Down the Yellow Brick Road

Youth Engagement and Intergenerational equity at the Global Landscapes Forum

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Abstract:

This paper examines youth engagement within the Global Landscapes Forum, a conference that took place in Paris, December 2015, and its contribution towards moving intergenerational equity forward. Youth are considered one of the main stakeholders when it comes to decision-making in long-term environmental issues as they are part of the current generation that are likely to face the implications of current decisions made. As such, using youth engagement to pave the way forward towards intergenerational equity is imperative to ensure sustainable development. The Global Landscapes Forum, is a large conference that brought together more than 3000 stakeholders from different backgrounds and that actively sought to engage youth through the Youth in Landscapes Initiative. Furthermore, it provided them with a unique event to showcase youth innovation and ingenuity. The research that took place as part of this paper was done through action research where I was given the chance to not only be part of the monitoring and evaluation team of the Youth in Landscapes Initiative but also to take part and create solutions for the land-use challenges that we were given. This gave me the chance to interact as a member of the 50 youth participants and to gain insight into how engaged they are and what barriers affect youth engagement. After a quantitative and qualitative analysis of the factors required for youth engagement (level of awareness, access to resources, networking and capacity building, and motivation to engage others), it was concluded that the youth participants are engaged but lack access to resources to further their engagement. Another barrier that was also apparent is this notion of traditional legitimacy prompting a perceived lack of experience by the participants themselves or by experts. In order for the Global Landscapes Forum and similar scientific conferences to move towards meaningful youth engagement and intergenerational equity, a set of recommendations has been given for implementation which included more funding, partnerships, and opportunities for youth researchers to be on panels and sessions thereby straying away from the norms of the scientific authority and the legitimacy it claims.

Keywords: Youth engagement, youth participation, intergenerational equity, barriers to engagement, legitimacy, conferences

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1. Introduction

1.1.   Introduction to youth

The Brundtland Commission defines sustainable development as "the kind of development that meets the needs of the present without compromising the ability of future generations to meet their own needs" (World Commission on Environment and Development (WCED), 1987, p.7). One of the main stakeholders when it comes to decision-making in long lasting environmental issues are youth. As part of the current generation who are likely to experience the impacts of current decisions made, it is imperative that they are also engaged in the dialogue of finding solutions (United Nations Population Fund (UNFPA), 2014). Through meaningful and active youth engagement in the scientific and political dialogue, a movement towards intergenerational equity can be achieved (Narksompong & Limjirakan, 2015). By increasing the involvement of youth, long-term effective sustainable solutions can be created through the establishment of more generationally equitable representation (Narksompong & Limjirakan, 2015; UNDP, 2014). The United Nations General Assembly (2012) also reiterated this concern regarding youth engagement and greater intergenerational communication in its statement:

"We stress the importance of the active participation of young people in decision-making processes, as the issues we are addressing have a deep impact on present and future generations and as the contribution of children and youth is vital to the achievement of sustainable development. We also recognize the need to promote intergenerational dialogue and solidarity by recognizing their views." (p.9).

Intergenerational equity is defined as "fairness in the inter-temporal distribution of the endowment with natural assets or of the rights to their exploitation" (United Nations, 1997, p. 43). It is part of the three core principles necessary to achieve our sustainability goals in addition to intersectional and international justice (Jerneck et al., 2011). The dilemma we currently face is our inability to predict what future generations will want and how to incorporate that into the decisions we make. With the finite resources this world has to offer, how do we attune decisions to not only suit the needs of the current generation but also that of future generation? Youth as of today seem to be the best ambassadors for what future generations might want and need due to it being in their benefit to ensure long-term environmental success (Sochacka, 2016) thereby solidifying their importance in the decision-making process.

The age range of youth is one that is subject to change from organization to organization and from country to country. The United Nations (UN) considers youth to be between the age of 15 and 24 (United Nations Educational, Scientific, and Cultural Organization (United Nations Department of Economic and Social Affairs (UNDESA), n.d.). The African Youth Charter (African Union Commission, 2006) further expanded this range to include youth as anyone who fell between the ages of 15 and 35 with many other organizations adjusting the age range according to different demographic, financial, cultural and economic settings (UNDESA, n.d.). As of 2014, youth ages 10 to 24 represent approximately 26% (1.8 billion) of the global population with 48 of the least developed countries having 50% of their populations under the age of 18 (UNFPA, 2014). Within this globally increasing demographic, youth who are not only seeking to gain education and livelihoods (UNFPA, 2014) but who are also eager to become involved and shape their future are included.

The involvement of current youth in the creation of environmental solutions is vital to ensure that we are truly taking the meaning of sustainable development into consideration as the next few decades will bear witness to the increase and stabilization of the greatest amount of youth ever on this planet (UNFPA, 2014). Young people are more likely to outlive their parents and elders and to face many of the impacts as a result of climate change and other environmental changes (UNFPA, 2014) which only supports the need for greater more meaningful youth engagement (Narksompong & Limjirakan, 2015).

1.2. Why should youth get involved in sustainability issues?

The inclusion of different stakeholders within sustainable development issues has long been an outstanding issue (Adams & Pingeot, 2013; Bäckstrand, 2006). Within this debate, the inclusion of different genders, ethnicities and age demographics have been mentioned (Adams & Pingeot, 2013). Representation and involvement of different stakeholders will bring about more equitable, legitimate and effective solutions to sustainability challenges (Bäckstrand, 2006). The United Nation's Agenda 21 emphasizes the importance of a variety of different stakeholders, classified as Major Groups, in the promotion of sustainable development (United Nations Conference on Environment and Development (UNCED), 1992). These Major Groups describe nine members of society integral to achieving sustainable development and include; women, children and youth, indigenous peoples, non-governmental organizations, local authorities, workers and trade unions, business and industry, scientific and technological communities, and farmers (UNCED, 1992).

The involvement of youth in environmental issues is a crucial part of ensuring sustainable development (UNCED, 1992) as it promotes active citizenship and the ability of to engage in environmental governance (Narksompong & Limjirakan, 2015). The need for youth engagement is important due to their ability in "shaping social and economic development, challenging social norms, and building the foundations of the world's future" (UN, 2013, p. 17). It is also due to their ability to connect globally with other youth, regardless of differences in culture (United Nations Development Programme (UNDP), 2014) and to drive change within their communities and countries (UN, 2013). Their ability to provide innovative ideas and solutions to sustainable development challenges is further evidence that youth have the ability to become drivers of change and social justice (UNDP, 2014). The UN (2013) even advocates for their active participation in decision-making and the importance of their role in society. Within this context, youth also need to play a key role within the scientific sphere as well.

This paper aims to examine the role of youth within a scientific conference setting, namely the Global Landscapes Forum. This conference took place in Paris on December 5th and 6th, 2015 and addressed global land-use issues, climate change and sustainable development. As part of this conference, a 5-day workshop prior to the conference called the Youth in Landscapes Initiative was also held followed by a youth led Dragon's Den style session during the conference. As part of my research, the level of youth engagement, barriers to engagement and recommendations on how this conference and similar ones can further integrate youth are examined.

1.3.   Research Questions

Research question (overarching)

How can youth empowerment pave the way for greater intergenerational equity within environmental conferences?

Research questions (sub-questions)

1. What level of engagement do youth participating at the Global Landscapes Forum currently have?

2. What are the barriers that may hinder youth engagement in the Global Landscapes Forum?

3. What recommendations can be given to Global Landscapes Forum organizers and similar conference organizers in order to actively engage youth and importance?

2. Conferences and the Global Landscapes Forum

2.1. Conferences: Their importance and contribution to the scientific arena

Published scientific papers are considered a major player in the scientific communication, conferences albeit often neglected also play an important role in scientific communication (Rowley-Jolivet, 1999). While the traditional view of conferences is that they are a space for the presentation of initial data and thought that will then be turned to published papers, there has been much discussion of the role conferences can have (Lisée & Larivière, 2008; Drott, 1995). According to Montesi and Owen (2008), conferences can have the potential for innovation and new ideas whereas journal publications contribute to the expansion of knowledge. In his paper, Drott (1995) indicated that conferences can serve three functions; conferences as self-improvement, conferences as group contributions, and conferences as final products (Drott, 1995).

In the traditional sense, conference proceedings can serve as an important venue for scientists and researchers to present their preliminary paper and to gain feedback from it (Drott, 1995). Rowley-Jolivet (1999) also describes conferences as having a similar function in that they simultaneously work as the input and output mediums for research bodies creating a symbiotic relationship. Research bodies or laboratories will output research papers, posters, and instruments in conferences as a way of exhibiting its expertise and to market itself in its given field (Rowley-Jolivet, 1999). In return, conferences provide access to up-to-date technology, funding opportunities and gained knowledge as a form of input for the research body or laboratory (Rowley-Jolivet, 1999).

A second function of conferences is that they can function as group contributions (Drott, 1995). Conference organizers often have panel sessions for researchers to discuss specific topics (Drott, 1995). It serves as a way of examining current interests in the field and for attendees to gain more robust information in a compact way (Drott, 1995). Additionally, conferences can function as venues that allow for interaction amongst attendees (Rowley-Jolivet, 1999). It brings together an international community of researchers and scientists thereby providing a space for collaborations to occur and thrive (Rowley-Jolivet, 1999).

The third function identified by Drott (1995) is the ability for papers presented in conferences to act as final products as opposed to a transitory venue for papers to be published in scientific journals. Both Drott (1995) and Rowley-Jolivet (1999) agree that conference papers are a different form of final product than journal articles thereby providing a separate function. It provides a more realistic view of the work that took place before it is neatly organized in a paper (Rowley-Jolivet, 1999). Drott (1995) similarly mentions that use of conference papers as a way of providing details what was done and how it was done as opposed to new discoveries. Conferences have the ability to allow attendees to gain a more intimate view into the gathering of information, the difficulties associated with it and to provide a place for ideas that may not be suitable for publication for a variety of reasons, to be showcased.

As stakeholders and future custodians of the environment, it is essential for the youth element to be included in the demonstration and production of scientific knowledge. It would allow them to exhibit their work and to gain access to potential funders and partners. Conferences can be the ground for them to mingle and interact with other stakeholders within the environmental community thereby expanding their knowledge base and understanding of the complexity behind sustainability issues.

2.2. Case: Introduction to the Global Landscapes Forum and the Youth in Landscapes Initiative

In order to gain a greater insight into intergenerational equity and youth engagement, I chose to use the case of the Global Landscapes Forum. The Global Landscapes Forum has actively tried to incorporate youth into its conference setting through the Youth in Landscapes Initiative and by providing them with a unique event to showcase their ingenuity and innovation. As a result of this active attempt at integration into a conference setting, I felt that the utilization of the Global Landscapes Forum and the Youth in Landscapes Initiative would allow for an interesting insight into youth engagement.

The Global Landscapes Forum, a conference held annually alongside the UN climate negotiations, helps bring focus to landscape and land-use issues. This event, led by the Centre for International Forestry Research (CIFOR) and other leading international organizations, brought together more than 3000 researchers, scientists, policy makers, world leaders, and leaders in civil society and businesses in addition to many others groups; making it one of the largest environmental events held outside the United Nations Framework Convention on Climate Change – Conference of the Parties (UNFCCC COP) (Global Landscapes Forum, 2016). This conference provided a platform for participants to find solutions to complex global

land use challenges through discussion forums, launch pads, landscape labs and a thematic pavilion. The Global Landscapes Forum, held in Paris in December 2015, saw 30 sessions about science-policy-practice containing one of the four themes: landscape restoration, rights and tenure, finance and trade in addition to achieving climate and development goals.

The Youth in Landscapes Initiative was an intense 5-day workshop, that took place before the Global Landscapes Forum, that brought together 50 young professionals aged 18 to 35 from all over the world to find real-world solution to a variety of land-use challenges provided by organizations working on the ground. These organizations include:

- *UNEP-DHI Partnership Centre on Water and Environment*: A United Nations Environment Programme center based in Denmark. This center focuses on the improvement in management of freshwater resources from the national and international levels (UNEP-DHI Partnership Centre on Water and Environment, n.d.).
- *Wageningen University – Centre for Development Innovation*: The Centre for Innovative Development connects Wageningen University's expertise to the global challenges of sustainable and equitable development and encourages work with different stakeholders (WageningenUR Centre for Development Innovation, n.d.).
- *CGIAR Research Program on Water, Land and Ecosystems*: This program supports a way for healthy ecosystems to become an important prerequisite to advancements in agriculture by creating sustainable solutions that ensure the long-term well-being of societies through the involvement of different stakeholders (CGIAR Research Program on Water, Land and Ecosystems, n.d.).
- *Centre for International Forestry Research (CIFOR)*: CIFOR is a non-profit, research facility that works on the most urgent forestry and landcape management issues through a multidisciplinary approach (CIFOR – Centre for International Forestry Research, 2014).
- *Livelihoods Venture:* Livelihoods Venture is an advisory body that manages Livelihood's fund whose mission is to aid rural farming communities in restoring their local ecosystems to help improve their incomes and livelihoods in a sustainable manner. (Livelihoods, 2016).

Each of these organizations provided a challenge in the following respective order:

- *Measuring success,*
- *Education*

- *Landscape restoration*
- *Rights and tenure, and*
- *Finance and trade*

These 50 young professionals were divided into five groups of ten where they were asked to disseminate the challenge, discuss and come up with an innovative idea that addressed the issue at hand. They were then asked to create a pitch that revolved around their solution. This pitch was then presented to a group of five high profile panelists in a Dragon's Den style event that took place on the final day of the conference. These panelists were:

- **Paula Caballero**, Senior Director at the World Bank
- **Steven Lawry**, Director of governance research at the Centre for International Forestry Research (CIFOR)
- **Bernard Giraud**, Danone's Senior Sustainability Advisor and co-founder of the Livelihoods Fund
- **Tui Shortland**, Managing Director of Repo Consultancy – a collective of indigenous environmental managers
- **Kemi Seesink**, Policy and Advocacy Coordinator of the Global Water Initiative
- **Tint Lwin Thaung**, Executive Director of The Centre for People and Forests (RECOFTC)

3. Theoretical Entry point

The Brundtland Commission in many instances talks about the importance of intergenerational equity or justice where the "needs of the present need to be met without compromising the ability of future generations to meet their own needs" (WCED, 1987, p.7). While this statement has become the driver behind many environmental movements and policies (Collins, 2007), it is vague at best and leads to the path for open interpretation by different parties in order to achieve this (Robinson, 2004; Padilla, 2002). Anderson, Teisl, & Noblet (2012) also assert the difficulty associated with balancing the needs of the presence generation let along those of future generations.

The idea for this paper comes from the notion of intergenerational equity. Intergenerational equity is a concept that says that humans "hold the natural and cultural environment of the Earth in common both with other members of the present generation and with other generations, past and future" (Weiss, 1990, p. 8). As youth are considered those who are most likely to face the impacts of decisions currently made,

and as they are considered one of the nine major groups needed for sustainable development, it is important that they take on a stronger role in decision-making.

The issue of intergenerational equity in the scientific sphere can be looked at through a Weberian lens where science and the arena it is represented in, conferences, represent a manifestation of social action that arises as a result of of value-oriented or substantive rationality (Weber, 1968; Benton & Craib, 2011). Substantive rationality, derived from value-rational action, implies a class of actions that depends on ultimate values that are chosen but cannot be justified on a rational basis (Kalberg, 1980; Benton & Craib, 2011). These values "depend on an individual's implied or stated, unconscious or conscious preference" (Kalberg, 1980, p. 1156). Weber places this form of substantive rationality on the borderline of rational action due to their persistent values (Kalberg, 1980; Benton & Craib, 2011). Values may not seem rational to everyone but the actions one takes can be understood as rational. This form of thinking paves the way for an institutionalized form of value-based rationality and actions thereby legitimizing these values in a bureaucratic manner (Kalberg, 1980). This institutionalization of values also takes place as a form of traditional or customary action and as a result of historical, economic, political or geographic domination (Kalberg, 1980) which in turn makes it difficult to stray away. This way of thinking about how the scientific sphere functions, in a form of substantive rationality, provides insight into why youth have a difficult time participating and engaging within it. There are a set of values that drive the scientific community to determine if youth should be present at their conferences and the capacity they should have within them.

The legitimacy that is needed in order to function in the scientific sphere arises from this form of substantive rationality where the system is created based on the beliefs of group members of a value's correctness (Spencer, 1970). The actions that are taken are a rational action to its underpinning values. According to Weber (1968), actions will become rationalized to conform to a certain set of values if there is a consensus amongst a group of people. As a result, this action is engrained into their lives making it difficult to move away from these internal bindings (Kalberg, 1980). The effect of this is to guide actions in specific ways and away from others (Kalberg, 1980).

This train of thought manifests itself into a form of legitimacy which in the case of youth in the scientific arena is traditional legitimacy. Traditional legitimacy is where an authority, a body with legitimate command, arise out traditional norms or the "rules of conduct towards which actors orient their behaviour" (Spencer, 1970, p. 124). Subsequently, active and meaningful youth participation is seen as a movement away from traditional legitimacy and its requirements and are therefore hard to accept. Since youth may not have the the necessary experience needed to satisfy the requirements created by the

scientific community or "authority", it is not deemed acceptable for them to participate within the scientific realm or not part of the "norm". This is the result of a unity amongst society in general, and the scientific community specifically, when it comes to the value based rationality of what it means to be able to take part in a scientific setting. Within the context of intergenerationally equitable representation within conferences, the difficulty associated with it can be looked as a stray from the traditional legitimacy of the authority that is qualified to be a part of conferences which in turn makes it very difficult to accept youth participation on a broader scale.

4. 4 Methodology

4.1. Action Research - Overview

In order to examine the idea of intergenerational equity within youth empowerment, I conducted an investigation through the use of action research to assess the level of youth engagement that occurred within the conference. Action research is a form of research, originated by Kurt Lewin (Tripp, 2005), which he defined as "a comparative research on the conditions and effects of various forms of social action, and research leading to social action" (Lewin, 1946, p.5). Action Research aims to change social reality through gaining more in depth insight into its practices. Tripp (2005) goes even more into depth by defining action research as "a form of action inquiry that employs recognized research techniques to inform the action taken to improve practice" (P.446) and additionally should meet the criteria required by other kinds of academic research. This includes but is not limited to the peer review process, significance and validity (Tripp, 2005, p.446).

Action research includes four phases: planning, acting, description and evaluating a change to a process thereby learning more about the practice and action inquiry in the process (See Figure 1) (Tripp, 2005). It begins with planning a change in practice from a thematic concern followed with implementing this change to practice (Tripp, 2005). As part of the implementation step, an account of who did what, when, where, why, and how is taken (Tripp, 2005). After this is conducted, a monitoring and description and analysis of the results generated due to the change in practice in addition to an explanation and possible implications (Tripp, 2005). This concludes with an evaluation of the results in order to understand what worked and what did not and why with regards to the practice; and the benefits of the conducted research (Tripp, 2005). With regards to the case used, the planning part involved preparing what I wanted to do to

better understand youth engagement at the Global Landscapes Forum, how to go about it and why I wanted to do it. The act involved conducting the surveys and questionnaire as part of my methods followed by analysing the data acquired as part of the monitoring and describing. This was then followed by the evaluate part which was to examine the data for the level of youth engagement, barriers to it and create recommendations for next year's conference and other similar conference.

As part of action research's iterative nature, this process is then repeated to promote further improvement (Tripp, 2005). This process can also be used to gain a better and deeper understanding of the practice and its influences (Tripp, 2005). As part of this iterative nature, another examination of the level of youth engagement can occur after some of the recommendations have been implemented.
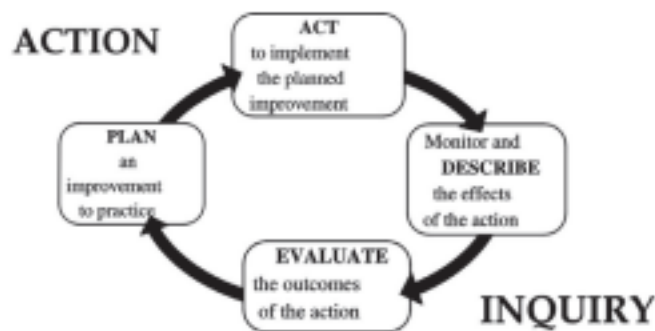
Figure 1: The 4-phase representation of the basic action research. This figure portrays the steps necessary to create action research (Plan, action, monitor and describe, evaluate) and how they supply each other in a cyclical manner further emphasizing its iterative nature (Tripp, 2005)

Traditional scientific research is best known as a form of research that utilizes a rigid set of rules of controlled variables and employs a more deductive approach (Tripp, 2005). Oppositely, action research uses a form of inductive approach, a process in which one uses theory to explain the observations made (Tripp, 2005). Through this form of inductive reasoning, the aim of research is to better understand how to improve the practice being studied (Tripp, 2005).

4.2.   Methods

I used action research through participation in the Youth in Landscapes Initiative and the Global Landscapes Forum to determine the level of youth engagement that took place under the current practices. Additionally, it was used to determine what went well and what improvements the conference can make in further promoting meaningful youth engagement. This would help in planning for future

Global Landscapes Forums and for similar environmental conferences in the future thereby taking a form of inductive research through the help of the Youth in Landscapes Initiative and the Global Landscapes Forum as a case study. Additionally, it also helped gain insight into what is the current issues within youth engagement and what can be done to improve it and move forward in intergenerational equity.

I was given the opportunity to be part of the Monitoring and Evaluation Team of the Youth in Landscapes Initiative Team as an entryway into collecting my data. When I arrived in Paris, I was also offered to take part in the Youth in Landscapes Initiative as part of the Landscape Restoration team. I was able to gain a deeper insight into how the workshop worked, the relationship that developed between the participants including myself from the constant interaction, and the thoughts and concerns the participants may have had.

While there are many ways of measuring youth engagement, I felt that it was best to use Khosroshahi et al.'s (2006) "Spectrum of Youth Engagement" taken from TakingITGlobal's "Cross-Canada Mapping of Youth-led and/or Highly Youth Engaged Initiatives: Final Report" (2006) (See Figure 2). This model was used because of its inclusion of attributes deemed important when measuring youth engagement in addition to its inclusion of social and wider issues that can affect youth engagement. Within this model, youth engagement is measured in a manner that determines whether youth are is engaged, under engaged, engaged, highly engaged and over engaged via different attributes. The spectrum is colour coded to show the similarities in attributes between the different levels.

Spectrum of Youth Engagement				
Disengaged	Under-engaged	Engaged	Highly-engaged	Over-engaged
Lack of awareness or misconception of issues	May be aware of issues and have the desire to act but face barriers to participation (Political, socio-economic,cultural)	Awareness of issues, want to make a difference	Understanding and involvement in issues of concern	High level of commitment to addressing focused issues of concern
Apathy	Lack access to resources and opportunities	Moved to act in formal and/or informal contexts	Desire and capacity to take action on issues	May take opportunities from others as they are over relied on for their expertise and ability to 'represent' youth
Don't know, don't care	Less experience	Access to resources	Experiences in leadership	Over-extended may affect ability to deliver
Unwilling to step out of comfort zone	Need for capacity building	Relies on support nwtowrks and capacity building	Often turned to for advice, relied upon as an expert	May intimidate others
May have the capacity but little desire to engage		Motivates others to engage		
May lack access to opportunities				

Figure 2: The Spectrum of Youth Engagement (Khosroshahi et al., 2006). The spectrum is divided into five levels spanning from disengaged to over-engaged. The colours are used to identify different attributes that are common amongst the five levels

As a result of the similarities in characteristics between the different levels of engagement, I was able to create the four criteria in order to measure youth engagement. These criteria are: Level of awareness, access to resources, networking and capacity building, and motivation to engage others (See Table 1).

Table 1: Categories adapted from the spectrum of youth engagement (Khosroshahi et al., 2006). The colour associated with the category correspond to the colour coded statements in Figure 2

Categories adapted from the Spectrum of Youth Engagement (Khosroshahi & Corriero, 2006)	
Categories	Colour associated with category
Level of Awareness	
Access to resources	
Networking and capacity building	
Motivation to engage others	

Furthermore, in order to understand the type of networking and capacity building that youth participants had engaged in, a table encompassing the types of networking behaviours adapted from Thornton, Henneberg, and Naudé (2013), was used (See Figure 3). This was done through including questions in the survey taken after the Global Landscapes Forum to determine the nature of networking behaviour that took place and the level of agreement the participants had regarding their ability to achieve them. This allowed for a more detailed understanding of what type of networking behaviour youth participants mostly engaged in during their time in the conference. This helped in identifying the level of engagement, in terms of networking and capacity building, that youth took part in thereby aiding in measuring where they lied along Khosroshahi et al.'s (2006) spectrum of youth engagement. The networking behaviours include Information Acquisition, Opportunity Enabling, Strong-tie Resource Mobilization and Weak-tie Resource Mobilization with questions created in the survey that sought to examine each of the behaviours.

Types of Networking Behaviour	Description
Networking Behavior Type I - Information Acquisition	The activities/routines/practices that a person/people employ to acquire necessary/desired information for helping make informed decisions
Networking Behavior Type II - Opportunity Enabling	The activites/routines/practices that a person/people employ to sense the oportunities to build their reputation by consciously interacting with relevant parties in their sphere
Networking Behavior Type III - Strong-Tie Resource Mobilization	The activites/routines/practices that a person/people employ to mobilize resources that are linked to their direct/established relationships
Networking Behavior Type IV - Weak-Tie Resource Mobilization	The activites/routines/practices that a person/people employ to mobilize resources that are linked to their indirect/less established new relationships

Figure 3: The different types of networkng behaviours and a description of each. Adapted from Thornton, Henneberg, and Naudé (2013)

Table 2: Table indicating the methods that were used per category of youth engagement

Category for Youth Engagement (Adapted from Khosroshahi & Corriero, 2006)	Survey was used to determine the level of engagement per category	Questionnaire was used to determine the level of engagement per category
Level of Awareness	√	
Access to Resources	√	√
Networking and Capacity Building	√	
Motivation to Engage Others		√

The method in which each category of engagement was measured is exhibited in the table above (See Table 2). A combination of surveys and questionnaire were used to measure the different attributes of youth engagement. Surveys were taken before and after youth participants participated in the Youth in Landscapes Initiative and the Global Landscapes Forum while the questionnaire was conducted during my time in Paris. Surveys were used to provide a comparison of the difference in confidence level regarding the skills that they have learned, the change in the level of knowledge in different issues as part of the level of awareness. It was also used to gage the networking behaviour that took place during the conference. In order to measure access to resources, both the survey and questionnaire was used while motivation to engage others utilized only the questionnaire. Subsequently, the level of engagement of each of these attributes was examined to help in understanding where the youth participants were in Khosroshahi et al.'s (2006) spectrum of youth engagement.

The data from the survey was compiled to identify the level of engagement that the youth participants had in their level of awareness, access to resources, networking and capacity building. The level of awareness utilized the survey answers taken before and after the conference regarding participants' confidence in certain skills and their level of knowledge regarding different aspects of the landscape approach. A single-variable Analysis of variance (ANOVA) test was then conducted for both sets of data to determine whether the change over time produced a significant change. An ANOVA test is a statistical method used to test the difference between two means and determines whether they are significantly different from each other. Using the "independent samples test", if the p-value is less than 0.05, assuming a 95% confidence level, then we reject the null hypothesis that there is no significant difference in level

of confidence or knowledge between before and after the conference took place. If the p-value is greater than 0.05 then we accept the null hypothesis and conclude that there is no significant difference in level of confidence or knowledge between before and after the conference took place.

Survey questions were also used to determine the level of networking and capacity building that occurred during the conference by examining the networking behaviour that the participants engaged in at the conference and the level of agreement that participants had regarding the different types of networking behaviours. Similarly access to resources was also addressed by asking participants in the survey about how they were able to gain the funds necessary to attend the workshop and the conference and examining the distribution amongst the different methods of funding.

The questionnaire was used to supplement the survey questions regarding access to resources and to provide answers into how the youth participants planned to motivate other youth to become engaged. The questionnaire also served to help answer the second research question and that is to provide a more detailed comprehension of the barriers that may hinder youth engagement in the Global Landscapes Forum. I conducted four questionnaires with my supervisor Dr. Kim Nicholas conducting the fifth due to time constraints and to ensure that a full sample is presented. The answers were given in written form to ease the process of analysis and to save time during the Youth in Landscapes Initiative as participants did not have a lot of time available during the program to take part in the interviews. Additionally, written answers made it easier for everyone to voice their thoughts in a limited time and to accommodate those whom may not be comfortable with their grasp of the English language.

The answers that were given in the questionnaire were compiled and then inputted into an excel spreadsheet and categories were created though an inductive approach (Ryan & Bernard, 2003) based on the answers given. Identifying the categories was done through repetition were certain topics are repeated by a number of people (Guba, 1978). While it was up to myself to ultimately decide whether something was an important theme, the more times it appeared in a text, the more likely that it was a theme (Ryan & Bernard, 2003). Subsequently overall themes for both questions, motivation to engage others and barrier to youth engagement, were found by comparing each of their the categories against one another and grouped together based on similar phenomenon's (Corbin & Strauss, 2008). Subsequently, these overall themes were created since many of the initial categories could act as sub-themes and could be combined into the five overall themes (Ryan & Bernard, 2003). This was due to the similarity or overlapping of the answers given. This was also due to the ability of some of the initial

categories to fall under larger themes due to them being a contributing factor of the larger theme (Ryan & Bernard, 2003).

4.3.   Ethical Consideration

As a researcher, I am very aware of the difficulty associated with being objective. As a result, the logic and argumentation I utilized for this paper was carefully researched with ideas and thoughts attributed to the original source it was taken from. I understand that as a participant in the Youth in Landscapes Initiative, I could have inadvertently influenced the other youth participants thereby affecting the answers they gave. I also realize that as a participant, I may not have been able to maintain the distance necessary to avoid being intrusive (Gillham, 2005) when changing my role to that of a conductor of the questionnaire.

In order to lessen the impact I had on the participants and in the interest of being as transparent as possible, I identified myself as a researcher from the beginning of the workshop with full awareness that it could change how I was perceived by the other participants (Gillham, 2005). When conducting the surveys, I ensured that no names were used to ensure the anonymity of the participants. Furthermore, I only conducted the questionnaire if the participants had signed consent forms before the questionnaire were conducted (see Appendix 1). The consent form included a description of my research, the risks and benefits of their participation, the time required and the right the participants had as recommended by Allmark et al. (2009). As part of that consent form, I explained that their privacy and anonymity would be maintained in all the data they afforded me. Additionally, the data they provided me would be stored in a secure private location to prevent access of unauthorized authorities.

5. Results

5.1.   Level of awareness

5.1.1 Level of Confidence

As can be seen from the figure below (See Figure 4), confidence levels across most skills have shown a slight increase with the exception of "Keeping discussions focused", "Summarizing main ideas from a discussion", "Note Taking", and "Identifying key points in an argument" which have shown a slight

decrease in confidence level. With that taken in mind, the participants' level of confidence exhibiting high levels with the level of confidence before and after between (3.37-4.03) and (3.52-4.04) respectively.

Figure 4: Level of confidence of youth participants before and after the Global Landscapes Forum. Level of confidence regarding a variety of skills was examined in order to determine the change of confidence over time.

In order to determine whether the conference had a significant impact on the level of confidence the participants had before and after the conference took place, an ANOVA test was conducted. The p-values for each skill set was calculated. Since all the results yielded a p-value of greater than 0.05 and fell within the range of 0.164 and 0.948 (See Appendix 2), we accept the null hypothesis. We thereby conclude that there is no change in the participant's level of confidence before and after the conference took place.

5.1.2 Level of Knowledge

Similarly, the level of knowledge taken before and after the Global Landscapes Forum was used to examine the level of awareness as part of Khosroshahi et al.'s (2006) spectrum. When examining the level of knowledge regarding different aspects of the landscape approach before and after the conference, almost all of the different aspects experienced an increase in levels after the conference had taken place

with the exception of "land restoration processes" (see Figure 5). The largest increases in levels of knowledge came from the technical challenges of implementing a landscape approach (0.34), rights and tenure issues (0.33), and the meaning of landscape approaches (0.32) respectively. Once more, the participants exhibited high levels of knowledge before and after the conference with ranges between (3.18-4.08) and (3.26-4.19) respectively.
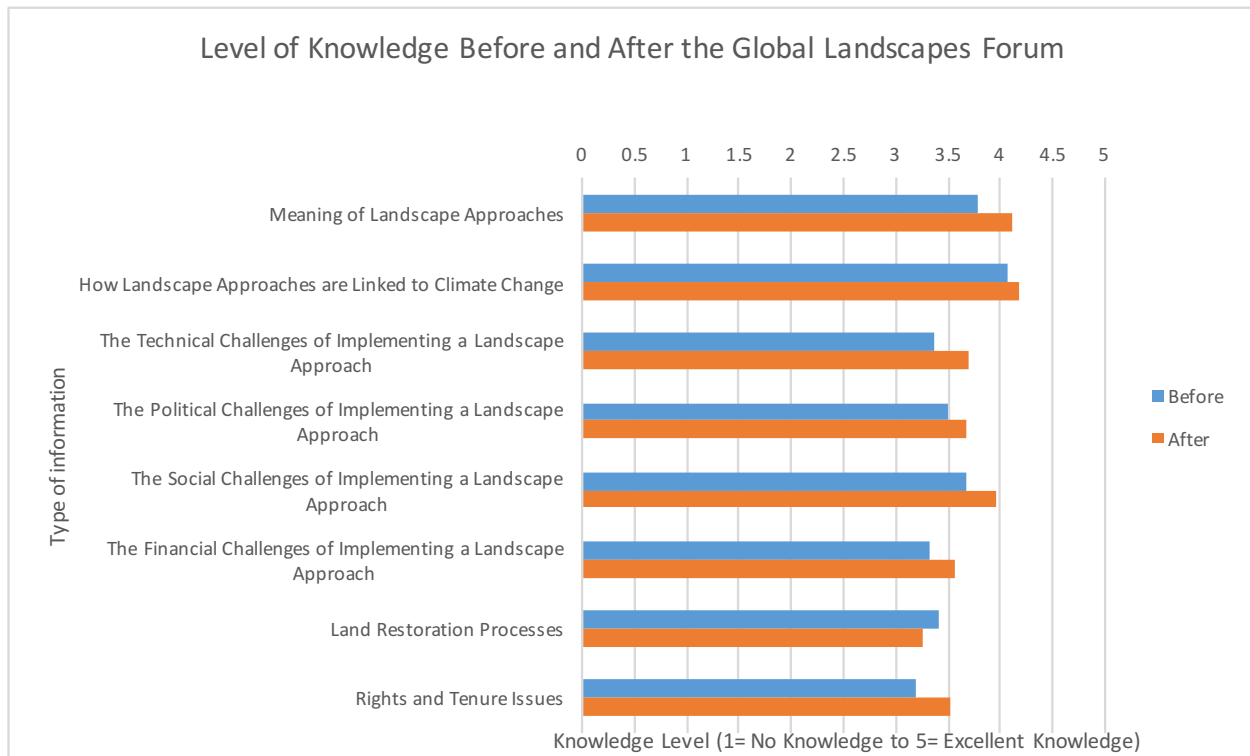
Figure 5: Level of Knowledge Before and After the Global Landscapes Forum. Knowledge levels regarding the different aspects of the landscape approach were examined in order to determine the change of knowledge over time

Similar to the level of confidence, an ANOVA "independent samples test" was also conducted to determine whether there was a significant difference in the level of knowledge that participants had before and after the conference. All the p-value calculated were greater than 0.05 with ranged from 0.109 and 0.611 (See Appendix 2) indicating that there is no significant change in the levels of knowledge before and after the conference took place.

A limitation that may have affected the quantitative analysis of the youth engagement spectrum was the mislabelling that occurred in the post-conference survey as a result of human error. In the survey that was given before the conference took place, the level of knowledge was given on a scale of 1 to 5 where 5 was represented as "excellent knowledge" while in the post conference survey, the highest level was 5 and

was represented as "very good knowledge". The use of excellent level of knowledge may have intimidated participants into choosing it thus picking a lower score. Had the labelling remained consistent, the change in levels of knowledge before and after the conference may have been smaller than it currently is. Since there was no significant difference in the level of knowledge in addition to maintaining a five-point scale, the change in wording would not have had much of an effect on the answers that were given.

5.2.   Networking and capacity building

In order to gain a better understanding of the type of networking that took place within the conference, questions in the survey given after the conference took place were asked. These questions examined the extent and type of networking behaviour that took place. These questions asked about the the participants' abilities to access more opportunities for career enhancement, increased knowledge, communicating ideas on landscape challenges to both experts and peers, and their ability to extend their network to include contacts of the contacts they made at the conference (See Figure 6). These were then measured against the table of networking behaviours from (Thornton, Henneberg, and Naudé, 2013) to determine the networking behaviour type that took place during the conference.
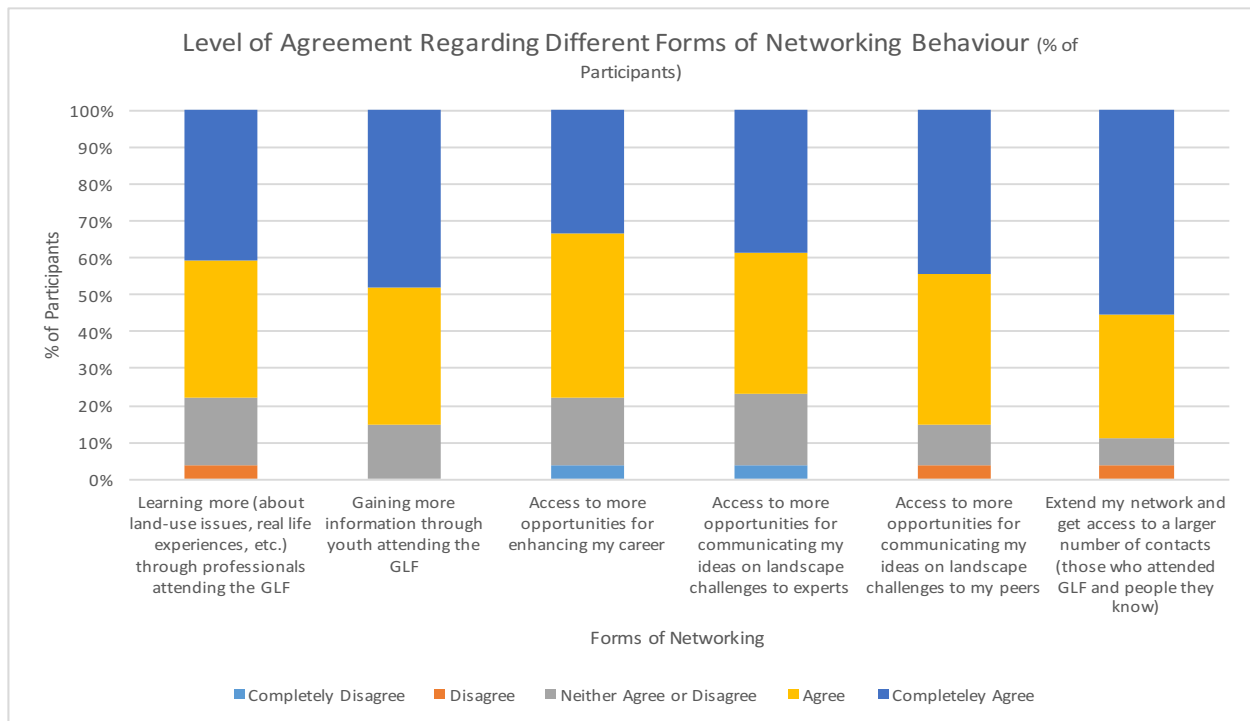

Figure 6: Level of agreement on the different types of networking behaviour that took place at the Global Landscapes Forum. There was an overall agreement on the ability of participants to network with different people at the conference.

According to the graphs above, an overwhelming number of participants felt that they agreed or completely agreed that they were able to to gain more opportunities to learn more about land-use issues from experts (78%), gaining more information through youth that attended the conference (85%), communicating their ideas on landscape challenges to their peers (85%), to experts (74%) and that they were able to extend their network beyond those they already met at the conference (89%). This is a very good indicator of the conference's ability to provide networking opportunities for the youth participants.

When comparing the survey answers of networking to Thornton, Henneberg, and Naudé's (2013) table on types of networking behaviour, it is determined that the most popular type of networking behaviour (Extend network and get access to a larger network) corresponded to Type IV weak-tie mobilization. This meant that the activity that participants used in the conference sphere was to "mobilize resources that are linked to their indirect/less established relationships" (Thornton, Henneberg, and Naudé, 2013, p.1159). The ability for participants to interact with others in their field during the time of the conference that they were new or indirect meant that they were able to get across their thoughts and ideas and use the conference as an arena for group interactions and social cohesion.

5.3.   Motivation to engage others

Participants were asked in the questionnaire how they planned to inspire other youth to become engaged in environmental issues and conferences. Participants were given time to write down their answers. 95 answers were given by the 49[1] participants. The coding process, done through an inductive approach (Ryan & Bernard, 2003) yielded 18 categories (See Figure 7):

- Sharing knowledge and experience
- Encouraging senior level practitioners to engage youth
- No expectations
- Encourage people to assist farmers
- Stay in touch with those from the workshop
- Network to gain more information to pass on
- Continued involvement in the field
- Set an example for others

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[1] 1 participant failed to answer the question and another said that they were graduating which was deemed N/A as it does not relate to the question

- Engage in topic sin everyday life

- Encourage others to get involved

- Collaboration with youth initiative and other similar projects

- Publicize the event and other similar events

- Involve other community members

- Move challenge forward to reality

- Advocate for funds to get other youth involved

- Use it as a learning opportunity for themselves

- Unsure

- N/A

Reasons Given	# of times that reason was given
Sharing Knowledge and experience	40
encourage others to get involved	11
Continued involvementin the field	6
Use it as a learning opportunity for themselves	6
Unsure	5
Collaboration with youth initiatives and other similar events	4
advocate for funds to get other youth involved	4
involve other community members	3
Encouraging senior level practitioners to engage youth	2
Stay in touch with those from the workshop	2
Network to gain more information to pass on	2
publicize the event and similar projects	2
move challenge forward to reality	2
N/A	2
No expectations	1
Encourage people to assist farmers	1
set an example for others	1
engage in topics in everyday life	1
Total	95

Figure 7: Different reasons and the amount of times each one was mentioned by the participants which show the most common way participants planned to motivate youth.

As Figure 7 shows, most participants were eager to return and try to help inspire others through a variety of ways. This included sharing their knowledge and experiences whether in person in a formal or informal setting or through social media, encouraging others to get involved, continuing their own involvement in some capacity or through advocating for youth to have the necessary financial and structural support. There were some participants that viewed their participation as a personal learning experience and an opportunity for them to grow in a professional and personal level. There were some that were unsure on

how they would go about inspiring others due to uncertainty in their future situations and not really knowing how to go about inspiring other youth. Some participants expressed apprehension on if they would have any impact from their participation and advocated for a more structural role for youth.

5.4.   Access to resources

Participants were asked in the survey how they received funding in order to attend the Youth in Landscapes Initiatives and the Global Landscapes Forum. Survey results indicated that 48 percent of the participants funded themselves in order to be able to attend the workshop and conference. This was followed by other forms of funding (22%) and scholarships (19%) (See figure 8).

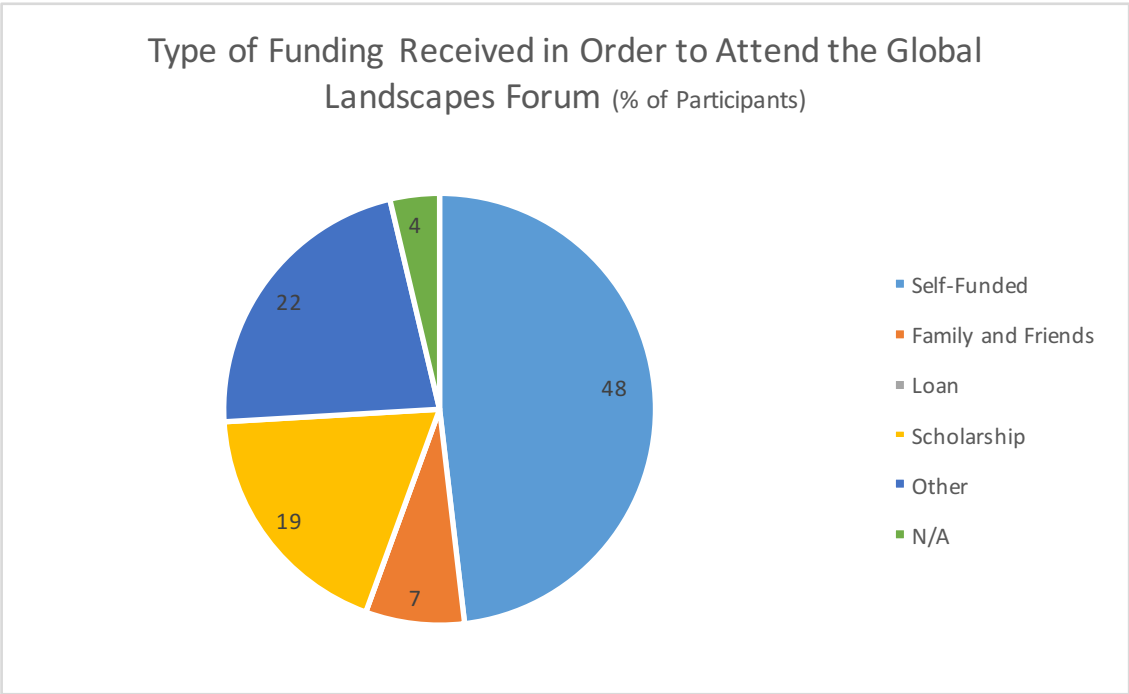Figure 8: Pie chart indicating the type of funding received by the participants in order to attend the Global Landscapes Forum.

Even though a majority of the participants managed to fund themselves in order to attend the workshop and conference, when asked in the questionnaire about barriers that could hinder youth engagement, 26 percent of the participants listed funding as a barrier that could prevent youth engagement.

5.5.   Spectrum of youth engagement

In order to determine where the youth participants fell on the spectrum of youth engagement (Khosroshahi et al., 2006), the following four categories were used to measure youth engagement: Level of awareness, Access to resources, Networking and capacity building, and motivation to engage others. I found that within the spectrum of youth engagement (Khosroshahi et al., 2006), participants of the Youth in Landscapes Initiative fell firmly in the middle of the spectrum (See Figure 2). A determination of where on the spectrum the participants lied was done through examining the four categories for engagement and matching them with the statements that were given per level of youth engagement.

In order to determine the level of awareness, the changes in level of confidence and level of knowledge before and after the conference were examined. The data showed that there was no significant change before and after. Even though there was no significant change, the levels of confidence and knowledge were both on the higher end of the scale out of five. The levels of confidence fell within the range of (3.37 – 4.03) before the conference and (3.52 – 4.04) after the conference. The level of knowledge fell within the range of (3.18 – 4.08) before the conference and (3.26 – 4.19) after the conference. This exhibited the already strong knowledge and confidence in skills the participants had prior to attending the conference. When examining the spectrum (Khosroshahi et al., 2006) it appears that the participants were "engaged" meaning that they were "aware of issues and want to make a difference" (p.33).

The barriers to youth engagement shed light onto the access to resources that youth participants had. A majority of participants' answers (48%) say that they had to fund themselves in order to attend the conference. With funding listed as 26% of the answers to barriers to engagement that youth participants have mentioned, it can be concluded that there is a lack of access of resources for youth. As a result, the youth participants are "under-engaged" in that there is a deficiency in resources.

In terms of networking, the type of networking behaviour that took place by the participants was deduced to be weak-tie resource mobilization according to Thornton, Henneberg, and Naudé's (2013) table on the types of networking behaviour. It meant that participants, by interacting with relevant parties and figures at the conference, were able to form new relationships in order to link to other contacts and gain a new set of resources (Thornton, Henneberg, and Naudé, 2013). According to the survey, youth participants were able to establish connections with not only their peers but with the experts they have met as well. Participants also felt that they were able to go beyond the contacts they made at the conference and establish second degree connections with people who did not attend at the conference. This meant that

they were able to make new connections to third party individuals via the people they met at the conference. When examining the spectrum of youth engagement (Khosroshahi et al., 2006), youth participants were able to "rely on support networks and capacity building experiences to further inspire and inform their work" (p.33) thereby making them "engaged".

Most participants said that they were motivated to inspire other youth to engage in environmental issues and conferences. They mentioned a variety of ways indicating that they wanted to share their knowledge and experiences and motivate them to become more engaged. They also mentioned that they wanted to help other youth, either from their fields or from others, become more aware of the opportunities and events available in addition to helping to try and secure better funding and representation for youth. On the spectrum (Khosroshahi et al., 2006), youth were "moved to act in formal/informal contexts" (p.33) and to motivated to engage other youth hence being "engaged".

In order to determine where on the spectrum of youth engagement participants fell, I examined the four factors and tried to match their results with the statements that best matched them with four out of five matched statements. I found that the engagement level that best matched the results was "engaged" which lies in the middle of the spectrum. The statements that were associated with the level of "engaged" from Khosroshahi et al.'s (2006) spectrum were:

- Awareness of issues, want to make a difference
- Moved to act in formal and/or informal contexts
- Access to resources
- Relies on support networks and capacity building experiences
- Motivates others to engage

As the results yielded from the analysis of the surveys and questionnaire indicate, participants were able to achieve most of the statements mentioned above. They were well aware of the different issues associated with land-use and the skills required to do so in addition to conveying their message and what they learned to others in their community. Furthermore, they showed great ability to network and expand their web of contacts in order to gain more experience. The difficulty they experienced came down to gaining access to financial resources in order to attend the conference. This indicates that while youth participants of the Youth in Landscapes Initiative were engaged there was still a way forward in engaging them further in a supportive manner that allows for more youth diversity and inclusivity.

5.6.   Further Findings

When asked about the barriers that could hinder youth engagement in the Global Landscapes Forum, youth participants gave a variety of reasons with some giving multiple reasons. There were a total of 110 answers given by the 49[2] participants. After coding and sorting the answers that were given, 15 categories were created (See Figure 9):

- Funding
- Perceived otherwise inexperience (from others or themselves)
- Opportunities given to participate
- Youth do not have an active role
- Youth as a non-important entity (they don't value youth enough)
- Lack of space/Access of space for youth to be involved or included
- Knowledge of conferences
- Time (off from work or school)
- Networking
- Fear of speaking/asking questions
- Difficulty in expressing yourself
- Logistics/Visa issues
- Outcome form participation
- Lack of confidence
- Agreement on challenge and solution

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[2] One participant failed to answer the question regarding barriers to youth engagement.

Reasons Given (Detailed)	# of times that this reason was given
Funding	29
Perceived or otherwise inexperience (from others or themselves)	12
Opportunities Given to participate	12
Youth do not have an active role	9
Youth as a non-important entity (they don't value youth enough)	9
Lack of space/Access of space for youth to be involved or included	9
Knowing about conferences	7
Time (time off from work or school)	6
Networking	6
Fear of speaking/asking	3
Difficulty in expressing yourself	3
Logistics/visa Issues	2
Outcome from participation	1
Lack of Confidence	1
Agreement on challenge and solution	1
TOTAL	110

Figure 9: The 15 categories used and the amount of times they were mentioned which show the prevalence of these issues amongst the youth participants

Subsequently, the 15 categories were further refined based on overall themes that could affect participation (Ryan & Bernard, 2003). There were five overall themes that the initial categories were placed into:

- Opportunities given to participate

- Youth are not viewed as an important group (youth are not valued enough)

- Funding

- Networking

- Other

Opportunities given to participate and youth as a non-important entity rank as the main challenges, both approximately 31 percent, behind youth engagement in environmental conferences. This is followed by funding (26%), other (6%), and networking (5%) respectively (See Figure 10).

Reasons Given (Larger Categories)	Response Total	% of reasons given fall under this category
Opportunities Given to participate	34	31
Youth as a non-important entity	34	31
Funding	29	26
Other	7	6
Networking	6	5
Total	110	100

Figure 10: Main Challenges behind youth engagement and the percentage of responses that fall within them. The initial 15 categories were sorted into 5 overall themes (opportunities given to participate, youth as a non-important entity, funding, other and networking

6. Personal Reflections from the Global Landscapes Forum

I initially became acquainted with the Global Landscapes Forum through working with the Youth in Landscapes Initiative as part of their monitoring and evaluation team. Upon my arrival in Paris, I was also asked if I would like to be part of the 50 youth participants due to some last minute cancellations, more specifically as part of the landscape restoration team. I agreed eager to get an inside perspective into how it is to be part of the program and to the thoughts and concerns of youth during the solution creation process. I also felt that through taking part in the workshop I would be able to become better acquainted with the participants and get more candid answers from them.

I spent five days working with the landscapes restoration team on creating a solution to how the CGIAR Research Program on Water, Land, & Ecosystems can generate and use data more effectively to drive better land restoration processes in shared river basins within Africa such as the Nile through the use of data crowdsourcing. We spent hours trying to understand the question and the requirements necessary to come up with a solution. With all of us having different backgrounds and experiences, our approach to the question differed which sometimes resulted in disagreements taking place. At times I felt that I did not want to contribute too much as I viewed myself as an outsider since I did not go through the same application process that my teammates had gone through and did not want to interfere too much. It was only after having a conversation with my teammates about my concerns, and having them rebuked did I feel more comfortable adding in my opinions. I also realized that if I wanted to understand what youth thought of the entire process and how as a youth myself I felt about my participation in the conference then I needed to become comfortable with the idea that I was not an outsider but someone who also endures the challenges of being taken seriously in the scientific sphere.

After spending entire days and evenings with the youth participants, whether it was in a formal or informal setting, I managed to better understand their concerns and their feelings about their time in Paris and their work and education. In some ways, it was comforting to realize that many of the worries that I have are shared across a wide spectrum of youth from all over the world. In other ways, it was also alarming to see that the issue behind youth participation is not something that is just limited to one place and time but takes on more of a systemic overview. The last day of the program required us to prepare our pitch for the Dragon's Den. We had to compress 5 days' worth of ideas and work into a two-minute pitch that was not only concise and to the point but also captivated the audience and the Dragons.

During the first day of the Global Landscapes Forum, I managed to attend a few of the sessions and discussion forums. Many of the ones I attended were very full with many people sitting in the aisles. The ideas and research that was presented encompassed a variety of ideas and research regarding different land-use issues and approaches to them. This research came from different organizations working in different part of the world. Whether it was the idea of agro-ecology, the Sustainable Development Goals or land rights and tenure given by politicians, researchers, and other important figures, I could not help but notice that youth were, for a large part, missing from the conversation.

The second day of the conference came with the Dragon's Den set to take place in the afternoon. The team and I met up with one of our mentors, Alan Nicol from the CGIAR, for some last minute rehearsal and advice. It was two other team members and myself that were set to pitch our idea. As time came closer to the Dragon's Den, we convened in the auditorium set up for us which was in a location different from where all the other sessions took place. I noticed that even though it was a large room, it did not feel that it filled up as much as some of the other sessions I attended earlier. When I examined the schedule, I noticed that a high-level plenary session was also set to take place in the amphitheatre at the exact same time as our event.

The event went as scheduled with team after team presenting their ideas and receiving feedback from the panel of experts. When the event was over, we were also approached by other youth who were in the audience to express their support of what we did. The atmosphere surrounding the Dragon's Den was a positive one that was fuelled through the energy and passion of youth both presenting and in the audience. The workshop and event helped give me insight into some of the struggles that youth may have but it also helped solidify my conviction in the importance of mainstreaming youth engagement throughout the conference as opposed to just limiting it to one event.

7. Discussion and Literature Support

The results from youth participating in the Global Landscapes Forum demonstrate that they feel confident in their abilities and have the desire and potential to be further engaged. Returning to the answers regarding barriers to youth engagement that were given by the youth participants. The initial 15 categories that were given touched on financial limitations, youth not being viewed as an important group, lack of experience, opportunities given to participate, networking abilities and opportunities, amongst a variety of other reasons.

One of the largest reasons given by the participants as barriers for youth to engage in environmental conferences was the lack of opportunities given for them to participate. Amongst the reasons for this issues were the inability to get time off from work or school, their lack of knowledge about the conferences that take place and the lack of space or access to space for youth to be involved and included in conferences (See Figure 9)). These reasons were also stated by Checkoway & Richards-Schuster (2003) and Checkoway (2011) where the unevenness associated with youth participation in research in that some were able to participate but some tried to but faced a lack of support from adults was discussed. The lack of opportunities given to youth in order for them to participate in more formal settings is also acknowledged in Checkoway's (2011) paper he discusses the notion of "adultism" which is defined as "the assumption that adults are better than young people, and entitled to act upon them without their agreement because of their age" (p.342). As part of this rhetoric, youth are less likely to be involved or taken seriously because they are not seen as resources or as equal partners (Bessant, 2003). Lack of time to be part of a meaningful engagement within a setting is also an issue that is acknowledged in addition to different assets both financial and social assets (Silver, Scott, & Kazepov, 2010).

Many of the youth participants touched upon the subject of youth representation and perception where they discussed the limited and marginalized role that youth have and how it impacts their representation when it comes to conferences. They felt that they did not have an active role, they were not viewed as an important entity and in some cases were not taken seriously by experts in the field. An answer that was given by one of the participants to portray this issue was "I think in the Global Landscapes Forum there is space for youth but issue is that youth are seen as future not present, cheerleaders of the football team. Give good image but not contribute". A form of prejudice does exist when it comes to youth by virtue of their age and relative inexperience that prevents them from making meaningful contributions (Bessant, 2003). This stems from the idea, supported by many initial youth experts, that youth are not fully

developed citizens and thus are unable to make rational decisions and thoughts (Bessant, 2003) further supporting the concept of adultism. As a result, youth are not taken seriously and relegated to a bystander role or to a degree of limited participation.

The expression of frustration behind the limited and bystander role that youth have seems to be a reoccurring theme in many papers This thought is also supported in Harris, Wyn, and Younes' (2010) paper where they observed the feeling by youth that they do not have a voice and their issues are not heard or that politicians are not interested in hearing or acting on their concerns. Furthermore, O'Donoghue, Kirschner, & McLaughlin (2002) also state that many youth encounter ambivalence from adults about their capacity to handle real world decision-making and action further emphasizing this prejudice against youth capabilities. As members of a marginal group, even when given the opportunity to participate, their voice does not really have much of a say (Silver, Scott, & Kazepov, 2010). The justification of this thought process in some cases has been to argue that it is part of tradition or culture resulting in the ignoring of youth voices by adult authorities (Vakaoti, 2013). While not a factor that was mentioned as a barrier to youth engagement, gender can also play a role in the type of youth that attend these conferences. Female representation can be difficult due to the limited economic, social and political power that they have making it difficult for them to actively participate in the political and scientific sphere (Pettit, 2012; O'Donoghue, Kirschner, & McLaughlin, 2002). Similarly to gender, race and ethnicity can also play an exclusionary role in youth representation (Hill et al., 2004). This especially also holds true within the realm of indigenous populations where youth are especially disempowered (Clarkson, Morrissette, & Regallet, 1992).

Financial restrictions were also a very prominent reason for why youth participants felt was an impediment towards being engaged in conferences with 26 percent of the answers participants gave listing it as a reason. Funding to attend international conferences and events is not something that is easy to come by. Whether it be the ability to pay for travel expenses, conference attendance fees, visa applications and other logistical fees, the cost of attending one of these events can be very high especially for youth. The cost of gaining access to participation opportunities can be even more difficult for those who live in rural areas or come from a lower socioeconomic status (Vakaoti, 2013) making only those who are able to pay have better access to these opportunities (Head, 2011). According to Checkoway (2011), income and socioeconomic status are correlated to the level or degree of participation that youth are able to have providing further evidence of the financial difficulty associated with attending conferences and other scientific events.

Alarmingly, a perceived lack of experience either by adults or experts was also a reoccurring theme given by the participants with regards to barriers hindering their engagement. As part of this perceived lack of experience, participants also expressed a fear of speaking or asking questions. They also articulated their lack of confidence as a barrier to engagement. Perceived lack of experience of youth by adults or experts is something that has been examined in numerous occasions (Bessant, 2003; Checkoway, 2011; Corriero, 2004). It links back to the concept that youth are not experienced enough due to their age (Bessant, 2003). It also links back to this dominance of expert driven knowledge as the most reliable form of knowledge while discounting the non-traditional or informal forms of knowledge (Checkoway & Richards-Schuster, 2003; Rigney, 2001). As a result of this prejudice, the system and its associated practice make it difficult for youth to participate. youth feel that they do not measure up to the expertise and knowledge of senior, more experienced adults.

Within this perceived lack of experience, there was also an internalized feeling of inexperience by the participants themselves. They felt that they did not possess enough experience that would allow them to participate in environmental conferences or to make a meaningful contribution. This lack of confidence or doubt in youths' own abilities hinders their self-esteem and self-development (Head, 2011). The inability or doubt behind whether youth are able to speak the appropriate language and demonstrate the appropriate knowledge needed to discuss issues of importance to them also prevents them from actively engaging in the process (Harris, Wyn, & Younes, 2010) or in some cases not taken seriously due to the differences in style when it comes to the expression of their thoughts (Silver, Scott, & Kazepov, 2010). Whether it comes from this notion that youth are incapable of fully grasping concepts due to their lack of rational thinking (Bessant, 2003) or due to their age (Checkoway, 2011), youth seem to doubt their abilities and the contributions they are capable of. Through this form of thinking that is so dominant in our society, adults in addition to youth themselves seem to lack of confidence in youths' knowledge and experiences which can hinder their contributions.

This dominant thought of youth inexperience can be traced back to the idea of traditional legitimacy (Weber, 1964). This traditional legitimacy creates a set of norms and assigns an authoritative figure as the figurehead of those norms. Within the scientific context, traditional legitimacy dictates that older scientists with official credentials and experiences are the main authority behind science which translates to scientific conferences being largely attended and chaired by older experts. Due to their inability to fulfil the criteria of traditional legitimacy by virtue of their age, youth and their contributions are not deemed legitimate or valid enough to be taken seriously thereby relegating youth to the side-lines or in some

cases, not even giving them the opportunity to participate. As a result of this hierarchical thinking, it is very difficult to move beyond this tradition or custom since youth have always been viewed as not experienced or rational enough to contribute. Furthermore, this traditional legitimacy allows for an internalization of feelings of inadequacy or inexperience by youth thereby discounting any innovative contributions they may have.

Breaking this form of substantive rationality, where youth are not viewed as important stakeholders, can be very difficult to address as it requires a movement away from the current authority and their norms. The scientific community has institutionalized this value-based rationality and actions based on the values and thoughts associated with youth creating an internalized barrier for them. In turn, it becomes increasingly difficult to stray from these internal bindings and for youth to gain acceptance in the larger scientific community (Kalberg, 1980). It requires a gradual paradigm shift to move away from the attitude of viewing youth as a problem that needs to be solved to viewing them as resources and as capable contributors of a community (Thapa , Sonti, & Finger, 2005; Checkoway, 2011).

Through youth empowerment, the scientific community can take an active step towards intergenerational equity thereby breaking from the traditional legitimacy given to adults. Youth engagement allows youth to be viewed as contributors to the current society we live in in addition to future societies (Burns et al., 2008). By viewing youth as contributors to in their own right and no as a source of problems that need to be solved, they can achieve their right to be part of society and to advance it with their contributions (Narksompong & Limjirakan, 2015). Through stronger youth engagement in conferences, youth are able to gain more confidence in their skills, experience where it is needed and to communicate with other experts in a more democratic manner further engaging in the dialogue of intergenerational equity and contributing to the democratization of knowledge (Checkoway & Richards-Schuster, 2003).

Through the democratization of knowledge, the scientific community would not only use technical expert knowledge but also use knowledge gained through everyday experiences thereby allowing underrepresented groups such as youth to partake in the creation of new sustainability focused strategies (Checkoway & Richards-Schuster, 2003). It would allow for youth to have a more equal voice within the scientific community without the prejudice of age and inexperience. It would allow youth to be viewed as a credible group that should be allowed to participate and contribute in a conference setting. This process would contribute to a wider variety of research conducted and presented at conferences thereby providing sustainable solutions that can be applied based on different disciplines and perspectives. Through taking part at conferences, youth will be able to interact with a plethora of scientists of varying

expertise and disciplines as possible collaboration partners but will also be able to expand on their current body of knowledge allowing for further engagement in the dialogue of sustainability.

Another reason for a lack of youth engagement may be attributed to the different pathways that young people use to get their message across. This can be seen as a movement away from the traditional forms of output and engagement and towards a different more informal medium that youth feel more comfortable in (Harris, Wyn, & Younes, 2010). As there has been difficulty with youth gaining meaningful participation, many have taken to try different mediums and methods such as the internet or activism of getting their message across (Harris, Wyn, & Younes, 2010; Vromen, 2003). It may not be that that a lack of youth participation is attributed just to difficulties in going to these conferences and gaining legitimacy among experts but it could also be that they have actively chosen not to attend or participate because of their preference for other channels of communication and expression (Vromen, 2003). These alternative channels of communication and expression can be deemed more democratic and easily accessible. While this paper focused on the issues surrounding youth engagement in environmental conferences, the question of whether youth use other mediums as a platform for their work and advocacy was not examined.

7.1.   Limitations

Some limitations may have contributed to the outcome of the answers provided by the participants and as a consequence may have had an effect on the analysis on the data. This sections seeks to examine some of the possible limitations that may have occurred during the conduction of my research.

Time constraints during the time the questionnaire was conducted may have had an effect on the answers and the depth of the answers that were given. The questionnaire was conducted on the final day of the Youth in Landscapes Initiative where the participants were busy preparing and finalizing the pitch that they were going to present during the Dragon's Den. As a result of the amount of work that had to be done, I had to conduct the questionnaire within a limited amount of time. Since there were two questions that were asked, the amount of time given was divided between the two further limiting the time for more in depth answers to be given and explored. Due to the participants being busy preparing their pitch and the time constraint, their thoughts may have been pre-occupied with the preparation therefore being unable to concentrate on the task at hand which can affect the answers they gave.

Another possible limitation of the research and a possible pitfall that can occur as a result of active research is that my participation as a participant within the Youth in Landscapes Initiative may have influenced the answers they gave during the questionnaire. Through the interactions and conversations that I may have had with the participants about my research or through casual conversation, a reflection of those conversations and topics may have occurred thereby affecting the answers given. The feelings and thoughts that were shared during the times spent together may have affected the answers that were given. Consequently, the data generated and the analysis that was done may also have been affected.

As the sample of youth participants that was interviewed was pre-selected by an independent committee, the sample of participating may not have been representative of the diversity of youth. Due to the nature and theme of the conference, only a select group of youth participants were chosen to be part of the Youth in Landscapes Initiative. As a result, this could limit the generalizability of the results to youth participating in conferences. Additionally, it may not give full insight into the different barriers that youth face in engagement.

7.2.   Recommendations

While the Global Landscapes Forum and the Youth in Landscapes Initiative have taken active steps to including youth into the conference setting, there are many steps that need to be taken to ensure that youth are not only meaningfully engaged but also to encompass and represent the diversity behind the youth population. These recommendations will allow the Global Landscapes Forum to enhance and build upon the 2015 conference in addition to providing other organizations with ideas on how to meaningfully and actively engage youth within their conferences.

Providing grant or scholarship opportunities that are catered to youth can ensure that they are not excluded due to their socioeconomic status. Through the provision of grants or scholarships, conference organizers can lessen the burden on youth to find funding in order to attend their conferences. These grants can then be adjusted to cater to different demographics of youth whether it be gender, race, ethnicity, or ability. It would also ensure that the youth that apply to attend the conference is diversified. Partnerships can also be established with other organizations or foundations that are willing to fund youth in return for being placed on the marketing materials given out. If funding through the conference organizer is not possible, then a database of where youth can apply for funding or materials on how youth can fundraise to attend the event can be provided.

While the Dragon's Den was not set up to be a competition but more of a display of the innovative ideas that youth are able to bring to sustainability issues, a continuation of these presented projects would allow for a greater impact and presentation of youth engagement. The Dragon's Den could be organized as an event where the panelists pick a winning project that would receive a certain amount of funding to operationalize it. Through the help of the Global Landscapes Forum, partnerships between youth and the different partners could be established to move the proposed projects to reality. Conversely, the conference organizers could try to encourage potential funders to attend the event and take on projects that align with their interests and goals. It would give youth the opportunity to determine the validity of their project, establish new connections, gain more confidence in their abilities and to challenge the norm.

The Global Landscapes Forum can try and include more youth as panelists or as presenters with their own sessions thereby purposefully addressing youth and their research and knowledge as part of the wider conference setting. This can be done through asking panels what youth can do to be part of the panel discussions and actively including them or by showcasing the variety of innovations and projects headed by youth scientists and researchers. This ensures that youth are not just part of one session but encompass all the different roles that are available at a conference, exhibiting their knowledge. Alternatively, as the Dragon's Den takes place during the conference, making sure that the event takes place at a time where there are no large plenary sessions taking place. This is to make sure that the youth session does not compete with other large sessions with prominent figures. It also sends a message to conference attendees that the session is an important one that should be attended.

As the results have showed, the impact on the skills acquired by the youth participants in the Youth in Landscapes Initiative did not exhibit a significant impact. While skill building is still an important part of effective participation (Narksompong & Limjirakan, 2015), this is an indicator to the workshop organizers that they may have to adjust the focus of the workshop to work with all the necessary aspects of youth engagement. The Youth in Landscapes Initiative can play a large valuable role in promoting youth participation within the Global Landscapes Forum through its workshop and by providing even more opportunities for youth to connect with other experts in the field. This works to slowly reverse the internalized effect of traditional legitimacy felt by youth and to move older senior experts from the current status quo.

Another way of approaching youth in the Global Landscapes Forum is to involve youth in coordinating the conference. Involving youth in the process of organizing the conference can help in empowering them to positions of power. Furthermore, it can help in ensuring that the youth perspective is taken into

consideration when deciding on the themes and topics that are to be covered in the conference in addition to the panelists. By placing youth in a position to shape the conference, it helps them gain more ownership of the organization process and change perception with regards to the capabilities of youth to organize and execute conferences. They would no longer be considered just recipients of knowledge but providers as well. It would help increase their independence and challenge the hegemony of youth dependence on adults thereby changing the perception that youth have of themselves and by adults. It would strengthen the relationship between generations and bolster the understanding of the importance of preserving the natural environment for future generations and crating sustainable solutions.

8. Conclusion

Attempting to address intergenerational equity is a daunting task. Much has been said to the importance of it but very little has been done to show how to address it especially within the scientific arena. Meaningful youth engagement can provide a step in the direction of achieving some form of intergenerational equity by allowing youth to be taken more seriously and for them to take on a larger more balanced role in addressing the issues behind sustainability. Conferences such as the Global Landscapes Forum can become a prime example of exhibiting a movement towards intergenerational equity through actively and meaningfully involving youth within their programming thereby changing the perception of youth and their contributions in addition to providing them with a stronger more equal voice.

As part of the current generation that are likely going to experience the impact of current decisions, youth are a vital component of ensuring that what works today will also work and continue on tomorrow. By involving youth in environmental conferences, they are given the opportunity to display their knowledge, research and ideas in a setting that would allow other researchers and politicians, young and old, to interact, communicate and connect with them. The presence of youth in the conference would also serve to establish a stronger connection to the importance of youth and attempt to level the playing field of experts. Furthermore, it would also help to slowly deviate from the norm of who should be considered an expert and move towards a more equitable representation of ideas and work from different generations of researchers.

The Youth in Landscapes Initiative is a unique program that allows youth from all over the world to come together and find a solution to some of the most pressing land-use issues that the world is currently facing.

It provides an opportunity for youth to exchange knowledge and ideas and to share them on a platform that is willing to listen to youth. While this program makes an effort to include youth, there is still much left to be done for enhanced youth engagement to occur. Resources to not only allow youth to attend these conferences but also to create the necessary connections to move their ideas forward and to connect with other experts in the field is vital to ensure the active engagement of youth.

The issue of legitimacy is not something that can be solved overnight. It is a matter that requires time and a concerted effort by conference organizers in order to change the tide of thought when it comes to who is qualified or allowed to take part. It requires an acknowledgement by organizers that there has been an uneven representation of youth in conferences and that youth should not only be the recipients of knowledge but also the providers. It should recognize the importance of youth engagement in creating solutions and actively encourage other experts to innovate and work with them as partners. Youth are not just the future, they are the present and they are ready to make a change and it is up to the scientific community to stand up with them and acknowledge that they are a necessary component in creating a long-term sustainable future.

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10. Appendix

10.1.   Appendix 1: Consent Form

<u>CONSENT FORM</u>

For participation in Lund University research on Youth Empowerment and Inter-Generational Equity

DESCRIPTION: You are invited to participate in a research study on youth empowerment and inter-generational equity. You will be asked questions about your involvement in the Youth in Landscapes Initiative (YIL). This will include what you have learned, experienced and how you felt about your overall experience. Also, you will be asked questions about the role you had during the Global Landscapes Forum (GLF) and/or YIL. The goal of the study is to better understand youth engagement, its role in youth empowerment in environmental conferences to an academic audience in order to explore the idea of generational equity in the context of environmental issues.

You will be asked to answer questions, which will be recorded if you consent below. Also if you consent, these recordings may be played to scientific audiences for research purposes if all personal identifying information is removed. Recordings will be archived in a secure location by NN.

RISKS AND BENEFITS: The risks associated with this study are anticipated to be minimal, not greater than those experienced in daily life. The benefits which may result from this study are an increased understanding of your own work and role in both the Youth in Landscapes Initiative and the GLF through self-reflection in the interviews and the chance to read about the views of others through the resulting publication. However, we cannot guarantee that you will receive any benefits from this study.

TIME INVOLVEMENT: Your participation in this study will take approximately 30-45 minutes. Participation is completely voluntary, and you will not receive any monetary compensation for your participation.

YOUR RIGHTS: If you have read this form and have decided to participate in this project, please understand your participation is voluntary and you have the right to withdraw your consent or discontinue participation at any time without penalty. You have the right to refuse to answer particular questions. Your individual privacy will be maintained in all published and written data resulting from the study.

I give consent to be recorded during this study: Please initial: _____Yes _____No

I give consent for recordings resulting from this study to be used for presentation at scientific meetings: Please initial: _____Yes _____No

I want a copy of the resulting publication's draft: Please initial: _____Yes _____No

If yes, please enter your email: _____

Please sign before the interview.

SIGNATURE _____ DATE _____

Thank you very much for taking the time to participate in this study.

For questions about the study, contact: Noor Nasir, Tel: +46(0)72-534 8235. E-mail: ess14nna@student.lu.se

10.2. Appendix 2: P-values

P-values for the Level of Confidence Regarding Different Skills	
Skill	**P-value**
Framing or tailoring messages for different audiences	0.164
Presenting an idea/opinion/message clearly	0.171
Public speaking	0.607
Approaching people	0.948
Introducing yourself	0.740
Following up with people	0.288
Managing conflict	0.217
Keeping discussions focused	0.766
Active listening	0.959
Asking questions and expressing yourself clearly	0.399
Summarizing main ideas from a discussion	0.848
Body language	0.476
Note-taking	0.852
Finding reliable information about land-use issues	0.557
Taking diverse perspectives in account	0.852
Identifying key points in an argument	0.899
Disproving an argument	0.248

P-values for the Different Types of Knowledge Associated with the Landscape Approach	
Knowledge	**P-value**
Meaning of Landscape Approaches	0.109
How Landscape Approaches are linked to climate change	0.611
The technical challenges of implementing a landscape approach	0.149
The political challenges of implementing a landscape approach	0.467
The social challenges of implementing a landscape approach	0.214
The financial challenges of implementing a landscape approach	0.320
Landscape restoration processes	0.521
Rights and Tenure Issues	0.207