> *I'm a practitioner of elegant frugality. I don't feel comfortable telling other people what to do, so I just try and* ***lead by example****.*
>
> *Amory Lovins*

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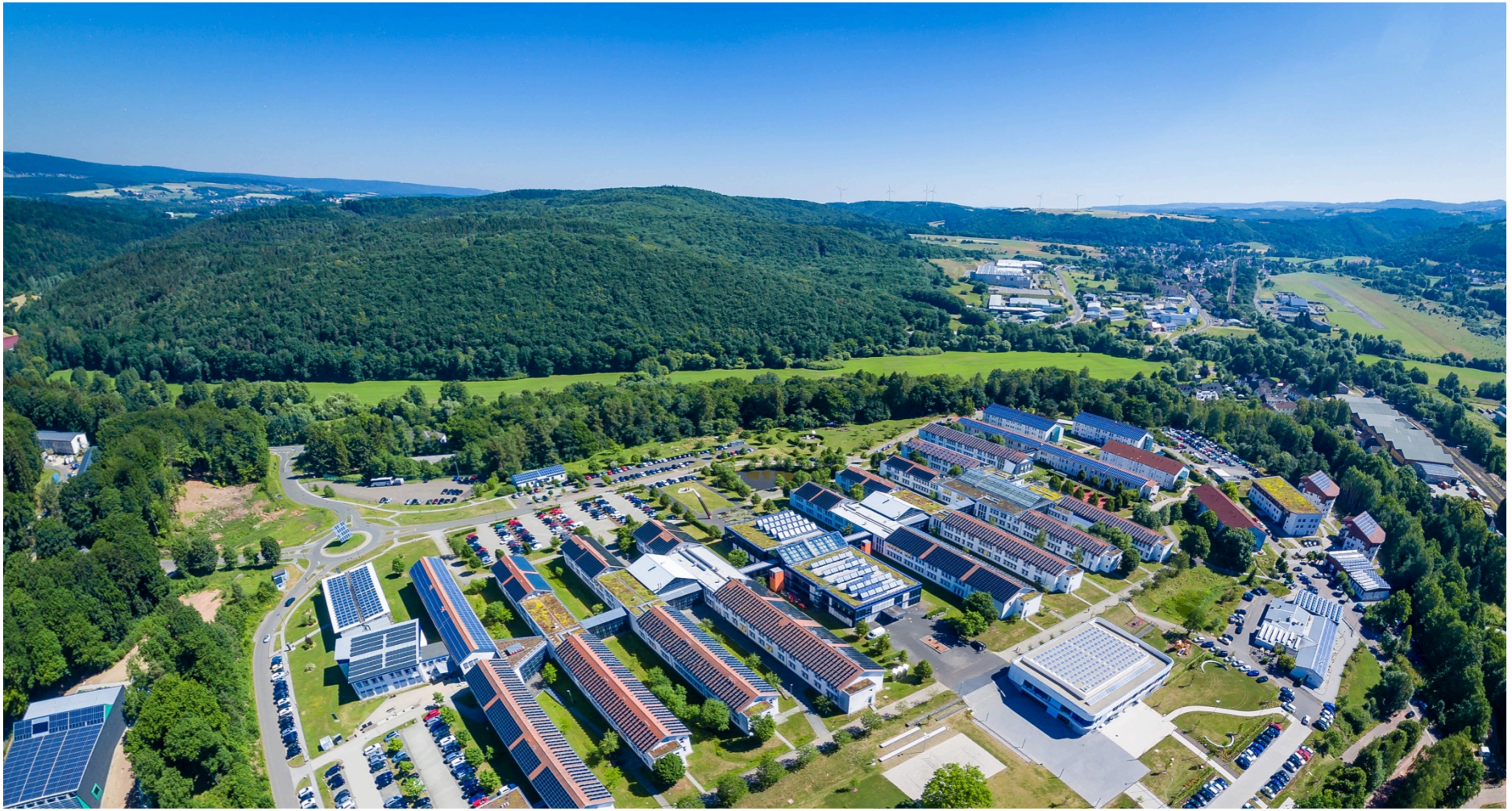


An Outstanding Place With Practical People

BIRKENFELD

IFAS: THE HUMDINGER

The three great challenges faced by humanity; famine, plague, and war for millennia are belittled by the scale and scope of the greatest challenge of all facing humanity in the Anthropocene: *climate change*. While the large majority still grapples with the very concept of *climate change*, Germany as a nation leads the world in '*climate protection*' that primarily aims at mitigating the human impacts on the environment predominantly responsible for *climate change*.

Among the many German institutions revolutionizing the climate protection and sustainable development landscapes, the Institute for Applied Material Flow Management (IfaS) of the Trier University of Applied Sciences, an organization entirely dedicated to practical actions of environment and climate protection, is trailblazing its way with its own unique approach to climate protection employing a multitude of Zero Emission initiatives.

PEOPLE MAKE THE DIFFERENCE

People, the greatest asset of all, defines the persona of any organization. It cannot get any better than having passionate practitioners at and beyond the call of duty. IfaS, a humdinger of an environmental institute, owes its enviable status primarily to its superlative team of visionaries and practitioners of climate protection. Beyond the bounds of work, IfaSers have made 'climate protection' their way of life, their hobby, and their community service. Unlike others, IfaSers lead by example that makes us proudly call them our *climate heroes*.

Here we present seven personal stories; private initiatives for climate protection, aiming to inspire you towards your own personal action that will make you proud and our future generations will be thankful of.

To see what IfaS does, to meet the rest of our team and to be inspired; visit
▶ www.stoffstrom.org

Images on Page 4

Blue roofs of the greenest campus in Europe; the home of IfaS

Energy efficient building stock of ECB

Fresh-air intake


Climate protection is, in fact, an easy thing to achieve. All you need is to make it your way of life. I did that, so can you.

Sustainable Living: Getting Back to the Roots

BRÜCKEN

Prof. Dr. Peter Heck is a biogeographer by education and holds a PhD in the same domain from the University of Saarbrücken. An eminent scientist, a renowned public figure, and a pioneer in the fields of Material Flow Management and Circular Economy Strategy, Prof. Heck has logged over three decades of international work experience in over 50 countries. He is one of the founders of IfaS. Besides his regular academic engagements, Prof. Heck serves as the Managing Director/Chief Executive Officer of IfaS.

A voracious reader, classic car enthusiast, and an avid traveller, Prof. Heck could be reached at p.heck@umwelt-campus.de

HE WALKS THE TALK. ALWAYS.

Giving up his weary city life in 2010 Prof. Heck moved to the verdant and serene countryside of Brücken with the aim of practicing what he advocates: sustainable living. He acquired a 200-year old flourmill and the surrounding property for the purpose of creating a sustainable dwelling. Since then, he retrofitted the existing structure with an array of advanced renewable energy and energy efficiency systems. A PV system, biomass heating system, and a geothermal heating unit feature the non-conventional REN supply to his cottage. Making use of the existing brook and the water mill, a micro-hydro system was also installed making the Heck residence a leading small-scale renewable energy producer in the region. Part of the land maintains a wooded area that provides sustainable woody biomass to the biomass heating system of the cottage. Among other things, free ranged ducks, chicken, geese and sheep are an integral part of the ecological farming he practices at present.

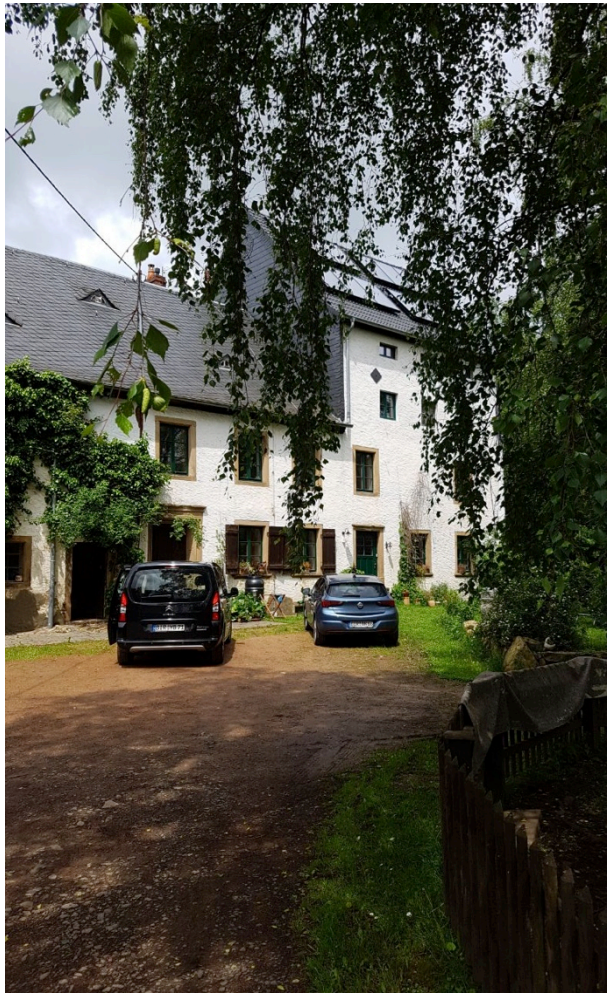
NOTABLE FEATURES

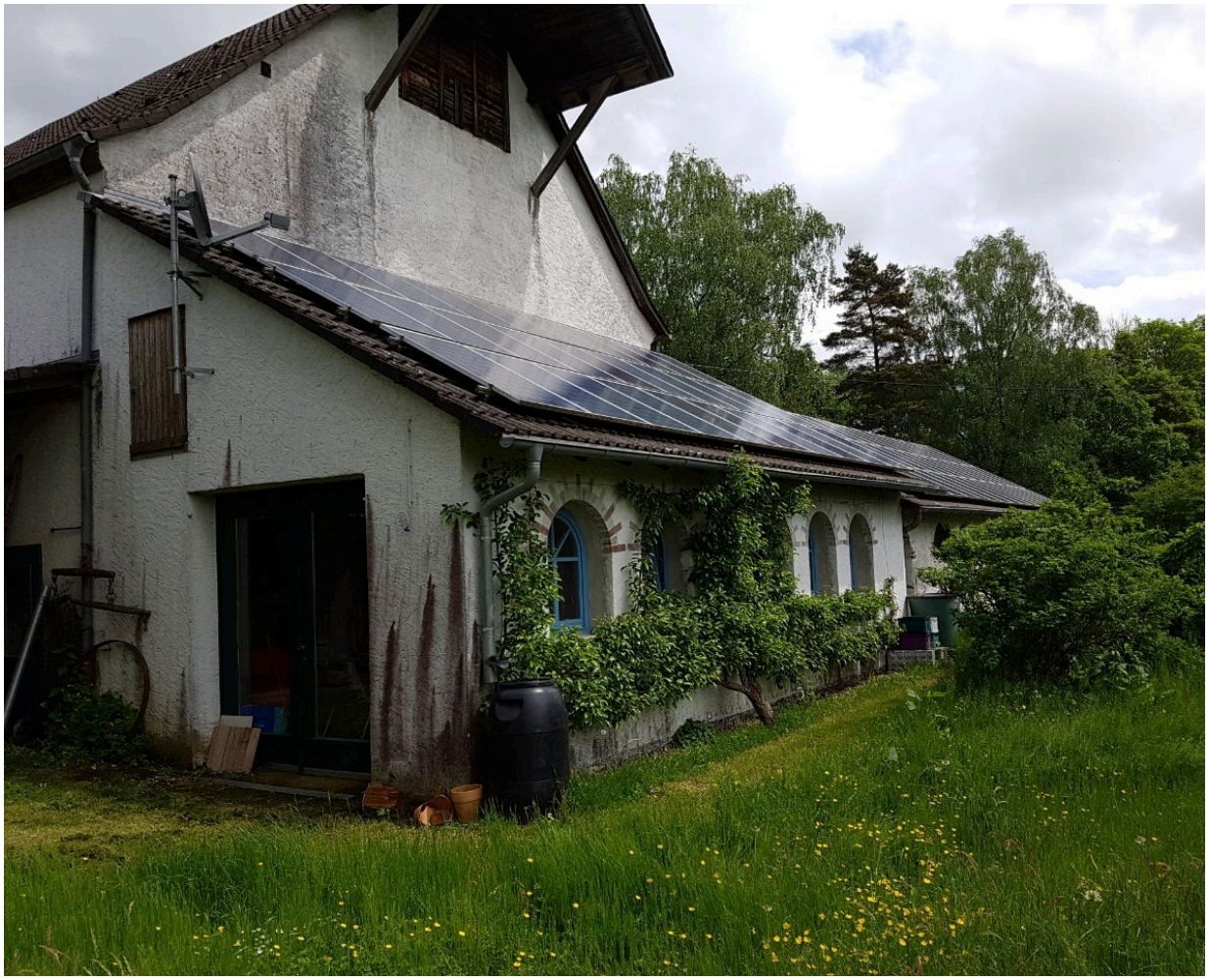
- 16kWp roof-mounted PV plant produces ca. 15,000 kWh/a, which is fed directly to the national grid

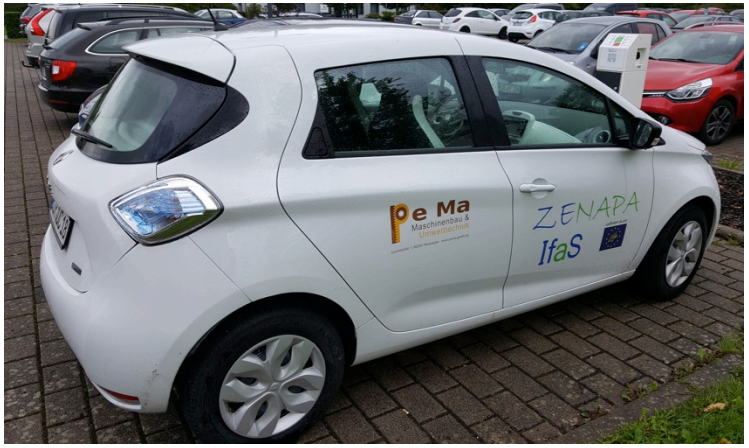
- Space heating is done through solar-thermal and geothermal systems, for which a 12m², roof mounted solar-thermal collector and a geothermal unit –mounted at the basement/cellar of the cottage with four 80m deep drilling and 3.5kW heat pump– are employed

- During winter months, sustainably harvested woody biomass is also used in the traditional fireplace to complement space heating

- The energy requirement of the heat pump and the totality of the household electrical energy requirement is entirely met through the renewable electricity generated by the 12kWp small hydro system






ZENAPA
IfaS

Sustainable Living: Getting Back to the Roots *contd.*

NOTABLE FEATURES [CONTD.]

- The PV system complements the small hydro system during summer months –when the brook runs low– to cover the energy demand of the household

- *Green energy* is also used to fuel the electric car –Renault ZOE™– and the remainder is fed to the grid

- The property is a net *green energy* exporter that makes it a Zero Emission system owing to energy use

GOING THE EXTRA MILE

A firm believer of *knowledge sharing*, Prof. Heck invests his leisure time also touring nationally and internationally to promote the concepts and practical applications of Zero Emission and Circular Economy. He entertains global scholars from various disciplines at his cottage and provides a tranquil place for lively discussions and brainstorming on various sustainability topics.

Keeping a tab on his personal 'carbon footprint' Prof. Heck takes measures to offset the GHG load through various GHG offset initiatives including planting forest trees and using electro-mobility. Furthermore, the bulk of his food supply comes from his property and he favours purchasing local produce with the aims of reducing the associated GHG emissions, environmental footprint, and also to support the regional economy. As a practice, the surplus of his farm produce is shared with his colleagues, neighbours, and friends. Community giving is a priority in his agenda. Accordingly, he invests his personal resources and also mobilizes resources through his global network of friends to help climate initiatives in his own community and also to help needy students from developing countries to obtain higher education.

Presented herein is just a fraction of Prof. Heck's remarkable climate action. To find out more or pay a visit to his country cottage, feel free to get in touch with him.

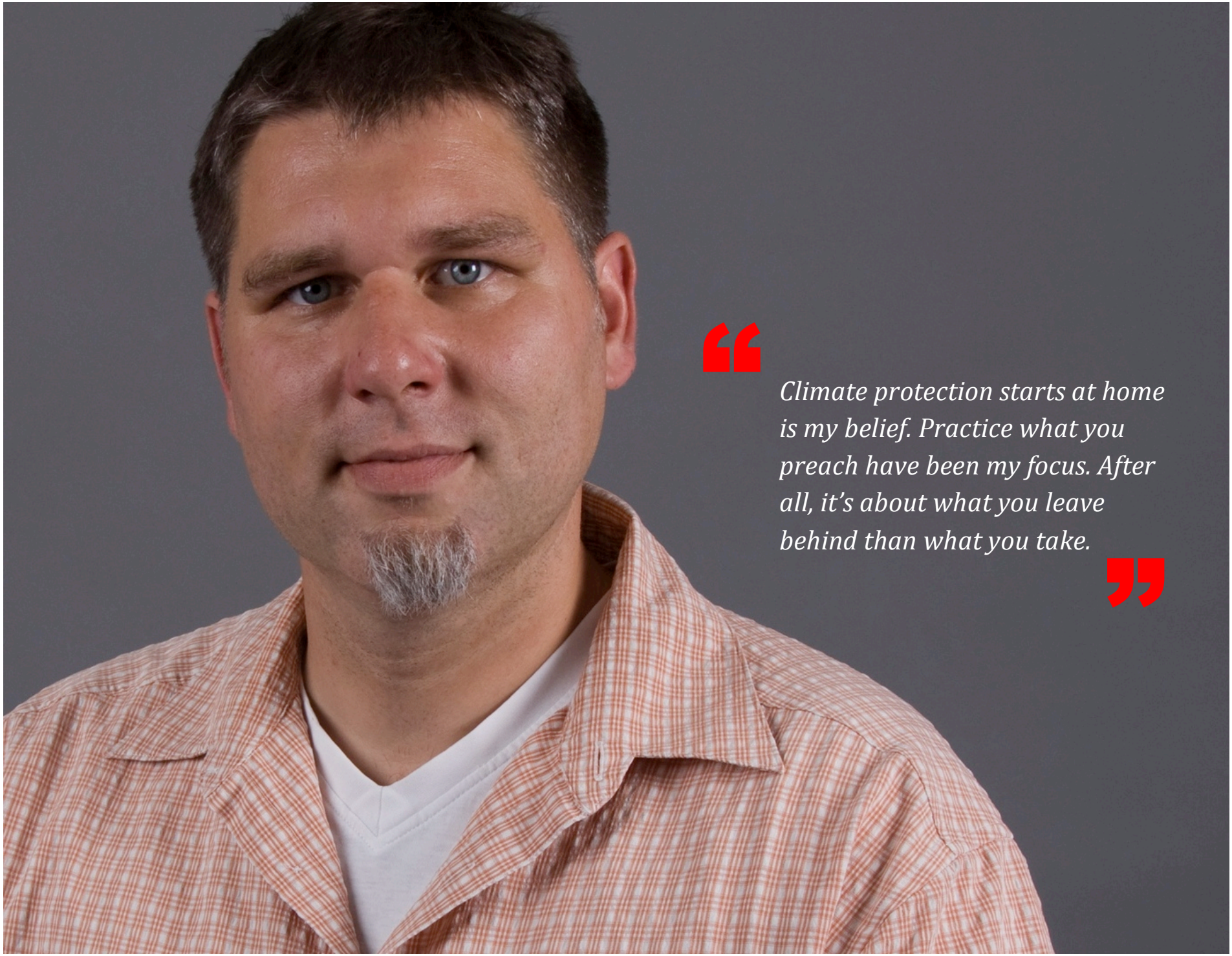
Images on Page 8

Heck' cottage

Roof-mounted PV plant

Biological 'lawnmowers': keeping the lawns trim

ZOE the e-car


Climate protection starts at home is my belief. Practice what you preach have been my focus. After all, it's about what you leave behind than what you take.

Renewable Energy Integrated Energy Efficient House

BIRKENFELD

Dr. Michael Knaus is a banker by training and an environmental economist by education. He holds a Diploma in Environmental Business & Law from the Trier University of Applied sciences and a PhD in Environmental Economics from the University of Limerick, Ireland. Dr. Knaus has clocked in over two decades of international Zero Emission project development experience in over 40 countries on five continents. He currently heads the department for international operations and the global education network of IfaS.

A passionate social worker and a true globetrotter, Dr. Knaus could be reached at m.knaus@umwelt-campus.de for any of your queries or to get inspired by his work.

THE HOUSE THAT 'MIKE' BUILT

Imagine living in an energy efficient house, which features superlative eco-compatible material and also powered by renewable energy. Moreover, imagine building it yourself. That is exactly what Dr. Knaus did.

Started as a pet project by Dr. Knaus in 2004, the residence is home for a family of six with advanced energy efficiency features coupled with solar and biomass energy technologies for heat and electrical energy supply. The timber-framed, clay-bricked house is insulated using the natural insulator, hemp and plastered with clay that together provides superior insulation against thermal loss whilst being eco-compatible. These features collectively decreased the embedded energy and the carbon content of the structure. Furthermore, the building envelope is further complemented with energy efficient advanced glazing that prevents the thermal loss whilst maximising the penetration of daylight.

OTHER NOTABLE FEATURES

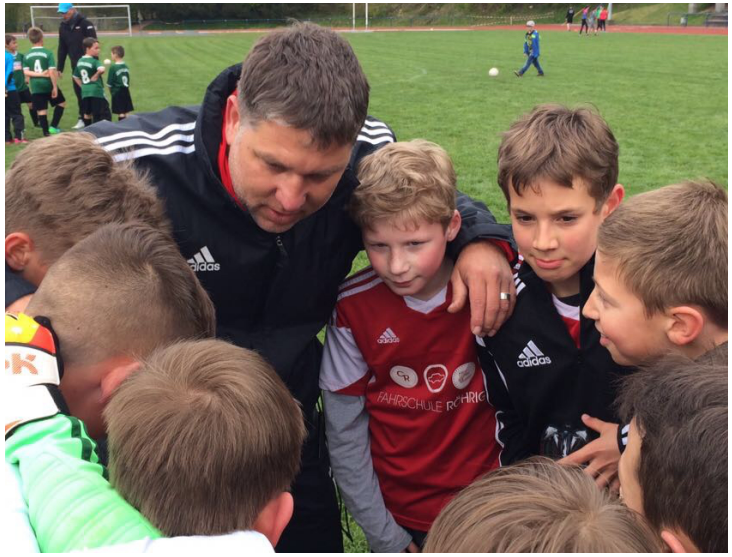
- 6.7kWp solar roof produces ca. 5,900 kWh/a, covers the entire annual electrical energy demand of the household (ca. 5,200 kWh/a) and supplies the surplus to the grid

- Thermal energy demand of the house, ca. 30kWh/m^2/a, is covered by a combination of biomass, solar thermal and a minimum of natural gas that nearly matches the German passive house standard

- Triple-glazed windows minimise the heat loss and heat gain during winter and summer months respectively through cutting-edge fenestration

- It also features sustainable illumination though Light Emitting Diodes

- A dry stone fence and a green roof support biodiversity by providing habitat for insects and amphibians



Renewable Energy Integrated Energy Efficient House *contd.*

BIRKENFELD

OTHER NOTABLE FEATURES [CONTD.]

▶ Among others, total greenhouse gas abetment owing to renewable energy (electrical) use alone amounts to ca. 3.25 tonnes $CO_{2\text{-eq}}$/a.

MULTIPLE BENEFITS

Being a meticulous planner, Dr. Knaus sourced the bulk of construction material locally/regionally, which helped reduce the greenhouse gas emissions significantly during the construction of the house. Furthermore, the choice of material also helped reduce the costs of construction substantially. The natural construction material; wood, clay, and hemp in particular, not only increased the biodegradability of the building envelope but also helps maintains high indoor air quality throughout the structure's usable life.

MORE THAN A PASSION

A firm believer of educating the younger generation for effective climate action Dr. Knaus spends his leisure time mostly engaging young kinds including his own in outdoor activities such as tracking, hiking, camping, and a number of sports that provide the opportunity to share knowledge and to highlight the importance of environment and climate protection. Among other community engagements, he regularly contributes to the community kindergarten and the football club alike.

He is highly praised locally and internationally for his hours and hours of *pro bono* advisory services on 'practical climate protection'. Conscious of his personal carbon footprint arising from frequent global travels he is finding ways to offset as much GHGs as possible including shifting to electromobility during local travels.

If you are interested in finding out more about Dr. Knau's personal initiatives towards climate protection, talk to him. Get inspired; find out how you may be able to start your own climate action as an individual, business or an organization.

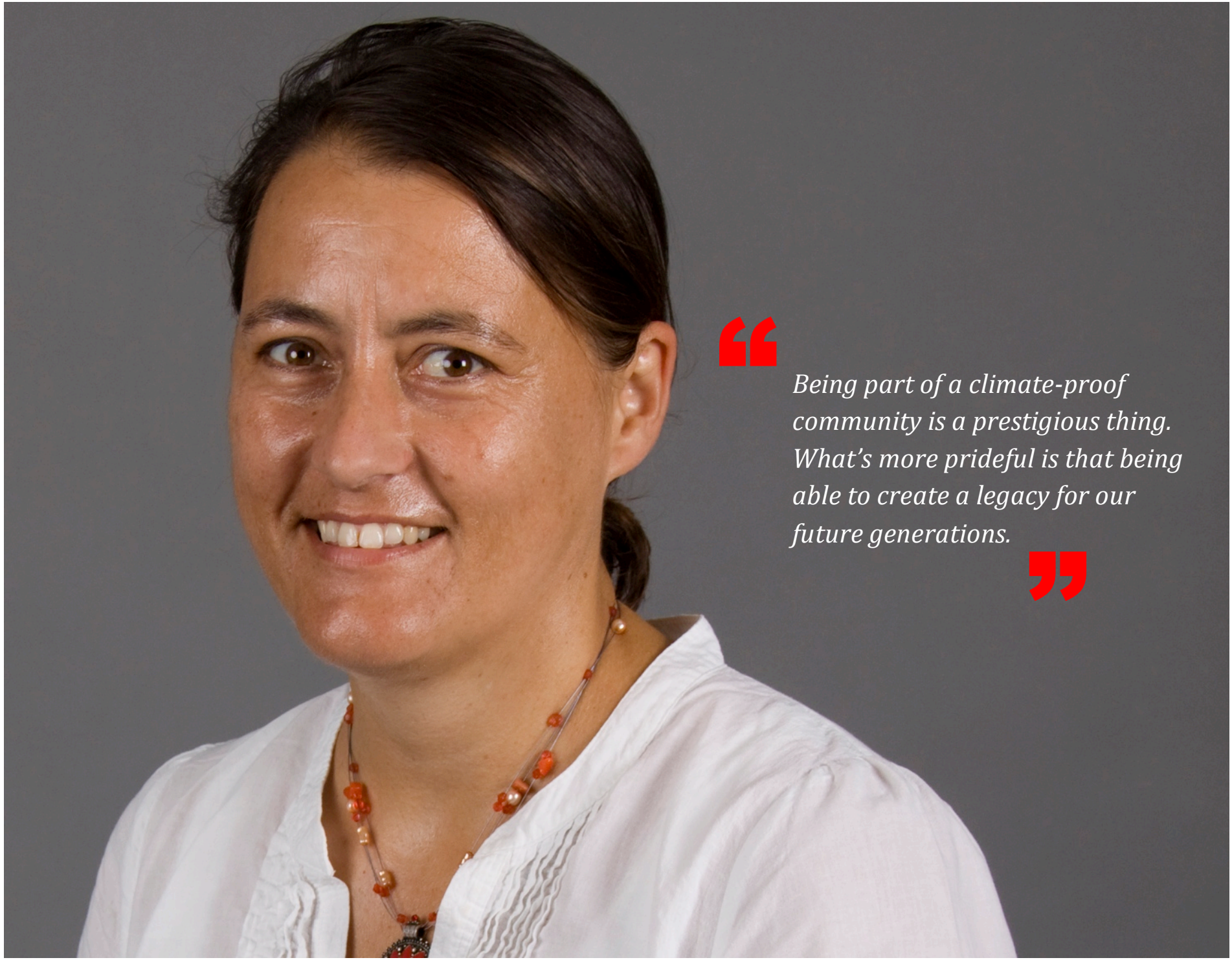
Images on Page 12

Hemp insulation secured with beer coasters

Clay plastering over hemp insulator with in-wall heating system

PV & Solar thermal [L]; Green roof [R]

Loved coach


Being part of a climate-proof community is a prestigious thing. What's more prideful is that being able to create a legacy for our future generations.

Serving the Community and Making it Climate-Proof

HÜFFLER

Ms. Evi Hubig is a business economist by training and a Material Flow Manager by praxis. She reads for an MA in Sustainable Change at the Trier University of Applied Sciences, Germany. With nearly three decades of work experience at some of the leading German business organisations, Ms. Hubig currently serves as the head of administration at IfaS.

Besides her unparalleled community engagement, she is an avid reader, a seasoned traveller and loves gardening and football.

She could be reached at e.hubig@umwelt-campus.de for further information on her climate action.

LET THERE BE [SUSTAINABLE] LIGHT

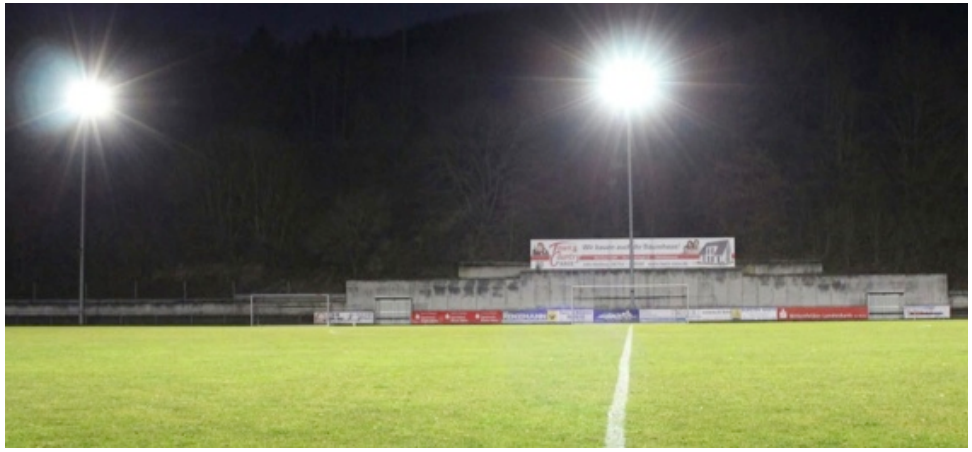
Public lighting is a necessity yet essentially a cost burden to most municipalities. Besides its negative impact on the public budget, the conventional illumination systems' contribution to climate change through energy and resource use is substantial.
Realising the need for a sustainable solution, IfaS together with its technology partner; Lanz, Manufakture GmbH have done some ground-breaking work since 2009 in a number of municipalities in the Rhineland-Palatinate and abroad providing sustainable illumination solutions.

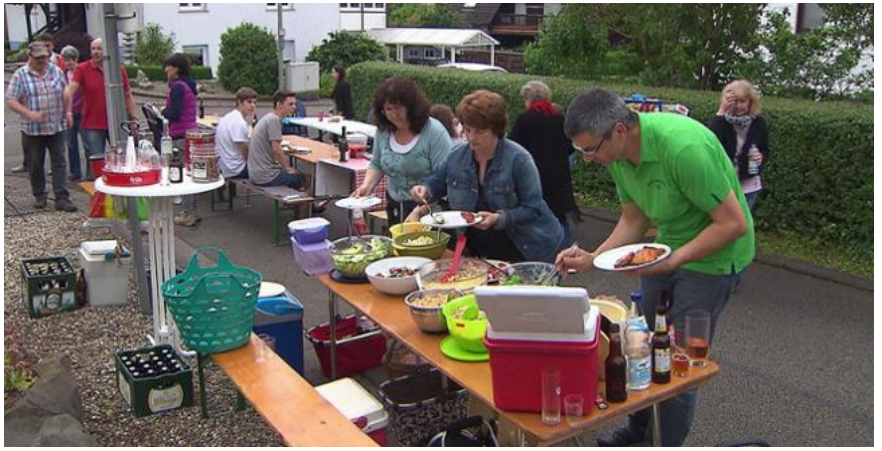
Inspired by this work Ms. Hubig initiated her own sustainable lighting project in her community in 2010. The project replaced all streetlights in Hüffler community with high efficiency, low energy consuming, and cutting-edge LED-based illumination system. Not only the kernel of the project was innovative but also the financing instrument. Ms. Hubig managed to finance 25% of the project investment through public funding and the balance through community credit.

Encouraged by the success, Ms. Hubig managed to convince the technology partner in 2011 to develop a special LED-based floodlight solution to illuminate the community football field. The project came to fruition in early 2017, replacing the existing metal-halide-based floodlights with an advance, high lumen, energy efficient LED-based floodlights. Besides providing unparalleled economic and environmental benefits to Hüffler community, Ms. Hubig's initiatives serve as 'lighthouse projects' in disseminating knowledge, expertise, and experience nationally and internationally.

NOTEWORTHY FEATURES

- Hüffler street lighting project incurred a cost of EUR 106,000 in 2010 of which 75% was raised through a community credit program





Serving the Community and Making it Climate-Proof *contd.*

HÜFFLER

NOTEWORTHY FEATURES [CONTD.]

- LED street lights reduced the electricity consumption by ca. 70% (from 51,502kWh/a to 15,182kWh/a), whilst associated energy costs reduced by 67% (from 16,486EUR/a to 5,400EUR/a)

- Street illumination associated greenhouse gas emissions were reduced by up to 80% or ca. 2.5 tonne of $CO_{2\text{-eq}}$/a

- The system efficiencies recorded (for floodlights) stands at 144 lm/W and 100,000 hours and achieved 70 per cent saving on electricity consumption, which transcends the current industrial averages

ENERGY & PASSION

In addition to Ms. Hubig's 'energy efficiency' implementations, she is regarded as one of the pioneering energy producers in the Hüffler community. Ca. 8kWp roof-mounted PV system at Hubig household produces nearly 8,200kWh/a of renewable electricity of which ca. 3,200kWh/a is consumed domestically and the balance is supplied to the national grid.

Besides these 'energy' related climate action Ms. Hubig's passion for the environment and sustainable living has given rise to several other initiatives including an 'environment day' and a garden sharing program. In every spring she engages her community for a thorough cleanup of the Hüffler commune and shares knowledge on various climate protection frontiers she deals with at work. Being a firm believer of sustainable agriculture, Ms. Hubig maintains a small greenhouse on her property, which she shares with two elderly neighbors who do not possess land or capacity to manage their own crop production. Besides producing self-sufficient quantities of organic crops this action helps to create awareness on sustainable living, climate protection, and also a close-knit, stronger community those who pursue the common goal: *climate protection*.

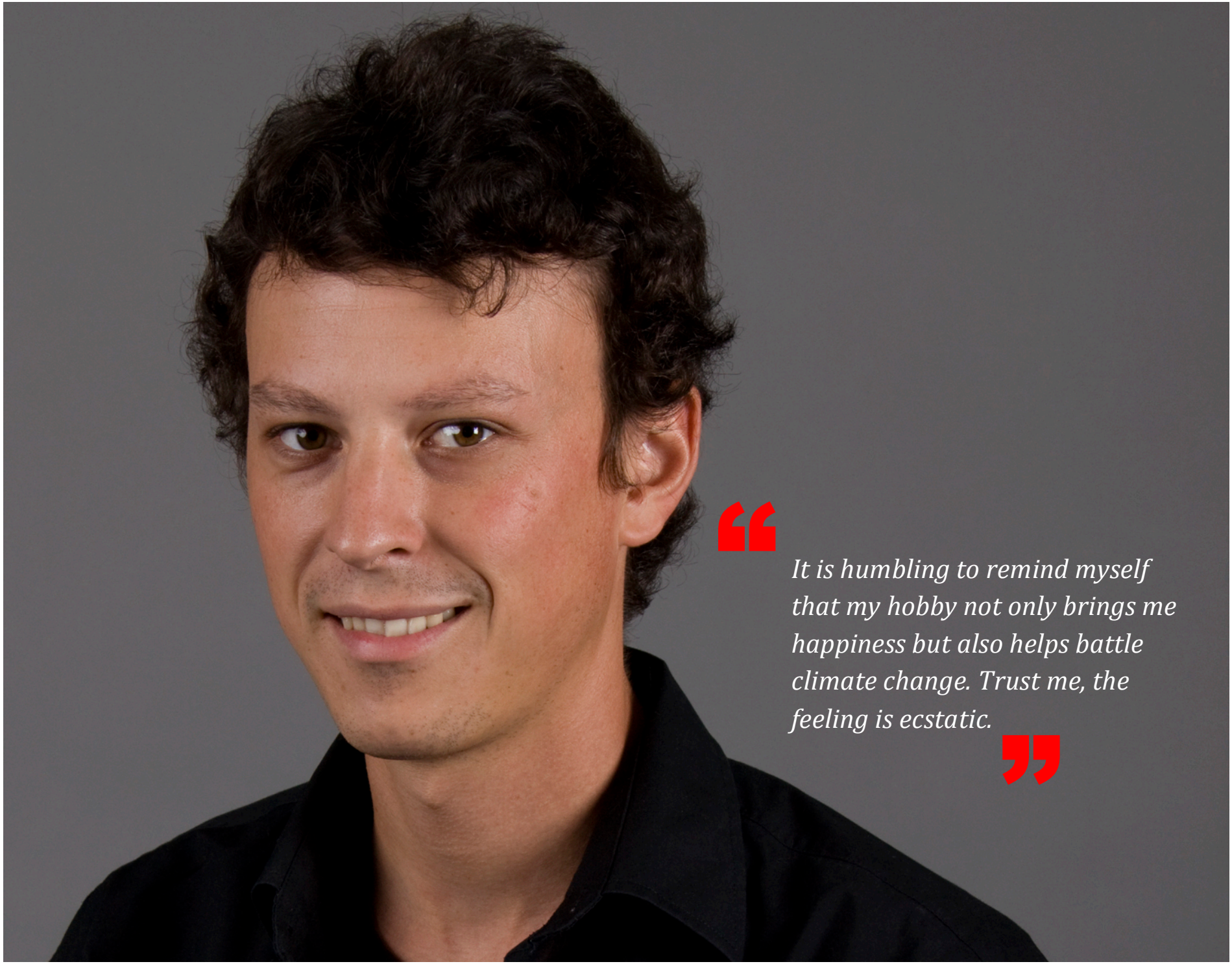
Intrigued? Probably it's time for you to act, too. Talk to Ms. Hubig for any help or inspiration.

Images on Page 16

A drone capture of floodlit Hüffler football field

High intensity yet low energy illumination

Spring gathering


It is humbling to remind myself that my hobby not only brings me happiness but also helps battle climate change. Trust me, the feeling is ecstatic.

Trailblazing in Sustainable Agriculture: Carbon Negative Viticulture

MÜLHEIM

Mr. Felix Flesch is a business economist by education with an MSc in International Material Flow Management from the Trier University of Applied Sciences, Germany. He also is a Doctoral researcher at the Universidad Autonoma de Aguascalientes, Mexico, researching in the field of cascade application of biochar for climate resilient agriculture. Mr. Flesch works at IfaS since 2009 and currently serves as an International Project Manager focusing the Central and South Americas.

A passionate linguist, an avid house builder, a sustainable farmer, and a globetrotter; Mr. Flesch could be reached at f.flesch@umwelt-campus.de

HANDS ON. PERIOD.

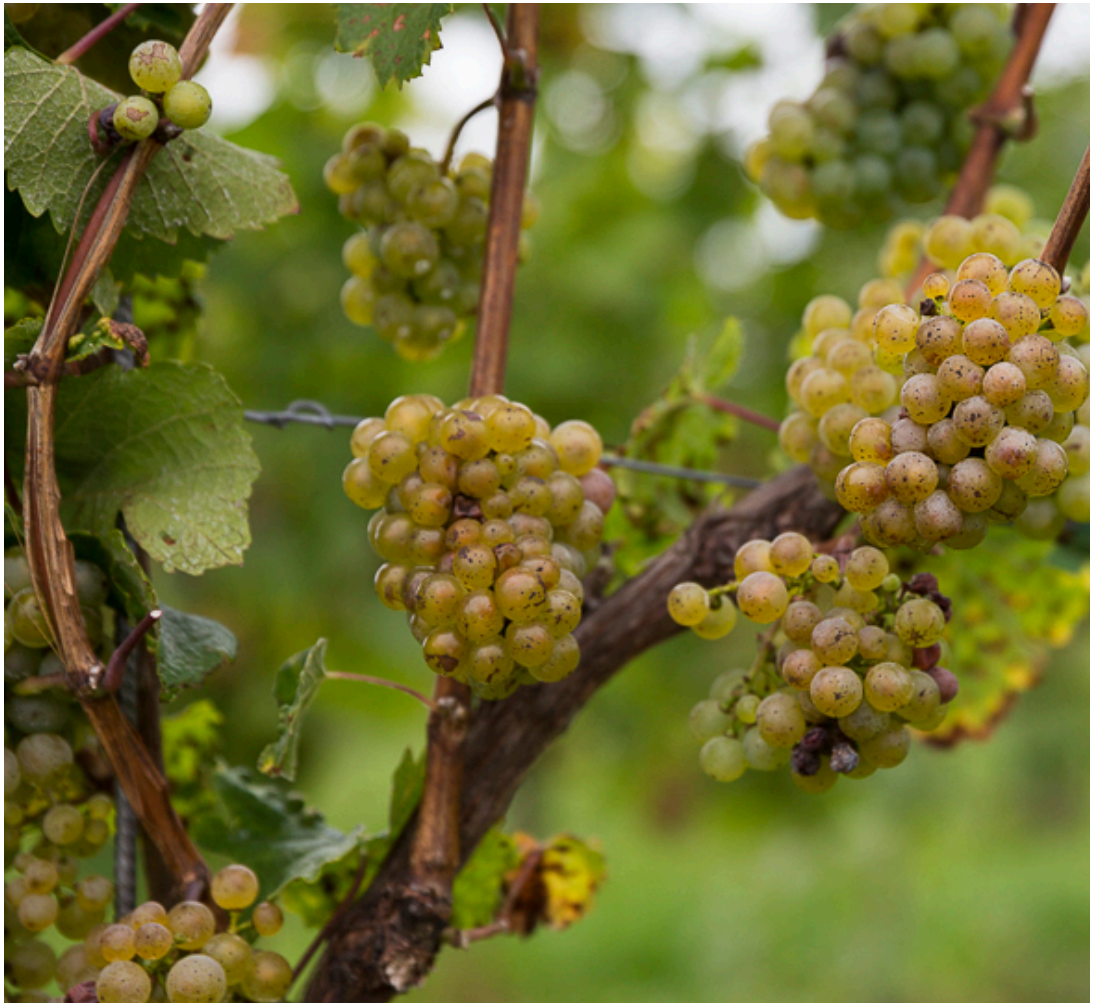
Coming from an entrepreneurial lineage, Mr. Flesch first tried his hand at viticulture at the age of 16. Family owned seven hectares of Riesling cultivation and wine production he managed was pretty conventional until 2013. Having had a moment of revelation whilst working on a biomass pyrolysis project for carbon sequestration at IfaS in 2013, Mr. Flesch tried to extend this practical knowledge to make the production of wine environmentally compatible and climate resilient. First, he trialled with the application of black soil [a.k.a. *terra preta*] as a mechanism to sequester carbon in soil and subsequently augmented the scale and scope of this initiative to producing the world's first carbon-negative Riesling wine.

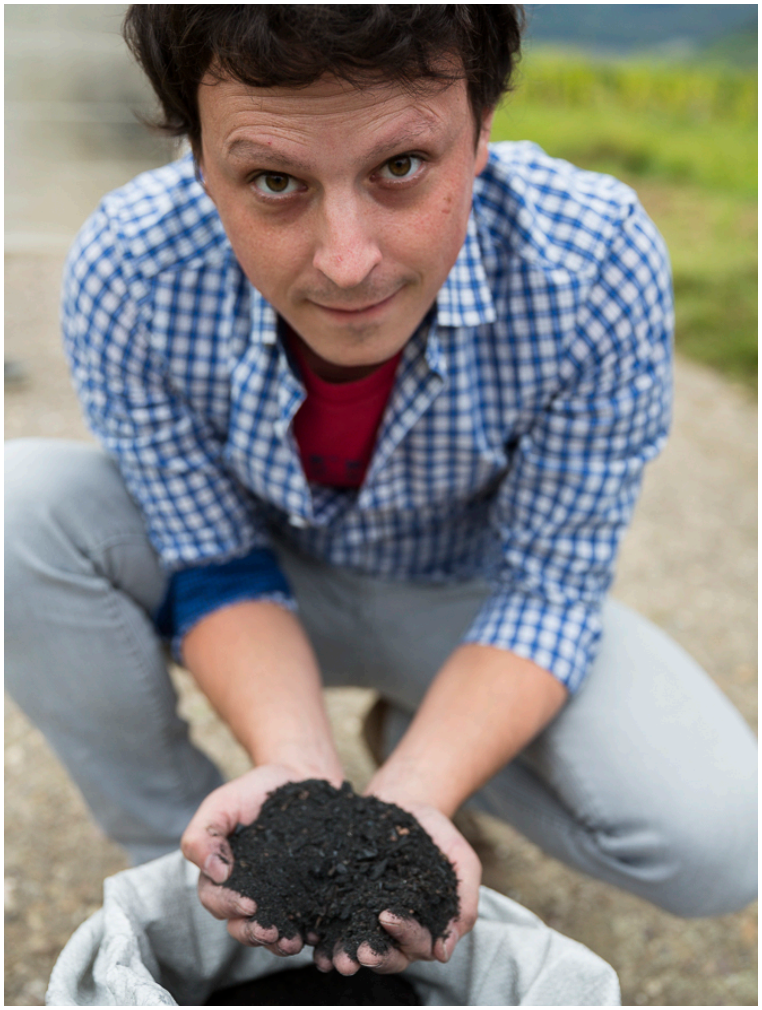
The woody biomass of grapevine pruning/lopping is used as the raw material in making *terra preta* through the process known as 'pyrolysis' and added to the soil as a soil amendment.

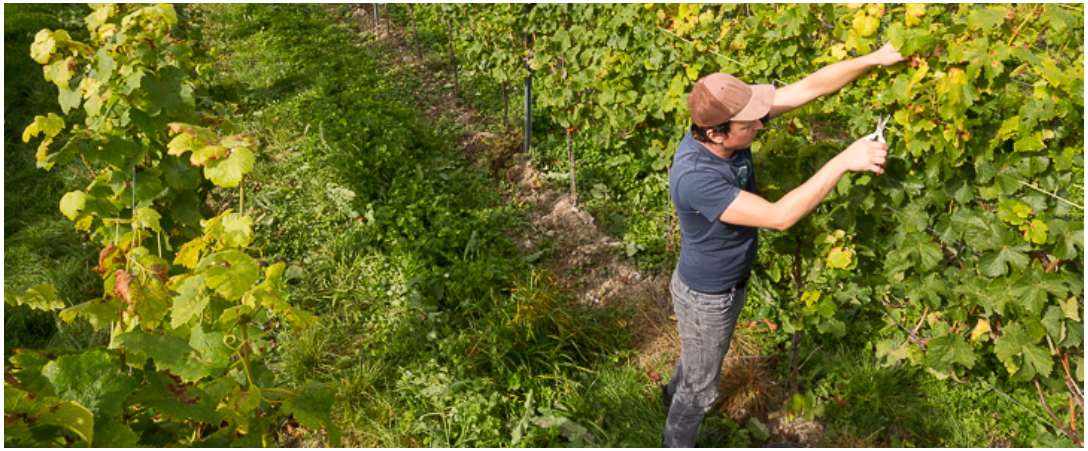
Besides acting as a soil amendment, *terra preta* also sequesters carbon for over 100 years. The lifecycle-wide greenhouse gas emissions of *terra preta* production have twice over 'negative' greenhouse gas balance than that of the final product; Vin-Vin™ Riesling wine, essentially making its overall lifecycle-wide greenhouse gas balance negative by 2kg$CO_{2\text{-eq}}$ per bottle of wine produced.

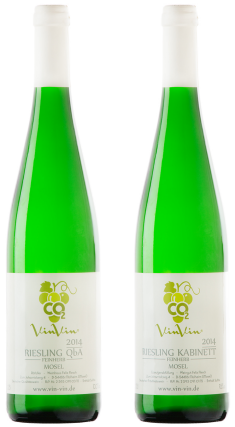
IN NUMBERS

- 5000m² of land is currently under *terra preta* based carbon negative viticulture
- Ca. 4000 bottles (three cubic meters) of carbon negative wine per annum is produced
- Total GHG abated per annum amounts to about 8 tonnes of $CO_{2\text{-eq}}$
- *Terra preta* production and applied to the soil amounts to ca. 9.2 tonnes per annum








VinVin
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MOSEL

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Trailblazing in Sustainable Agriculture: Carbon Negative Viticulture *contd.*

MÜLHEIM

SIGNIFICANCE

For over 2000 years Mosel valley –one of the best wine regions of the world– has dominated the Riesling wine production. The agricultural practices associated have changed very little over the years. Given the historical perspective, the fragility of the ecosystem and the impact of climate change on the industry, what Mr. Flesch has achieved is a remarkable feat. He not only has demonstrated the environmental benefits of carbon negative viticulture but also the economic feasibility, which is a trailblazer in the industry. Notwithstanding the climate protection aspects of this revolutionary practice, as observed by Mr. Flesch, the secondary benefits of using *terra preta* are; inter alia, the increased water retention of the soil, improvement of the floral biodiversity of the land, less fertilizer requirement by the crop etc.

Thoroughly convinced by the results, Mr. Flesch is in the process of increasing the cultivated land area under carbon negative viticulture and also actively engaged in disseminating the knowledge and practice among fellow vintners, farmers, and agriculturalist.

BEYOND VITICULTURE

Besides this specific agriculture oriented climate protection initiative, Mr. Flesch has also embarked on renewable energy implementation including PV, solar thermal, biomass-based heating and combined heat and power generation based heating at his household. He is currently a net energy producer (260% of his annual electrical energy demand; 3500 kWh) supplying to the national grid. All climate initiatives put together Mr. Flesch achieves about 26 tonnes of $CO_{2\text{-eq}}$ greenhouse gas abatement per annum.

If you are intrigued by Mr. Flesch' climate protection initiatives and would like to find out more on carbon negative and sustainable agriculture please visit ▶ www.vin-vin.de or feel free to talk to him.

Images on Page 20

*Probably the only **'carbon negative'** Riesling grapes in the world*

Terra preta being added to the soil

The vineyard in Mülheim

Vin-Vin™ product


Essentially, I'm an urban farmer showing people a practical way to re-establish the lost connection with nature. After all, nature is our origin, and the destination too.

Community Supported Agriculture: Helping People to Grow

SAARBRÜCKEN

Mr. Jörg Böhmer is an agriculturalist by training and an agricultural engineer by education. He holds a diploma in Agricultural Engineering from the University of Bonn, Germany. Mr. Böhmer works at IfaS since 2007 and currently serves as a project manager and the deputy head of the Department of Biomass and Cultural Landscape Management. The focus of his work includes multifunctional land-use systems and rural bio-economy development.

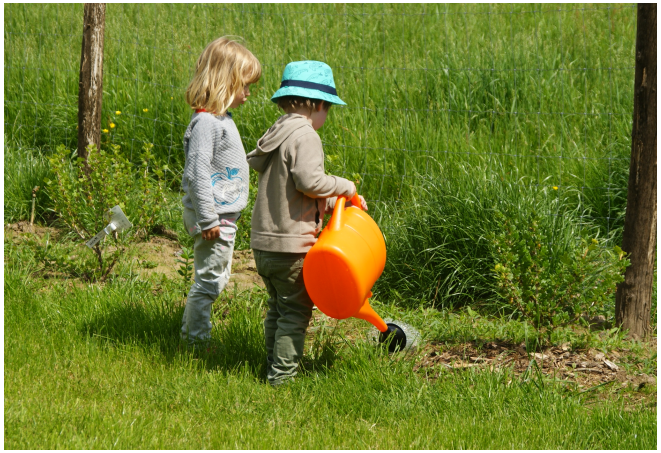
A father of three, Mr. Böhmer calls himself an urban farmer. He loves cycling, practices yoga and is a fan of a variety of genera of music. He could be reached at j.boehmer@umwelt-campus.de

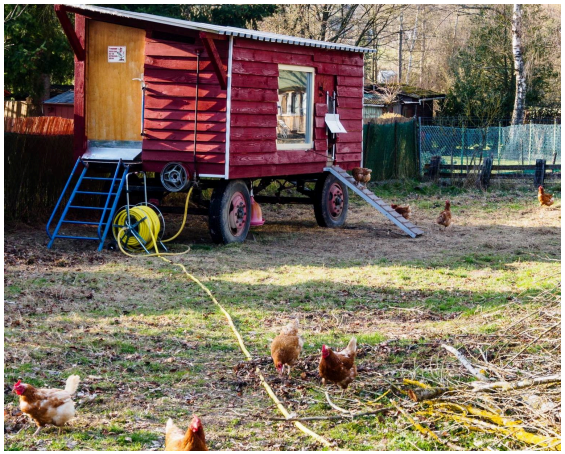
THE WHITE COLLAR URBAN FARMER

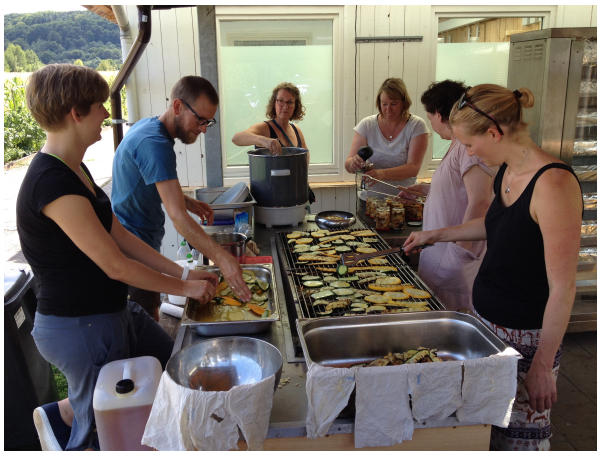
Having exposed to heavily *industrialised agriculture* at a young age in the suburbs of Cologne, Mr. Böhmer not only studied deep into the working of it but also grew weary of the trajectory of modern agriculture that impacts the nature, economy, and lives at an alarming rate. He invested his time to investigate the issues pertinent to modern *industrialised agriculture* and further studied the praxis of alternative 'sustainable' agriculture. His tenure at an organic agriculture certification body threw him a new direction of work. Realising the core issue (for the perpetuation of unsustainable agricultural practices) as the lack of 'basic understanding' of nature and its processes, Mr. Böhmer embarked on a personal journey to find practical solutions those that could be adopted by both urban and rural folks alike. The knowledge he furthered on Material Flow Management, Zero Emission strategies, and Circular Economy at IfaS provided the impetus for his *Stadtbauernhof* initiative in 2015. Mr. Böhmer along with a group of like-minded friends acquired a land in the suburban Saarbrücken to build their *Stadtbauernhof* (literally meaning, the 'city farm'), with the aim of providing 'consumers' an opportunity to experience sustainable agriculture/food production. Based on the concept of Community Supported Agriculture [CSA], the *Stadtbauernhof* was developed as a place for gardening, farming, animal husbandry, food processing, and knowledge sharing with the compulsory feature of praxis. *Stadtbauernhof* is a place that produces 100% organic food and implements triple bottom line sustainability in agriculture.

NOTABLE FEATURES

- *Stadtbauernhof* currently occupies a 1.7-hectares of land, an old farm from the '50s rented from a private landowner for 20 years, to exclusively produce organic food







Community Supported Agriculture: Helping People to Grow *contd.*

SAARBRÜCKEN

NOTABLE FEATURES [CONTD.]

- The bulk of organic fertiliser –compost and manure– required in the farm is produced onsite

- 60 households and one restaurant around *Stadtbauernhof* are registered clients and they pay in advance the cropping season to secure the supply of farm produce such as vegetables, herbs, fruits, eggs, and honey

- Farm produce is delivered to clients through a third party service provider (see: www.bringbock.de) that uses 'pedal-power' essentially making the delivery logistics 'Zero Emission'

- Participating households fulfil 60 to 90% of their fresh vegetable requirements from *Stadtbauernhof*'s output

- *Stadtbauernhof* is located in a 'water protection area, thus extra precautions are being taken to prevent eutrophication and emissions through the use of biochar as bedding material for laying hens and also as a carbon sequestering soil amendment

FORMING A FAR-REACHING NEXUS

Stadtbauernhof promotes the concept of Zero Emission through low input agriculture and also works on creating an agriculture-social-energy nexus that helps its members –adults and kids alike– and visitors to experience and practice sustainable agriculture and connect with nature.

AND BEYOND…

Mr. Böhmer and his colleagues ambitiously working on making the *Stadtbauernhof* energy plus, zero emission farm and also an urban destination for education and practice of sustainable agriculture

Visit ▶ www.stadtbauernhof.org or talk to Mr. Böhmer to find out more on his climate action.

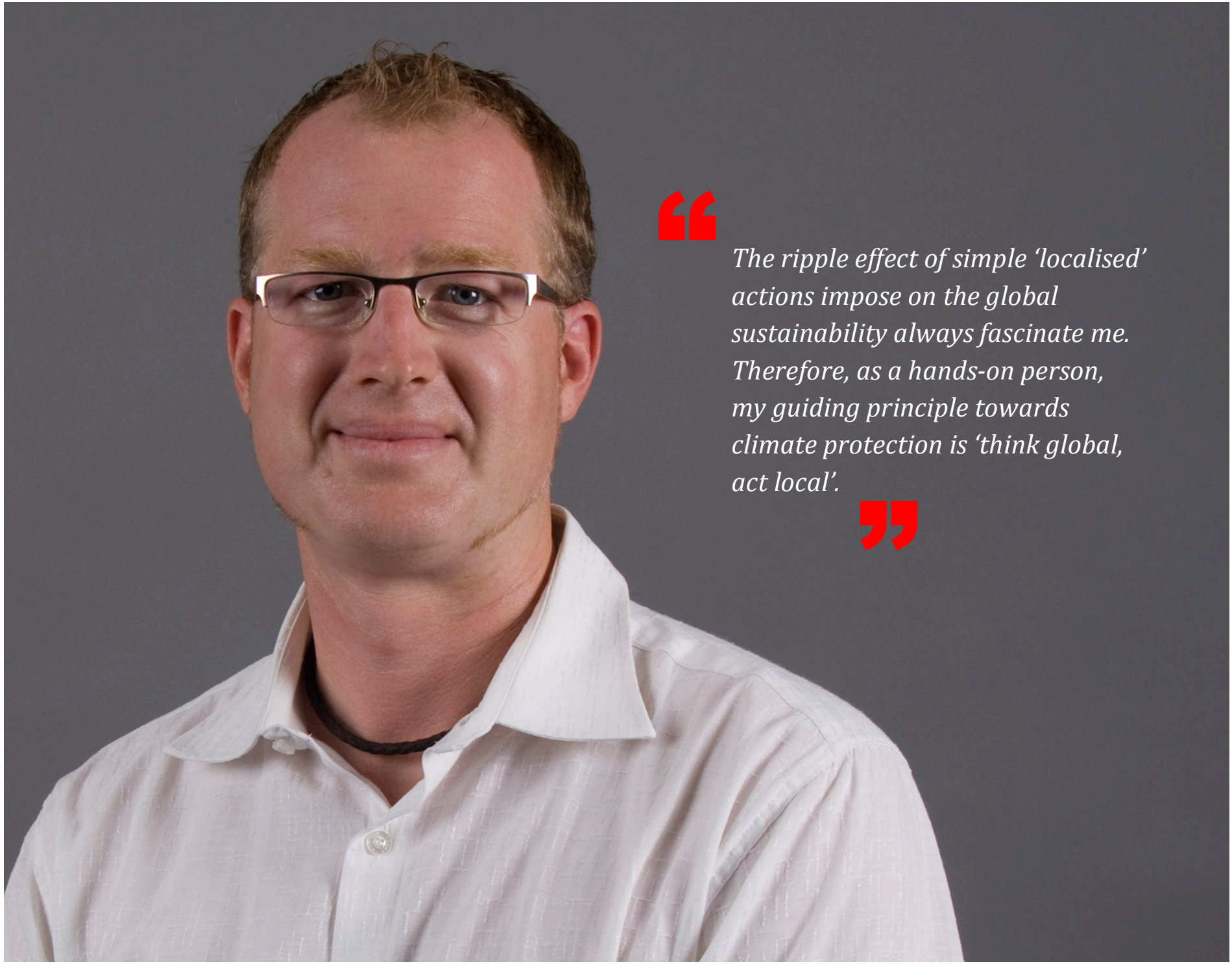
Images on Page 24

Vista of the Stadtbauernhof

Early Learning

Chicken coop

Making antipasti


The ripple effect of simple 'localised' actions impose on the global sustainability always fascinate me. Therefore, as a hands-on person, my guiding principle towards climate protection is 'think global, act local'.

An Ecological House and a Life Full of Eco-compatibility

ST. WENDEL

Dr. Alexander Reis holds a baccalaureate degree in Mechanical Engineering, which he completed at the Environmental-Campus, Birkenfeld. It was during his studies that he met the legendary Professor Dr. Heck who inspired him to pursue a career in sustainability sciences. Subsequently, Dr. Reis joined IfaS at its inception in 2001 and currently serves as a project manager handling the national and state-sponsored projects in Germany.

A loving father of three, Dr. Reis calls himself a 'man of praxis'. He loves building. He travels with his family and spends his leisure, reading. He could be reached at a.reis@umwelt-campus.de

A MAN OF PRAXIS

Origin of Dr. Reis' sustainable trajectory of life is almost accidental. While qualifying as a mechanical engineer at the Environmental Campus Birkenfeld in the '90s, he was put in touch with Professor Dr. Peter Heck –a pioneering scholar in the feed of Zero Emission, Material Flow Management and Circular Economy– to carry out his internship and thesis. Coming from a completely different discipline Dr. Reis was inspired and mesmerised by the depth and breadth of this emerging field of science quickly developed a deep liking and an understanding on how to relate the 'sustainability' discipline to his core area of studies and research.

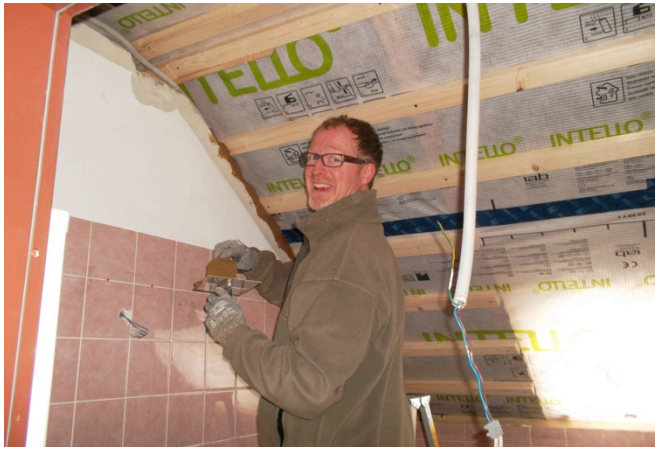
He furthered his higher education by furnishing himself with a doctoral qualification during which he tried to relate the principles of ecology and ecological economics with the field of engineering.

Being the man of praxis, in between academia and work, Dr. Reis experimented with various ecological building and engineering techniques. He tested out his knowledge and honed his skills by applying these ecological building and engineering techniques in many of his global projects in different geographical regions of the world such as Asia, Europe and the Americas.

Understanding the global sustainability dynamics and seeing the world around him in a new light Dr. Reis realised that there is a lot he could do at home. Being true to his belief; *think global, act local* Dr. Reis, since 2010, is focusing on local and hyper-local sustainability action. So, he started a new paradigm in life, and he brought it home.

AN ECO-COMPATIBLE LIFE

- The family home of Dr. Reis was renovated employing the latest ecological building guidelines and eco-compatible material transcending the German building code regulations for energy efficient housing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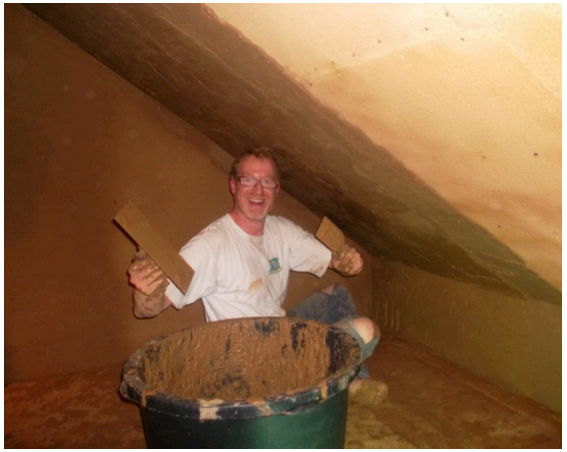


An Ecological House and a Life Full of Eco-compatibility *contd.*

ST. WENDEL

AN ECO-COMPATIBLE LIFE [CONTD.]

- Highest energy efficiency is achieved in his house by using hemp as the insulation material (a natural plant fibre composite) and clay for rendering the walls

- Thermal energy supply for space heating mainly comes from biomass energy and solar thermal, whereas in extreme conditions, a natural gas supply is used for shorter periods

- Purchases only certified 100% green electricity from a local renewable energy grid

- Dr. Reis' family has drastically reduced the meat consumption and all protein requirements are locally/regionally procured

- He supports local community farms and purchases organically grown fruits and vegetable from local/hyper-local sources

- Dr. Reis has reduced his international travels for work drastically and finds alternative ways to meet his clients' needs through advanced digital solutions such as virtual meetings.

- Through various initiatives of IfaS to offset carbon footprint, Dr. Reis has reduced his personal carbon footprint substantially

GIVING BACK TO THE COMMUNITY

Passionate about voluntary and community work, Dr. Reis, while staying close to his home and family, contributes a substantial amount of his personal time for community-based activities on sustainable living and climate action. For many year now, Dr. Reis has been on the board of a Waldorf School in St. Wendel and actively engaged in teaching kids on various sustainability subjects and disseminates knowledge on environmentally friendly technologies. He voluntarily holds workshops, seminars and lectures on these subjects in local schools on a regular basis and strives to promote his stand in life: '*think global, act local*' towards a sustainable future.

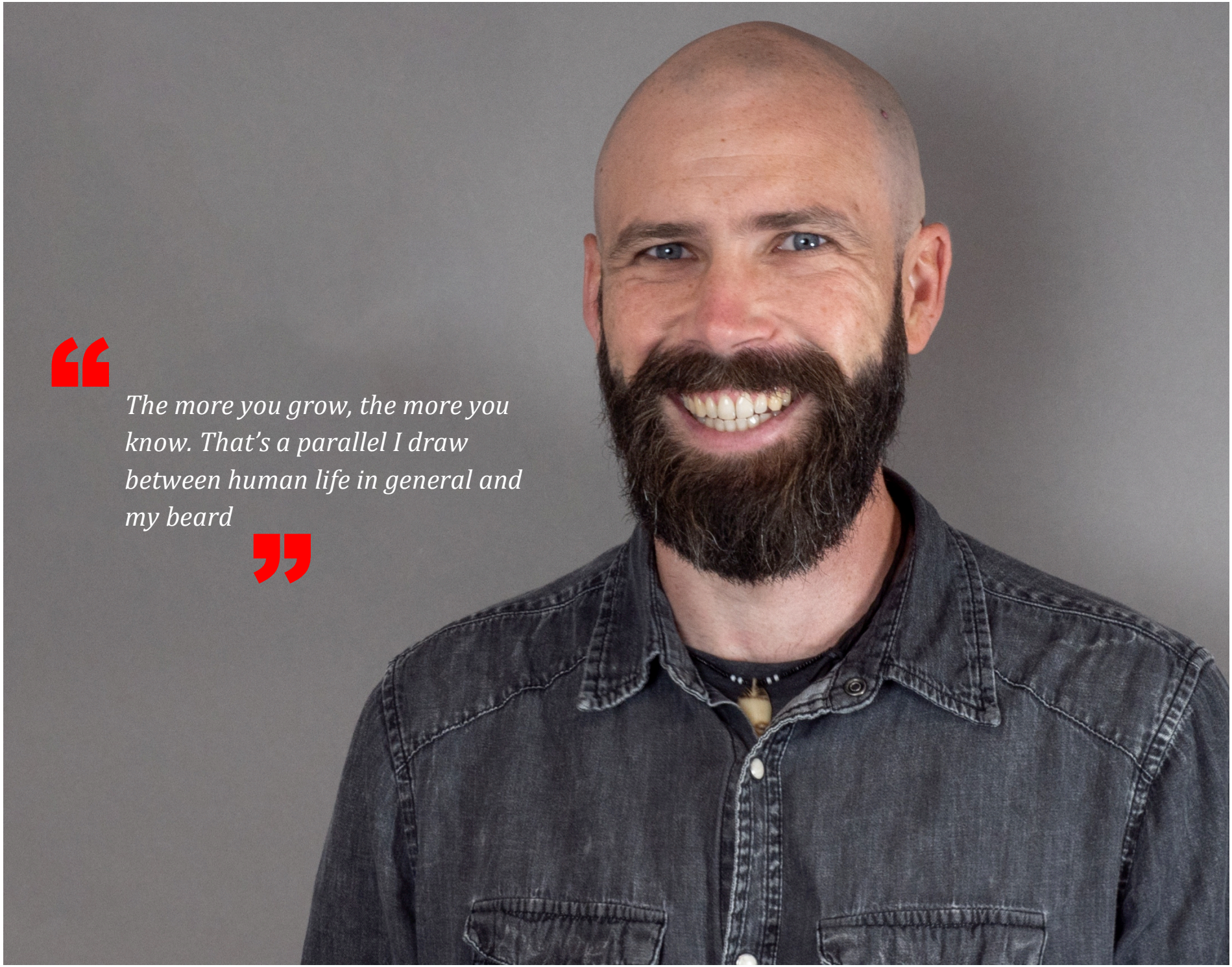
Images on Page 28

Man of praxis: laying a new roof

Ceiling insulation

Clay rendering

Waldorf eco-camp


The more you grow, the more you know. That's a parallel I draw between human life in general and my beard

A Message of Sustainability for All from a Life Lived Full

SAARBRÜCKEN

Mr. Christian Koch has a baccalaureate degree in Environmental Economics from the Environmental Campus Birkenfeld. Mr. Koch commenced his work at IfaS nearly a decade earlier and currently works as a project manager specializing in renewable energy, in particular, PV systems.

Mr. Koch is an outdoorsman. He loves skateboarding and travelling. Fishing is a favourite pastime, which he does in the fishing season in Germany. He also is a passionate and active contributor to uplifting poor communities and childhood education in developing countries. Mr. Koch could be reached at: c.koch@umwelt-campus.de

A PIONEER

Mr. Koch has always been involved in environment related activities since his childhood. His close interaction with nature and the community greatly influenced him to study Environmental Economics. Upon the completion of his baccalaureate, he further went on to furnishing himself with a Diploma, during which he embarked on a project at IfaS that changed basically everything.

In this pioneering and groundbreaking project in 2008, Mr. Koch and his team measured the orientation of over 3,000 rooftops to calculate their Solar PV potentials for a Zero-Emission village plan at *Nalbach.* In Mr. Koch' own words: "*Yes, that's long before most of us even knew the words 'Zero-Emission'*".

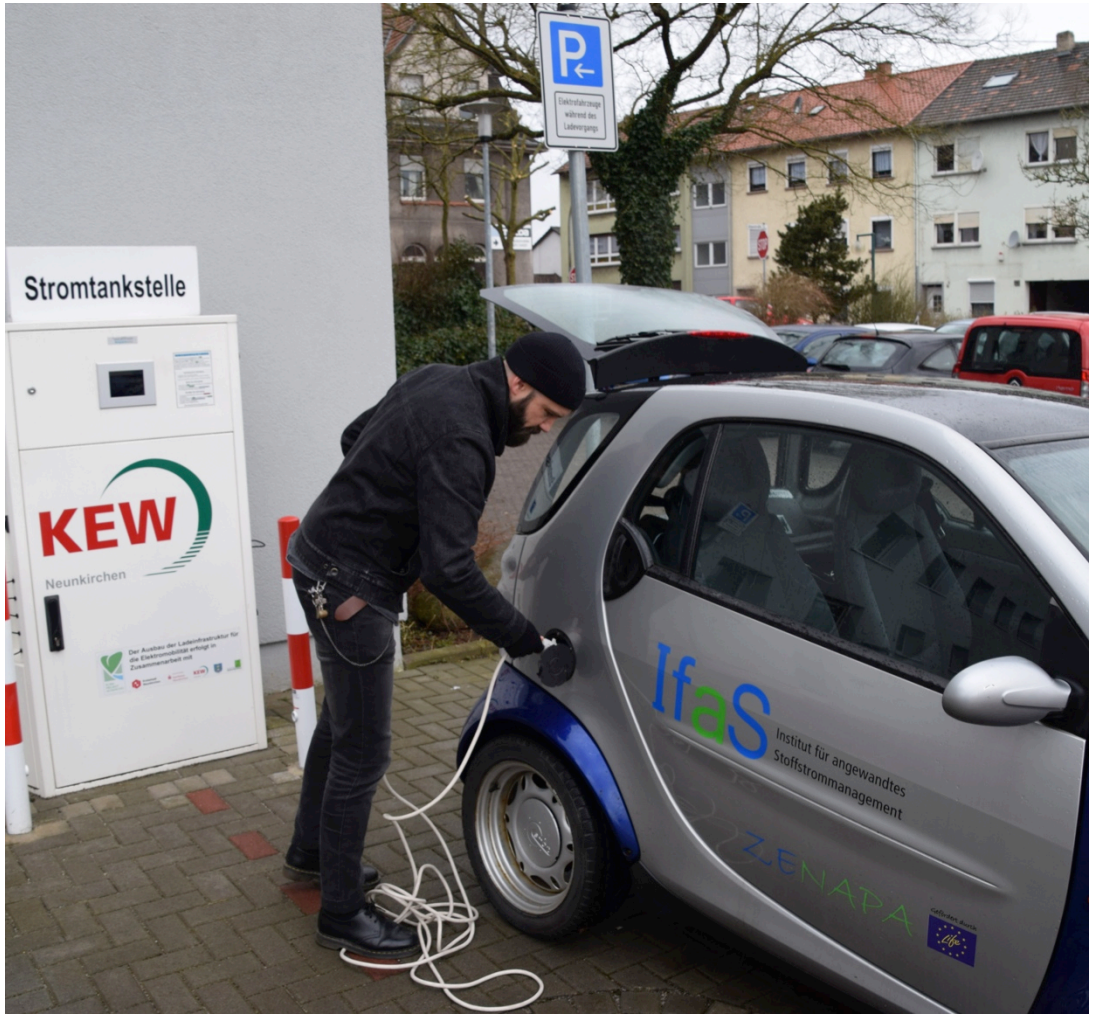
After finishing the diploma, with his newly acquired skills and knowledge Mr. Koch actively engaged himself in many project advocating his family, friends and community to switch to Zero Emission technologies. He convinced his parents to go green and converted his family home's heating system to a renewable energy heating system that includes a biomass-based pellet oven and a solar thermal collector.

UPON SELF REFLECTION…

Mr. Koch was aware and concerned about his own impact on the environment. With careful deliberation, he took a couple of drastic measures in order to reduce his own environmental footprint. In 2011 he sold his car, and ever since he uses public transportation. He also uses his bicycle or the skateboard for daily commute. If a vehicle is required for his work-related travels, he usually borrows an electric car from IfaS.

INTER ALIA…

- As an avid explorer and a traveller, along with his friends, Mr. Koch uses an old Mercedes sprinter –converted to a camper– to reduce his travel-related footprint/impacts such as flights and hotel stays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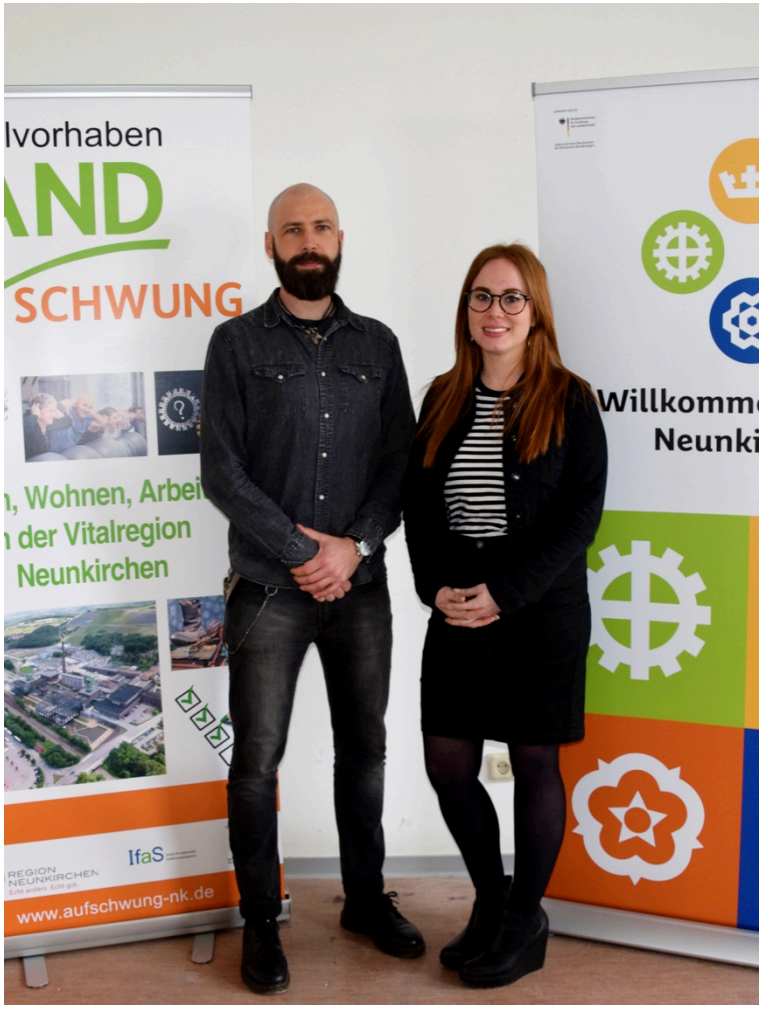
ZENAPA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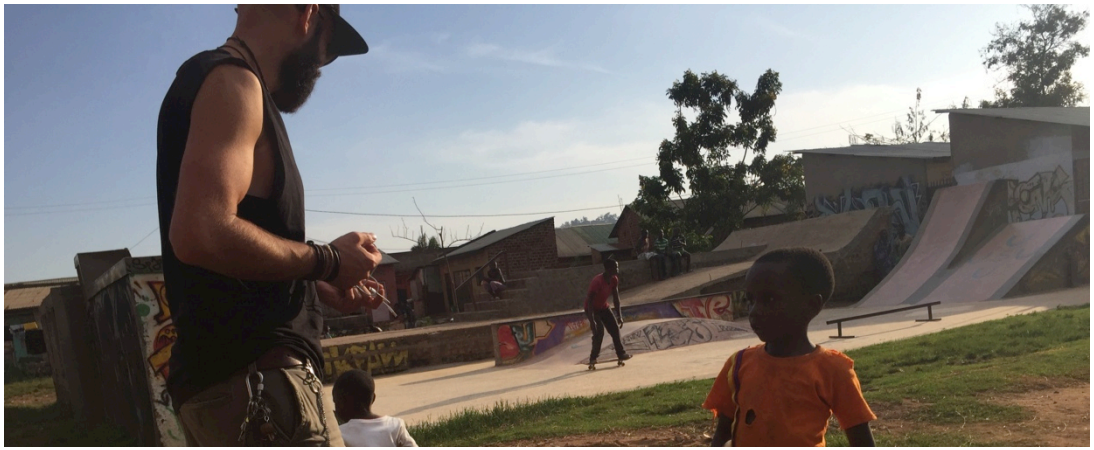

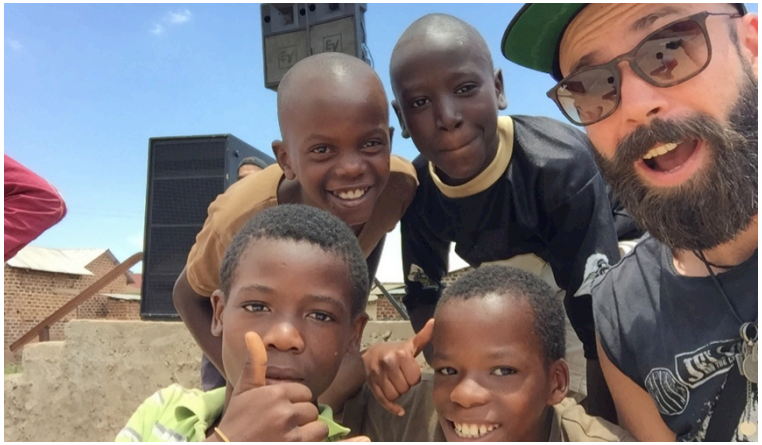

A Message of Sustainability for All from a Life Lived Full *contd.*

SAARBRÜCKEN

INTER ALIA… [CONTD.]

- Mr. Koch strives to reduce his food related environmental footprint by adopting a lifestyle that includes pescatarian diet

- Guided by the motto; '*leave it as you found it*', his strict adherence to the reduce, reuse and recycle practice has drastically reduced the solid waste he adds to the municipal bins

A DIFFERENT APPROACH TO EDUCATION

Going a step beyond Mr. Koch has taken a more philanthropic approach to life by starting his own not-for-profit association in Africa with support from the International Collaboration Society to help young, underprivileged kids and to teach them how to turn waste into products that subsequently pay for their education and help them improve the standard of living. An interesting element in this project is that the kids are taught the complexities of waste and environmental management through fun and games.

A key out-door sport; skateboarding, is used to build the team sprit while keeping the kids' interest in the key activity; environmental management.

As part of his work at IfaS, Mr. Koch works in a collaborative project with Auma Obama –the half-sister of former US president Barack Obama– on a Kids' Climate Conference in Africa and provides training to teachers in the field of sustainability. Although this project is work-related, it is close to his heart as Mr. Koch is passionate about helping underprivileged kids around the world.

HIS OWN PERSPECTIVE

"A Climate hero will live by what s/he believes in. Everyone has a choice to make, a choice to believe in certain principles of sustainability and live by. However, an important thing to be conscious about is that the choices you make, no matter how big or small, has a big and lasting impact today and in the future. I'm reducing my impacts; so can you."

Images on Page 32

Using e-mobility as much as possible	*Supports multiple climate action projects*
Sports as a platform for education	*Caring for kids*

Jot Down the Good Ideas Before You Forget

NOTES & CONTACTS

IMPRINT

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