

STUBE Hessen-Seminar
24th-26th May 2019 in Fulda

“We are what we eat? Ways to achieve sustainable consumption”

- Seminar facilitator:** Ms Eileen Paßlack, STUBE Hessen-Referentin
- Co-facilitator:** Ms Alejandra Isabel Garcia Hernandez (Honduras), Educational Science, Goethe University Frankfurt
- Target group:** Students from Africa, Asia and Latin America studying in English in Hessen
- learning goals:** SDG 2 – zero hunger; SDG 12 – Sustainable Consumption and Production; Sustainable Development Goals; Millennium Development Goals; exploring the difference between food loss and food waste (FLW) and understanding FLW as a misuse of the labour, water, energy, land and other natural resources that went into producing it; discussing the main drivers of unsustainable consumption; reflecting on how to provide the same or better services to meet the basic requirements of life and the aspirations for improvement for both current and future generations, while continually reducing environmental damage and risks to human health; having an insight in local and regional projects to improve resource efficiency through designing innovative solutions to reduce food waste; presenting examples of the participants countries as well as comparing the situations with other countries and regions; discussing how responsible consumption and production can be achieved through examples like adjusting the value paradigm – from the linear to a circular model of value chains; discussing the role of traditional knowledge as part of a sustainable consumption; assessing the nutritional value and the environmental impact which food has through the stages of its production and consumption
- Participants:** The number of registrations totalled 55 and a number of 28 students participated in this English speaking seminar (18 women, 10 men), where childcare has been offered for eight children. Out of 28 participants, 13 participants attended a STUBE seminar for the first time. All in all, the number of represented countries was 20. Divided by regions, 14 students from 9 african countries, 10 students from 7 asian countries, 1 student from 1 state in the MENA-region, 2 students from 2 latin american countries and one student from Europe participated in the seminar.

Process of the seminar

The seminar took place as planned.

Friday, 24th May 2019

The seminar started with a welcome speech for the participating students by the instructor Eileen Paßlack and co-instructor Alejandra Isabel Garcia Hernandez. The programme started at 7:45pm, after dinner. Ms Paßlack and Ms Garcia introduced themselves. The instructor presented the various offers of STUBE to the new participants. Together with the participants the co-instructor developed different rules that need to be followed during the seminar, like respect, punctuality, no side-talking. The co-instructor then assigned duties like taking pictures to some participants who volunteered. Following the more general introduction, Ms Paßlack gave an introduction to the Sustainable Development Goals in general with a special focus on SDG 2 and 12. Also the participant Ms Araba Amo-Aidoo presented her PhD-project “The Design, Installation and Testing of a Solar Photovoltaic

and/or Solar Thermal Energy System for Food Processing with Emphasis on Tropical Application; A Case Study of Ghana, Department of Agricultural and Biosystems Engineering, University of Kassel.” Afterwards Ms Garcia introduced the participants to some games to get to know each other.

Saturday, 25th May 2019

After breakfast, the co-instructor started the first workshop session with an energizing activity game and introduced the speaker Ms Prof. a. D. Dr. Barbara Freytag-Leyer, who presented the project “Food Heroes – Interreg North-West Europe Project”. The project aims at improving resource efficiency through designing innovative solutions to reduce food waste.

The FAO estimates that each year one-third of all food produced for human consumption in the world is wasted. In recent years several projects looked into this topic with focus on the last parts of the chain: retail and consumers. The project focuses on the first parts of the chain for fish, meat and fruits and vegetables. The cooperation partners are from different European organisations: Provincie Noord-Brabant (Netherlands), Dutch Design Foundation (Netherlands), Innovatiesteunpunt (Belgium), Flanders District of Creativity vzw (Belgium), Association des Chambres d’Agriculture de l’Arc Atlantique (France), Technopole Quimper-Cornouaille, (France), SPESSART regional e.V. (Germany), Bord Iascaigh Mhara (Ireland), Clean Technology Centre (Ireland), University of Lincoln (United Kingdom), Laval Mayenne Technopole (France), In Ovo B.V. (Netherlands). As it is a European project each participating country has a special focus according to its local conditions. Spessart regional e.V. and Fulda University of Applied Sciences will achieve a better appreciation of chicken and goats. The aim is to develop innovative, suitable solutions with producers, manual food processing, catering, retail industry and to test these solutions in the food sensory laboratory.

In her presentation Prof. Freytag-Leyer explained what Food loss and waste is. Food loss and waste (FLW) represent a misuse of the labour, water, energy, land and other natural resources that went into producing it. Food embodies much more than what is on our plates. It is, therefore, important that we recognize, appreciate and respect the value of food. **Food loss** refers to any food that is lost in the supply chain between the producer and the market. This may be the result of pre-harvest problems, such as pest infestations, or problems in harvesting, handling, storage, packing or transportation. Some of the underlying causes of food loss include the inadequacy of infrastructure, markets, price mechanisms or even the lack of legal frameworks. Tomatoes crushed during transport because of improper packaging is one example of food loss. **Food waste**, on the other hand, refers to the discarding or alternative (non-food) use of food that is safe and nutritious for human consumption. In a group work the students had to find someone from another country to exchange the perspectives from their countries on the following questions:

In countries like Nepal, Rwanda, Ghana or Benin food loss is caused by instable transportation systems and infrastructure. The participants heard a positive example that Rwanda banned the use of plastic bags since 2008. In 2008 the East African nation decided to put the ban in motion. Luggage is searched at the border, and any and all forms of plastic bags are confiscated before entering the country. Instead of using plastic carrier bags, businesses have made the transition to using paper as an alternative. Instead of providing tax incentives to companies that manufactured plastic bags, authorities encouraged them to recycle, which therefore created a new market for environmentally friendly bags – a market that did not exist prior to the ban. In Mongolia the extreme weather differences between winter and summer as well as the rough landscape are big challenges. In Argentina the food production is not distributed fairly. There is a big a food production sector in Argentina but mainly for exporting into other countries. Dependence on other countries which are the big players in the global market is another challenge. Prof. Freytag-Leyer recommends supporting cooperatives through direct marketing. In Nigeria preservation, electricity and storage are further challenges. Sometimes the prices rise and when they are on a lower level people buy more than they

consume because there is uncertainty on the development of the prices. The co-instructor explained that Honduras is a small, poor, fertile country, with a sunny climate and myriad rivers and it was once dominated by banana trees. In the last years African palm plantations have increased by almost 50%, having replaced bananas and other edible crops. African oil palm (*Elaeis guineensis*) is a species of palm tree native to West Africa. African palms, the saturated oil of which is a staple ingredient in processed foods and biodiesel, are now the most profitable crop in Honduras but also need a lot of water and are one of the biggest drivers of deforestation.

In summary food is wasted in many ways:

- Fresh produce that deviates from what is considered optimal in terms of shape, size and color, for example is often removed from the supply chain during sorting operations.
- Foods that are close to, at or beyond the “best-before” date are often discarded by retailers and consumers.
- Large quantities of wholesome edible food are often unused or left over and discarded from household kitchens and eating establishments.

Less food and food waste would lead to more efficient land use and better water resource management with positive impacts on climate change and livelihoods. The students proposed many solutions.

The second workshop of the day was held by Ms Tooba Jamil. The co-facilitator welcomed the speaker who is a Junior scientist/PhD Student at the Faculty of Organic Agricultural Sciences - Department of Organic Food Quality and Food Culture at Kassel University in Witzenhausen. Ms Jamil has completed her Master’s degree in "International Food Business and Consumer Studies" in June 2018. Her research focus is pursuing to develop a framework to document organic food systems case studies. She did her Bachelor’s in Economics with specialization in Food and Nutrition from Lahore College for Women, Pakistan. She started her workshop with an introduction on sustainability and sustainable development, consisting of the three dimension of sustainability: People, Planet and Profits. The social aspect of sustainability focuses on balancing the needs of the individual with the needs of the group. Environmental sustainability occurs when processes, systems and activities reduce the environmental impact of an organizations facilities, products and operations. Economic sustainability is used to define strategies that promote the utilization of socio-economic resources to their best advantage. She asks the participant on influential factors of consumption. They answered with factors like quality, price, income. She added factors like needs, values, goals, culture and identity and presented the video [“the story of stuff”](#) on consumption. In the context of modern food consumption patterns she showed some statistics on malnutrition. 821 million people do not get enough food (10.9 %). According to the WHO/FAO and OECD the demand is rising for out-of-home food consumption but also processed and frozen food. The main drivers of unsustainable consumption are growing population, increasing urbanization and rising incomes. There are also effects of food consumption on the environment, which can be illustrated with the double food and environmental pyramid model emerged from research and an evolution of the food pyramid, which forms the basis of the Mediterranean diet. The double food and environmental pyramid highlights the extremely close links between two aspects of every food: its nutritional value and the environmental impact it has through the stages of its production and consumption. Foods with a lower environmental impact are also recommended by nutritionists for their health benefits, while foods with a high environmental impact should be consumed with moderation because of the effects they can have on our health.

Sustainable consumption means “the use of goods and services that respond to basic needs and bring a better quality of life, while minimizing the use of natural resources, toxic materials and emissions of waste and pollutants over the life cycle, so as not to jeopardize the needs of future

generations". Sustainable consumption is an umbrella term that brings together a number of key issues, such as meeting needs, enhancing the quality of life, improving resource efficiency, increasing the use of renewable energy sources, minimizing waste, taking a life cycle perspective and taking into account the equity dimension. Integrating these component parts is the central question of how to provide the same or better services to meet the basic requirements of life and the aspirations for improvement for both current and future generations, while continually reducing environmental damage and risks to human health. A key issue is therefore the extent to which necessary improvements in environmental quality can be achieved through the substitution of more efficient and less polluting goods and services (patterns of consumption), rather than through reductions in the volumes of goods and services consumed (levels of consumption). Ms Jamil showed that SDG 12 on responsible consumption and production can be achieved for example through adjusting the value paradigm – from the linear to a circular model of value chains. Also traditional knowledge should be part of a sustainable consumption.

Sunday, 26th May 2019

The final day of the seminar began with an energizing activity and the co-instructor introduced the speaker Mr Zewdie Adane Mariami, STUBE Hessen participant, who currently is a student in the IPPAE Ph.D. Program "Agricultural Economics, Bioeconomy and Rural Development" for Students from Developing Countries at Justus-Liebig-University Giessen. The IPPAE Ph.D. Program is a program within the Institute for Agricultural Policy and Market Research at the Department of Agricultural and Environmental Politics in cooperation with the German Academic Exchange Service (DAAD). Mr Mariamis regional research focus is Central and Western Ethiopia (Rural development projects on livestock and irrigated commodities value chains), Northern and Upper West regions Ghana (Innovation platforms and actor networks in the Volta basin). His research topics are milk production efficiency and dairy technology adoption in Ethiopia. During his workshop he challenged the participants to answer some quiz-questions, like which country is the biggest producer of milk? What percentage of cow milk is composed of water? Or what is the estimated number of dairy products? The speaker showed why humans have evolved to drink milk and presented the recent trends in global dairy consumption, which increased by 32 % from 1990 to 2005. To show the new way of viewing the economic, social and ecological aspects of the Sustainable Development Goals (SDGs) and how they are all linked to food, he presented a model by the Stockholm Resilience Centre. The new illustration is based on one of the iconic figures of the centre, "the wedding cake" and implies that economies and societies are seen as embedded parts of the biosphere. This model wants to initiate a transition toward a world logic where the economy serves society so that it evolves within the safe operating space of the planet. The model developer concluded that actually all the sustainable development goals are directly or indirectly connected to sustainable and healthy food. They also put forward that goals on eradicating poverty (SDG 1) and zero hunger (SDG 2) requires gender equality (SDG 5), decent jobs (SDG 8) and reduced inequality (SDG 10). In a group exercise the participants worked on the following aspects 1. What are the negative consequences of dairy consumption and production? 2. How sustainable is the dairy production and consumption system in your region/continent? Do you have examples from your countries of origin? 3. What are possible remedies to reduce the negative effects of dairy? The participants gathered different answers, like increased emission of greenhouse gases / climate-warming gases through methane, which contributes 52 % of dairy cattle's greenhouse-gases. At the end the participants and the speaker discussed alternative foods to substitute dairy milk products, like the high protein non-dairy products chickpeas, peas and beans which have a high amount of calcium.

Used methods and evaluation of the seminar

At the end of the last workshop, Ms Paßlack and Ms Garcia closed the seminar and asked the participants to fill in a short evaluation form. After that every participant had the chance to share their impression from the seminar.

Following methods were used: different games to get to know each other, warming-up games, discussion and question rounds, teamwork in groups, presenting in front of the other participants, power point-presentation, expert talks

Impressions from the seminar:

- New Friends, System thinking, more about dairy production
- The seminar was in English that was very awesome
- Intercultural, cross country discussions was very interesting and informative
- The seminar was conducted in English. I learned new things and get to know about other countries
- New vision for food consumption and productions, with food management. Lots of new and informative ideas to change the word sustainable
- I learned a lot about sustainable consumption, the info was really great and I got self-awareness about my consumption decisions
- sehr interessante Themen, ich habe sehr viel mitgenommen, weil ich nicht vom Fach bin und werde ich 100% meinen Lebensstil ein bisschen nachhaltiger führen
- New info and understandings about one of the most important industries in the world
- I learned more about the topic sustainability and will share my knowledge with other to build a better world
- I can't attend all seminars because of language barriers, but everything was great in this seminar
- Perhaps some workshops have too much theoretical information at once and I couldn't process all the information at once
- Most STUBE Seminars are in German only. That excludes all the exchange students and non-German speaking people. Please take care of us. I hope you take this into consideration

08.07.2019

Eileen Paßlack

STUBE Hessen-Referentin