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What makes people want to save the world?

A study of behavioural drivers towards environmental consciousness in tourism-driven Himalayan Towns: The case of Dharamshala, India

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Summary

Rapid urbanization often raises conflicts between social, economic and environmental concerns. How these concerns are prioritized depends as much on government policies as they do on individual choices of the users in a given context. Moreover, it is these individual choices that shape larger community structures and consequently drive an urban development process deeply rooted in people versus place dynamics. This tussle between top-down policy making and bottom-up community subtleties must be addressed from both ends to achieve a thriving participatory governance approach to urban development. In this context, behavioural studies can provide valuable insights into the perceptions, attitudes and actions of individuals to gauge how people react to such developmental processes and how they choose to engage in them.

With respect to place dynamics, it is also evident that certain contexts are more environmentally vulnerable than others. The case of the Himalayan mountain regions is one such context where environmental management can be a challenging prospect, yet remains a highly crucial and contested notion, especially in light of local socio-cultural considerations which fall at the cusp of high exposure to urban systems in a predominantly rural and peri-urban milieu. This thesis takes up a case study of the city of Dharamshala in India which lies in the Himalayan mountain range in India and has a uniquely rich and vibrant cultural context placed within a heavily tourism-driven economic system bearing heavily on an ecologically vulnerable setting. In trying to understand the governance-related undercurrents of developmental planning in this region, this research adopts a strategy of combining behavioural studies with urban planning, environmental management and tourism development perspectives. The aim is to understand what drives people's attitudes and behaviour towards environmental preservation in Dharamshala with respect to individual psychological constructs along with broader structural systems that influence these constructs.

To this end, the concept of 'environmental consciousness' is employed to provide a statistical framework to assess various socio-psychological and socio-structural drivers that determine pro-environmental attitudes and behaviour in individuals. This quantitative approach is combined with a qualitative study to derive results on the relationship between individual and collective action and thus build on existing knowledge of community participation towards the governance of common pool resources. The findings bring to fore the role of community engagement as a factor of the local populace's felt personal responsibility and pride towards their city linked with the larger institutional setup of the context. Also found to be important are the role of specific population groups such as the refugee Tibetan population and certain tourists who show greater involvement in pro-environmental action along with a notable impact of the tourism industry on this phenomenon.

Keywords

Environmental consciousness, community participation, pro-environmental behaviour, common pool resources, tourism

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Abbreviations

DPA	Dharamshala Planning Area
MUD	Ministry of Urban Development
TCP	Department for Town and Country Planning
DTCA	Department for Tourism and Civil Aviation
CTA	Central Tibetan Administration
CPR	Common Pool Resources
NAM	Norm-Activation Model
TPB	Theory of Planned Behaviour
VBN	Value-Belief-Norm Model
NEP	New Environmental Paradigm Model
NGO	Non-Governmental Organisation
IHS	Institute for Housing and Urban Development Studies

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Chapter 1 Introduction

The Himalayan mountain range is among the most spectacular landscapes and valuable ecosystems on earth. Called the Third Pole of the world or the ‘Water Tower of Asia’ (Shreshtha et al, 2012), their glaciers are the primary source of water for river systems that sustain more than 1.4 billion people (Immerzeel et al, 2010), and their forests and valleys are home to all varieties of flora and fauna, as well as human settlements of many sizes and kinds. The mountain range and its many related natural systems have a tremendous impact on various social, economic, ecological, political, cultural aspects of the lives of the inhabitants in these regions, and vice versa.

This Thesis assesses the city of Dharamshala in north India, which is the second capital of the mountainous state of Himachal Pradesh and also serves as the seat of the Tibetan Government in exile. It has developed as a popular tourist destination due to its scenic landscapes, a growing reputation for spiritual and wellness tourism, a 22,500-capacity cricket stadium, and a vibrant local culture which is a mix of various communities including Kangri, Gaddi, Tibetan and others from surrounding regions. The city, situated in the district of Kangra, is also one of 100 cities chosen from across the country to be developed as smart cities as part of the India Smart City Mission (MUD, 2018).

Dharamshala Planning Area (DPA) covers 41.63 square kilometres and has a total population of 62,279 (TCP, 2017). The administrative boundaries include urban areas as well as 33 villages with an almost equal distribution of population across urban and rural areas. The state of Himachal Pradesh has been slowly urbanizing, with urbanization levels rising from 6.99 percent in 1971 to 10 percent in 2011. The component of urban population in Dharamshala, however, has grown at a significantly high rate of 60.87% from 2001 to 2011, increasing from 19,124 in 2001 to 30,764 in 2011, and is projected to grow to 57,876 by 2035 (TCP, 2017). This growth may be attributed firstly to the redrawing of administrative boundaries for the city over the years, and secondly to the increasing livelihood opportunities which attract people from rural areas as well as from neighbouring regions. The rapid urbanization also necessitated the upgradation of the urban local body from a Municipal Council to the Dharamshala Municipal Corporation in 2015.

Economic opportunities in the region have grown steadily and approximately 90% of the population is engaged in the tertiary sector due to increasing demand in the booming tourism sector, along with administrative services, trade and commerce. Tourism has emerged as one of the fastest growing sectors in the global economy and it is estimated to grow by 60% between 2013 and 2030 (DTCA, 2019). This growth pattern is visible in the case of Dharamshala and the policy-making and development of the city is also closely linked with tourism as can be seen in the Dharamshala Smart City Proposal (SCP), which seeks to develop the city as a ‘*Global tourism destination for all seasons and all reasons*’ (MUD, 2019). While the average length of stay by tourists was calculated to be 1.5 days in 2019, the Dharamshala Master Plan 2035 aims to increase the duration to 2.5 days through development of more tourist attractions and provision of better infrastructure and services including improvement in the quality and quantity of the available accommodation units. (DTCA, 2019).

Reports show that approximately 2.4 million tourists visited Kangra district in 2019, with the highest monthly figure of 274318 being recorded in the month of April, corresponding to an average tourist footfall of 9,140 per day in the peak month of April. While the exact figures for

number of tourists visiting Dharamshala are not clear, it is estimated that this number could fluctuate anywhere between 60-90% of the total tourists visiting Kangra. In 2015, it is assessed that over 50,000 tourists visited Dharamshala to attend cricket matches in the city. For the purpose of infrastructural planning, the Master Plan accounts for a ‘floating population’ of approximately 55,578 users in addition to the current population of 62,279 local residents (TCP, 2017). This floating population consists of many different kind of users as explained below.



Figure 1 Tourist attractions in Dharamshala - Scenic beauty and adventure tourism, Cricket Stadium, Dalai Lama Temple and Vibrant Market Areas (clockwise from top-left)

By virtue of the presence of His Holiness the Dalai Lama, the Central Tibetan Administration - which is the Tibetan government in exile, and the refugee Tibetan population, Dharamshala has also become the center for research on Tibetan culture and a destination for those seeking to learn more about spirituality and Buddhist practices, attracting a large number of foreign tourists and students. This, along with a growing culture of remote working among the younger generations, has created another small niche of longer-stay tourists who often stay in the non-touristic parts of the city for several weeks or months to take advantage of the pleasant weather conditions and quiet, peaceful surroundings. These also include people who come to engage in many volunteer programs and workshops which may last for many weeks and even months. Besides the tourists themselves, there is a temporary working population of people who have moved to Dharamshala for work opportunities, including a large seasonal influx of workers from other parts of the country to cater to the high demand in various tourism-related jobs such as staff in hotels and restaurants, tourist guides, taxi drivers, etc. and other activities such as construction or small scale industries like handloom, handicrafts, food products, etc. While the division of numbers for these different segments of the floating population is not clear, they are all considered regular users of the city’s infrastructure, services and amenities.

It can thus be seen that there are different user groups that constitute the overall population of the city, including permanent residents and a floating population consisting of various short

and long-stay tourists as well as temporary or seasonal workers. The different user groups relate to the city in their own ways based on their individual perceptions and agendas which influences the way they interact with the urban environment. The presence of tourists and the distribution of touristic attractions, along with geographical characteristics, divides Dharamshala into two broad areas – Upper and Lower Dharamshala. Upper Dharamshala is formed from a combination of rural and urban areas including Mcleodganj, Dharamkot, Bhagsunag, Naddi, etc and is the main touristic part of Dharamshala, being at a higher altitude and including the majority of attractions such as the main markets, Dalai Lama residence and main Monastery, major trekking routes, etc. The remaining areas fall under Lower Dharamshala which is where the majority of the local population lives and where major administrative centres and other local markets are located. With diverse contributing factors, Dharamshala presents an interesting context with several overlapping socio-cultural dynamics at play, placed in a specific economic and ecological setting.

From the perspective of urban management, this growth has created new challenges in managing issues of water and sanitation, solid waste, disaster vulnerability, pollution, increasing traffic, unregulated construction activity, etc. The frenzy of human activity is causing rapid, unplanned transformation of the urban morphology and degradation of the natural environment, along with various socio-cultural changes to the community fabric (Singh, 2015). These effects are not localized to just Dharamshala but can be seen in various other settlements in the mountains, where haphazard development of urban areas, driven by tourism in many cases, has led to severe environmental issues. For example, Shimla, which is the capital of Himachal Pradesh and one of the most popular hill stations of India, faced a water crisis in 2018 where municipal water supply was disrupted, residents had to stand in queues for many hours to fill water from tankers and tourists were requested to avoid visiting the city for a few weeks during the peak tourist months, having significant social and economic repercussions (Bhargava, 2018). The water shortage was attributed to climate change, reduced rainfall, deforestation, soil degradation, and inadequate infrastructure for water treatment and distribution, issues which are becoming increasingly common in surrounding areas.

It is important to recognize that providing infrastructure and services can be challenging in these areas due to tough conditions and difficulty of access. A more nuanced approach is needed to develop a positively symbiotic relationship between the urban fabric and the environment, with special focus on ensuring that tourism assumes greater responsibility in this process, along with cultivating a more engaged citizenry. Issues of environmental management must be addressed in a carefully planned, holistic manner to ensure long term sustainable development of these areas.

1.1 Problem Statement

A critical aspect of effective environmental management is the actions and activities of the various stakeholders in the process, including the government, community and the private sectors. Narrowing down on the role of the community, the literature indicates a strong relationship between community participation and effective environmental management. The extent of community participation varies significantly between different regions, and the literature on Indian cases suggests sporadic success of participatory approach-based conservation initiatives in fields such as watershed management, solid waste management, forest management, reconstruction in disaster-affected areas, etc. Even though overall success

rates are low, there still are successful examples of community-driven projects in the field of environmental management in India, as well as many in other countries.

In the ecologically sensitive context of the Himalayan belt, a bottom up, participatory approach can be highly beneficial to improve environmental preservation and it remains highly under-utilized. The Dharamshala Smart City Proposal lists ‘an environmentally conscious and responsible community’ as one of the city’s strengths (MUD, 2018), yet many issues of environmental mismanagement such as increasing solid waste, water and air pollution, deforestation, unsafe construction leading to increased disaster vulnerability, etc are arising in the city which are often directly caused by the community’s actions. Moreover, the huge floating population of tourists and workers also has a direct impact on the environment and their role in this process needs to be examined as well. There are a variety of factors that affect people’s behaviour and it is crucial to investigate how these different stakeholders in the community perceive their role towards environmental issues and what factors drive public awareness and action to better understand why community participation works in some places and not in others.

1.2 Relevance of Topic

The specific context of the tourism economy in settlements in the Himalayan belt has been chosen because a more direct impact of environmental management, or the lack of it, can be observed in these ecologically sensitive areas. Moreover, the growth of tourism may influence public perception because of the high profit-making potential from direct economic opportunities created by the recreational benefits of nature. It is critical that urban growth is regulated and planned to ensure that the natural environment can support the increased pressure from tourism and continue to provide the recreational benefits that help to sustain the industry. This research is highly relevant as tourism has been a fast-growing industry globally and there is still a gap in academic knowledge on how the industry influences the perceptions and behaviour of the people living in such settlements with respect to environmental issues. Moreover, there is also little research on the topic from the perspective of the temporary floating population of tourists and workers who also have a considerable impact on the area through their activities. This research will help to fill gaps with respect to the diverse factors guiding the actions of different user groups.

An improved understanding of what influences decision-making towards common pool resources also serves to add nuance to various aspects of the field of participatory planning. Participation is considered an essential component in governance and policy-making yet remains complex to navigate and challenging to achieve. The bottom-up approach to development has been a consistent theme in the planning literature and concepts like self-organization, co-production and co-management, etc. assume a heavy dependence on the behaviour of the users of a system. Better understanding of the conditions necessary for effective public participation in this context can be useful for better policy design and long-term success of environmental management initiatives in tourism driven settlements. With the increasing focus on a multi-stakeholder, network-based approach towards governance, it is even more relevant to understand how the potential of the different stakeholders can be effectively harnessed towards a more sustainable model of development, and this study seeks to add to this knowledge framework by analysing the behaviour of the individual units that make up the community.

1.3 Research Objectives

The objective of this research is to explain various social, cultural and psychological factors guiding the behaviour and decision-making of individual user groups such as the permanent residents, short and long-stay tourists, and seasonal migrant workers towards environmental management in Dharamshala.

The purpose of the study is to explain drivers for encouraging community participation in the context of a touristic settlement in an ecologically sensitive area and the necessary conditions that help facilitate citizen engagement in the field.

This research also aims to draw conclusions on the impact of the tourism industry on the perceptions of the different user groups towards environmental preservation.

1.4 Research Question

In the tourism-driven context of Dharamshala, which socio-structural and socio-psychological (attitude and behaviour) drivers explain the environmental consciousness of different user groups in the ecologically sensitive area?

Sub-Questions

1. What is the current measure of environmental consciousness of different user groups in Dharamshala?
2. What factors influence the individuals' levels of environmental consciousness in Dharamshala?
3. Which factors are most important with respect to community engagement towards environmental management in Dharamshala?
4. To what extent does the tourism industry affect individuals' levels of environmental consciousness in Dharamshala?

Chapter 2 Literature review/theory

2.1 Introduction

“What is common to the greatest number gets the least amount of care. Men pay most attention to what is their own; they care less for what is common; or at any rate they care for it only to the extent to which each is individually concerned.” - Aristotle (384-322 B.C.)

The above quotation by Aristotle provides two important insights. The first is that common property is subject to both neglect and overuse, due its intrinsic nature of being common to everyone, thereby characterized by lack of accountability to individual action. Secondly, the governance of such property is directly influenced by individual perceptions and behaviors of the users and has been for centuries. This chapter studies the theoretical framework that links management of the environment and natural resources with psychological, social, cultural and structural drivers at an individual level.

There are five broad concepts that apply to the established research objectives with multiple linkages and correlations between them. Firstly, the *governance of common pool resources* has been explored as a collective action problem with respect to environmental management, and multiple views on the subject have been compared and analysed. Secondly, *community participation* has been discussed as an effective means of environmental management through participatory planning based on principles of subsidiarity, along with studying the *institutional frameworks and rules for organization* of collective action. Thirdly, various theories on *user behaviour and decision-making* have been analysed to understand various drivers that influence individual attitudes including psychological, social and structural aspects. Next, these theories have been applied to the context of pro-environmental concern and behaviour of individuals to define the scope of *environmental consciousness*. Finally, the *tourism economy* context of the research has been explained based on literature on perceptions of individuals towards the positive and negative impacts associated with tourism. Some conflicting views on these concepts have also been discussed, along with certain gaps or possible points for consideration.

2.2 Governance of Common Pool Resources

Forests, watersheds, grazing pastures, global atmosphere, oceans are some examples of ecosystems constituting the natural environment which do not have a single owner, yet are accessed and used by multiple individuals as well as institutions. Such resource systems are often referred to as the ‘commons’ (Faller, 2009). From a legal standpoint, commons or *res commune* have been defined as “things common to all; that is, those things which are used and enjoyed by everyone . . . but can never be exclusively acquired as a whole” (Black Dictionary of Law, 1990). While this definition applies to the resource system itself, such as the forestry ecosystem or coastal ecosystem, it may not be applicable to the units of resources provided by the corresponding systems such as wood or fisheries (Araral, 2013) and a major social dilemma is in fact the use and exploitation of these units of resources. As with many environmental goods, such resources are denoted as common pool resources (CPRs) which Ostrom (2008) defines as “resources that are sufficiently large that excluding potential beneficiaries from using them for consumptive or non-consumptive purposes is non-trivial. Each individual consumptive use reduces the resource units that are available to others.” The primary defining characteristics of CPRs are non-excludability and rivalry, which differentiate them from public

goods, private goods, and club or toll goods. This is relevant as it indicates how management of such environmental goods or CPRs may be influenced by the needs and self-interest of the individuals using the system since the goods are non-excludable, as well as the social dynamics and governance mechanisms of the collective social unit by virtue of their rivalrous nature.

A major influence on the wide literature on understanding the commons has come from the *Tragedy of the Commons* by Garrett Hardin (1968). Hardin's argument assumes a state of helplessness in rational individual behaviour towards CPRs which makes the users or appropriators predisposed to greed and overconsumption causing over-exploitation and degradation of the commons. Ostrom (1990), however, has argued that the argument is flawed and that the tragedy is neither inescapable, nor is it generalizable to all contexts. She labels the phenomenon the 'drama of the commons' (Ostrom, 2002) instead, claiming that human motivation is complicated and may not always fall within the set of assumptions underlying the tragedy of the commons. Success and failure are both possible outcomes in the governance of CPRs and Ostrom presents many examples with moderate to high success rates to support her argument. Her work on institutional arrangements in management of CPRs in different contexts across the world has given extensive proof of self-organized community action as an effective means of environmental governance, reinforcing the principle of subsidiarity. One crucial focus of Ostrom's work has been on identifying conditions that trigger action from self-interested individuals towards common goals (Agrawal, 2014). Her departure from Hardin's arguments is not that individuals are not self-interested, but that their behaviour and actions can be influenced and regulated through the establishment of recognized, democratic institutional capacity operating with a set of well-defined rules and norms.

While it is clear that overcoming social dilemmas through collective action is a complex endeavour, it is also evident that by creating the right conditions, individual behaviour as well as social organization can be guided to serve larger goals. As Lejano and de Castro (2014) have noted, "the nature of the choice-making individual in itself is not fixed, but a consequence of the context in which individuals find themselves." Overall, individual attributes, social structures and norms, as well as situational characteristics of the context, all play an important role in determining levels of environmental consciousness among populations which leads to varying levels of individual behaviour as well as collective community participation. The recognition of these multifarious factors is crucial in assessing the value and potential of community participation towards environmental management which has been explored in more detail in the next section.

2.3 Community Participation and Institutional Frameworks

The theories developed towards governance of the commons have served to influence policy towards community-based management of natural resources and contribute to development of literature on participatory planning and multi-stakeholder, network-based governance. Considering the complexity of both - human interactions as well as the environment in which such interactions are played out - broad policy strokes and standardized, top-down decision-making are doomed to fail (Cornwall, 2008). This challenge has been approached from two perspectives. The first is the recognition of individuals as effective agents of change at the grassroots level as discussed in the section above, and the second is the development of institutional setups based on network models. These models allow for better integration of policies and have the potential to cut across restrictive hierarchies (Klijn, 2007), thus

reinforcing the importance of community participation and sound institutional frameworks in complex urban systems, including environmental management.

It has been argued that the governance of commons must go beyond the 'self-organizing cooperative structures' proposed by Ostrom (Giest, S. and Howlett, M., 2014) and recognize the role of networks of various other stakeholders that are essential for the application and maintenance of such structures. In this light, network-based governance has been the focus of much study and debate in recent times, with a focus on encouraging greater participation of different stakeholders in policy-making to effectively harness the power of networks in dealing with the complexities and interdependencies of public problem solving (Klijn, E. and Koppenjan, J., 2012). As the network governance model has developed, researchers have shown faith in the model while looking for solutions for various questions that arise on the practical feasibility, efficacy and democratic nature of such networks (Sorensen, E. and Torfing, J., 2005).

Ostrom has described the polycentric governance model as one that enables the market as well the state, including governments at various levels of devolution, to interact with the community in a manner that embraces complexity and allows for nested enterprises (Ostrom, 2012). This follows from her previous arguments where she has stressed the importance of institutions as an alternative to either private ownership or free access, saying 'that neither the state nor the market is uniformly successful in enabling individuals to sustain long-term, productive use of natural resource systems' (Ostrom, 1994). It also goes against historic notions of the 'invisible hand' of the market where pursuance of self-interest should notionally lead to improvements in the collective well-being of the overall market. This, however, is not empirically evident, and the argument against private ownership has gained traction due to the ability of communities to self-regulate their environments leading to more sustainable management of resources, as demonstrated by Ostrom (1994). The literature indeed indicates a relationship between property rights and environmental protection at a policy-level where conflicts often arise between the two while there also exist various land management practices that are effective at deriving mutually beneficial solutions to such conflicts. Moreover, the rights an individual holds over land they use often also influence the relationship they enjoy with the surrounding environment and the sense of ownership they feel towards it (Adler, 2005).

From a theoretical perspective, notions of complexity in urban environments can be used to understand how human settlements are composed of individual units and processes which are connected through their interactions. The units are both mutually dependent as well as autonomous at the same time. This mutual dependence may be interpreted as the social construct within which the units operate and exchanges happen, while the autonomy may be attributed to their individual perceptions and self-interest. These interactions, however, are non-linear, making it an uncontrollable and unpredictable system which over time self-organizes to produce coordination and synergy (Heylighen, 2008). It is this self-organization that must be facilitated and nudged in the right direction for responsible and sustainable bottom-up development since it is extremely challenging to plan for an unpredictable system exogenously and it is in fact the users themselves who are best equipped to comprehend the multi-layered narrative of a complex system.

Building on the need for local participation and contextualized solutions, Ostrom warns against sweeping panaceas for social and environmental change (Ostrom, 2014). She postulates that it is imperative to boost local institutional capacity to develop comprehensive and suitable norms

and mechanisms which may ensure smooth operations of collective action. Ostrom has proposed eight key rules for effective governance of CPRs (Ostrom, 1994):

- Clearly defined boundaries
- Congruence between appropriation and provision rules
- Collective choice arrangements
- Monitoring
- Graduated sanctions
- Conflict resolution mechanisms
- Minimal recognition of rights to organize
- Nested enterprises

These key rules describe enabling factors for collective action based on clear definitions, rules and mechanisms established and enforced by a mutually agreed framework of institutions of different sizes. The provision of such mechanisms, or the absence of them, have a direct impact on the willingness of users to engage in collective action along with many other factors identified by various researchers. For example, Ostrom identified trust, reciprocity and communication as the three building blocks of collective action (Ostrom, 1998). These variables directly influence perceptions and behaviors of the community as a whole as well as individual attitudes towards participation. Howlett and Giest (2014) have further supplemented the three building blocks in the context of cooperative interactions by adding notions of political entrepreneurship and leadership to the list. Since it is the communities engaged in the actions that are encouraged to design these rules, the role of the state should be to facilitate the necessary conditions to support this process, such as providing an arena for negotiations and support for monitoring mechanisms, etc (Agrawal, 2013). Other studies have also explored the role of additional ‘extra-local governance structures’ (Mansbridge, 2014) and ‘boundary organizations’ (Lee et al, 2013) in this nested framework which may provide ancillary services to assist institutions at the community-level.

It can thus be seen how exogenous systems and institutional frameworks shape the structural composition of collective action. Community participation has been a recurring theme in many policy development initiatives, especially in the field of environmental management, and various rules and factors identified by different researchers explain how such participation can be facilitated. Moreover, the link between individual and collective action based on notions of complexity and subsidiarity indicates that polycentric governance must account for intervention and coordination at multiple scales for effective implementation of policies and programmes. While this section dealt with collective action attributes, the following section moves to the individual level and looks into the drivers for individual attitudes and behaviours with respect to environmental management.

It should be noted that as an umbrella concept environmental management may include many concepts such as community-based natural resource management, co-production, co-management, environmental preservation or conservation, and so on. There is a large variation in the way these terms are labelled and defined, often being used interchangeably as well. Since environmental management itself is not the primary focus of this research, the umbrella concept will be used to cover all these different terms, and the notion of environmental consciousness, as discussed in Section 2.5, shall be used as the basis of this research with respect to various manners of pro-environmental initiatives.

2.4 User Behaviour and Decision-Making

In his paper 'Conservation means behaviour', Schultz notes that human activity is one of the biggest drivers of environmental change and it is often a matter of lifestyles and behavioural choices that contribute to this change rather than malicious intent (Schultz, 2011). He postulates that environmental conservation is, above all else, a matter of people and the choices they make, thus lending the sentiment to the title and encouraging further study of individual attitudes and choices to support conservation works.

Many studies that have tried to identify drivers that explain environmental concern in individuals broadly look at two scales of influence. Firstly, at the macro scale, they look at external or socio-structural factors such as social norms, institutional frameworks, geophysical conditions, etc; and secondly, at the meso scale, the focus is on socio-psychological factors which may include a variety of personal and social aspects. While they all have a bearing on levels of environmental concern, socio-psychological variables including attitudes, beliefs and worldviews seem to have a stronger impact than socio-demographic or structural factors (Dietz et al, 1998). It is thus essential to explore deeper into the multi-dimensional frameworks that guide user behaviour and identify which factors influence individual perceptions and actions towards the environment. The preceding sections have talked about the social and institutional perspectives of the subject, and this section delves deeper into behavioural studies to understand the socio-psychological drivers of environmental concern.

Individual behaviour and actions have been studied extensively and many theories exist on the subject. One of the early prominent works on behavioural analysis was the Norm-Activation Model (NAM) by Schwartz (1977) which discusses altruistic behaviour as a function of personal norms, which may be used as a tool to predict behaviour. These personal norms, he claims, are actively experienced 'as feelings of moral obligation, not as intentions', thus the behaviour is an active blending of social expectations and moral norms. Further, the feeling of responsibility for performing a specific behaviour and the awareness of the consequences of a chosen action are two crucial factors driving behaviour as per NAM, both of which stimulate anticipated emotions of pride or guilt which in turn guide the individual's decision-making (Onwezen, 2013).

While NAM was based on personal norms, the Theory of Reasoned Action (Ajzen, I. and Fishbein, M., 1967) added to the normative position of NAM by proposing personal attitudes and behavioural intention as the underlying motivation for performing an action besides social and personal norms. It is the expectation of a specific outcome that drives the individual's intention towards a certain behaviour, which precedes the behaviour itself. This theory was further expanded by the authors in 1991 in the form of the Theory of Planned Behaviour (TPB), when the notion of perceived behavioural control was added to this framework. Attitudes and intentions were deemed acceptable as sufficient indicators for behaviors in situations with a high degree of volitional control by the user, however, other kinds of behaviour were more likely to be influenced by factors outside a person's control. Behaviour performance was thus understood to be jointly determined by the individual's motivations (intention) as well as ability (behavioural control) (Montano, D. and Kasprzyk, D. 2015). These factors open up debate for inter-subjectivity of internal and external influences on individual attitudes and behaviour.

The next crucial insights come from the Value-Belief-Norm (VBM) Model by Stern et al (1999) which attempted to offer a theory analysing public support for environmentalism. This theory postulates that if a movement's basic values are accepted along with the belief that the valued objects are at risk and individual actions may help alleviate the risk, an obligation or

personal norm is effected in people towards the movement which further stimulates the intention to provide support. This support may vary among individuals based on their capabilities and constraints. This theory thus links pro-environmental behaviour with the engagement that environmentalism as a movement creates with people and how people perceive risks and threats such that it influences their behaviour.

Gifford and Nillson (2014) have identified 18 personal and social factors based on different studies that explain environmental attitudes. The personal factors include childhood experience, knowledge and education, personality and self-construal, sense of control, values, political views and worldviews, goals, felt responsibility, cognitive biases, place attachment, age, gender and chosen activities. Social factors include religion, urban versus rural residence, norms, social class, proximity to problem sites, and cultural and ethnic variations. Finally, the authors also argue that often pro-environmental behaviour may not be driven by any of these factors and could simply be attributed to choices such as cycling as a form of exercise, or recycling and reusing to save money and so on. This list is not exhaustive as the authors themselves concede that attempting to account for variations in such behaviour is a complex task and numerous other dynamics are often at play which may be difficult to analyse and collate.

In other studies, more influences have been identified with many overlaps with the above-mentioned factors. In some cases, similar concepts have been explained with different nomenclature or slightly altered definitions. Hines et al (1986) find the most important indicators to be knowledge of issues, knowledge of action strategies, locus of control, attitudes, verbal commitments and individuals' sense of responsibility. Bamberg and Moser (2007) mostly agree with this list and add three more indicators – intention, personal norms and problem awareness. Torgler and Valinas (2006) write that besides most commonly studied factors such as the ones mentioned above, political awareness and social capital have not been given enough attention. Onwezen et al (2013) hypothesize that it is anticipated pride and guilt that determine personal norms and suggest that these factors perform a self-regulatory function where 'anticipated emotions mediate the effects of personal norms on behaviour'. Gifford (2011) looks at the issue from a different perspective to identify 30 perceived psychological barriers to pro-environmental action. Wolf and Moser (2011) stress the importance of communication in environmental policy in terms of understanding differences in audiences, framing of the message, means of communication, information processing, etc.

The depth of literature on the subject of behavioural drivers and pro-environmental attitudes recognizes the challenge involved in defining a comprehensive list of such drivers. Studies have often used indicators ranging from 7 to 96 in number with huge variation in their application. It is clear, however, that the relationship between environmental action and individual social-psychological factors is a complex one but needs to be studied further to be able to strengthen environmental policies and initiatives. For the purpose of this research, the concept of 'environmental consciousness' has been adopted from the field of behavioural sciences to further explore this relationship between socio-psychological factors and individual attitudes and behaviours. The next section comprehensively defines and delineates this concept to address the scope of this research.

2.5 Environmental Consciousness

Individuals' attitudes and behaviour towards the environment have been studied through many lenses and there are often similar or partially overlapping views with differences in language

and nomenclature. This includes terms such as pro-environmental concern and behaviour, environmental orientations, environmental attitudes, pro-environmentalism, etc. This research uses the term environmental consciousness which is a relatively recent term, emerging from use in political and common language (Hofrichter, 1992), and is understood as a combination of a variety of attitudinal and behavioural features.

According to Schlegelmilch et al (1996), environmental consciousness is an individual's belief system, set in a multi-dimensional framework of cognitive, attitudinal and behavioural components with respect to environmental issues. Dembkowski and Lloyd (1994) state that environmental consciousness is indicative of the subjective knowledge individuals hold about the environmental consequences of their actions at a cognitive level. As an element of the belief system, Zelezny and Schultz (2000) focus on specific psychological factors that influence individuals' 'propensity to engage in pro-environmental behaviour'. Zheng (2010) describes the concept as a mental behaviour which is characterized by an individual's recognition, value judgement and behaviour intention towards environmental issues.

Jimenez Sanchez and Lafuente (2010) present a comprehensive model of environmental consciousness by focusing its scope on endogenous factors that influence behaviour, thereby construing environmental consciousness as the psychological or attitudinal aspect of pro-environmental behaviour. They look at environmental consciousness within a multi-dimensional framework that 'combines the endorsement of pro-environmental values and the perception about environmental conditions (affective dimension) with level of information (cognitive dimension), attitudes towards action (dispositional dimension) and engagement in pro-environmental behaviors (active dimension)'. This comprehensive framework serves well to establish a worldview composed of individual values, beliefs and attitudes that guide responsible behaviour towards environmental preservation. This distinction between behaviour and the underlying perceptions, attitudes and intentions that guide that behaviour can be understood based on the Theory of Planned Behaviour discussed earlier.

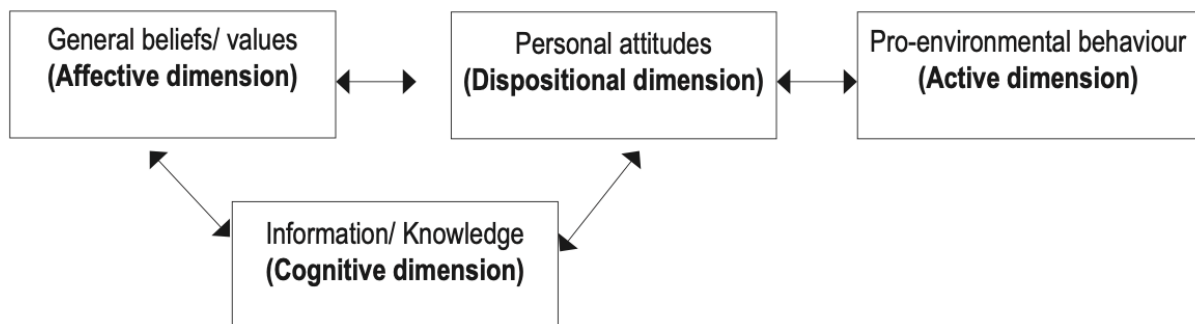


Figure 2: Dimensions of environmental consciousness (Sanchez and Lafuente, 2010)

In the literature surrounding behavioural science and environmental consciousness, research was mostly found to be in domains such as understanding consumer behaviour towards green products, individual behaviour in saving water or energy in households, organizational attitudes towards pro-environmental behaviour, and so on. The literature connecting notions of individual environmental consciousness with community participation and the governance of CPRs was found to be scarce, and this presents an opportunity for this thesis to contribute to a gap in academic knowledge on this subject. The specific context of a tourism-driven urban settlement in the sensitive Himalayan mountain region adds further nuance to this research,

with a multi-layered dynamic of perceptions and behaviors. This context is explained in the next section.

For the purpose of this research, this concept has been explored through the lens of the ‘New Environmental Paradigm’ (NEP) model developed by Dunlap and van Liere in 1978. This model and its application is further described in Section 3.2.3.

2.6 Tourism Economy

This section explores the underpinnings of a ‘tourism economy’ context which forms the backdrop against which all development in Dharamshala take place. Its practical relevance is explored from the literary perspective to define the significance of tourism activity as a major socio-structural influence on the attitudes and behaviours of local residents in the given context, along with the many visitors from outside.

Tourism as an economic activity has grown steadily to emerge as one of the largest industries in the world. The credibility of this statement, however, is ambiguous as it is extremely difficult to define the scope of the tourism industry itself as it cuts across various sectors and multiple scales. While primarily positioned as a service sector industry, tourism stimulates demand and supply patterns in local trade and commerce, as well as induces socio-morphological development at the local urban level of the tourism sites themselves. It contributes to the respective country’s economy by virtue of increased economic activity in such regions, as well as increasing revenues for the large-scale public and private industries such as airlines, hospitality, construction, etc (Lew, 2011). Despite the ambiguity on defining and measuring the extent of the tourism as an industry, it is clear that in its form as a specific human activity, it has significant impacts on the social, physical and environmental aspects of such tourism-driven settlements (Gossling, S. and Peeters, P., 2011).

Tourism creates an additional pressure on resources and infrastructure by virtue of the creation of an irregular floating population of tourists for whom adequate capacity must be developed in addition to the needs of the local users of a tourism destination (Sanchez-Galiano et al, 2017). In essence, the overall scales of infrastructure capacities end up being designed for a much larger number of users than the total population, leading to an increasingly higher ecological footprint and per capita resource usage over time. This has severe implications for the environment with respect to resource consumption as well as management of waste while also often disturbing and destroying natural ecosystems (Gossling, S. and Peeters, P., 2011). These impacts become even more relevant in the case of mountain tourism and other ecologically fragile contexts, where tourism has often been promoted as a means of community-based development through increased livelihood opportunities (Cole, V. and Sinclair, A., 2002, Jodi S et al, 2019) and many new concepts around ecotourism and sustainable tourism development have emerged in recent time (Gomez et al, 2007, Gossling, S. and Peeters, P., 2011). However it should be noted that the overall environmental impacts of such tourism initiatives still need further research to understand ground realities of the expected versus actual results.

Besides the larger scale direct environmental impact, tourism also influences the morphological growth of the urban area, along with reshaping the socio-cultural features of the community itself. In this research, the context of tourism has been studied with respect to the pro-environmental perceptions of individuals that engage with the destination by virtue of either providing a product or service or consuming them. Researchers postulate that the success or failure of environmental and sustainable tourism policies may be significantly influenced by

the attitudes and behaviors of stakeholders towards the environment (Brida et al, 2011, Imran et al, 2014). In fact, community-based tourism has in fact been proven to be a more effective governance approach compared to private ownership in certain contexts with respect to unpacking the complexities of tourism development as well as ensuring equitable, long term distribution of benefits (Qian et al, 2016). How residents perceive the impacts of tourism is a significant influencer of their perceptions of the environment as well as the overall levels of community participation (Sinclair-Maragh et al, 2014, Rasoolimanesh et al, 2017); and thus user perceptions must be studied as a crucial aspect of effective policy implementation.

2.7 Conceptual Framework

Based on the literature discussed above, a conceptual framework has been proposed to delineate the focus of the research. The dependent variable to be measured in this study is *environmental consciousness*, and the independent variables influencing it are identified as *socio-psychological drivers* and *socio-structural drivers*.

The socio-psychological drivers refer to the ‘internal’ psychological profile and perceptions of an individual and draw from the reviewed literature to identify relevant indicators that influence individuals’ pro-environmental attitudes and behaviour. The socio-structural drivers look at features of the ‘external’ context, specifically the attributes of the community and the socio-economic context an individual operates in. The literature on the governance of CPRs and institutional frameworks provides a solid foundation for identifying social dynamics operating at the community level that influence individual action, while it is also useful to understand the demography of the place to identify fundamental drivers toward environmental consciousness. These variables thus comprehensively define the scope of the research within the established context of a tourism economy and the operationalisation is designed based on this framework to adequately meet the objectives of the research.

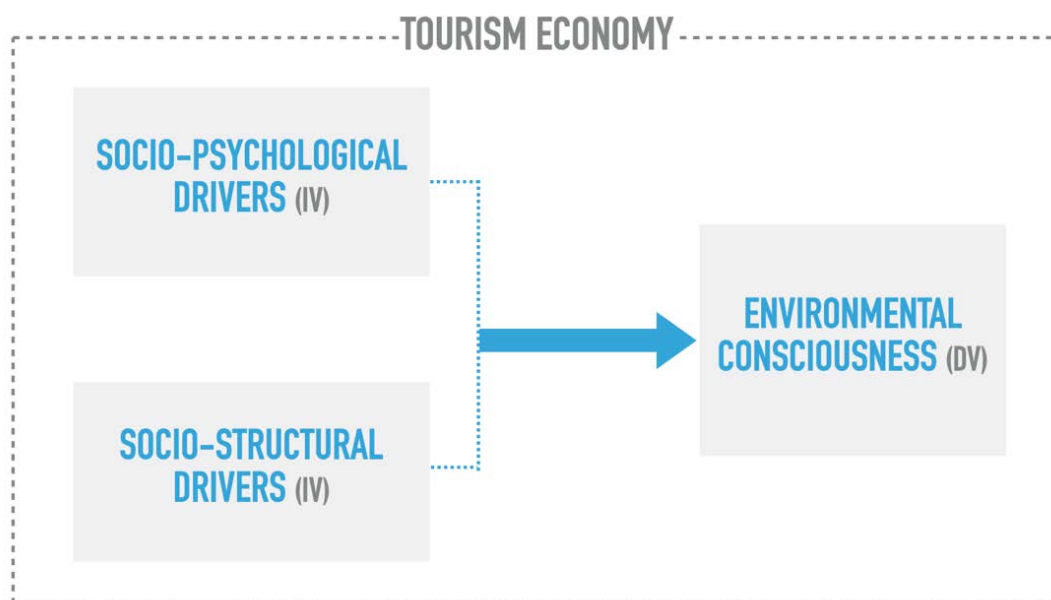


Figure 3: Conceptual Framework (Author, 2020)

Chapter 3 Research design, methods and limitations

As can be seen from the conceptual framework, this research operates at multiple levels including an individual psychological level, community context level and the broader institutional level. The objective is to measure environmental consciousness in different user groups in Dharamshala and identify various factors from these levels that influence such attitudes. This section describes how this empirical research has been carried out using a *case study strategy* based on a *mixed methods approach* combining qualitative and quantitative data analysis techniques with appropriate evidence to support the choices.

Specifically, this chapter describes the design and methodology adopted for the research. Firstly, Section 3.1 lists the revised research questions as per the literature review. These, along with other aspects of the research objectives are translated into an operationalisation in Section 3.2, which identifies the relevant, measurable indicators for all variables based on the theoretical frameworks. Based on the conceptual framework presented above, Section 3.3 explains how the research questions will be addressed to achieve the research objectives within the context of this framework and justifies the ‘case study’ strategy and ‘mixed methods’ approach adopted for the research. The design for the same is detailed in Section 3.4 with the exact data collection methodology and research instruments used with respect to different parts of the research. Further, the sample has been described in Section 3.5 with respect to the respondents and the methods of selecting such samples. Next, Section 3.6 defends the validity and reliability of the overall strategy based on the adopted methodologies. Section 3.7 describes the data analysis methods used after collection of data and finally Section 3.6 discusses the challenges and limitations met in carrying out the research.

3.1 Revised Research Questions

In the tourism-driven context of Dharamshala, which socio-psychological (attitudes and behaviour) and socio-structural drivers explain the environmental consciousness of different user groups in the ecologically sensitive area?

Sub-Questions

5. What is the current measure of environmental consciousness of different user groups in Dharamshala?
6. What factors influence the individuals’ levels of environmental consciousness in Dharamshala?
7. Which factors are most important with respect to community engagement towards environmental management in Dharamshala?
8. To what extent does the tourism industry affect individuals’ levels of environmental consciousness in Dharamshala?

3.2 Operationalisation

The operationalisation for the research breaks down the dependent variable '*environmental consciousness*', and the two independent variables, namely '*socio-psychological drivers*' and '*socio-structural drivers*' into sub-variables and indicators for easier handling and accurate measurement.

3.2.1 Environmental Consciousness

The operationalisation for this dependant variable derives from a commonly used tool for measuring environmental consciousness called the 'New Environmental Paradigm' (NEP). This tool, first developed by Dunlap and van Liere in 1978 and in its most widely accepted revised form proposed in 2000, considers environmental consciousness as composed of individuals' worldviews based on 5 dimensions with 3 statements ascribed to each (Jimenez Sanchez, M. and Lafuente, R., 2010). These have been presented in further detail in Chapter 4. Respondents indicate their agreement or disagreement for each of this 15-item list of statements using a 5-point Likert Scale. Based on these responses, the scale assigns a mean score for each individual asserting the normative position of their worldviews towards the balance between human activity and the environment.

While it has been argued that measures from this model do not always reflect in pro-environmental behaviour, the distinction between behaviour and attitudes has been discussed in the literature review above, and this study uses environmental consciousness and the NEP to look at the underlying attitudes that drive behaviour, which entails a focus on perceptions and beliefs of the respondents, rather than their actions themselves. Moreover, it has also been postulated that the results of the NEP may be highly dependent on various contextual factors along with sample sizes, and thus the internal reliability of the scale has been questioned in various studies (Ntanos, Kyriakopoulos et al, 2019). Despite such criticisms, the NEP is still among the most commonly used tools for empirical studies towards environmental consciousness based on survey strategies such as this thesis and has thus been adopted in the operationalization of the study. This tool also strengthens external validity of the research by making results on environmental consciousness directly comparable with similar studies conducted in various parts of the world.

3.2.2 Socio-psychological drivers

These are the highly internalised, meso-level dynamics that influence individual attitudes and behaviour (Dietz et al, 1998) and this is proposed as a combination of four sub-variables which adequately cover the scope of this research. These four classifications and the indicators are collated from multiple studies and are as follows. The corresponding indicators and data information is presented in Table 1 below:

- '**Personality attributes**' are the inherently private characteristics, values and experiences that enforce an individual's worldviews that are independent of exogenous attributes (Schwartz, 1977, Stern et al, 1999).
- '**Action values**' define certain personal dispositions that influence the individual's propensity to take action, thus informing when behavioural intention might lead to action (Onwezen, 2013).

- **‘Interpersonal Dynamics’** refer to the relationship between an individuals’ intentions and behaviours with respect to actions of other actors in the community (Ostrom, 1994, Torgler and Valinas, 2006).
- **‘Perception of risk’** towards various environmental issues in the city, along with the perceived actions of other stakeholders towards such issues also informs the ‘socio’ aspect of the socio-psychological drivers (Bamberg and Moser, 2007).

Sub-variable	Indicator	Data Type	Level of Measurement	Data Collection Method	Sources of Data
Environmental Consciousness					
	New Environmental Paradigm	Quantitative	Ordinal	Questionnaire	Online respondents
Socio-Psychological Drivers					
Personality attributes	Altruism	Quantitative + Qualitative	Ordinal	Questionnaire + Interviews	Online Respondents + Residents, Long-stay Workers, Government Officials, NGO representative
	Openness to change				
	Self-interest				
	Self-interest - Financial				
	Childhood experience in nature				
Action Values	Pride	Quantitative + Qualitative	Ordinal	Questionnaire + Interviews	Online Respondents + Residents, Long-stay Workers, Government Officials, NGO representative
	Guilt				
	Perceived Impact of Own Actions				
	Felt Personal Responsibility				
	Perception of ability to contribute				
Interpersonal Dynamics	Local Leadership	Quantitative + Qualitative	Ordinal	Questionnaire + Interviews	Online Respondents + Residents, Long-stay Workers, Government Officials, NGO representative
	Inspiration from individuals				
	Perception of reciprocity from other users				
Perception of Risk	Perception of state of environment	Quantitative + Qualitative	Ordinal	Questionnaire + Interviews	Online Respondents + Residents, Long-stay Workers, Government Officials, NGO representative
	Level of Concern				
	Perception of on-ground activity				
	Perception of involved stakeholders				

Table 1 Operationalisation Table: Environmental Consciousness & Socio-Psychological Drivers

3.2.3 Socio-structural drivers

As discussed before, these are external, macro-level factors which shape or structure the social space in which individual engagement as well as collective action take place. Since this collective action is also based on an aggregate of individual actions of all the actors that make

up this complex network, these socio-structural drivers operating at a network level influence both collective and individual actions to varying degrees.

To address the scope of this research, two sub-variables have been proposed in relation to environmental management in Dharamshala. The indicators for these have been listed in Table 2 below and their descriptions are as follows:

- The **'Impact of Tourism'** is added as a prominent structural driver which has a critical influence on the social, cultural and economic features of the population, thus directly impacting their attitudes and behaviours within their particular living context (Sinclair-Maragh et al, 2014). This sub-variable is proposed to also gain insights on how individuals perceive the role of tourism towards the city's urban development, its effects on the surrounding environment and how that influences the levels of environmental consciousness of people living in such contexts
- **'Demographic characteristics'** which may have significant bearing on individual perceptions and behaviours. This data was included as part of operationalisation to draw conclusions on specific personal, social and locational attributes of the population. (Gifford and Nilsson, 2014)

3.3 Research Strategy and Methodology

This research covers a large population size which includes all 62,279 current residents of the city of Dharamshala, over 2 million tourists from all over the world that visit the city for various durations through the year including people who move there for work, either temporarily or for longer periods. Moreover, the number of indicators is also long as behavioural drivers and environmental consciousness are complex subjects to measure. For a study of this purpose, with a large number of units to be studied with respect to a large number of variables, a quantitative analysis using surveys is considered most suitable (van Thiel, 2014).

At the same time, it has been argued that primarily subjective attributes such as perceptions and behaviours cannot be adequately studied only through numbers (Doyle et al, 2009). Quantitative studies have their limitations and they may often suffer from insufficient depth on such subject matters, besides the issue of reliability due to limited scope for triangulation of data. As the operationalisation shows above, all the identified indicators in this research are not suitable for quantitative data collection or analysis. Based on the above arguments, and the contextual nature of the subject, a qualitative analysis using a case study strategy was deemed most appropriate for the research. To adequately cover both quantitative and qualitative aspects of the topic, a mixed methods approach was adopted in the form of a sequential explanatory research design (Ivankova et al, 2006).

The first step of the research consisted of data collection on quantitative indicators, as identified in the operationalisation, through online questionnaires. The data collected from this exercise was analysed to answer sub-question 1 and obtain primary results addressing the other questions. These indicators were further explored through the second phase of qualitative research to explain the previous findings and address gaps in the quantitative study. The qualitative study relied primarily on interviews with a more focused line of enquiry based on the quantitative data analysis. After data from both phases of study was collected and analysed, specific answers for sub-questions 2, 3 and 4 could be derived in a complete way from the rich repository of data that comprehensively covers both quantitative as well as qualitative aspects of the subject of study. This complementarity not only helped to strengthen the validity and

reliability of the study through triangulation of data and further in-depth analyses, but as the research was conducted, it was sufficiently evident that a siloed approach using one of either qualitative or quantitative methods would have been grossly insufficient to answer the research questions.

	Sub-variable	Indicator	Data Type	Level of Measurement	Data Collection Method	Sources of Data
Socio-Structural Drivers						
	Perception of impact of tourism	Perception of contribution of tourism to economy	Quantitive + Qualitative	Ordinal	Questionnaire + Interviews	Online Respondents + Residents, Long-stay Workers, Government Officials, NGO representative
		Perception of role of tourism in environmental degradation				
		Perception regarding role of tourists				
	Demographic Characteristics	Age	Quantitive	Ordinal	Questionnaire	Online respondents
		Gender	Quantitive + Qualitative	Nominal	Questionnaire + Interviews	Online Respondents + Residents, Long-stay Workers, Government Officials, NGO representative
		Education Levels	Quantitive	Ordinal	Questionnaire	Online respondents
		Annual Income levels	Quantitive	Ordinal	Questionnaire	Online respondents
		Ethnicity	Quantitive + Qualitative	Nominal	Questionnaire + Interviews	Online Respondents + Residents, Long-stay Workers, Government Officials, NGO representative
		Area of stay	Quantitive	Nominal	Questionnaire	Online respondents
		Relationship to Dharamshala	Quantitive + Qualitative	Nominal	Questionnaire + Interviews	Online Respondents + Residents, Long-stay Workers, Government Officials, NGO representative
		Nature of Stay in city	Quantitive + Qualitative	Nominal	Questionnaire + Interviews	Online Respondents + Residents, Long-stay Workers, Government Officials, NGO representative
		Purpose of stay	Quantitive	Nominal	Questionnaire	Online respondents

Table 2: Operationalisation Table: Socio-Structural Drivers

3.4 Data Collection

The data collection on *socio-psychological drivers* and *socio-structural* was done using a combination of quantitative and qualitative methods. These methods and their data sources have been listed in the operationalisation table. The strategy for data collection and research instruments can be understood as the following:

3.4.1 Questionnaire

A questionnaire was formulated including questions on *socio-psychological drivers*, *socio-structural drivers* and the statements from NEP to measure *environmental consciousness*. The questionnaire used statements based on the operationalisation to be answered on a 5-point Likert scale, closing with a section on personal information for the demographic characteristics sub-variable.

Taking into account the target population dynamics, the questionnaire was prepared in both English and Hindi to adequately reach different parts of the population. Before circulation, the questionnaire was reviewed by two peers, and two locals in India, to check for coherence and comprehensibility in both languages.

The questionnaire was considered a suitable instrument due to the large number of responses required for quantitative analysis covering the different user groups in Dharamshala, including the permanent residents and various long and short-stay tourists. A large sample size also leads to higher external validity of the research (van Thiel, 2014). Additionally, owing to restrictions in face-to-face data collection due to the COVID pandemic, the online questionnaire offered relative ease of logistics with respect to time and cost involved in data collection. The questionnaires in English and Hindi have been attached as Annexures 1 and 2 respectively.

3.4.2 Interviews

Interviews were held with subject experts and key individuals for cross-sectional discussions on both *socio-psychological* and *socio-structural drivers*. The primary agenda of the interviews was to study aspects that are not covered in the online questionnaire and obtain inputs from well-informed respondents covering the various categories of network actors. These were conducted as semi-structured interviews so as to allow a broad range of topics to be discussed which also helped in triangulating data while helping to understand and accept or refute the findings from the quantitative data analysis.

The interviews were conducted while responses from the online questionnaire were being collected for efficient utilisation of time and to account for scheduling issues with potential respondents. The indicators were used as basic guides for the questions, and a broad outline of the topics to be discussed was shared with the respondents before the interview. Again, due to the limitations of the pandemic, the interviews were conducted either through online video calls or through telephonic conversations. Depending on the respondent, the interviews were conducted in either English or Hindi or a mix of both. The interview guides for the same have been attached as Annexure 3.

3.4.3 Secondary Data

The data collection through questionnaires and interviews was supplemented with data collection from secondary sources such as government reports, policy documents, media reports, research papers, etc. to improve the validity of the research and cross-check the findings.

3.5 Sample Size and Selection

As per the mixed methods research strategy adopted, data collection consists of questionnaires and interviews. The sampling size and selection for each is described below.

3.5.1 For Primary Data Collection: Questionnaires

Dharamshala has a total population of 62,279 and a total floating population of 55,578 (TCP, 2017) although there are no accurate estimates available for long and short-stay tourists independently. The required sample size for the study was thus calculated using a total of these numbers, 1,17,857 as input in the Yamane formula (1967).

$$n = N / (N \cdot e^2 + 1)$$

Here, n is the sample size, N is the population size and e is the margin of error. Due to the limitations due to the pandemic, the margin of error was considered to be 10% for the purpose of this calculation. Based on this, the sample size was calculated as:

$$n = 1,17,857 / (1,17,857 \times (0.1)^2 + 1)$$
$$n = 99.91 \text{ or approximately } 100$$

Based on 100 being the total required number of responses, it is assumed that a minimum of 33 respondents per user group are required. For this, a *random stratified sampling* approach was adopted in distributing questionnaires through online and social media platforms including community forums for Dharamshala, travel forums and groups to reach travellers all across the world who have visited the city. Additionally, questionnaires were shared through local networks in the city using *snowball sampling*, including to those with little access to social media. The aim was to reach as many people as possible to effectively cover the following user groups:

- Local community (permanent residents of the city)
- Long-stay tourists (staying in the city for more than 7 days within the last 3 years)
- Short-stay tourists (staying in the city for less than 7 days within the last 3 years)

3.5.2 For Primary Data Collection: Interviews

For semi-structured interviews, a *purposive and snowball sampling* approach was adopted in order to target different network actor groups including members from the government, including the urban local body as well as the Tibetan government, and civil society organisations, along with community leaders and individuals from the different user groups mentioned above with a mix of demographic features. Additionally, key experts were also identified from non-governmental organisations engaged in community-based tourism initiatives from other Himalayan towns outside of Dharamshala for a comparative understanding of network attributes in different contexts. This also helps to increase the validity of the research by making some of the results more generalisable to the broader Himalayan context beyond Dharamshala itself.

3.6 Validity & Reliability

The mixed methods research methodology can offer significant advantages towards achieving high levels of validity in social sciences research (Driscall et al, 2007). In the case of this thesis, the case study strategy uses online questionnaires for quantitative research to benefit from a large sample size which yields rich data containing a breadth of information on various subjects. The large sample size significantly improves reliability of the results as postulated by the Central Limit theorem and use of a standardised measure such as the NEP makes the results objectively comparable to studies in different contexts which adds to the external validity of the research. The qualitative research also helps in identifying more potential causal relationships beyond those understood from the statistical analysis, thus making the research more comprehensive and serves to improve the internal validity by ensuring all aspects of the study are sufficiently covered (van Thiel, 2014). Qualitative inputs from experts outside Dharamshala make the results generalisable to other Himalayan towns, thereby further adding to external validity.

Special emphasis was laid on improving reliability and validity of the research through triangulation of data using different techniques. Firstly, methodological triangulation was applied through the use of multiple instruments, for example, studying of independent variables using both online questionnaires as well as interviews and also cross-checking these findings with information from policy documents and literature. Secondly, data triangulation was applied by diversifying the sources of information and getting perspectives on common indicators from different kinds of stakeholders during interviews. For instance, the data analysis verifies if claims made by government officials were backed by residents or other stakeholders, or if significant differences emerge between perceptions of different user groups. Thirdly, in the design of the online questionnaire, certain indicators were measured using multiple statements with a combination of positively and negatively-worded statements spread in different sections of the questionnaire to minimise response error and cross-check respondents' answers. The corresponding interpretations from triangulation were recorded and described as part of the data analysis.

The combination of the two methods thus greatly improves the credibility of the research and the transferability of its conclusions by combining the relative strengths of both quantitative and qualitative research. Additionally, the reliability of the research was ensured by checking coherency and researcher bias for all data collection instruments through peer-reviews, and carefully documenting and presenting all developments regarding the data collection and analysis in a transparent manner.

3.7 Data Analysis

The quantitative data generated from the online questionnaire was analysed using the Statistical Package for Social Sciences (SPSS) software for statistical analysis. The raw data was prepared for analysis by removing responses with incomplete data in MS Excel before importing into SPSS. Next, value labels were assigned for all the variables including all Likert-scale items and data was subsequently divided into user groups using dummy variables to be able to run comparative analyses with respect to the user groups. Based on observations from previous studies employing NEP, along with other psychological indicators, certain statements were reverse coded before running analyses on the prepared data set as required. After reverse coding, statements were aggregated into the variable or sub-variable level as required. Comparisons between the user groups were run using One-way Analysis of Variance tests (ANOVA) while inferential analysis for other variables was based on correlation and

regression. Descriptive analyses were employed for comparing other variables and these were supported with data from the qualitative analysis. This has been further discussed in Chapter 4. The Code Book for the SPSS analysis has been attached as Annexure 5.

The qualitative data was analysed using the Atlas.ti software. Preparation for this data included transcription and translation of all interviews from Hindi and English on MS Word. This data was then imported into Atlas.ti and codes were created based on the operationalisation table. Additional codes were added as needed. The Code Book for the same has been attached as Annexure 6.

3.8 Challenges and Limitations

The fieldwork for this thesis research, the schedule for which can be seen in Annexure 4, was entirely carried out remotely due to the onset of the COVID pandemic in April 2020. This meant that the data collection for Dharamshala had to be done through online and telephonic methods as travel and face-to-face interactions were completely restricted. This posed certain challenges and necessitated changes to the original data collection methods. The various challenges have been described below:

- Original data collection methods included *Focus Group Discussions* with members of the different user groups, namely residents, and long- and short-stay tourists. These however had to be cancelled due to difficulties in sampling of large numbers of respondents for this remotely, along with logistical difficulties in organising them.
- It is postulated that *interviews*, when conducted online, have proven to have less than optimal results with respect to quality of natural conversation and participation. This was also observed by the researcher where technical glitches during online calls disrupted the flow of the conversations along with creating complications in recording of data.
- It is possible that the unnatural conditions due to lockdown restrictions may also impact people's relationship with the surrounding urban environment and thus the collected data on environmental consciousness may be skewed.

Besides the pandemic related challenges, certain other limitations were:

- Sampling for *interviews* posed challenges as response rates from government officials were extremely poor and eventually only one representative each from the Municipal Corporation and the Central Tibetan Administration could be interviewed.
- Regarding the *questionnaires*, while a large sample size leads to higher external validity of the research, they are subject to one challenge which is that of response error (van Thiel, 2014). In the case of online questionnaires, with low attention spans, a high percentage of incomplete responses was recorded with only 131 valid, complete responses being recorded out of a total of 223 total received.
- Additionally, considering the nature of the study, it is likely that respondents provided socially desirable answers to the questionnaire, which again affects the reliability of the study. Minimisation of this error was attempted through maximising the sample size for the study along with careful design of research instruments to improve triangulation of data.
- While the questionnaire was shared online in both languages, the data collection software posted the default version in English with an option to change the language to Hindi. Considering that no responses were actually recorded in Hindi, it is assumed that the process of changing the language may have been a deterrent for many respondents.

Chapter 4 Research Findings

This chapter describes the findings from the data collection from the online questionnaire and interviews, structured in a way to guide the answering of the main research question and sub-questions. The basic preparation for the data has been described in section 3.7. In this chapter, first the final sample and data collection methods have been described in Section 4.1. Section 4.2 covers the basic description of the sample for the data and Section 4.3 presents the primary inspection for the quantitative data. Section 4.4 unfolds the quantitative analysis for data collected through the questionnaire with respect to the dependent variable - *environmental consciousness* as per the NEP model. Section 4.5 and Section 4.6 present the qualitative analysis based on interview for indicators from the independent variables, *socio-psychological* and *socio-structural drivers* respectively. Finally, Section 4.7 presents the inferential analysis on quantitative data combining the three variables. Findings for each of the variables have been summarised and interpreted in a discussion at the end of each respective section.

4.1 Data Collection and Sampling

The data collection, as carried out within the limitations of the COVID pandemic, was able to meet basic requirements for sample sizes as well as the scope of study. See Table 3 below for complete details of sample.

A total of 131 complete responses were recorded for the online questionnaires which included 35 residents, 34 long-stay tourists and 62 short-stay tourists. Since these respondents were approached through online platforms, the number of short-stay tourists were much larger since there are a large number of tourism-related groups for the Himalayan region.

10 semi-structured interviews were carried out covering various network actors including 2 local residents, 2 long-stay tourists who stayed in Dharamshala as workers or volunteers, stakeholders from 2 government departments as well as 2 local NGOs. 2 interviews were also carried out with representatives of NGOs operating in the tourism-based environmental management space in Himalayan towns other than Dharamshala.

4.2 Quantitative Data Description

This section describes the sample of the respondents based on data from the online questionnaire. The descriptive graphs for the quantitative data are attached in Annex 7.

4.2.1 Types of Users

The respondents were questioned about the nature of their stay in Dharamshala, asking whether they were permanent residents of the city, including those that were temporarily based in other cities, or if they were tourists. The tourists were asked about the length of their stay along with the purpose of their visit. This helped to classify the users into three types – residents (27%), long stay tourists (26%) and short stay tourists (47%).

The purpose of visiting Dharamshala for most short-stay tourists was Leisure and Sightseeing (68.4%), followed by Adventure Sports (25.5%). It was found that all long-stay tourists visited Dharamshala for the purpose of either work, studies and research, workshops or volunteer work.

Sample Type	Data Type	Sample Size	Sampling Method	Respondent Code	Respondent Detail
Questionnaire					
Online respondents	Quantitative - Primary	131	Random Stratified & Snowball Sampling		User Groups: Residents: 35 Long-stay tourists: 34 Short-stay Tourists : 62
Interviews					
Residents	Qualitative - Primary	2	Purposive Sampling	R1	Urban resident (Upper Dari, Dharamshala)
			Purposive Sampling	R2	Rural resident (Rakkar village, Dharamshala)
Long-stay Workers	Qualitative - Primary	2	Snowball Sampling	R3	Long-stay worker with Waste Warriors - community based waste management organisation (Dharamshala)
			Purposive Sampling	R4	Long-stay volunteer with EduCare India - sustainable development organisation (Dharamshala)
Government Officials	Qualitative - Primary	2	Purposive Sampling	R5	Commissioner - Municipal Corporation of Dharamshala
			Purposive Sampling	R6	Head of Environmental Desk - Central Tibetan Administration
Non-Governmental Organisations	Qualitative - Primary	4	Snowball Sampling	R7	National Award-winning Director of Chinmaya Organisation for Rural Development (Dharamshala, Himachal Pradesh)
			Snowball Sampling	R8	CEO, Waste Warriors - community based waste management organisation (Dharamshala, Himachal Pradesh & Dehradun, Uttarakhand)
			Snowball Sampling	R9	Founder, Green People - community based ecotourism organisation (Dehradun and Nag Tibba, Uttarakhand)
			Purposive Sampling	R10	Founder, Spiti Ecosphere - community based ecotourism organisation (Kaza, Himachal Pradesh)

Table 3: Final Data Collection and Sampling detail

4.2.2 Age

72% of the respondents belonged to the 18-35 years category while the remaining 28% belonged to 36-65 years. This may be attributed to a higher percentage of younger users being active on social media and thus accessing the questionnaire. Moreover, a much higher proportion of younger people can be seen in the category of tourists as compared to residents which may be because of Dharamshala's attraction as a popular weekend destination for youth from surrounding states with easy connectivity and inexpensive accommodation options.

4.2.3 Gender

The overall gender distribution was almost even with 52% female and 48% male respondents. This distribution can be seen to be skewed towards males in the resident population while the numbers are proportionally much higher for females in the long-stay tourists and somewhat higher in short-stay tourists.

4.2.4 Education

The overall statistics for education shows reasonably a well-educated sample with a 54% share of respondents with a Master's degree or higher and 38% share with Bachelor's degrees. About 6% of the sample population are diploma holders. These numbers are evenly distributed across the three user categories, with marginally higher proportions for short-stay tourists.

4.2.5 Income

45% of the respondents have chosen to not share data on income levels by choosing the option 'Prefer not to say'. However, income levels do not indicate any significant differences across the user types that have provided responses for this question.

4.2.6 Nationality

Out of 131 total responses, 122 are by Indian nationals while 9 are by non-Indians. This can be attributed to Dharamshala being a popular international tourist attraction, with the non-Indians belonging to various nationalities including British, Colombian, Dutch, Mongolian and Tibetan. 7 out of 9 non-Indians were long-stay tourists.

4.2.7 Area of Stay

The respondents were asked to choose their area of stay within Dharamshala. Upper Dharamshala is located at a higher altitude and hosts the majority of touristy activities, whereas Lower Dharamshala is the more local part of the city. This is reflected in the statistics as well where 76 out of 96 total tourists stayed in Upper Dharamshala and 31 out of 35 residents are based in Lower Dharamshala.

4.3 Quantitative Data Primary Inspection

Primary data inspection is conducted for the purpose of identifying suitable methodologies for conducting statistical analyses along with preparing the data for the same. This section describes various steps adopted in organising the variables and sub-variables for the analysis.

Owing to a large number of total indicators, it was imperative that these indicators and sub-variables be aggregated for easier analysis. For this, reliability analyses were run for the sub-variables based on Cronbach's alpha test. The table indicates which variables were aggregated as per the rule that a Cronbach's alpha value greater than 0.7 indicates high suitability for aggregation, however when the sample size is limited, a minimum baseline of 0.5 is considered acceptable. Based on this criteria, all variables except 'Personal Attributes' and 'Level of Concern' were aggregated as shown in Table 4.

Variable	Cronbach's Alpha	Aggregated
Environmental Consciousness - NEP (DV)	.646	Yes
Socio-psychological Drivers (IV)		
<i>Personality Attributes</i>	.451	No
<i>Action Values</i>	.646	Yes
<i>Interpersonal Dynamics</i>	.660	Yes
<i>Perception of Risk</i>	NA	No
Socio-structural Drivers(IV)		
<i>Impact of Tourism</i>	.592	Yes

Table 4 Cronbach's alpha for aggregation of variables

The inferential analysis was performed after ensuring the relevant assumptions for the respective tests were met. All outliers in the data for these variables were removed and independence of observations was ensured. Correlation, regression and ANOVA tests assume normal distribution of data which has been measured using the Shapiro-Wilk test. A significance value for Shapiro-Wilk greater than 0.05 indicates normal distribution of data. Next, homogeneity of variance was tested using the Levene test where a p-value greater than 0.05 for the Levene coefficient proves the homogeneity of variance. While these tests are assumed to be robust even in case of unsuitable distribution of normality, in case of violation of assumption under Levene test, a Welch ANOVA test has been performed instead of one-way ANOVA which is considered more reliable for such cases (Field, 2013).

Inferential analysis has then been conducted using correlations and regressions to identify potential relationships and their strengths for different variables. Correlation establishes whether a relationship exists between two variables without implying causality for which Pearson's correlation r has been employed for continuous data. For such tests, a coefficient value between 0 and 1 is generated, with a higher value indicating a stronger relationship and vice versa, along with a positive (+) or negative (-) value indicating the direction of the relationship. For variables with statistically significant correlations, a regression analysis is performed to analyse how changes in one variable affect the others.

4.4 Data Analysis – Environmental Consciousness

Environmental consciousness is the dependent variable and has been measured using the New Environmental Paradigm scale by Dunlap and van Liere (2000). As discussed before, the scale is composed of 5 dimensions containing 3 statements each for which respondents indicate their agreement on a 5-point Likert scale ranging from ‘strongly disagree’ to ‘strongly agree’. These dimensions are as follows. The statement numbers as applying to the dimensions are indicated in brackets:

- Limiting variables of growth (NEP 1, NEP 6, and NEP 11)
- Anti-anthropocentrism (NEP 2, NEP 7, and NEP 12)
- Vulnerability of natural balancing (NEP3, NEP 8, and NEP 13)
- Rejection of exceptionalism (NEP 4, NEP 9, and NEP 14)
- Instances of an eco-crisis episode (NEP 5, NEP 10, and NEP 15)

4.4.1 Overall NEP Score

Firstly, a mean NEP score was calculated for combining the results from the 15 statements after reverse coding all statements that are negatively worded. This assigns an overall NEP score to each respondent based on their levels of agreement on all statements. Next, the tests for assumptions were confirmed (See Annex 8) and a one-way ANOVA test was conducted to compare means between the three user-groups.

The ANOVA test reveals a p-value of 0.335 which indicates that there is no significant difference between the means of the three groups, implying that levels of environmental consciousness do not vary across types of users. The descriptive statistics show mean values of 3.77 for residents, 3.92 for long-stay tourists and 3.83 for short-stay tourists. Thus, while long-stay tourists might be said to have slightly higher levels of environmental consciousness than the others, the differences were not found to be statistically significant. A post-hoc Tukey’s test was also carried out which confirms these findings with no p-values less than 0.05 for comparisons between user groups. These results have been attached in Annex 8.

4.4.2 NEP Statement-wise Comparison

Next, it was checked whether differences exist between the user groups based on individual statements. For this purpose, an ANOVA test was proposed for the three user groups with respect to each statement.

Firstly, while checking assumptions for the same, tests for normality indicated that the data was skewed for some statements. While this skewness does not affect the applicability of the ANOVA, it should be noted that considering the framing of some statements, the highly skewed responses may be attributed to respondents’ tendency to provide socially acceptable answers. The histograms for data distribution for all statements have been added in the Annex which show that almost all respondents strongly agree or strongly disagree with many statements. This can also be seen in Table 5 below which shows the overall frequency and mean distributions for all statements. For example, 86% of all respondents answered ‘strongly agree’ for NEP7 and less than 2% answered ‘strongly disagree’ and ‘somewhat disagree’ combined.

NEP Item	%age Distribution					Mean*
	Strongly disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Strongly agree	
NEP1. We are approaching the limit of the number of people the Earth can support.	1,5	6,1	13,0	26,7	52,7	4,23
NEP2. Humans have the right to modify the natural environment to suit their needs. (R)	33,6	27,5	16,0	11,5	11,5	3.60
NEP3. When humans interfere with nature it often produces disastrous consequences.	0,0	3,1	9,2	20,6	67,2	4.52
NEP4. Human innovation will ensure that we do not make the Earth unlivable. (R)	6,1	9,9	20,6	35,1	28,2	2.31
NEP5. Humans are seriously abusing the environment.	0,0	0,8	3,8	18,3	77,1	4.72
NEP6. The Earth has plenty of natural resources if we just learn how to develop them. (R)	4,6	5,3	11,5	23,7	55,0	1.81
NEP7. Plants and animals have as much right as humans to exist.	0,8	0,8	3,8	8,4	86,3	4.79
NEP8. The balance of nature is strong enough to cope with the impacts of modern industrial nations. (R)	27,5	25,2	10,7	16,8	19,8	3.24
NEP9. Despite our special abilities, humans are still subject to the laws of nature.	0,8	0,8	6,1	26,0	66,4	4.56
NEP10. The so-called "ecological crisis" facing humankind has been greatly exaggerated. (R)	41,2	25,2	5,3	19,1	9,2	3.70
NEP11. The Earth is like a spaceship with very limited room and resources.	5,3	6,1	13,7	35,1	39,7	3.98
NEP12. Humans were meant to rule over the rest of nature. (R)	64,9	23,7	5,3	3,8	2,3	4.45
NEP13. The balance of nature is very delicate and easily upset.	3,1	11,5	9,9	33,6	42,0	4.00
NEP14. Humans will eventually learn enough about how nature works to be able to control it. (R)	18,3	25,2	18,3	22,1	16,0	3.08
NEP15. If things continue on their present course, we will soon experience a major ecological catastrophe.	0,8	1,5	3,1	18,3	76,3	4.68

Table 5. Frequency and Mean Distribution of NEP Items

* Mean Likert scores after adjustment for direction. Higher score indicates pro-NEP worldview. Statements with I at end indicate reverse coded values for analysis purposes.

Secondly, upon checking for homogeneity of variance, it was found that conditions of Levene's test were violated for 6 out of 15 statements including NEP3, NEP5, NEP6, NEP8, NEP9, and NEP10. Correspondingly, the Welch ANOVA test was used for these six statements while a normal one-way ANOVA was used for the remaining nine statements. The tables for these tests have been provided in Annex 8.

Based on the two kinds of ANOVA tests, statistically significant results with p-values less than 0.05 were found for statements NEP3, NEP6, NEP9, NEP10 and NEP13. Validity of these results was confirmed using Tukey's HSD test for one-way ANOVA test and the Games-Howell coefficient for Welch ANOVA test results. These post hoc tests confirm that statistically significant differences can be observed between the means for the three user groups for these particular statements, and also help in identifying which groups display these significant differences. While the detailed results for the tests can be seen in Annex 8, the individual mean scores have been arranged as per user type in Table 6 and the significant differences summarised below. The interpretation for these results as per the five dimensions of the NEP scale has been presented as part of the discussion in Section 4.4.3.

Residents show notably higher scores than both long-stay and short-stay tourists for NEP3, NEP9 and NEP13 indicating pro-NEP worldviews and higher levels of environmental consciousness. However, for NEP6 and NEP10, a higher score indicates lower environmental consciousness as these are negatively-worded statements. In both these cases it is long-stay tourists who display the highest pro-environmental scores. It should be noted that previous studies using NEP have shown mixed results with respect to NEP6 due to ambiguity related to its language suggesting that the interpretation of the statement may differ in different contexts. (Erdogan, 2009, Ntanos et al, 2019)

NEP Item	User Group	Mean
NEP3. When humans interfere with nature it often produces disastrous consequences.	Residents	4,94
	Long-stay tourists	4,26
	Short-stay tourists	4,42
NEP6. The Earth has plenty of natural resources if we just learn how to develop them. (R)	Residents	4,60
	Long-stay tourists	3,97
	Short-stay tourists	4,08
NEP9. Despite our special abilities, humans are still subject to the laws of nature	Residents	4,80
	Long-stay tourists	4,53
	Short-stay tourists	4,45
NEP10. The so-called "ecological crisis" facing humankind has been greatly exaggerated. (R)	Residents	3,11
	Long-stay tourists	1,71
	Short-stay tourists	2,16
NEP13. The balance of nature is very delicate and easily upset.	Residents	4,37
	Long-stay tourists	4,06
	Short-stay tourists	3,76

Table 6: Summary of Mean NEP Scores by User Type

** Mean Likert scores with no adjustment for direction. Higher score indicates stronger agreement with statement. Statements with I at end indicate reverse coded values for analysis purposes but used as normal values here.*

4.4.3 Discussion: Environmental Consciousness

The lack of any significant differences in the overall NEP scores may be attributed to either of two reasons. The first possible reason may be inaccuracies in the statistical analysis which may arise due to an internal lack of consistency in the NEP model itself, an issue which has been observed in previous studies (See Section 3.2.1), or due to lack of a representative sample size which thus affecting reliability. The other reason might be that considering the overall combination of demographic characteristics and other personal qualities, the differences between overall levels of environmental consciousness might not vary significantly between residents and tourists in Dharamshala. For this reason, it might be possible to draw some conclusions from the observations made from ANOVA tests on individual statements.

NEP3 and NEP13, which suggest notably higher means for residents than either kind of tourists, belong to the dimension of the NEP called '*fragility of nature's balance*'. This indicates that residents of Dharamshala have greater respect for the balance of nature and believe that human interference can upset it. More than a sub-conscious perception, this observation may represent the lived experience of people in sensitive mountain ecologies. For example, this experience may stem from increasing cases of disasters including flash floods and landslides in the Himalayan region in recent years, which tourists have mostly heard of, while residents have experienced first-hand.

Similarly, NEP9 belongs to the dimension '*anti-exemptionalism*' which places human activity in the context of the laws of nature. More residents agree that despite the development of human abilities, we are still subject to the laws of nature. While tying together with the reasons discussed for NEP3 and NEP13, it may be argued that compared to tourists, who mostly come from urban areas in surrounding states, local residents have had a higher dependence on their immediate environments till more recent times owing to lack of accessibility and recent urbanisation and thus show stronger rejection for the view that humans are exempt from the laws of nature.

NEP6 belongs to the '*limits to growth*' dimension and it is seen that more residents believe that the available natural resources on earth are sufficient for human survival if we learn to develop them while tourists show greater disagreement. There are two possible reasons for this view. The first is that having had a larger dependence on their natural surroundings as discussed above, people in such previously ill-connected environments have traditionally shown great enterprise in utilising local resources and leading sustainable, self-sufficient lifestyles, and thus they do believe that their surrounding resources are enough for survival. Additionally, it may be possible that awareness levels with regards to issues of climate change and environmental degradation might be higher in urban tourists who hold a slightly more pessimistic view of humans' capability to sustainably use the existing resources.

This difference in levels of awareness and education may also explain the results for NEP10, belonging to the '*possibility of eco-crisis*' dimension, where long-stay tourists show considerably higher concern for an impending ecological crisis. The low concern regarding the crisis by residents may be owing to a disconnect between long-term or apocalyptic implications of larger environmental issues and everyday life, whereas many long-stay tourists visit Dharamshala for the purpose of study or volunteer work, often in the field of environmental management, and may perceive threats of global environmental challenges more seriously.

These results tie together strongly with the 'cognitive' and 'affective' dimensions of the environmental consciousness framework by Jimenez Sanchez and Lafuente (2010) (See

Section 2.5). This lends further weight to the arguments that such subjective and contextual knowledge shapes individuals' values and belief systems (Dembkowski and Lloyd, 1994, Zelezny and Schultz, 2000) which directly affects the 'dispositional' and 'active' dimensions. This framework, in combination with the NEP dimensions, thus comprehensively describes a network of psychological stimulants which influence individual behaviour towards environmental management.

4.5 Data Analysis: Socio-Psychological Drivers

This section looks at the first independent variable – *socio-psychological drivers* towards environmental consciousness – with respect to four sub-variables – personal attributes, action values, interpersonal dynamics, and perception of risk. Data for these sub-variables was collected through interviews as well as from the online questionnaire, in the form of Likert-scale statements. Findings from these have been presented in two parts. Firstly, this section presents an indicator-wise analysis of findings from the qualitative techniques. Secondly, Section 4.7 on inferential analyses describes results from statistical tests on computed scores from aggregate variables.

4.5.1 Personality Attributes

Personal attributes refer to aspects of an individual's personality that are shaped by deeply ingrained values and beliefs based on experiences and preferences that may or may not always be traceable to specific exogenous factors.

4.5.1.i Altruism

As an inherent personal trait, there have been several theoretical linkages to an individual's philanthropic nature and their concern and actions towards environmental preservation. This is seen as a more just and humanitarian worldview, and altruism emerged as an important personal attribute with 15 statements between 7 respondents from the interviews offering multiple points of view. Representatives from NGOs claimed strong altruistic inclinations that motivated them to get involved in the community development sphere.

For these individuals, this motivation derives from an inherently altruistic personal nature combining with other worldviews developed over time. For example, for R7, it was an urge to apply her education and skills to meaningful causes. She says, "*..later on in life when we became doctors and post graduates and senior resident, it became very obvious that we got very good education in big institutions and big hospitals...we started with community development and if you ask what your motivations were, the motivation was to do something because we got so much education...*"

For R9, working in a regular corporate job in a big city, the stimulus was an ongoing trend of high-earning employees quitting their jobs to do something meaningful and he says his urge was to create some impact like he says, "*..and figuring out for yourself what is more meaningful, you know, what's really creating an impact on the lives of people or environment in general.. within I really wanted to do something which creates a change, you know, which creates a positive impact.*"

For R3, it was a matter of seeking fulfilment combined with a strong sense of social and environmental justice. R3 says, “..because I am working in the field of waste management, I would like to integrate the waste picker communities. So, the waste picker community across developed countries are an organised labour.. That environmental injustice happens globally, but here this happens very significantly against this community.. a huge part of the Waste Warriors’ vision is to uplift the waste picker community. So, we try to integrate improving their lives in every project that we tried to propose.”

This notion of altruism does not only apply to long-term workers of such NGOs but also applies to larger groups of individuals with two specific demographic traits. These are ethnicity and nationality, where it has been suggested that the Tibetan community and non-Indians respectively display a greater sense of altruistic characteristics than others. These have been discussed in detail in the section on demographic characteristics.

4.5.1.ii Openness to change

Another psychological personality trait, this indicator looks at an individual’s curiosity towards new experiences and adaptiveness to change. This indicator comes up 6 times by 3 respondents in interviews.

R8, as founder for a prominent waste management NGO in Dharamshala recounts his journey, saying, “..And then I was there for almost two years before again trying to find my wings and do something new. As an individual I have this tendency to not stay at a place for a long time.” About his move to the development sector, R9 says, “So the transition was had more to do with the place I was living in and the kind of cultures I would say. But I’ve always had this instinct to, you know, explore new places and be involved in experiences which are culturally rich, and you know, help you sort of getting new insights.” It is thus evident that values like altruism and openness to change often work together in combination with intellectual or spiritual curiosity and motivate people towards exploring invigorating and meaningful work.

4.5.1.iii Self-Interest

The extent to which an individual feels that their personal interests are affected by an external stimulus determines the importance they attach to it. With this indicator, a higher perception of self-interest towards the environment would imply a stronger perceived relationship to it.

Evidence for this can be found for residents in the interviews where respondent R8 describes how people living in the Himalayan regions have traditionally maintained a very strong relationship to ‘jal, jangal, jameen’ (water, jungles and land) because the dependence on these resources has always been high. This also ties well with the findings from the NEP discussion on ‘anti-exemptionalism’. This notion of self-interest that individual and environmental health go hand in hand was indicated by 6 out of 10 respondents.

4.5.1.iv Self-Interest – Financial

Similar to self-interest discussed above, this indicator looks at the individual’s financial interests with respect to the environment. The experience of respondent R8, working in the field of waste management, reveals an interesting aspect. Waste generated by local tourism business operators at popular camping spots and trekking routes was typically thrown into the mountainside when this NGO initiated a program to collect this waste and transport it to the landfills. While initially the cost for this service was borne by the local forest departments, the charges were consequently passed on to the businesses in the form of a ‘fee per bag’ of garbage,

based on a 'polluter pays' model. This led to considerable improvements in waste management, which he describes as, *'The experience with this model has been very good because the businesses became more responsible when they had to pay per bag, so some businesses started to segregate their waste, some of them started really filling in the bags tightly which they would not do before but now because they were paying per bag so they try to be more efficient.'*

4.5.1.v Childhood Experience in Nature

This indicator assesses an individual's place attachment to natural environments based on the quality and quantity of time spent in nature as a child, which should theoretically trigger encouragement of pro-environmental values. This sentiment can be seen to some extent in local residents in the form of perceiving changes to the environment over time. Respondent R1 recounts *'...in our childhood we used to go swimming in an 'aal' which is basically will be a place in the river where the water will collect and become kind of a swimming pool. So we were discussing about the swimming pools that we used to have, how many used to be there and now it's not there. We used to go fishing there. Now it is not there.'*

4.5.2 Action Values

This sub-variable looks at individual traits that influence the translation from behavioural intention into action. Such values increase or decrease an individual's propensity to engage in a certain kind of action.

4.5.2.i Pride

Pride, as a sense of gratification derived from completing an action, often accompanied by positive reinforcement through recognition of one's work, is an important driving force in human nature. In the research too it emerged as an essential component in driving environmentally-conscious behaviour in individuals with 17 mentions by 5 respondents in the interviews. Cultivation of pride was one of the key strategies highlighted by NGO representatives in encouraging action by giving recognition to the relevant stakeholders and this can be seen to work at multiple levels.

One NGO designated community ambassadors from individuals and businesses who adopted green practices. R3 describes this as – *"We have this programme called the 'clean business programme', which has five criteria and if you if you fulfil all the criteria you become a clean business of Dharamshala, and you are recognised by Himachal tourism and the Municipal Corporation. So that recognition again is an incentive for the business."*

"We have been able to use that as a leverage to mobilise community members, to identify existing active citizens, and then heavily incentivizing those community members. So highlighting their efforts, even something as small as them carrying a cloth bag or something as large as them composting at their households, we call them 'swacchta ke sipahi' (waste warriors)."

With respect to why it works in terms of self-organised action and community level dynamics, R10 explains, *"..you'd say it gives them a better sense of ownership over their space, I guess. And these things also start to inculcate a sense of like civic pride and people start to feel proud of having a clean village and neat and tidy place."*

Additionally, the notion of pride and self-esteem has also been used by 2 NGOs for motivating workers and empowering them to act as effective agents of change at the ground level. R7 gives an example – “..we ask each one of these volunteers, what did you get out of this? They say I got recognition in the village, and when I went to the government office with my card that says volunteer for CORD, the government officers looked at me with respect and they said, ‘very good job’ to me. You know, that kind of appreciation, recognition was their payment.”

The same principle has been utilised by another NGO for working on goals like inhibiting out-migration from the villages and reviving traditional construction and agriculture practices by inculcating a sense of pride in this cultural heritage. Another NGO conducted multi-stakeholder meets to highlight good practices by local governments and institutions in and around Dharamshala. This not only acts as a capacity-building platform but gives tremendous encouragement to small ULBs for their work.

4.5.2.ii Guilt

The feeling of guilt arising from performing a certain individual action, can be the basis of a decision to repeat or not repeat that action which may subsequently shape long-term behaviours as well. In this regard, many respondents mentioned instances of community members knowingly committing wrong actions, or wilfully not participating in positive activities, often without impunity because of a collective apathy towards such behaviour.

Interestingly, R3 suggests, “*There will always be this category of extreme community members that just don’t care, they can’t be bothered less regardless of what you do. So you can’t keep wasting our energy on that demographic of people, you have to incentivize people who are doing what they should be doing, and then spend most of your energy and invest most of your resources into that middle category to tip them over basically.*”

4.5.2.iii Felt Personal Responsibility

The extent to which an individual feels personally responsible for an outcome influences their willingness to take action to achieve it. 9 responses by 4 respondents relating to this indicator were found in the interviews which reveal some noteworthy dynamics in these regions wherein the inherent obligation that people previously felt towards taking care of their surroundings has significantly reduced.

R7 describes a traditional system of management of local water streams in nearby villages called ‘*kuls*’ and the role of a designated ‘*kohli*’ responsible for it. Whenever maintenance work was required, the *kohli* would mobilise the community and each household would be mandated to send one volunteer for this work, and this system worked smoothly until the services related to water began to be institutionalised and water management began to be handled by the government, thus shifting the responsibility for this work from the individual to the state.

Similarly, with respect to waste management, R3 describes how local residents expect the government to manage the waste problem without themselves making any efforts towards reducing usage, segregating, etc. R4 observes the existence of the now globally recognised ‘NIMBY’ (not in my backyard) phenomenon in local residents too. She says, “*Because I work specifically in the field of waste management, people are very ignorant of where their waste is going. It’s very easy for people to have that out of sight, out of mind mentality, that waste should be managed but not in my backyard.*”

Interestingly, she also mentions a ‘culture of finger pointing’ where locally no one takes responsibility for such issues and blames others for their action, or inaction. She claims that this feeling has increased since Dharamshala got its own Municipal Corporation (MC). These increased expectations from the MC are also cited by R6 in terms of a perceptible change in people’s attitudes where they were willing to contribute towards certain issues before but believe that now the MC should be taking complete responsibility for it with their extensive resources.

4.5.2.iv Perceived Ability to Contribute

Following from the lack of personal responsibility that individuals feel, their willingness to act is also contingent on the extent to which they feel they are capable of contributing or the extent to which they believe their actions matter. From this research it can be observed that citizens in Dharamshala don’t feel empowered to contribute towards environmental management, partly because of the increased involvement of the government in provision of such services along with other reasons as discussed below.

One observed reason for this helplessness is lack of local organisation and initiatives. R10, when working in another remote Himalayan village, helped to bring the local community together to repair broken drains after they had been waiting for many months for the authorities to do it. This empowerment enabled them to take up more such projects on their own as their perceived ability to get things done was improved.

In the same light, citizens also claimed that certain environmental issues arise out of policy decisions by local and central government in which local citizens neither have any say in the decision-making process, nor any power to mitigate the effects of such decisions. For example, R1 mentions, “*..these changes that came in, if I’m giving you the example of Kul, it was made by the government. Okay, so you cannot change this thing. Because if they were doing it all over the country, how can you challenge that?*”

Even when citizens feel a sense of responsibility, they find that they have no way to get involved in local governance processes. As R1 says, “*To segregate waste is the society’s responsibility, it will not happen any other way. We were the ones who elected these people and chose the government to come here. But if you want something to happen in Dharamshala or Himachal in general, the government has to take the lead by involving the local populace. Local people have their ideas but still they don’t know who they should talk to.*”

4.5.3 Interpersonal Dynamics

Interpersonal dynamics and social relationships are critical aspects of community structures. In this context, they refer to an individual’s innate understanding of, and sub-conscious reaction to the actions of other people from their own or other communities, how likely they are to follow or replicate such behaviours, and in a corollary manner, how they believe their actions might be perceived by other community members.

4.5.3.i Local Leadership

The presence or absence of locally-visible initiatives, by individuals or organisations, can have a significant impact on individual behaviour. This indicator also has a strong relevance in Dharamshala as can be substantiated through 18 statements by 7 different respondents that explain the multiple levels at which local leadership can mobilise the community.

Firstly, as a community leader working on waste management, R8 recalls that his inspiration towards getting involved in the field came from a woman already working on conducting community clean-ups in Dharamshala. This same sentiment was echoed by R7 with respect to him coming across a local group working on sustainable rural development in Uttarakhand. In both these cases, as the most direct example of inspiration leading to action, these individuals ended up getting formally involved in these initiatives and still continue to work with them as their primary occupation.

Secondly, initiatives by such leaders often directly raise involvement of the local communities by targeted campaigns aimed at improving awareness levels and building community ownership. For example, R8 describes initiatives by the NGO including awareness programmes for school kids, local competitions for residents, campaigns for local businesses, trainings and workshops for taxi drivers, knowledge sharing platforms for institutions, etc. Thus, the impact of initiatives by local leaders can extend to different stakeholders which then has the indirect effect on the local community through individual inspiration, which is the subject of the next sub-section.

Thirdly, such initiatives attract volunteers and workers from outside the city who come and share their time, skills and knowledge towards local problem solving and in the process shift the existing community dynamics. R10 describes an example, *“We have seen that over the years, we’ve had volunteers coming in to help and say build a greenhouse, restore some of the Stupas or build a drain and stuff like that. And when the locals see this, they realise they could be solving some of these problems themselves too.”*

Fourthly, the presence of one such leader or entity can help lay the base for germination of other leaders as well and create an active, cohesive community of changemakers. R8 says *“I know people who have tried to settle down in upper Dharamshala, looking for places there but eventually came down and settled in lower Dharamshala because there is a very aware community in lower Dharamshala because there is a lot of direct action being taken there due to the presence of many non-profits.”*

It is noteworthy, however, that the local leaders identified in this research hold fairly pessimistic views with respect to their role in broader institutional setups and are especially wary of engaging with government authorities. At least 3 NGO representatives, and 1 resident, who have tried to work in collaboration with the state authorities have reported overall negative experiences and expressed reservations about the ease of working with them.

4.5.3.ii Inspiration from Individuals

Individuals, even when not in leadership roles, can influence the microcosm of the community surrounding them and inspire small actions by other individuals. For example, R1 describes how his neighbourhood of 15-20 households all began composting their wet waste because of one household taking the initiative, and the other families observing and embracing the idea. Secondly, as mentioned earlier, the initiatives by local NGOs created community ambassadors for waste management with the idea that individuals from within the community can often inspire more confidence due to better relatability and approachability. R3 says, *“As we keep moving forward towards achieving strategies for transforming this ward into a model ward, we started getting these active citizens, the ‘swachhta ke sipahis’(waste warriors) to speak instead of us speaking. So whenever we have any events and workshops, we get them to talk instead of us.”*

4.5.3.iii Perception of Reciprocity from Other Users

The notion of reciprocity is often tied together with qualities such as trust and cohesion within the community. This sets the foundation for setting up social norms, including stimulation of positive behaviour, but also ensuring that all members refrain from committing actions that are deemed negative by the community.

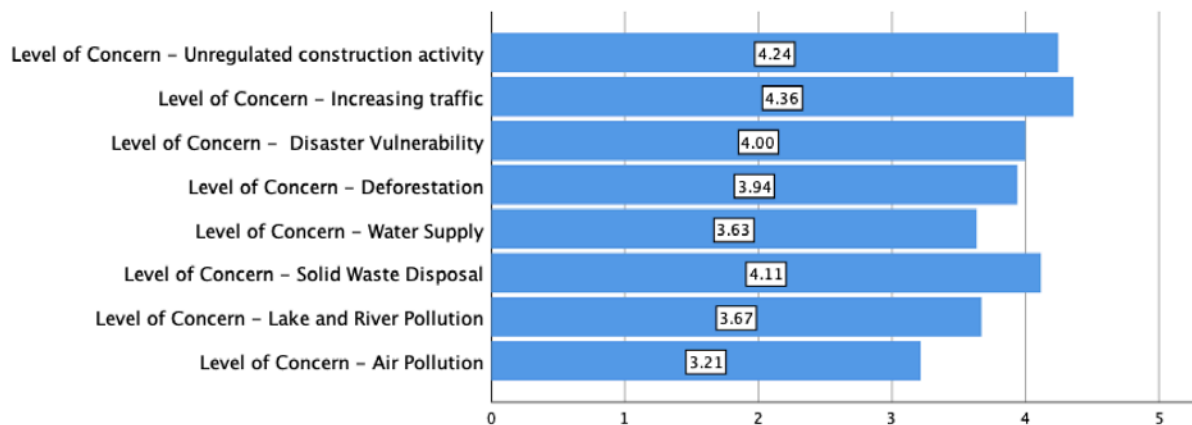
In this regard, respondents shared specific examples of harmful actions by certain stakeholders including individuals as well as businesses. R2 describes an example of a local business mistakenly dumping waste close to a local gathering spot in their village. When confronted about the action, the business owner recognised his mistake and corrected it. This example simply reflects how the concept of reciprocity can lead to development of stable social structures with self-organisation rules and monitoring mechanisms.

4.5.4 Perception of Risk

This sub variable looks at the problem awareness of the citizens and the levels of concern they hold regarding the environment of Dharamshala, and also to gauge the perceptions of the users regarding the ongoing efforts regarding environmental preservation. It is postulated that a higher level of concern would encourage more users to be environmentally proactive.

4.5.4.i Level of Concern

The users of the city reveal high levels of concern about three particular issues – waste management, traffic and rampant construction activity, as identified in interviews by local residents, government representatives as well as NGO workers. Graph 1 below shows the mean responses to various environmental concerns from the online questionnaire. Some local stakeholders' statements give insight into their mindset.



Graph 1 Level of concern for various environmental issues

R1, an urban resident, says, “.. if you’re talking about environmental change in Dharamshala, specifically, forest is not a problem. The air pollution problem exists in the sense that it is melting our glaciers and turning them black, but that’s not local to Dharamshala, it is coming from north of India okay. The pollution that is coming from Punjab and other areas, Himachal doesn’t have that. So the major problem we will face will be the garbage. And the traffic, traffic is going to be another big problem if they don’t manage it properly.. Moreover, in the monsoons now, all the water will get contaminated from the waste dumping ground and mix into the river. And on top of this, there has already been a fire there once, releasing a lot of toxic gases...”

R2, a resident from Rakkar village says, *“The biggest problem here I would say is construction, houses are getting built on top of each other. Other than that, as of now water or energy are not a problem at all. But even as close to 1km from my village there is rampant construction, so there’s little regard for such issues there.. as the number of houses goes up, population and pressure on resources is going to keep increasing.”*

R5, from the Municipal Corporation says, *“..a major problem has been regarding the solid waste management, the quantity of waste has increased, but accordingly we have not been able to increase our solid waste management capacity. In and around the Mcleodganj area, National Green Tribunal has passed last year in 2019 February, they have banned all kinds of commercial construction activity in that area.”*

4.5.4.ii Perception of State of Environment

While level of concern for certain items on the scale above is high, overall sentiments regarding the state of the environment are fairly optimistic. The residents or temporary workers in the city do not reveal any major cause for concern despite their recognition of larger environmental issues in the broader context of the Himachal Pradesh state. As R8 says, *“..even when they can see water levels in the khud (water streams) going down, or there is plastic in the water, I don’t think people are able to tie it together with a larger problem or the long-term risk. That today if water levels are low, in 10 years it’ll be dry, or that if I’m cutting down some trees to build a hotel, legally or illegally, there is going to be some long-term impact with respect to climate change or global warming, that connection in understanding is not there.”*

4.5.4.iii Perception of on-ground activity

Respondents do not perceive high levels of ongoing initiatives being conducted in Dharamshala currently except for two stakeholders. Firstly, there is a strong presence of some NGOs who are actively engaged in involving the citizens and attempting to collaborate with the government in their initiatives. Secondly, the Central Tibetan Administration has a dedicated Environmental Desk which runs its own programmes. However, direct engagement from the state has been perceived as disappointing, while other civil society initiatives are also lacking.

4.5.5 Discussion: Socio-Psychological Drivers

One of the main objectives of this research was to identify psychological drivers that motivate individuals and communities to take action towards environmental preservation. Thus psychological drivers must be understood as operating at an individual level but also stimulating collective action, thus operating at a slightly elevated ‘socio-psychological’ level. While this creates several overlaps in individual and collective influences, a nuanced understanding of both can help design better policies and programmes in the field of environmental management.

Starting with ‘personality attributes’, the most important individual drivers that emerge are ‘altruism’ and ‘openness to change’ that motivate individuals to devote their time to work that might not necessarily give them tangible selfish benefits. As mentioned before, interviews revealed that these qualities also manifested as part of respondents’ spiritual explorations that brought them away from ‘big city life’. These factors come together in Dharamshala with the city holding a certain spiritual allure because of the Buddhist presence along with the

Himalayan region itself being renowned for its mystical stories. Nevertheless, such an image of a touristic destination might be beneficial for attracting the right kind of individuals with higher levels of environmental consciousness. This spiritual and philosophical pursuit does not hold relevance only for the religious, but also for the intellectually curious ones. These inherent 'moral obligations' have been discussed by Schwartz (1977) in his Norm-Activation Model which uses the notion of personal norms as indicative of behavioural choices. For the ones who are not so spiritually inclined, financial incentives may be considered the *primum mobile* that works for a wide variety of causes, which falls in line with the Theory of Planned Behaviour (Ajzen, I. and Fishbein, M., 1967). Financial self-interest can in fact be understood as the underlying reason for the lure of the tourism industry even when individuals claim they understand the damage to the socio-ecological fabric of the city that comes with it.

With respect to 'action values', the overall deduction is that basic human tendency seems to be to evade 'personal responsibility' for their actions whenever possible and individuals will often find ways to justify these actions by pointing fingers or claiming to not have the power to effect change. That being said, the lack of 'perceived ability to contribute' may often be a realistic restricting factor due to lack of institutional capacity and avenues for the motivated individuals to get involved. At a psychological level, however, this is primarily a factor of inadequate 'behavioural control' (Montano, D. and Kasprzyk, D. 2015), and 'knowledge of action strategies' and 'locus of control' (Hines et al, 1986), which diminishes the intention towards an action. The role of communication is also paramount here, wherein the local governments must interact openly with citizens, seeking their participation and engaging with them in the co-production of knowledge. The importance of communication is also in the consistency and clarity of information sharing, which has been stressed on by Wolf and Moser (2011). As discussed in the text, 'pride' can be a compelling motivational factor for stakeholders to get involved and leveraging this as a tool can yield significant results at multiple levels. The notion of cultivating 'civic pride' has been discussed in planning literature as far back as 1915 by Sir Patrick Geddes in his book 'Cities in Evolution'. Another important finding from the interviews is that while it may not be easy to change collective behaviour all at once, a more nuanced approach can be to identify active citizens who have the values and intention to act, enable them and then work with them to propagate larger change.

This links to the next section – 'interpersonal dynamics'. It is important to cultivate a culture where 'local leadership' is encouraged and enabled at various levels as trying to achieve results in an individual capacity might be difficult. Literature shows that a network of extra-local (Mansbridge, 2014) or boundary organisations (Lee et al, 2013) may be a more pragmatic approach to achieving tangible results for better governance, which requires strengthening of institutional frameworks. This approach must also percolate to the individual level as citizens may be able to 'inspire each other' through more informal and direct communication channels, while also keeping checks on such processes in a way that might be too big a task for any external entity. Thus a top-down approach to raising social capital may actually germinate seeds for bottom-up development of social norms and self-monitoring mechanisms.

Finally, it is essential that local populations be made 'aware of risks' and uncertainties surrounding urban development issues, especially in ecologically sensitive regions. Such awareness building can be instrumental in ensuring people take more responsibility towards their actions and in fact may also be able to offer solutions for the same. This awareness and understanding of risk as a behavioural driver towards environmentalism is a fundamental argument of the VBN model (Stern et al, 1999). In conclusion, it is evident that encouraging a more participatory approach is in the interest of all stakeholders and a network of well-informed

and motivated individual and organised stakeholders can lead to better environmental management.

4.6 Socio-Structural Drivers

This section looks at the identified social and structural factors that influence environmental consciousness in Dharamshala. These are the exogenous factors that shape communities and drive individual and collective actions. This research looks at three specific demographic characteristics that emerge as prominent factors in Dharamshala – gender, ethnicity and nationality. Secondly, as a major industry in the region, tourism is a vital structural driver that impacts various local socio-economic processes, and this has been discussed to explain the tourism economy context of this research.

4.6.1 Demographic Characteristics

4.6.1.i Gender

With respect to many community-based strategies employed in Dharamshala as well as surrounding regions in Himachal Pradesh, the research shows that women have a very strong role to play in driving social change. Their role is manifested in two steps – first as individuals, and secondly as an organised unit.

In their individual capacity, women in these regions are considered more hard working. R10 says, *“we basically started working with the women in the villages. In the villages, the women in general are more proactive is what I found, to take on new stuff than the men are.. I mean, without sounding sexist, but men in the hills are a bit lazy. The women are the ones that do all the field work..”*

This notion in fact is very well recognised by many policy-makers which is the reason developmental initiatives in villages across India are carried out through ‘Mahila Mandals’ or women self-help groups (Das, 2000). These are considered the most active agents of change and they represent a very effective level of community organisation that can directly reach households. With respect to setting up of these groups in one of her projects, R7 says, *“..women’s groups were for every individual woman and collectively together for each other. When we formed the woman group, we told them that now see we have got together to help each other and help others, that is the main issue. As many women in our households, in the villages we should all be together so that we can take individual as well as good collective decisions.”*

Furthermore, even when not formally organised as these groups, their informal connections are mostly well established. As R1 says, *“..at the local level you know, at least in my locality of 15- 20 houses, the ladies are very well connected, you start something and they will take over. They discuss with each other; they share their knowledge with each other. That’s the beauty of their connection.”*

4.6.1.ii Ethnicity

A defining feature of Dharamshala has been its role as the place of refuge offered to the Tibetan community by the Indian government. This feature has not only been a major attraction drawing a large tourist population to the city over the years, but has also shaped a novel social dynamic in the city where innately distinct groups of people with different religions, ethnicities,

languages and cultures co-exist, which includes Buddhist Tibetans, local communities from within Himachal Pradesh, many local business owners who are migrants from nearby states of Punjab and Haryana and other temporary workers from all over the country.

The Environmental Desk of the CTA runs multiple initiatives regarding waste management in the city and their activities are perceived differently by different people. The interview with a representative of the Desk brings an interesting perspective. He says that the Tibetan community feels grateful to the Indian government for offering them refuge. Moreover, as Buddhists, they have a sense of 'universal responsibility' towards humanitarian issues and environmental justice. These, combined with the fact that Dharamshala serves as the abode of the Dalai Lama, encourages them to maintain the sanctity of the city, thus justifying their devotion towards keeping the city clean. They run many environmental initiatives with locals as well as volunteers that visit Dharamshala for spiritual pursuits. Their programmes are especially popular with visitors from other countries who have already read about these programmes in international travel magazines.

Respondents R3 and R4 both confirm that the Tibetans live as a more cohesive and responsible community. R3 says, *"..definitely Tibetan community is more knowledgeable and agreeable to the fact that you should be taking care of our environment. So you see less trash around their communities, significant presence of messaging for their communities, awareness raising, material put up and installed. And I think I'll expand that to not just environmentalism, but in general you know, humanitarianism, kindness, animal rights, all of those things are sort of imbibed in their philosophies.."*

A different point of view comes from a local resident R1 who claims that Tibetan colonies around his village dump their waste in the water streams causing significant water pollution. He says that their community initiatives are simply highlighted and well known, *"..because they have a very good PR model. Villagers in Dari will not sit and write about what we do. We do it but we don't write about it.."*, thus indicating that it is more an issue of marketing and image building.

4.6.1.iii Nationality

Considering the extent to which individuals show pro-environmental values, it was found that the people who visit Dharamshala from other countries behave more responsibly and take part in more volunteer activities. R6 says that it is foreigners who show most motivation in engaging in clean-up drives, even more so as compared to local Tibetan community, while local tourists from Punjab and Haryana are highly negligent.

R6 says, *"It is worth thinking about, these people did not travel all the way to India to pick up trash. Like if we Indians go to Germany or France, we would never go around picking trash on the streets, but these guys do it when they come here. If you look at the tourists coming here from let's say Punjab or Delhi, they are infamous for being loud and they leave the place behind in such poor conditions. So there is definitely a difference in the thinking process there."*

4.6.2 Impact of Tourism

By virtue of its significant contribution to the local economy, the tourism industry is considered a critical feature in the policy-making of the entire state of Himachal Pradesh. It comes with its own set of challenges including a heavy toll on the environment due to increased pressure on resources.

4.6.2.i Perception of Contribution of Tourism to Economy

The financial dependence on the tourism sector is evident from the interviews where 8 out of 10 respondents agree that the tourism sector is very crucial for the local economy. With the exponential growth of the sector in recent times, respondents believe that locals are inclined to get involved in the sector because the potential for making money is quite high, irrespective of consequences for the surroundings.

For urban areas, R8 explains that most of the local businesses are now owned by migrants from surrounding states, and for them, business interests are paramount. He says, *“The community there is very business orientated, every season they will think of how much business they’re doing and how much money is coming in and that’s it.”*

This is applicable in surrounding villages as well where alternate livelihood options are scarce and there is growing demand from tourists for more authentic and rustic experiences that are ‘closer to nature’. As R4 says, *“..for the local community there in the villages of Dharamshala when they’re seeing such a growth in opportunities and the market is growing right in front of them, some people say that they know the problem is there, but they feel that it’s more important to make money right now.”*

But respondents from outside Dharamshala say that this growth of the industry can be redirected and that potential benefits from tourism can be leveraged for community development. Moreover, R9 believes that most tourists visit a certain destination only once, so the goal should be to utilise the revenues from tourism to build capacity in other sectors which can lead to more equitable and sustainable long-term livelihood options, while also promoting the local culture and preserving the environment. R10 describes their work with setting up homestays in remote Himalayan villages – *“We started working on tourism by looking at livelihoods, of benefits from travellers coming into the area to go to local communities. Because at that point in time, whatever tourists were coming in, it was primarily staying in a hotel, and most of it was organised by outsiders, there was no money flowing to local communities. So we developed homestays in a way that anybody basically could start a homestay.”*

4.6.2.ii Perception of Role of Tourism in Environmental Degradation

Respondents recognise that growing tourism activities have an impact on the environment and the two are closely linked because the tourism is heavily dependent on the environmental beauty of the place.

In fact, R8 claims that the tourism industry in Dharamshala has been previously affected by environmental concerns as well, which raised concerns with local businesses. He says, *“..we could see that the community was interested and engaged and they could see that their businesses were getting impacted because Dharamshala’s tourism influx from the international perspective went down because of the pollution, because of the traffic jams, because of the*

garbage, because of the too many people, too many shops, because the buildings coming everywhere, and Bhagsu started losing its tourists so international tourism started coming down.”

This interdependence is well recognised by experts and so are the consequences. As R10 says, *“I think tourism is and always will be your double-edged sword. So, it does obviously bring in the revenue and things like that, but it does have its negatives and you can’t totally get rid of the negatives you know, is what I found.”*

She says it is important to keep the carrying capacities in check, something that tourism development authorities have so far ignored. – *“So for tourism departments it’s more like about how they can increase tourist numbers coming into city, without looking at whether we have that bandwidth to take tourists or the infrastructure, how do we minimise the impacts of all these large number of tourists now coming in. So they basically believe in promoting a destination so that more and more tourists can come in. But very little checks and balances of how to manage all that garbage.”*

This sentiment is echoed by R5 from the MCD regarding unchecked growth in the city. He says, *“..we have a lot of tourists coming in, so lot of hotels and services coming up, need for roads, infrastructure, which are putting a lot of pressure on the city because the carrying capacity has already been adjusted and that is a concern.”*

4.6.2.iii Perception regarding Role of Tourists

As the above sections describe, there is a relationship between tourism and the environment. Most respondents, when asked about tourists also agree that since the coming of tourists is inevitable, and in fact desired, their behaviour should be regulated.

Some residents believe that it is the tourists who are at fault for spreading litter. R4 says, *“90% of the people in the local communities said that we can manage our own waste as long as it’s our waste, but when tourists come and they litter around and they don’t care about anything we’re doing, they don’t really listen to us so that’s difficult to manage.”*

However, considering that most touristic activity is localised to specific regions within Dharamshala, R3 says that it is not only tourists who are to blame. She says, *“those parts of the cities where tourists visit the most are being polluted and littered because of the tourist population, but that’s not the extent of the city. So the local population really definitely needs to recognise that the tourists can be blamed in those specific touristy areas. But don’t blame the littering in your area on the tourists.”*

In fact, she believes that in her work she encounters more resistance from the long-term residents whereas the people who have moved into the city over the years are more aware of their ecological footprints. Continuing with a more optimistic view regarding the role of the tourists, she continues, *“I do feel that tourism can address a lot of issues. And if it’s used innovatively you can tap into a lot of people who want to do stuff, who have skills or knowledge, who can then come in and contribute to the area. So if it’s used in a way as a tool innovatively, tourism can do a lot.”*

4.6.3 Discussion: Socio-Structural Drivers

At a broader scale, the three social factors identified in this chapter, along with the impact of tourism, are an interesting combination of features quite specific to Dharamshala and give crucial insights for this research.

As mentioned in the text, there is already existing recognition in India around the role of women, and women's groups, as being highly effective agents for reaching individual households and for driving socio-economic change. As a matter of direct observation by the author as well, in most Indian villages and especially in the Himalayan region, women are relied upon for everything – from working in the fields to taking care of their families and also to earning livelihoods as and when required. In this context, the Mahila Mandals act as sanctuaries for mutual support and stimulating collective action for and by these women and deserve support and encouragement (Das, 2000). It is crucial to understand that even when unorganised as any formal or informal group, working with individual women can be instrumental in bringing significant change to an entire household including adults and children.

In terms of ethnicity and nationality, it must be recognised and stressed that specific groups of people show greater enterprise than others towards pro-environmental action. While on the one hand it is practical to encourage their efforts and participation, social norms and self-monitoring mechanisms must be developed to check the behaviour of known offenders, whether they belong to different ethnicities or geographical locations. The recognition of tourists and business owners from surrounding states as ones that act negligently must be noted and treated as a lack of civic sense which must be addressed through targeted measures.

With respect to the impact of tourism, it is clear that as one of the biggest employment generators for the city, it is a crucial part of Dharamshala's socio-economic profile and shall remain so. In terms of advantages, it creates livelihoods for many residents in urban as well as rural areas, bringing in significant revenues while its major disadvantage has been an undue pressure on resources and unchecked urbanisation which has become cause for environmental degradation. That being said, the potential to redirect benefits from tourism has also been utilised effectively by practitioners in similar contexts and there is already an influx of responsible tourists and workers coming to Dharamshala with the skills and intentions to affect positive change. These factors can be useful for policy-makers to consider and use to their benefit.

4.7 Inferential Analysis

The section on Environmental Consciousness and NEP presented findings regarding calculation of the NEP score and the differences between the three user groups based on the overall NEP score as well as the individual statements. This section looks at statistical analyses concerning sub-variables from the independent variables and their effect on the dependent variable.

As discussed in Section 4.3, based on calculated Cronbach's alpha values, three sub-variables were found suitable for aggregation – action values, interpersonal dynamics, and impact of tourism. Based on these sub-variables, mean scores for their statements were correspondingly aggregated into an 'Action Value Score', 'Interpersonal Dynamic Score' and 'Tourism Impact Score'. Relevant statements were reverse coded as required. Higher scores represent stronger agreement with action value indicators, interpersonal dynamics and a greater support for the tourism industry respectively.

A correlation analysis was run using these three scores along with the NEP score to identify potential underlying relationships between the same. As seen in Table 7 below, NEP shows a moderate positive correlation of 0.335 with the Action Value and weak negative correlation of -0.181 with Tourism Impact Score. Additionally it can be seen that Interpersonal Dynamics has significant correlations with both Action Value as well as Tourism Impact. This implies that a higher NEP score may be associated with a higher support for action value drivers, whereas respondents with higher NEP scores may reject pro-tourism sentiments. This same interpretation holds true for Interpersonal Dynamics as well, however this correlation being between independent variables has not been analysed further.

	NEP Score	Action Value Score	Interpersonal Dynamics Score	Tourism Impact Score
NEP Score	1			
Action Value Score	.335**	1		
Interpersonal Dynamics Score	0,073	.347**	1	
Tourism Impact Score	-.181*	0,093	-.172*	1

Table 7 Correlation values between aggregated variables

The next step was to run a regression analysis for NEP (DV) with Action Values (IV) and Tourism Impact (IV) as the first model and computing a second model with additional control variables added including age, gender, nationality and education. Since ANOVA analysis for NEP revealed no differences between the three user groups, regression was conducted for the entire sample population together so as to identify which indicators have the most significant impact on environmental consciousness. The supporting statistics for the regression analysis have been attached in Annexure 9.

Both models of the regression analysis confirm a weak, but statistically significant effect of the independent variables on the dependent variable. The R-squared value indicates that about 15.8% of the variation in NEP scores can be explained by variation in the independent variables. While Action Values shows a positive B-value of 0.253 and Tourism Impact shows a negative B-value of -0.169, both of these are statistically significant. This means that a unit

increase in Action Value causes NEP scores to increase by 0.253 units, and a unit increase in Tourism Impact score causes NEP scores to go down by 0.169 units.

Model	Model 1 with Independent Variables		Model 2 with Independent Variables + Control Variables	
Constant	3,214		3.39	
Significance	0.00		0.00	
R-squared	0.158		0.189	
Variables	B	p	B	p
Action Value Score	0,253**	0,000	0,240**	0,000
Tourism Impact Score	-0,169**	0,009	-0,201**	0,003
Age			0,068	0,417
Gender			0,087	0,246
Nationality			-0,005	0,973
Education Level			-0,091	0,096

Table 8 Regression Analysis with two models

Thus it can be interpreted that higher environmental consciousness can be stimulated by improving individuals' perception of action values. Additionally, a stronger pro-tourism stance can also mean lower levels of environmental consciousness, which necessitates the need for tourism activities in Dharamshala to be made more responsive towards environmental concerns to balance general perceptions and effects of the two facets.

Chapter 5 Conclusions and Recommendations

5.1 Introduction

This research was conducted with the fundamental objective to identify factors that influence people's motivation to engage in pro-environmental behaviour, to see what makes people *want* to save the world. Saving the world, however, cannot be an individual endeavour, and requires a large number of individuals to act together as an organised social unit. Recognising this truism, this research focuses on individual as well as collective action and delves into understanding the psychological and structural constructs that guide this innately interdependent social behaviour.

The setting for this research was a unique socio-economic context defined by its geographic location in the mystical Himalayas, and a vibrant and colourful cultural context composed of a diverse multitude of people living and working together, facing a decidedly threatened existence because of the confrontation of a thriving tourism industry and a sensitive, vulnerable ecology. In this respect, Dharamshala presented a peculiar combination of characteristics, adding several layers of richness to this research which asks some relevant questions and presents purposive findings.

This final chapter answers the main research question as a combination of detailed answers for four sub-questions that cover various aspects of the research and also provide policy recommendations wherever relevant. This is followed by a section on additional findings from the research and the final section on relevant lines of inquiry for further research.

5.2 Conclusions

Main Research Question: *In the tourism-driven context of Dharamshala, which socio-structural and socio-psychological drivers explain the environmental consciousness of different user groups in the ecologically sensitive area?*

The research brings up some answers to the main question at both levels, socio-psychological and socio-structural, and reveals the complexity of the simultaneous autonomy and mutual dependence of the individual units making up the population of Dharamshala.

In Dharamshala, the major influence on environmental consciousness seems to come from the close interaction and experiences the residents have with their natural surroundings, whereas the 'outsiders' show greater practical manifestation of the same by virtue of being more enterprising in engaging in action towards the same. The outsiders in this case are the refugee Tibetan population, who do so out of spiritual leanings along with a sense of gratitude and responsibility towards the place they are living in. Next the outsiders refers to the many short-term tourists, primarily foreigners, who show a similar sense of altruistic responsibility towards doing their part in environmental preservation and finally long-term tourists who come to Dharamshala specifically to engage in study, volunteer work or formal employment. The motivations for the different groups are different, and these specific factors have been discussed in the following discussions.

The defining feature in the case of Dharamshala is an inter-linked phenomenon of a lack of civic pride towards their surroundings by the local communities which emerges from a lack of felt responsibility which itself may be traced to a change of institutional structures over time,

alienating citizens from the larger governance structures, leading to a loss of trust and communication between citizens and state. This lack of communication also manifests as a lack of awareness and information-sharing about larger environmental issues and a misplaced confidence in the resilience of natural systems. While it is often claimed that good governance requires an increase in subsidiarity, it appears that Dharamshala has in fact stepped further away from that principle with the constitution of the Municipal Corporation and the Smart City initiatives, decisions which do not necessarily find favour with local residents. As a structural factor, the tourism industry has a huge impact on the socio-economic priorities of the state as well as the citizens and continues to inform personal decisions as well as larger policy and thus directly influences attitudes and behaviours towards the environment.

5.2.1 Sub-Question 1

What is the current measure of environmental consciousness of different user groups in Dharamshala?

Section 4.4 presented the findings for ‘environmental consciousness’ for different user groups based on the New Environmental Paradigm model which reveals mean NEP scores to be 3.77 for residents, 3.92 for long-stay tourists and 3.83 for short stay tourists. Overall, these results indicate moderate to high levels of environmental consciousness among the user groups with minor variations across groups implying that most respondents hold primarily pro-environmental worldviews.

While the statistical analysis revealed no significant differences between residents and different kinds of tourists on the overall scale, it is worth noting that the nuance of the NEP scale with respect to its five dimensions provides useful insights. It was clear from the analysis that the residents displayed a closer bond to their natural surroundings and held stronger beliefs about living in harmony with nature, recognising the fact that nature’s inherent balance is delicate. Moreover, the residents also understand that humans are as vulnerable to natural processes as this balance is to human activity. At the same time, the results suggest that the residents’ comprehension of the limits of natural resources or the possibility of critical ecological events is lower compared to tourists from outside. Irrespective of the extent of this difference or the reasons for the same, the NEP study shows that it is essential that the perception of risk around these subjects is improved among the residents wherein they understand the long-term threats to the fragile environment they live in.

As many other researchers have already pointed out, the results from this scale can be highly contextual with a heavy dependence on every individual’s interpretation of the statements themselves (Donmez-Turan and Kiliclar, 2020). However, these results shed light on the NEP scale itself and the fact that statistical differences exist, and can be logically interpreted, at a minute statement-wise detail level but not necessarily at the overall level testifies to the intricacy of the psychological and social underpinnings of this subject.

5.2.2 Sub-Question 2

What factors influence the individuals’ levels of environmental consciousness in Dharamshala?

The study of the *socio-psychological drivers* proved to be quite illuminating in identifying traits that justify the existing levels of environmental consciousness in people, or qualities that could be leveraged to improve these levels.

The first such important trait is *altruism* which can either manifest in individuals who choose to invest time and effort in pro-environmental actions irrespective of any personal gains accruing from the same, or can also appear in groups as was proven by the actions of the Tibetan community, or the relatively more helpful nature of tourists from other countries, both of whom show a higher sense of civic responsibility. Thus *ethnicity* and *nationality* also prove to be important aspects in the context of Dharamshala. One highly practical insight was the importance of *financial self-interest* where any proposition that helps a user save money or make money offers greater likelihood of being adopted. This finding is well-supported by the Theory of Planned Behaviour, which justifies individual actions based on expectations of specific outcomes (Ajzen, I. and Fishbein, M., 1967).

Next, as a testament to positive reinforcement methodologies, cultivation of *pride* proves to be a highly effective technique for encouraging individual as well as collective action. The presence of *individuals who can inspire change* at a very localised level was also found to be important. Identification of individuals who possess such qualities and enabling and encouraging their positive behaviour may serve as an effective strategy towards driving bottom-up change. While altruism and financial self-interest are mostly pre-existing personal qualities that can be identified and leveraged, pride and individual inspiration can be actively cultivated through designed policy initiatives. As the many examples presented in the research show, combinations of various factors work in different contexts and studying such cases in more depth might reveal additional clues for effective delivery of programmes.

Additionally, two factors that work together in terms of influencing people's perceptions towards environmental action are *perception of state of the environment* and *perception of on-ground activity*. These aspects influence the users' perception of risk around ecological concerns by making them aware of current levels of environmental damage along with potential risks and threats from inaction. When users see efforts being made on-ground with respect to certain issues, they are more likely to acknowledge the seriousness of a problem, and possibly also see avenues for getting involved. Both these factors behove the improvement of communication between the state and the citizens, where citizens become more aware and the state becomes more active.

5.2.3 Sub-Question 3

Which factors are most important with respect to community engagement towards environmental management in Dharamshala?

It should be noted that the results presented for Sub-Question 2 may be considered valid inputs for this question as well, and at the same time the results for this question will be applicable to both individual and collective action discussions to a fair degree. However, disregarding the overlaps, these are some factors which may be especially helpful towards stimulating community engagement, more than individual action.

The first factor to note in this regard is the notion of *felt personal responsibility*. This can be related to the sense of civic responsibility because collective action would be impossible to drive as long as a problem is seen as external and not one meant for the individual to solve. This value in fact needs to be treated in conjunction with the *perceived ability to contribute* as

both of these relate to a matter of institutional frameworks. When institutions and service delivery mechanisms are designed in a way that the burden of responsibility lies exclusively on one actor, it is no surprise that the perceived personal responsibility of the other actors is eroded along with their ability to contribute. This value, in a way, calls for decentralisation and democratisation of governance processes wherein citizens are both empowered and expected to participate in governance. These arguments are well rooted in academic literature as well, as discussed in the literary review around governance of common pool resources and institutional frameworks, especially based on the work of Ostrom (2000, 2014).

This leads to another essential component which is *local leadership*. The way this aspect has been explored has been as local organisational units which take the initiative to organise themselves and take charge towards effecting tangible change. For local initiatives to make their presence felt, the recognition of their right to organise (Ostrom, 1994) is crucial such that they are allowed space to do that, and that their efforts are supported and encouraged by local bodies. This calls for encouragement of collaborative strategies which are more localised, so as to generate better informed solutions that are tailor-made for specific contexts. The theories on network governance (Klijn, E. and Koppenjan, J., 2012) can guide this discussion further especially with respect to the role of extra-local governance structures (Mansbridge, 2014).

A prime example of this are the women's groups – *Mahila Mandals* that were discussed before. They are formally recognised local institutions in India that have been instrumental in the delivery of national level policies and programmes across the length and breadth of the country (Das, 2000). Their success story reiterates the point that organisation of community action must be treated as a matter of reorganisation of institutional setups that allow local groups to build capacity in order to act as support networks for centralised initiatives. As many respondents have pointed out, building of trust at local hierarchical levels is instrumental towards effective collaborative governance and this lack of trust is one of the major hurdles to be overcome in the Indian development context. Recognition of such shortcomings and opening up of communication channels would be instrumental in overcoming these roadblocks.

5.2.4 Sub-Question 4

To what extent does the tourism industry affect individuals' levels of environmental consciousness in Dharamshala?

The impact of the tourism industry correlates most closely with the financial self-interest driver wherein the potential monetary benefits from the industry take precedence over any concerns locals may have regarding environmental preservation. With economic opportunities from tourism becoming increasingly lucrative, most locals find it obvious to engage in tourism-related activities and there might be some who choose to do it more responsibly. As the research shows, with the correct intention, tourism in its many forms also has the potential to solve problems instead of creating them. In this respect, the need of the hour is to promote more socially and environmentally responsible tourism initiatives which may be community-based or nature-based as have been developed in many parts of India as well as in global contexts (Cole, V. and Sinclair, A., 2002, Jodi S et al, 2019).

5.2.5 Additional Findings

There have been other significant findings regarding the role of tourism and tourists in this research, which also deserve mention since they indirectly affect the socio-economic context of Dharamshala and may be grounds for further study. The research shows that with the rapid growth of the tourism industry, an important social shift has taken place in the city. Most local tourism businesses are now operated by people from outside Himachal Pradesh and the cost of running such businesses, especially in the prime touristic areas, has become extremely high, leading to growing displacement of local communities and the looming threat of gentrification. At the same time, many members of the refugee Tibetan community, who first settled here in the late 1960s, have started moving away from the city with growing opportunities elsewhere. While the short-stay tourist population ensures that there is a constant flux of people moving in and out of the city, even long-stay volunteers and workers come to the city, work with local organisations on specific initiatives and then leave, often in the middle of projects. This affects the deliverability of such projects. Locals are not able to form long-lasting associations with such organisations, losing trust when such projects are abandoned mid-way.

The result of all this movement of people is the setting in of a sense of transience in the city, creating conditions where the city seems to belong to no one and thus no one is willing to take responsibility for it. This means that a large percentage of the population displays a sense of indifference towards the issues in their own city, even when awareness of the consequences is high. The people engaged in working on those issues are ones who have come from outside the city, fuelled by their altruistic tendencies or spiritual curiosity which may not always last for as long as it takes for actual changes to show. Meanwhile, this influx of urban tourists, combined with a surge in accessibility to the internet and social media, has increased the local population's exposure to the supposed wonders of a rapidly developing, globalised world, especially in rural areas. This has led to a shift in aspirations wherein the desire for urbanisation grows without allowing the time for the process to happen in any planned fashion, leading to further unregulated, uncontrolled growth of the city, eating into its natural surroundings.

In this way, the growth of tourism is not only an economic phenomenon but brings with it significant socio-cultural and ecological concerns as well which deserve further deliberation and study as it changes the way local community structures work, how land markets work, how environmental policy needs to be designed and so on.

5.2.6 Recommendations for further study

The bridges between behavioural science and urban planning are still weak and there is a need to find stronger connections between the two to ensure better results of planning and policy efforts. The methodological approach adopted in this study can be the basis for the development of further academic knowledge combining such concepts with the following recommendations for improvement.

The NEP model for environmental consciousness proved to a useful tool for this study and regardless of the criticisms, the NEP scale presents a valuable opportunity to gain deep insights into individual perceptions about environmental concerns for design of targeted policies and programmes. Given more time and resources, a study of this nature would benefit from larger sample sizes using a similar conceptual framework. In such a scenario, it would be worthwhile to explore advanced statistical methodologies for larger datasets which would allow for more specific results on psychological factors. This would include the application of factor analysis

techniques, such as Principal Component Analysis, on the NEP scale findings to further establish and interpret the dimensionality of the scale. This study could also be designed as an experiment to explore the role of communication and awareness by comparing results between different parts of a city or different controlled groups with different levels of access to information. Additionally, for the qualitative analysis, it would be desirable to have more interviews or focus group discussions with residents from different local contexts for improved triangulation of data, and with local tourism business operators to explore the specific role of tourism.

Complex urban issues when linked with tourism present further layers of complexity as the phenomenon of tourism in urbanising areas is still understudied and deserves much attention. As discussed above, in certain contexts, tourism may be responsible for a wide gamut of developmental issues. These concerns become even more relevant in the context of rapidly urbanizing rural areas which are starting to adopt features of the urban world based on readily available, fancy looking images on their TV screens and phone without the infrastructure or planning to support it, thus condemning these systems to fail over time. Detailed studies are required to understand the complex local processes that give rise to these phenomena and also explore the many potential ways of harnessing the benefits from the tourism industry for larger gains for the community. This should also help derive conclusions on regulating the behavior of different user groups of residents and tourists through individualized strategies.

Similar to this study conducted for Dharamshala, it could be useful for policy-makers to conduct such surveys for urban areas with varying ecological contexts and levels of threat to identify which dimensions of the NEP scale can best explain local environmental perceptions and determine which socio-psychological drivers are the biggest influencers for different local population groups to help them make more targeted policies initiatives. A new study should also delve deeper into the subject of local institutional frameworks and the community attributes that act as definitive socio-structural drivers. As mentioned before, possible topics for further academic exploration in these areas include gentrification, evolution of local land markets, provision of ecosystem services as an economic tradeoff with respect to the tourism industry, influence of spiritual or religious institutions on levels of environmental consciousness, etc.

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Annex 1: Online Questionnaire (English)

NOTE: The survey was conducted entirely online using the survey platform Qualtrics which allowed for optimisation of the user interface for digital screens and thus no print version was created. The following version has been reconstructed for print purposes and has been condensed accordingly.

The options for Multiple Choice Questions have been presented in their entirety. All Likert scale questions have been indicated in brackets as (Likert Item), the corresponding statements have been presented and these may be assumed to be answered on a 5-point scale ranging from 'Strongly Agree', 'Somewhat Agree', 'Neither Agree nor Disagree', 'Somewhat Disagree' and 'Strongly Disagree'.

Q1.1 Welcome! I would first like to thank you for taking the time to contribute to this research project. My name is Mohak Gupta and this survey is part of my master's thesis research at Erasmus University, Rotterdam (Netherlands). I am trying to study how different individuals relate to the environment in the tourism-oriented city of Dharamshala and what factors influence their environmental consciousness. Your responses to this survey will help me formulate recommendations for sustainable urban development of the environmentally vulnerable mountain towns in India.

The survey takes about 10-12 minutes to complete. Your answers will be anonymous and will be deleted right after analysis, thus I request you to answer in a manner that truly represents your personal opinions.

To begin we need to understand your relationship with Dharamshala. Are you originally a resident of the city?

- Yes, I am from Dharamshala and currently live here.
- Yes, I am from Dharamshala but I don't currently live there.
- No, I am not from Dharamshala.

Q1.2 Which of these best describes the nature of your stay in Dharamshala? (Please choose most relevant option whether it applies to you currently or did so in the past)

- I visited Dharamshala for less than 7 days.
- I stayed in Dharamshala for 7 days or more, but less than three months.
- I have lived in Dharamshala for three months or more, but less than three years.
- I have lived in Dharamshala for 3 years or more.

Q1.3 What was the purpose of your stay Dharamshala? (tick all that apply)

- Work
- Visiting family and friends
- Leisure & Sightseeing
- Adventure Sports (trekking, camping, paragliding, etc)
- Cultural Event (Film Festival, Music Festival, etc)
- Sporting Event (Cricket Match, etc)
- Studies or Research
- Workshop (Yoga, meditation, music, dance, craft, etc)
- Volunteer Work
- Other _____

Q2.1 In this section, we would like to understand personal perceptions regarding the environment. Please indicate to what extent you agree with these statements. (*Likert Item*)

- I believe that the conditions of the local environment have a direct impact on my health and wellbeing.
- I believe that my financial wellbeing is directly impacted by the condition of the local environment.
- I used to spend a lot of time outdoors in natural environments as a child.
- I prefer to spend my free time outdoors in natural environments.
- I prefer a simple routine life without too many changes.

Q2.2 Please indicate to what extent you agree with these statements. (*Likert Item*)

- I believe my individual actions have an impact on the environment.
- I am willing to support action on environmental issues whether or not I gain from it personally.
- I am willing to support action on environmental issues whether or not everyone is doing it.
- I am open to changing my lifestyle in the interest of the environment.

Q3.1 This section is about people's attitudes and behaviour with respect to the community they live in. Please indicate to what extent you agree with these statements. (*Likert Item*)

- I feel a sense of pride in adopting environmentally-friendly practices in my lifestyle.
- I feel inspired by people who lead environmentally conscious lives.
- I feel guilty when I know my actions have a negative environmental impact.
- I personally can do nothing to prevent environmental degradation.
- Protecting the environment is not my personal responsibility.

Q3.2 Please indicate to what extent you agree with these statements. (*Likert Item*)

- There is no point in me doing anything for the environment unless everyone takes part.
- I believe many people around me knowingly commit actions that harm the environment.
- I believe that if I adopt a more environmentally conscious lifestyle, other people will also follow.
- If I see someone in my community adopt environmentally-friendly practices I am encouraged to adopt them as well.

Q4.1 Finding a balance between the environment and other economic or developmental concerns can be complex, whether it is the building of a dam or the clearing of forests for construction in the city.

In this context please indicate to what extent you agree with these statements. (*Likert Scale*)

- I would adopt a more environmentally-conscious lifestyle if it helps me save money.
- I would make more environmentally-friendly decisions if I am incentivised to do so.
- I believe that economic and development concerns should be given priority over environmental issues.
- Economic growth is essential in order to protect the environment.
- Protecting the environment should be given priority even if it causes slower economic growth.

Q5.1 What is the state of the environment in Dharamshala presently? Please indicate to what extent you agree with these statements. (*Likert Item*)

- I believe the environment is degrading significantly in Dharamshala.
- I see efforts being made in the city to tackle the environmental degradation.

Q5.2 Who do you think is actively making efforts to address environmental issues in Dharamshala? (*Please feel free to share names of specific individuals or organisations in the field that you know of*)

- Municipal Corporation of Dharamshala
- Central Tibetan Administration
- Non-governmental Organisations _____
- Local Community Groups _____
- Commercial Initiatives _____
- Other _____

Q5.3 How would you rate your level of concern for the following issues in Dharamshala? (*Likert Scale – Very high, High, Neutral, Low, Very Low*)

- Air Pollution
- Lake and River Pollution
- Solid Waste Disposal
- Water Supply
- Deforestation
- Disaster Vulnerability
- Increasing traffic
- Unregulated construction activity

Q5.4 Tourism and tourists are a big part of life in Dharamshala. How do you think tourism contributes towards the growth of the city? Please indicate to what extent you agree with these statements. (*Likert Item*)

- I believe the tourism industry is very important to the economy of Dharamshala.
- I believe the tourism industry in Dharamshala should be further promoted.

- I believe the tourists and the tourism industry is a major cause of environmental degradation in Dharamshala.
- I believe that the number of tourists visiting Dharamshala should be controlled.
- I believe there should be strict laws regarding the behaviour of the tourists.

Q6.1 What is the impact that humans have on the earth? What are your views about the relationship between human activity and nature? Please indicate to what extent you agree with these statements. (*Likert Item*)

- We are approaching the limit of the number of people the Earth can support.
- Humans have the right to modify the natural environment to suit their needs.
- When humans interfere with nature it often produces disastrous consequences.
- Human innovation will ensure that we do not make the Earth unlivable.
- Humans are seriously abusing the environment.
- The Earth has plenty of natural resources if we just learn how to develop them.
- Plants and animals have as much right as humans to exist.
- The balance of nature is strong enough to cope with the impacts of modern industrial nations.
- Despite our special abilities, humans are still subject to the laws of nature.
- The so-called “ecological crisis” facing humankind has been greatly exaggerated.
- The Earth is like a spaceship with very limited room and resources.
- Humans were meant to rule over the rest of nature.
- The balance of nature is very delicate and easily upset.
- Humans will eventually learn enough about how nature works to be able to control it.
- If things continue on their present course, we will soon experience a major ecological catastrophe.

Q7.1 This last section is to get some basic information about you. As mentioned before, your answers will be anonymous and will be deleted after analysis.

Age

- Under 18 years
- 18 - 35 years
- 36 - 65 years
- 65 years or older

Q7.2 Gender

- Male
- Female
- Other

Q7.3 Nationality

- Indian
- Other _____

Q7.4 Education Level

- Up to High school
- Diploma holder
- Bachelor's Degree
- Master's degree or higher

Q7.5 Occupation

▼ Retired ... Other Industry

Q7.6 Annual Income

- Up to ₹ 2,50,000 (up to USD 3,250)
- ₹ 2,50,000 - ₹ 7,50,000 (USD 3,250 - USD 9,750)
- ₹ 7,50,000 and above (USD 9,750 and above)
- Prefer not to say

Q7.7 Ethnicity

- Gaddi
- Ghirth
- Gorkha
- Tibetan
- Other _____

Q7.8 Area of Stay (pick most recent in case of multiple locations)

▼ McLeodganj ... Uprehr

Q40 Would you like to participate in the draw for a chance to win a Rs.2000 coupon from www.amazon.in? If yes, please enter your email address below.

Yes _____

No

Annex 2: Online Questionnaire (Hindi)

NOTE: The survey was conducted entirely online using the survey platform Qualtrics which allowed for optimisation of the user interface for digital screens and thus no print version was created. The following version has been reconstructed for print purposes and has been condensed accordingly.

The options for Multiple Choice Questions have been presented in their entirety. All Likert scale questions have been indicated in brackets as (Likert Item), the corresponding statements have been presented and these may be assumed to be answered on a 5-point scale ranging from 'Strongly Agree', 'Somewhat Agree', 'Neither Agree nor Disagree', 'Somewhat Disagree' and 'Strongly Disagree'.

Q1.1 आपका स्वागत है!

मैं सबसे पहले इस सर्वेक्षण में योगदान के लिए समय निकालने के लिए आपका धन्यवाद देना चाहूंगा। मेरा नाम मोहक गुप्ता है और यह सर्वेक्षण इरास्मस यूनिवर्सिटी, रॉटरडैम (नीदरलैंड्स) में मेरे मास्टर की थीसिस रिसर्च का हिस्सा है। मैं इस बात का अध्ययन करने की कोशिश कर रहा हूँ कि धर्मशाला में विभिन्न व्यक्ति पर्यावरण से कैसे संबंधित हैं और कौन से कारक उनकी पर्यावरणीय चेतना को प्रभावित करते हैं। इस सर्वेक्षण में आपके उत्तर मुझे हमारे पहाड़ी शहरों के सतत विकास के नीति निर्माण के लिए सिफारिशें तैयार करने में मदद करेंगे।

सर्वेक्षण पूरा होने में 10-12 मिनट से अधिक नहीं लगना चाहिए। आपके उत्तर गुमनाम होंगे और विश्लेषण के ठीक बाद हटा दिए जाएंगे, मैं आपसे अनुरोध करता हूँ उत्तर वह दें जो वास्तव में आपकी व्यक्तिगत राय का प्रतिनिधित्व करता है।

शुरू करने के लिए हमें धर्मशाला के साथ आपके संबंध को समझना होगा। क्या आप मूल रूप से धर्मशाला के निवासी हैं?

- हाँ, मैं धर्मशाला से हूँ और वर्तमान में यहीं रहता हूँ।
- हाँ, मैं धर्मशाला से हूँ लेकिन वर्तमान में मैं वहाँ नहीं रहता हूँ।
- नहीं, मैं धर्मशाला से नहीं हूँ।

Q1.2 धर्मशाला में आपके ठहरने के बारे में इनमें से कौनसा विकल्प सबसे सटीक है? (चाहे यह आपके लिए वर्तमान में लागू है या अतीत में)

- मैं 7 दिन या उससे अधिक समय तक धर्मशाला में रहा, लेकिन तीन महीने से कम।
- मैं 7 दिन या उससे अधिक समय तक धर्मशाला में रहा, लेकिन तीन महीने से कम।
- मैं तीन महीने या उससे अधिक समय से धर्मशाला में रह रहा हूँ, लेकिन तीन साल से कम।
- मैं 3 साल या उससे अधिक समय से धर्मशाला में रहता हूँ।

Q1.3 धर्मशाला जाने का आपका उद्देश्य क्या था? (सभी लागू होने वाले टिक करें)

- काम
- परिवार या दोस्तों से मिलने के लिए
- आराम और पर्यटन स्थलों का भ्रमण
- साहसिक खेल (ट्रेकिंग, कैम्पिंग, पैराग्लाइडिंग, आदि)
- सांस्कृतिक कार्यक्रम (फिल्म समारोह, संगीत समारोह, आदि)
- स्पोर्ट कार्यक्रम (क्रिकेट मैच, आदि)
- अध्ययन या अनुसंधान
- कार्यशाला (योग, ध्यान, संगीत, नृत्य, शिल्प, आदि)
- स्वैच्छिक काम
- अन्य _____

Q2.1 इस खंड में, हम पर्यावरण के संबंध में व्यक्तिगत धारणाओं को समझना चाहेंगे। कृपया इंगित करें कि आप इन कथनों से किस हद तक सहमत हैं।(Likert Item)

- मेरा मानना है कि आसपास के वातावरण का मेरे स्वास्थ्य पर सीधा प्रभाव पड़ता है।
- मेरा मानना है कि आसपास के वातावरण का मेरी कमाई पर सीधा प्रभाव पड़ता है।
- मैं बचपन में प्राकृतिक वातावरण में बहुत समय बिताता था।
- मैं अपना खाली समय प्राकृतिक वातावरण में बिताना पसंद करता हूँ।
- मैं बहुत अधिक बदलावों के बिना एक साधारण दिनचर्या वाला जीवन पसंद करता हूँ।

Q2.2 कृपया इंगित करें कि आप इन कथनों से किस हद तक सहमत हैं।(Likert Item)

- मेरा मानना है कि मेरे व्यक्तिगत कार्यों का पर्यावरण पर प्रभाव पड़ता है।
- मैं पर्यावरण के मुद्दों पर काम का समर्थन करने के लिए तैयार हूँ चाहे मैं व्यक्तिगत रूप से इससे लाभ उठाता हूँ या नहीं।
- मैं पर्यावरण के मुद्दों पर काम का समर्थन करने के लिए तैयार हूँ, चाहे हर कोई इसे कर रहा हो या नहीं।
- मैं पर्यावरण के हित में अपनी जीवन शैली बदलने के लिए तैयार हूँ।

Q3.1 यह अगला भाग समाज के संदर्भ में लोगों के दृष्टिकोण और व्यवहार के बारे में है। कृपया सूचित करें कि आप इन कथनों से किस हद तक सहमत हैं।(Likert Item)

- मैं अपनी जीवनशैली में पर्यावरण के अनुकूल प्रथाओं को अपनाने में गर्व की भावना महसूस करता हूँ।
- मैं ऐसे लोगों से प्रेरित महसूस करता हूँ जो पर्यावरण के प्रति जागरूक जीवन जीते हैं।
- जब मैं जानता हूँ कि मेरे कार्यों का नकारात्मक पर्यावरणीय प्रभाव है, तो मैं दोषी महसूस करता हूँ।
- मैं व्यक्तिगत रूप से पर्यावरण क्षरण को रोकने के लिए कुछ नहीं कर सकता।
- पर्यावरण की रक्षा करना मेरी व्यक्तिगत जिम्मेदारी नहीं है।

Q3.2 कृपया इंगित करें कि आप इन कथनों से किस हद तक सहमत हैं।(Likert Item)

- पर्यावरण के लिए मेरा कुछ भी करने का कोई फायदा नहीं है जब तक कि सब इसमें हिस्सा न ले।
- मेरा मानना है कि मेरे आसपास के कई लोग जानने के बावजूद पर्यावरण को नुकसान पहुंचाने वाले काम करते हैं।
- मेरा मानना है कि अगर मैं पर्यावरण के प्रति अधिक जागरूक जीवनशैली अपनाता हूँ, तो अन्य लोग भी इसका अनुसरण करेंगे।
- अगर मैं अपने समुदाय में किसी को पर्यावरण के अनुकूल प्रथाओं को अपनाता देखता हूँ तो उन्हें अपनाने के लिए मैं प्रोत्साहित महसूस करता हूँ।

Q4.1 पर्यावरण और अन्य आर्थिक या विकासात्मक चिंताओं के बीच एक संतुलन खोजना जटिल हो सकता है, चाहे वह एक बांध का निर्माण हो या शहर में निर्माण के लिए जंगलों को साफ करना। इस संदर्भ में कृपया बताएं कि आप इन कथनों से किस हद तक सहमत हैं। (Likert Item)

- मैं पर्यावरण के प्रति जागरूक जीवनशैली अधिक अपनाऊंगा अगर वे पैसे बचाने में मेरी मदद करते हो।
- मैं पर्यावरण के प्रति जागरूक जीवनशैली अधिक अपनाऊंगा अगर मुझे ऐसा करने के लिए कुछ वित्तीय लाभ मिले।
- मेरा मानना है कि आर्थिक और विकास की चिंताओं को पर्यावरण के मुद्दों से अधिक प्राथमिकता दी जानी चाहिए।
- पर्यावरण की सुरक्षा के लिए आर्थिक विकास आवश्यक है।
- पर्यावरण की रक्षा को प्राथमिकता दी जानी चाहिए भले ही यह धीमी आर्थिक वृद्धि का कारण हो।

Q5.1 वर्तमान में धर्मशाला में पर्यावरण की स्थिति क्या है? कृपया इंगित करें कि आप इन कथनों से किस हद तक सहमत हैं।(Likert Item)

- मेरा मानना है कि धर्मशाला में पर्यावरण काफी खराब है।
- मैं देख रहा हूँ कि शहर में पर्यावरणीय गिरावट से निपटने के लिए प्रयास किए जा रहे हैं।

Q5.2 आपको क्या लगता है कि धर्मशाला में पर्यावरणीय मुद्दों के समाधान के लिए सक्रिय रूप से कौन प्रयास कर रहे हैं? कृपया उस क्षेत्र के विशिष्ट व्यक्तियों या संगठनों के नाम साझा करें जो आप जानते हैं)

- धर्मशाला नगर निगम
- केंद्रीय तिब्बती प्रशासन
- गैर-सरकारी संगठन _____
- स्थानीय सामुदायिक समूह _____
- निजी क्षेत्रक संगठन _____
- अन्य _____

Q5.3 आप धर्मशाला में निम्नलिखित मुद्दों के लिए अपनी चिंता का स्तर कैसे तय करेंगे? (Likert Item)

- वायु प्रदूषण
- झील और नदी का प्रदूषण
- कचरा प्रबंधन
- जलापूर्ति
- वनों की कटाई
- बढ़ती पर्यावरणीय दुर्घटनाओं
- बढ़ता यातायात
- अनियमित निर्माण गतिविधि

Q5.4 पर्यटन और पर्यटक धर्मशाला में जीवन का एक बड़ा हिस्सा हैं। आपको क्या लगता है कि पर्यटन शहर के विकास में कितना योगदान देता है? कृपया इंगित करें कि आप इन कथनों से किस हद तक सहमत हैं। (Likert Item)

- मेरा मानना है कि धर्मशाला की अर्थव्यवस्था के लिए पर्यटन उद्योग बहुत महत्वपूर्ण है।
- मेरा मानना है कि धर्मशाला में पर्यटन उद्योग को और बढ़ावा दिया जाना चाहिए।

- मेरा मानना है कि पर्यटकों और पर्यटन उद्योग धर्मशाला में पर्यावरणीय गिरावट का एक प्रमुख कारण है।
- मेरा मानना है कि धर्मशाला आने वाले पर्यटकों की संख्या को नियमित किया जाना चाहिए।
- मेरा मानना है कि पर्यटकों के व्यवहार को लेकर कड़े कानून होने चाहिए।

Q6.1 पृथ्वी पर मनुष्यों का क्या प्रभाव पड़ता है? मानव गतिविधि और प्रकृति के बीच संबंध के बारे में आपके क्या विचार हैं? कृपया इंगित करें कि आप इन कथनों से किस हद तक सहमत हैं।(Likert Item)

- लोगों की संख्या पृथ्वी की अधिकतम क्षमता के अनुसार सीमा तक पहुंच गई है।
- मनुष्य को अपनी आवश्यकताओं के अनुरूप वातावरण को संशोधित करने का अधिकार है।
- मनुष्य का प्रकृति के साथ दुष्प्रयोग करना अक्सर विनाशकारी परिणाम उत्पन्न करता है।
- मानव कौशल यह सुनिश्चित करेगी कि हम पृथ्वी को असाध्य न बनाएं।
- मनुष्य पर्यावरण का गंभीर दुरुपयोग कर रहा है।
- पृथ्वी के पास बहुत सारे प्राकृतिक संसाधन हैं यदि हम सिर्फ उन्हें विकसित करना सीख ले।
- पौधों और जानवरों का अस्तित्व इंसानों जितना ही महत्वपूर्ण है।
- प्रकृति का संतुलन आधुनिक औद्योगिक देशों के प्रभावों का सामना करने के लिए काफी मजबूत है।
- हमारी विशेष क्षमताओं के बावजूद, मनुष्य अभी भी प्रकृति के नियमों के अधीन हैं।
- मानव जाति के सामने आने वाले "पारिस्थितिक संकट" को बहुत बढ़ा-चढ़ा कर पेश किया गया है।
- पृथ्वी बहुत सीमित जगह और संसाधनों वाले एक अंतरिक्ष यान की तरह है।
- मनुष्य प्रकृति के बाकी हिस्सों पर शासन करने के लिए बना है।
- प्रकृति का संतुलन बहुत नाजुक है और आसानी से गड़बड़ा सकता है।
- मनुष्य अंततः प्रकृति को इतना समझ सकेगा कि वह उसे नियंत्रित कर सकेगा।
- यदि चीजें उनके वर्तमान पाठ्यक्रम पर जारी रहती हैं, तो हम जल्द ही एक बड़ी पारिस्थितिक तबाही का अनुभव करेंगे।

Q7.1 यह खंड आपके बारे में कुछ बुनियादी जानकारी प्राप्त करना है। जैसा कि पहले उल्लेख किया गया है, आपके उत्तर गुमनाम होंगे और विश्लेषण के बाद हटा दिए जाएंगे।

आयु

- 18 वर्ष से नीचे
- 18 - 35 वर्ष

- ३६ - ६५ वर्ष
- ६५ वर्ष या उससे अधिक

Q7.2 लिंग

- नर
- महिला
- अन्य

Q7.3 राष्ट्रीयता

- भारतीय
- अन्य _____

Q7.4 शिक्षा का स्तर

- हाई स्कूल तक
- डिप्लोमा धारक
- बैचेलर डिग्री
- मास्टर डिग्री या उच्चतर

Q7.5 व्यवसाय

- ▼ रिटायर ... अन्य उद्योग

Q7.6 वार्षिक आय

- ₹ 2,50,000 तक (3,250 अमरीकी डॉलर तक)
- ₹ 2,50,000 - 7,50,000 (USD 3,250 - USD 9,750)
- ₹ 7,50,000 और अधिक (USD 9,750 और अधिक)
- चुप रहना पसंद करूंगा

Q7.7 जातीयता

- गद्दी
- घिरथ
- गोरखा
- तिब्बती
- अन्य _____

Q7.8 रहने का क्षेत्र (कई स्थानों के मामले में सबसे नया चुनें)

▼ मक्लिओडगंज ... उपरहर

Q40 क्या आप www.amazon.in से रु 2000 का कूपन जीतने के लिए ड्रा में भाग लेना चाहेंगे? यदि हाँ, तो कृपया नीचे अपना ईमेल पता दर्ज करें।

- हाँ _____
- नहीं

Annex 3: Interview Guides

For Residents, Long-stay workers, Government Departments, NGO Representatives

Local Initiatives

- What kind of initiatives exist at the local level?
- What kind of people are involved in these?
- What motivates people to get involved?

Local Leadership

- Are there visible examples of individuals who engage in pro-environmental work at a local level?
- Do people know of such individuals from their neighbourhood?
- Do people feel inspired when they see someone taking action?

Motivation Drivers

- How did local community leaders choose to get involved? What were their motivations?
- What feedback did they get from the community in their work?
- What challenges did they face and what do they opportunities they see?
- What were their observations related to people's behaviour?
- How easy or difficult it is to work in the community and with government authorities?

Community Organisation

- Is the community organised in any formal/informal way to manage such initiatives?
- Is the community active as a social collective?
- Is there a good level of trust and communication in the community?
- Do people engage in community activities of any kind together?

Level of Awareness & Risk Perception

- What is the general community awareness level about environmental issues? Are there any awareness programmes in operation?
- How well does the community understand communication from the government authorities? Are they aware of environmental policies, initiatives, etc?

Social Norms and Structures

- What kind of informal rules and regulations, rights and obligations exist within the community with respect to environmental issues?
- What influences the effectiveness of these norms? Is there any system of rewards or penalties for such rules?
- What kind of customs and traditional knowledge are online respondents aware of with respect to environmental issues which may or may not be used now?

Annex 4: Fieldwork Schedule

Dates	Description
18 th May, 2020	Submission of 1 st Proposal
25 th May, 2020	Go-No Go Decision
26 th May 2020 – 5 th June 2020	Preparatory phase – Refinement of Research Instruments Secondary Data Analysis
6 th June 2020 – 10 th June 2020	Pilot questionnaire Pilot interviews to community members
10 th June 2020 – 15 th July 2020	Implementation of Online Survey and Interviews
16 th July, 2020 – 31 st July	Data Transcription and Analysis

Annex 5: SPSS Code Book

Variable Name	Label	Type of Data	Values
RecordedDate	Data of completion of survey	Nominal	
Residency_STR	Status of Residency	Nominal	1 = Yes, I am from Dharamshala and currently live here. 2 = Yes, I am from Dharamshala but I don't currently live there. 3 = No, I am not from Dharamshala.
NatureofStay_STR	Nature of stay	Nominal	1 = I visited Dharamshala for less than 7 days. 2 = I stayed in Dharamshala for 7 days or more, but less than three months. 3 = I have lived in Dharamshala for three months or more, but less than three years. 4 = I have lived in Dharamshala for 3 years or more.
USERTYPE	User types - Residents, Long-stay tourists, Short-stay tourists	Nominal	1 = Residents, 2 = Long-stay Tourists, 3 = Short-stay tourists
DEMO_7.8_AreaUpLow	Area of Stay (Upper/Lower)	Nominal	1 = Upper Dharamshala, 2 = Lower Dharamshala
DEMO_7.8_Area	Area of Stay (pick most recent in case of multiple locations)	Nominal	McLeodganj, Bhagsunag, Dharamkot, Naddi, Forsythganj, Kotwali Bazar, Kachehri Adda, Ramnagar, Mant Khas, Upper Barol, Upper Dari, Middle Dari, Lower Dari, Lower Barol, Gulerian, Chelian, Sudher Khas, Loharkad , Kajlot, Reserve Forest Banoi , Naddi, Kand, Thehar, Mohli Haran Di , Mohli Lahran Di , Rakkar , Hoddal, Sidhpur, Sidhbari, Upahu , Garh, Baghni , Rasan, Chakvan Banwala , Panjlehr, Jatehar, Uprehr, Patt, Narghota, Dhial
PURP_Work	What was the purpose of your stay Dharamshala? (tick all that apply) - Selected Choice Work	Nominal	
PURP_VisitFF	What was the purpose of your stay Dharamshala? (tick all that apply) - Selected Choice Visiting family and friends	Nominal	
PURP_Leisure	What was the purpose of your stay Dharamshala? (tick all that apply) - Selected Choice Leisure & Sightseeing	Nominal	
PURP_AdvSports	What was the purpose of your stay Dharamshala? (tick all that apply) - Selected Choice Adventure Sports (trekking, camping, paragliding, etc)	Nominal	
PURP_CulturalEvent	What was the purpose of your stay Dharamshala? (tick all that apply) - Selected Choice Cultural Event (Film Festival, Music Festival, etc)	Nominal	
PURP_SportingEvent	What was the purpose of your stay Dharamshala? (tick all that apply) - Selected Choice Sporting Event (Cricket Match etc)	Nominal	
PURP_StudyResearch	What was the purpose of your stay Dharamshala? (tick all that apply) - Selected Choice Studies or Research	Nominal	

PURP_Workshop	What was the purpose of your stay Dharamshala? (tick all that apply) - Selected Choice Workshop (Yoga, meditation, music, dance, craft, etc)	Nominal	
PURP_Volunteer	What was the purpose of your stay Dharamshala? (tick all that apply) - Selected Choice Volunteer Work	Nominal	
PURP_Other	What was the purpose of your stay Dharamshala? (tick all that apply) - Selected Choice Other	Nominal	
PERSATT_1.1_Altr1	ALTRUISM: I am willing to support action on environmental issues whether or not I gain from it personally.	Scale	5 = Strongly agree, 4 = Somewhat agree, 3 = Neither agree nor disagree, 2 = Somewhat disagree, 1 = Strongly disagree
PERSATT_1.1_Altr2	ALTRUISM: I am willing to support action on environmental issues whether or not everyone is doing it.	Scale	5 = Strongly agree, 4 = Somewhat agree, 3 = Neither agree nor disagree, 2 = Somewhat disagree, 1 = Strongly disagree
PERSATT_1.5_OpenChg1_r	OPENNESS TO CHANGE: I prefer a simple routine life without too many changes. (-)	Scale	5 = Strongly disagree, 4 = Somewhat disagree, 3 = Neither agree nor disagree, 2 = Somewhat agree, 1 = Strongly agree
PERSATT_1.2_SelfInt	SELF INTEREST: I believe that the conditions of the local environment have a direct impact on my health and wellbeing	Scale	5 = Strongly agree, 4 = Somewhat agree, 3 = Neither agree nor disagree, 2 = Somewhat disagree, 1 = Strongly disagree
PERSATT_1.3.1_SelfIntFin1_r	SELF INTEREST - FINANCIAL: I would adopt a more environmentally-conscious lifestyle if it helps me save money. (-)	Scale	5 = Strongly disagree, 4 = Somewhat disagree, 3 = Neither agree nor disagree, 2 = Somewhat agree, 1 = Strongly agree
PERSATT_1.3.2_SelfIntFin2_r	SELF INTEREST - FINANCIAL: I would make more environmentally-friendly decisions if I am incentivised to do so.	Scale	5 = Strongly disagree, 4 = Somewhat disagree, 3 = Neither agree nor disagree, 2 = Somewhat agree, 1 = Strongly agree
PERSATT_1.4_ExpNature	EXPERIENCE IN NATURE: I used to spend a lot of time outdoors in natural environments as a child. (-)	Scale	5 = Strongly agree, 4 = Somewhat agree, 3 = Neither agree nor disagree, 2 = Somewhat disagree, 1 = Strongly disagree
ACTVAL_2.2_Pride	PRIDE: I feel a sense of pride in adopting environmentally-friendly practices in my lifestyle.	Scale	5 = Strongly agree, 4 = Somewhat agree, 3 = Neither agree nor disagree, 2 = Somewhat disagree, 1 = Strongly disagree
ACTVAL_2.3_Guilt	GUILT: I feel guilty when I know my actions have a negative environmental impact.	Scale	5 = Strongly agree, 4 = Somewhat agree, 3 = Neither agree nor disagree, 2 = Somewhat disagree, 1 = Strongly disagree
ACTVAL_2.1_ImpOwnAct	IMPACT OF OWN ACTIONS: I believe my individual actions have an impact on the environment.	Scale	5 = Strongly agree, 4 = Somewhat agree, 3 = Neither agree nor disagree, 2 = Somewhat disagree, 1 = Strongly disagree
ACTVAL_2.4_FeltResp_r	FELT RESPONSIBILITY: Protecting the environment is not my personal responsibility. (-)	Scale	5 = Strongly disagree, 4 = Somewhat disagree, 3 = Neither agree nor disagree, 2 = Somewhat agree, 1 = Strongly agree
ACTVAL_2.5.1_AbleContr1_r	PERCEIVED ABILITY TO CONTRIBUTE: I personally can do nothing to prevent environmental degradation. (-)	Scale	5 = Strongly disagree, 4 = Somewhat disagree, 3 = Neither agree nor disagree, 2 = Somewhat agree, 1 = Strongly agree
ACTVAL_2.5.2_AbleContr2_r	PERCEIVED ABILITY TO CONTRIBUTE: There is no point in me doing anything for the environment unless everyone takes part. (-)	Scale	5 = Strongly disagree, 4 = Somewhat disagree, 3 = Neither agree nor disagree, 2 = Somewhat agree, 1 = Strongly agree
INTERDYN_3.2.2_InspnInd	INSPIRATION FROM INDIVIDUALS: If I see someone in my community adopt environmentally-friendly practices I am encouraged to adopt them as well.	Scale	5 = Strongly agree, 4 = Somewhat agree, 3 = Neither agree nor disagree, 2 = Somewhat disagree, 1 = Strongly disagree
INTERDYN_3.2.3_Reciprocity	RECIPROCITY: I believe that if I adopt a more environmentally conscious lifestyle, other people will also follow.	Scale	5 = Strongly agree, 4 = Somewhat agree, 3 = Neither agree nor disagree, 2 = Somewhat disagree, 1 = Strongly disagree

INTERDYN_3.1_LocLeader	LOCAL LAEADERSHIP: I feel inspired by people who lead environmentally conscious lives.	Scale	5 = Strongly agree, 4 = Somewhat agree, 3 = Neither agree nor disagree, 2 = Somewhat disagree, 1 = Strongly disagree
ENVSTAT_5.1.1_CurrPerc	PERCEPTION OF STATE OF ENVIRONMENT: I believe the environment is degrading significantly in Dharamshala	Scale	5 = Strongly agree, 4 = Somewhat agree, 3 = Neither agree nor disagree, 2 = Somewhat disagree, 1 = Strongly disagree
ENVSTAT_5.1.2_OnGrAct	ON-GROUND ACTION: I see efforts being made in the city to tackle the environmental degradation.	Scale	5 = Strongly agree, 4 = Somewhat agree, 3 = Neither agree nor disagree, 2 = Somewhat disagree, 1 = Strongly disagree
ENVSTAT_5.2_StkHolder_MCD	Who? Municipal Corporation of Dharamshala	Nominal	
ENVSTAT_5.2_StkHolder_CTA	Who? Selected Choice Central Tibetan Administration	Nominal	
ENVSTAT_5.2_StkHolder_NGO	Who? Non-governmental Organisations	Nominal	
ENVSTAT_5.2_StkHolder_LocComm	Who? Local Community Groups	Nominal	
ENVSTAT_5.2_StkHolder_Commercial	Who? Commercial Initiatives	Nominal	
ENVSTAT_5.2_StkHolder_Other	Who? Other	Nominal	
ENVSTAT_5.2.3_StkHolder3_TEXT	Who? Other - Text	Nominal	
ENVSTAT_5.2_StkHolder_LocCommTXT	Who? Local Community Groups - Text	Nominal	
ENVSTAT_5.2_StkHolder_CommercialTXT	Who? Commercial Initiatives - Text	Nominal	
ENVSTAT_5.2_StkHolder_OtherTXT	Who? Other - Text	Nominal	
ENVSTAT_5.3.1_LC	Level of Concern - Air Pollution	Scale	5 = Very High, 4 = High, 3 = Neutral, 2 = Low, 1 = Very Low
ENVSTAT_5.3.2_LC	Level of Concern - Lake and River Pollution	Scale	6 = Very High, 4 = High, 3 = Neutral, 2 = Low, 1 = Very Low
ENVSTAT_5.3.3_LC	Level of Concern - Solid Waste Disposal	Scale	7 = Very High, 4 = High, 3 = Neutral, 2 = Low, 1 = Very Low
ENVSTAT_5.3.4_LC	Level of Concern - Water Supply	Scale	8 = Very High, 4 = High, 3 = Neutral, 2 = Low, 1 = Very Low
ENVSTAT_5.3.5_LC	Level of Concern - Deforestation	Scale	9 = Very High, 4 = High, 3 = Neutral, 2 = Low, 1 = Very Low
ENVSTAT_5.3.6_LC	Level of Concern - Disaster Vulnerability	Scale	10 = Very High, 4 = High, 3 = Neutral, 2 = Low, 1 = Very Low
ENVSTAT_5.3.7_LC	Level of Concern - Increasing traffic	Scale	11 = Very High, 4 = High, 3 = Neutral, 2 = Low, 1 = Very Low
ENVSTAT_5.3.8_LC	Level of Concern - Unregulated construction activity	Scale	12 = Very High, 4 = High, 3 = Neutral, 2 = Low, 1 = Very Low
TOURISM_5.4.1_Econ1	I believe the tourism industry is very important to the economy of Dharamshala.	Scale	5 = Strongly agree, 4 = Somewhat agree, 3 = Neither agree nor disagree, 2 = Somewhat disagree, 1 = Strongly disagree
TOURISM_5.4.2_Econ2	I believe the tourism industry in Dharamshala should be further promoted.	Scale	5 = Strongly agree, 4 = Somewhat agree, 3 = Neither agree nor disagree, 2 = Somewhat disagree, 1 = Strongly disagree
TOURISM_5.4.3_Role_r	I believe the tourists and the tourism industry is a major cause of environmental degradation in Dharamshala. (-)	Scale	5 = Strongly disagree, 4 = Somewhat disagree, 3 = Neither agree nor disagree, 2 = Somewhat agree, 1 = Strongly agree
TOURISM_5.4.4_Tourists1_r	I believe that the number of tourists visiting Dharamshala should be controlled. (-)	Scale	5 = Strongly disagree, 4 = Somewhat disagree, 3 = Neither agree nor disagree, 2 = Somewhat agree, 1 = Strongly agree
TOURISM_5.4.5_Tourists2_r	I believe there should be strict laws regarding the behaviour of the tourists. (-)	Scale	5 = Strongly disagree, 4 = Somewhat disagree, 3 = Neither agree nor disagree, 2 = Somewhat agree, 1 = Strongly agree

NEP_6.1.1	NEP1. We are approaching the limit of the number of people the Earth can support.	Scale	5 = Strongly agree, 4 = Somewhat agree, 3 = Neither agree nor disagree, 2 = Somewhat disagree, 1 = Strongly disagree
NEP_6.1.2	NEP2. Humans have the right to modify the natural environment to suit their needs.	Scale	5 = Strongly agree, 4 = Somewhat agree, 3 = Neither agree nor disagree, 2 = Somewhat disagree, 1 = Strongly disagree
NEP_6.1.3	NEP3. When humans interfere with nature it often produces disastrous consequences.	Scale	5 = Strongly agree, 4 = Somewhat agree, 3 = Neither agree nor disagree, 2 = Somewhat disagree, 1 = Strongly disagree
NEP_6.1.4	NEP4. Human innovation will ensure that we do not make the Earth unlivable.	Scale	5 = Strongly agree, 4 = Somewhat agree, 3 = Neither agree nor disagree, 2 = Somewhat disagree, 1 = Strongly disagree
NEP_6.1.5	NEP5. Humans are seriously abusing the environment.	Scale	5 = Strongly agree, 4 = Somewhat agree, 3 = Neither agree nor disagree, 2 = Somewhat disagree, 1 = Strongly disagree
NEP_6.1.6	NEP6. The Earth has plenty of natural resources if we just learn how to develop them.	Scale	5 = Strongly agree, 4 = Somewhat agree, 3 = Neither agree nor disagree, 2 = Somewhat disagree, 1 = Strongly disagree
NEP_6.1.7	NEP7. Plants and animals have as much right as humans to exist.	Scale	5 = Strongly agree, 4 = Somewhat agree, 3 = Neither agree nor disagree, 2 = Somewhat disagree, 1 = Strongly disagree
NEP_6.1.8	NEP8. The balance of nature is strong enough to cope with the impacts of modern industrial nations.	Scale	5 = Strongly agree, 4 = Somewhat agree, 3 = Neither agree nor disagree, 2 = Somewhat disagree, 1 = Strongly disagree
NEP_6.1.9	NEP9. Despite our special abilities, humans are still subject to the laws of nature	Scale	5 = Strongly agree, 4 = Somewhat agree, 3 = Neither agree nor disagree, 2 = Somewhat disagree, 1 = Strongly disagree
NEP_6.1.10	NEP10. The so-called "ecological crisis" facing humankind has been greatly exaggerated.	Scale	5 = Strongly agree, 4 = Somewhat agree, 3 = Neither agree nor disagree, 2 = Somewhat disagree, 1 = Strongly disagree
NEP_6.1.11	NEP11. The Earth is like a spaceship with very limited room and resources.	Scale	5 = Strongly agree, 4 = Somewhat agree, 3 = Neither agree nor disagree, 2 = Somewhat disagree, 1 = Strongly disagree
NEP_6.1.12	NEP12. Humans were meant to rule over the rest of nature.	Scale	5 = Strongly agree, 4 = Somewhat agree, 3 = Neither agree nor disagree, 2 = Somewhat disagree, 1 = Strongly disagree
NEP_6.1.13	NEP13. The balance of nature is very delicate and easily upset.	Scale	5 = Strongly agree, 4 = Somewhat agree, 3 = Neither agree nor disagree, 2 = Somewhat disagree, 1 = Strongly disagree
NEP_6.1.14	NEP14. Humans will eventually learn enough about how nature works to be able to control it.	Scale	5 = Strongly agree, 4 = Somewhat agree, 3 = Neither agree nor disagree, 2 = Somewhat disagree, 1 = Strongly disagree
NEP_6.1.15	NEP15. If things continue on their present course, we will soon experience a major ecological catastrophe.	Scale	5 = Strongly agree, 4 = Somewhat agree, 3 = Neither agree nor disagree, 2 = Somewhat disagree, 1 = Strongly disagree
NEP_Score	NEP Score	Scale	
DEMO_7.1_Age	Age	Nominal	Under 18 years, 18 - 35 years, 36 - 65 years, 65 years or older
DEMO_7.2_Gender	Gender	Nominal	Male, Female, Other
DEMO_7.3_Nationality	Nationality - Selected Choice	Nominal	Indian, Other
DEMO_7.3_Nationality_TEXT	Nationality - Other - Text	Nominal	
DEMO_7.4_Education	Education Level	Nominal	Up to High school, Diploma holder, Bachelor's Degree, Master's degree or higher

DEMO_7.5_Occupation	Occupation - Selected Choice	Nominal	
DEMO_7.7_Ethnicity	Ethnicity - Selected Choice	Nominal	
DEMO_7.7_Ethnicity_TEXT	Ethnicity - Other - Text	Nominal	
DEMO_7.6_Income	Annual Income	Nominal	Up to ₹ 2,50,000 (up to USD 3,250), ₹ 2,50,000 - ₹ 7,50,000 (USD 3,250 - USD 9,750), ₹ 7,50,000 and above (USD 9,750 and above), Prefer not to say
ENVCOM_3.1.5_FeltResp	Protecting the environment is not my personal responsibility.	Scale	5 = Strongly agree, 4 = Somewhat agree, 3 = Neither agree nor disagree, 2 = Somewhat disagree, 1 = Strongly disagree
ENVCOM_3.1.4_AbleContr1	I personally can do nothing to prevent environmental degradation.	Scale	5 = Strongly agree, 4 = Somewhat agree, 3 = Neither agree nor disagree, 2 = Somewhat disagree, 1 = Strongly disagree
ENVCOM_3.2.1_AbleContr2	There is no point in me doing anything for the environment unless everyone takes part.	Scale	5 = Strongly agree, 4 = Somewhat agree, 3 = Neither agree nor disagree, 2 = Somewhat disagree, 1 = Strongly disagree
ENVCOM_3.2.2_ContrOthers	I believe many people around me knowingly commit actions that harm the environment.	Scale	5 = Strongly agree, 4 = Somewhat agree, 3 = Neither agree nor disagree, 2 = Somewhat disagree, 1 = Strongly disagree
PERSVAL_2.1.5_OpenChg1	I prefer a simple routine life without too many changes.	Scale	5 = Strongly agree, 4 = Somewhat agree, 3 = Neither agree nor disagree, 2 = Somewhat disagree, 1 = Strongly disagree
PERSVAL_2.2.4_OpenChg2	I am open to changing my lifestyle in the interest of the environment.	Scale	5 = Strongly agree, 4 = Somewhat agree, 3 = Neither agree nor disagree, 2 = Somewhat disagree, 1 = Strongly disagree
ENVCOM_3.2.2_ContrOthers_r	I believe many people around me knowingly commit actions that harm the environment. (-)	Scale	5 = Strongly disagree, 4 = Somewhat disagree, 3 = Neither agree nor disagree, 2 = Somewhat agree, 1 = Strongly agree
ENVMON_4.2.1_FinDep	I believe that my financial wellbeing is directly impacted by the condition of the local environment.	Scale	5 = Strongly agree, 4 = Somewhat agree, 3 = Neither agree nor disagree, 2 = Somewhat disagree, 1 = Strongly disagree
USERTYPE_Residents	USERTYPE=Residents	Nominal	
USERTYPE_LongStayTourists	USERTYPE=Long-stay tourists	Nominal	
USERTYPE_ShortStayTourists	USERTYPE=Short-stay tourists	Nominal	
ENVMON_4.1.1_ExpFinInc1	I would adopt a more environmentally-conscious lifestyle if it helps me save money.	Scale	5 = Strongly agree, 4 = Somewhat agree, 3 = Neither agree nor disagree, 2 = Somewhat disagree, 1 = Strongly disagree
ENVMON_4.1.2_ExpFinInc2	I would make more environmentally-friendly decisions if I am incentivised to do so.	Scale	5 = Strongly agree, 4 = Somewhat agree, 3 = Neither agree nor disagree, 2 = Somewhat disagree, 1 = Strongly disagree
ENVMON_4.1.3_PercBal1	I believe that economic and development concerns should be given priority over environmental issues.	Scale	5 = Strongly agree, 4 = Somewhat agree, 3 = Neither agree nor disagree, 2 = Somewhat disagree, 1 = Strongly disagree
ENVMON_4.1.4_PercBal2	Economic growth is essential in order to protect the environment.	Scale	5 = Strongly agree, 4 = Somewhat agree, 3 = Neither agree nor disagree, 2 = Somewhat disagree, 1 = Strongly disagree
ENVMON_4.1.5_PercBal3	Protecting the environment should be given priority even if it causes slower economic growth.	Scale	5 = Strongly agree, 4 = Somewhat agree, 3 = Neither agree nor disagree, 2 = Somewhat disagree, 1 = Strongly disagree
PERSVAL_2.1.4_AdultExpNat	I prefer to spend my free time outdoors in natural environments.	Scale	5 = Strongly agree, 4 = Somewhat agree, 3 = Neither agree nor disagree, 2 = Somewhat disagree, 1 = Strongly disagree

TOURISM_5.4.3_Role	I believe the tourists and the tourism industry is a major cause of environmental degradation in Dharamshala.	Scale	5 = Strongly agree, 4 = Somewhat agree, 3 = Neither agree nor disagree, 2 = Somewhat disagree, 1 = Strongly disagree
TOURISM_5.4.4_Tourists1	I believe that the number of tourists visiting Dharamshala should be controlled.	Scale	5 = Strongly agree, 4 = Somewhat agree, 3 = Neither agree nor disagree, 2 = Somewhat disagree, 1 = Strongly disagree
TOURISM_5.4.5_Tourists2	I believe there should be strict laws regarding the behaviour of the tourists.	Scale	5 = Strongly agree, 4 = Somewhat agree, 3 = Neither agree nor disagree, 2 = Somewhat disagree, 1 = Strongly disagree
NEP_6.1.2_R	NEP2. Humans have the right to modify the natural environment to suit their needs. (-)	Scale	5 = Strongly disagree, 4 = Somewhat disagree, 3 = Neither agree nor disagree, 2 = Somewhat agree, 1 = Strongly agree
NEP_6.1.4_R	NEP4. Human innovation will ensure that we do not make the Earth unlivable. (-)	Scale	5 = Strongly disagree, 4 = Somewhat disagree, 3 = Neither agree nor disagree, 2 = Somewhat agree, 1 = Strongly agree
NEP_6.1.6_R	NEP6. The Earth has plenty of natural resources if we just learn how to develop them. (-)	Scale	5 = Strongly disagree, 4 = Somewhat disagree, 3 = Neither agree nor disagree, 2 = Somewhat agree, 1 = Strongly agree
NEP_6.1.8_R	NEP8. The balance of nature is strong enough to cope with the impacts of modern industrial nations. (-)	Scale	5 = Strongly disagree, 4 = Somewhat disagree, 3 = Neither agree nor disagree, 2 = Somewhat agree, 1 = Strongly agree
NEP_6.1.10_R	NEP10. The so-called "ecological crisis" facing humankind has been greatly exaggerated. (-)	Scale	5 = Strongly disagree, 4 = Somewhat disagree, 3 = Neither agree nor disagree, 2 = Somewhat agree, 1 = Strongly agree
NEP_6.1.12_R	NEP12. Humans were meant to rule over the rest of nature. (-)	Scale	5 = Strongly disagree, 4 = Somewhat disagree, 3 = Neither agree nor disagree, 2 = Somewhat agree, 1 = Strongly agree
NEP_6.1.14_R	NEP14. Humans will eventually learn enough about how nature works to be able to control it. (-)	Scale	5 = Strongly disagree, 4 = Somewhat disagree, 3 = Neither agree nor disagree, 2 = Somewhat agree, 1 = Strongly agree
ActionValue_Score	Action Value Score	Scale	
InterpersonalDynamic_Score	Interpersonal Dynamics Score	Scale	
TourismImpact_Score	Tourism Impact Score	Scale	

Annex 6: Atlas.ti Code Book

◇ Demographic Characteristics 10 Codes:

- **Dem**
 - **Dem :: Age**
 - **Dem :: Area of Stay/Operation**
 - **Dem :: Area of Stay/Operation :: Other cities**
 - **Dem :: Area of Stay/Operation: Rural**
 - **Dem :: Education**
 - **Dem :: Ethnicity**
 - **Dem :: Gender**
 - **Dem :: Purpose**
 - **Dem :: Relationship to DHM**
-

◇ Network Actors 7 Codes:

- **Network Actors**
 - **Network Actors: Local Community**
 - **Network Actors: NGOs**
 - **Network Actors: Private Sector**
 - **Network Actors: State**
 - **Network Actors: Temporary residents**
 - **Network Actors: Tourists**
-

◇ Network Attributes 10 Codes:

- NW Att
 - NW Att: Collaboration
 - NW Att: Communication/Awareness
 - NW Att: Community Ownership/Participation
 - NW Att: Institutional Capacity
 - NW Att: Local Knowledge/Traditions
 - NW Att: Monitoring mechanisms
 - NW Att: Role of State
 - NW Att: Social Norms
 - NW Att: Trust
-

◇ Others 6 Codes:

- Important
 - Others: Convenience/Indifference
 - Others: Initiatives
 - Others: Outsider factor
 - Others: Transience
 - Others: Worldview/Globalisation/Urbanisation
-

◇ Psychological Factors 24 Codes:

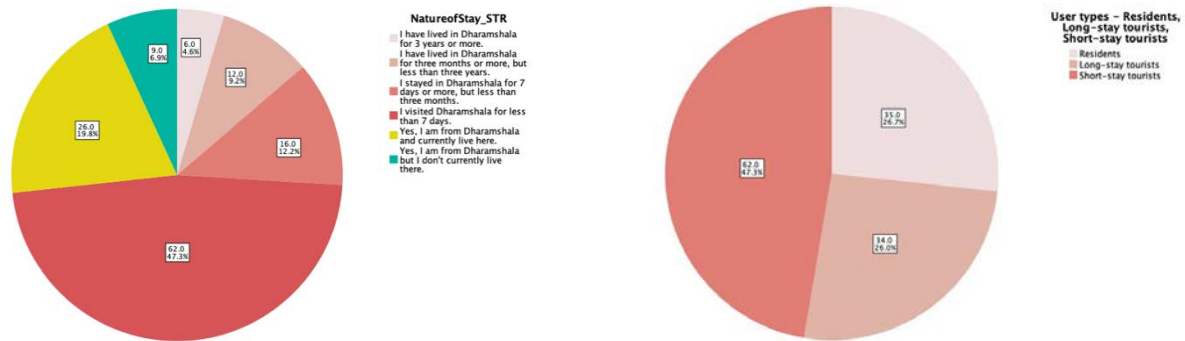
- Psych
- Psych: Comm
- Psych: Comm: Felt Personal Responsibility
- Psych: Comm: Guilt

- **Psych: Comm: Inspiration/Local Leadership**
- **Psych: Comm: Others' contribution (negative)**
- **Psych: Comm: Perc - Ability to contribute**
- **Psych: Comm: Pride/Recognition**
- **Psych: Comm: Reciprocity**
- **Psych: Level of Concern/Perception of risk**
- **Psych: Money**
- **Psych: Money: Balance Econ-Env**
- **Psych: Money: Incentive**
- **Psych: Pers Val**
- **Psych: Pers Val: Altruism**
- **Psych: Pers Val: Experience in Nature**
- **Psych: Pers Val: Openness to Change**
- **Psych: Pers Val: Perc - impact of own actions**
- **Psych: Pers Val: Self Interest**
- **Psych: Pers Val: Spirituality**
- **Psych: Tourism**
- **Psych: Tourism: Env Degradation**
- **Psych: Tourism: Money**
- **Psych: Tourism: Role of tourists**

.....

Annex 7 Quantitative Data Description

Types of Users



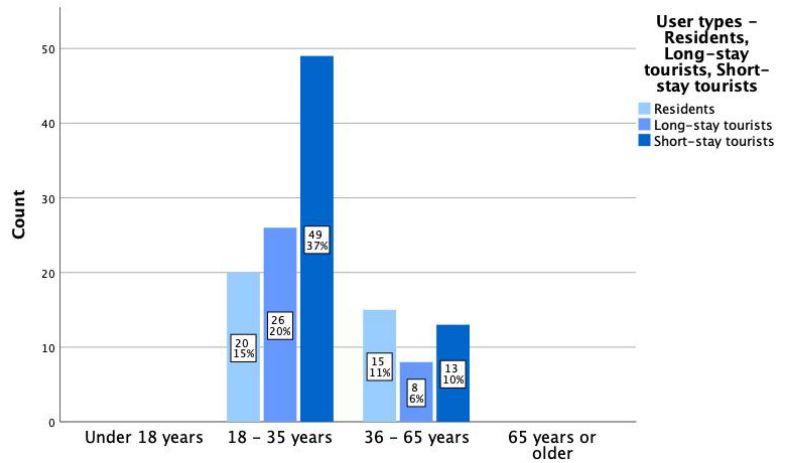
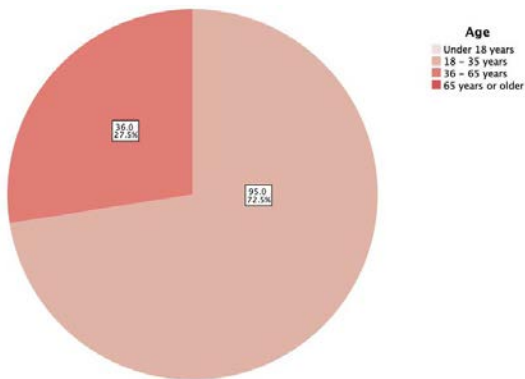
Graph 2 Distribution of Users by Nature of Stay

Graph 3 Distribution of Users by Type

Purpose of Visit	Responses		Percent of Cases
	N	Percent	
What was the purpose of your stay Dharamshala? (tick all that apply) - Selected Choice Work	13	9,1%	13,3%
What was the purpose of your stay Dharamshala? (tick all that apply) - Selected Choice Visiting family and friends	2	1,4%	2,0%
What was the purpose of your stay Dharamshala? (tick all that apply) - Selected Choice Leisure & Sightseeing	67	46,9%	68,4%
What was the purpose of your stay Dharamshala? (tick all that apply) - Selected Choice Adventure Sports (trekking, camping, paragliding, etc)	25	17,5%	25,5%
What was the purpose of your stay Dharamshala? (tick all that apply) - Selected Choice Cultural Event (Film Festival, Music Festival, etc)	1	0,7%	1,0%
What was the purpose of your stay Dharamshala? (tick all that apply) - Selected Choice Sporting Event (Cricket Match, etc)	1	0,7%	1,0%
What was the purpose of your stay Dharamshala? (tick all that apply) - Selected Choice Studies or Research	12	8,4%	12,2%
What was the purpose of your stay Dharamshala? (tick all that apply) - Selected Choice Workshop (Yoga, meditation, music, dance, craft, etc)	11	7,7%	11,2%
What was the purpose of your stay Dharamshala? (tick all that apply) - Selected Choice Volunteer Work	8	5,6%	8,2%
What was the purpose of your stay Dharamshala? (tick all that apply) - Selected Choice Other	3	2,1%	3,1%
Total	143	100,0%	145,9%

Table 9: Purpose of Visit

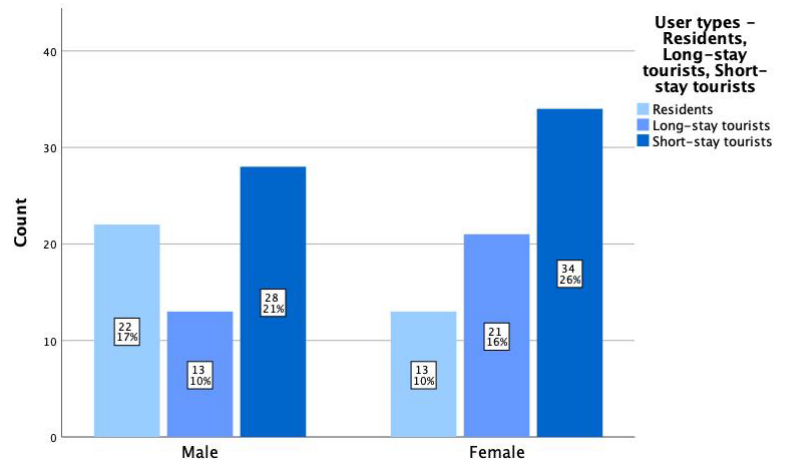
Age



Graph 4 Distribution of Users by Age

Graph 5 Distribution of Users by Age and Type of User

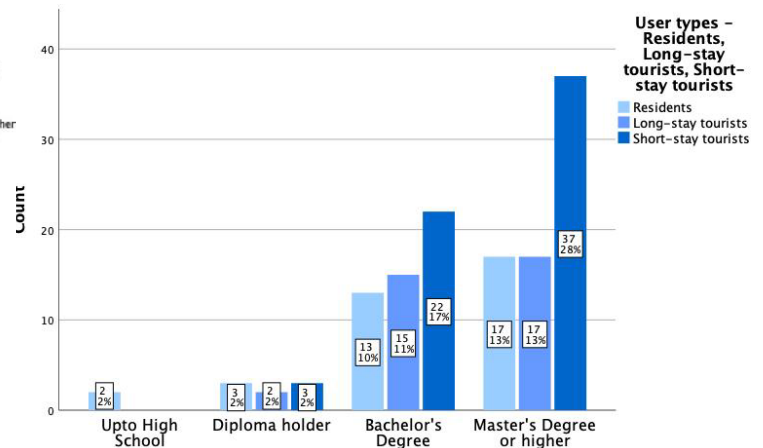
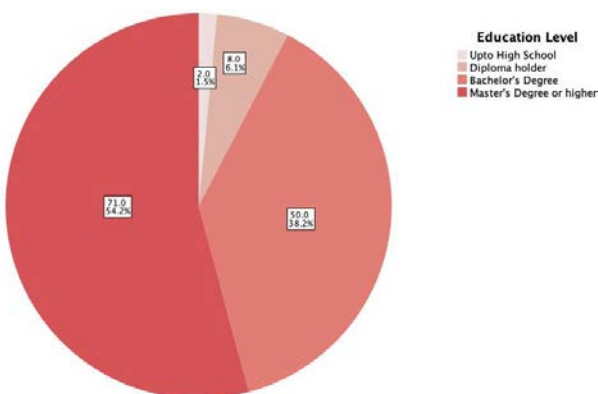
Gender



Graph 6 Distribution of Users by Gender

Graph 7 Distribution of Users by Gender and Type of User

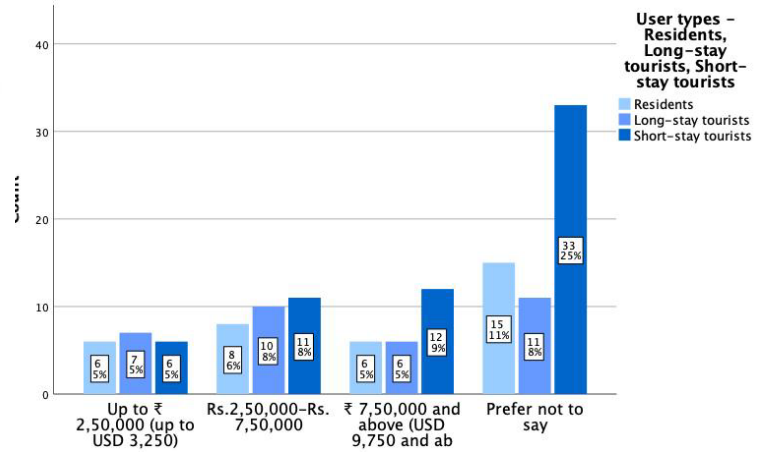
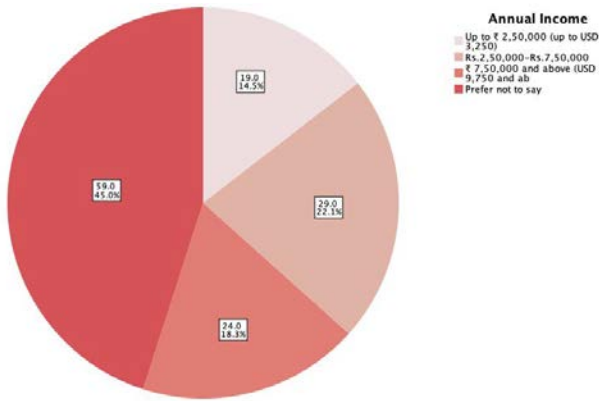
Education



Graph 8 Distribution of Users by Education

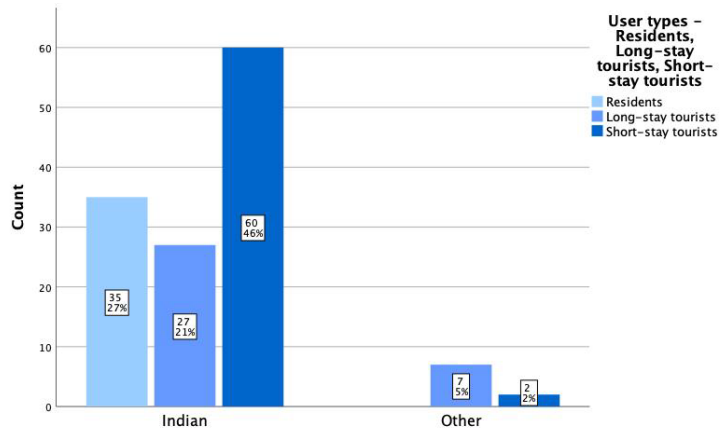
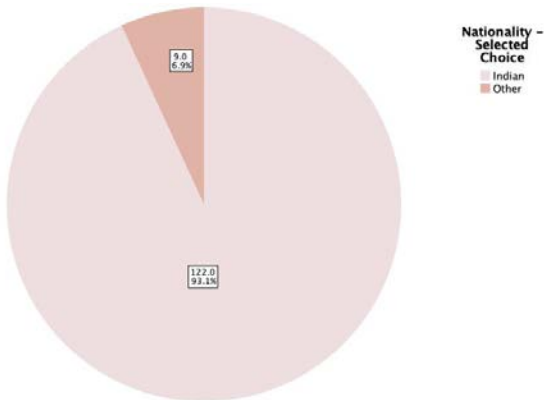
Graph 9 Distribution of Users by Education and Type of User

Income



Graph 10 Distribution of Users by Income

Graph 11 Distribution of Users by Income and Type of User

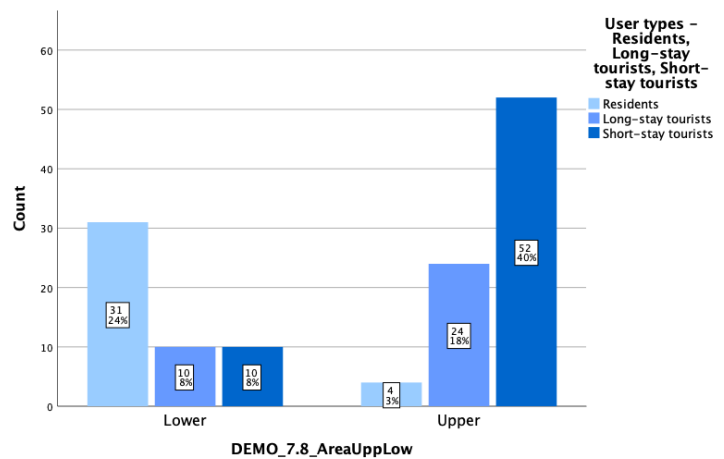
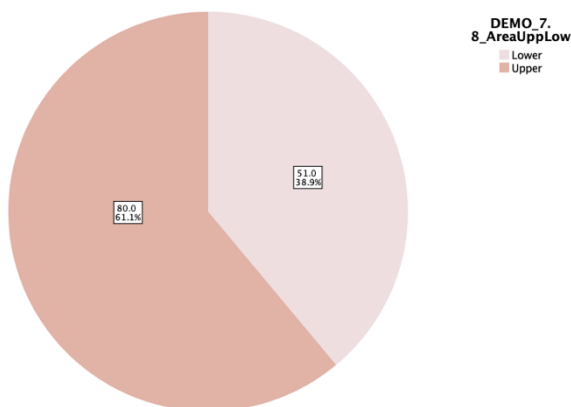


Nationality

Graph 12 Distribution of Users by Nationality

Graph 13 Distribution of Users by Nationality and Type of User

Area of Stay



Graph 14 Distribution of Users by Area of Stay

Graph 15 Distribution of Users by Area of Stay and Type of User

Annex 8: Data Analysis: Environmental Consciousness

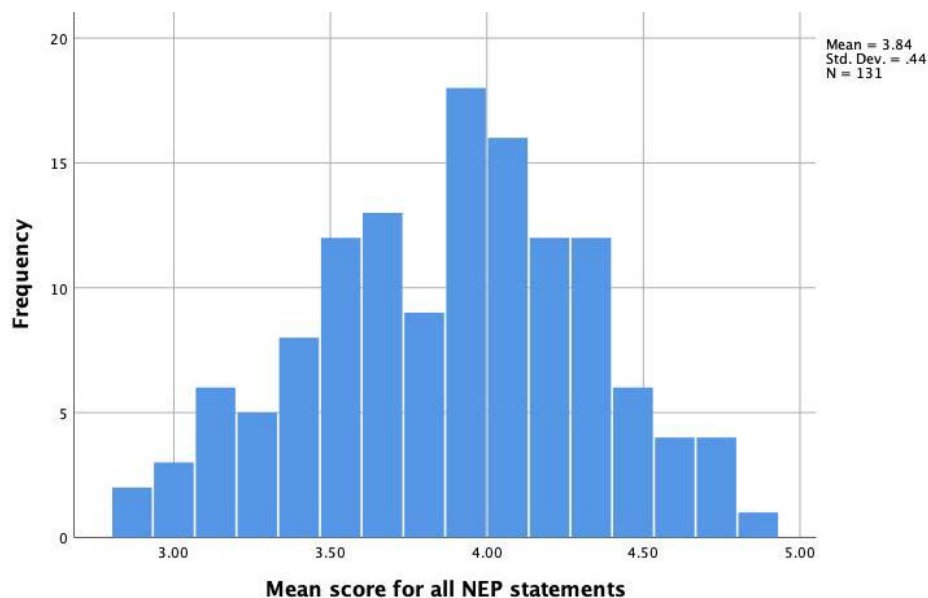
8.1 Overall NEP Score

8.1.1 Testing of Assumptions for ANOVA

Shapiro-Wilk Test shows significance value of 0.164, which is greater than 0.05, thus data is assumed to be normally distributed, as bell shaped distribution can be seen from histogram as well. Additionally, significance of 0.464 for Levene Test, also greater than 0.05, proves homogeneity of variance of data, thus assumptions for performing ANOVA test are satisfied.

	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Mean score for all NEP statements	.078	131	.049	.985	131	.164

Table 10 Test for Normality for Overall NEP Scores



Graph 16 Test of Normality Histogram for Overall NEP Score

		Levene Statistic	df1	df2	Sig.
Mean score for all NEP statements	Based on Mean	.773	2	128	.464
	Based on Median	.618	2	128	.540
	Based on Median and with adjusted df	.618	2	125.729	.540
	Based on trimmed mean	.752	2	128	.474

Table 11 Levene's Test for Homogeneity of Variance - Overall NEP Score

8.1.2 ANOVA Test

Mean values as obtained for different user groups can be seen in Descriptive statistics – 3.77 for residents, 3.92 for long-stay tourists and 3.83 for short stay tourists. ANOVA test shows significance of .335, which means differences between means of three user groups are not

statistically significant. This is confirmed by post-hoc test where no p-values between 0.05 are observed.

Mean score for all NEP statements

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Residents	35	3.7733	.42386	.07165	3.6277	3.9189	3.07	4.67
Long-stay tourists	34	3.9294	.41680	.07148	3.7840	4.0748	2.87	4.80
Short-stay tourists	62	3.8366	.45930	.05833	3.7199	3.9532	2.87	4.67
Total	131	3.8438	.43972	.03842	3.7678	3.9198	2.87	4.80

Table 12 Descriptive Statistics for ANOVA - Different User Groups

Mean score for all NEP statements

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	.426	2	.213	1.104	.335
Within Groups	24.709	128	.193		
Total	25.136	130			

Table 13 ANOVA Test for Overall NEP Scores

Dependent Variable: Mean score for all NEP statements

Tukey HSD

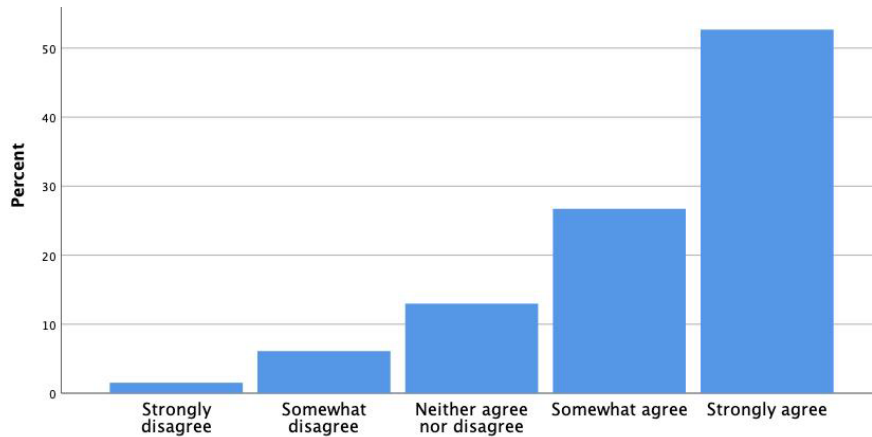
(I) User types – Residents, Long-stay tourists, Short-stay tourists	(J) User types – Residents, Long-stay tourists, Short-stay tourists	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Residents	Long-stay tourists	-.15608	.10580	.306	-.4070	.0948
	Short-stay tourists	-.06323	.09289	.775	-.2835	.1571
Long-stay tourists	Residents	.15608	.10580	.306	-.0948	.4070
	Short-stay tourists	.09285	.09376	.584	-.1295	.3152
Short-stay tourists	Residents	.06323	.09289	.775	-.1571	.2835
	Long-stay tourists	-.09285	.09376	.584	-.3152	.1295

Table 14 Tukey's Post-hoc Test for comparison between means

8.2 NEP Statement-wise Comparison

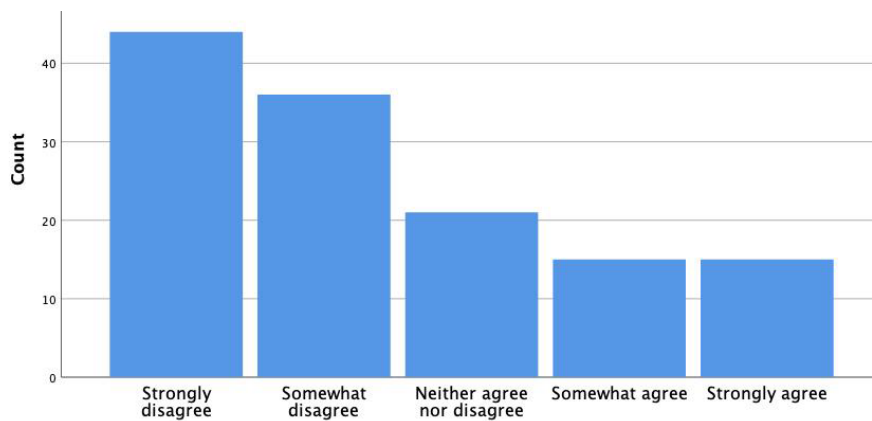
8.2.1 Testing of Assumptions for Individual Statements

Normality distribution histograms for the 15 NEP statements show that data for these statements is not normally distributed. ANOVA test is still considered robust for such data, and the test is carried out post the Levene test for homogeneity of variance, results for which are presented next.



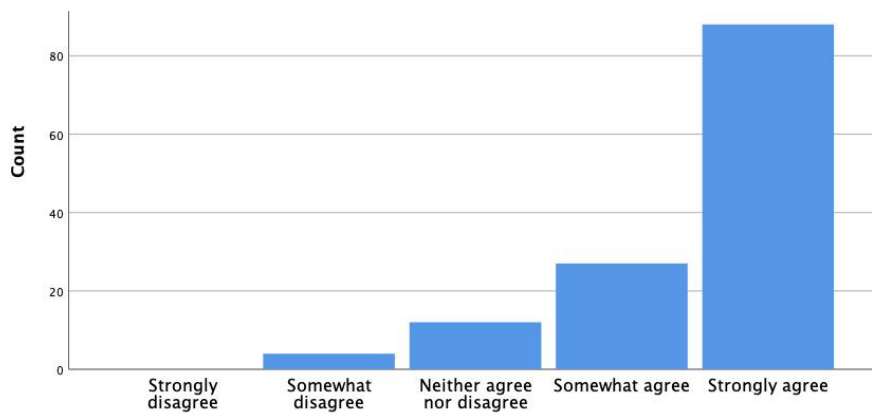
NEP1. We are approaching the limit of the number of people the Earth can support.

Graph 17 Normality Distribution Histogram - NEP1



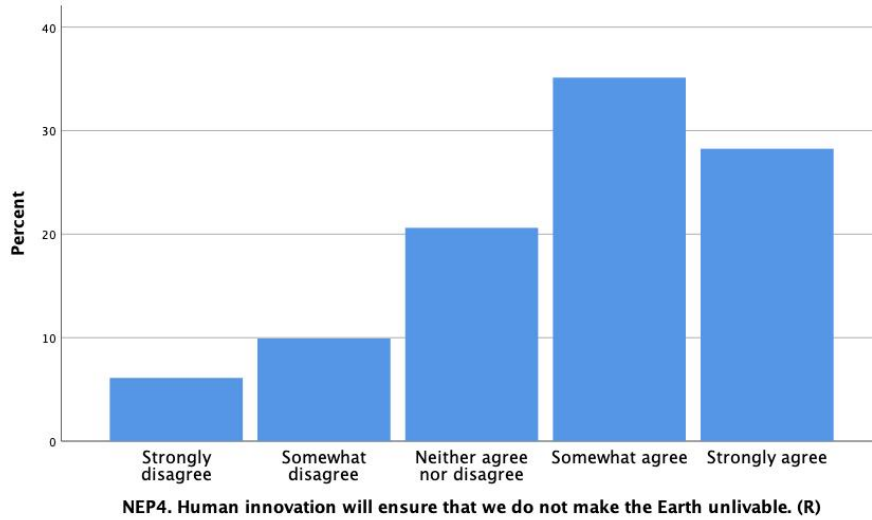
NEP2. Humans have the right to modify the natural environment to suit their needs. (R)

Graph 18 Normality Distribution Histogram - NEP2

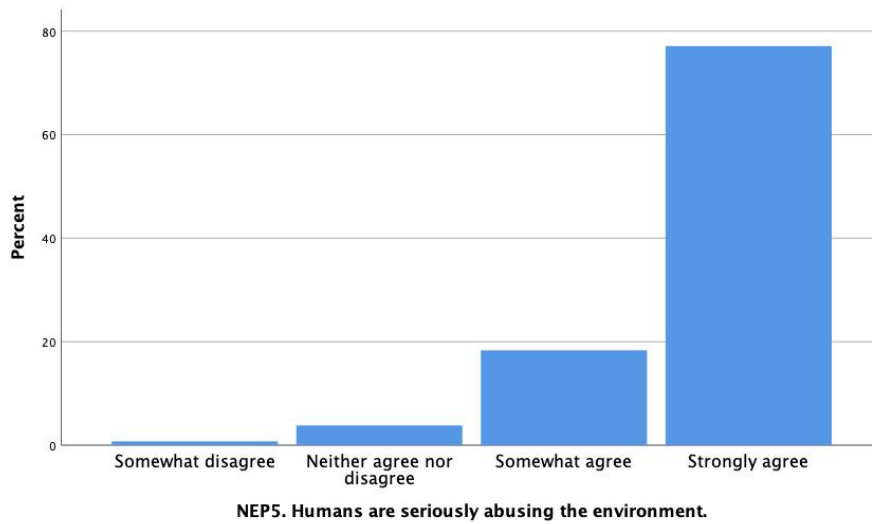


NEP3. When humans interfere with nature it often produces disastrous consequences.

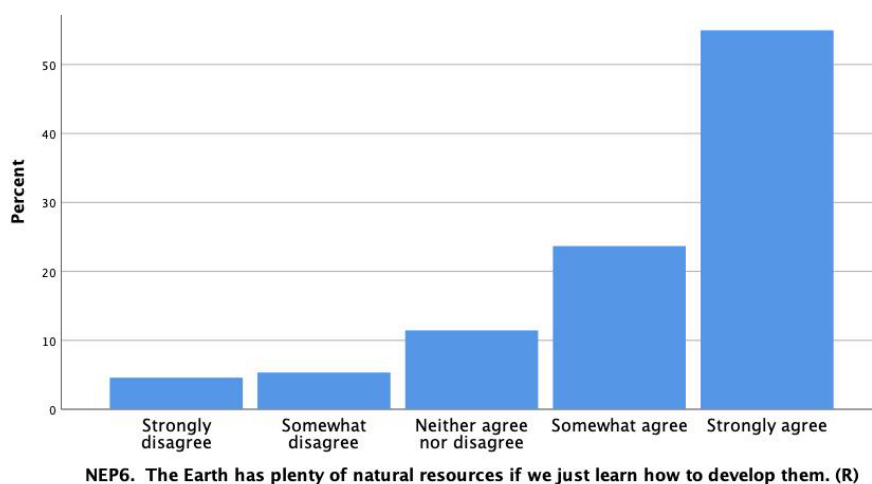
Graph 19 Normality Distribution Histogram - NEP3



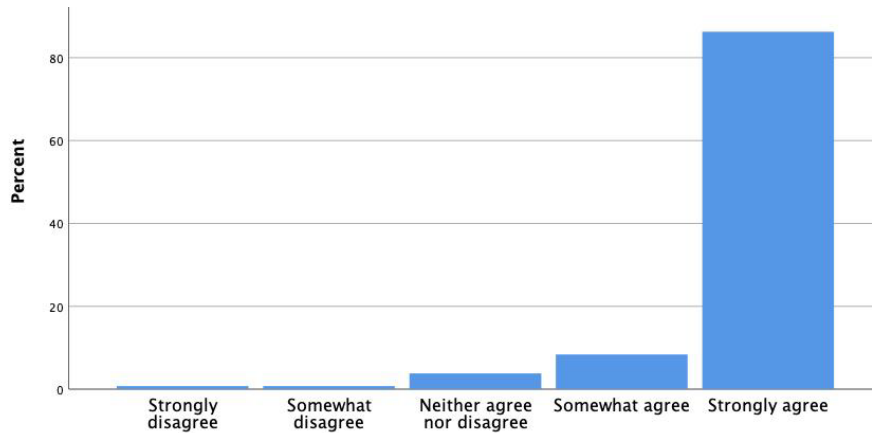
Graph 20 Normality Distribution Histogram – NEP4



Graph 21 Normality Distribution Histogram – NEP5

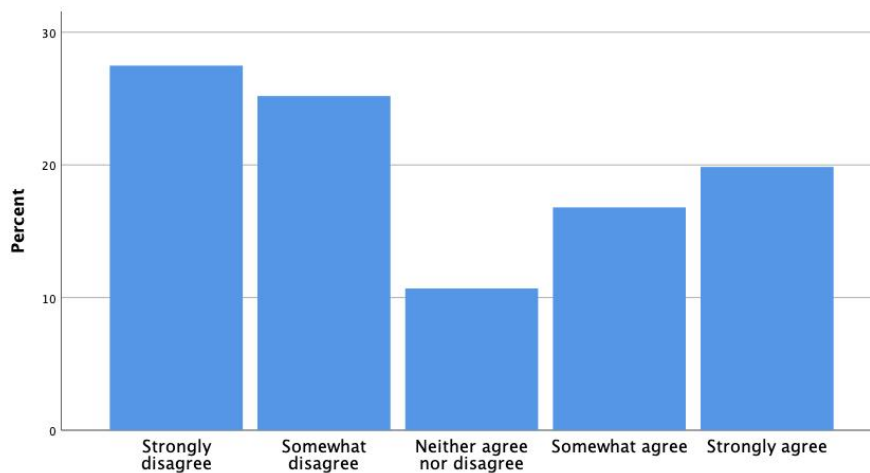


Graph 22 Normality Distribution Histogram – NEP6



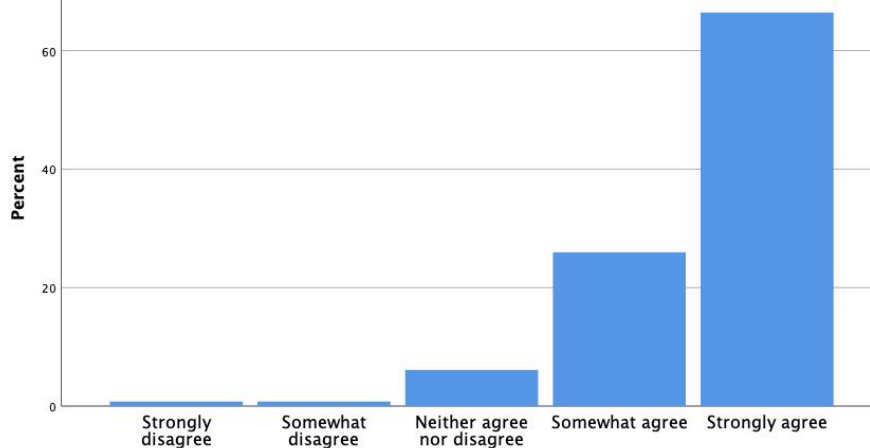
NEP7. Plants and animals have as much right as humans to exist.

Graph 23 Normality Distribution Histogram – NEP7



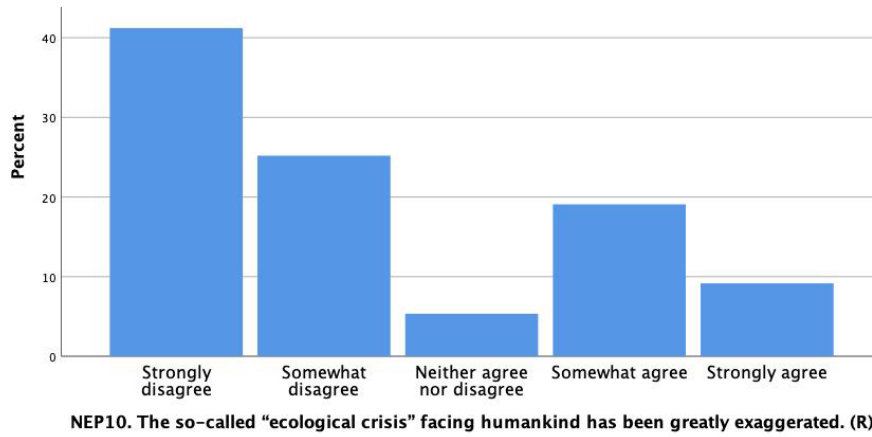
NEP8. The balance of nature is strong enough to cope with the impacts of modern industrial nations. (R)

Graph 24 Normality Distribution Histogram – NEP8

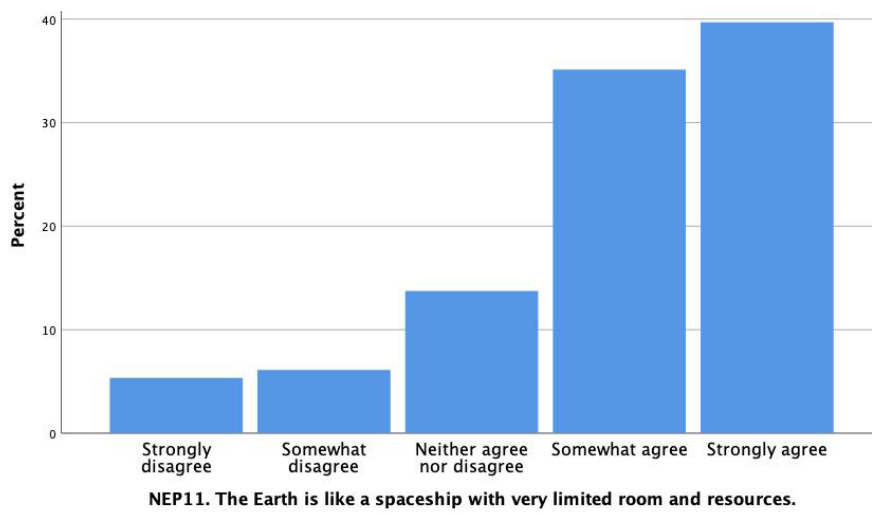


NEP9. Despite our special abilities, humans are still subject to the laws of nature

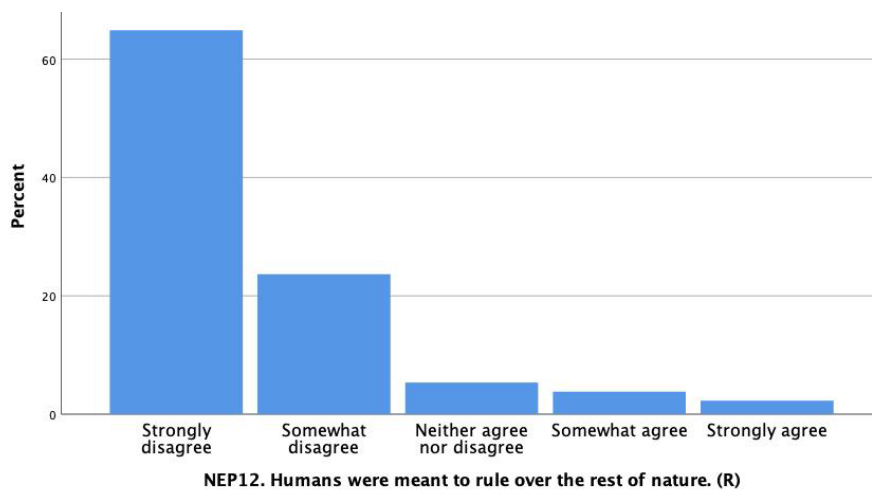
Graph 25 Normality Distribution Histogram – NEP9



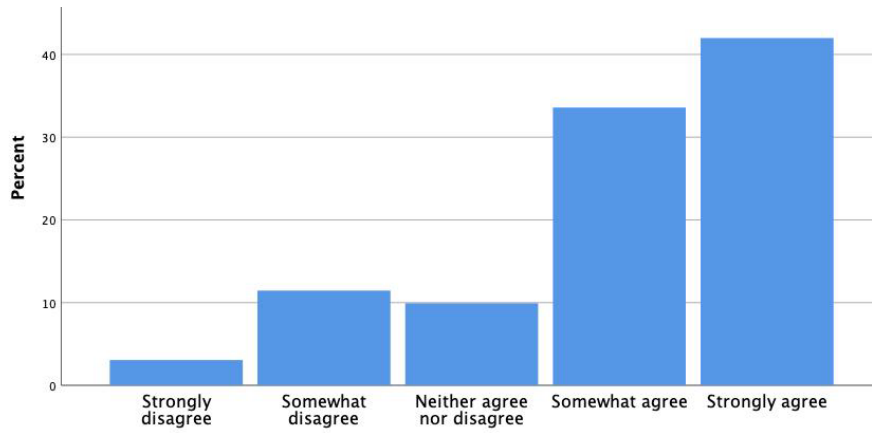
Graph 26 Normality Distribution Histogram – NEP10



Graph 27 Normality Distribution Histogram – NEP11

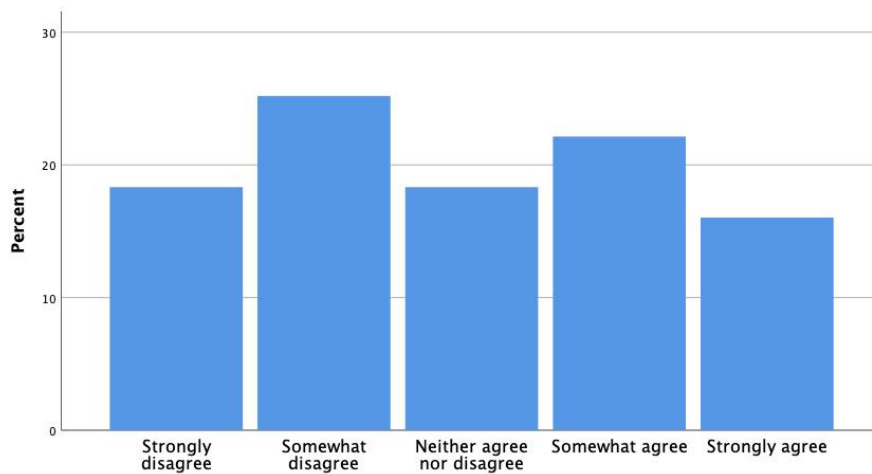


Graph 28 Normality Distribution Histogram – NEP12



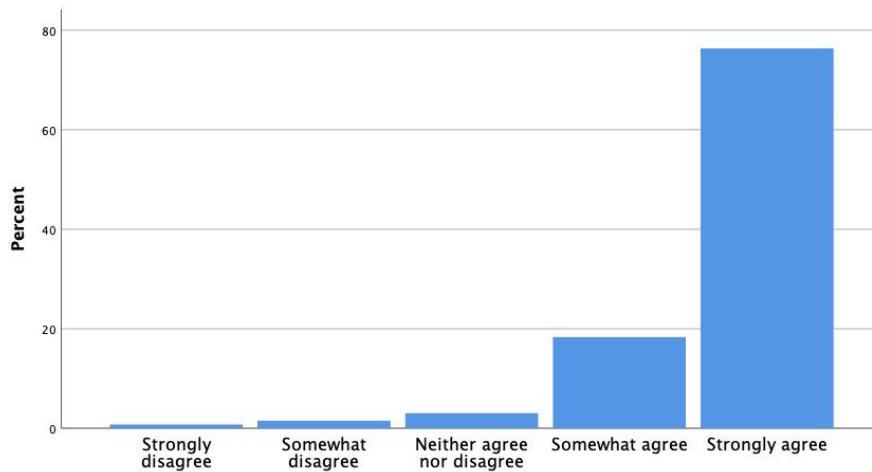
NEP13. The balance of nature is very delicate and easily upset.

Graph 29 Normality Distribution Histogram – NEP13



NEP14. Humans will eventually learn enough about how nature works to be able to control it. (R)

Graph 30 Normality Distribution Histogram – NEP14



NEP15. If things continue on their present course, we will soon experience a major ecological catastrophe.

Graph 31 Normality Distribution Histogram – NEP15

		Levene Statistic	df1	df2	Sig.
NEP1. We are approaching the limit of the number of people the Earth can support.	Based on Mean	0,280	2	128	0,756
	Based on Median	0,814	2	128	0,445
	Based on Median and with adjusted df	0,814	2	99,850	0,446
	Based on trimmed mean	0,374	2	128	0,689
NEP2. Humans have the right to modify the natural environment to suit their needs. (R)	Based on Mean	1,425	2	128	0,244
	Based on Median	0,727	2	128	0,485
	Based on Median and with adjusted df	0,727	2	126,460	0,485
	Based on trimmed mean	1,283	2	128	0,281
NEP3. When humans interfere with nature it often produces disastrous consequences.	Based on Mean	41,407	2	128	0,000
	Based on Median	8,136	2	128	0,000
	Based on Median and with adjusted df	8,136	2	83,838	0,001
	Based on trimmed mean	39,631	2	128	0,000
NEP4. Human innovation will ensure that we do not make the Earth unlivable. (R)	Based on Mean	2,288	2	128	0,106
	Based on Median	1,353	2	128	0,262
	Based on Median and with adjusted df	1,353	2	124,227	0,262
	Based on trimmed mean	1,925	2	128	0,150
NEP5. Humans are seriously abusing the environment.	Based on Mean	6,592	2	128	0,002
	Based on Median	1,559	2	128	0,214
	Based on Median and with adjusted df	1,559	2	112,747	0,215
	Based on trimmed mean	4,954	2	128	0,008
NEP6. The Earth has plenty of natural resources if we just learn how to develop them. (R)	Based on Mean	3,731	2	128	0,027
	Based on Median	5,688	2	128	0,004
	Based on Median and with adjusted df	5,688	2	115,279	0,004
	Based on trimmed mean	4,468	2	128	0,013
NEP7. Plants and animals have as much right as humans to exist.	Based on Mean	2,360	2	128	0,099
	Based on Median	0,744	2	128	0,477
	Based on Median and with adjusted df	0,744	2	120,997	0,477
	Based on trimmed mean	2,792	2	128	0,065
NEP8. The balance of nature is strong enough to cope with the impacts of modern industrial nations. (R)	Based on Mean	6,224	2	128	0,003
	Based on Median	3,048	2	128	0,051
	Based on Median and with adjusted df	3,048	2	127,876	0,051
	Based on trimmed mean	6,157	2	128	0,003
NEP9. Despite our special abilities, humans are still subject to the laws of nature	Based on Mean	7,876	2	128	0,001
	Based on Median	2,798	2	128	0,065
	Based on Median and with adjusted df	2,798	2	105,110	0,065
	Based on trimmed mean	6,305	2	128	0,002
NEP10. The so-called "ecological crisis" facing humankind has been greatly exaggerated. (R)	Based on Mean	8,900	2	128	0,000
	Based on Median	4,448	2	128	0,014
	Based on Median and with adjusted df	4,448	2	116,156	0,014
	Based on trimmed mean	8,602	2	128	0,000
NEP11. The Earth is like a spaceship with very limited room and resources.	Based on Mean	2,923	2	128	0,057
	Based on Median	1,997	2	128	0,140
	Based on Median and with adjusted df	1,997	2	122,197	0,140
	Based on trimmed mean	1,985	2	128	0,142
NEP12. Humans were meant to rule over the rest of nature. (R)	Based on Mean	0,499	2	128	0,608
	Based on Median	0,314	2	128	0,731
	Based on Median and with adjusted df	0,314	2	126,876	0,731
	Based on trimmed mean	0,563	2	128	0,571
NEP13. The balance of nature is very delicate and easily upset.	Based on Mean	0,451	2	128	0,638
	Based on Median	0,556	2	128	0,575
	Based on Median and with adjusted df	0,556	2	114,210	0,575
	Based on trimmed mean	0,276	2	128	0,760
NEP14. Humans will eventually learn enough about how nature works to be able to control it. (R)	Based on Mean	1,814	2	128	0,167
	Based on Median	0,883	2	128	0,416
	Based on Median and with adjusted df	0,883	2	121,006	0,416
	Based on trimmed mean	1,724	2	128	0,182
NEP15. If things continue on their present course, we will soon experience a major ecological catastrophe.	Based on Mean	2,237	2	128	0,111
	Based on Median	0,635	2	128	0,532
	Based on Median and with adjusted df	0,635	2	111,930	0,532
	Based on trimmed mean	1,437	2	128	0,241

Table 15 Levene's Test for Homogeneity of Variance – Individual Statements

Levene's test shows that p-values that are less than 0.05 for NEP3, NEP5, NEP6, NEP8, NEP9, and NEP10 do not meet necessary conditions for conducting one-way ANOVA test. Thus,

ANOVA test to compare means for different user groups was conducted for the remaining 9 statements and the Welch ANOVA test was used for comparison of means for these 6 statements.

To verify these results, and to assess which user groups display differences in means for the statistically significant results, post-hoc tests were applied. For one-way ANOVA test results, the Tukey's HSD coefficient was used and Games-Howell test was used for Welch ANOVA test results. These are presented in Table 19 below. Significant results have been highlighted in yellow.

		ANOVA				
		Sum of Squares	df	Mean Square	F	Sig.
NEP1. We are approaching the limit of the number of people the Earth can support.	Between Groups	2,676	2	1,338	1,354	0,262
	Within Groups	126,454	128	0,988		
	Total	129,130	130			
NEP2. Humans have the right to modify the natural environment to suit their needs. (R)	Between Groups	0,494	2	0,247	0,132	0,876
	Within Groups	238,865	128	1,866		
	Total	239,359	130			
NEP4. Human innovation will ensure that we do not make the Earth unlivable. (R)	Between Groups	6,003	2	3,001	2,263	0,108
	Within Groups	169,784	128	1,326		
	Total	175,786	130			
NEP7. Plants and animals have as much right as humans to exist.	Between Groups	0,575	2	0,287	0,744	0,477
	Within Groups	49,440	128	0,386		
	Total	50,015	130			
NEP11. The Earth is like a spaceship with very limited room and resources.	Between Groups	1,054	2	0,527	0,412	0,663
	Within Groups	163,878	128	1,280		
	Total	164,931	130			
NEP12. Humans were meant to rule over the rest of nature. (R)	Between Groups	0,548	2	0,274	0,314	0,731
	Within Groups	111,879	128	0,874		
	Total	112,427	130			
NEP13. The balance of nature is very delicate and easily upset.	Between Groups	8,575	2	4,288	3,531	0,032
	Within Groups	155,425	128	1,214		
	Total	164,000	130			
NEP14. Humans will eventually learn enough about how nature works to be able to control it. (R)	Between Groups	10,939	2	5,470	3,040	0,051
	Within Groups	230,298	128	1,799		
	Total	241,237	130			
NEP15. If things continue on their present course, we will soon experience a major ecological catastrophe.	Between Groups	0,594	2	0,297	0,635	0,532
	Within Groups	59,940	128	0,468		
	Total	60,534	130			

Table 16 ANOVA Test for Individual Statements

Robust Tests of Equality of Means					
		Statistic ^a	df1	df2	Sig.
NEP3. When humans interfere with nature it often produces disastrous consequences.	Welch	18,709	2	65,241	0,000
NEP5. Humans are seriously abusing the environment.	Welch	2,427	2	75,081	0,095
NEP6. The Earth has plenty of natural resources if we just learn how to develop them. (R)	Welch	4,400	2	71,993	0,016
NEP8. The balance of nature is strong enough to cope with the impacts of modern industrial	Welch	1,934	2	66,765	0,153
NEP9. Despite our special abilities, humans are still subject to the laws of nature	Welch	5,015	2	72,182	0,009
NEP10. The so-called "ecological crisis" facing humankind has been greatly exaggerated. (R)	Welch	9,222	2	71,319	0,000
a. Asymptotically F distributed.					

Table 17 Welch ANOVA Test for Individual Statements

Multiple Comparisons									
Dependent Variable				Mean Difference (I-J)	Std. Error	Sig.	95% Confidence		
							Lower Bound	Upper Bound	
NEP3. When humans interfere with nature it often produces disastrous consequences.	Games-Howell	Residents	Long-stay tourists	.678*	0,190	0,003	0,21	1,14	
			Short-stay tourists	.524*	0,099	0,000	0,29	0,76	
NEP6. The Earth has plenty of natural resources if we just learn how to develop them. (R)	Games-Howell	Residents	Long-stay tourists	0,62941	0,27030	0,060	-0,0215	1,2803	
			Short-stay tourists	.51935*	0,19925	0,029	0,0441	0,9946	
NEP9. Despite our special abilities, humans are still subject to the laws of nature	Games-Howell	Residents	Long-stay tourists	0,271	0,168	0,252	-0,14	0,68	
			Short-stay tourists	.348*	0,114	0,008	0,08	0,62	
NEP10. The so-called "ecological crisis" facing humankind has been greatly exaggerated. (R)	Games-Howell	Residents	Long-stay tourists	1,40840*	0,32649	0,000	0,6235	2,1933	
			Short-stay tourists	.95300*	0,31472	0,010	0,1959	1,7101	
NEP13. The balance of nature is very delicate and easily upset.	Tukey HSD	Residents	Long-stay tourists	0,313	0,265	0,468	-0,32	0,94	
			Short-stay tourists	.613*	0,233	0,026	0,06	1,17	

*. The mean difference is significant at the 0.05 level.

Table 18 Post-hoc Test Results for Individual Statements

Annex 9: Inferential Data Analysis

Two regression models were generated, firstly using NEP Score as DV, and Action Value Score and Tourism Impact Score as IVs and secondly adding Age, Gender, Nationality and Education Levels as control variables.

The tests were carried out after testing for homogeneity of variance which showed no p-values less than 0.05, thus proving that condition is satisfied.

Descriptive Statistics			
	Mean	Std. Deviation	N
NEP Score	3,84	0,440	131
Action Value Score	4,33	0,616	131
Tourism Impact Score	2,76	0,557	131
Age	2,27	0,448	131
Gender	1,52	0,502	131
Nationality - Selected Choice	1,07	0,254	131
Education Level	3,45	0,682	131

Table 19 Descriptive Statistics for Variables in Regression Model

Test of Homogeneity of Variances						
		Levene Statistic	df1	df2	Sig.	
Action-based Values	Based on Mean	0,706	2	128	0,496	
	Based on Median	0,503	2	128	0,606	
	Based on Median and with adjusted df	0,503	2	118,675	0,606	
	Based on trimmed mean	0,561	2	128	0,572	
Reciprocity	Based on Mean	0,230	2	128	0,795	
	Based on Median	0,303	2	128	0,739	
	Based on Median and with adjusted df	0,303	2	109,886	0,739	
	Based on trimmed mean	0,275	2	128	0,760	
Impact of Tourism	Based on Mean	0,791	2	128	0,456	
	Based on Median	0,728	2	128	0,485	
	Based on Median and with adjusted df	0,728	2	117,551	0,485	
	Based on trimmed mean	0,875	2	128	0,419	

Table 20 Levene Test for Homogeneity of Variance for Independent Variables

Coefficients ^a								
Model		Unstandardized Coefficients		ed Coefficient	t	Sig.	95.0% Confidence Interval for B	
		B	Std. Error	Beta			Bound	Bound
1	(Constant)	3,214	0,296		10,852	0,000	2,628	3,800
	Action Value Score	0,253	0,058	0,355	4,358	0,000	0,138	0,369
	Tourism Impact Score	-0,169	0,064	-0,215	-2,634	0,009	-0,296	-0,042
2	(Constant)	3,390	0,385		8,806	0,000	2,628	4,152
	Action Value Score	0,241	0,059	0,337	4,052	0,000	0,123	0,359
	Tourism Impact Score	-0,202	0,067	-0,256	-2,987	0,003	-0,335	-0,068
	Age	0,068	0,083	0,069	0,815	0,417	-0,097	0,233
	Gender	0,087	0,075	0,099	1,165	0,246	-0,061	0,235
	Nationality - Selected Choice	-0,005	0,149	-0,003	-0,034	0,973	-0,299	0,289
	Education Level	-0,091	0,054	-0,141	-1,678	0,096	-0,198	0,016

a. Dependent Variable: NEP Score

Table 21 Coefficients for Regression Modelling

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