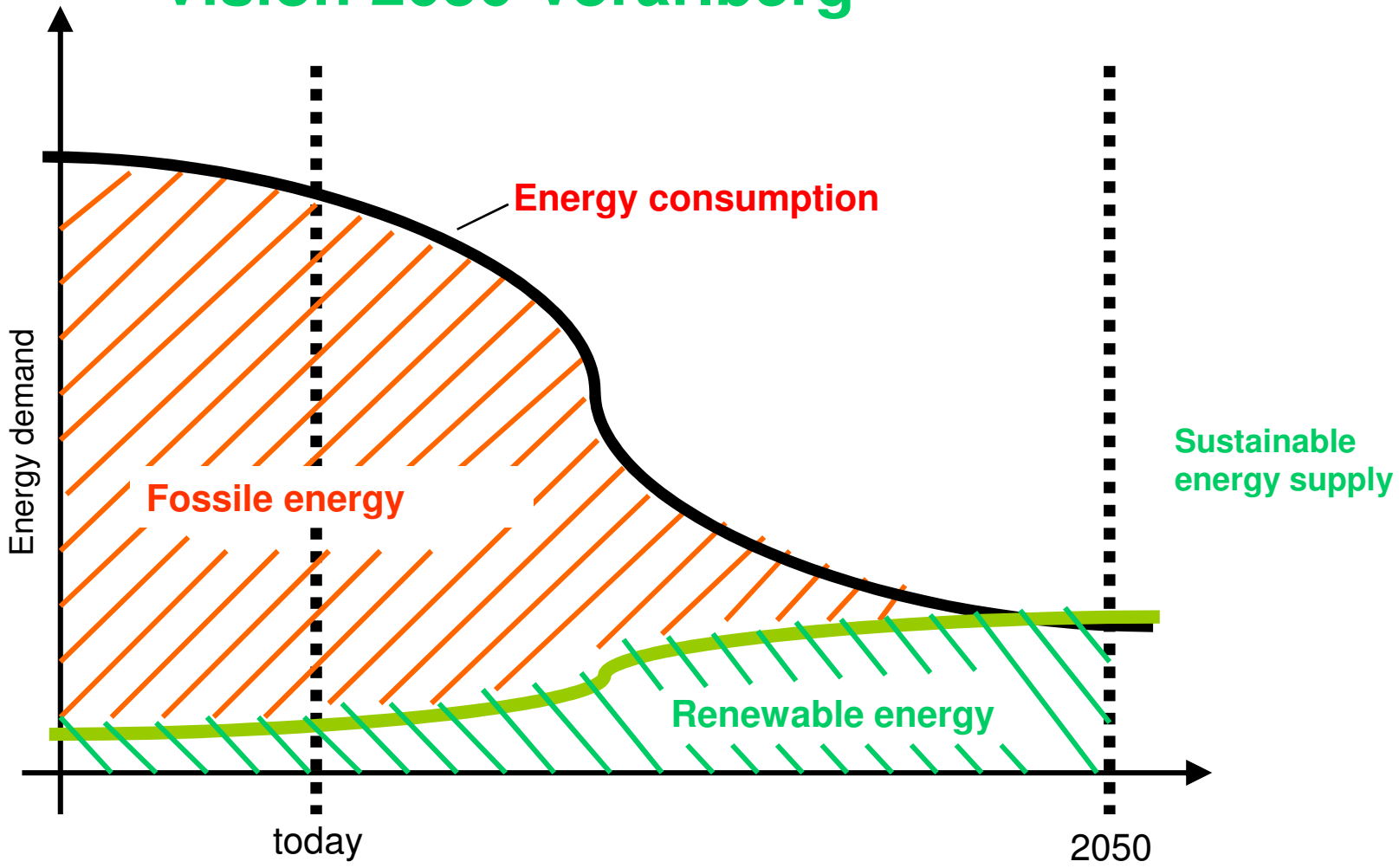
The path to energy autonomy in Vorarlberg

Vision 2050 Vorarlberg



Schritt für Schritt zur Energieautonomie in Vorarlberg

101 enkeltaugliche Maßnahmen

step by step to energy autonomy
101 grandchild suitable measures

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Examples where we are (I)

- Share of biomass for heating purposes: about 25%
- We run more than one hundred biomass district heating systems
- Vorarlberg has 0,65 m² of solar thermal per inhabitant, 0,7 m² of PV
- Hydropower covers about 80% of total electricity consumption
- Share of bicycle traffic is 17%
- Quality and density of public transport is similar to big cities
- We run one of the European largest implementation programme for electric mobility
- Approximately one fourth of all families used the energy consulting service
- One third of all communities take part in the programme for energy efficient communities

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Examples where we are (II)

- In the municipalities passive house quality is common standard
- Most new buildings meet at least the low-energy standard
- We have worldwide the highest density of passive houses (almost 30% of all new dwellings meet passive house standard)
- Last year we reached a renovation rate of 3%

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Further important background factors

- Most municipalities have drawen up land use development concepts
- Regionwide system for sustainable procurement in the public sector
- Programmes towards strengthening local supply systems
- Well rooted and broadly supported associations (non profit organisations,
  charities)
- Numerous regional planning collaboration projects for supracommunal development and management of infrastructures.
- Strategy for sustainable forest use
- Region-wide supply of public transport
- Iinitiatives towards sustainable tourism

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Elements of the energy autonomy process

- Vision building process including about 100 persons (imagine what could be possible in the year 2050?).
- Lobbyists were not allowed in that process
- Workshops and discussions with members of the provincial parliament
- Citizen councils to evaluate and integrate opinions of citizens
- Elaboration of measures without influence of the program management (what‘s there is there, what isn‘t, isn‘t)
- Continuing process of implementation with institutional members (administration, chambers, associations, communities, NGO‘s, ..). Joint determination of respective contributions.
- Start of a common process together with citizens and (social) networks working out their possibilities to act and push behavioral changes.

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Understanding of process of energy autonomy programme

- Working groups are the main suppliers of contents, also in the phase of realisation.
- Programme management only provides the process itself and delivers furthe support if necessary or requested.
- Results and agreements are worked out in dialogs only. There is no possibili for written opinion to be sent to the programme management.
- The basic process idea is to make it clear that the work is part of the development of our common living environment.

  That can only be done by a public discussion. In this sense responsibility cannot be delegated. Each one – including the government – has to play his part.

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Spatial and social factors

- The province constitutes an area of identification in which my life is taking place. Hence a sence of joint responibility arises .
- Because of the manageable size of the province the actors are not anonymous. A social responsibility is evolving.
- The dimension of the province makes it possible to observe the model behaviour of important actors.
- Generally sound structures and commitment on a communal level.
- The province is structured in active subregions (e.g. valleys).

Assessment of two important social and political practices in Vorarlberg

- There is a culture of individual initiative, especially in the fields of culture, ecology and social activities.

- In numerous cases politicians didn‘t initiate, but rather accepted and even supported many projects, instead of killing them off.

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What else is important, what was difficult

- It was and it is difficult to find the right speed with the working groups (between the poles of „we don‘t need more discussion let as go into details“ and (recurring) fundamental debate)
- It is not easy to keep the motivation of the working groups high (they spend a lot of time, some of them durign leasure time)
- Now we have reached a point when it is crucial that politics take concrete measures, first sucesses must become visible (these are not necessarily the most effectiv measures, rather measures with a high symbolic effect)
- We had a very critical phase when chamber of commerce demanded for stronger voice (the solution was to introduce a programme advisory board)

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What else is important, what was difficult

- It is very important not to violate the communicated principles of process (working group members keep a wary eye on the programm management)
- It was and it is vital to adapt the process design when it turns out to be not effective or adequate
- Of vital importance was not to allowed lobbyists in the vision process (otherwise reservations would have been made, uncertainity would have bee arised, lobbyists would have applied preasure to politics).
  They only recognized what happend, when the decision to become energy autonomous was already made)

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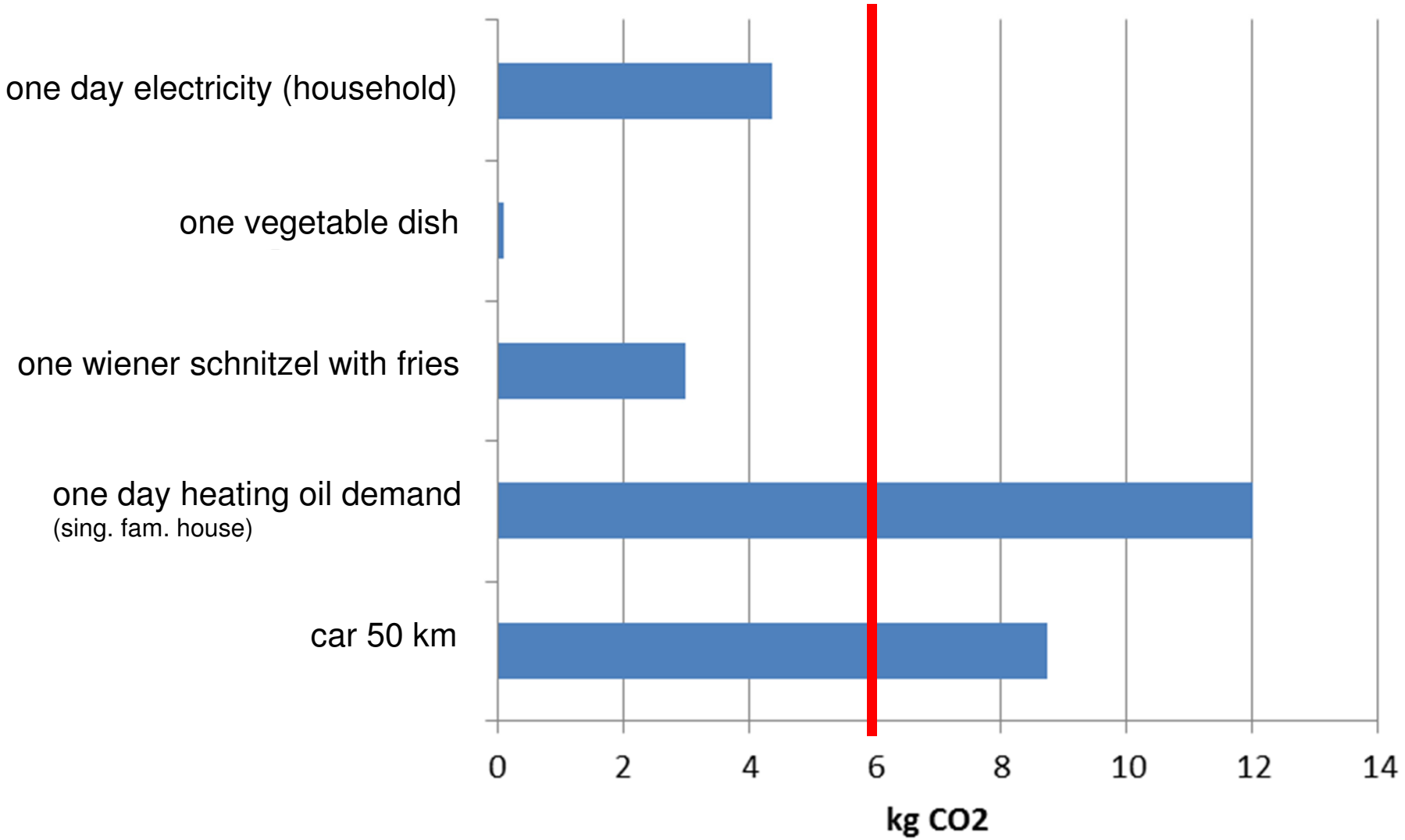
CO_2 emissions per day and the sustainable one day limit



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Some important questions

How do we live?

What do I really need to meet my accomodation requriments and to feel comfortable?

area and equipment, flat or our own house, distance to work, energy consumption, ..

How are we mobile?

Where do I want to go, is it really important for me to be there?

means of transport, using or possessing, travelling or consuming, …

What do we eat?

What is really good for me and how do I want my food to be produced?

vegetarian, organic, fair trade

What do we consume?

Does it make me happier having that stuff as well?

how much, lifespan, reparability, common use instead of possession

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Combine old and new

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Sustainable building as a cultural process

- Sensibilisation, participation of citizens, users
- Explain innovation
- Develop a common understanding
- Environmental sustainability as part of our culture, our way of living

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Thank you for your attention!

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list of participants

MOUNTEE LECTURE BY WOLFGANG PFEFFERKORN 2. OKTOBER 2014

PARTICIPANTS OF STUDIO CLAVOUT

ROBERT MAIR
Corradin Clavout
STANCU LAURENȚIU TIBERIU.
BARTOSZ KOZAL
CHRISTIAN NEHER
Labinot Pacolli
Damdinpurev Chinbadam
MARIA PASZKOWSKA
MICHAL MRÁZ
GRÓCZ BENCE
Ioannis Bolas
René Caamaño
Philipp Nigg
LARS HUBER

Evaluation report of activity

WP5

Name of the activity :	**MountEE workshop with students from the University of Liechtenstein**
Date and venue :	2. 10.2014, 09.00 – 12.00, Vaduz, Liechtenstein
Name of the evaluator / organization:	Wolfgang Pfefferkorn, CIPRA

Main informations

Number of participants	**14**
Target group (professionals, elected people, technicians from public institutions, etc)	**Teachers and international master students from the University of Liechtenstein, Institute of Architecture and Planning**
Main goal of this activity	**Transfer of knowledge and experiences from the MountEE project (with a focus on the service package) to the teachers and students in Liechtenstein – and vice versa**

Outputs

The objectives of information or education or training seem to be met? *Explain why*	**Yes.** **Main results and experiences of MountEE (with a focus on the service package) have been presented. After that the students and teachers discussed several issues with the MountEE expert.**
The transfer of know how was successful? *Explain why*	**Yes.** **1. Students and teachers learned that sustainable building in mountain environments can be realized in very different contexts from the polar circle to the Mediterranean Sea.** **2. They received information material on MountEE and learned about the service package, which was new to them.** **3. The content provided by the MountEE expert fits well into the curriculum of the students, who deal with sustainable building and try to find practical solutions in their so called "Design Studios".**

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The number of participants was satisfying in relation to your expectations and your communication? *Explain why*	**Yes. This is the number of master students in the winter semester 2014/2015**

Quality of the activity

Quality of interventions and visits (content, duration, kind of visit…)	**The students and teachers appreciated the Mount-EE input very much, especially the service package and the MountEE film showing the examples in the different regional contexts (Vorarlberg, northern Sweden, Italy, Rhone-Alpes, Pyrenees).**
Quality of exchanges or debates	**After the presentation of the MountEE expert there was an interesting debate on « high tech requirements versus low tech user needs» of sustainable/passive house/NZEB buildings. Actually there is a strong debate on the need to simplify the use of NZEB buildungs for those living in these buildings. If the technical requirements are too complicated, users ignore them and as a consequence, the energy performance of these buildings stays below the expectations and calculations. This debate has a strong link to Module 5 of the Service Package).**
Quality of the organization (timeline, accommodation services,…)	**The workshop was organized at the Institute for Architecture at the University of Liechtenstein in Vaduz within a so called "Design studio" event.** **Communication with the teachers of the Master Programme before and after the workshop was uncomplicated and worked very well.**

Others informations

Any remarks	**None**

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Global evaluation

What are the positive points of this activity?	**1. Direct and fruitful knowledge transfer between MountEE and students who will become architects very soon and can directly use the knowledge gained – mainly with regard to the Service Package.** **2. Good exchange between the responsible people of the Master Programme and the CIPRA experts. The workshop helped to intensify the cooperation and exchange between CIPRA and the Institute for Architecture.**
What are the negative points of this activity?	**Initially it was planned to carry out a joint follow up event with an excursion to several buildings in Liechtenstein and Vorarlberg. Due to time limitations within the semester programme this excursion could not be carried out.**
What are the points to improve for a next activity?	**Better planning of the follow up event.**
What is your personal impression?	**It was a very fruitful exchange between students, teachers and the MountEE expert. Especially the debate on high tech versus low tech concepts was interesting.**

More material

Material added: - **Concept for the co-operation between MountEE and the University of Liechtenstein** - **List of participants** - **MountEE ppt presentation** - **Semester plan of the Master Programme**

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Feedback from participants (synthesis of evaluation questionnaires for participants)

Number of responses:

There was only oral feedback at the end of the workshop.
This feedback was very positive.

Make a synthesis of responses for each following questions (main remarks)
How did they had the information about this activity?

The activity was part of the semester programme. The students got the information by the teacher.

What are the points to improve for a next activity?

Better planning of the follow up activity (excursion in this case)

Others remarks or suggestions:

None

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