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AN ASSESSMENT OF CLIMATE FOOTPRINTS THROUGH THE

ACTIVITIES 0F THREE WOMEN IN YAOUNDE, CAMEROON

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An Assessment of Climate Footprints through the Activities of Three Women in Yaounde, Cameroon.

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Dedication

To All My Heroes

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List of Acronyms

CREAM – Children's Reassurance Ministry

CDA – Critical Discourse Analysis

IDPs – Internally Displaced People

IPCC – Intergovernmental Panel on Climate Change

NGOs – Non-Governmental Organisations

PACJA – Pan-African Climate Justice Alliance

SDGs – Sustainable Development Goals

PASH – Power, Agency, Scale/Structure, History

UN – United Nations

UNFCCC – United Nations Framework Convention on Climate Change

WSF – World Sustainability Fund

WWF – World Wildlife Fund For Nature

Chapter One: General Introduction

The climate change debate is so ubiquitous and topical that policymakers, international organisations, NGOs, governments and even individuals are constantly developing different strategies and tools to address it. Each day, technology, science and reality compete for the spotlight as arguments and theories animate the global debate regarding climate change and related environmental issues. My interest in this topic was triggered during a three-month internship at the World Sustainability Fund (WSF) and was sustained throughout my field research in Cameroon. I hardly fathomed what I was getting into when I stepped into the maze of the climate mine field and its endless ramifications, spanning a broad spectrum of crises and a broad range of solutions. [1]Neo-liberal thinking for example assumes that the solutions it offers should apply globally as individual action is likely to make the world a better place when individuals check their climate footprints. This work, though not seeking to address the how and why of these climate issues, attempts to explore the practical applicability of the footprint tool espoused by WSF.

WSF is an NGO whose mandate is to implement the Sustainable Development Goals (SDG) in various countries in a bid to bridge the gaps between "The World We Create; The World We Want and the World We Need". It seeks to achieve a clean planet through its ecological footprint calculations by translating sustainability concerns into public action. WSF's climate perspective "*weather is emotion – climate is character*" while the "*planet is our home and its comfortability makes us feel at home*" (PowerPoint Presentation by WSF Director on 17-05-2019 aligns with Rees et al. (1995:5) who posit that "*sustainability requires that our emphasis shift from managing resources to managing ourselves; and that we learn to live as part of nature*". WSF offers a jointly developed climate footprint tool to create awareness on individual climate impacts, ensure reduction of individuals'

[1] Lukacs, Martin. 2017. Neoliberalism has conned us into fighting climate change as individuals. (Source: www.theguardian.com/environment/true-north).

carbon dioxide (CO^2) emissions and lead individuals towards realising (financial) compensation by engaging in climate-friendly activities.

During my internship at WSF, I had made arrangements to conduct field work on Fang female agency and climate change adaptation in Gabon. But for reasons way beyond my control, I had to switch to the current topic and conduct field work in Yaounde, Cameroon. Anecdotally, this enlarged my carbon footprint as I travelled several more kilometres by air to get to the field. The inspiration to examine the effects of the activities of three women on climate change resulted from a Climate Action Workshop organised by WSF ahead of a Feel at Home International Fair (February 2019) during which WSF promoted its climate-related activities to the public and show cased its climate footprint tool. This tool assesses activities by individuals in relation to food, travel, home and stuff (household items). However, it is developed by, in and for the West; and does not seem to fully embrace the realities of the other world, my native Cameroon. This research on footprints seeks to ascertain whether they apply similarly in both worlds or not, and to understand the position and role of women in today's climate change discourse; in a bid to answer the general question whether the climate footprint tools and concepts propounded and espoused by Non-Governmental Organisations like WSF resonate in the randomly selected situations of three women in Yaounde, Cameroon. How and why are climate footprints (dis)connected from/to local realities?

The theoretical framework of this thesis focuses on climate debates, gender perspective, power, critical discourse analysis (CDA) and different concepts of climate change. Using literature from online sources, books, journals, I explored the different paradigms of climate change/discourse, particularly the power and history aspects of PASH (Power, Agency, Scale/Structure, History) framework, to show how WSF enacts and reproduces power discourse using the four components (food, travel, home and stuff) of its climate tool. Flotum's (2010) theory of narrative discourse indicates that various actors strategically employ frames related to the effects and potential solutions for climate change in an effort to shape people's preferences, public opinion/policy (Bolsen & Chapiro 2017). Climate footprint, carbon footprint and ecological footprint and related concepts interweave and

revolve around greenhouse gas emissions. However, the production and reception of text, talk and picture data around footprints tell of a broader social order.

The following sub-questions shall guide the understanding of the key investigation of this study:

- What are the different articulations and paradigm transformations around climate change and where does WSF stand in climate discourse?
- How and why has WSF developed the climate footprint and is it a good tool for application to the situations I encountered in Yaounde, Cameroon?
- Could the climate footprint tool have a colonial undertone and thus be used to dominate rather than address climate issues?
- What is the environment for women in Cameroon and their position in society and how do these relate to WSF's climate toolkit components?

The three female respondents in this study are either active or passive actors in the phenomenon of climate change through their market, kitchen or agricultural trajectories. They are housewives, mothers to many children and attached to or somehow involved in agriculture. Madam P. owns and operates a small restaurant and completed secondary school. Madame Etoundi does mixed-subsistence farming and dropped out after primary school. Justice Mabu is a university graduate working in the Judiciary and owns an NGO known as CREAM which seeks to build awareness on climate change and mitigation activities. Interestingly, the socio-economic and cultural environments of these women put them at crossroads in implementing the requirements of climate footprint tools.

Methodology for this thesis is three-pronged, comprising critical discourse analysis, interviews/audio/film and observation/photo, applied by the researcher at WSF and in Yaounde to interact with and keep track of the study's active and partial participants in their real-life environments. Part one of the analysis is based on picture/text/talk data of WSF's neoliberal climate messaging and communication through the footprint tool. The second part focuses on the picture/interviews (audio/video) of the women in relation to the four components of the tool. The thesis generally concludes that WSF's climate footprint tool could be relevant yet dangerous, but applicable if certain attendant measures are taken. As an ethnographic study, this research could reflect experiences in other parts of Africa.

Chapter Two: Literature Considerations

This chapter examines the different articulations around climate change, gender and environment, climate change and power.

2.1. Climate Change Debate

Climate change generally refers to the "increasing changes in the measures of climate over a long period of time including precipitation, temperatures and wind patterns" whereas global warming is one of its aspects that refers to the "rise in global temperatures due mainly to the increasing concentrations of greenhouse gases in the atmosphere" (source: www.usgs.gov/faqs/ accessed on 14-05-2019). The Intergovernmental Panel on Climate Change (IPCC) projections on climate change effects include increase in heat waves, heavy precipitation, decrease in sea ice and water resources particularly in semi-arid regions and other global indicators. For Africa, by 2020, between 75 to 250 million people will be exposed to increased water stress. There will be a 50 percent reduction of yields from rain-fed agriculture and agricultural production as well as severe compromise of access to food.

According to geological records, ongoing climate change is today happening at an unprecedented rate and magnitude. The main causes of climate change are high concentration of greenhouse gases in the atmosphere and anthropogenic (human) activities, which increase surface temperatures and cause global warming (source: www.usgs.gov/faqs/ accessed on 14-05-2019).

Various authors, stakeholders and academics approach climate change from different angles and for different purposes and interests. Werndl (2016:338) posits that properly defining climate can provide clarity about the state of the climate system. He argues that it should correctly classify different climates; it should not depend on our knowledge; should be applicable to the past, present and future and should be mathematically well-defined.

Vlassopoulos (2012) underscores the polyphonic discourse around climate change and the challenges of establishing new institutional equilibriums and policies. In public debates, climate change has undergone different articulatory transformations and morphed from being defined as an environmental degradation problem, to a development problem, to a migration issue and to a security matter. Most recently,

climate change talk is tilting towards climate emergency, crisis, breakdown while global warming is being articulated as global heating (Brian Kahn 21-05-2019. The Guardian). The gender component of the climate change debate also matters.

2.2. Gender Perspective of Climate Change

The climate change debate is not gender neutral (Dankelman 2010). It exposes gender differences regarding the environment from a biological, social, cultural and psychological angle. Gender is an identity. It is also a process that determines how men and women function. According to Kessler-Harris (2012),

> *... gender is the economic, social, political and cultural attributes and opportunities associated with being women and men (...) it is a social expression of particular characteristics and roles that are associated with certain groups of people with reference to their sex and sexuality (p*827).

In Africa for example, poverty is regarded as a biological (natural) phenomenon that affects women. Robertson and Berger, Geiger observe:

> *... the links between reproductive and productive labour constitute a basis for understanding women and class, and are crucial as well to any comprehension of gender as a primary way of signifying relationships of power at all levels of the socioeconomic structure and politics* (1986:116).

In the Fang community of Gabon, women are used as reproductive and productive objects (Mba'a 1950, Ngou 2007, Nkoghe 2010, Baptiste 2018). Similarly, in Cameroon women are responsible for child bearing and rearing, fending for food, cooking, farming and domestic chores.

The interconnectedness of man and nature throughout history proves that human survival and wellbeing depend on nature, natural resources and processes (Owen 1998, in Dankelman 2010). The gathering and production of food (procurement), protection of life, property and territory (water, energy resources, fodder), childbearing and rearing (basic health standards and collection of health plants) [Dankelman 2010] highlight this human–nature dependency.

Social structures and agency that determine what and how mankind does things expose the different levels at which individuals interact with the environment and

the underlying power relations. Despite the environmental use/management and social relationships that bind humanity and the environment together (Rees 1995), women are more connected to and interact more with nature than men (Dankelman 2010). In rural areas for example, women are involved in both nature exploitation/degradation and subordination and oppression (ecofeminism: Nkengla 2017). Women in developing countries provide environmental care through water management, land use and biodiversity and are more affected by environmental destruction: "*in time of disaster, women and girls pay the price because their lives become harder*" (UN Secretary General, 2018 G20 Summit, Nagel 2015).

Climate change also reflects gendered stereotypes. Developing countries which emit less greenhouse gases "are the most vulnerable and women are the poorest of the poor" (Drupont 2012:129). In time of crisis, they walk long distances to fetch water; in time of famine, they eat less to feed their family and in time of natural disasters, they cater for their children who cannot go to school (Drupont 2012). Despite these efforts, misunderstanding of women's needs and priorities resulting from a gap in differentiation of social categories makes it difficult to adjust new policies to shifting demands (Nkengla 2017). These challenges including women's presence/livelihood activities and their agency in climate change issues clearly distinguish them as potential changers and influencers.

Malmström (2012:21) defines agency as "the capacity to act according to the specific socio-cultural context forms". The British Open University defines agency as "the degree to which agents are free to make their own decisions and follow a chosen path of action". Agency entails acting on and changing structures. The climate change debate is dominated by neoliberal ideas and their underlying power structures tend to be rather optimistic about individual-based solutions.

2.3. Climate Change and Power

"Power can be generally defined as "the capacity to control, or the freedom to act, to achieve certain goals" (Source: The British Open University accessed on 25-05-2019). Elishevan (1997:68) expresses power as 'the ability of individuals to act in a directed and voluntary manner and to bring about change'. Power involves systems of domination, rule(s) and connected resources. Foucault's power/knowledge connection therefore implies the use of rules instead of physical

power to control human activity and behaviour. This 'economy of power', as he calls it, is combined with 'disciplinary power' in which development and new technology function together. Foucault also looks at power as 'judgement of normality' in terms of time (if one is late), activity (if one is not attentive) and behaviour (if one does not behave properly), which are evident in climate change discourse.

Power exists and is negotiated in relationships between individuals and groups at local, national and international spheres. Within the context of development, power is embedded in the state (to direct the model of development or to influence international relations), in institutions and in ideas. Power is also applied in relations (between people and institutions) through the interaction of ideas and relations with each other. Power can be exercised politically, economically, socially and culturally and climate change is a domain that exposes shades of power interactions (Dankelman 2010, 2012; Sara De Wit 2011, Rahman 2012).

Developed countries are known to hijack climate change discourse. The United Nations (UN) epitomises the time, activity and behaviour aspects of Foucault's power theory through the positions articulated at various climate change conferences, summits and workshops. At the December 2018 G20 Summit, the UN Secretary General said that by 2030, climate change can cause devastating loss of productivity and trillions of dollars to the global economy; but since *'science'* has made available the knowledge of the size and nature of climate change damages, *'we'* have the ingenuity and tools to combat these damages by creating green economy, water supply, sanitation policies, among others (outlined in Tannen 1981). He further said that, "leaders must lead. We have the moral and economic incentives to act but lack leaders". Elisheva summarises such climate change power discourse:

> *Power has to be acquired, may only be exercised and is a matter of authority. Power belongs to an individual and only to the collective. Power cannot be attributed to anyone. It is a quality of social systems. Power is productive and makes development possible. Power is an evil, a good, diabolical and routine. (1997:70)*

The United Nations is a foremost international social structure and reference body, whose rules are prescribed, broken down and implemented in different ways across countries. Climate change is qualified by the UN as an 'all time challenge' involving power dynamics at different levels: scientists conducting the research, structures approving the results, strategies (Sustainable Development Goals – SDGs) implementing the recommendations and monitoring and evaluation tools (footprints) and procedures.

To conclude, climate change engages with issues of power in a dynamic and historically informed manner. Climate discourse/debates have transformed from an environmental to an anthropogenic problem. In this complex reality, women's role as active changers cannot be overlooked. Within its broad social and cognitive framework, this study applies critical discourse analysis to assess the structures of picture data, text and talk (audio/video) to determine how WSF's individualistic modelling of footprints exhibit their neoliberal discursive power towards climate change and how this approach is (dis)connected from/to local realities of three women in Yaounde, Cameroon.

Chapter Three: Methodology and Tools

This chapter examines how I gathered and processed data for this ethnographic study. The various methods I employed include critical discourse analysis, interview techniques/audio/film/photo at WSF and in Yaounde, respectively. In order to explicate the methods, I conducted document research, observed attitudes through participation and used ideas expressed during workshops, informal/formal discussions, interviews and non-verbal communication.

3.1. Critical Discourse Analysis (CDA)

Generally, climate change discourse and subject positions are tailored to shape opinions and preferences (Fleming, et al. 2014). In this work, critical discourse analysis is used as a method to ascertain how climate change "language is socially shaped and is socially shaping" (Fairclough 1993:134). This method keenly investigates the production and reception of climate communication/messaging and assesses the discursive structures and strategies used by WSF to persuade/influence their audience as they reproduce neoliberal dominance in climate-related communication.

Fairclough (2013) defines critical discourse analysis (CDA) as a "way and means of systematically approaching the relationships between language and social structure". He examines language as a form of social exercise, and discourse analysis as the manner in which texts work within sociocultural/institutional practice. Discourse and critical discourse analysis overlap in text and talk as message bearers are engaged in managing the minds/actions of others in their own interests. This study assesses the WSF tool and the constructs underpinning its language. It further analyses the role of conversation and pragmatic situations, strategies/other properties of text, talk, interactions and communicative events in relations between discourse, power, dominance, social inequality in order to determine the (dis)connectedness of climate footprints from/to local realities.

The adequacy criteria of CDA are not merely observational, descriptive or even explanatory (Fairclough 1985). Its success is measured by its contribution to change. Whereas the management of discourse access represents one of the crucial social dimensions of dominance, that is, who is allowed to say/write/hear/ read what

to/from whom, where, when and how, modern power has a major cognitive dimension (Teun 1993). This is facilitated by a detailed description, explanation and critique of the ways dominant discourses (indirectly) influence socially shared knowledge, attitudes and ideologies through their role in the manufacture of concrete models and formation of opinions embodied in such models. The footprint is a tool of modern climate paradigm that embraces anthropogenic causes of climate change.

3.2. Interview Techniques and Audio/Film at WSF

My first data collection process for this quasi-ethnographic research began during my internship at the World Sustainability Fund (WSF). I gathered data from PowerPoint presentations, (casual)discussions, interviews (audio/film), photos, document research, notes-taking, networking, online videos, participatory observation, event organisation, country brochure development for Gabon. This research was spurred by the dynamics of WSF's text and talk around climate footprints and the way the Director showcased the organisation's interrelations with the UN through its implementation of SDGs. I therefore developed social cognition to process, store and investigate the functions and consequences of this tool in a non-Western context.

From January to March 2019, I conducted internship and research activities in two locations: the World Sustainability Fund (WSF), The Hague and Yaounde, Cameroon. During my internship at WSF, I worked with the Country Management Department whose duties are: analysing social and environmental issues of chosen countries, building toolkits and developing country brochures, creating and/developing country networks and teams, presenting PowerPoints, drafting letters for main project influencers, opening country offices and starting projects.

As a volunteer and later on an intern, my work and research helped to produce a country brochure for Gabon - a booklet that comprises nine sections: brochure summary, introduction to WSF, guideline, analysis toolkit, country projects, the team, process of contract agreement, contact and appendix. The document is part of a Country Sustainable Development Program developed by WSF that generally applies to every country based on the National Adaptation Program of Action (NAPA) and/or Intended Nationally Determined Contribution (INDC) of each

country. It also gives a stocktaking of important projects, financial, and organizational contacts and proposes Sustainable Development projects that could be implemented in a given country.

Figure 1: The birthing process of my research topic

While developing the brochure, I observed and participated in workshops, discussions. Interviews and filming constituted one of my main research methods. Iana, a Russian expert at WSF accepted to co-create my data:

Figure 2: Video interview with Iana at WSF office (January 2019)

The pre-field tool-testing inspired WSF Director to demand for a similar exercise for the organisation. In another filmed interview, Elijah, a Shell staff and country manager for Nigeria at WSF consented and said:

Figure 3: Video Interview with Elijah at WSF office in January 2019

> *Women are pivotal and their contribution to climate change is significant. Women in Africa are very industrious, manage the home, take care of the children and their actions and what they do with the rubbish can have direct impact on climate change. Governments of the countries where these women live are responsible for providing waste-management facilities like the incinerator; and women can become the people that will separate the waste right from the point of its generation to the point of its disposal/management.*
>
> (January 2019).

While participating with the WSF team at the Feel at Home International Fair, I sought consent from Steliana Van De Rijt, founder of Mothers as Leaders organisation, leadership coach and participant and she said:

> *We live in a world where much attention is paid to famous politicians, actors or stars whereas we mothers are particularly disregarded. If we have more mothers as leaders – mothers taking care of their planet the same way they take care of their children, if we have more power for mothers and if they are able to take decisions, they will make sure we don't waste energy. They will make sure we don't burn things we don't need. They will make sure the air their children breathe is healthier. So, I think women have a say in climate change issues in the world.*
>
> (Video interview 03-02-2019).

Figure 4: Source: Video interview with Steliana on 3rd February 2019

Results of the above creative methods and the perspectives of the respondents oriented my data-collection process in Africa. During my field trip, and in addition to direct conversations, I resolved to use film, photo and audio in order to capture relevant implicit and explicit data for critical discourse analysis.

The second aspect was my fieldtrip to Africa to explore how women particularly fit in WSF's climate footprints. While in Yaounde, Cameroon, I collected data using participatory observation, interviews (audio/film), discussions and field visits to respondents' activity sites. Critical data analysis provided understanding of the constructs underpinning WSF's approach to climate discourse and action and how the tool could work elsewhere.

3.3. Interview Techniques and Audio/Film/Photo in Yaounde, Cameroon

In Yaounde, I combined audio, film, photo to my interview techniques while observing and participating in the women's activities. Details of the application of these techniques are presented below.

Direct, live and unscripted conversations propelled interactions with my respondents especially when my fieldwork prospects in Libreville, Gabon failed and I abruptly found myself in Yaounde. I met Christina Asoh, a family friend with whom I discussed my research/fieldtrip intentions and frustrations. She connected me to Madam P., one of the three respondents discussed in this study.

Figure 5: Christina Asoh, fieldwork assistant in Yaounde, Cameroon

Christina Asoh is a teacher from Bafut and lives in Yaounde. She is one of Madam P.'s customers. When we visited Madam P., she also connected me to Madame Etoundi, a member of her food network.

I also met Reverend Dr. Philemon Nfor at a church service. I knew him from childhood through his inspirational meditations and singing.

Figure 6: Rev. Dr. Philemon Nfor at Ecovillage Project site

When I shared my research prospects with him, he contacted Justice Mabu, a member of his Christian network and booked an appointment on my behalf. That was how I made a research visit to the NGO (CREAM) and Ecovillage Project site.

Yaounde is the political capital of Cameroon and sits on seven hills. It has an area of 180km and is 726m above sea level. Its average temperature is 23^{o}C. It is the city that hosts my three respondents (source: www.researchgate.net).

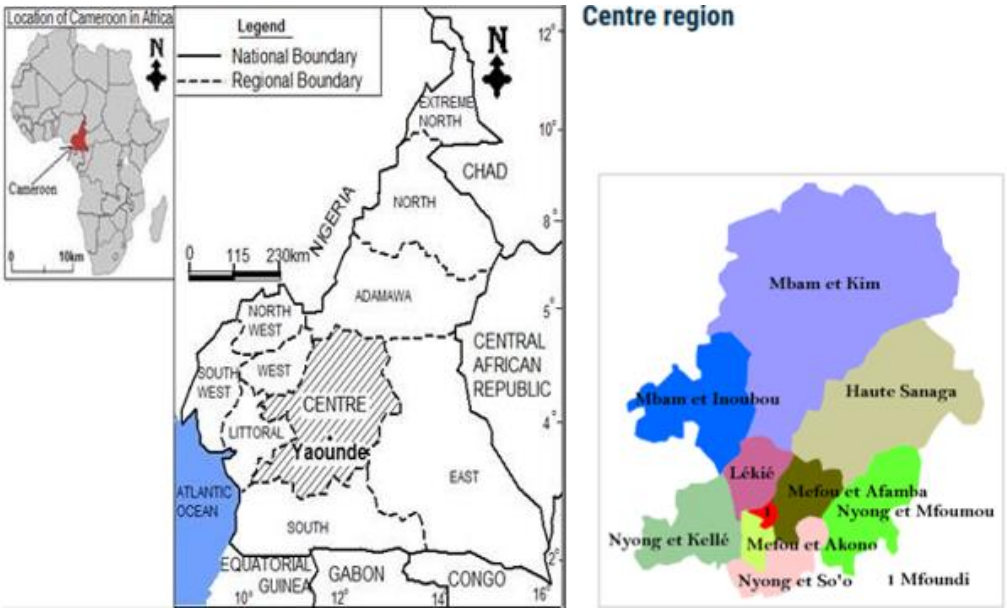


Figure7:Sources : www.researchgate.net

Madam P. and Madame Etoundi live in Damas, whereas Justice Mabu lives in Acacia, Yaounde. Their homes, are located within Mfoundi around primary/secondary schools, a university and some motor parks thereby, favouring most of their daily activities.

Figure 8: Location of Damas. (Source: www.google.com/)

Madam P. purchases most of her food items at the Mfoundi Market, the second biggest in Yaounde, located about four kilometres away from her home.

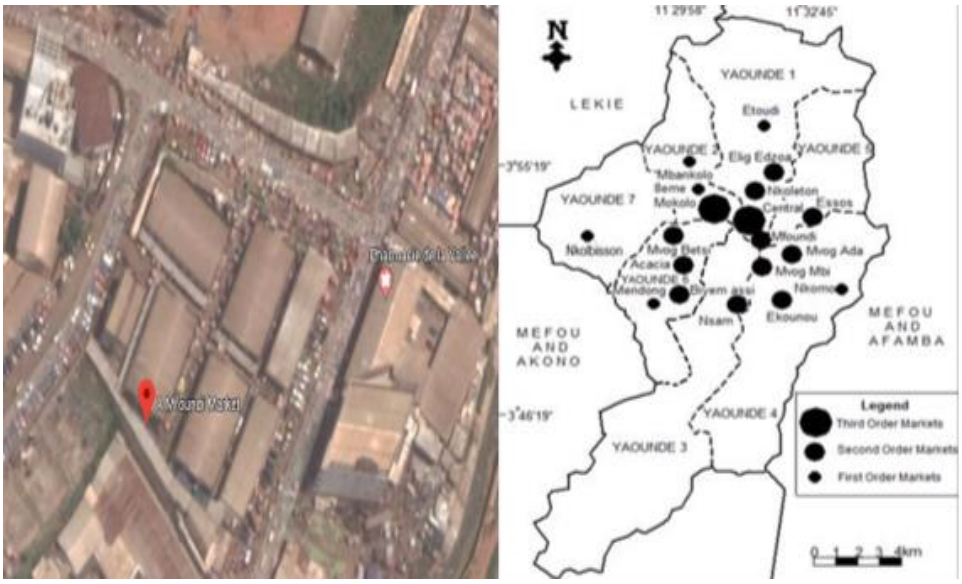


Figure 9: (Left) Satelite view of Mfoundi Market (sources: www.google.com/maps/, www.researchgate.net/publication/328429818)

Another area within Yaounde that served as my data-collection site was Nkometou market.

Figure 10: Nkometou market (sources: fieldtrip and www.camerlex.com/le-village-nkometou)

Nkometou market is located in the outskirts of Yaounde more than 10 kilometres away from Madame Etoundi's residence in Damas. The market is found in the Mendoum subdivision of the Obala Division (www.researchgate.com). It is a weekly market and operates on Sundays. Madame Etoundi purchases most of her food and agricultural items from there.

Akak is also one of the data sites where Madame Etoundi's farm is located. It is a small village situated in the Awae subdivision of the Mefou-Afamba division and has about 200 inhabitants (source: www.wikipedia.org/wiki/Akak).

I collected most of Justice Mabu's data for this thesis at Mfou. It is the capital of the Mefou-Afamba division and covers an area of about 3,358 km².

Figure 11: Mfou: Source: Fieldtrip

Mfou is a rural area whose main activity is farming and has a population of about one million people (source: www.wikipedia.org/wiki/Mfou).

While using various creative methods, I encountered some technical problems that led to the loss of some data (for example, voiceless recording). However, the use of telephone and digital recorder helped me to 'back interview' Justice Mabu after I returned from the field. Most documents I consulted were online publications/books and in some cases only one source provided relevant information. Such were the cases of climate footprint (definition), Akak, Nkometou and Mfou locations.

To conclude, the blend of textual, audio-visual, photo and interview techniques in my research were a reliable means through which I could process, store and then assess the data in an attempt to answer my research questions. In the next chapter, I will present a blend of picture data, followed by textual data of the two research environments. The aim is to critically indicate the discursive climate change practices of WSF as a neoliberal process.

Chapter Four: Climate Change: A Discourse to Change People's Actions

This chapter examines how climate discourse is enacted and legitimated through paradigms, different shades of discourse and tools to influence people's thinking and actions. This perspective establishes the background on which WSF developed its climate footprint tool and the underpinning functions of the language around it.

4.1. Paradigms

Rahman (2012) examines three paradigms of climate change discourse with each developing new perspective based on projections and assumptions. The author states that Benjamin Franklin developed the first climate change discourse paradigm/climate studies in 1763 during the first 'crisis' or 'pre-science' period when there was little knowledge about changing climate. Jean Fourrier began the second paradigm in the 19th century and was followed by scientists in the 1970s during the next 'crisis'. During these periods, climate change was guided by an 'objective view' "(neutral to any Eco-centric or Anthropocentric view) shaped by the notion that it was completely a scientific issue" (Rahman 2012:6). With rising environmentalism, the modern paradigm paints a bleak future for the planet bedevilled by increasing concentrations of greenhouse emissions in the atmosphere.

From the 1980s when climate change took centre stage in public discourse, "it has been manifested by believers that consequences of human activities on world climate has reached an alarming state and are posing critical threats to physical, socio-economic structures" (Rahman 2012:2). Climate sceptics on the other hand have "presented fairly enough evidence to disqualify anthropogenic trait of climate change" while public agenda holds it not only as the "most illustrious environmental issue since the late 20th Century" but progressively inclining to a development problem with a political character (Dankelman 2002, Rahman 2012). Rahman opines that these transformations have led to a completely new paradigm indicating that the environmental term 'Climate Change' also refers to the change in modern climate brought predominantly by human beings. The WSF climate footprints pertain to this new paradigm following its individualistic approach, consonant with IPCC's view of climate change as

> (…) *a change in the state of the climate that can be identified (e.g. using statistical tests) (…) any change in climate over time, whether due to natural variability or as a result of human activity* (Rahman 2012:3).

The United Nations Framework Convention on Climate Change (UNFCCC) also views climate change as:

> *(…) a change of climate that is attributed directly or indirectly to human activity that alters the composition of the global atmosphere and that is in addition to natural climate variability observed over comparable time periods* (Rahman 2012:3).

Dankelman (2002:21-25) and Rahman (2012) contend that although higher greenhouse gas (carbon dioxide and methane) concentrations resulting from human activities continue to alter the atmosphere, about three quarters of the emissions come from fuel burning while the rest is due to change in land use patterns (deforestation, cattle, rice agriculture, etc). Whereas industrialised who have developed socioeconomically at the expense of the colonised world emit 80 percent of greenhouse gases, poor countries who emit little suffer the most adverse effects of climate change. Therefore, the high probability of climate change disparities between industrialised and developing countries will exacerbate inequalities in health and access to adequate food, clean water, and other resources. At the centre of the Paris Agreement tussle between the USA and the other 19 members of the G20 is this very issue.

4.2. Discourse

> *The structure and habits of language which seem self-evidently natural, serve not only as a way to communicate meaning but also to re-establish and ratify one's way of being in the world (*Tannen 1981:470).

Discourse refers not to language as simple conversation, but rather to everything that language use entails, including the active construction of thoughts, identities, and actions (Foucault 1972, 1980; Gee 2003; Kress 1985; in Fleming, et al. 2014).

> *Discourse provides a set of possible statements about a given area, and organises and gives structure to the manner in which a particular, object, process is to be talked about (…) it provides descriptions, rules, permissions*

> *and prohibitions of social and individual action* (Kress 1985:7 in Fleming 2014:5).

Discourse analysis reflects [2]language beyond the sentence used in a particular context. This thesis rather adopts critical discourse analysis to expound different functions of language and how discursive power is reproduced within context of climate change.

4.2.1. Logical Action Discourse

Logical action is a form of discourse that embraces information/knowledge provision persuasion and personal capacity to ensure responsive action and change (Fleming 2014). Therefore, the manner in which information is conveyed is most important if aimed at influencing people. Other important factors of this discourse include personal capacity/context, physical resources (technology, infrastructure, time and money), risk acceptance, motivation, access to support networks personal skills and character traits (Moser and Dilling 2007 in Fleming 2014). Sara De Wit's "Global Warning" epitomises some characteristics of logical action discourse including the reproduction of discursive power by a Bamenda Grassfield chiefs representative:

> *I beg, respect land matters! (…) We burn down our bushes indiscriminately and cut down our trees. If the traditional council sees you burning the soil it will be reported. All land belongs to me and no man can burn my soil or he will be in trouble* (2011:11).

Fleming (2014) further admits that logical action discourse considers resistance to change as a result of insufficient information, less understanding of available information or incapacity to act. Cognisant of this pitfall, WSF logically uses text, photo data and talk to convey its climate stance.

Nevertheless, people may respond to logical action discourse as passive recipients of information and not change their normal ways regardless of their personal context. When individuals are expected to understand, accept and respond to

[2] Source: www.linguisticsociety.org/resource/discourse-analysis (accessed 02-07-2019)

externally-designed climate information communicated by foreign climate message bearer organisations, they might not recognise and own the reasons and/or methods for change since, as climate victims or vulnerable populations, they do not experience same or similar situations.

4.2.2. Complexity Discourse

Hulme (2009), Moser and Dilling (2007) in Fleming (2014:13) posit that

> *(…) climate change is a very complex, pervasive and uncertain phenomenon, generally difficult for people to conceptualise and to relate to their daily activities, arguably because it cannot be easily translated into the language of popular culture (…) a highly specialised science associated with oceans, landmasses, or the atmospher*e.

Therefore, complexity discourse breaks down the details of climate change complexes and nurtures opinions that adaptive and mitigation solutions are possible if things are done differently.

4.2.3. The Culture of Consumption Discourse

Fleming (2014) argues that climate change is highly related to the way people live, interact, eat and relate with the environment. Therefore, it is possible to address climate change only by changing culture:

> *… ultimately, the greatest potential for a shift towards sustainable lifestyles might be through a change in culture – that is, a shift in assumptions about human nature, our relationship with the world around us, the nature of human society, and our aspirations for the Good Life* (Fleming 2014:17).

WSF Director echoed similar perspectives in a conversation on 10-05-2019:

> *It is possible if the people choose and accept to change. It also depends on the kind of future they want for their children. This lies on how they perceive the planet in the next fifty years*.

According to the culture of consumption discourse, individuals have the primacy to make their rational choices to consume what they want and how, based on their affordability and comfortability. However, individuals are generally reluctant to act alone based on the notion that their individual actions will make (only) a minimal

impact on large and complex problems Fleming (2014). As a result, they fail to see their "personal role as part of a significant collective response to climate change" (Bateson 2007 in Fleming 2014). Whether or not WSF's development of the climate footprint tool considers such individual complexes is an issue worth analysing.

4.3. Footprints

Footprints could be considered as power tools used to assess climate impacts and promote best practices. However, by assuming that individual action could make the world a better place if individuals check their climate footprints, the WSF tool appears to embrace [3]neoliberal individualistic thinking which often assumes that the solutions it offers are the best and should apply globally. This section briefly examines the concepts of climate, carbon and ecological footprints.

4.3.1. Climate Footprint

The technical term, climate footprint outlined in this section is a subset of carbon footprint and is different from the generic term used in WSF toolkit. Most sources tend to define carbon footprint. However, climate footprint is a

> *…measure of the total amount of carbon dioxide (CO^2), methane nitrous oxide (N2O), hydrofluirocarbons (NFCs) perfluorocarbons (PFCs) and sulphur hexafluoride (SF6) emissions of a defined population, system or activity considering all relevant sources, sinks and storage within the spatial and temporal boundary of the population, system or activity of interest* (wikipedia.org/wiki/climate-footprint)

It is a combination of greenhouse gases (GHGs) controlled under the Kyoto Protocol (wikipedia.org/wiki/climate-footprint) and is calculated as carbon dioxide equivalent (CO^2e) following a 100-year global warming potential (GWP 100).

4.3.2. Carbon Footprint

Carbon footprint originates from ecological footprint. It is a "measure of greenhouse gas (GHG) emissions associated with an activity, group of activities or

[3] Lukacs Martin. 2017. Neoliberalism has conned us into fighting climate change as individuals (Source: www.theguardian.com/environment/true-north)

a product" (www.google.com). According to the Environmental and Toxicology Studies Journal, carbon footprint

> *… is the calculation of emissions of greenhouse gases caused directly and indirectly by an organisation or company and those that result from fossil-fuel combustion in manufacturing, heating, and transportation, as well as emissions required to produce the electricity associated with goods and services consumed* (www.imedpub.com/scholarly/carbon-footprint-journals).

It involves the amount of carbon dioxide (CO^2) released by the activities of persons and entities. Carbon and climate footprints overlap and are calculated/expressed in equivalent tonnes of carbon dioxide (CO^2e) using a 100-year global warming potential (GWP 100). The calculation of carbon footprint considers direct and indirect greenhouse emitting activities, fossil fuel and other related carbon emissions.

Tao et al. (2013:23) identify four types of carbon footprints: personal carbon footprint which refers to gas (carbon dioxide) emissions from each individual's daily food, clothing, housing and traffic; product carbon footprint which measures the greenhouse gas (GHG) emissions of a product (goods or services) throughout its production, consumption, recycling and disposal processes; organisational carbon footprint that measures greenhouse gas emissions of the organisation's activities including energy consumption in their buildings, industrial processes and company cars; country carbon footprint which measures greenhouse gas emissions generated within an entire country from the energy and overall consumption of raw materials to vegetation/carbon sequestrations, import and export activities (indirect and direct emissions). The U.S. Environmental Protection Agency, the Nature Conservancy and British Petroleum created online carbon calculators to enable people compare their individual estimated carbon footprints with national and global averages and WSF's climate footprints is an online tool.

4.3.3. Ecological Footprint

The World Wildlife Fund For Nature (WWF) defines ecological footprint as [4]"the impact of human activities measured in terms of the area of biologically productive land and water required to produce the goods consumed and to assimilate the wastes generated".

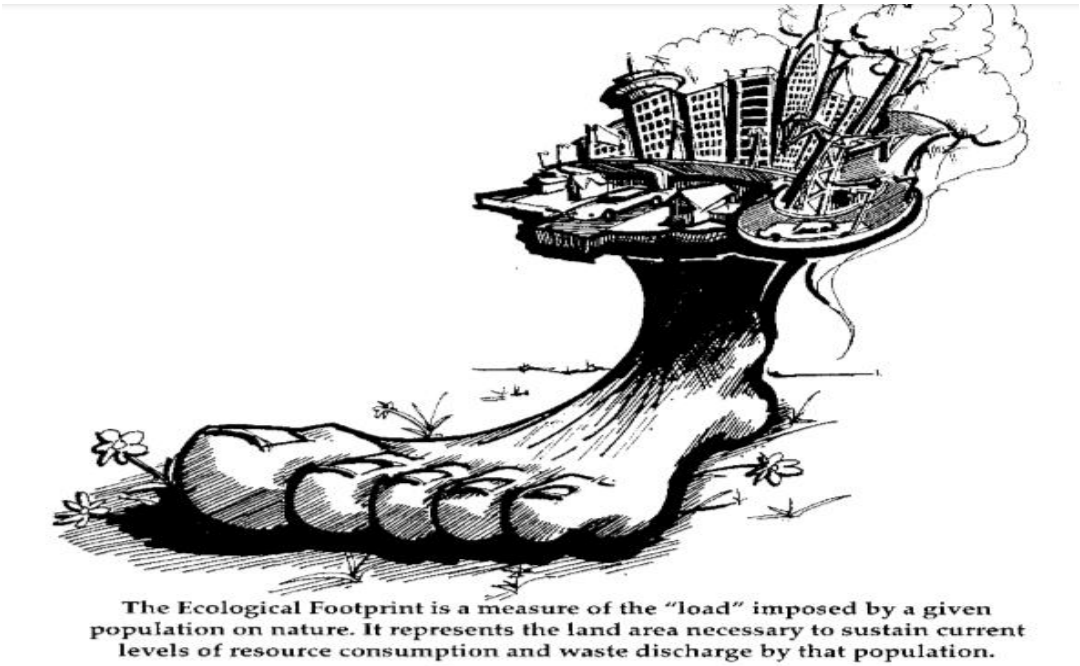


Figure 12: Ecological footprint (Copied from Rees et al. 1990:9)

The concept of ecological footprint was developed by Rees in the 1990s and it measures the environment and how much is needed to produce the resources we consume/dispose of our waste. According to Rees et al. (1995), ecological footprint is

> *(…) an accounting tool that enables us to estimate the resource consumption and waste assimilation requirements of a defined human economy in terms of corresponding productive land area* (Rees et al. 1995:8) (*…) It is an ecological camera that takes a snapshot of our current demands on nature (…) and measures the sustainability gap that society must somehow close to ensure a stable future* (Rees et al. 1995:22).

[4] Source: wwf.panda.org/knowledge/hub/teacher/resources/ accessed on 21-05-2019.

Ecological footprint is also used to measure the effects of humanity (up)on the environment and to highlight the [5]"apparent unsustainability of current practices and the inequalities in resource consumption between and within countries". Today, competitive expansionism has turned humankind into a global culture where the earth is subdued and consumed but unfortunately, even the fastest and richest as well as the slowest and poorest are bound to live on the same planet – Earth (Rees 1990, Dankelman 2002).

Rees (1990), considers climate change as an environmental crisis yet, is optimistic about individual power to finding solutions. His ecological footprint urges individuals to know, recognise, accept their ecological impacts and reduce their behavioural and social complexes that hamper environmental and technical solutions to climate change effects. He believes that humans are competitive organisms and cooperative social beings having an "untapped potential to meet the challenge of reducing their ecological footprint" (Rees et al. 1990:7) for the benefit of collective society.

To conclude, transformed views on climate change causes from eco-centric to anthropogenic activities have turned the phenomenon into a constantly changing one. For this reason, different stakeholders and social structures interrelate to keep up with the pace. Moreover, different patterns of access (to information) are manipulated to shape people's thinking and attitudes towards a given model chosen by a social structure. The next chapter focuses on WSF, an NGO that embraces a neoliberal approach to climate change using the individual carbon assessment model.

[5] Source: www.britannica.com/science/ecological-footprint/ accessed on 21-05-2019.

Chapter Five: The World Sustainability Fund (WSF)

WSF was created by Emile Van Essen in 2011 to facilitate, implement and accomplish sustainable development programmes and projects in countries around the world. It is located at Laan van Nieuw Oost-Indië, 252,2593 CD, Den Haag, The Netherlands.

Figure 13: WSF Director (top), World Sustainability Fund (WSF) location (left) (Source: www.google.com/maps) and office (right)

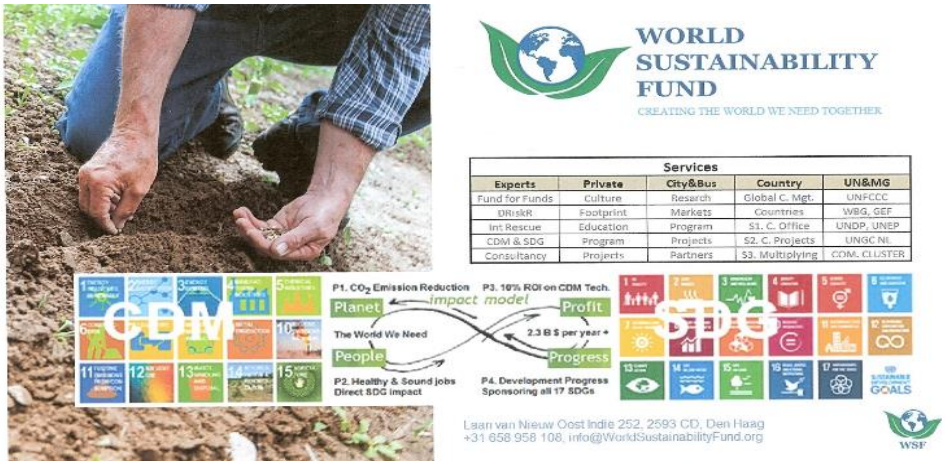


Figure 14: World Sustainability Fund Homepage (source: www.worldsustainabilityfund.nl/)

WSF embraces the modern paradigm whereby anthropogenic activities are the main cause of climate change. Its climate action is based on assessing individuals'

climate impact using a new jointly developed tool - climate footprints. The climate footprint toolkit tackles the much-discussed climate change realities, albeit from a neoliberal angle, and helps people to assess their climate contribution and take action towards reducing climate change effects at their individual levels. To that extent it is generally relevant and cross-cutting.

This chapter is a critical assessment of WSF's climate discourse around the footprint toolkit. It begins with a critical analysis of the toolkit's implicit and explicit messages as I encountered at WSF and demonstrates that the creative techniques used were particularly relevant as reflexive tools for [6]visual storytelling of my research process and that the photos and audio materials are data, carrying textual messages. The aim of this approach is to indicate the critical functions of language in a broader socio-political structure and how through it WSF reproduces neoliberal dominance discourse in climate change. It focuses on a climate mitigation tool – climate footprint.

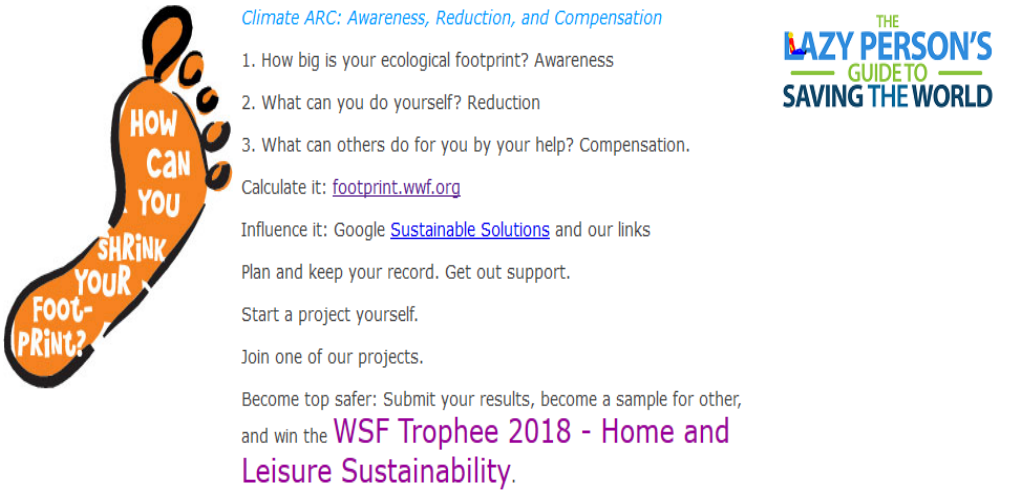


Figure 15: WSF climate footprint tool (Source: https://footprint.wwf.org.uk/#/questionnaire).

This tool was developed to drill WSF experts on communicating the organisation's climate action to the public and encourage people to register and be trained on climate *awareness*, *reduction* and *compensation* (ARC).

[6] Heiderich, T. Techniques: The Different Types of Shots in Film. www.oma.on.ca/en/contestpages/resources/free-report-cinematography.pdf (accessed 01-07-2019)

5.1. Toolkit Assessment

5.1.1. The Lazy Person's Guide to Saving the World

"The lazy person's guide to saving the world" is part of the footprint and concerns various domains through which individuals can save the world namely: by ending extreme poverty, fighting inequality and injustice and then fixing climate change. It is an aspect of logical action climate discourse (Fleming 2014). The underlying meaning of the caption is further explained on the SDG website thus:

> *Change starts with you. Seriously. Every human on earth—even the most indifferent, laziest person among us—is part of the solution. Fortunately, there are some super easy things we can adopt into our routines that, if we all do it, will make a big difference.*
>
> (source: www.un.org/sustainabledevelopment/takeaction/ accessed 20-05-2019)

Do such messages fully resonate with local communities which may feel logically compelled to be responsible for climate problems and solutions?

5.1.2. Climate ARC

Climate footprint's ARC includes *awareness, reduction* and *compensation.*

***Awareness* = How big is your ecological footprint?** The size of the ecological footprint referred to here, is knowledge about the amount of carbon dioxide each individual emits into the atmosphere (directly) or the greenhouse gas emission s/he indirectly contributes to through consumption.

Persuasion is a form of logical action discourse used by WSF to reproduce power in climate change. The strategies of text, talk and verbal interactions are targeted at controlling individuals' emotions so they can be convinced of how much harm they cause to the planet and in turn voluntarily find solutions.

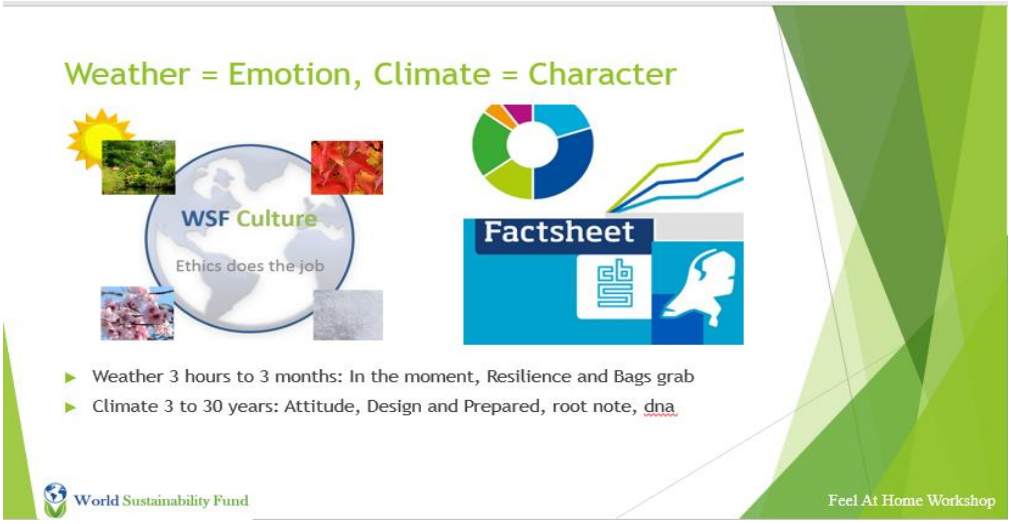


Figure 16: PowerPoint Presentation Slide of WSF Climate Footprint Awareness Creation

> *Weather is emotion. Climate is character. It depends whether each and everyone believes it applies to them or not. It also depends on what kind of planet you would like your children to live in fifty years from now. Feeling at home means feeling good and feeling to stay. Our planet is our home and its comfortability is ours.*
>
> (WSF Director during a climate action workshop on 17-05-2019).

In its awareness creating approach, WSF footprint calculations (not examined in this study) break down the implications of carbon dioxide emission with the notion that individual changes in habits can offer more solutions to climate change effects. This complexity discourse as examined by Fleming (2014) states that a difficult and complex issue can be understood if simplified. During the workshop, WSF Director stated:

> *It's very easy. I can show you. It's possible to cut down CO^2 emissions to 1.5 by 2050. The people in your community in Cameroon can ask themselves what kind of climate future they want to leave for their children. If a clean one, they can sacrifice.*
>
> Director of WSF – 17-05-2019

This tallies with Bowman's observation (cited in Fleming 2014) that individuals should be perceived as "beyond, separate to/outside nature, but that we should also

accept that we are dependent on nature and the world's ecosystems". The perspective also ties with the UN's climate solution projection.

Persuasion is often butressed by the dynamics of complexity discourse in which WSF facilitates the psychological designing of the magnitude of individual carbon emissions in the minds of participants using appealing pictures:

Figure 17: Equating carbon dioxide in tonnes (Source: WSF climate action workshop slide 17-05-2019)

I observed the influence of these slow power dynamics in one participant at WSF's climate action workshop who rather confessed:

> *I didn't know this is how much I was contributing to climate change. I eat a lot of meat in my house. Yes! I eat meat in every meal. From today, I will stop and become a vegetarian. I even intended to buy another car because my wife loves cars; but I have to revisit that plan. I will now do a lot of walking and cycling. It is even good for my health* (conversation: 17-05-2019).

An aspect of personal capacity (morals) inherent in "*WSF culture: Ethics does the job*" could be interpreted as the organisation's intrinsic neoliberal responsibility to provide 'appropriate information' for responsive action (Fleming 2014:10). Similarly, the use of "climate = character" is a means of technically constructing guilt and a sense of moral responsibility (Sara de Wit 2011) in individuals to enable them accept climate change as a risk and be motivated to act after realising how much they (can) contribute to climate change. Therefore, the climate footprint awareness chain could be represented thus:

Information → Communication → Personal Capacity → Action

Although the necessary information could be properly communicated, a careful selection of WSF's climate footprint text translates an unexpressed understanding of inexpressible resistance to climate-related change as may be observed in local socio-political, economic and cultural experiences different from those in the West.

***Reduction* = What can you do yourself?** This aspect of the toolkit requires people to engage in different actions (especially change of behaviour and habits) that would influence proper reduction of greenhouse gas emissions at individual levels. Similar to Fleming's (2014) culture of consumption discourse, it focuses on the way people live, interact, eat and relate with the environment. It admits that individuals have the right to make their own rational choices, deciding on what they want to consume or not and how they want to lead their lives. However, coaxing people to change behaviour and habits by adopting unfamiliar choices can meet some resistance.

***Compensation* = What can others do for you by your help?** Compensation focuses on the ability to gain or save money from active engagement in ecological footprint reduction.

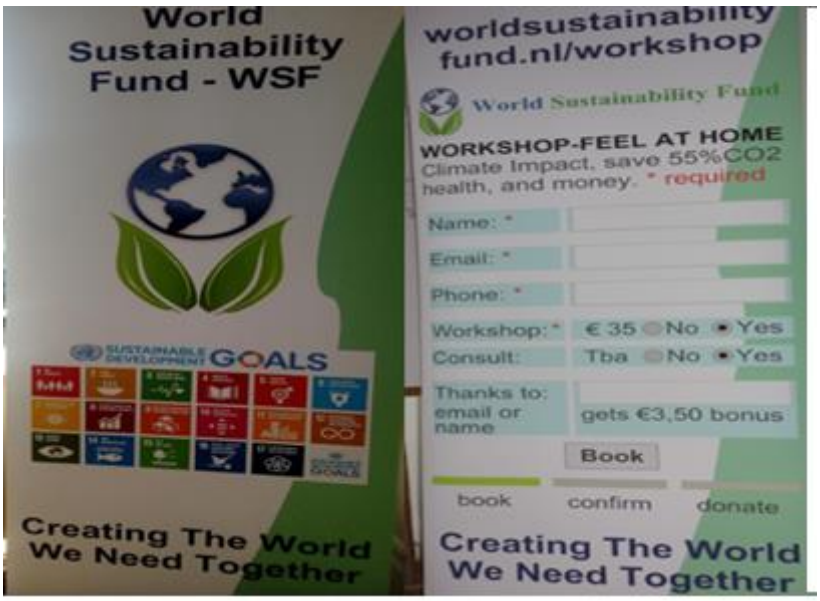


Figure 18: WSF climate action (Source: Photo taken during internship January 2019)

Compensation entails individuals' openness to share their climate-related successes and challenges with (climate) experts, NGOs, governments, regional and

international organisations and in turn generate income or save money through concerted efforts while saving the planet. It presents a power-relation undertone that underlies climate discourse and action. Applicability is also contextual.

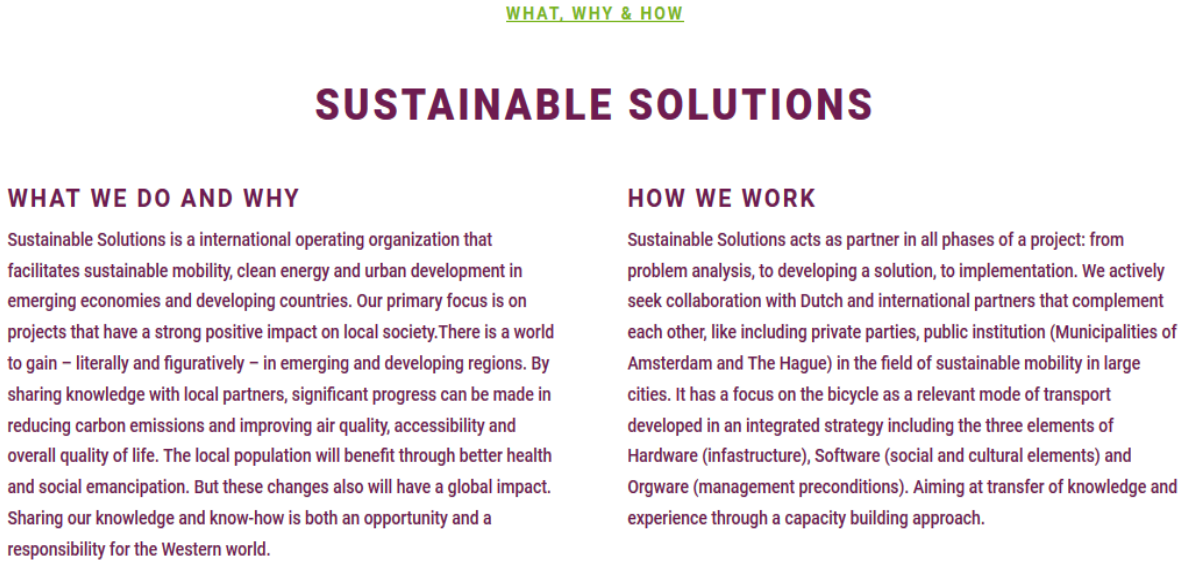


Figure 19: Source: www.sustainable-solutions.nl/ (accessed 02-06-2019)

Sustainable Solutions is a link on WSF's climate toolkit which, when clicked on, provides founding ideas behind the toolkit development. Worth noting is the message content of Sustainable Solutions mission (what we do and why) in figure 19, which indicates the neoliberal perspective of WSF's climate footprint tool:

> (…) *There is a world to gain – **literally and figuratively** – in **emerging and developing regions** (…) Sharing our knowledge and know-how is both an **opportunity** and a **responsibility** for the **Western world***".

The above is an undertone of hidden power discourse which is often not outrightly expressed. Partnering with Sustainable Solutions means sharing its vision/mission. Martin Lukacs (2017) argues that [7]"(…) these persuasive exhortations to individual action (…) and the campaigns of mainstream environmental groups, especially in the West — seem as natural as the air we breathe" but can be used for other unspoken purposes. It is therefore clear that the hidden skeletons of colonisation

[7] Source: https://www.theguardian.com/environment/true-north/2017/jul/17/neoliberalism

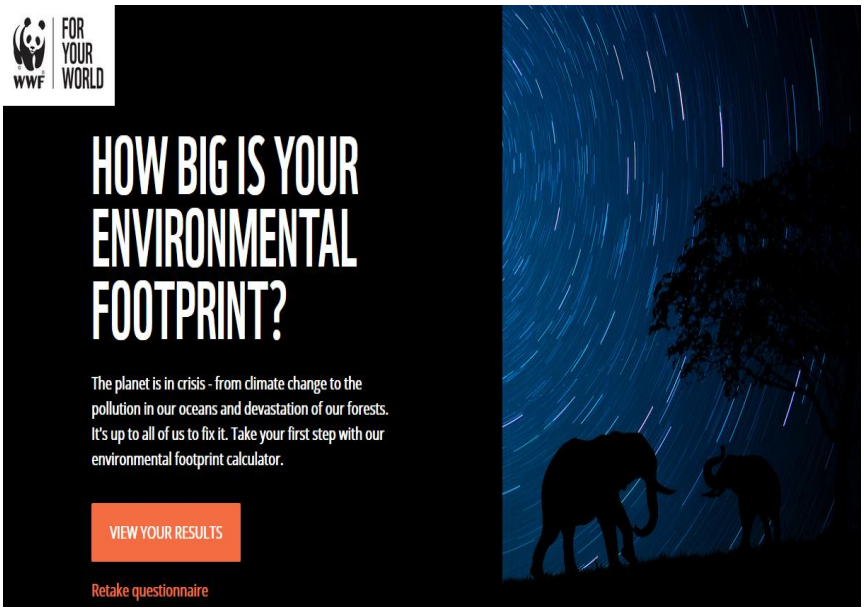
haunting both victors and victims today are at the base of dynamic discourses and actions including climate change.

Calculate it: **footprints.wwf.org**: This link guides users' assessment of their individual ecological footprints through a series of questions and multiple answer choices around food, travel, home and stuff.

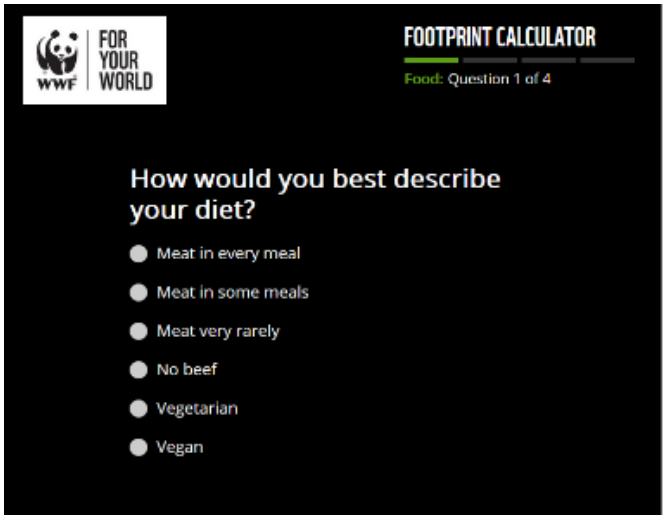
The following section zooms in on the picture data of WSF's climate footprint assessment tool.

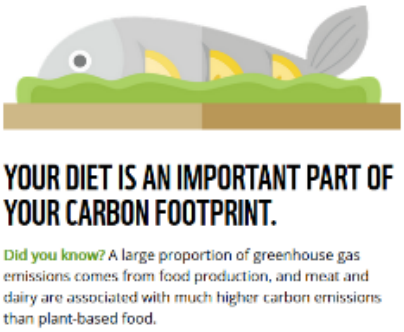
5.2. Climate Footprints in Pictures

The pictures below are a sequential representation of the WSF toolkit which we tested on the ground, in that order, to assess the individual climate footprints of our respondents. The photographs depict the various climate footprint components namely: food, travel, home and stuff. This visual means is employed as a story line on the interlinkages and (de)complexities of language functions in climate change discourse. https://footprint.wwf.org.uk/#/questionnaire is the source of the footprint photo data.

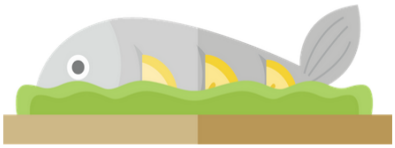


5.2.1. Food

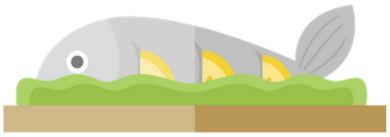

FOR YOUR WORLD
WWF
FOOTPRINT CALCULATOR
Food: Question 1 of 4
How would you best describe your diet?
Meat in every meal
Meat in some meals
Meat very rarely
No beef
Vegetarian
Vegan

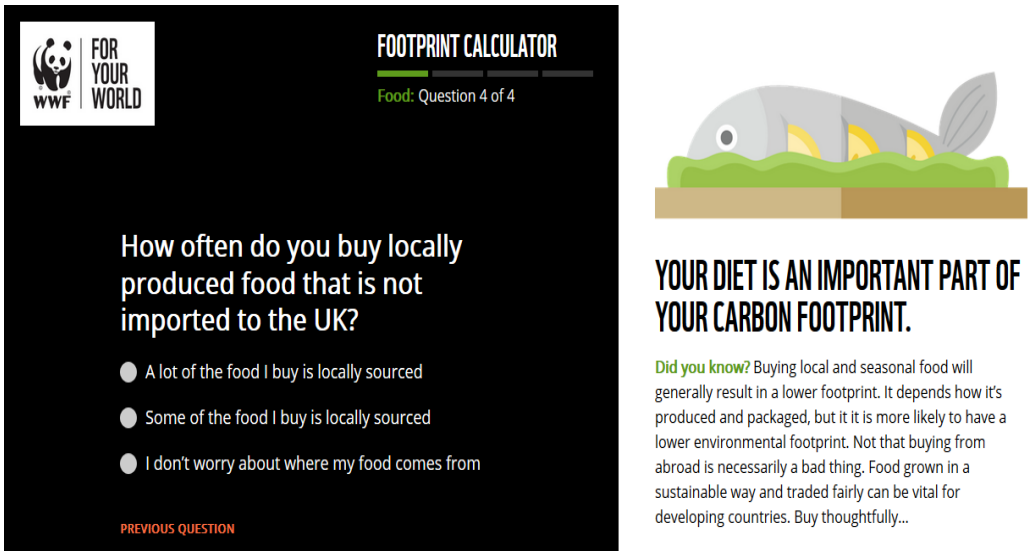

YOUR DIET IS AN IMPORTANT PART OF YOUR CARBON FOOTPRINT.
Did you know? A large proportion of greenhouse gas emissions comes from food production, and meat and dairy are associated with much higher carbon emissions than plant-based food.


FOR YOUR WORLD
WWF
FOOTPRINT CALCULATOR
Food: Question 2 of 4
In a week, how much do you spend on food from restaurants, canteens and takeaways?
£0
£1-£10
£10-£50
More than £50
PREVIOUS QUESTION


YOUR DIET IS AN IMPORTANT PART OF YOUR CARBON FOOTPRINT.
Did you know? Food bought in restaurants has a wider footprint than food you buy to cook at home because of the 'overheads' in the restaurants – the emissions associated with heating, lighting and cooking for your meal. Food from takeaways has additional packaging and additional transport emissions, from the means of getting it from the restaurant to your home.


FOR YOUR WORLD
WWF
FOOTPRINT CALCULATOR
Food: Question 3 of 4
Of the food you buy how much is wasted and thrown away?
None
0%-10%
10%-30%
More than 30%
PREVIOUS QUESTION

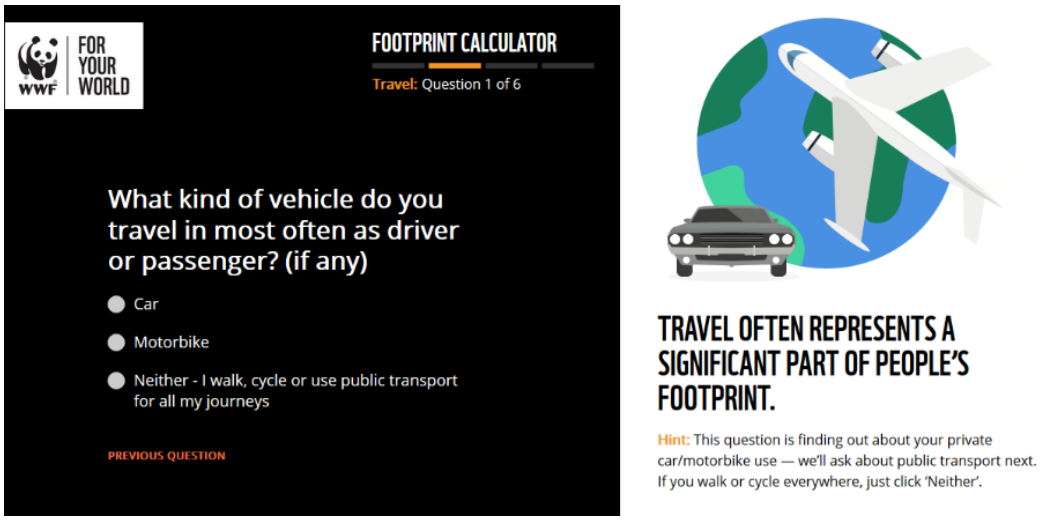

YOUR DIET IS AN IMPORTANT PART OF YOUR CARBON FOOTPRINT.
Did you know? One third of all food produced is wasted. Every year wasted food in the UK represents 14 million tonnes of carbon dioxide emissions. In total, these greenhouse gas emissions are the same as those created by 7 million cars each year.



WSF climate footprints require that people add some variety to their diet. It also states that:

> *The way a given food is farmed is a hugely important part of how sustainable that type of food is. Constant farming of the same crop types will drain nutrients from the soil. Then farming this crop all year long will give no time for the soil to recover. By having a colourful plate, we will be ensuring a more nutritious, natural, flavourful and exciting meal – one that is sync with your ecosystem.*
>
> (source: https://footprint.wwf.org.uk/#/questionnaire)

5.2.2. Travel



FOR YOUR WORLD

FOOTPRINT CALCULATOR

Travel: Question 2 of 6

Which of these best describes the vehicle you use most?

- Electric car
- Plug-in Hybrid car
- Hybrid car
- Small petrol or diesel car
- [x] Medium petrol or diesel car
- Large petrol or diesel car

PREVIOUS QUESTION

TRAVEL OFTEN REPRESENTS A SIGNIFICANT PART OF PEOPLE'S FOOTPRINT.

Hint: This question refers to company cars, taxis and hired cars as well as your own.

FOR YOUR WORLD

FOOTPRINT CALCULATOR

Travel: Question 3 of 6

How many hours a week do you spend in your car or on your motorbike for personal use including commuting?

- Under 2 hours
- 2 to 5 hours
- 5 to 15 hours
- 15 to 25 hours
- Over 25 hours

PREVIOUS QUESTION

TRAVEL OFTEN REPRESENTS A SIGNIFICANT PART OF PEOPLE'S FOOTPRINT.

Hint: This should include personal driving to the shops, on holiday, to visit friends and family, and also your commute to and from work. But it shouldn't include business trips — those are part of your employer's footprint, not yours.

FOR YOUR WORLD

FOOTPRINT CALCULATOR

Travel: Question 4 of 6

How many hours a week do you spend on the train for personal use including commuting?

- I don't travel by train
- Under 2 hours
- 2 to 5 hours
- 5 to 15 hours
- 15 to 25 hours
- Over 25 hours

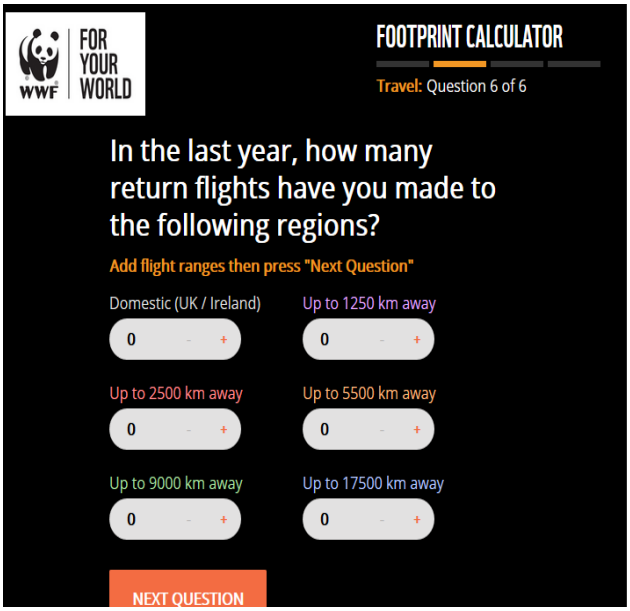
PREVIOUS QUESTION

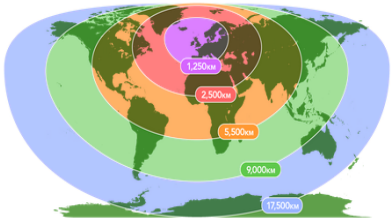
TRAVEL OFTEN REPRESENTS A SIGNIFICANT PART OF PEOPLE'S FOOTPRINT.

Hint: This should include your commute and any other train journeys you make, except business trips (they're part of your employer's footprint, not yours).

TRAVEL OFTEN REPRESENTS A SIGNIFICANT PART OF PEOPLE'S FOOTPRINT.

Hint: This should include your commute and any other bus journeys you make, except business trips (they're part of your employer's footprint, not yours).

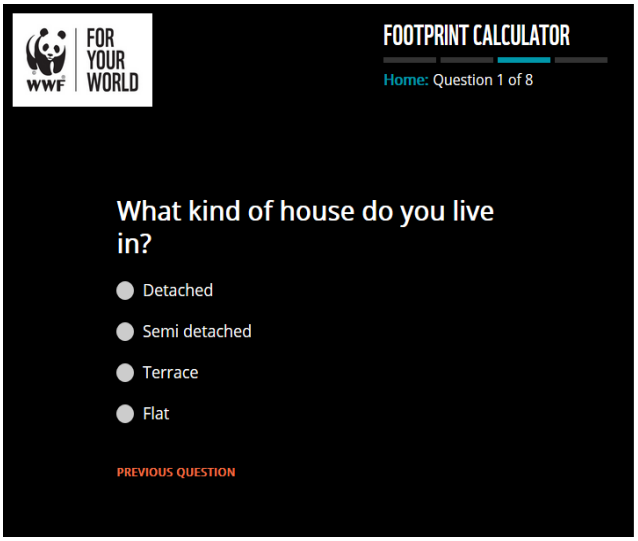


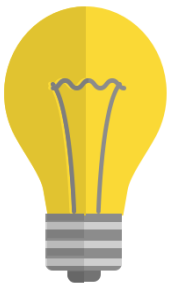


FLIGHT OFTEN REPRESENTS A SIGNIFICANT PART OF PEOPLE'S FOOTPRINT.

Hint: This should not include business trips (they're part of your employer's footprint, not yours). See the image above for ranges in km.

5.2.3. Home





HOW YOU USE ENERGY AT HOME PLAYS A BIG PART IN YOUR CARBON IMPACT ON THE WORLD.

Did you know? 19 million UK homes have poor levels of energy efficiency – meaning that people are wasting energy and money heating the street around their home!

FOR YOUR WORLD

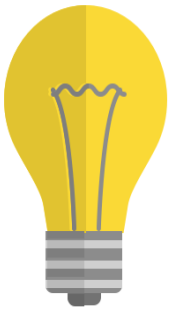
FOOTPRINT CALCULATOR

Home: Question 2 of 8

How many bedrooms does your house have?

- 1
- 2
- 3
- 4 or more

PREVIOUS QUESTION



HOW YOU USE ENERGY AT HOME PLAYS A BIG PART IN YOUR CARBON IMPACT ON THE WORLD.

Did you know? Basic energy efficiency measures – insulation, double-glazing, low-energy lighting – can cut your energy bills by up to a quarter.

FOR YOUR WORLD

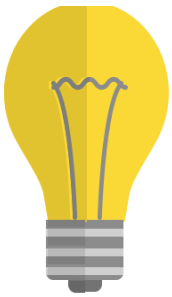
FOOTPRINT CALCULATOR

Home: Question 3 of 8

How many people (aged 17 and over) live in your house?

- 1
- 2
- 3
- 4
- 5 or more

PREVIOUS QUESTION



HOW YOU USE ENERGY AT HOME PLAYS A BIG PART IN YOUR CARBON IMPACT ON THE WORLD.

Did you know? If we switched every light in the UK to low-energy LED lights, we could cut our power needs by the equivalent to more than two new nuclear power stations!

FOR YOUR WORLD

FOOTPRINT CALCULATOR

Home: Question 4 of 8

How do you heat your home?

- Gas
- Oil
- Electricity
- Wood

PREVIOUS QUESTION

HOW YOU USE ENERGY AT HOME PLAYS A BIG PART IN YOUR CARBON IMPACT ON THE WORLD.

Hint Please indicate the primary fuel source that is used. Your energy bill will tell you this.

WWF FOR YOUR WORLD

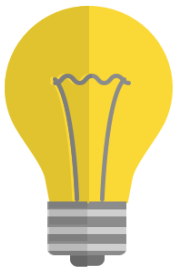
FOOTPRINT CALCULATOR

Home: Question 5 of 8

Is your electricity on a green tariff?

- I don't know
- No
- Yes but the tariff is less than 100% renewables
- Yes 100%

PREVIOUS QUESTION



HOW YOU USE ENERGY AT HOME PLAYS A BIG PART IN YOUR CARBON IMPACT ON THE WORLD.

Hint Your tariff is the energy plan you're on. If your electricity comes from renewable generation, it will be indicated on your bill. Some companies provide green gas and/or offsets, as well as guaranteeing that your power comes from renewables.

WWF FOR YOUR WORLD

FOOTPRINT CALCULATOR

Home: Question 6 of 8

Do you regularly turn off your lights and appliances (instead of leaving them on standby)?

- [x] Yes
- [ ] No

PREVIOUS QUESTION

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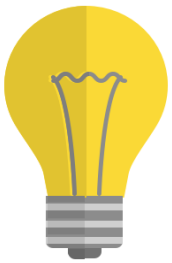


HOW YOU USE ENERGY AT HOME PLAYS A BIG PART IN YOUR CARBON IMPACT ON THE WORLD.

Did you know? Lighting can account for up to 15% of your household electricity bill, so you can cut down just by turning off lights when they're not needed. And don't leave devices on standby — some of them use quite a lot of energy still, adding to your footprint.

WWF FOR YOUR WORLD

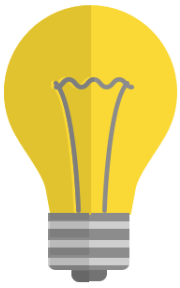
FOOTPRINT CALCULATOR

Home: Question 7 of 8

How warm do you keep your home in winter?

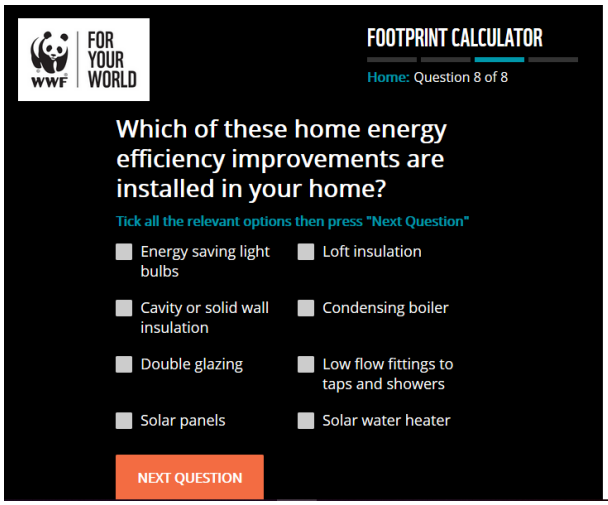
- Below 14°C
  COLD
- 14-17°C
  COOL
- 18-21°C
  WARM
- Over 21°C
  HOT

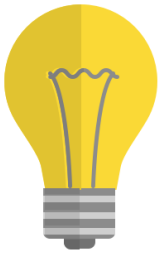
PREVIOUS QUESTION



HOW YOU USE ENERGY AT HOME PLAYS A BIG PART IN YOUR CARBON IMPACT ON THE WORLD.

Did you know? By turning down your central heating thermostat by just 1°C you could reduce the energy you use for heating by 10%. The same principle applies to air conditioning when it's hot — the less you use it, the more you save (in money and carbon).

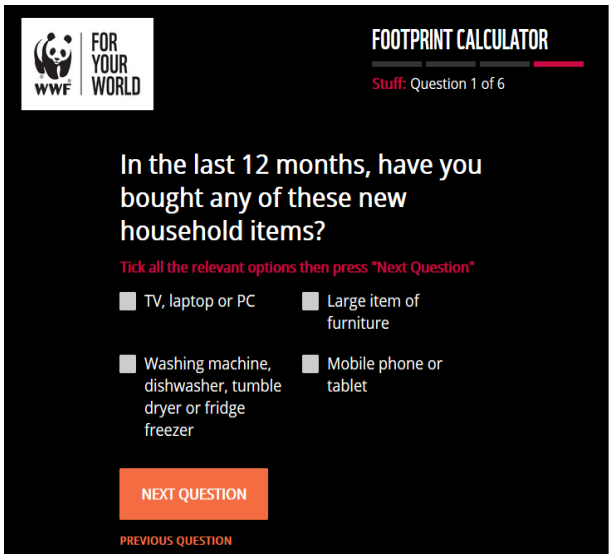


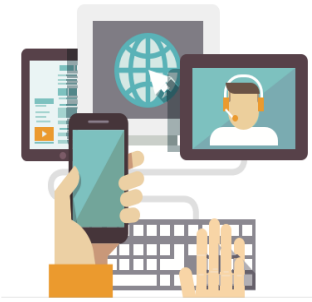


HOW YOU USE ENERGY AT HOME PLAYS A BIG PART IN YOUR CARBON IMPACT ON THE WORLD.

Did you know? The energy we use in our homes accounts for around 20% of the carbon dioxide emissions in the UK. By making your home more efficient (i.e. finding ways to waste less energy) you can reduce your carbon footprint

5.2.4. Stuff



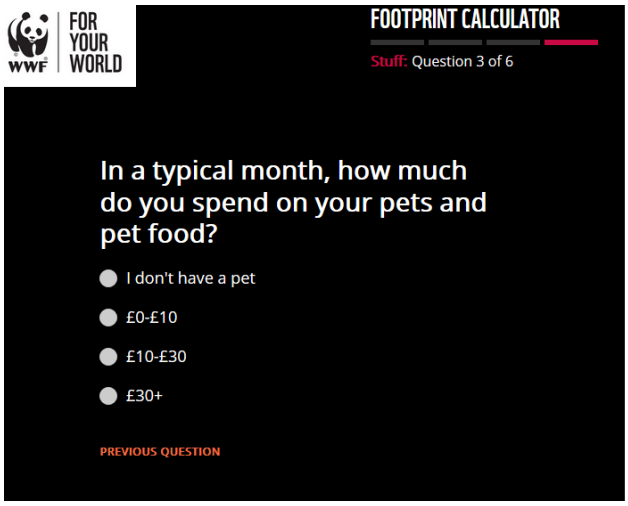


THE PRODUCTION PROCESS REQUIRES MASSIVE AMOUNTS OF ENERGY.

Hint: Don't include any second-hand items, just those you bought new. The production process for new household appliances (even 'efficient' appliances) requires massive amounts of energy and resources. Reusing old ones also diverts waste from landfill.

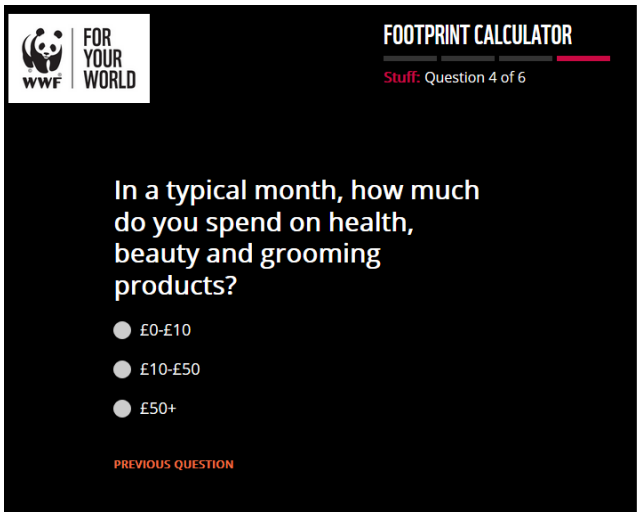
THE PRODUCTION PROCESS REQUIRES MASSIVE AMOUNTS OF ENERGY.

Hint: Don't include second-hand clothes, just those you bought new.



THE PRODUCTION PROCESS REQUIRES MASSIVE AMOUNTS OF ENERGY.

Hint: This includes pet food, vet and grooming products, kennels, cages, litter etc. We love the animals in our lives, but if we're calculating our footprint, we need to include theirs too!



THE PRODUCTION PROCESS REQUIRES MASSIVE AMOUNTS OF ENERGY.

Hint: This includes all bathroom products, plus other personal care costs such as haircuts, manicures, sunbeds, electric razors, hairdryers and all personal hygiene products.

Other hints that follow the above footprint assessment state that:

> *We live in a culture of disposable fashion which is taking a toll on the environment. Buy one well-made expensive item of clothing rather than constantly replacing it with cheaper alternatives. This* ***will stop the waste of resources in manufacturing****, it also* ***cuts down the transport costs and carbon cost of the supply chain****. Less clothes being transported* ***means less emissions and trucks on the road****.*
>
> (Source: https://footprint.wwf.org.uk/#/questionnair)

FOR YOUR WORLD

FOOTPRINT CALCULATOR

Stuff: Question 5 of 6

In a typical month, how much do you spend on phone, internet and TV contracts?

- £0
- £1-£30
- £30-£60
- £60+

PREVIOUS QUESTION

THE PRODUCTION PROCESS REQUIRES MASSIVE AMOUNTS OF ENERGY.

Hint: These should all be broken down on your bills...

FOR YOUR WORLD

FOOTPRINT CALCULATOR

Stuff: Question 6 of 6

Which of these types of waste do you recycle and/or compost?

- Food
- Paper
- Tin cans
- Plastic
- Glass

FINISH

PREVIOUS QUESTION

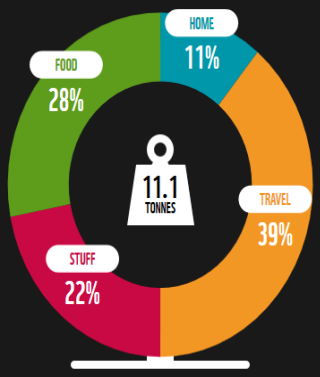
THE PRODUCTION PROCESS REQUIRES MASSIVE AMOUNTS OF ENERGY.

Hint: About a third of our kitchen and garden waste can be composted and, increasingly, local authorities collect compostable waste which they can process to produce renewable energy. By contrast, if it's dumped in landfill it turns into methane, which is a big contributor to climate change. The processes for dealing with waste — including landfill and incineration — are very energy-intensive

FOR YOUR WORLD

BACK TO FOOTPRINT

CLICK EACH SECTION TO SEE MORE DETAILS



TIME FOR CHANGE

Stay informed through WWF's carbon progress updates.

STAY INFORMED

Chapter Six: The Ladies

This chapter combines visual and textual story lines of three women's climate activities. The first set of pictures represent the real-life situations of the women in relation to the WSF toolkit components. The second part is mostly text and talk and depicts the livelihood activities of the women and their socioeconomic and cultural environments. It is a result chapter that assesses the women's food, travel, home and stuff to ascertain the (dis)connectedness of WSF's climate footprints from/to local realities in Yaounde, Cameroon. All the pictures were taken by myself during the fieldtrip within the context of the creative methodology which we adopted in our work.

6.1. The Ladies in Pictures

6.1.1. Madam P.: Photo Reportage of a Typical Day


ENGLAND

6.1.2. Madame Etoundi: Hustling Through Her Day

6.1.3. Justice Mabu: Making Time for Impact









ASSOCIATION
(CREAM)

6.2. Who are the Ladies?

6.2.1. The Restaurant Owner/Operator

Josephine Mbui, popularly known as Madam P. was born in Bafut sub division in the North West Region of Cameroon. She is the first of seven children. She attended primary school in Presbyterian School (PS) Mamboh while living with her grandmother. After obtaining her elementary certificate, she travelled to the East Region of Cameroon as a housemaid and after two years, she returned to Bamenda, capital of the North West Region to learn hairdressing. She later moved to Buea to work as a hairdresser and then got married and left to Yaounde where she established her family of five including her husband and three children.

Madam P. owns and operates a restaurant business around her Damas neighbourhood in Yaounde. She employs about five people including some members of her family. She started up this restaurant business in 2000 when her husband lost his job. A small bar became their only source of income prompting her husband to allow her start up a restaurant business after preventing her from continuing with her hairdressing skill. Not only does the business occupy her but it has become the main source of income from which the family and others survive.

Madam P.'s main activity is food preparation and sale. She strategically prepares *water fufu*, *eru* and *achu* that are delicacies enjoyed by many people in Cameroon. Her cooking processes entail a lot of firewood/fuel burning. Cow skin processing alone involves smoking, scraping, soaking in water (for at least two days), several hours of cooking.

According to Fleming's (2014) culture of consumption discourse, individuals have the discretion to choose or not what they want to consume. What attracts many customers to Madam P.'s cuisine is the amount of meat/cow skin she serves with vegetables and soups. However, WSF's footprint discourse recommends the substitution of meat and dairy product consumption with other foods. If she replaces these dishes with 'like meat' products, her customers may no longer be attracted to her business.

Moreover, many of her customers are internally-displaced persons (from the anglophone crisis), taxi drivers, mechanics, workers and students some of whom

lack shelter, kitchen utensils or time to cook. They buy and eat on-the-spot or bring dishes from their homes for take-aways. Therefore, footprint's recommendation for people to stop buying food from restaurants in order to reduce 'overheads' is inapplicable in most cases of Madam P.'s customers.

It is probable that WSF's careful choice of climate language considers the personal capacity to resist (Fleming 2014) recommendations that tamper with a people's lifestyle including food culture. In Madam P.'s and her customers' situations, providing shelter and other forms of energy for cooking might be a preferable solution for WSF to curb individual carbon impacts of restaurant food consumption and processing.

Madam P. contributes indirectly to travel footprints rather as a taxi passenger. Her responsibilities outweigh her financial capabilities such that the money she gets from her petty business could not enable her buy a personal car. Moreover, she grew up in a poor family, does not drive and does not have a car.

6.2.2. The Mixed-Subsistent Farmer

Madame Etoundi Hortense was born around 1969 in the Mfoundi Division of the Centre Region of Cameroon. She grew up with her mother and often accompanied her to the farm where they cultivated, harvested and sold farm produce. After her primary education, Madam Etoundi learnt sewing and later got married to Mr Etoundi, a civil servant. She has ten children including three sets of twins. Her first child is at university while the last is still in primary school. Madam Etoundi cultivates her husband's piece of land located in Akak, a village about 13 kilometres away from her residence at Dragage, Yaounde. Her life revolves around mixed farming including cassava.

Cassava is one of the main crops in Cameroon, It is cultivated for its savoury/multipurpose uses and resistance to harsh climate. Madame Etoundi cultivates, purchases and processes cassava into paste, dough, *bobolo* (*baton-de-manioc*), flour, garri, starch etc; while its leaves are used as vegetables and its stems as firewood.

Cassava consumption in its different forms is a cultural phenomenon that cuts across many communities in Cameroon. The climate footprints recommend variety,

but switching crops for Madame Etoundi would mean loosing her *baton-de-manioc* customers and probably an entire livelihood. Moreover, she has only one piece of land which she has been cultivating for over thirty years. Therefore, achieving WSF's ecological goal would require some time (for her) to discover which other type of crop can do well on her piece of land and also time to educate her customers on the importance of variety. Ensuring substitutes that would enable Madame Etoundi's community derive similar satisfaction from switching diets would be a difficult task.

Madame Etoundi also contributes to travel carbon impacts mostly as a taxi passenger. Although her husband has cars, she cannot drive and can only be transported by her son or a paid transporter. She revealed that her driver-son seldom accepts to use his father's car to ferry her to the farm or market; which is about 13 kilometres from her residence.

Madame Etoundi is fifty, weighed down by the delivery of ten children, farming and market activities. It is practically impossible for her to either cycle or trek over more than 10km and carrying heavy food items. Moreover, it is impossible to carry eight bags of cassava tubers on a motorbike and even taxi. That is why Madame Etoundi goes for the Hilux vehicle to get her cassava home. Whereas the footprint requires the use of public transport or bicycles, this might not be feasible in Yaounde for the reasons explained above.

6.2.3. The Agro-Legal Worker

Justice Mrs Grace Mabu was born in Lassin, Noni, Bui Division in 1953. She is a housewife and mother of five children. She attended primary school in Lassin and secondary education in Limbe and CCAST Bambili, respectively. She obtained a Bachelor's degree in English private law at the University of Yaounde and graduated from the National School of Administration and Magistracy (ENAM) as a judge. She has been a magistrate for the past thirty-three years and now serves as the Vice President of the Court of Appeals of the North West Region in Bamenda. She is well-travelled and was once invited to the United States by former President and Mrs Clinton where she met businessmen and judges from all over the world.

She attended a leadership training and evangelism course in Singapore. When she returned to Cameroon, she formed the Children's Reassurance Ministry (CREAM) organisation in order to extend her skills to benefit children, mothers, fathers. According to her, founding this organisation is a form of catharsis, relieving her from the stress of judging court cases and living the experiences of others' testimonies. She also assists '*Pikumghum',* linking arbitration and reconciliation of cases between sports men and sports agencies at the national and international levels.

One of the activities she has embraced within CREAM is climate change awareness and action. She clings to agriculture as the "bedrock and the most important livelihood of the African woman because it enables women to educate their children and support their husbands" (audio interview 19-05-2019). She feels that if women are empowered and educated on facts about climate change, they will know how to properly manage their produce to have sufficient food and make/keep a climate-friendly environment. She has formed a cooperative for sustainability in order to protect women against hunger and for them to participate in income generating activities for the welfare of the child and family.

Justice Mabu is presently working on constructing an 'ecovillage' project at Mfou in Yaounde to enable city dwellers and internationals live and experience the need for environmental protection. Ecovillage was jointly founded with partners like Farmer Tantoh and the Pan-African Climate Justice Alliance (PACJA), as an offshoot of CREAM with the aim of reconnecting people with nature (Ecovillage and Ecolodge). It is an "Africa in Miniature Area" surrounded by forest, farms, fish ponds, poultry, pig sty, priest centre, forest community houses, hospital, airport, etc in Mfou, Yaounde. Ecovillage has a vision to bring health, religion, education, village and town life together where people can feel at home and ingeniously contribute to creating a planet-friendly environment. Its aim is to replace forest trees with fruit trees that will keep the environment fresh and serve as food for the community.

CREAM includes fishfarming in its activities to fill the gap of local scarcity in fish production. There is a traditional oven behind CREAM office and is used to smoke and conserve fish. The local backery/oven also serves as a training and income-

generating activity site for vulnerable children and marginalised people. Bread baked there is distributed to retailers and income generated from it is used for the CREAM children's school fees, food and shelter. In the interview excerpt below, Justice Mabu discusses about the importance of variety:

> *(…) foodcrops we grow on the site to get protein (…) the fish pond for fish production (…) we must not wait for fish to come from China or Japan (...) We train other people to have fish. We already have a number of them and are preparing to build up a pigry that would contain one hundred pigs because in less than one year you can have a pig which can sell for more than one hundred thousand instead of a cow that will take at least two years for you to sell. This is a means of adapting to climate economy by chosing to rear animals that would yield more and fast income with less climate damage and if we have excess (…) we take to the oven for smoking. We also intend to bring garri (cassava product) in times of plenty and transform it into bobolo (baton de manioc) and water-fufu for future consumption.*
>
> (Audio interview 19-05-2019)

Despite the importance of the bakery to lives and livelihoods, the charcoal-burning, heating and environmental aspects of local production and conservation processes do cause negative impacts on the environment in contrast with ecological footprint's expectation of creating a climate-friendly planet. although Justice Mabu is committed to food security and variety, she is not void of knowledge on the effects of fuel burning, adaptation and mitigation strategies. She argues that:

> *Here we cannot do without charcoal because it would be difficult for us to transform our products. At the local level, charcoal comes from some of the trees that we have to cut down when we are working the farms. We carry this charcoal to the Ecovillage oven to bake with. Yeah! But you can never stay from cutting down a tree from the forest to build a house. You will not build houses on top of a tree. That is why the Ecovillage is going to take about one hectare (…) cut down the existing forest trees and replace them with fruit trees and at the same time provide space for the building of Ecovillage activity houses. We have a challenge. When I think about this project, I am frightened because we need solar energy systems to provide*

electricity needed for the functioning of Ecovillage and CREAM activities. Our ultimate aim is to train vulnerable children to be able to see what we do. We also attempted to engage in a solar energy project that would ease our waste management through the use of biogas/fuel to ensure that no human or animal faeces is wasted.

(Audio interview 19-05-2019)

These excerpts indicate the existence of local needs, the necessity of meeting them and the importance of finding climate friendly solutions. The compensation aspect of the climate footprint tool could help Justice Mabu achieve her goals.

Justice Mabu's means of transportation is different from the others.

(…) and we cannot pretend to be out of Africa so I manage my car for myself and office use until I acquire a car. We cannot do without a car because we have to carry much cassava. It is not easy to lift a pig and put in a truck and also carry whatsoever to town where it can be marketed.

(Audio interview 19-05-2019)

Unlike the other two, she has a driver and sometimes drives herself. However, one local reality noted in her words is the importance of a car not just to carry people to places but to carry their luggage especially farm produce. This is evident in the situations of Madam P. and Madame Etoundi.

Nevertheless, the number of hours the three women spend in taxis or personal cars per week are undetermined depending on the traffic situation, state of the car or taxi and any unforeseen situation they may encounter. Sometimes drivers trying to escape traffic get stuck in more traffic and the women end up late to business.

6.3. WSF's Neoliberal Model, Socio-economic and Cultural Environments of the Women and Footprint Components.

6.3.1. Food

One implicit expression of WSF's neoliberal discourse power is its embrace of the UK as a parameter to communicate climate action. Its footprint tool opines that the consumption of locally-produced food is healthy and climate-friendly. Furthermore, large amounts of food are wasted/thrown away in the UK and

packaging of imported food causes climate impacts. However, some local realities indicate that many people choose their diet to satisfy hunger rather than for nutritional purposes.

Many African families are subsistent and extended and quite often food is barely available or sufficient. Madame Etoundi has a family of more than twenty-five people, a dog and pigs; Madam P. caters for more than fifteen people while Justice Mabu is responsible for a crowd of street children and marginalised people. Madam P. even feeds Madame Etoundi's pigs with cooked cocoyam and banana peelings from her food processing which somehow reduces food wastage or waste dumping around the environment. Therefore, establishing climate footprint rules for local communities in Africa or developing countries might need to reflect local realities like more mouths to feed than food to waste or throw away.

6.3.2. Travel

During climate action workshops in the West, WSF usually proposes some travel tips to curb individual ecological footprints namely: cycling, using public transport and driving smarter. Cycling is eco-friendly and creates no emissions, uses no resources, keeps the cyclist fit and healthy and can enable individuals save money while saving the environment. More cycling means more reduction of cars on the road, less congestion and less pollution. These reasons are indeed important in reducing climate effects. However, local realities in Yaounde such as logistics, resources and topography do not favour cycling. Below is an instant reaction from Justice Mabu during an interview with her about cycling:

> *Can I trek from Yaounde to Mfou? Could we? And how could we use bicycles in a hilly area. So, I have thrown the question back to you. I will be interested to see your suggestions so that we apply it to the other people*.
>
> (Audio interview 19-05-2019)

Cameroon's mainstay is agriculture and many people trek or use taxi and motorbikes to go to farms or local markets to buy and sell their produce. In Yaounde, although many people have private cars, many more have taxis and bikes mainly for business purposes. Public transport and trains or trams are inexistent. Madam P., Madame Etoundi and Justice Mabu travel in different ways for slightly

similar but different purposes. Both Madam P. and Madame Etoundi use taxis (at least 5 hours or more a week) to go to local markets mainly to buy food items.

Many taxi and motorbike owners and drivers are unemployed university graduates. Having families to cater for and lives to sustain, they resort to petty transport business that can 'put food on their table'. They depend on customers like Madam P. and Madame Etoundi to survive and vice versa.

Unfortunately, this interconnection and interrelation increases ecological impacts. WSF recommends fast driving during their climate workshops as one of the planet-friendly solutions. However, speeding on such roads might just be a 'highway to the grave' as more lives will be lost through accidents. The images below give an idea:

Figure 20: A glimpse of transport situation in Cameroon (Source: fieldtrip and www.google.com/)

Rather than simply asking individuals to use public transport, cycle or trek, climate footprints should seek to strike a balance by encouraging and supporting the

development of road networks and transport facilities and providing employment opportunities.

6.3.3. Home

The UK is applied in the WSF tool as a measuring parameter for energy use at home. By contrast, the weather conditions and detached houses in which the three women live differ from those of the UK. The average temperature in Yaounde ranges between 22^{o}C and 27^{o}C and Cameroon does not experience winter. People wear thick or light clothing depending on the weather. Those who have electrical fans or air conditioners can use them to cool their homes as well.

Both Madam P.'s and Madame Etoundi's houses have seven rooms but Justice Mabu's basement, middle and upper parts of the house have more than ten rooms altogether. The women use electricity but sometimes they buy energy-serving bulbs/high with luminousity.

On the other hand, Cameroon has only one government-owned electricity supplier – Eneo Cameroun SA and solar panels are scarce and expensive. Local normalcy is about blackouts, low voltage and illegal electricity distribution where one person owns an electric metre, redistributes electricity to neighbours and does business out of it by collecting surplus bill payments from his/her illegal clients.

Regarding the footprint question on energy tariff, most people neither know nor can tell whether they are on a green tariff or renewable generation. When people receive their power bills, they rather focus on calculating how to pay the bill. Turning the light off for them is not about saving the planet from heat but is about reducing bills. In Yaounde, air conditioners are mostly installed in offices and are often used during the dry season when there is enormous heat. Sometimes people forget to switch them off because the bills are paid by their employers.

In another perspective, typical situations of families in Yaounde, Cameroon indicate that people live in communities and strive to sustain one another. Households are densely populated including extended family members, and internally displaced and vulnerable people. During difficult situations, families open their doors to accommodate people in need and hand-in-hand, they strive to get food and shelter. However, their circumstances and resultant activities added to

changing climate put them at crossroads especially if they have to follow WSF's climate recommendations of reducing the number of people per household and building/living in smaller houses. Justice Mabu tries to make sense of it in these words:

> *I find it very, very disconnected! When I remove people from the house and send them to the village, where will they go and live? I would like you to give us suggestions on what to do since you live the situation. It is not me here who will come to build a house, don't cut trees, tell children to go away and I live with few people.* (Audio interview19-05-2019)

6.3.4. Stuff

Appliances like electric irons, fridges and gas cookers are often repaired and reused for lack of means to buy new ones. However, there is need to determine the exact quantified impacts which may not meet climate/environmental standards elsewhere. The women also purchase brand new clothes or footwear but the cases are rare because second hand goods are more available, affordable and practical for their kind of activities.

Madame Etoundi has a dog while Madam P. has a parrot which are never taken to the vet. The pets share of the same food prepared for the family and sleep wherever they find themselves in the house.

Madam P. spends six days of the week cooking or processing food for her customers. Although it would be environmentally good and climate-friendly for her to buy an expensive outfit, having to process and prepare food with it in a soot/smoke-filled kitchen might not be different from *putting a ring on a pig's nostrils*.

Similarly, Madame Etoundi spends at least five days of the week at the farm and two at the market, characterised by tilling, watering, planting, harvesting or processing cassava into *baton de manioc (bobolo)* for her customers. Buying an expensive attire as a means of reducing her carbon impact may be laudable but wearing it to the farm and market to carry out her kind of activities might not be suitable.

Madam P. and Madame Etoundi are self-employed, do not earn a monthly salary and their source of income is from petty trading and the sale of farm produce and the money raised from these sources is used mostly to cover their family responsibilities. Taking stock of what they spend on and how they handle their health, beauty and grooming products as espoused by WSF's climate footprints might be important. However, the question is to what extent could the tool's related requirements be relevant to the women's situations?

Regarding beauty, buying one expensive body lotion or a big container of it might relatively be a good option to control individual contribution to ecological impacts. Nevertheless, it might be impossible to sustain it in such large families.

Figure 21: Few of Madame Etoundi's children and grandchildren (Source: fieldtrip)

Because of the number of people under a family's care, higher quantities would have to be used thereby, increasing the production, packaging and transportation processes of the product and use of energy resulting in higher carbon emission.

Both Madam P. and Madame Etoundi are like 'female husbands'. While Madame Etoundi takes care of almost all their children's needs, Madam P. pays school fees and feeds the children:

Table 1: Video interview February 2019

Madam Etoundi	**My translation**
Comme monsieur Etoundi ne travaille plus, je le soutient a travers mon travaille champêtre. Quand je coupe mon zoum par exemple, je peut vendre a 20 ou 15 milles au marché. Hors mis de tontines, avec mon argent que je travaille au champ, chaque matin, je donne 5000 a mes enfants. Quand mon mari travaillait, il faisait mais comme il ne travaille plus, je donne à manger à la famille et j'achette aussi les cahiers aux enfants. Je les habilles ... Je met aussi le carburant de 2000 francs dans la voiture de mon fils chaque jour pour qu'il parte a l'universite. Je continuais toujours a soutenir ma famille parce que l'homme ne peut pas tout faire a la maison. Le travaille du champ est tres important. Toutes femmes doivent travailler au champs parce que je vis grace a mon champ	Since Mr Etoundi is no longer working, I support him through my farmwork. When I harvest and sometimes take *zoum* (a green vegetable specie) to the market, I sell it for 20 or 15 thousand francs. Apart from using money from the sale of farm produce to save in our self-help group, I also provide 5000 francs for my children everyday to support my retired husband. I try to feed the family, buy books for the children and clothe them. I fuel my son's car for 2000 francs so he can go to the university. I keep supporting my husband because a man cannot shoulder all family responsibilities. Agriculture/farmwork is very important. I therefoe encourage every woman to get involved because it enables me to sustain lives and livelihoods.

> *It depends on how determined you are. Looking at the background where I come from, I have to take care of both families. I have a lot of people who have to go to school. You can see that for us in Bamenda (…) schools are not going. Everybody in this house who can go to school at least goes to school. And my target is A'Level. I pay their school fees out of my petty business. During holidays I start putting their money in little cases. I put five hundred in each case per person … at the end of the holiday everybody will go to school as easy as possible. Six of them are in primary school and the other is in a boarding school. In a year I can pay school fees for about two million …*
>
> (Video interview with Madam P., March 2019)

The voices above tell how important the women's activities are, particularly to their families.

Figure 22: Recycled glass (bottle)

Four types of waste namely: food, paper, glass and plastic mentioned in the footprint assessment toolkit are either recycled or composted by Madam P., Madame Etoundi and Justice Mabu. Left over cooked food is either preserved in the fridge/freezer or is later heated up and eaten. Paper is used for packaging whereas glass (bottles) are used to preserve fried groundnuts. Plastic bottles are used to carry and keep drinking water. Yet, a lot of plastic containers litter the streets and rivers of Yaounde in particular, and Cameroon in general.

WSF could address these situations by engaging in a pyrolysis conversion technology that seeks to recycle and transform plastics into oil and fuel which Kholmes (2011) calls the '4R Sustainability' to reduce, reuse, recycle and renew plastics.

Although some efforts are made by local communities to recycle or compost waste, the general recycling situation in Cameroon remains deplorable. The waste collection system is dysfunctional, lacks resources and collection and dumping in recommended waste-dump areas is approximate.

Figure 23: Littered waste in the streets of Yaounde (Source: fieldtrip)

The above image depicts poorly disposed waste. Inappropriate measures are put in place by council authorities to follow up waste management in homes and around the city. Therefore, rubbish piles up and the footprint indicators are shattered. A probable ecological solution would be for climate advocates to encourage

governments and other stakeholders to be proactive in creating remunerative projects that would help local communities to properly dispose of, recycle or compost waste.

6.4. Discussion: How (dis)connected are WSF's Climate Footprints from/to Local Realities?

Climate change is experienced around the world through prolonged and intensified droughts, desertification, floods, cyclones, depletion of rain forests, increase in ocean acidity, etc (De Bruijn & Van Dijk 1995, Collier, et al. 2008, Sara De Wit 2011, Gaymard, et al. 2015). Women, who are naturally more connected to the environment than men (Dankelman 2002, Nkengla 2017) devise strategies to succeed in their fending to sustain lives/livelihoods within the changing climate.

Figure 24: Water fufu draining and preservation

Madam P. for example could experience and adapt to climate change by buying much firewood in season and preserving it for later usage. When she experiences scarcity of food like vegetables and cassava resulting from the change in rainfall patterns, she connects with other women like Madame Etoundi and members of self-help groups for supplies especially during the dry season. She also increases the price per plate of food or reduces the quantity served to her customers in order to make some profit. But these may not always be feasible.

In her mixed crop cultivation, Madame Etoundi adopts different forms of techniques to ensure food security:

Table 2: Video Interview (March 2019)

Madame Etoundi	**My Translation**
Ce marécage c'est depuis trente ans que c'est devenu sec. C'est Madame Etoundi seule qui a fendu avec la houe et machette : on met les cannes sur ce marécage parce que les cannes sucent l'eau et rend le marécage sec. On enfonce aussi les herbes et on met la terre en haut et avec le temps ça devient sec. Avant de piquer ce njamanjama tu dois tourner la terre avec les cacas de poules et de porcs parce que le marécage est très pauvre.	It has taken thirty years for this marshy land to get dry. Madame Etoundi has single-handedly created these canals using the hoe and machete. We also bury the grass and plant sugarcane on the marshy area and with time, it absorbs water. I use a mixture of fowl and pig droppings to fertilise the marshy land before planting my vegetables.

At Justice Mabu's ecovillage project site, there is an identifiable natural loss of vegetation and drying up of the main stream that feeds the local community in Mfou.

Figure 25: Climate change at Ecovillage Project site (Source: fieldtrip)

Through adaptation, she could diversify her CREAM NGO/ecovillage project activities - fish pond establishment, fruit tree planting, borehole project (in view). Here are her views:

> *The forest is disappearing that is why in looking for nature, we are preserving one and half hectare of land and also for it to be beneficial for us in connection with the ANAFOR (Cameroon*

parastatal in charge of protection of forest and environment. However, if a tree or two are cut down for the purpose of Ecovillage, we make sure we plant fifty or one hundred fruit trees that will keep the planet climate friendly, provide food and shelter for human beings and even animals. In this way, we also ensure the health of people by making available fruits and vegetables for consumption. We hope in fifty years to come, local, national and international individuals will be able to benefit from this project.

(Audio interview on 19-05-2019)

Figure 26: A farmer at Justice Mabu's Ecovillage site

The picture above depicts various climate impacts: heat generated from the burning, air pollution resulting from the smoke, land degeneration and possible exposure to dryness/harsh climatic conditions. Although it might take time to re-establish the vegetation, all hope is not lost. A few meters away, watermelon seedlings planted by Justice Mabu's team are germinating:

Figure 27: Watermelon plant germinating at Justice Mabu's Ecovillage project site

The adaptation and mitigation methods developed by our study participants as indicated in this work could be recognised, harnessed and improved collaboratively by all national and international stakeholders.

Assessing individuals' activities around *food, travel, hom*e and *stuff* builds awareness on the seriousness of climate change effects and greenhouse gas reduction strategies. However, research findings and studies attest that Africa's climate change problem is not the reduction of greenhouse gases but rather mitigation and adaptation strategies 'applicable' to local situations and taking into consideration the role of women (Dankelman 2002, 2010). It could even be argued that climate rules are more of a 'show of power and agency' within and around structures.

WSF's climate footprint tool neither captures nor addresses health impacts of emissions from heat, soot, smoke deriving from cooking processes by individuals. In which case the tool appears to uphold financial considerations over ecological impacts on individuals.

During my fieldwork, I realised that the little child in the figure below (middle) constantly had a runny nose and coughing was common among all age groups.

Figure 28: Eye discomfort and runny nose caused by smoke

In short, the socio-cultural and economic environments and conditions under which the women operate put them at crossroads with the tenets of WSF's climate/ecological footprint assessment. The home dynamics, poor and large family sizes, failure to prioritise education of the girlchild and the fact that these women live in a culture where men are still the head and 'natural' decision-makers all impact the feasibility and applicability of the WSF toolkit as is. When I began interviewing Madame Etoundi at home, Mr Etoundi told her what/how to show or tell me and corrected every statement she made. At some point, she felt intimidated and stopped speaking until we left her husband's presence. Then, she was able to confidently walk me through her farm and the market and share her experiences.

This experience might be telling a deeper story of the aspect of power relations that underlie climate change discourse and action including WSF's climate footprints that could be broken down comparatively as follows:

Science – the West – international organisations – governments

Non-governmental organisations – communities – families

Gender – class, gender – agency

6.5. Successes and Challenges of the Research

> *Scientific research is not all about reason. Fieldwork as well as realities are messy. Doing academia is being confused all the time.*
>
> Harry Wels (2017), Mirjam de Bruijn (2018)

The above lecturers' utterances summarise my experiences during my entire internship and research processes.

Successes:

- Capturing the real-life story of our three participants.
- Identification of areas of improvement of the WSF toolkit.
- Flexibility of data salvage/retrieval thanks to creative methods.
- Improved skills/competencies in communication, research/analytical methods, networking, IT, revision and editing.
- New-born research family with networks in Gabon and Cameroon.
- Family reunion and first hand outreach sharing of climate change realities.

Figure 29: Source: internship and fieldtrip

Challenges:

- Frustration and embarrassing travel logistics leading to media exposure in Gabon.
- Stress and double literature gathering/study resulting from the abrupt change of research country and respondents.
- Technical difficulties, loss of data and some poor images.
- Difficult terrain (butchers'/rope sellers' areas in two markets)
- Double payment of return flight ticket.

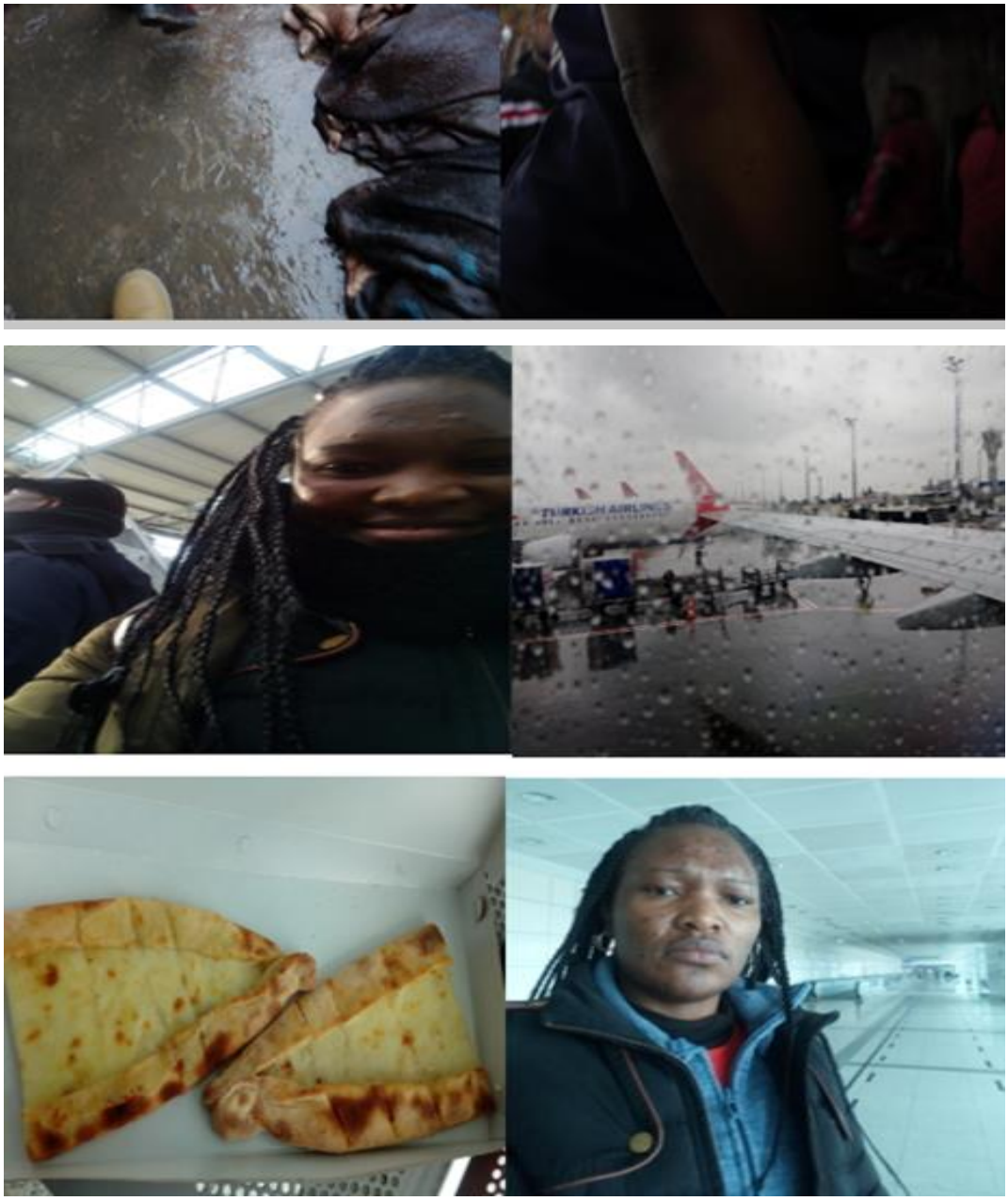


Figure 30: Fieldtrip mess and confusion in photos

Chapter Seven: General Conclusion

There are areas needing urgent attention and there are interests competing for the same attention. Our journey through this thesis brings to mind the tussle between the pharmaceuticals and traditional pharmacopeia. Is my doctor at the hospital better than the village healer, or can both work together in synergy?

This problem-oriented practical social research on the discourse around the WSF climate footprint tool, particularly its food, travel, home and stuff components, capture climate assessment and recommendations that reflect local realities and the day-to-day activities of three women in Yaounde.

In order to collect relevant data and conduct acceptable result analysis, I employed three different methods namely: critical discourse analysis, interviews (audio/film) and photography; as well as document research, (in)formal discussions and participatory observation. Photography presents data in a way that allows interpretations to emerge for the reader.

Based on literature, I contend that climate change has morphed from a natural into an anthropogenic phenomenon and is also progressively being articulated as a development problem (Rahman 2012, Fleming 2014). I also argue that climate change is a fertile ground where different structures and stakeholders enact, reproduce and legitimate power discourse and that its "language is socially shaped and is socially shaping" (Teun 1993).

Undoubtably, the reasoning behind the ecological assessment rule to buy one expensive thing in order to "stop the waste of resources in manufacturing, (…) cut down the transport costs and carbon cost of the supply chain too" is lopsided. WSF's climate footprint focuses attention on the 'manufacturing' and 'supply chain' rather than the local consumers whose daily situations are different from those in the West. The findings from our field work in Cameroon indicate that the women are either active or passive actors of climate change, making WSF's climate footprint assessment efficient. The women create ecological impacts in different ways either through food processing, farming practices, transport, energy or waste management. This makes WSF's climate footprint relevant in its awareness,

reduction and compensation (ARC) efforts. It does resonate with some local realities. However, the tool could be dangerous for the following reasons:

- It is a soft power tool whose neoliberal individualistic recommendations do not or only partially consider the socioeconomic and cultural realities of local situations in other places like Yaounde, Cameroon. Hence the need to adjust for greater applicability when aiming at affecting people's minds and altering lifestyles to save the planet.
- The WSF tool was designed in the West following Western contexts and most of its recommendations to change food, travel, home habits might be difficult to apply in Yaounde and Cameroon in general.
- The tool appears to be based on hidden colonial ideas as evidenced in the toolkit's Sustainable Solutions mission statement.

While the WSF toolkit ticks the right boxes for climate change management, the following aspects could be further researched to make the climate footprint tool more responsive globally:

- What adaptive and mitigation efforts are applicable locally and how can they be recognised, harnessed and improved upon to suit climate needs in local communities?
- How can climate discourse and action be decolonised in order to attain maximum and inclusive global solutions to climate change?

Abstract

This thesis entitled ‘An Assessment of Climate Footprints through the Activities of Three Women in Yaounde, Cameroon’ sets out to show the (dis)connectedness of climate tools established in and for the West from local realities in Yaounde, Cameroon. It also aims to prove that the socio-cultural and economic situations of women in local communities are different from those in the West thereby, putting them at crossroads of climate footprint assessment and implementation.

Theoretical underpinnings applied in this study indicate the different perspectives on the complex climate change issue, the transformations of climate discourse within given paradigms and the peculiar climate messaging and communication of the World Sustainability Fund (WSF).

The three-pronged-methodology: critical discourse analysis, interview and audio/film, observation and photo used to gather data for this thesis aim at assessing the neoliberal individualistic modelling of WSF’s climate footprints and how this works elsewhere. This approach facilitates the communication of both the implicit and explicit experiences of the research/participants as they occur in their real live situations.

Results of this study reveal that although climate impact assessment tools such as footprints could be designed with good intensions, they could equally be regarded as dangerous neoliberal power tools that ignore local sociocultural/economic realities elsewhere. The language functions of picture/text and talk around WSF’s climate footprint production rather represent broader sociocultural/political structures as exemplified in the colonial trait of its Sustainable Solutions.

This study, conducted at WSF, The Hague and on three women in Yaounde, Cameroon is only a tip of the iceberg. It therefore serves as an opening for more research regarding women as actors in climate issues and the decolonisation of the climate change phenomenon.

Key words: **Climate change, discourse, footprints, the women, World Sustainability Fund (WSF)**

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