



# MADHUBANI, FORESTS OF HONEY: FROM PAINTING NATURE TO PERCEIVING ENVIRONMENT

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## ABSTRACT

In the present study, an attempt has been made to measure environmental consciousness among the people of *Madhubani* district in Bihar, India, famous for its unique art form, the *Madhubani* paintings which depict nature and the living world. The analysis of different parameters viz. affective dimension, cognitive dimension, dispositional dimension and active dimension shows that the mean of total environmental consciousness score of all occupational groups taken together is 0.62 on a scale of 0 to 1. This score exhibits a diffused level of environmental consciousness. Groups that are engaged in professions that require knowledge and information have shown a much better response in terms of environmental consciousness e.g., government/ private officials, teachers, business/other works and students in comparison to those who are involved in nature-based activities like paintings. A community that has identified nature as an integral part of their art and culture has the potential to improve their pro-environmental behaviour. Initiation of environmental projects and appropriate sensitization can surely bring in a change in their perspective towards nature and make the nature painters of *Madhubani* leaders for tomorrow in environmental awareness.

**KEYWORDS:** *Madhubani*, Nature painting, Occupation, Environmental Consciousness, Pro-environmental behavior.

## 1. INTRODUCTION:

The world-famous art form known as *Madhubani* painting belongs to the *Madhubani* (meaning forest of honey) district of Bihar. *Madhubani* paintings depict nature in an intriguing way. While these paintings portray the deities and scenes from various ancient epics, they also present natural objects like the sun, moon and religious plants such as *Tulsi*, Banyan, *Pipal*, etc. Even while depicting scenes from the royal court and social events, the gaps in the paintings are generally filled by flowers, animals, birds, and even geometric designs that reflect an association with nature. *Madhubani* artists did colorful artworks on tree trunks in order to resist deforestation in 2012. As a result, not even a single painted tree was cut on highway number 52 of the *Madhubani* district and it became a well-known center for tourist attraction. As per a report by the BBC, the *Madhubani* artists have presented before the world how an art form can be used to express a strong social message effectively (Tewary 2012).

India's recent growth story has been clouded by severely degrading the pristine physical environment of rural areas and the increasing scarcity of the natural resources that are crucial for supporting further growth and development. The economically backward region of *Madhubani*, like most other deprived areas of the country, also happens to be environmentally vulnerable. There are problems of eroded soils, polluted water bodies, and degraded forests. On the other hand, hasty growth has also unleashed greater public awareness and an unprecedented demand for the comprehensive management of natural resources comprising air, water, forests, and biodiversity. Environmental management and sustainability are swiftly evolving as the next most important developmental policy challenge for the country. Pollution, natural resource management, ecosystem functionalities and biodiversity conservation have become equally important as poverty alleviation in rural areas.

A study of the local communities of *Madhubani* can raise a curiosity in the view of their long association with nature which may have a direct bearing on their life-style and behavior. The people of this region, including the painter community and those engaged in other occupations, may have certain perceptions about environmental and ecological practices. What is depicted in their traditional art form may be deep-rooted in their age-old thought process (Rozario 1997). This may be reflected in their awareness and sensitivity towards ecological and environmental concerns. However, there are many other occupations followed by the people of this region. Therefore, a study of the district *Madhubani* must focus on the painters as well as the others. The poorer communities are often engaged in manual work while pursuing their artistic commitment. A community widely unequal in terms of wealth, education and living standards may have varying perceptions and consciousness about these ecological and environmental issues. It is an interesting exercise to trace the journey of these people from depicting nature in color to perceiving the significance and challenges of the environment.

### 1.1 Environmental Consciousness:

Environmental Consciousness is an extensive and multifaceted psychological construct that reflects an individual's awareness and perception of the environment. An ecologically sensitive individual is one who engages in an extensive

range of pro-environmental behaviors based on certain values and attitudes (Axelrod and Lehman 1993). Thus, environmental consciousness corresponds to what can be considered as the attitudinal aspect of pro-environmental behavior (Sánchez and Lafuente 2010). Environmental consciousness functions on the key endogenous factors that influence environmental behavior. However, certain studies have shown that pro-environmental behavior may also be influenced by other non-attitudinal exogenous or situational factors. Pro-environmental practices enhance an individual's level of satisfaction and their close association with the environment. Awareness along with the willingness to perform or create an impact in society towards pro-environmental action can bring in an overall societal change. A study involving measurement of environmental consciousness is based upon four dimensions viz. affective, cognitive, dispositional and active.

#### 1.1.1 Affective Dimension:

The affective dimension shows the attitude, feeling and sentiment of an individual towards an object. There are various ways to express these sentiments and feelings in terms of good or bad and positive or negative. This dimension of environmental consciousness includes concerns, hopes, moods, feelings and reactions relating to environmental problems (Maloney and Ward 1973). It also reflects an individual's outlook towards the surroundings. The most established approach of research on environmental concern centers around the relationship between human beings and nature, based upon certain values and beliefs (K. D. V. Liere and Dunlap 1980; Dunlap and Liere 2008). Social behaviorists incorporate the affective dimension, mainly concentrating on the primitive principles that are believed to have an impact on a more exact and broader set of outlooks towards environmental concerns and a greater impact on pro-environmental behavior (Dunlap et al. 2000). In line with these learnings, individuals can presume that a pro-environmental world view is significant as a describing element of environmental consciousness. Several studies have shown that environmental concern could be based upon direct personal experience of the environment, without the need to share symbolic representations of the global problems (Gooch 1995).

#### 1.1.2 Cognitive Dimension:

The cognitive dimension measures the individual's level of information and specific knowledge about environmental problems. This dimension helps in shaping one's behaviour pattern by developing personal norms and internalizing values, beliefs and practices that are rooted in environmental consciousness. Precise information or knowledge is important in shaping personal attitudes and values which in turn can transform these attitudes and beliefs into practices (Matthews 2002). The cognitive dimension incorporates information, knowledge, aptitude and policy-making capabilities of an individual. It shows the level of understanding of various issues and reflects the way an individual's brain function. It also reflects the decision-making power of an individual in terms of choices and procedures that are made which have a real impact on the environment. Although knowledge and information promote high environmental values, it cannot guarantee expertise in the field of environment (Makower 2009).

### 1.1.3 Dispositional Dimension:

The connection between the affective dimension and the active dimension can be viewed as a chain of intermediate attitudinal patterns, namely, dispositional dimension. One of the most widely acknowledged theories in this regard highlights the role of personal norms as the highest attitudinal variables that intervene between principles, beliefs and behaviors. Individual moral norms are regarded to be the most central attitudinal basis for inclinations towards certain pro-environmental behaviors (Geller 1995). The sense of individual responsibility and spirit of self-efficacy gives a boost to this dimension. The moral aspect of pro-environmental behavior can be made functional by the realization of personal onus an individual has towards his behavior (Schwartz 1977). This individual personal norm is understood as the degree to which a person assumes duty for environmental anomalies and considers it to be vital to take action independent of what others do. This aspect includes personal attitudes towards individual action from the view of the spirit of self-effectiveness and the perception of individual duty. Pro-environmental attitudes are also reflected in the readiness to bear the costs of different environmental policies.

### 1.1.4 Active Dimension:

Empirical evidence shows the presence of different pro-environmental behaviors, which are leveraged by combining different types of behaviors (Stern 2000). It may be an involvement in environmental activism that embraces collective behavior such as, being a member of a particular environmental organization, participate in the environmental demonstration, venture as environmental volunteers and guides, etc. Individual behaviors may also reflect low-cost behaviors such as reduce-reuse-recycle or refusing high-cost consumerism, minimizing automobile use, etc.

Examining environmental consciousness, therefore, is to club together with the act of endorsement of pro-environmental values and the awareness about environmental conditions (affective dimension) with the level of information or specific knowledge (cognitive dimension), individual response towards particular environmental action (dispositional dimension) and engagement or involvement in pro-environmental behaviors (active dimension). The connection between these different aspects is bidirectional (Figure 1). One's pro-environmental behavior can be strengthened by general beliefs, certain attitudinal instincts and environmental behavior which all may be enriched by information or knowledge.

towards pro-environmental behavior, beliefs, attitude, level of information, knowledge and their ability to connect with nature.

## 2. METHODOLOGY:

### 2.1 Study area:

*Madhubani* district is situated 60 km south of Patna, the state capital of Bihar (Figure 2). It is spread over an area of 3,501 km<sup>2</sup> with a population size of 44,87,379. Among the 8,96,643 households of *Madhubani* district, the total size of the working population is 16,36,938 (Directorate of Census Operations 2011).

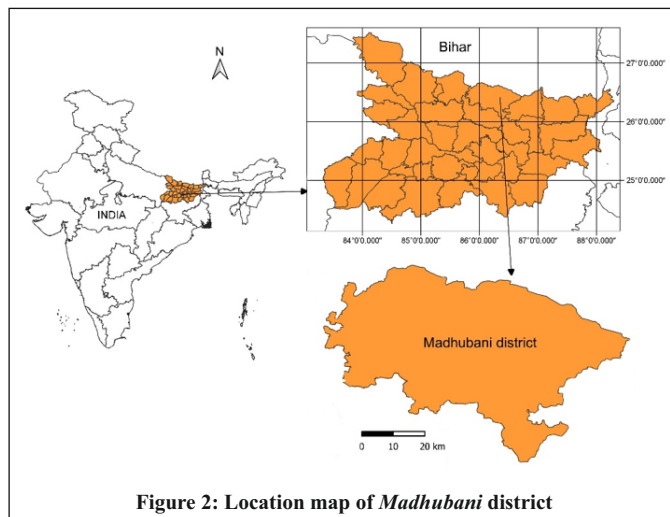


Figure 2: Location map of *Madhubani* district

The district consists of a vast low lying plain intersected by numerous streams and marshes but traversed also in parts by upland ridges. The soil of the district is highly calcareous with a mixture of clay and sand in varying proportions. This contains a tiny proportion of sand and since it can retain moisture, it is suited for paddy cultivation. There are three well-marked seasons, viz. a pleasant cold season, a dry summer season and the rainy monsoon season. *Madhubani* district gets more rain than its adjoining districts. The average annual rainfall in the district varies between 900mm and 1300 mm. The land in the district is mainly plain and produces one crop in a year. *Madhubani*, like other districts of North Bihar, is dependent on the local rainfall for its crops.

Although the people of *Madhubani* are engaged in various farm and non-farm activities, the major occupation is agriculture and allied activities. Farmers and agricultural laborers constitute the largest proportion of the population. Allied activities include rearing of live stocks, cattle raising, fishing, toddy brewing, etc. Secondary and tertiary activities are not very organized in this economically backward district of Bihar. However, there are a significant number of people employed in services like doctors, engineers, teachers, businessmen, laborers, construction workers, government and private sector officials, etc. A large number of people work as housekeepers in richer households. The poor laborers and workers are also the ones who are engaged in *Madhubani* as a family occupation.

### 2.2 Survey:

The present study is based on a sample of 150 people from different occupations, educational levels, socio-economic classes, age, and gender. The method used was a questionnaire-based stratified random survey. The target group comprised of seven categories, namely, housekeepers, teachers, government/ private officials, students, business/ other works, farmers and agricultural laborers. A stratified random survey was carried out on the respondents who were asked questions on several environmental issues that cover the four dimensions of consciousness, as defined earlier.

To study the affective dimension, questions were asked to check the level of consciousness about global environmental problems related to water, climate, pollution, etc. They were also examined on the general world view, leadership and adopted measures at all levels. Respondents were also asked questions to test their level of knowledge and information about the environment in order to calculate the cognitive dimension. The third set of questions was aimed at capturing the dispositional dimension. Questions were designed in this segment about their attitudes, habits about energy use, waste management and other household activities that reveal the personal attitude of the respondents. Finally, the respondents were surveyed on the active dimension. This includes their pro-environmental behavior, consumption pattern, and behavior on one hand and engagement in collective action programs on the other.

A score was assigned according to the number of pro-environmental answers given by individuals for questions related to each of the four dimensions, as per the following formula:

Score in each dimension = number of pro-environmental answers given in

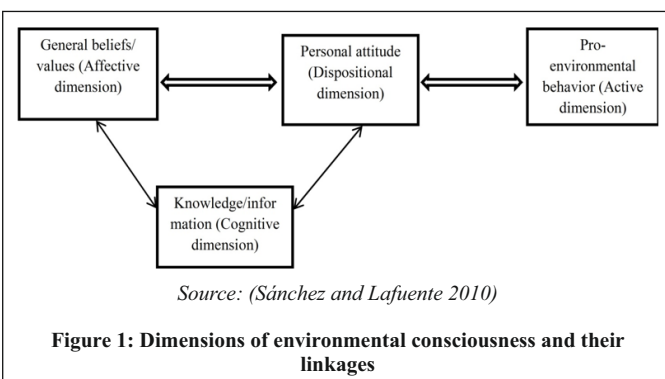


Figure 1: Dimensions of environmental consciousness and their linkages

Environmental Consciousness is to figure out specific psychological parameters or constructs related to an individual's inclination to participate in pro-environmental behavior (Wesley Schultz and Zelezny 1999). The idea of environmentalism is built around values and beliefs in the realm of human-nature relationship. An environmentally conscious human being will show pro-environmental behaviour and active involvement in maintaining the balance between the two. Environmentalism encompasses questions about values or beliefs and generally witnesses the relationship between human beings and the environment. Environmental consciousness deals with the level of endorsement of pro-environmental behavior (Dunlap et al. 2000; K. D. V. Liere and Dunlap 1980; K. D. Van Liere and Dunlap 1981). The moral dimension of pro-environmental behavior has been operationalized by determining the level of personal obligation (Schwartz 1977). It reveals the sense of responsibility that a person possesses, considers it a duty and takes actions in solving environmental problems. This also reflects the degree to which a person assumes responsibility for environmental problems and considers that it is essential to take action independent of what others do.

In the present study, an attempt has been made to measure environmental consciousness among the people of *Madhubani* based on occupational structure. Following the review of many important analytical methods found in the literature, this study has tried to measure a multifaceted and behavior-oriented environmental consciousness score for the chosen sample. Since the study incorporates psychological constructs, it is tough to quantify the degree of environmental consciousness which varies with geography, resource availability, socio-economic conditions, demography and general worldview. However, this study attempts to analyze and rank people's inclination

each dimension/total number of questions asked in each dimension.

The mean score of each dimension was calculated for each of the seven categories of respondents. Finally, a grand mean of all seven categories was calculated for each dimension. The mean value of each dimension was used to rate the level of consciousness. A scale was devised ranging from values 0.1 to 1 to represent different levels of environmental consciousness for each category in different dimensions as well as overall environmental consciousness. Subsequently, they were categorically ranked as mature (0.9-1.0), good (0.8-0.89), average (0.7-0.79), diffused (0.6-0.69), unsatisfactory (0.5-0.59) and worst (0.1-0.49).

### 3. RESULTS AND DISCUSSION:

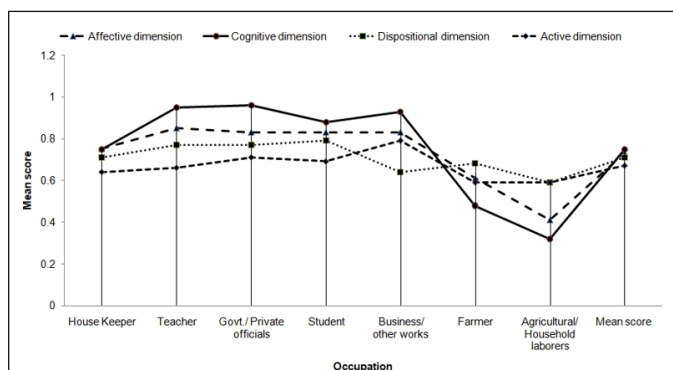
#### 3.1 The four dimensions of consciousness:

Among the occupational population of Madhubani, a scrutiny of the measures of the four dimensions for each of the seven occupational categories reveals certain specific patterns (Table 1).

**Table 1: Score in each dimension for different occupational classes and mean score of each dimension**

Occupation	Scores in			
	Affective dimension	Cognitive dimension	Dispositional dimension	Active dimension
House Keeper	0.75	0.75	0.71	0.64
Teacher	0.85	0.95	0.77	0.66
Govt./Private officials	0.83	0.96	0.77	0.71
Student	0.83	0.88	0.79	0.69
Business/other works	0.83	0.93	0.64	0.79
Farmer	0.61	0.48	0.68	0.59
Agri./household laborers	0.41	0.32	0.59	0.59
Mean score	0.73	0.75	0.71	0.67

The educated sections of the society comprising of officers, teachers, students, and businessmen, score high (>0.83) in the affective dimension. The housekeepers score average (0.75) while the farmers and agricultural laborers show diffused (0.61) and poor (0.41) levels of consciousness respectively. This pushes the overall score to an average of 0.73 (Figure 3).



**Figure 3: Mean values of all dimensions for different occupational classes**

**Note.** Scale for remarks on the mean value: mature (0.9-1.0), good (0.8-0.89), average (0.7-0.79), diffused (0.6-0.69), unsatisfactory (0.5-0.59) and worst (0.1-0.49)

The difference is sharper in the cognitive dimension of consciousness. The knowledge and information levels are mature (> 0.93) for the professional class, followed closely by the students (0.88). It is expected that the farmers and agricultural laborers do not have much access to information. Therefore, they score as low as 0.48 and 0.32 respectively. It is interesting to note that the housekeepers have an average level of awareness (0.75) which may be attributed to their proximity to the relatively more educated people. The mean of the cognitive dimension stands at an average score of 0.75 for all classes taken together.

The dispositional dimension that expresses personal behavior came out to be average for the professional classes (0.71-0.79). People engaged in housekeeping jobs have shown consciousness somewhat at par with others. On the contrary, the businessmen have shown diffused consciousness (0.64) that is comparable to the farmers (0.68). The agricultural laborers are at the bottom (0.59) and the overall mean is average (0.71).

The fourth and last parameter analysed in this segment is the active dimension that shows collective action and involvement in environmental initiatives. No

category of respondents has shown maturity in this matter. While officials (0.71) and businessmen (0.79) are average in this aspect, the others have diffused consciousness (0.64-0.69). The farmers and agricultural laborers are at an unsatisfactory low (0.59). As a result, the overall score on the active dimension is diffused at 0.67.

The scores for the farmers and household laborers are lower than any other group. While it is significantly less for affective and cognitive dimensions, the gap is less in case of dispositional and active dimensions.

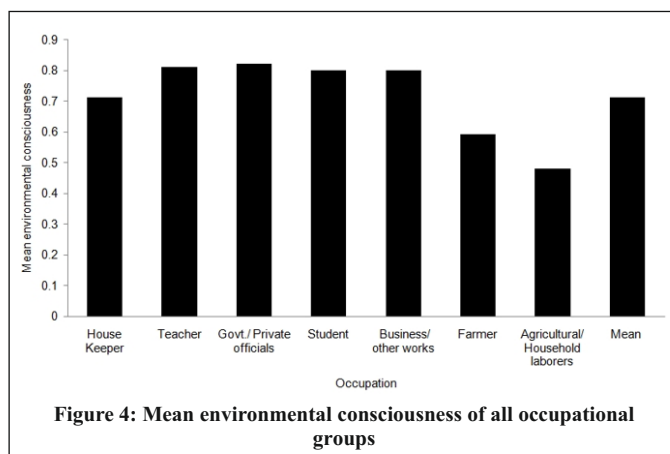
#### 3.2 Mean environmental consciousness of each occupational group:

Combining the scores of all four dimensions, the mean environmental consciousness of each occupational class was calculated as a simple arithmetic mean (Table 2).

**Table 2: Mean environmental consciousness for different occupational classes**

Occupation	Mean environmental consciousness	Remarks
Housekeeper	0.71	Average
Teacher	0.81	Good
Govt./Private Officials	0.82	Good
Student	0.8	Good
Business/other work	0.8	Good
Farmer	0.59	Unsatisfactory
Agri./household laborers	0.48	Worst
Mean environmental consciousness of all groups	0.71	Average

The overall means of the professional classes have come out to be good (0.80-0.82). The housekeepers do better (average at 0.71) than the farmers (0.59) and agricultural laborers (0.48). The grand mean of all classes stands at an average score of 0.71 as it covers the wider range (Figure 4).



**Figure 4: Mean environmental consciousness of all occupational groups**

The better performance of the officials, businessmen, teachers and students may be attributed to their awareness created from different electronic and print media sources. Their exposure to the wider world helps them develop and behave more maturely. These people enjoy higher status and facilities in the society. Therefore, it is also their moral responsibility to spread this consciousness among different sections of the society and also communicate to the government about the grievances of the public regarding mismanagement of the resources and needs of the people to help raise their standard of living. Those involved in business may initiate sustainable practices and thereby spread environmental consciousness to the lower strata of people who are yet to receive education and awareness. The teachers and students must take responsibility at a larger scale to build an environmentally aware nation.

The most important community in rural areas is that of farmers or cultivators and agricultural laborers who constitute the largest chunk of the population in a region. They are also a group of people who are involved with the famous *Madhubani* paintings. They are extremely vulnerable to climate change, low agricultural productivity and ecosystem malfunctioning. Interestingly, this section of people in the current study has ranked very low on the scale of environmental consciousness (0.59). An unsatisfactory overall consciousness makes them even more exposed as none of the schemes launched for them by the centre or the state governments will work for their benefit unless they make a conscious effort. They need to have a progressive mindset to reap the benefits of these social schemes. They need greater opportunities in the fields of education and scientific and sustainable agricultural practices.



The community of household and agricultural laborers revealed the worst environmental consciousness. This deprived section of the society is generally below the poverty line struggling for existence. It is a moral dilemma to expect much from them in terms of environmental consciousness. Vulnerability to environmental pollution, ecological degradation adds to their already existing conditions of poverty, hunger and malnutrition. Serious policy intervention is required in this segment.

### 3.3 Mean value of each dimension:

The current study revolves around a community that has produced one of the finest types of art depicting nature. However, when it comes to environmental consciousness, these people have not shown a very aware and sensitized mindset. A close look at the mean values of the four dimensions for the entire sample reveals an average level of consciousness for affective, cognitive, dispositional and active dimensions (Table 3).

**Table 3: Mean value of scores for the four dimensions constituting environmental consciousness**

Dimension	Mean value of each dimension	Remarks
Affective dimension	0.73	Average
Cognitive dimension	0.75	Average
Dispositional dimension	0.71	Average
Active dimension	0.67	Diffused
Mean	0.72	Average

The cognitive dimension has the highest average score of 0.75 despite the high dispersion across classes. Pro-Environmental behavior has come out to be diffused (0.67). This implies a low level of involvement of the local people in environmental action plans, programs and initiatives. The low level of activeness can be attributed to the lack of concern and enterprise on the part of political representatives who are responsible for the local developmental activities. People in the lowest socio-economic stratum have developed a tendency to compromise with the situation and have learned to live with the poor quality of overall environmental life.

### 3.4 Environmental consciousness of the district population:

The results of the sample study may be used to interpolate the level of environmental consciousness of the entire Madhubani district. It was calculated as a weighted score based on the occupational structure and its population distribution, using the following formula (Table 4).

Mean environmental consciousness of the entire district = total weighted value of environmental consciousness ( $\sum M*N$ ) / total population ( $\sum N$ ) =  $\sum (M*N) / \sum N$ .

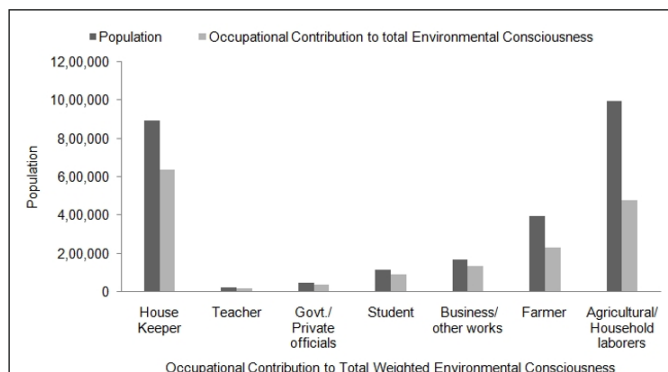
**Table 4: Total weighted value of environmental consciousness of the entire district based on occupation and population**

Occupation	Mean Environmental Consciousness (M)	Occupation-wise Population (N)	Total Weighted Value of E.C. (M*N)
Housekeeper	0.71	8,96,645	6,39,756
Teacher	0.81	24,880	20,104
Govt./Pvt. officials	0.82	49,108	40,211
Students	0.8	1,15,000	91,671
Business/other works	0.8	1,70,405	1,35,803
Farmers	0.59	3,96,957	2,34,205
Agri./Household Laborers	0.48	9,95,586	4,76,886
Total		26,48,581	16,38,636

The mean environmental consciousness of the entire district thus calculated came out to be 0.62. This puts Madhubani in the category of overall diffused environmental consciousness level. The grand mean of weighted environmental consciousness of the entire district is diffused even though five out of the seven occupational classes have shown good levels of consciousness. The reason behind this may be traced to the fact that around 60 percent of the working population is the poor farmers and agricultural/household laborers. Their poverty, malnutrition, illiteracy and overall deprivation lead to a low environmental consciousness as well. However, it is interesting to note that this marginalized segment was not very diverse from other classes in dispositional and active dimensions. This, however, is not due to a good performance on their part but due to a poor performance by all occupational classes.

The sectoral contribution of the different occupational groups to the total environmental consciousness also presents interesting results (Figure 5). The highest contribution (20 percent of the total population) comes from the housekeepers having an average mean consciousness value of 0.71. The other significant

contribution to the total environmental consciousness is from agricultural and household laborers (60 percent of the population) which fall in the category of worst environmental consciousness with the lowest value of 0.48. The environmentally detrimental attitude, behavior, activities and lifestyle of the largest segment of the population should be a major concern for society. Information and knowledge via education will help them improve their attitude and behavior and socio-economic conditions as well.



**Figure 5: Total weight of environmental consciousness based on occupation and population**

Farmers and cultivators representing 24 percent of the working population have contributed an unsatisfactory score of 0.59 to the total measure of environmental consciousness. They represent a section of the society that should be the most aware of natural and environmental issues by virtue of their direct association with nature (Myers 2012). Their dismal performance suggests that due attention should be paid to improve their aptitude and thinking while providing resources to engage in eco-friendly and sustainable agricultural practices. The business class constituting 10.5 percent of the total working population has done well with a mean value of 0.80. However, there is scope for further improvement on this scale by enhancing their knowledge, attitude, belief, behavior and activeness.

Students above the secondary level constitute 2.5 percent of the total population of Madhubani district. The young adult population has a good mean consciousness score of 0.8. To improve this further, they may focus more on dimensions concerned with knowledge, information, behavior and activeness. While improving knowledge would help them to know about the environment better, it will also help them grow as the leaders for tomorrow to save the environment. The officials, though only 3 percent of the population, have the potential to contribute a lot in terms of policy making and implementation. Their already high score of 0.82 shows that they can use their awareness and consciousness to significantly improve the overall state of society.

The teachers have a major role in imparting knowledge and generating awareness in society. They have recorded a high mean value (0.81) as is expected. This very small section of the society (1.52 percent) can use their knowledge to spread education and awareness about environmental problems and the impacts on human health, flora and fauna that can help create healthy and conscious citizens.

## 4. CONCLUSION:

Madhubani, one of the most backward districts of Bihar, has performed poorly in terms of environmental consciousness as well. Their overall perception and awareness of the environment have been found to be unsatisfactory. While this may be largely attributed to abject poverty and deprivation, there have been failures at the levels of policy initiatives. The laborers and the farmers are the most vulnerable groups in terms of climate change and other vagaries of nature, yet are unaware of the consequences. A lot of efforts need to be taken to maintain cleanliness, health initiatives and resource management. The poor psychological state of the people should be taken as an alarm towards creating a healthy society.

A community that identified nature as an integral part of their art, culture and existence will surely respond to proper policy prescriptions (Carolan 2009; Herva 2006). A host of measures may be drawn up, including awareness campaign and education, environment centers, long term strategic planning, subsidies on renewable energy sources, formulation and implementation of stringent laws, cheap alternatives to polythene and plastic, rainwater harvesting, strict enforcement of buyback policy and many more. While the leaders may be the government, corporate, and NGOs, the stakeholders include every citizen. Once the necessary pro-environmental steps are taken to protect the environment, it will ensure a pathway for sustainable development for all (Hocking 2020). Under the targeted policy intervention and sensitization, the nature painters of Madhubani may become leaders for tomorrow in environmental awareness.

## REFERENCES:

- Axelrod, L.J., and D.R. Lehman. 1993. Responding to Environmental Concerns: What Factors Guide Individual Action? *Journal of Environmental Psychology* 13 (2):

- 149–159.
- II. Carolan, M.S. 2009. "This Is Not a Biodiversity Hotspot": The Power of Maps and Other Images in the Environmental Sciences. *Society and Natural Resources* 22 (3): 278–286.
  - III. Directorate of Census Operations. 2011. *Census of India*. Government of India.
  - IV. Dunlap, R.E., and K.D. Van Liere. 2008. The "New Environmental Paradigm." *The Journal of Environmental Education* 40 (1): 19–28.
  - V. Dunlap, R.E., K.D. Van Liere, A.G. Mertig, and R.E. Jones. 2000. Measuring Endorsement of the New Ecological Paradigm: A Revised NEP Scale. *Journal of Social Issues* 56, (3): 425–442.
  - VI. Geller, E.S. 1995. Integrating Behaviorism and Humanism for Environmental Protection. *Journal of Social Issues* 51, (4): 179–195.
  - VII. Gooch, G.D. 1995. Environmental Beliefs and Attitudes in Sweden and the Baltic States. *Environment and Behavior* 27, (4): 513–539.
  - VIII. Herva, V.P. 2006. Marvels of the System. Art, Perception and Engagement with the Environment in Minoan Crete. *Archaeological Dialogues* 13, (2): 221–240.
  - IX. Hocking, C. 2020. Occupation in Context: A Reflection on Environmental Influences on Human Doing. *Journal of Occupational Science* 1–14. <https://doi.org/10.1080/14427591.2019.1708434>.
  - X. Van Liere, K.D., and R.E. Dunlap. 1981. Environmental Concern: Does It Make a Difference How It's Measured? *Environment and Behavior* 13, (6): 651–676.
  - XI. Liere, K.D.V., and R.E. Dunlap. 1980. The Social Bases of Environmental Concern: A Review of Hypotheses, Explanations and Empirical Evidence. *Public Opinion Quarterly* 44, (2): 181–197.
  - XII. Makower, J. 2009. *Strategies for the Green Economy*. McGrawHill.
  - XIII. Maloney, M.P., and M.P. Ward. 1973. Ecology: Let's Hear from the People: An Objective Scale for the Measurement of Ecological Attitudes and Knowledge. *American Psychologist* 28, (7): 583–586.
  - XIV. Matthews, P. 2002. Scientific Knowledge and the Aesthetic Appreciation of Nature. *Journal of Aesthetics and Art Criticism* 60, (1): 37–48.
  - XV. Myers, F. 2012. Emplacement and Displacement: Perceiving the Landscape Through Aboriginal Australian Acrylic Painting. *Ethnos* 78, (4): 435–463.
  - XVI. Rozario, L. do. 1997. Shifting Paradigms: The Transpersonal Dimensions of Ecology and Occupation. *Journal of Occupational Science* 4, (3): 112–118.
  - XVII. Sánchez, M.J., and R. Lafuente. 2010. Defining and Measuring Environmental Consciousness. *Revista Internacional de Sociologia* 68, (3): 731–755.
  - XVIII. Schwartz, S.H. 1977. Normative Influences on Altruism. *Advances in Experimental Social Psychology* 10: 221–279.
  - XIX. Stern, P.C. 2000. Toward a Coherent Theory of Environmentally Significant Behavior. *Journal of Social Issues* 56, (3): 407–424.
  - XX. Tewary, A. 2012. Indian Tribal Art Form Madhubani to Save Trees. <https://www.bbc.com/news/world-asia-india-20422540>.
  - XXI. Wesley Schultz, P., and L. Zelezny. 1999. Values as Predictors of Environmental Attitudes: Evidence for Consistency across 14 Countries. *Journal of Environmental Psychology* 19 (3): 255–265.