



PLANNING MALAYSIA:

Journal of the Malaysian Institute of Planners

VOLUME 22 ISSUE 6 (2024), Page 604 – 615

EXPLORING HOW HUMAN NEEDS FULFILLMENT SHAPES THE PERCEPTION OF EXTERNAL CATALYSTS TO ECO- BEHAVIOUR

Aisyah Abu Bakar¹

*¹ Department of Environment,
Faculty of Forestry and Environment,
UNIVERSITI PUTRA MALAYSIA*

Abstract

This study explored the connection between how people perceive the external condition for environmental behaviour [EC] and meeting human needs by drawing upon Maslow's Hierarchy of Needs [HON], Subjective Well-Being [SWB], and Human Interdependence [HI]. Research Questions: (1) Will EC increase if human needs are conveniently met? (2) Can unmet human needs lead to an increase in EC, and if so, which needs do not significantly impact EC? Purpose: This research investigates the variation in EC across the convenience and difficulty of addressing human needs. Approach: Mann-Whitney U test was conducted to measure the variation of EC across convenience and difficulty in addressing 24 human requirements. Findings: The convenience of satisfying 17 human needs led to a significant increase in EC while the other 7 human needs demonstrated no significant effect. The findings suggest that EC has the ability to develop autonomously, regardless of fulfilling human needs.

Keywords: external condition, human needs, subjective well-being, human interdependence with the environment

¹ Researcher at Universiti Putra Malaysia. Email: aisyah.ab@upm.edu.my

INTRODUCTION

This research investigated the statistical interaction between fulfilling human needs and the perception of external conditions of environmental actions by drawing upon existing studies. It aims to broaden the scope of ongoing research concerning positive psychology and Human Interdependence with the Environment [HIE] by concentrating on Human Interdependence [HI], Subjective Well-Being [SWB], and Maslow's Hierarchy of Needs [HON].

HUMAN INTERDEOENDENCE

Recent studies have provided new insights into Human Interdependence [HI], which is a key factor influencing Subjective Well-Being [SWB] over the long run. SWB describes a person's subjective assessment of their levels of happiness, well-being, and life satisfaction by specifically focusing on the dimensions of psychological, emotional, and judgmental. While SWB focuses on evaluations of current well-being, HI is future-focused. The foundation of HI is the idea that an individual's contributions to those around them ultimately determine the improvements in their own well-being. Consequently, a person's SWB benefits from their contributions to others. This promotes the notion that HI is indeed crucial for fostering long-term well-being (Dirzyte & Valatka, 2023; Isham et al., 2022; Garcia et al., 2015; Kjell, 2011).

The characteristics of HI include both internal emotions and external viewpoints. These qualities encompass thought patterns, life experiences, habitual behaviours, involuntary actions, and intentional behaviours that alter the environment and affect a person's sustainable SWB. Generally, HI is defined from two contexts: Human Interdependence with the Environment [HIE] and Human Interdependence with Other Humans [HIH]. Figure 1 illustrates how the two contexts expand into four dimensions.

Within the framework of a more thorough scientific investigation (Abu Bakar et al., 2020a; Abu Bakar et al., 2020b; Abu Bakar et al., 2018; Abu Bakar et al., 2017a; Abu Bakar et al., 2017b), Environmental Behaviour (EB) and External Conditions to Environmental Behaviour (EC) have been proposed as the third and fourth dimensions of HIE. The latter stands as the focus of this research.

EXTERNAL CONDITION TO ENVIRONMENTAL BEHAVIOUR

External Conditions to Environmental Behaviour (EC) focuses on attitudes towards the conveniences of the surrounding environment that can lead to ecologically conscious actions. Some of the traits that constitute EC include a supportive social atmosphere, accommodating facilities and infrastructure, and awareness regarding the cost and accessibility of green products (Abu Bakar et al., 2020a; Abu Bakar et al., 2020b).

HI DIMENSIONS	Human Interdependence with other Humans (HIH)	Human Interdependence with the Environment (HIE)
DIMENSION 1	Personal Empowerment (PE)	Eco-Personality & Lifestyle (PL)
Lifestyles, personality, inner-strength, willpower, wisdom, awareness, and life prospects.	Focus And Resilience, Sense of Control, Self-Determination, Goal Orientation and Self-Improvement	Ecological Mindset, Collectivistic Cultures, Modesty and Moderation in Material Pursuits, and Environmental Mindfulness.
DIMENSION 2	Positive Relationship (PR)	Interaction With Nature (IN)
Intimacy, closeness, familiarity, empathy, affection, voluntary and involuntary interactions.	Affection, Compassion, Forgiveness, Ability to Tolerate Others, Sense of Inclusion and Self-Regulation.	Closeness to Nature, Knowledge of and Empathy Towards Nature, And Health Associated Attributes in Relation to Surroundings.
DIMENSION 3	Organizational Opportunity (OO)	Environmental Behaviour (EB)
Engaging with the surrounding, executing roles or tasks, proving skills and responsibility.	Articulatory and Versatility, Initiatives of Positive Interactions and Cooperative Engagements towards Professional Growth.	Careful and Conscious Decision-Making, Smart Consumerism, Recycling, Energy-Saving Initiatives, and Waste Handling.
DIMENSION 4	Community Movement (CM)	External Condition (EC)
Attitude towards circumstances, interpersonal behaviours with the larger public, etc.	Proactivity, Public Participation, Friendliness, Openness, Respect for Diversity and Sense of Belonging.	Attitudes towards Surroundings Convenience and Encouragements to be Environmentally Responsible

Figure 1: Dimensions of HIH and HIE
 Source: Abu Bakar et al., 2017

EC serves as a driving force behind choices and activities that are conscious of the environment. Besides the surrounding encouragement and convenience, these circumstances also involve beneficial enforcement in the direction of sustainable conduct. EC acknowledges favourable atmospheres, such as personal and professional support, affordability, accessibility, and efficiency, as well as other overall atmospheres that support greener choices. It encourages and enhances HIE by building a strong connection between environmental behaviours and positive outlooks. The enhancement of EC not only improves people's immediate happiness but also contributes towards better SWB over the long run (Abu Bakar et al., 2018; Abu Bakar et al., 2017a; Abu Bakar et al., 2017b) (see Table 1).

Table 1: Definition, Factors, and Indicators of External Conditions

Definition	Factor	Code	Indicators
Contextual and situational factors that influence and hinder individuals to think and act responsibly towards the environment	Surrounding Encouragement	EC1	having family members who support eco-friendly behaviours
		EC2	having a supportive, ethical climate at work
		EC3	having reachable conducive outdoors
		EC4	having a favourable neighbourhood that supports green politics
	Convenience	EC5	recognising accessibility to environmental products
		EC6	recognising affordability of environmental products
	Favourable Reinforcement	EC7	recognising favourable waste handling management
		EC8	recognising conducive surrounding and amenities
		EC9	recognising the efficiency of public transport infrastructure
		EC10	recognising legal enforcement on environmental destruction

HUMAN NEEDS FULFILLMENT AND WELL-BEING

Maslow's Hierarchy of Needs [HON] initially comprised five tiers, which corresponded to various levels on the motivational spectrum (Maslow, 1943). The hierarchy involved two distinct categories: deficiency needs and growth needs. The four most pressing deficient needs were physiological needs, safety needs, love and belonging needs, and esteem needs, while self-actualisation was associated with growth needs. The five-stage HON was later extended to include cognitive needs and aesthetic needs as part of growth needs (Maslow, 1962) and transcendence needs (Maslow, 1970). Figure 2 shows the current eight stages of Maslow's Hierarchy of Needs.

Deficiency needs refer to the need for sustenance that arises from shortages. If left unaddressed, the desire to satisfy these needs will become stronger over time. On the other hand, growth needs are fundamentally driven by psychological fulfilment, which can be met through creative and intellectually satisfying activities. Reaching the transcendence needs—the ultimate level of HON—requires attending to lower-level needs. While people seem to escalate the hierarchy consistently, changes in HON may be brought about by individual situations like marital disputes or career setbacks. In reality, people are prone to bounce between various HON levels rather than to move through it in an upward trajectory.

Maslow (1943) posits that people must first satisfy their basic needs to advance to higher levels of HON. This idea applies to every level of the hierarchy. For example, gratifying Esteem Needs is required before moving on to Cognitive Needs. Maslow (1987) further postulated the idea that satisfying a need is not a black-and-white or final process and that his previous observations could have given the false impression that one need must be met completely before moving on to a higher need. Lower-level needs in HON are usually those that individuals have progressed the fastest towards achieving and most people only have partly completed these needs. Given their dynamic and adaptive nature, human needs enable people to meet several demands at once (Abu Bakar, 2022).

The existing literature has propounded two opposing viewpoints. First, meeting human needs is crucial for achieving SWB. Second, over-satisfying needs might lead to unhappiness. Moreover, those who overcome unfulfilled needs are able to develop a sense of purpose while partly satisfied or unsatisfied needs can bring meaningfulness to life. This study has identified 24 markers of human needs throughout the eight phases of HON (see Figure 3).

	HON	UNDERSTANDING
DEFICIENCY NEEDS	1	Physiological Needs The body's need for balance and consistent levels in different bodily systems is called homeostasis. It is driven by survival instincts like seeking shelter, water, food, warmth, rest, and good health. Until this need is met, all other needs are secondary.
	2	Safety and Security Needs The need for safety and security in one's life and surroundings involve seeking protection from violence, health threats, sickness, and economic pressures in order to thrive in modern societies.
	3	Belonging and Love Needs The need for love and a sense of belonging is fulfilled through supportive and communicative friendships, family, and intimate relationships. Deprivation of these needs can lead to feelings of guilt, loneliness, depression, or low extraversion values.
	4	Esteem Needs The need for self-confidence and recognition is fulfilled through positive feelings of self-worth achieved via accomplishments, appreciation, and recognition. Without meeting this need, one may experience feelings of inferiority.
	5	Cognitive Needs The need for knowledge and understanding is fulfilled by yearning for learning, exploration, discovery, and creation to better understand the world. Failure to fulfil this need may result in confusion and identity crisis.
GROWTH NEEDS	6	Aesthetic Needs The need to appreciate and connect with nature's beauty which involves taking time to immerse oneself in natural surroundings, allowing the sights, sounds, and sensations of the environment to refresh and rejuvenate the mind and body.
	7	Self-Actualization The instinctual need to maximize one's abilities and strive to be the best leading to a feeling of generativity –the desire to vote, contribute, volunteer, nurture and guide others to the well-being and growth of future generations or to outlast oneself.
	8	Transcendence Needs The need to surpass self-centeredness, and assist others in self-fulfilment and unlocking potential, also known as spiritual needs – when fulfilled, results in a sense of integrity, elevating one's existence to a higher plane.

Figure 2: Understanding the Stages of the Hierarchy of Human Needs
 Source: Abu Bakar et al., 2022

STAGES OF HUMAN NEEDS	HON	#	HUMAN NEEDS INDICATORS
Essential Requirements <i>In the absence of them, the living system of mankind is obstructed.</i>	Physiological Needs	HN01	Nutritional and Wholesome Food
		HN02	Access to Medical Care
		HN03	Clean Water (for Drinking and Washing)
		HN04	Clean and Fresh Air
		HN05	Functional and Well-Maintained Lavatory
	Safety & Security Needs	HN06	Sufficient Electrical Supply
		HN07	Affordable Housing and Conveniences
		HN08	Financial Security and Stability
		HN09	Personal Safety and Security
		HN10	Health Insurance
Supplementary Requisites <i>In the absence of them, the living system is not obstructed but lives would be challenging</i>	Belonging & Love Needs	HN11	Work-Life Balance
		HN12	Social Acceptance and Cultural Inclusivity
		HN13	Reliable Communication Network
		HN14	Access to Internet with Reliable Connectivity
Aspired Prospects <i>In the absence of them, the living system is not obstructed and lives would not be too challenging</i>	Esteem Needs	HN15	Primary Education Attainment
		HN16	Secondary Education Attainment
	Cognitive Needs	HN17	Tertiary Education Attainment
		HN18	Employment Prospects and Opportunities
	Aesthetic Needs	HN19	Well-Kept Areas for Recreational Activities
		HN20	Rich Biodiversity of Flora and Fauna
	Self-Actualization	HN21	Rights to Participate in Leadership Selection
		HN22	Freedom of Expression
		HN23	Opportunities Free from Corruption
		HN24	Artistic and Cultural Freedom

Figure 3: Human Needs Indicators
 Source: Abu Bakar et al., 2022

TRANSCENDENCE AND EXTERNAL CONDITION

HON offers an unbiased examination of the factors influencing SWB. Individuals can build their SWB by attending to their fundamental needs. However, it should be noted that the pursuit of HON and SWB is highly individualised with no predetermined approach. This is because one's understanding of human needs may vary depending on their circumstances. While certain individuals discover SWB via creative endeavours, others do so through their connections with surrounding individuals or through their charitable initiatives.

According to Maslow (1970), only 1% of the global population has attained transcendence, which is the highest level of HON. Transcendent individuals find inner peace and satisfaction by helping others and improving society. Some people require the will and ability to form a connection with something greater than themselves to rise beyond their unique identity and challenges (Koltko-rivera, 2015). This selfless state requires elements like knowing one's value and making a positive impact to the world. For some, transcendence is the pursuit of having a sense of being one with everything that exists, including the cosmos, the natural world, or a higher force.

Furthermore, EC describes the fulfilment of transcendence needs, which are characterised by a change in emphasis from one's egocentric pursuits towards a greater responsibility to the natural world. Individuals who score higher on EC are more likely to immerse themselves into encouraging surroundings that will help them succeed in their endeavours. With the support of their physical and social surroundings, these individuals are more inclined to see the big picture, be optimistic about issues outside themselves, and work for a more equitable and sustainable future (Abu Bakar et al., 2020a; Abu Bakar et al., 2020b). They often have a heightened sense of purpose in their everyday activities. Additionally, EC aligns with the concept of transcendence whereby people commit beyond their own interests and wants to effectuate beneficial transformation in the world.

RESEARCH QUESTIONS

This research aims to answer the following questions: (1) Will EC increase if human needs are conveniently met? (2) Can unmet human needs lead to an increase in EC, and if so, which needs do not significantly impact EC?

METHOD

A sample of 4,315 respondents from Malaysia were invited to partake in the survey. An 11-point Likert scale was used to elicit their responses regarding EC. A data screening was conducted followed by the Kolmogorov-Smirnova test. Since the data was not normally distributed, the Mann-Whitney U test was administered to analyse the mean difference of EC between the ease and difficulty of providing 24 human needs.

FINDINGS

The tables below present (i) the mean distribution of EB items, (ii) the Mann-Whitney U test results, and (iii) an interpretation of the statistical results.

Table 2: Mean Distribution of EC Items

Indicators	Code	\bar{x}	$\bar{x}EC$
My family cherish pro-environmental behaviours.	EC1	7.77	
The ethical climate of my workplace is serious about environmental protection.	EC2	7.71	
Conducive outdoors is within my reach.	EC3	7.72	
My neighbourhood is favourable towards environmental behaviours.	EC4	7.76	
Environmental-friendly products are available and accessible.	EC5	7.49	7.66
The prices for environmentally friendly products are affordable.	EC6	7.41	
The waste handling management operates favourably in the neighbourhood.	EC7	7.63	
The civic amenities function favourably in maintaining a conducive environment.	EC8	7.73	
Traffic infrastructure is efficient to encourage the use of public transport.	EC9	7.68	
Legal enforcement is strict on environmental destruction.	EC10	7.72	

Note. Mean Distribution of EB Items (\bar{x}) and Overall Mean of EB ($\bar{x}EC$)

Table 3: Mann-Whitney U Test Results

HUMAN NEEDS (EC)	Difficult			Convenient			U	z	p
	N	$\bar{x}R$	\tilde{x}	N	$\bar{x}R$	\tilde{x}			
Nutritious Food	336	2023.22	7.6	3979	2168.62	7.8	626209.5	-1.928	.054
Medical Treatment	423	2159.92	7.9	3892	2157.79	7.8	822345.5	-.033	.973
Clean Water (For Wash & Drink)	392	2364.97	8.1	3923	2137.32	7.8	687774.5	-3.451	.001
Clean Air	1330	1987.93	7.5	2985	2233.78	7.9	1758827.0	-5.988	.000
Well-Function Toilet	805	2041.60	7.7	3510	2189.70	7.8	1319069.0	-2.940	.003
Adequate Electricity	428	2157.45	7.9	3887	2158.06	7.8	831581.0	-.010	.992
Affordable Houses and Amenities	1114	2262.20	7.9	3201	2121.74	7.7	1666873.5	-3.242	.001
Financial Stability	1861	2105.27	7.7	2454	2197.99	7.9	2185319.0	-2.422	.015
Personal Security	1578	2059.09	7.6	2737	2215.02	7.9	2003417.5	-3.961	.000
Health Assurance	1325	1979.99	7.6	2990	2236.88	7.9	1745012.5	-6.250	.000
Balance in Work and Personal Time	1582	2029.86	7.6	2733	2232.17	7.9	1959088.0	-5.142	.000
Social Tolerance	1310	1998.76	7.5	3005	2227.42	7.9	1759672.0	-5.545	.000
Communication Line	328	2241.13	8.0	3987	2151.16	7.8	626603.0	-1.257	.209
Internet Line	923	2272.86	8.0	3392	2126.75	7.7	1459393.5	-3.160	.002
Primary School Accomplishment	313	2448.11	8.3	4002	2135.31	7.8	535509.0	-4.279	.000
Secondary School Accomplishment	390	2267.12	8.0	3925	2147.16	7.8	722817.0	-1.814	.070
Tertiary School Accomplishment	836	2137.77	7.7	3479	2162.86	7.8	1437313.5	-.523	.601
Job Opportunity	1678	2124.35	7.7	2637	2179.41	7.8	2155985.0	-1.416	.157
Well-Maintained Recreational Park	1430	1954.05	7.5	2885	2259.09	7.9	1771121.5	-7.573	.000
Diversity of Flora and Fauna	1453	1944.42	7.5	2862	2266.43	7.9	1768917.0	-8.026	.000
Rights to Choose Leaders	1823	2002.98	7.5	2492	2271.41	8.0	1988849.5	-6.993	.000
Freedom of Speech	1957	2041.87	7.6	2358	2254.38	7.9	2080030.5	-5.580	.000
Corruption Free Opportunities	2247	2118.46	7.7	2068	2200.97	7.9	2234545.0	-2.174	.030
Freedom to Express Arts & Diversity	1531	1961.12	7.5	2784	2266.27	7.9	1829730.5	-7.700	.000

Note. Mean Rank of $\bar{x}\Sigma EC$ across Difficult and Convenient; **Bold** shows higher mean rank.

Table 3 shows that EC had a significantly greater mean when 13 human needs were fulfilled with ease and 4 human needs were fulfilled with difficulty.

Table 4: Mann-Whitney U Test Results Interpretation

	HUMAN NEEDS (EC)	INTERPRETATION
Physiological Needs	Nutritional and Wholesome Food	Those who claimed convenient had greater mean rank (N = 3979, $\bar{x}R = 2168.62$) than those who claimed difficult (N = 336, $\bar{x}R = 2023.22$), but the difference was not statistically significant (U = 626209.5, p = .054).
	Access to Medical Care	Those who claimed difficult had greater mean rank (N = 423, $\bar{x}R = 2159.92$) than those who claimed convenient (N = 3892, $\bar{x}R = 2157.79$), but the difference was not statistically significant (U = 822345.5, p = .973).
	Clean Water (for Drinking and Washing)	Those who claimed difficult had greater mean rank (N = 392, $\bar{x}R = 2364.97$) than those who claimed convenient (N = 3923, $\bar{x}R = 2137.32$). A statistically significant difference was found (U = 687774.5, p = .000).
	Clean and Fresh Air	Those who claimed convenient had greater mean rank (N = 1330, $\bar{x}R = 2233.78$) than those who claimed difficult (N = 1330, $\bar{x}R = 1987.93$). A statistically significant difference was found (U = 1758827.0, p = .000).
	Functional and Well-Maintained Lavatory	Those who claimed convenient had greater mean rank (N = 3510, $\bar{x}R = 2189.70$) than those who claimed difficult (N = 805, $\bar{x}R = 2041.60$). A statistically significant difference was found (U = 1319069.0, p = .003).
Safety and Security Needs	Sufficient Electrical Supply	Those who claimed convenient had greater mean rank (N = 3887, $\bar{x}R = 2158.06$) than those who claimed difficult (N = 428, $\bar{x}R = 2157.45$), but the difference was not statistically significant (U = 831581.0, p = .992).
	Affordable Housing and Conveniences	Those who claimed difficult had greater mean rank (N = 1114, $\bar{x}R = 2262.20$) than those who claimed convenient (N = 3201, $\bar{x}R = 2121.74$). A statistically significant difference was found (U = 1666873.5, p = .001).
	Financial Security and Stability	Those who claimed convenient had greater mean rank (N = 2454, $\bar{x}R = 2197.99$) than those who claimed difficult (N = 1861, $\bar{x}R = 2105.27$). A statistically significant difference was found (U = 2185319.0, p = .015).
	Personal Safety and Security	Those who claimed convenient had greater mean rank (N = 2737, $\bar{x}R = 2215.02$) than those who claimed difficult (N = 1578, $\bar{x}R = 2059.09$). A statistically significant difference was found (U = 2003417.5, p = .000).
	Health Insurance	Those who claimed convenient had greater mean rank (N = 2990, $\bar{x}R = 2236.88$) than those who claimed difficult (N = 1325, $\bar{x}R = 1979.99$). A statistically significant difference was found (U = 1745012.5, p = .000).
Belonging and Love Needs	Work-Family Balance	Those who claimed convenient had greater mean rank (N = 2733, $\bar{x}R = 2232.17$) than those who claimed difficult (N = 1582, $\bar{x}R = 2029.86$). A statistically significant difference was found (U = 1959088.0, p = .000).
	Social Acceptance and Cultural Inclusivity	Those who claimed convenient had greater mean rank (N = 3005, $\bar{x}R = 2227.42$) than those who claimed difficult (N = 1310, $\bar{x}R = 1998.76$). A statistically significant difference was found (U = 1759672.0, p = .000).
	Reliable Communication Network	Those who claimed difficult had greater mean rank (N = 328, $\bar{x}R = 2241.13$) than those who claimed convenient (N = 3987, $\bar{x}R = 2151.16$), but the difference was not statistically significant (U = 626603.0, p = .209).
	Access to Internet with Reliable Connectivity	Those who claimed difficult had greater mean rank (N = 923, $\bar{x}R = 2272.86$) than those who claimed convenient (N = 3392, $\bar{x}R = 2126.75$). A statistically significant difference was found (U = 1459393.5, p = .002).
Esteem Needs	Primary Education Attainment	Those who claimed difficult had greater mean rank (N = 313, $\bar{x}R = 2448.11$) than those who claimed convenient (N = 4002, $\bar{x}R = 2135.31$). A statistically significant difference was found (U = 535509.0, p = .000).
	Secondary Education Attainment	Those who claimed difficult had greater mean rank (N = 390, $\bar{x}R = 2267.12$) than those who claimed convenient (N = 3925, $\bar{x}R = 2147.16$), but the difference was not statistically significant (U = 722817.0, p = .070).
Cognitive Needs	Tertiary Education Attainment	Those who claimed convenient had greater mean rank (N = 3479, $\bar{x}R = 2162.86$) than those who claimed difficult (N = 836, $\bar{x}R = 2137.77$), but the difference was not statistically significant (U = 1437313.5, p = .601).
	Employment Prospects and Opportunities	Those who claimed convenient had greater mean rank (N = 2637, $\bar{x}R = 2179.41$) than those who claimed difficult (N = 1678, $\bar{x}R = 2124.35$), but the difference was not statistically significant (U = 2155985.0, p = .157).

Note. Result Interpretation of Mann-Whitney U Test; Bold & Highlighted shows statistically significant output.

Table 4: Mann-Whitney U Test Results Interpretation (continued)

	HUMAN NEEDS (EC)	INTERPRETATION
Aesthetic Needs	Well-Kept Areas for Recreational Activities	Those who claimed convenient had greater mean rank (N = 2885, $\bar{x}R = 2259.09$) than those who claimed difficult (N = 1430, $\bar{x}R = 1954.05$). A statistically significant difference was found (U = 1771121.5, p = .000).
	Rich Biodiversity of Flora and Fauna	Those who claimed convenient had greater mean rank (N = 2862, $\bar{x}R = 2266.43$) than those who claimed difficult (N = 1453, $\bar{x}R = 1944.42$). A statistically significant difference was found (U = 1768917.0, p = .000).
Self-Actualisation Needs	Rights to Participate in Leadership Selection	Those who claimed convenient had greater mean rank (N = 2492, $\bar{x}R = 2271.41$) than those who claimed difficult (N = 1823, $\bar{x}R = 2002.98$). A statistically significant difference was found (U = 1988849.5, p = .000).
	Freedom of Expression	Those who claimed convenient had greater mean rank (N = 2358, $\bar{x}R = 2254.38$) than those who claimed difficult (N = 1957, $\bar{x}R = 2041.87$). A statistically significant difference was found (U = 2080030.5, p = .000).
	Opportunities Free from Corruption	Those who claimed convenient had greater mean rank (N = 2068, $\bar{x}R = 2200.97$) than those who claimed difficult (N = 2247, $\bar{x}R = 2118.46$). A statistically significant difference was found (U = 2234545.0, p = .030).
	Artistic and Cultural Freedom	Those who claimed convenient had greater mean rank (N = 2784, $\bar{x}R = 2266.27$) than those who claimed difficult (N = 1531, $\bar{x}R = 1961.12$). A statistically significant difference was found (U = 1829730.5, p = .000).

Note. Result Interpretation of Mann-Whitney U Test; Bold & Highlighted shows statistically significant output.

Table 5: Summary of Findings

Statistically Significant Difference Established (p < .000)		Difference Did Not Reach Significance
Condition 1:	Condition 2:	Condition 3:
EC Increase with Difficulty	EC Increase with Convenient	Neither Change EC
The difficulty to meet human needs increases EC, or EC is greater with difficulty to meet human needs.	The convenience to meet human needs increases EC, or EC is greater with the convenience to meet human needs.	Neither convenience nor difficulty to meet human needs increases EC, or EC does not change with the convenience nor difficulty to meet human needs.

	HON	No. Human Needs	Findings/Condition
DEFICIENCY NEEDS	Biological & Physiological Needs	1 Nutritional and Wholesome Food	Condition 3
		2 Access to Medical Care	Condition 3
		3 Clean Water (for Drinking and Washing)	Condition 1
		4 Clean and Fresh Air	Condition 2
		5 Functional and Well-Maintained Lavatory	Condition 2
	Safety & Security Needs	6 Sufficient Electrical Supply	Condition 3
		7 Affordable Housing and Conveniences	Condition 1
		8 Financial Security and Stability	Condition 2
		9 Personal Safety and Security	Condition 2
		10 Health Insurance	Condition 2
	Belonging and Love Needs	11 Work-Life Balance	Condition 2
		12 Social Acceptance and Cultural Inclusivity	Condition 2
		13 Reliable Communication Network	Condition 3
		14 Access to Internet with Reliable Connectivity	Condition 1
	Esteem Needs	15 Primary Education Attainment	Condition 1
		16 Secondary Education Attainment	Condition 3
GROWTH NEEDS	Cognitive Needs	17 Tertiary Education Attainment	Condition 3
		18 Employment Prospects and Opportunities	Condition 3
	Aesthetic Needs	19 Well-Kept Areas for Recreational Activities	Condition 2
		20 Rich Biodiversity of Flora and Fauna	Condition 2
	Self-Actualisation	21 Rights to Participate in Leadership Selection	Condition 2
		22 Freedom of Expression	Condition 2
		23 Opportunities Free from Corruption	Condition 2
		24 Artistic and Cultural Freedom	Condition 2

The mean distribution of EC items, ranging from 7.41 to 7.77, suggested that Malaysian respondents had a highly favourable sentiment towards EC (see Table 2). The respondents were asked to determine whether meeting human needs was convenient or difficult. Between 50% to 75% of them said that meeting all 24 demands was convenient (see Table 3).

The Mann-Whitney-U test examined the average fluctuation of means for all EC items between two points (convenience and difficulties). The results indicated that EC increased when almost half of the human needs were convenient to satisfy. These human needs are clean and fresh air, functional and well-maintained lavatory, financial security and stability, personal safety and security, health insurance, work-life balance, social acceptance and cultural inclusivity, well-kept areas for recreational activities, rich biodiversity of flora and fauna, rights to participate in leadership selection, freedom of expression, opportunities free from corruption, and artistic and cultural freedom. The ease with which these human needs can be met is likely to increase the external conditions influencing environmental behaviour.

The results also revealed that EC increased when four human needs were difficult to satisfy: clean water, affordable housing and conveniences, access to internet with reliable connectivity, and primary education attainment. Furthermore, EC was unaffected by the convenience or difficulty to fulfil certain human requirements, namely (i) nutritional and wholesome food, (ii) access to medical care, (iii) sufficient electrical supply, (iv) reliable communication network, (v) secondary education and (vi) tertiary education accomplishment, and (vii) employment prospects and opportunities.

DISCUSSION AND CONCLUSION

This study found that the convenience or difficulty of addressing human needs might influence the External Conditions to Environmental Behaviour. Among the crucial factors include clean air, functioning lavatories, financial stability, safety, health insurance, work-life balance, social acceptance, recreational areas, biodiversity, government involvement, freedom of speech, corruption-free opportunities, and cultural freedom. These factors are favourable when they are satisfied, demonstrating that a supportive atmosphere promotes sustainability. Nevertheless, factors like nutritional food, medical care, electricity supply, communication networks, and educational achievements, including employment opportunities, appear to have less direct impact. This suggests that while these factors are essential for overall well-being, they may not directly increase or decrease EC. In conclusion, External Conditions to Environmental Behaviour may vary across diverse human needs, highlighting the intricate interplay between the external catalysts to environmental behaviour and the availability of essential necessities.

Furthermore, the external conditions that encourage eco actions can be positively impacted by the difficulty of satisfying specific human wants. The following capture some of these reasons:

- **Clean Water (for Drinking and Washing):**
Water shortages and pollution are environmental challenges that might become more apparent when people face difficulties in obtaining clean water. People and communities who are dealing with water scarcity are more likely to save water and support sustainable water management programs, that aim to make water available to everyone while also protecting the environment.
- **Affordable Housing and Conveniences:**
Having Affordable housing and basic utilities might be a prominent challenge, but when faced with such difficulties, communities can become more resilient and inventive. Sustainable living techniques, such as energy efficiency and waste reduction, may help residents in underprivileged regions make the most of limited resources by reducing housing-related expenditures and improving living conditions.
- **Access to the Internet with Reliable Connectivity:**
Local involvement and grassroots initiatives in environmental education and action may be bolstered by limited internet access. Local networks and face-to-face communication can help communities overcome digital gaps, thus strengthening links and empowering collective action for environmental protection and advocacy.
- **Primary Education Attainment:**
Local efforts and community-led educational programs that focus on sustainability and environmental awareness might emerge when primary education targets are unmet. Problems in underprivileged areas schools could inspire new ways of teaching about the environment and provide local kids with the necessary tools to become environmental champions.

Collectively, the challenge of addressing these basic necessities highlights preexisting socioeconomic gaps while simultaneously inspiring environmentally conscious actions and solutions spearheaded by the community. Resilience, sustainable development, and environmental justice and fairness may be advanced on local and global levels by tackling these issues. While these obstacles are substantial, they also provide chances for groundbreaking environmental action and beneficial ecological effects.

REFERENCES

- Abu Bakar, A., Mohamed Osman, M., Bachok, S., Ibrahim, M., & Abdullah, A. (2017a). Sustainable Well-Being: An Empirical Exploration on Human Interdependence with the Environment. *Advanced Science Letters*, 23(7), 6357-6361(5). <https://doi.org/https://doi.org/10.1166/asl.2017.9269>
- Abu Bakar, A., Mohamed Osman, M., Bachok, S., & Ibrahim, M. (2017b). Sustainable Well-Being Subjective Indicators: Human Interdependence with Other Humans and with the Environment. In B. McLellan (Ed.), *Sustainable Future for Human Security* (pp. 301–318). Springer, Singapore. https://doi.org/https://doi.org/10.1007/978-981-10-5433-4_21
- Abu Bakar, A., Mohamed Osman, M., Bachok, S., Hitam, M., & Abdullah, A. (2018). Human Interdependency for Sustainable Well-Being: Structural Invariance across Settlement Areas. *PLANNING MALAYSIA Journal of the Malaysia Institute of Planners*, 16(1), 281–293. <https://doi.org/http://dx.doi.org/10.21837/pmjournal.v16.i5.431>
- Abu Bakar, A., Osman, M. M., & Hitam, M. (2020a). Personality and Lifestyle Interprets External Condition to Environmental Behaviours. *PLANNING MALAYSIA Journal of the Malaysia Institute of Planners*, 18(1), 56–65.
- Abu Bakar, A., Osman, M. M., Hitam, M. (2020b). Attitudes and Pro-Environmental Behaviours: Determining Factor of Personality and Lifestyle. *PLANNING MALAYSIA Journal of the Malaysia Institute of Planners*, 18(1), 1–10. <https://doi.org/10.21837/pm.v18i1.704>
- Abu Bakar, A. (2022). Hierarchy of Needs and Subjective Wellbeing. *Planning Malaysia*, 20(4), 377–390. <https://doi.org/10.21837/pm.v20i24.1213>
- Dirzyte, A., & Valatka, V. (2023). Creative and Happy Individuals Concerned about Climate Change: Evidence Based on the 10th Round of the European Social Survey in 22 Countries. *Sustainability*, 15(22), 15790. <https://doi.org/10.3390/su152215790>
- Garcia, D., Anckarsäter, H., Kjell, O. N. E., Archer, T., Rosenberg, P., Cloninger, C. R., & Sikström, S. (2015). Agentic, communal, and spiritual traits are related to the semantic representation of written narratives of positive and negative life events. *Psychology of Well-Being*, 5(1), 8. <https://doi.org/10.1186/s13612-015-0035-x>
- Kjell, O. N. E. (2011). Sustainable well-being: A potential synergy between sustainability and well-being research. *Review of General Psychology*, 15(3), 255–266. <https://doi.org/10.1037/a0024603>
- Koltko-rivera, M. E. (2015). *Rediscovering the later version of Maslow's hierarchy of needs : Self-transcendence and opportunities for theory , research , and unification*. *Rediscovering the Later Version of Maslow's Hierarchy of Needs : and Unification*. August. <https://doi.org/10.1037/1089-2680.10.4.302>
- Maslow, A. H. (1943). *A theory of human motivation*. Psychological Review. <http://psychclassics.yorku.ca/Maslow/motivation.htm>
- Maslow, A. H. (1962). *Toward a Psychology of Being*. D. Van Nostrand Company.
- Maslow, A. H. (1970). *Motivation and Personality* (Second Edition). Harper & Row.
- Maslow, A. H. (1987). *Motivation and Personality* (Third Edition). New York: Harper and Row.

Received: 19th March 2024. Accepted: 17th October 2024