



# SHOPPING FOR A LANDSCAPE



**Supervisors:** Prof. Dr. agr. Dr. h.c. mult. A. Ploeger, Prof. H. Vogtmann

**Authors:** Pooria Shakouriizee, Maryam Ahmadi, Md Shafiu Islam, Ibrahim Sayman and Tracy Kamerlaing Phillips

## Introduction

There is currently a tremendous amount of labour and effort invested into the food business to provide food for the world. However, the manner in which a large proportion of food is produced is not without consequences; our shopping choices affect not only the people living in lands far away, but also the landscapes in those lands, most often even irreversibly. Our research is about the impact of agriculture on landscape and biodiversity, how an individual's food choices affect the scale of impact, and possible mitigation strategies.

## Objectives

- To substantiate the relationship between the food basket and landscapes in Germany and abroad.
- To enlighten consumers of their food choice effects on landscapes and biodiversity and lost benefits.
- To provide scientific evidence of the detrimental impact of food production on landscapes to policy makers, in partnership with NABU.

## Methods / Procedures

There was limited research available linking the shopping basket to the impacts on landscape and biodiversity. In order to fill this gap, a qualitative secondary research was conducted, in the form of literature review. The main focus of this project work was to convey the importance of landscapes, and the loss of them, to consumers and policy-makers. To achieve this, consumer posters and accompanying brochures were made for NABU.

**Keywords:** Landscape, wellbeing, shopping basket, agriculture, meat, palm oil, soybean, regional food, Rhön biosphere reserve, sustainability, indicators, biodiversity, true cost, food miles, bees, deforestation, conventional, sheep rearing.

## Constraints

There was limited literature relating agricultural practices to the impact on landscape and biodiversity (most literature concentrated on climate change). Different topics were searched while making the consumer posters; the wide range of issues made it challenging to deliver concise messages in the posters. The project work involves German landscapes as well but due to the absence of a native German-speaker in the team, the search for scientific studies in Germany was limited.

## Results



Sources: 1, 2, 4, 8

- Germany's highest contribution to landscape change, in terms of agriculture, revolves around the production of meat and the use of palm oil. It is clear that the majority of landscapes that are destroyed are then OUTSIDE of Europe.<sup>5</sup>
- Changes in landscape affect the amount of biodiversity in a particular area.<sup>6</sup>
- However, there are some labels that consumers can look out for which back the sustainable production of certain foods, and thus have a minimal effect on landscapes around them and abroad.<sup>2</sup>
- Consumers must seek to reduce their intake of animal products because the destruction of landscapes linked to soybean and palm oil production is fueled by the high meat and meat product consumptions of Europeans.<sup>9</sup>
- There are landscape benefits that cannot be quantified by money, e.g. human wellbeing which is linked to different features of natural landscapes.<sup>3</sup>

Product (100g)	Amount of soy (g)
Pork meat	51
Pork sausage	34
Cheese	25
Chicken breast	109
Hamburger	46
Chicken wings	109
Salmon steak	59

Source: 9

## ALTERNATE NAMES FOR PALM OIL

Anything with the word "Palm" in it	Palm Kernel Oil	Sodium Lauryl Lactylate
Cetyl Alcohol	Palm Stearine	Sodium Lauryl Sulfoacetate
Cetyl Palmitate	Palmitate/Palmitate	Stearate
Elaeis Guineensis	Palmitic Acid	Stearath 2 & 20
Emulsifiers 422,	Palmityl Alcohol	Stearic Acid
430-38, 470-8,	Palmolein	Vegetable Glycerin
481-3, 483-5	Sodium Dodecyl Sulfate	VEGETABLE OIL
Glyceryl Stearate	Sodium Kernelate	Vitamin A Palmitate
Octyl Palmitate	Sodium Laurethyl	
Palm Fruit Oil	Lauryl Sulphate	

Source: 7

## Conclusions and future recommendations

- Policy-makers must scrutinise the Common Agricultural Policy in Europe which allows for the cheap importation of food and feed.
- Consumers have a lot of power to drive change in agricultural practices if they would be well-informed about the impacts and would petition their local retailers to source sustainably.
- Surveys regarding the average German shopping basket would be useful to give some quantification of the landscape destruction associated with Germany.
- Quantifying the loss of particular species in terms of money might emphasise the loss of biodiversity to policy-makers.

1 (2013): Say NO to Palm Oil - ihavelychsyndrome.org. Retrieved from: <http://www.ihavelychsyndrome.org/say-no-to-palm-oil-ihavelychsyndrome-com/#.WGVBIPkLIU> on 03.01.2017.

2 Biosphärenreservat Rhön (2014): Verein Natur und Lebensraum Rhön. Retrieved from: <http://dachmarke.brhoen.de/> on 30.12.2016.

3 Biosphärenreservat Rhön (2014): Vielfalt, Entwicklung, Bildung und Forschung - Mensch und Biosphäre. Retrieved from: <http://biosphaerenreservat-rhoen.de/213-worum-geht-mensch-und-biosphaere> on 02.01.2017.

4 BMEL (2014): Regional labelling provides reliable and transparent identification. Retrieved from: [https://www.bmel.de/EN/Food/Food-Labeling/\\_Texte/Labeling-Regional-Products.html](https://www.bmel.de/EN/Food/Food-Labeling/_Texte/Labeling-Regional-Products.html) on 29.12.2016.

5 Khatun, K. (2012): Reform or reversal: implication of the Common Agricultural Policy (CAP) on land use, land use change and forestry (LULUCF) in developing countries. In: Conservation Letters. Vol. 5, p. 99-106.

6 Lymbery, P. and Oakeshott, I. (2014): Farmageddon: The true cost of cheap meat. London: Bloomsbury Publishing plc.

7 Orangutan Foundation International AU In: Ragg, M. -> GO GREEN TIP #112: HOW TO AVOID PRODUCTS WITH PALM OIL. Retrieved from: <http://greenglobaltravel.com/2016/01/03/how-to-avoid-products-with-palm-oil/> on 03.01.2017.

8 WWF (2016): Palm Oil Scorecard 2016. Retrieved from: <http://www.worldwildlife.org/publications/palm-oil-scorecard-2016> on 31.12.2016.

9 WWF (2015): The Hidden World of Soy. Retrieved from: [http://wwf.panda.org/\\_core/general.cfc?method=getOriginalImage&urlimgID=%26%2AB%3C%27%21%2EK%3F%0A](http://wwf.panda.org/_core/general.cfc?method=getOriginalImage&urlimgID=%26%2AB%3C%27%21%2EK%3F%0A) on 09.12.016