



A Transitivity Analysis of Imran Khan's UN General Assembly Address Environmental on Justice and Climate Responsibility

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Abstract

This study examines how environmental values and climate responsibility are expressed in Imran Khan's speech on climate change at the 74th United Nations General Assembly. Drawing on Halliday's transitivity framework within Systemic Functional Linguistics, it analyses how the speech represents actions, perceptions, and responsibilities through particular linguistic choices. The analysis shows that material and mental processes are used most frequently, allowing the speaker to combine descriptions of tangible environmental threats with expressions of concern, urgency, and awareness. By highlighting Pakistan's severe vulnerability to climate change despite its minimal contribution to global emissions, the discourse presents Pakistan as both deeply affected and ethically engaged. The speech consistently stresses fairness, shared responsibility, and the need for collective global action, especially from countries with higher carbon footprints. Overall, these linguistic patterns construct an environmental narrative grounded in justice, interdependence, and collective responsibility. The study illustrates how transitivity analysis can reveal the ecological values embedded in political discourse and enhance understanding of how environmental crises are framed and legitimised in international political communication.

Keywords: *Climate change, Systemic Functional Grammar (SFG), Transitivity Analysis, Imran Khan's speech, ecosophy, United Nations General Assembly (UNGA).*

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Climate Vulnerability and Political Environmental Discourse

Climate change presently poses one of the most daunting challenges to the modern world, threatening ecosystems, human lives, and global stability. Countries with minimal carbon emissions often face the harshest consequences, and Pakistan is one such nation. Recurrent floods, rapidly melting glaciers, rising temperatures, and declining water security have heightened concerns about the country's environmental future. In this light, public discourse particularly political discourse plays a very important role in how environmental issues will be framed and tackled on both national and international levels. The United Nations General Assembly (henceforth UNGA) provides a critical platform where world leaders express national priorities and negotiate shared global responsibilities. Imran Khan's address to the 74th UNGA session was one such moment that brought environmental vulnerability, moral responsibility, and global equity into sharp focus. In his speech, he not only highlights Pakistan's exposure to climate change but also points to the weak linkage between countries most responsible for global emissions and those bearing the most severe impacts of climate change. Since political speeches function as tools of persuasion and ideological representation, analysing their linguistic choices provides valuable insight into the ecological values and worldviews they promote.

This research examines Khan's speech using Halliday's Systemic Functional Linguistics with particular focus on the transitivity system (Halliday and Matthiessen 248). Transitivity analysis, which concerns how actions, actors, experiences, and circumstances are represented in language, allows the researcher to understand how leaders construct responsibility, agency, and urgency in environmental discourse (Halliday and Matthiessen 213-15). Based on this framework, the study aims to reveal the embedded ecosophy of Khan's speech, his underlying ecological philosophy, values, and vision expressed to a global audience (Stibbe 13-14). The study, therefore, asks: How do the transitivity patterns in Imran Khan's UNGA speech reveal his ecosophy regarding climate change? To answer this question, the research examines the types of processes, participants, and circumstances used in the speech and interprets their contribution to the ecological meanings constructed. This analysis demonstrates how linguistic choices shape Imran Khan's portrayal of climate change, Pakistan's vulnerability, and the call for collective global action. The researcher situates this linguistic analysis within the broader field of ecolinguistics, which investigates how language shapes ecological understanding and ideological positioning (Stibbe 2-4). The analysis is further extended through an ecosophical perspective that emphasises the role of underlying values and worldviews in shaping environmental communication (Næss 87).

Ecological Worldviews and Political Communication

Understanding political responses to climate change requires analysis of how ecological concerns are framed, communicated, and legitimised in public discourse.

Environmental problems do not exist independently; they become meaningful through the stories and linguistic choices that leaders use to build urgency, responsibility, and agency. Scholars working within ecolinguistics stress that ecological issues are built around “stories we live by”, the dominant narratives, ideologies, and values encoded in language (Stibbe 13). These stories shape how societies perceive ecological crises and the actions deemed necessary to address them. In this sense, political speeches serve as key sites where ecological worldviews, or ecosophies, are articulated and circulated. A large body of research has focused on the material impacts of climate change, especially within so-called developing or vulnerable regions. Mendelsohn considers the significant effects of increased temperatures on agricultural systems in developing countries, arguing that climate variability threatens food security and economic stability (Mendelsohn 6). Mahato similarly contends that climate change disrupts water availability, soil fertility, and agricultural productivity, particularly for small-scale farmers who lack the resources to adapt (Mahato 5). Such research reveals a structural unevenness in climate vulnerability and underscores the need for coordinated responses at a global level.

Beyond agriculture, scholars have demonstrated that the impacts of climate change extend into labour, health, and human well-being. Masuda et al. show that rising temperatures in tropical regions significantly reduce productivity and jeopardise the health of working populations, a situation that demands policy intervention and climate-sensitive governance (Masuda et al. 30). Research into climate adaptation and mitigation further stresses that effective responses must be inclusive and community-led. For developing countries, strong local participation, institutional capacity, and integration with indigenous knowledge systems are essential components of effective climate policy (Halsnæs and Verhagen 666). Collectively, these studies establish the broader context in which developing countries bear disproportionate environmental harm despite contributing least to greenhouse gas emissions.

Within ecolinguistics, the role of language in shaping perceptions of environmental responsibility and justice has received increasing scholarly attention. Transitivity analysis, one strand of Halliday’s Systemic Functional Linguistics, is widely employed to uncover the ideological choices embedded in political speech. Rehman analyses speeches by Imran Khan and Mahathir Mohamad to demonstrate how differences in process types reflect divergent political ideologies and rhetorical strategies (Rehman 76). Similarly, Rahardi, Sujatna, and Hidayat’s analysis of Greta Thunberg’s speech shows how material and relational processes foreground urgency and moral accountability in climate activism (Rahardi, Sujatna, and Hidayat 610). Gong and Liu argue that passive constructions in environmental narratives often obscure agency, creating ambiguity about responsibility for ecological harm (Gong and Liu 71). Mansyur et al. likewise emphasise how transitivity patterns in environmental

speeches position human actors in relation to nature and ecological crises (Mansyur et al. 35).

These studies collectively underscore that transitivity analysis is a useful approach to unveiling how political actors create climate change, responsibility, and agency through language. Yet, against the growing research on political environmental discourse, there is still scant analysis of the ecosophy, or underlying ecological philosophy, as represented through linguistic patterns, in the speeches of world leaders from the developing world. Imran Khan's UNGA speech provides a significant case for such an analysis, given that the speech focuses on climate justice, global inequity, and Pakistan's vulnerability. This study will add to ongoing discussions within ecolinguistics and political communication, particularly with respect to how language constructs ecological values and global responsibility.

Transitivity and the Construction of Ecological Meaning

Systemic Functional Linguistics, developed by M. A. K. Halliday, offers an effective framework that explores how language represents experience, constructs reality, and encodes an ideological position. According to SFL, the ideational metafunction is designed to explain how human experience is organised through processes, participants, and circumstances in language. This kind of configuration, which is called the transitivity system, permits analysts to explore how actions, perceptions, and relationships are linguistically constructed in a text. Transitivity identifies several process types-material, mental, relational, verbal, behavioural, and existential of which represent a distinct plane of experience (Halliday and Matthiessen 248). Material processes denote actions and events; mental processes denote cognition, perception, and emotion; relational processes classify or identify; and verbal processes report what is said. The distribution of these processes in a text discloses how the speaker grammaticalises agency, responsibility, and causation. In political discourse, such choices are rarely neutral; they operate to legitimate worldviews, to assign blame or praise, and to convince audiences of a preferred view of events.

This is particularly useful in ecological discourse, where the transitivity system reveals how certain environmental issues have been framed or which actors are positioned as responsible for harm or solution. Gong and Liu argue that transitivity analysis can reveal whether environmental degradation is represented as caused by a particular agent or, on the other hand, is obscured through passive constructions in which responsibility is diffused ambiguously (71). Similarly, Rahardi et al. demonstrate how activists use material and mental processes to foreground urgency and moral accountability in climate-related speeches (612). Thus, through such studies, transitivity emerges as one of the key tools for understanding how ecological meanings are constructed through language.

That adds another dimension to transitivity-based analysis: the idea of ecosophy, deep-lying ecological philosophy or value system. Originating in the work of Arne Næss, ecosophy describes the deeply held beliefs and ethical commitments that inform a speaker's orientation to the environment (Næss 87). In ecolinguistics, ecosophy is used to identify the ecological values guiding discourse and influencing public interpretation (Stibbe 14). When combined with transitivity analysis, the concept helps to reveal not only what a speaker says about ecological issues but also how their linguistic choices reflect broader ideological commitments.

These frameworks meaningfully intersect in political communication: political leaders do not merely describe environmental problems; they position themselves, their nations, and other global actors within moral and ecological narratives. By examining process types and participant roles, researchers can trace how leaders construct themselves as responsible agents, portray their nations as vulnerable or proactive, and ascribe varying degrees of responsibility to global powers. Transitivity thus becomes a lens through which ecological worldviews are not only observed, but systematically deciphered. This research, through the application of transitivity analysis to Imran Khan's speech, discusses subtle ways in which his ecological philosophy is linguistically encoded. The framework shall help explain how he constructs the vulnerability of Pakistan, frames climate injustice, and appeals for global cooperation while offering insight into the ecosophy underlying his political stance on climate change.

Methodological Approach to Analysing Khan's UNGA Speech

This paper employs a qualitative, text-analytical approach, based on Systemic Functional Linguistics (SFL), focusing particularly on the transitivity system to bring out the ecological meanings in Imran Khan's speech at the 74th United Nations General Assembly. The focus is on how linguistic choices have constructed certain actions, responsibilities, and values, and what those choices do to constitute the ecosophy expressed through the speech. The official transcript of Imran Khan's speech delivered on 27 September 2019, obtained from the United Nations multimedia archive, is used as the main dataset for the study. This address was selected because it represents Pakistan's environmental concerns on the global podium and, further, articulates moral, political, and ecological arguments that make it suitable for transitivity analysis. The speech holds significance not only for its content but also for its purpose: to draw international attention to Pakistan's vulnerability to climate change and to call for global cooperation.

Following standard SFL procedures, the speech was first transcribed into a clean, analysable text. The transcript was then divided into individual clauses, as the clause serves as the fundamental unit of analysis in transitivity studies. Each clause was numbered sequentially to maintain analytical clarity and facilitate cross-referencing. This segmentation

enables the systematic identification of processes, participants, and circumstances, and provides a structured overview of the linguistic patterns that shape ecological meaning.

The analysis follows Halliday and Matthiessen's model of transitivity, which categorises clause meaning into six process types: material, mental, relational, verbal, behavioural, and existential. The study identifies, for each clause:

- Type of process (e.g., material, mental)
- Those participating, such as Actor, Senser, Token;
- The circumstantial elements providing contextual detail.

This coding enables the researcher to trace how Khan linguistically constructs climate threats, national vulnerability, responsibility, and appeals for global action. The distribution and function of process types will be used to examine how the speech positions various actors, including but not limited to Pakistan, world leaders, and the international community, in relation to climate change.

After coding, data interpretation was done qualitatively. The aim was not just the counting of process types but, rather, to understand how linguistic patterns reflect ecological worldviews and ideological positions. Material and mental processes, for example, were analysed to understand how Khan constructs environmental realities and expresses evaluation or concern. Relational and verbal processes were investigated to identify how identities, responsibilities, and moral arguments are framed. The analysis, therefore, goes beyond the structural description and, through the transitivity patterns, infers broad ecological meanings to uncover the ecosophy embedded in the speech. This interpretive stage draws on principles from ecolinguistics, which emphasise that language reflects deeper values and stories that shape public understanding about the environment.

Transitivity analysis befits the aims of this study in particular because political speeches are strategic constructions of meaning: they frame causes, assign responsibility, and position speakers ideologically. By applying the method of transitivity analysis to Imran Khan's speech, this study shows how he uses linguistic structures to foreground Pakistan's climate vulnerability, emphasise environmental justice, and call for collective responsibility. The method thus offers a systematic way of tracing how ecological meaning is built through language and how a political leader expresses his ecosophy on an international stage.

Representing Climate Crisis: Transitivity Patterns in the Speech

This transitivity analysis of Imran Khan's UNGA speech demonstrates how linguistic choices construct the climate emergency as an immediate and globally significant threat. It is through the textual distribution of process types and associated participants and

circumstances that one realises the strategic use of language by Khan to foreground Pakistan's vulnerability, emphasise the urgency in this matter, and show the moral responsibilities of global actors.

i. Dominant Process Types and Their Communicative Function

Material and mental processes emerged as the most frequent in the speech, indicating Khan's dual emphasis on describing concrete environmental conditions and expressing cognitive and emotional responses to those conditions. Material processes such as depend, come, are melting, planted and contribute enable Khan to construe climate change as an unfolding series of actions and events with real, measurable consequences. These processes locate Pakistan within a network of ecological interdependencies, such as dependence upon rivers and glaciers, and configure climate change as a potent agent of change dynamically reshaping the country's natural topography. The mental processes of feel, realise, are scared, and hope emphasise expressions of concern, urgency, and moral awareness. By positioning himself and Pakistan as sensors, Khan frames climate change not only as an environmental issue but as a deeply human one that evokes fear, responsibility, and anticipation. These reveal his role: reflective and perceptive, highly attuned to the gravity of the crisis. Meaning is also constituted through the less dominant verbal and relational processes. Verbal processes like said, will give and must be pushed to enable Khan to frame the speech as a conversation with the international community in which he represents a spokesperson calling for more equitable climate action. Relational processes like is, are, and are amongst are used to identify Pakistan's status as one of the most affected nations through establishing the relations between the environmental conditions and national identities.

ii. Positioning Pakistan as a Climate-Affected Nation

Through material and relational processes, Khan constructs Pakistan as highly vulnerable to climate-induced hazards. Statements such as "We depend upon our rivers" and "We are mainly an agricultural country" foreground structural dependence on natural systems. Circumstantial elements, 80 per cent of the water, from glaciers in our mountains, reinforce the centrality of glacial melt to Pakistan's survival. By describing glaciers as "melting at quite a rapid pace," Khan foregrounds the immediacy of the threat and ascribes agency to environmental processes framed by global emissions. Material processes are those, such as those detected in the clause "We detected already 5000 glacier lakes", which quantify the scale of environmental transformation. Mental processes, on the other hand, would be such as "we are scared", expressing a collective emotional response, reinforcing the seriousness of the crisis, situating climate change as a shared human concern.

iii. Building Global Responsibility and Climate Justice

Khan uses transitivity patterns to shift focus from national vulnerability to global accountability. Verbal processes, for example, include “richer countries must be pushed”, while material processes are “Countries... are mainly responsible”; both reveal the agency of powerful nations in causing and worsening climate change. The clauses bear clear agency and responsibility, aligning directly with the broader debates on climate justice when considering Pakistan’s experience. In contrasting Pakistan’s “minuscule” contribution to global emissions with the disproportionate suffering it faces, Khan builds an argument founded upon considerations of fairness and moral responsibility. The choices of transitivity, therefore, work to reveal structural injustices within the global climate regime and to appeal for a “combined effort of the world,” through a mental process that frames cooperation as a necessary realisation.

iv. Emphasising Urgency and the Need for Action

Throughout the speech, transitivity patterns foreground urgency. Circumstantial elements, such as if nothing is done, at a rapid pace, and in five years, bring into focus the compressed timelines within which climate change is unfolding. Material processes, such as planting a billion trees, present Pakistan's proactive measures and establish the country not only as a victim but also as an actor that contributes to solutions. Such duality of representation gives added weight to Khan’s call for global cooperation, as he has shown national commitment and initiative.

v. Articulating Ecosophy: Imran Khan’s Ecological Philosophy

The transitivity patterns in Imran Khan’s UNGA speech detail a coherent ecological philosophy, a distinctive ecosophy framed by values of responsibility, interdependence, justice, and collective survival. Through his lexical choices, Khan builds up climate change not just as an environmental threat but as a moral and existential challenge that requires both national resilience and global solidarity. This is where his ecosophy comes into play through the interplay of the material, mental, relational, and verbal processes framing environmental vulnerability, human agency, and ethical responsibility.

vi. Recognising Vulnerability and Interdependence

First, Khan’s ecosophy is grounded in the recognition of ecological interdependence. Material processes such as depend, come, and are melting foreground Pakistan’s reliance on natural systems, primarily rivers and glaciers. These processes make explicit that this nation’s survival is intimately tied to environmental stability. Circumstantial elements, in our mountains, 80 per cent of the water-offer a geographical and ecological map of Pakistan’s vulnerability, reinforcing the idea that climate change is not an abstract concern but a lived and pressing reality. By framing Pakistan as integral to an intertwined ecological system that it shares with neighbouring regions, Khan’s speech constructs an ecosophy that

disavows isolation and puts at the forefront the fates shared by nations which draw from the same natural resources.

vii. Moral Responsibility and Environmental Justice

The principle of fairness is what lies at the core of Khan's ecological philosophy. Relational and material processes, such as "Countries... are mainly responsible" and "our country contributes a minuscule amount", provide a striking contrast between the contribution of industrialised nations and the suffering being experienced in developing countries like Pakistan. These linguistic constructions position climate change as a justice issue in which responsibility must be seen to fall where contribution to the problem has occurred. Verbal processes, such as must be pushed, indicate that Khan conceives accountability not as optional but as a moral requirement. Thus, his ecosophy extends beyond environmental concern to a more general ethical stance supporting global equity and moral obligation.

viii. Vision, Agency, and Proactive Leadership

Khan also constructs himself, and by extension Pakistan, as an actor capable of meaningful environmental intervention. Material processes, such as planting a billion trees and have set ourselves a target foreground proactive actions taken at the national level. These actions reflect an ecosophy centred on stewardship, long-term sustainability, and national responsibility. At the same time, mental processes such as hope, feel, and realise reveal a leader who engages in critical and reflective thought with regard to environmental challenges. His vision does not stop at the immediate threats only, but encompasses future possibilities of things grounded in the belief that human beings have the capacity to respond meaningfully to the ecological crisis.

ix. Collective Survival and Shared Human Potential

Khan's ecosophy culminates in an appeal to the collective human capability. The mental processes of "My optimism comes from the fact ... "and" we can do anything provided our survival instinct is stirred up" build up an image of humanity endowed with potential and resilience. By invoking human ingenuity and divine endowment, Khan frames climate action not simply as imperative but wholly possible. His call for a "combined effort of the world" frames climate change as an existential challenge that crosses borders. This framing reflects an ecosophy of cooperation, unity, and a sense that global crises need global solutions.

Ideology, Responsibility, and Global Environmental Imbalance

These results show that Imran Khan's speech is not a simple narration of the environmental issues affecting Pakistan but a strategic act of ecological storytelling driven by an ideological, ethical, and political motive. Through the analysis of the distribution of transitivity patterns, it becomes clear that Khan constructs climate change as both a scientifically measurable crisis and a morally urgent one. This dual framing lies at the heart of how he positions Pakistan within the global climate narrative.

A key theme emerging through the analysis is Khan's insistence on environmental justice. The speech foregrounds a structural imbalance in global climate politics through relational and material processes that distinguish countries responsible for emissions from those suffering their consequences. This imbalance rhymes with broader concerns raised in climate justice scholarship, which underlines the disproportionate costs of ecological degradation borne by vulnerable nations. Therefore, Khan's discourse locates Pakistan within a larger community of nations, making a call for due responsibility, reflecting an ideological commitment toward principles of fairness and moral accountability. The analysis also reveals that Khan constructs himself as a leader whose authority derives from experiential knowledge and ethical conviction alike. Mental processes such as feel, hope, and realise convey him as a reflective and perceptive figure, while material processes describing national initiatives such as large-scale tree plantation reinforce his determination to enact practical environmental action. This dual representation is in line with ecolinguistic ideas that political actors shape ecological meaning not only through the framing of narratives but also through their embodied action.

In this respect, the emphasis on interdependence, linguistically encoded by circumstantial elements and material processes describing shared rivers, melting glaciers, and regional climate systems, constitutes climate change as a collective and transboundary phenomenon. This framing challenges individualistic or nation-centred approaches and instead supports an ecosophical view that prioritises cooperation, shared fate, and long-term planetary well-being. What emerges from this discussion of the transitivity patterns in Khan's speech is that these go beyond describing events to construct a world where environmental survival depends on global solidarity, equitable responsibility, and proactive leadership. His ecosophy, uncovered here through the linguistic analytical approach, expresses an ethical stance that embeds national vulnerability into universal human possibility.

Conclusion

This study explored how transitivity patterns in Imran Khan's UNGA speech reveal the ecological philosophy embedded within his political discourse. The research is based on a systematic, exhaustive analysis of processes, participants, and circumstances, which indicates that Khan builds climate change as a pressing, multi-dimensional crisis moulded by human action, global inequity, and environmental interdependence. The predominance of material

and mental processes indicates how Khan balances his descriptions of environmental reality with expressions of concern, responsibility, and hope. In framing Pakistan as vulnerable and proactive, he reveals an ecosophy based on stewardship and resilience. Simultaneously, the clear locus of responsibility attributed to high-emission countries foregrounds a commitment to climate justice and global action at equity. The findings extend ecolinguistic scholarship by demonstrating the ways in which transitivity analysis can uncover the ecological values and ideological orientations encoded within political speech. They also expand research into environmental communication by demonstrating how leaders from climate-vulnerable nations use language to contest global power asymmetries and to argue for collective survival. Imran Khan's speech, in other words, elaborates an ecosophy of fairness, cooperation, and shared responsibility. By laying bare the linguistic means through which such a worldview is conveyed, this research underlines the contributions that transitivity analysis can make to interpreting how political actors frame public understandings of climate change. This approach can be further developed in future research by comparing different leaders', regions', or international forums' ecosophies in order to gain deeper insights into how ecological values circulate within global climate discourse.

Appendix A

Excerpt from Imran Khan's UNGA Speech (Climate Change Segment)

First of all, I will start with climate change. So many leaders have talked about climate change, but Mr President, I feel that there is a lack of seriousness. Perhaps world leaders do not realise it. Some of the leaders who can do a lot do not realise the urgency of the situation. We have many ideas, but, as someone said, ideas without funding are mere hallucinations.

Pakistan—I will start with my own country. Our country is among the top ten nations in the world most affected by climate change. We depend upon our rivers. We are mainly an agricultural country, and 80 per cent of the water in our rivers comes from the glaciers. The glaciers—not just on the Pakistani side but also in India—feed major rivers. Eighty per cent of the water in the Indian rivers also comes from the Himalayan, Karakoram, and Hindukush glaciers, and these glaciers are melting at quite a rapid pace.

We have already detected five thousand glacial lakes in our mountains, and if this keeps going, if nothing is done, we are scared that humans are facing a huge catastrophe. When my party came to power in the province of Khyber Pakhtunkhwa, we planted a billion trees in five years. Now we have set ourselves a target of ten billion trees in Pakistan—the idea being to counter the effects of global warming. But one country alone cannot do anything; this has to be a combined effort of the world.

My optimism comes from the fact that the Almighty has endowed humans with great powers. We can do anything provided our survival instinct is stirred up, and this is what I hope the United Nations will take the lead in. There must be more emphasis, and richer countries must be pushed—countries mainly responsible for greenhouse gas emissions must be pushed—because our country contributes only a minuscule amount to greenhouse gases. So I feel that the United Nations must take the initiative in this.

Appendix B

Clause Segmentation of the Speech

First of all, I will start with climate change.

So many leaders have talked about climate change.

But, Mr President, I feel that there is a lack of seriousness.

4a. Perhaps world leaders do not.

4b. Some of the leaders who can do a lot do not realise the urgency of the situation.

5a. We have many ideas.

5b. But, as someone said, ideas without funding are mere hallucinations.

Pakistan—I will give you—I start with my own country.

Our country is among the top ten nations in the world most affected by climate change.

We depend upon our rivers.

9a. We are mainly an agricultural country.

9b. And 80 per cent of the water in our rivers comes from the glaciers.

9c. The glaciers—not just on the Pakistani side but also in India—feed the Indian rivers; 80 per cent of their water comes from the Himalayan, Karakoram, and Hindukush glaciers.

9d. And these glaciers are melting at quite a rapid pace.

10a. We have detected five thousand glacial lakes in our mountains.

10b. And if this keeps going, if nothing is done, we are scared that humans are facing a huge catastrophe.

When my party came to power in the province of KP, we planted a billion trees in five years.

Now we have set ourselves a target of ten billion trees in Pakistan.

13a. The idea is to counter the effects of global warming.

13b. But one country alone cannot do anything.

13c. This has to be a combined effort of the world.

My optimism comes from the fact that the Almighty has endowed humans with great powers.

We can do anything provided our survival instinct is stirred up.

And this is what I hope the United Nations will take the lead in.

17a. There must be more emphasis; richer countries must be pushed.

17b. Countries that are mainly responsible for greenhouse gas emissions must be pushed.

17c. Because our country contributes only a minuscule amount to greenhouse gases.

So I feel that the United Nations must take initiative in this.

Appendix C

Sample Transitivity Coding of Clauses

First of all [Circumstance], I [Sayer] will start [Verbal Process] with climate change [Phenomenon].

So many leaders [Sayer] have talked [Verbal Process] about climate change [Verbiage].

I [Senser] feel [Mental Process] that there is a lack of seriousness [Phenomenon].

4a. World leaders [Senser] do not [Mental Process].

4b. Some of the leaders [Actor] who can do a lot [Material Process] do not realise [Mental Process] the urgency of the situation [Phenomenon].

5a. We [Senser] have [Mental Process] many ideas [Phenomenon].

5b. Someone [Sayer] said [Verbal Process] ideas without funding are mere hallucinations [Verbiage].

I [Sayer] will give [Verbal Process] Pakistan [Target]; I [Sayer] start [Verbal Process] with my own country [Target].

Our country [Identified] is [Relational Identifying Process] amongst the top ten nations most affected by climate change [Identifier].

We [Actor] depend [Material Process] upon our rivers [Goal].

9a. We [Identified] are [Relational Process] mainly an agricultural country [Identifier].

9b. Eighty per cent of the water in our rivers [Actor] comes [Material Process] from the glaciers [Circumstance].

9c. The glaciers [Actor] send (implied) [Material Process] water to the Indian rivers [Goal] from the Himalayan ranges [Circumstance].

9d. These glaciers [Actor] are melting [Material Process] at a rapid pace [Circumstance].

10a. We [Actor] have detected [Material Process] five thousand glacial lakes [Range] in our mountains [Circumstance].

10b. We [Senser] are scared [Mental Process] that humans are facing a catastrophe [Phenomenon].

My party [Actor] came to power [Material Process] in KP [Circumstance]; we [Actor] planted [Material Process] a billion trees [Goal] in five years [Circumstance].

We [Sensor] have set [Mental Process] ourselves a target of ten billion trees [Phenomenon].

13a. One country [Actor] cannot do [Material Process] anything [Range].

13b. This [Phenomenon] has to be [Mental/Relational Process] a combined effort of the world [Phenomenon].

My optimism [Sensor] comes [Mental Process] from the fact that humans are endowed with great powers [Phenomenon].

We [Actor] can do [Material Process] anything [Goal] provided our survival instinct is stirred up [Circumstance].

I [Sensor] hope [Mental Process] that the United Nations will take the lead [Phenomenon].

17a. There [Existent] must be [Existential Process] more emphasis; richer countries must be pushed [Verbiage].

17b. Countries responsible for greenhouse gases [Actor] must be pushed [Verbal Process].

17c. Our country [Actor] contributes [Material Process] a minuscule amount to greenhouse gases [Goal].

I [Sensor] feel [Mental Process] that the United Nations must take initiative in this [Phenomenon].

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