

Around-the-world,
sustainably...



**alchemia
nova**

*institute for innovative
phytochemistry @
closed loop processes*

www.alchemia-nova.net

Francesco Menconi



**alchemia
nova**

*institute for innovative
phytochemistry @
closed loop processes*



ABOUT US

- Innovation-driven SME
- 27 alchemists
- Austria, branch office in Greece
- Cradle to Cradle® partner since 2006

EXPERTISE

- Circular Economy Applications
- Waste-water treatment and natural resource recovery
- Phytotechnology
- Biogenic substitutes
- Sustainable building with integrated ecosystem services and materials



**alchemia
nova**

*institute for innovative
phytochemistry @
closed loop processes*



FP7 demEAUmed
(01/2014 – 42
months) **Greywater
treatment** *via* a
constructed vertical
ecosystem; **water
loops** for
Mediterranean tourist
facilities,
www.demeaumed.eu



Life Agromine
(07/2016 – 48 months)
Phyto mining with
hyperaccumulator
plants **on soils and
waste** for the green
synthesis of pure nickel
compounds,
www.agromine.org



**H2020 Green
INSTRUCT** (09/2016 –
42 months) Green
integrated structural
elements for buildings
made from construction
and demolition waste;
**water treatment in
green façade elements**,
www.greeninstruct.eu



**Bioplastics Roadmap
Austria 2050** (03/2017
– 12 months)
Development of a
roadmap for actions
and future research
needs for significant
increase of **bio-based
plastics** by 2050



**MFA – Bio-based
Industry** (05/2017 – 9
months) Qualitative
and quantitative
**material flow
analysis of petroleum**
derived products in
Austria and possible
substitution with bio-
based materials



**H2020 Automate
VertECO** (11/2017 – 12
months) Indoor
ecosystem with a
customized sensor &
control unit that
generates information
about the **quality of
treated and purified
greywater**

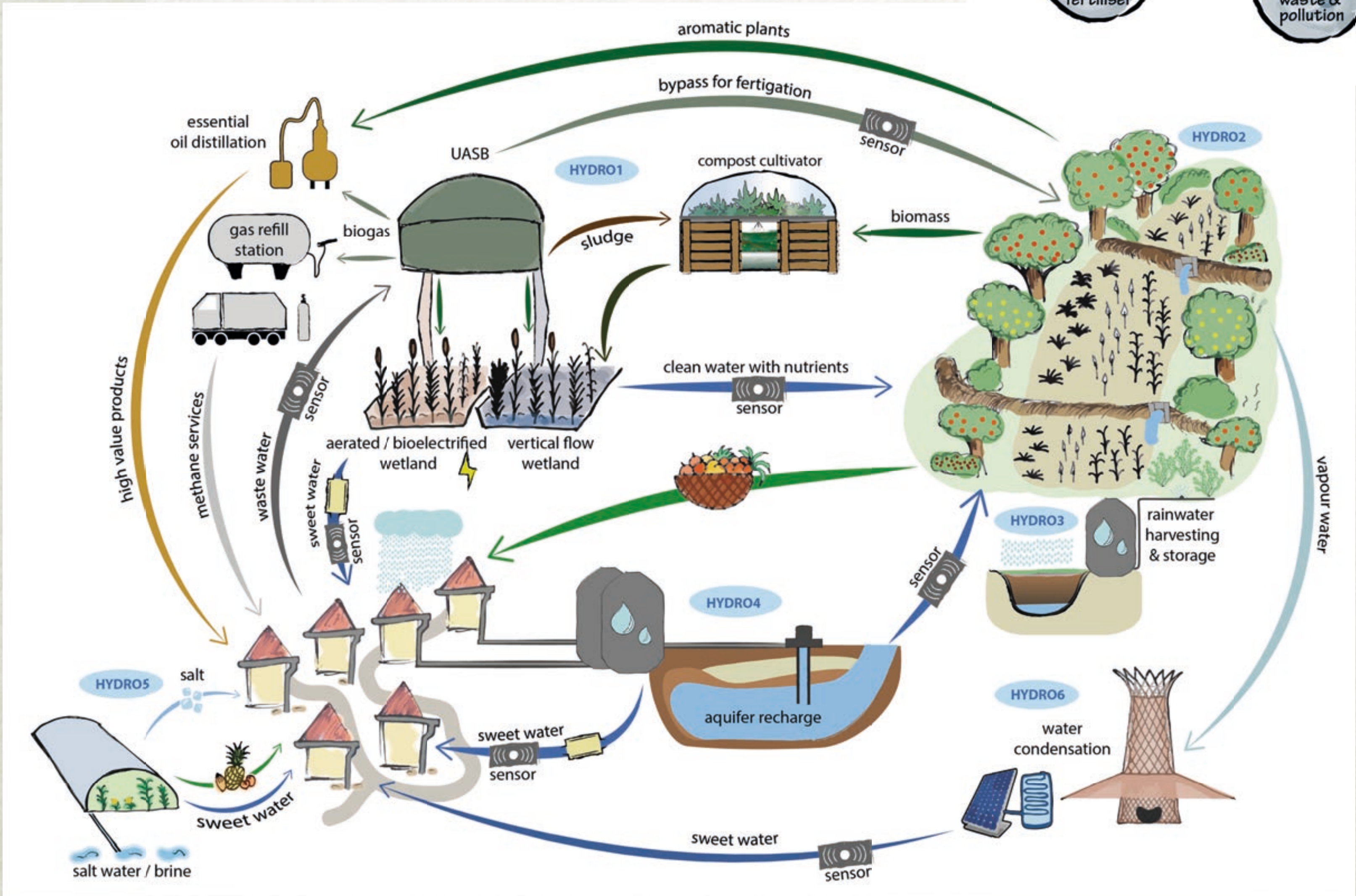
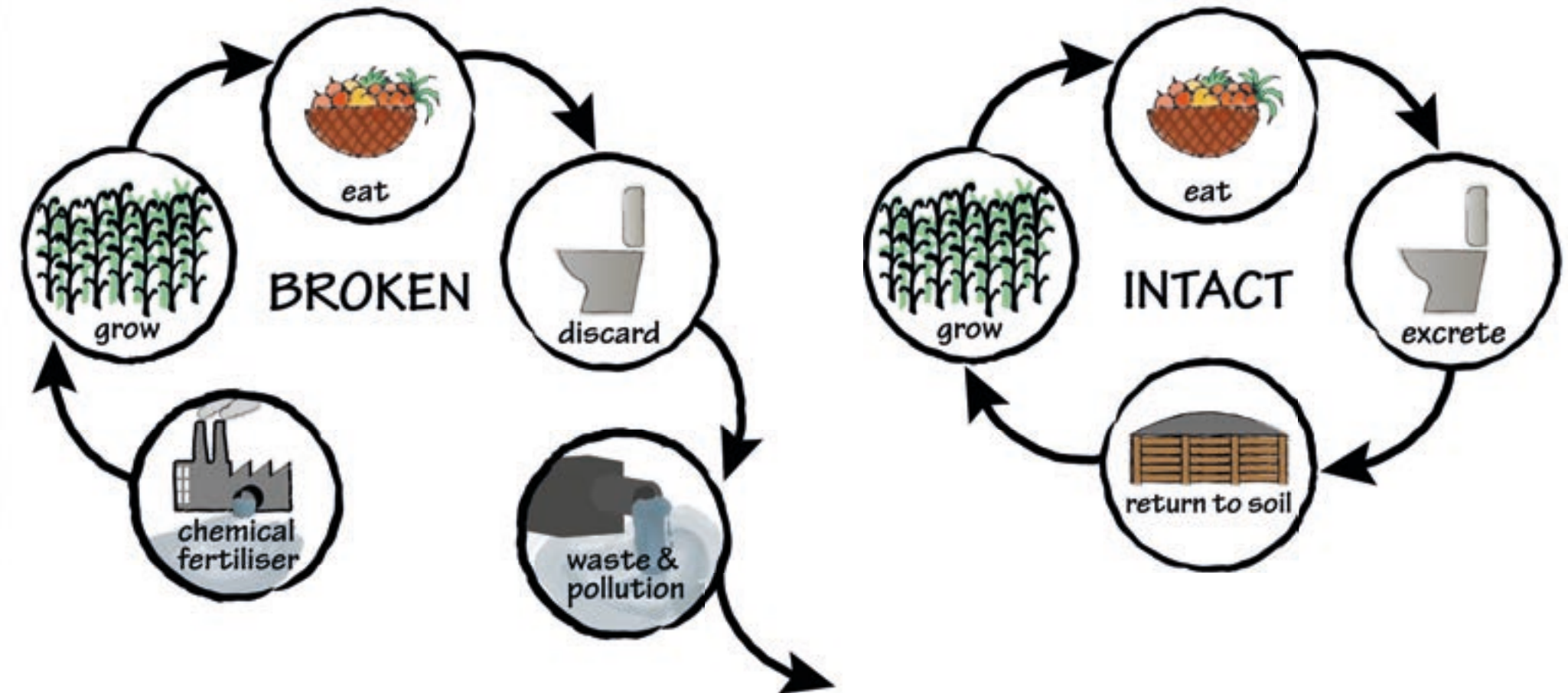


**H2020 Project
HOUSEFUL** (05/2018 –
54 months) - Innovative
circular solutions and
services for new
business opportunities in
the EU **housing sector**
www.houseful.eu



H2020 ReCO₂ST
(01/2018 – 42 months)
Residential retrofit
assessment platform
and demonstrations for
**near-zero energy and
CO₂ emissions** with
optimum cost, health,
comfort and
environmental quality;
**energy efficient
buildings**, recost.eu

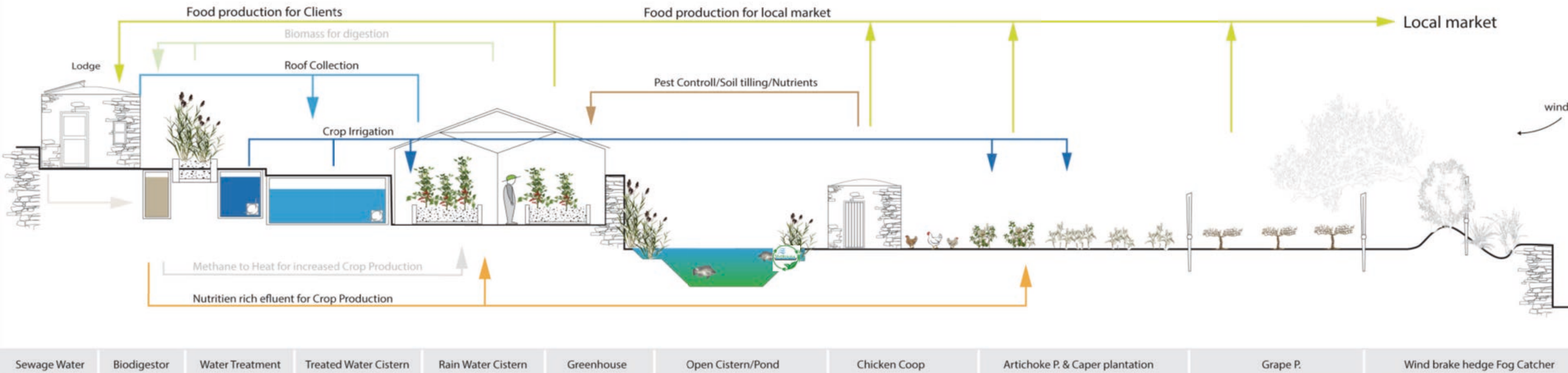
ENERGY, WASTE AND NUTRIENT CYCLES



alchemia nova
 institute for innovative
 phytochemistry @
 closed loop processes

ECO-TOURISM - WATER MANAGEMENT LOOPS

Hydrousa: Transition from Ecotourism to Agrotourism at Ecolodge Tinos



www.tinosecolodge.gr

Water loops in eco-tourist facility

Remotely located, off the grid

Self sufficient for water, energy and food production



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No. 776643



HAPPY HOLIDAYS... THE CHOICE IS YOURS

- Destination
- Accommodation
- Transportation
- Activities
- Personal behaviour

WHERE TO GO?

Accommodation selection criteria:

- Accessibility
- Facilities
- Energy source and consumption
- Water cycle
- Waste disposal
- Hygiene practice
- Gastronomic services

ECO_SUSTAINABILCRITERIAITY
Source: <https://ecobnb.com/>

There is a wide scope of accommodation available from simply green to fully circular!



ECO-LODGES AROUND THE WORLD

Austria

- 🌈 **St. Martin Chalets (Sankt Michael im Lungau- Salzburg):** Austria's first ever ethical, eco-friendly, energy self-sufficient holiday village.
- 🌈 **Biolandhaus Arche:** 1st ecohotel of Austria, wood and clay buildings, organic vegetarian wholefood
- 🌈 **Tiny House Fritz (Schwarzenbach an der Pielach – Lower Austria):** try living in a original Tiny House!



St. Martin Chalets, source: <https://stmartinchalets.at/>

Europe

- 🌈 Kolarbyn Eco- Lodge (Sweden): Deep forest experience
- 🌈 Casa Tarsan vegan Eco- Lodge (Spain): green travel experience surrounded by the mountains of Valencia
- 🌈 Tom's Eco Lodge (UK): Isle of Wight

Abroad

- 🌈 Great Ocean Ecolodge (Australia): established and operated by the Conservation Ecology Centre within Great Otway National Park



Kolarbyn Eco- Lodge, source: <https://kolarbyn.se/en/>

GREEN ACCOMMODATION SEARCH PLATFORMS



© [Chang Duong \(https://unsplash.com\)](https://unsplash.com)

- **ecobnb.com**: wide range of filters for narrowing selection down on the type of accommodation , e.g. your specific budget and specific eco-requirement
- **greenpearls.com**: listing of very high quality, sustainably run and managed unique hotels, search based on location, specific hotels or categories like wellness, city hotels, diving hotels, family hotels, wedding or vegan hotels
- **alpine-pearls.com**: filters to find holiday experiences suited to your travel style – Watersports, Climbing, Hiking, Local Culinary Arts or Nature Adventures
- **biohotels.info**: strict controls over what makes a bio hotel and a straightforward way to search
- **verantwortungsvoll-reisen.com**: Negotiation, booking and advise on European travel destinations!

TRANSPORTATION MATTERS!

Climate-friendly traveling links:

- 🌈 <https://www.langsamreisen.de/>: traveling with sailing ships, cargo ships or mailboat
- 🌈 <https://www.traivelling.com/>: individual long distance journeys with the train
- 🌈 <https://www.biketeam-radreisen.de/>: specialist on travels with the bicycle
- 🌈 <https://www.travelons.de>: ecological blind booking surprise travels
- 🌈 <http://www.night-trains.com/>: night train lines in the world with a unique schematic map illustrating the worldwide network.

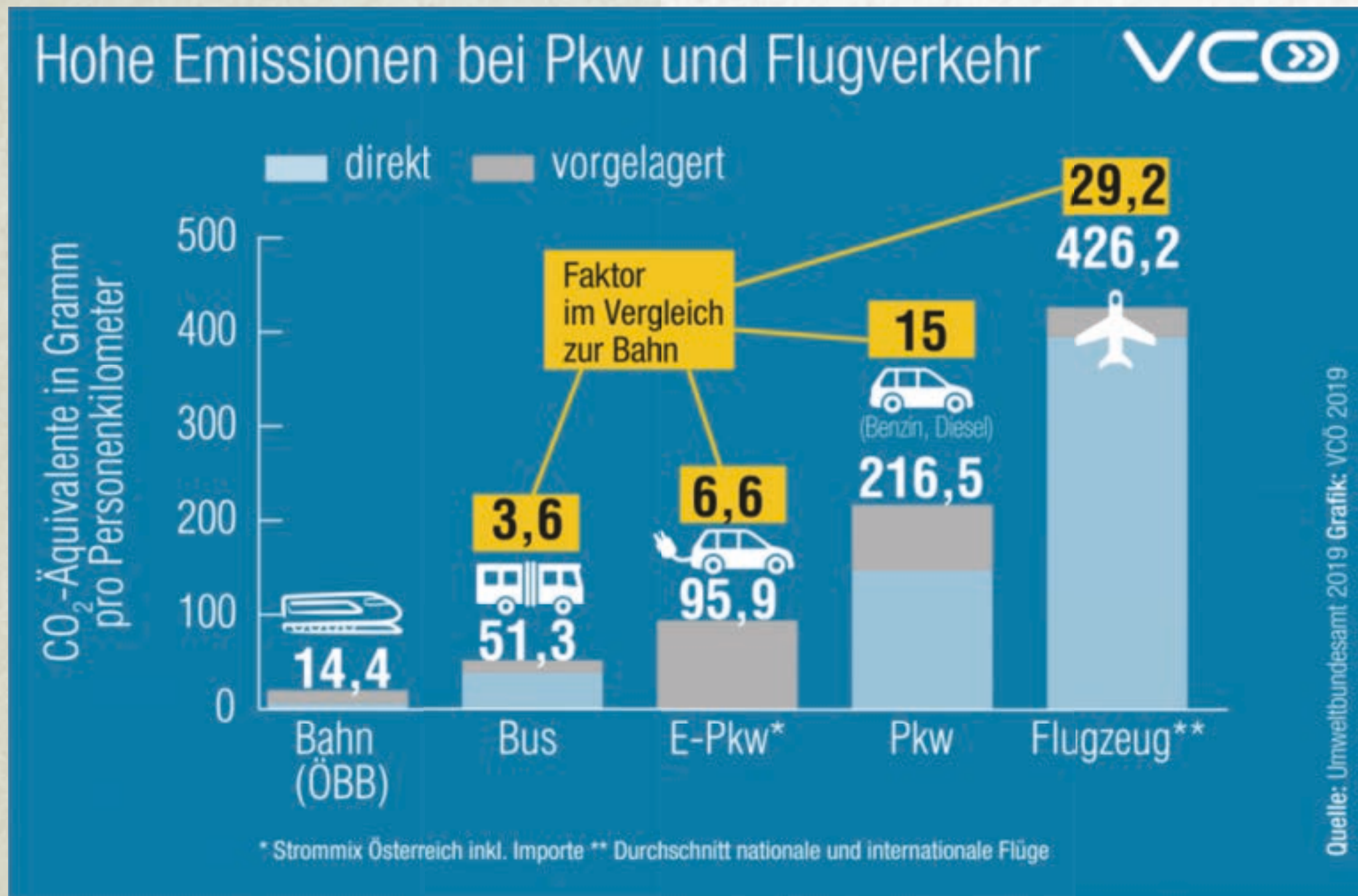


© oxana v (<https://unsplash.com>)



Source: <https://www.langsamreisen.de>

FLYING, SUSTAINABLY?



- Ask yourself if the flight is **really necessary?** Are there more climate-friendly alternatives?
- Check airlines for their **CO₂ emissions** (e.g. with the Airline Index of Atmosfair). Some Airlines even rely on biofuels for certain routes!
- Choose a **direct flight**, since most emissions are generated during take-off and landing. Also you have to fly a greater distance when you opt for connecting flights
- Take part in **on-board recycling**
- Consider booking through flight comparison sites with **Gold Standard carbon offsetting**. They offer the best price for airline tickets and offset your carbon emissions with their revenues



BY TRAIN OR BY CAR:

- **TIME** in the train is usable (reading, working, playing with the children, eating..)
- **MONEY:** compare train ticket with overall costs for car - online car cost calculators!
- **NERVES:** No traffic jam
- **LIVES:** higher road traffic safety
- **Much less CO2**



Zero emissions car hire:

- <https://www.futuredriving.at/>
- <https://www.sixt.at/elektroauto-mieten/>
- <https://greenmotion.co.uk/fleet>
- <https://www.carhire4lower.com>

WHAT HAPPENS IN VEGAS DOESN'T ALWAYS STAY IN VEGAS!



Torrid Tuesday leaves 30 tonnes of Rubbish on Brighton Beach
Brighton Journal | 17th February 2020

Ideas for circularity on your holiday:

- Recycle
- Pick up litter, including your own!
- Bottle your own water
- Pack a lunch to avoid too many “take-aways”
- Eat in a “green restaurant” with bio-products and local produce
- Unplug to unwind
- Sensitively address local environmental issues

GO GREEN IN YOUR LEISURE TIME!

- Swimming
- Climbing
- Hiking
- Cave exploration
- Meditation
- Bike tours
- Walking
- Horseback riding
- Sailing tours
- Outings to local organic farms
- Cooking classes or rediscover local traditions

Or, alternatively...

- Volunteer for projects in environmental protection (e.g. <https://www.archelon.gr> : protection of sea turtles, <https://isea.com.gr>: coastal clean-up)
- Attend conferences, seminars or workshops on environmental issues
- Kids special: „ladybird farm “ (Hungary) - allowing visitors to 'pay' part of their entrance fee in recyclable household waste, such as paper or plastic, encouraging people to understand the value of resources and what a circular economy means!



Horse trek in Fiordland, New Zealand

(Source: <https://www.kayak-newzealand.com/eco-friendly-activities-new-zealand/>)

- **As a Cradle to Cradle® Partner**, alchemia-nova GmbH can provide advice to make the product under development fit for a Cradle to Cradle® certification
- **Bio-inspired innovation** with Biomimicry
- **Funding Applications:** alchemia-nova GmbH specializes in state-of-the-art research and innovation as well as the implementation of cycle economics and natural-based solutions in cities, industry and agriculture.



alchemia
nova

*institute for innovative
phytochemistry @
closed loop processes*

Thank you for your time!

Francesco Menconi
www.alchemia-nova.net