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## EDITORIAL

Rapidly changing canvas of globalization, liberalized economy and technological revolution has made the business management more relevant in improving work life balance. For a world of the future both technology and management must go hand in hand, creating a constructive synergy for all of us. We, at I.T.S; are proud to publish the Vol. 20 No: 02, edition of SYNERGY- I.T.S Journal of I.T & Management.

This research journal is endeavoured to promote and disseminate the knowledge to the large numbers of academicians, researchers, students and practitioners across the world in the complex multi-disciplinary management field. Dr. Tanushree Sanwal and Ms. Ankita Sharma Investigates the Relationship between Psychological Contract Breach and Counterproductive Workplace Behaviours. The second paper by Ms. Rahila Sami, Dr. Ajay Sharma tries to draw inferences of Leadership, Organizational skills and Team management learning from Ramayana Bhagavad Geeta and Ramayana. Third paper by Dr. Kavita Tiwari, Dr. Surendra Tiwari tries to explore the concept of Narrow Organization Base to Wide Socioeconomic Perspective based on HRD concepts. Fourth paper by Chetna Rajput, Dr. Rajeev Johari Brings out an investigatory action research towards easing lives and environment care of small pockets of rural india. Fifth paper by Akanksha Sahu, Dr. Indraneel Mandal Presents a paper on Environmental and Sustainable Energy Ecosystem and the last one by Geeta Baliyan presents a case study on Phishing Attack in the cyber space As it is evident that the contributed papers delve into multiple aspects of management in different spheres of business and intellectual pursuits offering new perspectives and strategies to engage the reader and spur innovative thinking.

At Synergy, it has always been our endeavour to provide a framework for the furtherance of research into different aspects of Management and Information Technology. It is hoped that the present issue shall continue the tradition of path breaking research ideas from such diligent minds.

Editor - Synergy

# **An Investigation of the Relationship between Psychological Contract Breach and Counterproductive Workplace Behaviours**

**Dr. Tanushree Sanwal<sup>1</sup>**

**Ms. Ankita Sharma<sup>2</sup>**

## **Abstract**

The psychological contract is one of the most important concepts in organizational context. Simply, psychological contract mean unwritten agreement between employee and employer. Several reasons cause to breach the psychological contract and breaches of the psychological contract generated many negative consequences to organizations such as, reduce organizational commitment, citizenship and increase counterproductive behaviours in the workplace etc. Among above mentioned consequences, counterproductive behaviors in the workplace have significant importance in the organization. Hence, this paper focuses on investigate the relationship between psychological contract breach and counterproductive workplace behaviors. To test the relationship, a standard questionnaire was developed and the questionnaire was pre-tested, modified and used to capture the relevant data. This questionnaire is distributed among 100 management students in Ghaziabad region. Accordingly, the research subjected to 53 percent response rate. Collected data is analyzed using quantitative method. Findings revealed that, psychological contract breach was positively correlated with counterproductive workplace behavior.

**Keywords : Psychological contract, Psychological contract breach, Counter productive workplace behaviors**

## **Introduction**

The psychological contract is mutual obligation between employer and employee towards each other (Rousseau, cited in Chao, Cheung & Wu 2011). The psychological contract refers to “the idiosyncratic set of reciprocal expectations held by employees concerning their obligations (what

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they will do for the employer) and their entitlements (what they expect to receive in return)” (McLean, Kidder & Gallagher 1998). The psychological contract concept was derived from social exchange theory and equity theory (Anderson & Scalk 1998). Simply above theories explain that people are rational and always they try to compare the return with their contribution. Employees try to compare their contribution with their return, if employees perceived that organization cannot meet their expectation, it cause to psychological contract breach (Morrison & Robinson 1997). The social exchange theory explained about the norm of reciprocity. It implies that “employees reciprocate the treatment they receive from their employer by adjusting their perceived obligation and fulfillment to the employer” (Robinson & Rousseau 1994). Morrison & Robison (1997) define psychological contract breach as the cognition that one’s organization has failed to fulfill one or more obligations comprising the psychological contract.

Previous researches suggested that psychological contract breach is likely to have pervasive negative impact on employees work attitudes and behaviors. For example prior research indicates that psychological contract breach is negatively related to job satisfaction, positively related to intent to quit, and negatively related to employees self –reports of their in- role and extra performance (Robinson & Morrison 1995; Lester et al. 2002).

Counterproductive work behavior refers, employee misbehave and violate the organizations disciplines intentionally and try to harm its members well-being (Sackett & Devore 2001). “Counterproductively workplace behavior is behavior that is intended to have a detrimental effect on and their members. It can include overt acts such as aggression and theft or more passive acts, such as purposely failing to follow instructions or doing work incorrectly. The common theme is that these behaviors are harmful to the organization by directly affecting its functioning or property, or by hurting employees in a way that will reduce their effectiveness (Fox, Spector & Miles 2001, p.308).

Robinson & Morrison 2000 and Chao et al. 2011 discussed there is a significant positive relationship between the psychological contract breach and counterproductive workplace behaviors. According to Jensen, Opland & Ryan (2009) transactional and relational contract breach has differential effects on counterproductive workplace behavior.

## **Problem Statement**

The level of psychological contract breach which is experienced by person at work is likely to be

a result of the counterproductive workplace behaviors. Psychological contract breach makes huge impact to the employees as well as on organization. Hence, The problem statement of this research will investigate the Relationship between psychological contract breach and counterproductive workplace behaviors.

## **Literature Review**

### Psychological Contract and Psychological Contract Breach

The concept of psychological contract was first used by Argyris (1960) and has been discussed and developed many times since then. The most general description of a contract is the belief in obligations existing between two or more parties (Krishnan 2011). The psychological contract refers to “the idiosyncratic set of reciprocal expectations held by employees concerning their obligations (what they will do for the employer) and their entitlements (what they expect to receive in return)” (McLeanParks, Kidder & Gallagher 1998). The employer and employee may have different viewpoints regarding the content and the extent to which their mutual obligations have been fulfilled (Krishnan 2011). The employees derive the terms of their psychological contracts in three main ways. First, interaction either through oral or written communications, which may take the form managers, coworkers, recruiters, etc. Second, observation of the behaviors of the coworkers, managers and other members and how they are treated by the organization, provides social cues that inform the employee of his/her contractual obligation. Third, the organization provides structural signals that convey information through the HR practices like formal compensation and benefits, performance review and organizational literature like handbook and mission statement (Rousseau 1995).

According to Rousseau (1995) there are two major types widely used in literature on psychological contract. There are transactional and relational contract. Closed-ended timeframe, exchange of economic resources, unambiguous performance standards and limited mutual investment between employer and employee are the characteristics of transactional obligations (Rousseau 1995). Relational contracts include following characteristics, open ended, long term relationship involving considerable investment by both employees (company specific skills and loyalty) and employers (extensive training and development) (Rousseau 1995).

Morrison & Robison (1997) defined psychological contract breach as the cognition that one's organization has failed to fulfill one or more obligations comprising the psychological contract.



Morrison & Robinson (1997) suggested that there are three main reasons that psychological contracts go unfulfilled; renegeing, disruption and incongruence. Renegeing occurs when purposely and knowingly fails to keep all of their promises to employees. Disruption arises when the organization is unable to live up to its prior commitments due to the fluctuating economic or environmental factors. Incongruence occurs when the employee identifies that there has been an honest misunderstanding regarding the terms or conditions of the employments relationship. The psychological contract concept was derived from social exchange theory and equity theory (Anderson & Scalk 1998). Simply above theories explain that people are rational and always they try to compare the return with their contribution. Employees try to compare their contribution with their return. If employees perceived that organization cannot meet expectation, it cause to psychological contract breach (Morrison & Robinson 1997). The social exchange theory explained about the norm of reciprocity. It implies that “employees reciprocate the treatment they receive from their employer by adjusting their perceived obligation and fulfillment to the employer” (Robinson & Rousseau 1994, p.247). “If organization fails to fulfill the reciprocate returns, employees may perceived that organization breach the expected exchange relationship such as psychological contract and do not tempt to meet their obligation to the organization” (Balu cited in Chao et al. 2011, p.765).

### **Counterproductive Workplace Behavior**

Counterproductive work behavior refers, employee misbehave and violate the organization's disciplines intentionally and try to harm its members well-being (Sackett & Devore 2001). Counterproductively workplace behavior is behavior that is intended to have a detrimental effect on and their members. It can include overt acts such as aggression and theft or more passive acts, such as purposely failing to follow instructions or doing work incorrectly. Counterproductive work behavior is any purposeful undesirable behavior that has the potential to have negative consequences to an organization and the staff members within that organization. These activities include acts such as theft, calling in sick when you're not sick, fraud, sexual harassment, violence, drug and alcohol use, and inappropriate use of the internet (Instone n.d.). There are many different factors that can lead to counterproductive work behaviors. Sinangil & Viswesvaran (2001) grouped counterproductive workplace behaviors in to two broad categories; the first is property deviance involving misuse of employer assets. Examples include theft, property damage and misuse of discount privileges. The second is production deviance involving violating norms about how work is to be accomplished. This includes not being on the



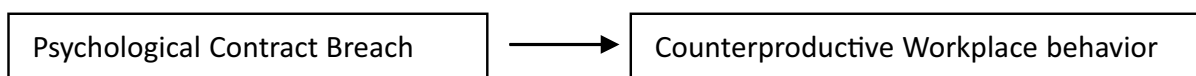
job as scheduled (Absence, tardiness, long breaks) and behavior that weaken from production when on the job (Drug and alcohol use, intentionally slow, sloppy work). The common theme is that these behaviors are harmful to the organization by directly affecting its functioning or property, or by hurting employees in a way that will reduce their effectiveness (Fox, Spector & Miles 2001). Psychological contract breach and counterproductive workplace behavior

Research finding shows that significant relationship between psychological contract breach and counterproductive work behaviors. According to Jensen, Opland & Ryan (2009) transactional and relational contract breach has differential effects on counterproductive workplace behavior. Equity theory explain that, If employee perceive that psychological contract is breached ,they try to regain the equity by doing misbehavior such as absent from work, use company resources for personal use. Also stressed that psychological contract breach may led to create negative emotional experiences such as anger and frustration within the employees (Robinson & Morrison 2000). In a study demonstrated that the positive relationship between psychological contract breach and counterproductive workplace behavior (Chao et al. 2011), hence, researcher hypothesis as

*H1: There is a positive relationship between Psychological contract breach and Counterproductive Workplace behavior*

The conceptual framework of the study is given in Figure 1

**Figure 1. The conceptual Framework of the research**



## **Method**

The sample in this research comprised active management students. The respondents were selected through a random sampling method. The research was purely based on primary data. A questionnaire was used for data collection. 100 questionnaires distributed, 53 valid questionnaires were returned and used for analysis. Due to the sensitive nature of study on counterproductively workplace behavior, all questionnaires were anonymous and the confidentiality of the data and results were promised to respondents by the researcher. The

majority of respondents 58.8% were males and 41.5% were female. 49.1% of participants aged between 31 to 40, 26.4% aged between 21 to 30, 18.9 % were 41 to 50 and 5.7% were over 50. Sample is subjected to income level between Rs.25,000 to Rs.50,000, 62.3%, 51,000 to 75,000, 28.3%, 75, 76,000 to 100,000, 7.5% and 1.9% were above 100,000.

## **Instruments**

Researcher measured the variables of the research by using standard questionnaires. The participants expressed their opinion on a 5 point Likert scale. For psychological contract breach 5 indicated —Received much more than promised and 1 indicated —Received less more than promised and for counterproductively workplace behavior 5 indicated —Never and 1 indicated —Very Often.

PCB: The questionnaire for measuring the fulfillment of psychological contract was a modified standard questionnaire, which is originally developed by the Robinson & Morrison 1995. It consist main six areas, Benefits, Pay, Advancement, Opportunities the work itself, Resource support and Good employment relationship. The Cronbachs" Alpha is 0.952.

CWB: The counterproductively workplace behavior inventory adopted by the Chao et al. 2011, use to measure the counterproductive workplace behaviors. Use mainly six categories to measure the employee"s counterproductive workplace behavior engagement. Theft and related behavior, Misuse of information, Misuse of time & resources, Poor attendance, Poor quality work, inappropriate verbal actions. The Cronbach Alpha is 0.854.

Bivariate analysis used to investigate the relationship between psychological contract breach and counterproductive workplace behavior.

## **Analysis and Findings**

According to the table 1 (correlation between PCB and CWB) Pearson correlation between psychological contract breach and counterproductive workplace behavior is 0.691. It demonstrates that there is a positive relationship between above mentioned two variables. The found relationship is statistically significant as correlation is significant at 0.01 levels (1- tailed).Thus; there is statistical evidence to prove that psychological contract breach and counterproductive workplace behavior are positively related.

**Table 1: Correlation between PCB and CWB**

	PCB
Correlation	0.691
Sig.(1-tailed)	0.000

The results of simple regression analysis of the psychological contract breach against the counterproductive workplace behaviors is given in table 2.

**Table 2: Results of the Simple regression analysis**

Method	Linear
R Square	.477
Adjusted R Square	.467
F	46.569
Significance	<0.000
B - Constant	3.427
B - value	.302

According to table 2, regressions equation of counterproductive workplace behavior is:

$$\text{Counterproductive Workplace Behavior} = 3.427 + .302(\text{PCB})$$

The b value of the equation, the gradient of the regression is 0.302, which is significant at 1% (Significant = 0.000). As indicated by R Squared, 47.7% of the variance of counterproductive workplace behavior is explained by psychological contract breach with the standardized beta of 0.477. The F value is 46.569, which is significant at 1% (P = 0.000), which is suggest that Psychological Contract breach has significantly explained 47.7% of the variance of counterproductive workplace behaviors.

The hypothesis testing was carried using the results of Person"s Correlation analysis and the results of Regression analysis. The Pearson"s Correlation coefficient between Psychological contract breach and Counterproductive Workplace behavior is 0.691. Therefore, there is a strong positive relationship existing between the Psychological contract breach and Counterproductive Workplace behavior. Hence, the Null Hypothesis, which indicate there is no positive relationship between psychological contract breach and counterproductive Workplace behavior is rejected and the Alternative hypothesis, which indicate there is a positive relationship between psychological contract breach and counterproductive workplace behavior

is accepted. As per the result of simple regression analysis between the two variables the regression coefficient (b) is 0.302, which is significant at 1 % (Sig.T=0.000). Therefore, based on the results of both tests, the Null hypothesis is rejected and the alternative hypothesis is accepted. Hence the data is support the hypothesis that there is a positive 53 relationship between Psychological contract breach and Counterproductive Workplace behavior of the active student reading in faculty of Graduate studies.

## **Discussion**

It was found that there is a positive relationship between psychological contract breach and counterproductive workplace behavior of active management student. The correlation between this variable was 0.691, which is significant at 0.000 level. This correlation was greater than the lower bound of strong correlation (0.5) and suggested that there is a strong positive relationship between psychological contract breach and counterproductive workplace behavior.

According to the results of simple regression analysis, psychological contract breach was found to have positive impact on counterproductive workplace behavior with the weak of b value of 0.302. As Chao et al. 2011; Robinson & Morrison 2000; Jensen, Opland & Ryan 2009 discussed about the significant positive relationship between the psychological contract breach and counterproductive workplace behaviors. The findings of the correlation and regression analysis empirically confirm the arguments given by above mentioned researchers.

Identifying the relationship between psychological contract breach and counterproductive workplace behaviors among students was the primary objective of this study. Based on the empirical information, conceptual framework is conceptualized to identify the relationship between psychological contract breach and counterproductive workplace behavior. Results of the study, demonstrated that there is a positive relationship between independent and dependent variables.

## **References**

- Ambrose, ML, Seabright, MA & Schminke, M 2002, „Sabotage in the workplace: The role of organizational injustice“, *Organizational Behavior and Human Decision Processes*, 89, pp.947-965.

- Anderson, N, Ones, D, Sinangil, HK & Viswevaran, C 2001, *Hand book of Industrial, work & Organizational Psychology*, vol.1, SAGE Publication, Oliver"s Yard.
- Anderson, N, & Schalk, R 1998, „The Psychological Contract in Retrospect and Prospect". *Journal of Organizational Behavior*, vol.19, pp. 637-647.
- Chao, JMC, Cheung, FYL & Wu, AMS 2011, „Psychological Contract breach and Counterproductive Workplace Behavior: Testing moderating effect of Attribution style and Power distance", *The International Journal of Human Resources Management*, vol.22, no.4, pp.763-777.
- Chen, ZX, Tsui, AS & Zhong, L 2008, „Reaction to psychological contract breach: a dual perspective", *Journal of organizational behavior*, vol.29, pp. 527-548.
- Fox, S, Spector, PE & Miles, D 2001, "Counterproductive Work Behavior (CWB) in Response to Job Stressors and Organizational Justice: Some Mediator and Moderator Test for Autonomy and Emotions", *Journal of Vocational Behavior*, vol.59, pp. 291- 309.
- Jensen, JM, Opland, RA & Ryan, AM 2010, „Psychological contracts and counterproductive work behaviors: Employee responses to transactional and relational breach", *Journal of Business Psychology*, vol.25, pp. 555-568.
- Knights, JA & Kennedy, BJ 2005, „Psychological Contract Violation: Impacts on Job Satisfaction and Organizational Commitment Among Australian Sector Public Servants", *Applied Human Resources Management Research*, vol.10, no.2, pp.57-72.
- Krishnan, TN 2011, „Understanding employment relationship in Indian organizations through the lens of psychological contract", *Employee Relations*, vol. 33, no. 5, pp. 551-565
- Kwok, CK, Au WT & Ho, JCM 2005, „Normative Controls and Self –Reported Counterproductive a workplace Behaviors in the Workplace in China", *Applied Psychology: An International Review*, vol. 54, pp. 456-475.
- Lester, SW, Turnley, WH, Bloodgood, JM & Bolino, MC 2002, „Not Seeing Eye to Eye: Differences in Supervisor and Subordinate Perceptions of and Attributions for Psychological Contract Breach", *Journal of Organizational Behavior*, vol. 23, pp. 39- 56.

- Marcus, B, Taylor, OA, Hastings, SE, Sturm, A & Weigelt, O 2013, „The Structure of Counterproductive Work Behavior: A Review, a Structural Meta-Analysis, and a Primary Study“, *Journal of Management*, vol.20, no.10, pp. 1-31.
- McLeanParks, J, Kidder, D & Gallagher, DG 1998, „Fitting Square Pegs into Round Holes: Mapping the Domain of Contingent Work Arrangements onto the Psychological“, *Journal of Organizational Behavior*, vol.19, pp. 697-730.
- Morrison, EW, & Robinson, SL 1997, „When Employee Feel Betrayed: A model of How Psychological Contract Violation Develops“, *Academy of Management Review*, vol. 22, pp. 226-256.
- Robinson, SL, & Bennett, RJ 1995, „A typology of deviant workplace behaviors: A multi-dimensional calling study“, *Academy of Management Journal*. vol. 38, pp. 555– 572.
- Robinson, SL & Morrison, EW 1995, „Psychological Contracts and OCB: The Effect of Unfulfilled Obligations on Civic Virtue Behavior“, *Journal of Organizational Behavior*, vol. 16, pp. 289-298.
- Robinson, SL & Morrison, EW 2000, „The Development of Psychological Contract Breach and Violation: A Longitudinal Study“, *Journal of Organizational Behavior*, vol. 21, pp. 525-546.
- Robinson, SL & Rousseau, DM 1994, „Violating the Psychological Contract: Not the Expectation but the Norm“, *Journal of Organizational Behavior*, vol. 15, pp. 245-259
- Rousseau, DM 1995, „Psychological Contracts in Organizations: Understanding Written and Unwritten Agreements“, Sage, Newbury Park, CA.
- Rousseau, DM & McLean Parks, J 1993, The contracts of individuals and organizations.
- Sackett, PR, & Devore, CJ 200, „Counterproductive Behavior at Work, In Anderson, N, Ones, DS, Sinangil, KH & Viswesvaran, C (Eds.), *Hand Book of Industrial, Work and Organizational Psychology*, Thousand Oaks, CA: Sage, pp.145-164
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# **Bhagavad Geeta and Ramayana as Perennial sources of Leadership: Organizational skills and Team management learning from Ramayana**

**Ms.Rahila Sami<sup>1</sup>**

**Dr Ajay Sharma<sup>2</sup>**

## **Abstract**

This paper depicts the organizational skills and team management learning from The Ramayana, one of the two Sanskrit epic of ancient India, Mahabharata being the other. It carries a lot of unique management concepts, leadership styles, team building techniques, group management tactics, organization and utilization of scarce resources which find much relevance in today's world and can be helpful in re-engineering the business processes and practices which minimize friction among team members to yield the desired results. The business world is ever dynamic and to survive and sustain there is a strong need to be determinant, competent and patient at the same time like Lord Rama was when he was preparing for war against powerful king Ravana of that time.

The Ramayana tells about the dynamics of group and how is it equally important to address workers participation in management, continuous motivation, and establishment of alliance and network of human relations, necessary to win trust of the team. This can easily be correlated to the essentials of success of business organizations worldwide as in today's era of technological advancement and high human aspirations those who believe in equality and inclusion of all will only be raised as leaders by people.

Life of Rama and his character has various unexplored qualities and lessons which might find various practical implications in corporate world and upcoming startups. The skills required to deal with organizing limited resources and manage time in a crisis situation yet achieving set goals with mitigated wastage are worth adapting to which can be beneficial for businesses to pave way for new radiance of opportunities to emerge through.. The lessons of progressive thinking, strength of inner self, positive attitude and focus from the life of Rama can be an aid in

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making more informed and better decisions in terms of inculcating team spirit among employees and contribute in building a sustainable growth and promoting human well being.

**Keywords: Ramayana, Management, Team building, Resource**

## **Introduction**

The well-known religious Indian epic (adikavyam) Ramayana- is an ancient poem that has inspired generations over the years. It was originally written by sage Valmiki in Sanskrit during the period of Treta Yuga approximately 5th to 4th B.C to the genre of Itihas and later translated into many other languages and developed many versions .It comprises of seven Kandas (Bala, Ayodhaya, Aranya, Krishkinda, Sundara, Yuddha and Uttara) with 20,000 shlokas, still holds an inevitable place in the Hindu mythology. It is embedded with numerous management practices that are worth learning and adapting to. Valmiki beautiful narration of events of Ramayana even makes it master creation flooded with personal and professional lessons.

The verse quoted below glorifies Valmiki

Kujantam rama rameti madhuram madhuraksaram  
aruha kavishakham vande Valmikikokilam

Meaning: I salute sage Valmiki - the nightingale /(cuckoo bird literally), who sings in sweet voice the sweet name of Rama, Rama, from the 'tree 'of poetry

Divine sage Narada arrives at the hermitage of sage Valmiki in order to enlighten him and keep him informed of his duty to author epic poem Ramayana. In the dialogue between the two sages, Valmiki elicits from Narada about most virtuous person on earth-Rama- the central character in the whole Ramayana. Set in the beginning of times, this is the story of a prince and how his divine plan unfolds, Ravana has kingship over Lanka and was a harsh ruler, and naturally the gods were not pleased with his evil ways. To solve this problem they asked Lord Vishnu, protector of the world to bring back peace to which he assured that he will take the form of human being, through the birth of Rama -the son of Dashratha. In this way he would show mankind how they should live

and what they should strive for and also to avenge evil ways of men, through which gods have suffered. So Ramayana isn't only about Lord Rama and rescue of his wife, Sita. The Ramayana is also about devotion, loyalty, family roles and respect for elders through the principles of truth and self control.

The story of Ramayana flows at multiple levels, there is a deeper lesson of understanding for life that we don't really know therefore the way this paper explores Ramayana is how it is directly applied in our lives and what significance it finds in corporate practice today and how impactful can the adoption of learning from Ramayana be to businesses and startups of today to address the rising issues of sustainable development, procurement and utilization of resources, team handling dynamics and organizational skills development .

'The secret to knowledge is inquisitiveness. The secret to inquisitiveness is observation, the secret to observation is mindfulness and the secret to mindfulness is being in the present'

**.Shubha Vilas –Ramayana the Game of Life.**

Valmiki says –one has to think of the Artha (subject matter) and consequences before arriving at any decision. If something happens there is a reason behind nothing in this world is causeless, that unknown cause can be the source of misery or joy and power.

This poem depicts values of Rama, Dharma nishtha and Interpersonal relationship of Rama. The other characters like Lakshmana, Hanumana, Vibhishana, and Sugriva also contributed to this epic. There are many management and leadership thoughts which are unexplored till now regarding skills of organizing things and building teams of diverse people with different abilities and expertise like management of community is necessary to establish synergy in results, the ways partners cooperate and support in odd time when situations are adverse clearly depicts loyalty towards organization and team mates.

Coming together is beginning, remaining together is progress, and working together is success. Rama came alone combined with people Vibhishana and Sugriva and worked with monkeys and bears to achieve his goal. It requires decision making, problem solving, establishing connections with people to arrange resources and keep people together.

## II Literature review

The ability to use your time, energy, resource etc. in an effective way so that you achieve the things you want to achieve.

Self-discipline and organizational skills are crucial to success in any profession (Definition of **organizational skills** from the Cambridge Business English dictionary)

Organizational skills are skills used to organize your workload, manage time and resources, and schedule and prioritize projects. The rising concern among the organizations regarding mismanagement of resources, unhealthy and non progressive work culture, employee's performance and attitude towards work, declining loyalty of employees and lack of talent engagement is resulting in bad retention ratio. Employees require proper training and involvement in decision making to develop sense of belongingness and security of job in the form of well defined career path designed and communicated by organization.

The research question in this research is how learning from Ramayana can be instrumental in inculcating skills beneficial for effective and efficient management of resources and process and help to resolve these issues.

An entrepreneur organizes various factors of production like land, labor, capital, machinery, etc. for channelizing them into productive activities. Attempts should be to combine various activities to accomplish predetermined goals. It requires Organization is the structural framework of duties and responsibilities

Louis Allen, "Organization is the process of identifying and grouping work to be performed, defining and delegating responsibility and authority and establishing relationships for the purpose of enabling people to work most effectively together in accomplishing objectives."

George Terry, "Organizing is the establishing of effective authority relationships among selected work, persons, and work places in order for the group to work together efficiently".

L.H. Haney, “Organization is a harmonious adjustment of specialised parts for accomplishment of some common purpose or purposes”.

According to WHO course 'To err is Human' defines team as a distinguishable set of two or more people who interact dynamically, interdependently and adaptively towards a common and valued goal / objective / mission, who have been assigned specific roles or functions to perform and who have a limited lifespan of membership'.

Organization skills are those related to creating structure and order, boosting productivity, and prioritizing tasks that must be completed immediately.

Maintaining strong organizational skills can reduce the chance of developing poor work habits such as procrastination, clutter, miscommunication, and inefficiency.

Managers look for employees who can not only keep their work and their desk organized, but for those who can also adjust quickly to the organization structure of a company

**Internal Organization Skills:** Organizational skills encompass ability to keep them calm and prepared with systematic planning and scheduling.

**External Organization Skills:** Leaders should be able to organize big projects into smaller jobs and schedule and delegate these smaller tasks to other employees in order to stay on track with deadlines to compete while sustaining a healthy work-life balance.

### **III. Methodology**

This paper is based on review of already published evidences in a way to interpret and understand what the researchers attempted to illustrate through evidences in Ramayana. Such type of study and examination often aims to replicate existing understanding on particular concept. Four sources of evidence were used; concepts of famous authors, peer review empirical studies, reviews published in academic journals and non-peer reviewed studies (religious books)

## **IV. Analysis of Organizational Skills in Ramayana**

### **1. Clarity of vision**

Profound sense of insight comes from enhancement of perception skills, to be able to see what others can't see. 'Anaagata vidhaanam tu kartavyam shubhamichchataa, aapadaashankamaanema purushena vipashchitaa" A wise man should foresee tragedy and misfortune and take action to prevent or overcome well before it strikes to enjoy a safe and healthy life. What the business wishes to do should be more of what is needed. Vision aids in formation of action plans .It requires the ICSS approach (intelligence, commitment, skills and strategy). Rama had a clear vision to rescue his wife defeat the evil forces. All moved in single direction to unite Ram and Sita without being deviated. Similarly, every leader needs to have clear vision of what he is aiming for and what will it bear him in future in parallel to his followers who will support him in his struggle

### **2. Planning**

Develop routines and consistency, work less complete more strategy, and focus on things to prioritize them towards achievement of final target. Planning is the essence of success and should comprise of heterogeneous and diverse elements to meet new business threats, like Rama created unique army of different beings having different abilities. Being less stressed will aid in proper execution of plan which is need of the hour. Proactive approach helps leader to take responsibilities and initiate .Planning in advance to avoid last minute hassle. 'Viklavo veeryaheeno yah sa daivamanuvartate veerah sambhaavitaatmaano na daivam paryupaasate' means only the timid and weak leave things to destiny (daivam) but strong and self-confident never bank on destiny or luck. Leaders should analyze business environment, scan the opportunities and threats to match their strength and weakness accordingly rather than believing on miracles to happen.

### **3. Excellence in execution**

Managers at all levels should learn from the way Hanuman brilliantly executed his plan to locate Sita .The determination with which he conducted the search shows how focused he was that he even declined the invitation of mount Mynaaka to take some rest on the way. Leaders require a strong understanding of business management, balance urgent needs of all stakeholders and

make decisions in the best interest of business and this comes from taking ownership and accountability.

### **3. Working out of comfort zones**

When Rama went on exile for fourteen years, he took it as an opportunity to mingle with the commoners of their kingdom rather than following the royal protocol. This helped them to understand the ground realities better. This practice can be adopted by the CEOs and marketing honchos of today to travel to gather first hand information and get customer's pulse and serve them better by understanding their issues and demands.

### **4. Ethical approach**

No matter how powerfully established the organization is, unethical means will bring fate. Most ethical dilemma involves conflict between the needs of the part and the whole, individual verses the organization or the organization verses the society as a whole. Managers faced by such tough ethical choices often benefit from a normative strategy, one based on norms and values to guide decision making. The concepts of moral right and justice approach can be learnt from Ramayana, the way he informed the enemy and gave space to resolve and avoid war and not attacking when Ravana was armless during war shows obedience of principles and adherence to ethical boundaries.

He didn't ask Sita to come along with him in exile and even stopped Lakshman from accompanying him elicits the right of free consensus and right to freedom of speech, similarly utilitarian approach can be related as Rama saved humanity by killing Ravana and it was good for society and establishment of what is right and truth. The way Rama went to Ayodhya without any regret after killing Ravana and felt comfortable to explain to family and friends and commoners, so should the managers of today also take ethical decisions which they would not hesitate to publicize. The ethical standards and limits should be taken into account while designing rules, policies, norms of organization which has positive long term impact on business and its stakeholders.

### **5. Art of balancing**

Don't be a perfectionist seek for help when needed ,involve and consult others for better leadership and acknowledge inputs .Rama's life is an explicit example of anger management .He

was never egoist. Just hung on what he had to do with utmost balance, patience and self command. It can be learnt from Rama as to how to conduct oneself gracefully in times of poverty, deprivation and when situations are unfavorable. It is the art of dealing with cravings for things you wish to have but you can't afford, inculcates the qualities of patience, self control, gracefulness and understanding of importance of resources and be less wasteful when you can afford them.

This clearly deals with issues of team handling with calm approach and usage of resources sustainably not losing hopes when organization loose business and team didn't do well but working hard consistently with patience. The acceptance of failure and tests is the key to have courage to fight and regain strength. Fall and rise is law of nature and is very common to start ups also.

Big battles are won through mental stability and patience. The issues in organizing resources are persistent because of production of managers and not leaders. Leadership is about being able to take a group of people or a nation or the entire world to a direction of destination, they haven't imagined possible.

## **6. Uncertain business environment**

The businesses can adapt the strategy adopted by Rama in addressing that external situation can go adverse any moment, so leaders should always be alert and proactive to handle complexities with flexible approach and prepare a backup plan to rescue from it. Rama was unaware of series of disasters approaching him but because of his phenomenal wisdom he never gave up and with limited resources, trained army of monkeys and bears to be competent enough to face the challenges and overcome them. Leaders need to analyze all internal and external factors which will affect the business and head towards bridging the gap between financial, legal, environmental aspects and the business in new and expanding markets.

## **7. Motivation**

Rama worked with alliance and cooperation to see possibility in every distress and difficulty with same enthusiasm. Through proper direction, discipline and concerted efforts of motivated



workforce anything we believe in is achievable. Continuous small steps towards the goal under able guidance marks success. The organizations of today really need to address to distribution of power and control over resources to employees in a manner to empower them and promote rightful participation. Proper training leads to competency development which will further develop problem solving. It develops confidence in employees so they willingly take actions that results into cooperative and collaborative attitudes.

### **8. Workers participation in management**

No distinction on the basis of class, creed, being a prince Rama involved everyone in decision making and to seek for advice. He was realistic in admitting that anyone can contribute valuably apart from the leader. He listened to all which made them feel part of the family. Similar approaches should be adopted by corporate to engage employees to develop a sense of belongingness and provide equal opportunities for all to express which can further resolve issues of talent management and retention. Stress on inclusion of all and treatment of everyone with respect helps in maintaining a work life balance as nowhere Rama is seen misbehaving or posing anger on Sita. He shows good mental balance by having peace with outside challenges and personal life and thus is free from chaos so he can be more focused and productive.

### **9. Positive attitude**

Believing in one self and his team to face any thrust and challenge and finding possibilities out of difficulties never giving up and holding back is sure to yield results with continuously heading towards goals. 'Durlabham hi sadaa sukham' means to be happy is something which is difficult to achieve. That is to say, happiness and sorrow are alternate in one's life and there cannot be uninterrupted happiness alone. Being joyful and successful is not the goal itself but when people are joyful they are pleasant to the world. It takes just a little rules and discipline to make sure that we don't sink and are able to create an impact on society, maintain healthy relations within and outside organization and strive to be wonderful human beings.

We can imbibe the generosity and humbleness of Rama when he asked Ravana to teach him how to run the Kingdom as Rama had no shame in accepting that he has no clue of kingship and asking Ravana to guide and share his experiences about how to rule . Despite all evil that Ravana

did Rama still treats him with regard and considers the good qualities that he possesses which could be learnt from him.

## **V. Analysis of Team building learning in Ramayana**

### **1. Personality traits**

Significance of Rama is not because of series of life disasters but the way he conducted himself through the disastrous series occurred to him. He never left the path of truth and deviated from fundamentals of his life. Rama never sought for short cuts to solve the problems and have victory. It can be learnt that organization today want to earn quick profits and indulge in malpractices and breach the code of conduct. Cheating is a personal decision, some leaders never cheat no matter how hard the situations are and some always cheat no matter how good they have it. Leader with principles is always trusted upon by people.

'Satyameveshwaro loke satye dharma samaashritah' explains only a person's conduct and character proclaim whether he is born in a good family or boasting about himself. Truth controls this world and dharma is rooted in truth not in pleasures of the senses. Dharma can be attained after observing various discipline of his own purification and undergoing to great strain and strain

### **2. Truth and commitment**

Aahuh satyam hi paramam dharmam Truth is the highest dharma. A leader who is truthful and shares the relevant details with his team wins their confidence and support. Like Rama keeps his word at any cost is lesson for all the leaders to be transparent and committed to what they promised to deliver. 'Lakshmee chandrat apeyaadwaa himavaan vaa himam tyajet ateeyaata saagarō velaam na pratijnaamaham pituh' means beauty may leave moon, himavaan may become bereft of snow, the ocean may transgress its shores but I (Rama) will never violate the promise given by my father.

### **3. Responsibility handling**

A very interesting incident from Ramayana where Hanuman is asked to bring Sanjeevani plant of which he has no clue, he didn't refuse to go nor he asked for simpler tasks rather took up the challenge and responsibly fulfilled it. In the present era leaders often face the issues that

employees refrain from taking that extra effort to do something as that might not be part of their Key Responsibility Areas .Here is an example of how pushing our boundaries and testing our potentials can lead us to success never imagined to be ours.

#### **4. Trust the team**

In contrast with the army of Rakshasa which was powerful and had defeated the formidable, devas and vanquished many kings, Rama's army was less sophisticated and never fought wars before. Yet Rama believed their potentials and maintained his confidence in their ability to conquer seemingly impossible odd and finally win over it. Strong communication skills build trust easily, collaborate with peers locally and globally and bring top-level oversight of process across borders and time zones.

#### **5. Synergize the results**

It means every person is contributing with the collaborative groups and the concerted effort of whole team yields unbelievable results and increases the productivity. It comes from art of taking initiatives. Human brain is limited but qualities are unlimited leaders of today need to pick, interpret and implement according to individual capabilities and always strive to explore more.

#### **6. Informed decisions**

We are not product of circumstances rather of the decisions we make. Rama is the man of honor by his chosen decisions. It is not necessary things will go well always but risks are involved in taking up new projects. The plan should be communicated to each team member so that he is informed about his role and mitigate chances of confusion. Thus posing better resource management and ability to recognize and utilize the potential contributing factors to make optimal use of.

#### **7. Succession planning**

“Jirnasya Sharirasya Vishrantim Bhirochaye” explains that this body has become old and needs some rest. Dashrath knew that there was none better placed to succeed him than Rama. Rama was expert in leading and commanding troops, expert in archery, never was he seen proud of his strength, true to his word, free from envy, excellent behavioral skills made him fittest of all to

succeed the throne but Dashrath consulted other panels of his advisory to suggest name for the next king rather than believing in the descended royal hierarchy, it shows leaders are those whom the people choose and support not those who get power from family. Dashrath also wanted to know whether Rama was equally eligible in people's opinion as he was in his and that Ram was chosen for the right reasons as king. There is one more event recorded by Valmiki where describes the way Jambavan proposes Hanuman's name to be given the responsibility of enquiring about bringing Sita back. In this competitive era where businesses to earn profits and brand name stoop down to such malicious level to defame others, Jambavan on the other hand recognizes that Hanuman was more fit than him for this task. It shows real talents should be recognized and given platform to prove themselves.

Hanuman's decision of burning Lanka displeased Rama and Rama removed him from the scene to rediscover his decision making abilities .Later when Mahiravan took Rama and Lakshman to Patal lok, it was Hanuman who rescued them by his intellectual and physical prowess. Rama thus created a leader.

Placement of right candidate on the right job is one of the core organizational skills. Appointment of leader through such democratic approach shows how important the organization and its goodwill is and that it should be handed to responsible hands who are dedicated and for whom personal and organizational goals are no different. The most eligible, qualified person should be chosen to replace the leader and thus direct the organization towards the set goals. Leader should create more leaders.

### **8.Subordination of individual interest**

Rama's foremost commitment was for the people everything he did was for the welfare of the people, personal interest was simply absent from any of his decision making which implies for a leader to be effective emphasis should be laid on interest of his team and later his personal interests. Such leaders are impactful and survive for long term in the organization. The people first approach of Rama indicates to think of common interest of all in the team and consider all stakeholders who will be affected by the decision. Unbiased choices result in better outcomes.

## **9. Relationship building**

Usage of reason and logic to resolve a problem by analyzing all relevant information to build trust and transparency. Jack Rothman models on locality development, social policy planning and social action depict what Rama long ago did by his able leadership he developed competency of his team to cause end of an evil. Human resource development is possible through community engagement. Locality development is harmonious interrelationship among different ethnic and social class including participation of action of wide range of people, usage of democratic practice that fosters voluntary cooperation of all team members which generates a feeling of respect and dignity among employees. Rama never held himself superior to others neither is he seen suppressing anyone by virtue of his valor and strength proving unity is strength and essence of team spirit.

It can only be possible through no discrimination policy that values relationships like Rama being a prince ate tasted berries of Shabri without thinking of caste, creed and status.

## **10. Fulfillment of Dharma:**

Today a small obstacle and adversity makes us deviated from our goals but Sri Rama accomplished his goals with all the difficulties in life, being it killing of demons by order of his teachers (as a student), obeying and fulfilling promise of his father (as a son), promise made to Sugriva and coin him as King post defeating Bali (as a friend), or freedom of Sita from Ravana (as a husband). He never failed to discharge his duties and gave highest priority to dharma in his life. Entrepreneurs of today need to be just to all the roles they play to various stakeholders of their organization. 'Aanrushamsyam paro dharmah" to be compassionate, kind and humble is a great virtue.

## **11. Participative management**

Rama was full of patience and credit giver. He gave credit of his success to his brother and his team mates. He acknowledged and recognized everyone and encouraged environment of open discussion, welcomes new ideas and invites suggestions. He never threw his opinion forcefully on others. He taught to be a participative leader not a dictator. Leader is never found suppressing others unlike what is very common to observe in organizations today where the employees feel

choked under their leaders as their freedom of expression is totally curbed, also they are not given proper credit and appreciation for their work. The performance appraisal should be transparent to keep the employee attached and motivated and feel valued.

'Mantramoolam cha vijyam pravadanti manaswinah" means wise men say that the root of victory is consultation and discussion with learned and wise men.

## **12. Recognizing key employees**

Rama recognized potential of Hanuman to be the right person to send on the difficult project to bring Sanjeevani plant to save life of Lakshman. He also discovered him safe enough to hand over the responsibility of enquiring about mother Sita and bring her back. This act depicts placement of right resources to yield desired information and results and help in further decision making. The recognition of key employees is similarly essential for leaders to utilize their talent for the benefit of team and also save time and effort of other resources. The organization should conduct activities that could be instrumental in bringing forth qualities of team members like Jambhavan did for Hanuman. There is no shame in accepting that others might possess some talent better than us. Jambhavan was generous enough to propose Hanuman's name for the task despite of knowing he won't be depicted as heroic as Hanuman will be in the future ages but he chose to accept the truth and appreciate those who are better than him.

## **13. Sustainable assimilation of resources**

The straining on the resources should be monitored strictly to ensure their availability in future also. The efficient use of team's money and people are the key to business. 'Yatkrutwaa na bhaveddharmo na keertirna yasho dhruvam shareerasya bhavet khedah kastatkarma samaacharet.' This is in context of the advice given by Jatayu to Ravana to refrain from abducting Sita which can cost him dearly which he will not be able to bear. This is very relatable for business issues of present where there is scarcity of resources and major portion is held by big corporate who exercise control over them and either stock them or use them beyond what is required by them. It is clearly stated in the verse above that one should only lift only such weight as will not exhaust him beyond a limit, and consume only that much which can easily be digested by them as overly consumption of anything will result in exhaustion of resource and no longer will be factor of

production. So special emphasis should be laid on budget management and knowing the finances inside and out. Leaders should also believe in giving that space to team members to relax and rethink rather than giving those tons of pressure and tension where they lose their creativity and zeal to work.

#### **14. Team spirit**

Enthusiasm has great strength. There is nothing in this world which is not attainable for the enthusiastic. 'Utsaaho balavaanaarya naastyutsaahaat param balam sotsaahasya hi lokeshu na kinchidapi durlabham" are the words of Lakshman to cheer Rama who was in deep sorrow at the loss of Sita. He emphasizes to come out of hopelessness and seek for Sita's whereabouts. Leaders should never get depressed and lose heart in the face of difficulties for those are inseparable part of life. Rising again and encouraging others is what holds the spirit of team. 'Sarvaarthhaah vyavaseedanti vyasanam chaadhigachchati' means efforts of unenthusiastic, weak and immersed in sorrow cannot bring out any good. It is the duty of the manager to keep the confidence of the team members intact, to make them believe that they need not to fear from failures rather be terrified with regret as giving up is birth of regrets.

#### **15. Building a high performance team**

Indian entrepreneurs are not gaining much global success because leaders fail to engage and involve talent. They are more into informing and less into seeking advice. It begins with talent acquisition and imparting them appropriate training to develop their competency. Along with training treatment of employees is of utmost importance as it is responsibility of organization to provide for healthy personal and process interaction within the work culture.

Performance of the team depends of their growth so they need to have career path and next level of promotion.

### **VI. Conclusion**

Based on the study it can be concluded that management needs those practices which they preach and Ramayana is one such enriching source of knowledge which gives numerous examples of organizational skills and tactics to handle team issues and achieve goals with full



determination. The concepts of truthfulness, ethics, and sustainability, interpersonal relations can be imbibed which help in building goodwill and thus guarantee long term survival and growth of any business. Leaders should utilize this spiritual nourishment rather than spending heavily on sources that manage their affairs and problems. Strategize to survive in dynamic and complex environment to increasingly improve quality of performance and work life balance. This can be achieved through discipline and principles of commitment to what is ethical and good for all.

## References

- Archana Tyagi: Organizational Behaviour (Excel Books)
- Drucker, Peter, 1968 The Practice of management, Pan books, London
- Fred Luthans: Organizational Behavior (McGraw Hill)
- Indian leadership style discussed in Indian scripture Ramayana by Dr.Rishi P Shukla, Akshay Krishnan,Alekhya Madishetty, Symbiosis institute of business management
- K. Aswathappa: Organizational Behavior
- Leadership learning from Ramayana and Mahabharata for the Business world by Ms. Anagha Shupre, IMS Ghaziabad
- Management Gyan from CEO Krishna)
- Madhukar Shukla: Understanding Organizations – Organizational Theory & Practice in India (Prentice Hall)
- S. P. Robbins: Organizational Behavior (Prentice Hall)
- The Times of India, New Delhi dated Nov, 02, 2007(Prof. Ramanath Narayanswamy-
- Shashi Aggarwal, Lecture on Team building intervention

# Human Resource Development (HRD) Concept from Narrow Organization (HRM) Based to Wide Socioeconomic Perspective

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## Abstract

Human Resource Development (hereafter HRD) is an important topic of present time. Management professionals consider it, as the sub discipline of HRM and view it, in organizational context. So from HRM scholars" viewpoint HRD in narrow concept consisting of activities of training, education and skill building, though all these terms themselves have broader meanings and deeper than their usual perceptions and in the broader concept besides these activities. HRM also comprises activities like empowerment, awareness raising, team building, community mobilization and development, organization development, entrepreneurship development, sensitization and conscientisation, human resources planning and policies. But many researchers have, broadened the scope and integrated the concept of HRD by looking it from socioeconomic angle and giving it another dimension such as physical, intellectual, psychological, social, political, moral and spiritual development. From Socioeconomic experts HRD has become multidimensional rather than being simply confined within the limits of training and development and this multidimensional HRD is integrated HRD. This study is dedicated to discover both aspects of HRD.

**Keywords: Human Resource Development, Training, Education, Skill, Empowerment, Team Building**

## Introduction

Human Resource Development (HRD) is an important and very attention receiving discipline of present time. It is a relatively young academic discipline, but an old and well-established field of practice (Swanson and Holton n.d). Researchers have developed new theories and conceptual frameworks that address a broad range of phenomena of interest to the HRD profession (Torraco

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2004). A key area of inquiry has been to try and figure out the current boundaries of HRD (Metcalf and Rees 2005) but defining HRD has not been so straightforward, and the writers and researchers are continually debating the issue, and there seems to be no consensus, despite of the fact that numerous efforts have been made to define HRD (Haslinda 2009).

Metcalf and Rees (2005) also expressed by quoting many studies that HRD is relatively a new field of academic study and there is no homogeneity in HRD intellectual inquiry and proliferation of global HRD. Research suggests that we should, at least, be starting to scratch the surface of the many socio-cultural variations that shape HRD philosophies and practices.

### **Objectives of the Study**

The core objective of this paper is to present an organizational model of HRD encompassing all the aspects of human resource development from an organizational point of view, as well as an HRD model from socioeconomic scholars' point of view.

### **Research Methodology**

This research article has been developed from descriptive secondary information searched by reviewing literature about Human Resource Development (HRD) and Human Resource Management (HRM), published in research journals in the form of research articles, research reports of various organizations and books of Human Resource scholars on this topic.

### **Defining HRD**

Haslinda (2009a) expressed referring many studies that numerous attempts to define human resource development (HRD) by academics, researchers and practitioners have led to confusion in the literature, illustrating the elusive nature of this concept. The process of defining HRD is made still more difficult by the evolving nature of HRD; for example, the term HRD started out as simply —training, and then evolved into —training and development (T&D), and then into HRD. Confusion also arises over the —purpose, the —location and the —intended beneficiary of HRD. This is further complicated by attempts to define HRD from an international or global perspective. The emerging field of national HRD (NHRD) has also been explored and debated and has had notable influence on the definition of HRD. Haslinda (2009a) further narrated that a disagreement

arises, with some authors arguing that it is not possible or feasible to provide a single definition of this concept. In reviewing the literature surrounding the meaning and understanding of HRD, a number of dimensions can be seen to be influencing the evolving and complicated nature of HRD.

### **Defining HRD from Business Managers Viewpoint**

HRD is considered by scholars of Business Administration as a sub discipline of Human Resource Management (HRM), concerned with developing productive skills by imparting training. HRM scholars, Werner and DeSimone (2006 p.5) defined Human Resource Development (HRD) as:

*“A set of systematic and planned activities designed by an organization to provide its members with the opportunities to learn necessary skills to meet current and future job demands”.*

Swanson and Holton (n.d) have also quoted definitions of HRD offered by some authors (*McLagan, Gilley & England and Smith*) as:

“HRD is the integrated use of training and development, career development and organizational development to improve individual and organizational effectiveness” (McLagan).

“HRD is organized learning activities arranged within an organization to improve performance and personal growth for the purpose of improving the job, the individual, and the organization” (Gilley and England),

“HRD is the process of determining the optimum methods of developing and improving the human resources of an organization and the systematic improvement of the performance of employees through training, education and development and leadership for the mutual attainment of organizational and personal goals” (Smith)

Byrne (1999) is of the opinion that HRD is a function in an organization that provides opportunities for an individual worker to improve current and future job performance, while simultaneously best

utilizing human capital in order to improve the efficiency of the organization itself. Ideally, well-developed and well-implemented HRD systems are integral to the company's strategic plan and benefit both the employee and the company.

### **Defining HRD from Socioeconomic Scholars Viewpoint**

Haslinda (2009a) reported, that Harbison and Myers offered the first definition of HRD in 1964. This definition is very broad in perspective, as it elaborates HRD in relation to culture, the economy and social and political contexts rather than individuals and organizations. They defined HRD as:

*“HRD is the process of increasing the knowledge, the skills, and the capacities of all the people, in a society. In economic terms, it could be described as the accumulation of human capital and its effective investment in the development of an economy. In political terms, HRD prepares people for adult participation in the political process, particularly as citizens in a democracy. From the social and cultural points of view, the development of human resources helps to people lead fuller and richer lives, less bound to tradition. In short, the processes of HRD unlock the door to modernization”.*

According to Khan and Khan (2011) this definition, too much broadens and integrates the concept of HRD and makes it Integrated HRD.

### **Dimensions of HRD in Historical Perspective**

Swanson and Holton (n.d.) asserted that it is easy to connect logically the origins of HRD to the history of humankind and the training required to survive or advance. While HRD is a relatively new term, training—the largest component of HRD—can be traced back through the evolution of the human race.

According to Haslinda (2009b) the origin of HRD was suggested to have started, in the USA during the advent of the Industrial Revolution', in 1800s. But some writers argued that the roots of HRD emerged in 1913 when Ford Motor started training its workers to produce mass production on the assembly line.

Haslinda and Hiok (2009) by referring many studies narrated that researchers believe that the debates are complicated by the beliefs and understanding of individual stakeholders and HRD practitioners. Haslinda and Hiok are of the opinion that theorizing and modeling HRD worldwide is a complex task and varies between countries. Although somewhat debatable, several studies in both developed and developing countries have been undertaken to develop a descriptive framework of HRD practices. These studies found that the nature and extent of HRD vary from one country to another and is influenced by the economic, political, cultural, labor market and educational systems of each individual country. In an attempt to explain human resource development, numerous authors have debated the theoretical concepts of HRD, yet a distinctive conceptual and theoretical identity has not been established. Haslinda (2009a) squeezing from many researches has concluded that most countries such as Russia, Germany and Korea equate HRD with training and development (T&D) and the main focus is on activities related to training. USA scholars have charted the intellectual history and origin of HRD within human development (psychology and education) and human capital (economics and management). In the United Kingdom scholars have highlighted the importance of culture, leadership and organizational learning as components of HRD processes. The terrain of HRD inquiry has thus perhaps always been multidisciplinary.

Jaishi (n.d.) expressed that HRD has gained increasing application as a goal, and as a process in the developmental field. As a goal, it is equated with the development of human capacity and uplift of human aspirations. In terms of process, HRD involves activities related to education, training, empowerment, awareness raising, skills enhancement, team building, community mobilization and development, organization development, entrepreneurship development, sensitization and conscientisation, human resources planning and policies. In the Indian concept of HRD (expressed in —The National Concept of HRDII), education and culture constitute the core of the strategy, however, it is not education in the narrow sense of schooling, but a broad concept encompassing health, nutrition, employment, science & technology, equality and special attention to weaker groups, education being used as an instrument for peoples development and access to opportunities and facilities in all these areas.

## **HRD from Organizational (or Managerial) Viewpoint**

Livingstone and Raykov (2005) quoting some studies analyzed that with the current expansion of the global economy and the fast-changing evolution of technology and innovation, organizations are facing an ongoing need for employee learning and development. As knowledge increasingly becomes a key factor for productivity, it has also become a currency for competitive success. Understanding factors that contribute to organizational learning and the transfer of knowledge to the workplace environment are essential to human resource development (HRD). The culture and environment of an organization can influence the types and numbers of learning-related events and employee job satisfaction as well as employee motivation to transmit newly acquired knowledge to the workplace context.

### *(I) Organizational Narrow Concepts of HRD*

Fisher (2005) declared HRD as one of the more moral management functions, which is intended to help people to learn and develop. David Weir, a professor of Intercultural Management in France is of the view that HRD uses training and development to identify, assure, and help to develop the key competencies that enable individuals to perform current or future jobs with planned individual learning accomplished through training, on-the-job learning, coaching or other means. HRD uses organization development as a focus for assuring healthy inter- and intra-unit relationships and helping groups to initiate and manage change by facilitating individuals and groups to effectively impact on the organization as a system. Haslinda (2009b) Located the HRD by its functions and expressed that the function of HRD is to provide learning, education and training to the human resources selected and recruited.

### *(ii) Organizational Broader Concepts of HRD*

Gulcin (2006) is of the opinion that HRD encompasses the broad set of activities that improve the performance of the individual and teams. Schmidt and Kunzmann (2006) revealed in "*holistic view on human resource development*" that HRD must be understood in a broad sense, incorporating formal training, self-directed learning, informal and collaborative learning activities.

Egan, et al. (2004) expressed with reference to (Kuchinke 1996) that HRD has extended beyond a narrow concentration on training to include organizational and systems-level issues that



influence the development of broad skill sets, abilities, and knowledge associated with learning in technical, social, and interpersonal areas. Metcalfe and Rees (2005) expressed by extracting from many studies that management and organizational writers have noted, the field of HRD has expanded beyond training and development to include a strong connection to corporate strategy, individual responsibility for learning, extension into team learning, incorporation of career development, an emphasis on internal consultancy, organizational learning and knowledge management and the nurturing of the intellectual capital of an enterprise.

Swanson and Holton (n.d.) expressed that HRD is a process of developing and unleashing expertise for the purpose of improving individual, team, work processes, and organizational system performance. HRD efforts typically take place under the additional banners of training and development and organization development as well as numerous other titles. Two major realms of practice take place within HRD, One is an organization development (OD); the other is training and development (T&D). OD focuses at the organization level and connects with individuals, while T&D focuses on individuals and connects with the organization.

#### *HRD from Socioeconomic Scholars Viewpoint*

Egan, et al. (2004) expressed with reference to (Kuchinke 1996) that HRD has extended beyond a narrow concentration on training to include organizational and systems-level issues that influence the development of broad skill sets, abilities, and knowledge associated with learning in technical, social, and interpersonal areas.

Abdullah (2009) squeezing from many researches has concluded that most countries such as Russia, Germany and Korea equate HRD with T&D and the main focus is on activities related to training. On the other hand, in other countries, such as in Thailand, Singapore and India the scope of HRD is seen to be very broad, encompassing activities related to the possibility of developing human resource's physical, emotional, spiritual and intellectual improvement as well as improving their technical and productive skills.

Kuchinke (1996) asserted that HRD has extended beyond a narrow concentration on training to include organizational and systems-level issues that influence the development of broad skill

sets, abilities, and knowledge associated with learning in technical, social, and interpersonal areas.

According to Rao (1995) the scope of HRD is extended, at one side, to developing competencies of human resource by enhancing knowledge, building skill, changing attitude and teaching values, and at the other side, the creation of conditions through public policy, programs and other interventions to help people to apply these competencies for their own and other benefits and making things happen. In the words of Bacchus (1992) the ultimate goal of HRD in any country is to improve the quality of life of its entire people and not merely concerned with providing the necessary skills to individuals. The concept of HRD deals with many facets of development of individuals, including their physical, intellectual, emotional, political, and spiritual aspects. According to Khan, (2009) Economic (financial) development is also an important aspect of HRD and its physical, emotional and intellectual development depends too much on its economic development.

Abdullah (2009) reported that Harbison and Myers offered the first definition of HRD in 1964 (quoted above). This definition is very broad in perspective, as it elaborates HRD in relation to culture, the economy and social and political contexts rather than individuals and organizations.

According to Rao (1995) people earn their food and living by working and engage themselves in productive activities for which a combination of both physical and intellectual development is important. Physical development comes from good nourishment and medical care. Intellectual development comes through the process of education and socialization. Social development involves developing the ability to live as the member of the society or a group and contribute to it, at the same time deriving benefits from it. Political development ensures human dignity through freedom of expression, democratic participation and an opportunity to influence things that in turn influence the individual's living. Moral and spiritual development is required to bring order, discipline and peace in the life. Thus all aspects of development are integral part of HRD. Rao (1995) expressed that ultimately what is important, is human satisfaction and the quality of life. Developing people is the essence of any HRD effort and it is an important goal of all other development activities (plans, policies, programs, establishment of new structures, mechanism).

All forms of development (economic, technological, ecological, agricultural, industrial, etc.) are ultimately meant to serve people in terms of improving their happiness through better quality and standards of life because according to the Indian concept (The National Concept of HRD) of HRD, development is not just about factories dams and roads. Development is basically about people. The goal is the people's material, cultural and spiritual fulfillment.

Tan (1996) restricted himself while discussing HRD in his paper to the extent of training and development of people through education, but admitted by referring Muqtada & Hildeman (of the Working Group on HRD Strategies, Commonwealth Secretariat 1993), that, HRD in an integrated sense also encompasses health care, nutrition, population policies and employment. Tans word is quoted as:

*“HRD in an integrated sense also encompasses health care, nutrition, population policies and employment (Muqtada & Hildeman 1993; Working Group on HRD Strategies, Commonwealth Secretariat 1993). Though important, these aspects of HRD will not be dealt with.”*

In the opinion of Bacchus (1992) the ultimate goal of HRD in any country is to improve the quality of life of its entire people and not merely concerned with providing the necessary skills to individuals. The concept of HRD deals with many facets of development of individuals, including their physical, intellectual, emotional, political, and spiritual aspects.

#### *(I) Economic/Financial Development of HR*

When people are getting good income they will be economically developed and healthy and well nourished and medicated, by purchasing potent diet medicines and leading hygienic life. When people would be well nourished, healthy and free from diseases they would be a developed human resource (Khan 2009). Many research studies prove it.

People will be un-satisfied and lose motivation if not properly paid. They will quit the organizations, causing increase of turnover and leading to increased expenditure of selection,

recruitment and training (Rao 1995). In an analysis of lessons learnt from human resource development in Japan, Singapore, South Korea and Taiwan. Quah (1993) concluded, that comprehensive reforms are needed in public personnel management in the direction of attracting, retaining, developing and utilizing competent employees.

In general terms, the determinants of health have long been well known. One is people's purchasing power (which depends on their incomes and on prices) over certain goods and services, including food, housing, fuel, soap, water and medical services. Another is the healthiest environment-climate, standards of public sanitation and the prevalence of communicable diseases. A third is people's understanding of nutrition, health and hygiene. There is some evidence that all three factors are important, but that low income is the central cause (The World Bank 1980).

Ulimwengu (2009) a research fellow of IFPRI referred Strauss, (1986) who using cross-section data on hoe-cultivating farm household from Sierra Leone, investigated the efficiency wage hypothesis, or the relationship between nutritional quality and agricultural productivity. He found that effective family labor, which is a function of actual labor and per capita daily calorie intake, is a significant input in the production process. His study shows a highly significant effect of calorie intake on labor productivity.

But proper calories are found in proper diet and with low income people cannot purchase proper and required diet and remain malnourished. Most malnutrition reflects a shortage of calories, protein, or both and leads to diseases causing poor working. Some diets are inadequate because they lack specific nutrients. Anemia, resulting primarily from blood loss and too little iron, is the most prevalent example of this. A recent estimate is that at least 500 million people are anemic. The consequent fatigue, the apparent lethargy and apathy, and the adverse effects on productivity and school performance can be so common in poorer societies as to appear normal. Goiter is another common disorder caused by a micronutrient deficiency-in this case, iodine. Available evidence suggests that iodine deficiency can stunt physical and mental development, and reduce energy and motivation (The World Bank 1980).

Vitamin A deficiency is also extensive-affecting, it has been suggested, half the children in many developing countries. In an extreme form it can lead to blindness. But in less serious forms it can still lead to poor eyesight, undermining educational performance and adult earning power. It can also affect growth, skin condition and the severity of other nutritionally related illnesses (The World Bank 1980).

Malnutrition also affects earnings. In part, this reflects the consequences of childhood malnutrition on mental development and educational achievement; but there are also links between nutrition and physical productivity. In the long run, adults can only be as energetic as their diets will allow-otherwise they would gradually become emaciated and ill. For example, farmers who are badly malnourished put in fewer hours per hectare than those who are better nourished. Research on the relation between nutrition and productivity has not been extensive, but a few studies have suggested that greater height or weight leads to greater physical productivity (The World Bank 1980).

### *(ii) Physical Development of HR*

The success of an organization depends on the effective performance of people occupying various roles in the organizational structure (Kumar 2005). People cannot function and make things happen unless they are physically well developed, healthy and free from diseases (Khan 2009). Thus, proper potent food and freedom from disease become important. People would be physically fit when they are well nourished and healthy and motivated when they enjoy better quality and standard of life. This would be achieved when they would receive a proper share in the production or development in the form of increased income or financial benefits comfortable working conditions, proper working hours, holidays for leisure, recreational facilities and self-respect (Khan 2009).

Human resource development holds the key for economic development by enabling people to become more productive, because economic development depends upon the level of industrial activity of production, which onward depends upon the productivity of human resources. Productivity of human resource depends upon its competencies and conditions (through public policy, programs and other interventions to help the people) to apply these competencies. These conditions are Physical fitness and motivation (Rao 1995).

Rao (1995) is of the view that productivity is determined by the number of hours of work and its intensity. And an undernourished or sick person cannot work long or properly. Absence of medical facilities further reduces productivity. Increased expenditure on food to the extent, it raises productivity can be termed as an investment. Better diet, housing and control of communicable diseases have raised the quality of life everywhere. Regarding the importance of living standards, health and nutrition Rao quoted many studies of the World Bank and other researchers (as mentioned in the text) revealing, that proper nourishment and health care increase productivity and bad health cause decrease in productivity. A world bank study quoted a text of 1890 by Alfred Marshall, who wrote that health and strength, physical, mental and moral are the basis of industrial wealth; while conversely the chief importance of material wealth lies in the fact that when wisely used it increases the health and strength, physical and mental, and moral, of the human race (World bank 1991). Rao (1995) referred a report of the World Bank of the year 1991 based on some studies concluding that better health and nutrition raise workers productivity, decrease the number of days they are ill, and prolong their potential working lives such as in Sierra Leone a 10 percent increase in calories in-take of farm workers consuming 1500 calories a day raised output by 5 percent. Similar results have been found among Kenyan road construction workers with a daily in take of 2,000 calories. By reducing morbidity and debility, the malaria eradication program in Sri Lanka in the 1940s led to a ten percent rise in incomes, (World Bank 1991). A study of (Basta et al. 1979) on the rubber plantation workers in Indonesia revealed that treatment of anaemic workers with iron tablets for a period of 60 days (at a per capita cost of \$ 0.08) resulted in an increase in productivity by 15 to 20 percent as compared to control groups. Another study estimated that output increases by about 10 to 20 percent for every 10 percent rise in haemoglobin level. After reviewing several studies Behrman and Deolalikar (1998) came to the conclusion that Nutrient intake might affect productivity without altering indicators of health status because nutrient changes may be transferred largely to energy expenditure changes, including some that are productivity related.

According to Yip (1993) in developing countries, where a large proportion of the economic output is based on physical labor, a major reduction in work capacity can be of great economic consequence. It is well established that significant anemia related to iron deficiency reduces work performance. The adverse effect of iron deficiency on the work or energy output appears to be

mediated through a combination of decreased oxygen carrying capacity from anemia and the effect of iron deficiency on muscle function. Iron supplementation studies among rubber tappers in Indonesia and tea pickers in India have clearly shown the gain in productivity after treatment of significant anemia. If the average reduction in productivity is 20% for an anemic person, in a "country where 50% of the women and 20% of the men are affected, the impact of iron deficiency anemia equals a total loss of 5-7% of the national economic output. Therefore, the economic consequence of iron deficiency in some poor countries may be substantial.

Rao (1995) quoted a World Bank study of household survey data from nine countries, suggesting that the economic effects of illness may be substantial. An average adult worker in Peru might expect to be ill 4.5 days a month and miss about one day of work as a result; in Ghana, the corresponding figures were 3.6 and 1.3 days. In the United States, workers aged between 18 and 44 miss, on an average, one quarter of a day's work in a month.

The results of study of Kim et al. (1997) conducted on the impact of Onchocercal Skin Disease (OSD) on productivity at a coffee plantation in Ethiopia revealed that employees, of the plantation labor force, suffer significant losses in economic productivity as a result of OSD and their daily income also decreases.

Hawkes and Ruel (2006) expressed that in the agricultural population, workers in poor health are less able to work, a situation that cuts productivity and income, perpetuates a downward spiral into ill health and poverty, and further jeopardizes food security and economic development for the wider population.

World Bank (2007) pointed out that illness and death from HIV/AIDS, malaria, tuberculosis, and other diseases reduce agricultural productivity through the loss of labor, knowledge of productive adults, and assets to cope with illness.

IFPRI researcher Ulimwengu (2009) wrote (with reference to Fogel 1994; 2004) that indeed, improvements in health care increase the productivity of labor, especially if people switch from low-productivity jobs to high productivity jobs as their health improves. In particular, there is



strong evidence that growth in early-industrialized countries, was associated with significantly increased caloric intake and therefore greater height and body mass.

*(iii) & (iv) Intellectual and Socio-Cultural Development*

According to Indian concept (expressed in —The National Concept of HRD) of development, it is not just about factories dams and roads, development is basically about people, the goal is the people's material, cultural and spiritual fulfillment.

Jaishi (n.d.) expressed that HRD has gained increasing application as a goal, and as a process in the developmental field. As a goal it is equated with the development of human capacity and upliftment of human aspirations. In terms of process, HRD involves activities related to education, training, empowerment, awareness raising, skills enhancement, team building, community mobilization and development, organization development, entrepreneurship development, sensitization and conscientisation, human resources planning and policies. The emerging concept of HRD puts people at the centre of development, because development is not only by people, it is also for people. Thus human development, instead of stressing on the formation of human capital for development, emphasizes on enlarging people's choices in order to improve their quality of life.

In the Indian concept of HRD (expressed in — THE NATIONAL CONCEPT OF HRD), education and culture constitute the core of the strategy, however, it is not education in the narrow sense of schooling, but a broad concept encompassing health, nutrition, employment, science & technology, equality and special attention to weaker groups, education being used as an instrument of peoples development and access to opportunities and facilities in all these areas.

Kumar (2005) expressed that HRD is not only training for operational skills but also includes behavioral skills as it ultimately aims to create an enabling culture wherein the capabilities are —acquired, sharpened and used.

According to Schmidt and Kunzmann (2006) human resource development must be understood in a broad sense, incorporating formal training, self-directed learning, informal and collaborative learning activities. The ontology should avoid an overly bias towards one of these forms, although

it is clear that formal training is much better understood than informal and collaborative learning activities, which is still subject of major research activities.

*(v) Psychological (Emotional and Motivational) Development*

The success of organization depends on effective performance of people occupying various roles in the organizational structure (Kumar 2005). The industrial revolution with its emphasis on quantity output and the prevalent understanding of how people could be made to produce more (work), had led to the dehumanization of the workplace. People were viewed as mere substitutes of machines, and important components of human beings, viz., emotions, needs, aspirations, expectations, etc., had no place. This realization had given way to various strategies. Primarily they were related to motivation in the context of work. In other words efforts were directed to make the work more interesting, valuable, and meaningful to people so that they were involved in doing the activities beyond a mechanical perspective. For this, one approach was to recognize the emotions and needs of human beings and the other was to change the content of activity so that the individual is motivated, willing and looks forward to doing this activity. Both the aspects, i.e. the feelings and the job contents, are interlinked and therefore, organizations some times tinkered with the job contents and sometimes paid attention to human feelings and needs (Kumar 2005).

Samad (2007) expressed that adapting new approach of management to boost up organization performance and high quality of services as well as maintaining high level of motivation is priority to managers. One of the techniques used by organization and that has attracted great interest from scholars and practitioners is employee empowerment.

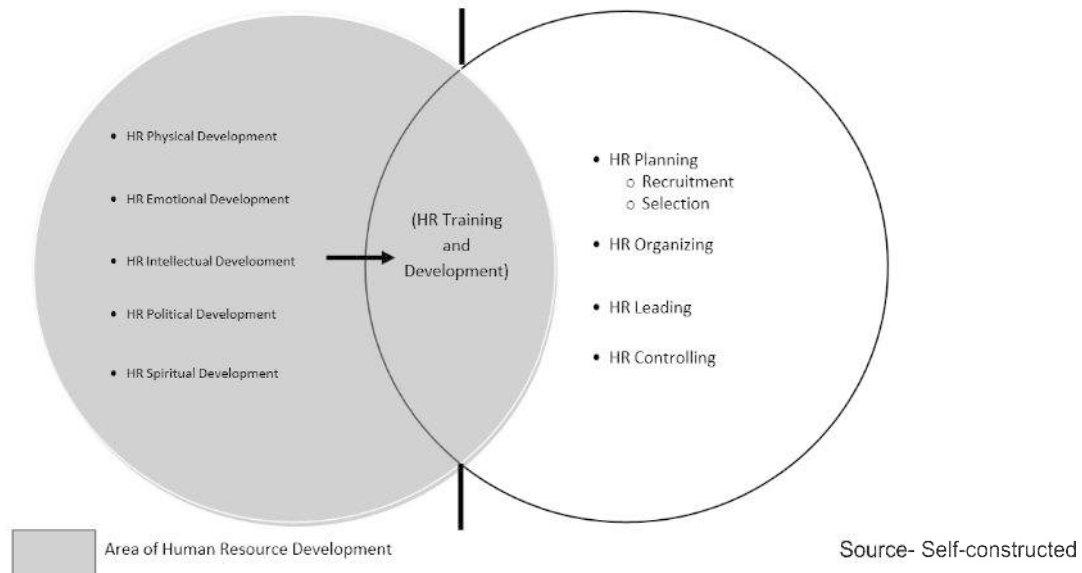
Gagne et al. (1997) concluded that the dimensions of empowerment differentially affect workers' intrinsic task motivation. Carter (2009) and Lee & Koh (2001) inferred that when employees are involved they are empowered and when they feel empowered they are motivated. Tuuli and Rowlinson (2007) are of the opinion that a key presumption of empowerment theory is that empowered individuals or groups should perform better than those relatively less empowered. There appear to be an implicit assumption of universality of the empowerment-performance relation. Empowerment effects on performance may not be direct, but may operate through motivation, ability and opportunity to perform.

Fashoyin (1997) opined that the workers in competitive economic environment become more important agent in mobilizing all factors of production towards achievement of a competitive advantage and motivation of the workforce to commit itself to work and maintain uninterrupted and effective operations is a very important factor in the promotion of productivity for economic growth.

Diagram 1: Socioeconomic and Human Resource Management View Point

**Human Resource Development**  
Socioeconomic (integrated) view point

**Human Resource Development**  
Human Resource Management view Point



## Discussion and Conclusion

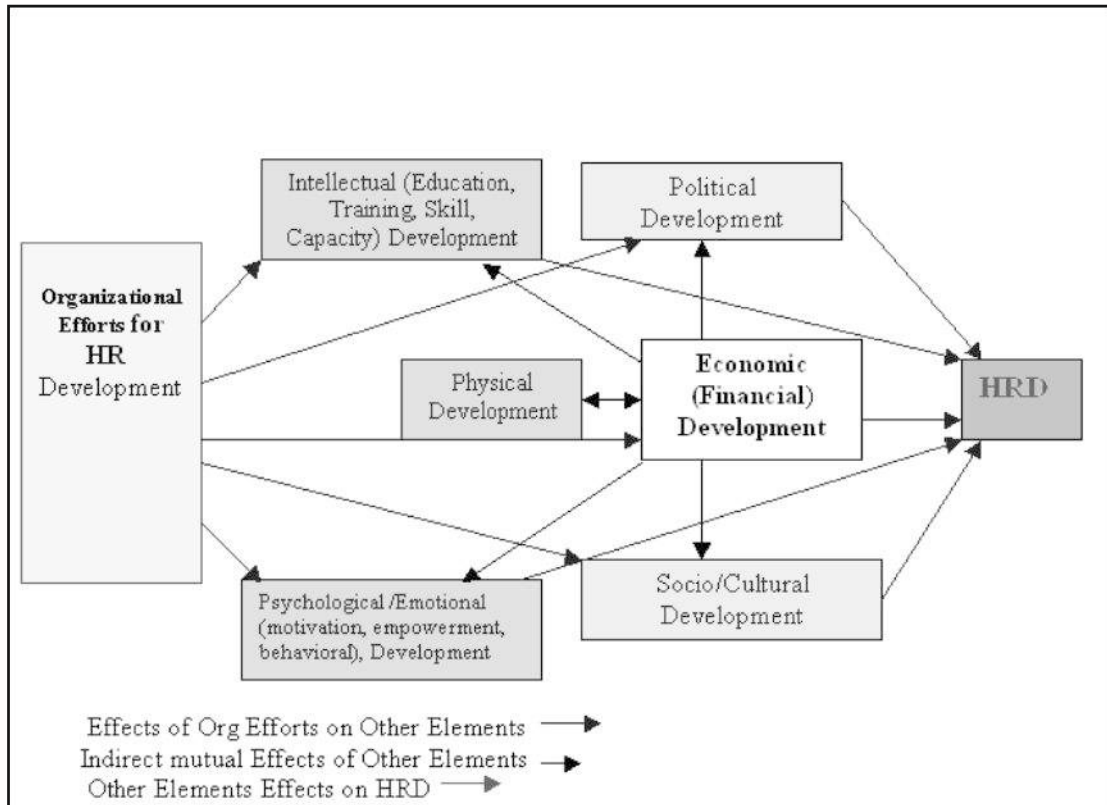
From the above literature it is revealed that HRD has different degrees of concepts in HRM perspective and in Socio-economic perspective (integrated HRD) as defined by Harbison and Myers in 1964 and elaborated by Khan and Khan (2011). Definition of Harbison and Myers is very broad and useable in socio-economic perspective as elaborated in diagram -1 and diagram -2 (Gray, yellow and green area of diagram-1).

It is Concluded that HRD in organizational perspective is focused in narrow sense by its function

on learning, education, training and development to the human resources selected and recruited to identify, assure, and help to develop the key competencies that enable individuals to perform current or future jobs with planned individual learning accomplished through training, on-the-job learning, coaching or other means (green area of diagram-1). Later on scope of HRD in organizational perspective has broadened and extended beyond a narrow concentration on training and development to include organizational and systems- level issues that influence the development of broad skill sets including behavioral skills, abilities, and knowledge associated with learning in technical, social, and interpersonal areas and also expanded to include a strong connection to corporate strategy, individual responsibility for learning, extension into team learning, incorporation of career development, an emphasis on internal consultancy, organizational learning and knowledge management and the nurturing of the intellectual capital of an enterprise, so HRD is a process of developing and unleashing expertise for the purpose of improving individual, team, workprocess, and organizational system performance. HRD along with education and training also involves activities related to, empowerment, awareness raising, skills enhancement, team building, community mobilization and development, organization development, entrepreneurship development, sensitization and conscientisation, human resources planning and policies (yellow and green area of diagram -1).

It is also revealed from the above literature that HRD from socio-economic perspective is a composite of economic/financial, physical, psychological (emotional, motivational), intellectual (knowledge, training, skill building, attitudinal development), socio-cultural, political and spiritual/ethical development. The Physical (health and freedom from diseases), Psychological (emotional, motivational,), Intellectual (education, training, skill building) development, Socio-cultural, and Political development of HR depend on or act through Economic (financial and resourcefulness) development. Because if person is not financially sound s/he cannot purchase good food & medicine, cannot get good education & training, cannot be happy & satisfied, cannot be a respectable member of society (specially in societies where wealth is a status symbol) and cannot be free to exercise political rights of opinion or vote. This is expressed in the form of a HRD model in the diagram -2.

Diagram 2: Showing organizational Effects for Integrated Socio-Economic HRM Model



Source- Self-constructed

Therefore it is concluded that HRD in socio-economic perspective has a broader scope & many aspects, and has attained an integrated status encompassing many dimensions of development like economic, physical, social, political, psychological and intellectual.

So it is elaborated that HRD is to develop competencies of the people and improving their quality of life by providing them better share in the income of country or any organization/firm, in the form of better salary and other financial benefits (wages/salaries, bonus, health allowance, education allowance, recreation allowance, etc) boosting their motivation by empowering them, reducing the remuneration gaps between different categories of people, providing them more leisure by reducing working hours, comforting their lives by bettering work places and developing them socio-politically by giving them representation, freedom of expression and satisfying them by providing security of job and removing their fears. Hence the definition of Harbison and Myers, which is broad in perspective, and elaborates HRD in relation to culture, the economy and social and political contexts is very near to integrated concept if two more elements. i.e. physical development and psychological development (with reference to motivation) are also added.

## References

- Abdullah, H 2009, 'Definitions of HRD: Key Concepts from a National and International Context', *European Journal of Social Sciences*, vol. 10, No. 4.
- Bacchus, MK 1992, *Human Resource Development: Definition, Importance and Strategies*, Common Wealth Secretariat, London.
- Byrne, SM 1999, 'The Value of Human Resource Development to an Organization; Providing Technical Assistance to Small Manufacturing Companies' PhD Dissertation submitted to the Faculty of the Virginia Polytechnic Institute and State University in Adult Learning and Human Resource Development, Unpublished
- Carter, JDT 2009, 'Managers Empowering Employees', *American Journal of Economics and Business Administration*, vol. 1, no. 2, pp. 39-44, © 2009 Science Publications.
- Egan, TMI, Yang, B & Bartlett, KR 2004, 'The Effects of Organizational Learning Culture and Job Satisfaction on Motivation to Transfer Learning and Turnover Intention', *Human Resource Development Quarterly*, vol. 15, no. 3, Fall 2004, pp 279-301, © 2004 Wiley Periodicals, Inc.
- Fashoyin, T 1997, 'Labour Relations and Productivity Enterprise and Management Development, Working Paper EMD/18/E, Enterprise Development Department, ILO, Geneva, Retrieved on December 7, 2007, from [http://www.ilo.org/dyn/empent/docs/F111PUB100\\_01/PUB100\\_01.htm](http://www.ilo.org/dyn/empent/docs/F111PUB100_01/PUB100_01.htm)
- Fisher, C 2005, 'HRD Attitudes: Or the Roles and Ethical Stances of Human Resource Developers', *Human Resource Development International*, vol. 8, no. 2, June 2005, pp. 239 – 255.
- Gagne, M, Senecal, CB & Koestner R 1997, 'Proximal Job Characteristics, Feelings of Empowerment, and Intrinsic Motivation: A Multidimensional Model', *Journal of Applied Social Psychology*, 1997, vol. 27, no. 14, pp 1222-1240
- Gulcin 2006, 'Human Resource Development: a Strategic Approach', Information Services papers, Bond University, [http://epublications.bond.edu.au/library\\_pubs/12](http://epublications.bond.edu.au/library_pubs/12).
- Haslinda A 2009a, 'Evolving Terms of Human Resource Management and Development', *The Journal of International Social Research*, vol. 2, no. 9.

- Haslinda A 2009b, 'Definitions of HRD: Key Concepts from a National and International Context', *European Journal of Social Sciences*, vol. 10, No. 4.
- Haslinda A & Hiok, OM 2009, 'Modelling HRD Practices in Malaysian Manufacturing Firms', *European Journal of Social Sciences*, vol. 8, No. 4, pp. 640-652.
- Hawkes, C & Ruel, MT 2006, 'Understanding the Links Between Agriculture and Health: A 2020 Vision for Food, Agriculture, and the Environment', *The International Food Policy Research Institute (IFPRI) 2020 FOCUS* -13.
- Kim, A, Tandon, A & Hailu, A 1997, 'Health and labor productivity: Economic Impact of Onchocercal skin Disease', *Policy Research Working Paper* 1836, World Bank.
- Jaishi, K n.d., 'Human Resource Development II (PDDP's activities by Mr. Krishna Pd. Jaishi DDC Chairman,)' Retrieved September 24, 2008 from <http://www.pddp.org.np/pub/ar99/hrd.htm>
- Khan, MT 2009, 'Industrial Relations: Role of Labor Unions in Organizational Climate in Pakistan's Perspective', PhD Dissertation (Submitted to National University of Modern Language, Islamabad, Pakistan for PhD in HRD), unpublished.
- Kuchinke, KP 1996, 'Classification of human development in HRD', *Organization Development Journal*, vol. 14, no. 1, pp. 55–69.
- Kumar, S 2005, 'Human Resource Management', in — CENTRAL BANK MANAGEMENT (ed) Indian Institute of Banking & Finance/ Macmillan, The Arcade', World Trade Centre, Cuffe Parade Mumbi 400 005, India.
- Livingstone, DW & Raykov, M 2005, '„Union Influence on Worker Education and Training in Canada in Tough Times', *Ontario Institute for Studies in Education of the University of Toronto, Canada, JUSTLABOUR*, vol. 5.
- Metcalfe, BD & Rees, CJ 2005, 'Theorizing Advances in International Human Resource Development', *Human Resource Development International*, vol. 8, no. 4, pp. 449 – 465.
- Muqtada & Hildeman (of Working Group on HRD Strategies, Commonwealth Secretariat 1993).



- Quah, JST 1993, Human Resource Development in Four Asian Countries: Some Lessons for the Commonwealth Countries, Commonwealth Secretariat, London.
- Rao, TV 1995, Human Resources Development, Experiences, Interventions, Strategies National Book Foundation, Islamabad, Pakistan.
- Samad, S 2007, Social Structural Characteristics and Employee Empowerment: The Role of Proactive Personality', *International Review of Business Research Papers*, vol. 3, no.4, pp.254-264.
- Schmidt, A & Kunzmann, C 2006, Towards a Human Resource Development Ontology for Combining Competence Management and Technology-Enhanced Workplace Learning, Proceedings of *Ontocontent 2006*, Springer, Lecture Notes in Computer Science (Lncs}, year {2006}, pp1078- 1087, publisher Springer.
- Swanson, RA & Holton, EF III n.d., *Foundations of Human Resource Development*, 2nd edition, Published by Berrett-Koehler Publishers.
- Tan, PB 1996, Human Resource Development in Asia and the Pacific in the 21st Century- Issues and Challenges for Employers and Their Organizations, Paper presented at the ILO Workshop, Retrieved, December, 05, 2007 from, <http://www.ilo.org/public/english/dialogue/actemp/papers/1998/tanhrd2.htm>.
- The National Concept of HRD, Assistance for Strengthening Human Resources Development Capabilities in Asia and the Pacific Retrieved September 23, 2008 from <http://education.nic.in/cd50years/z/8T/F3/8TF30101.htm>.
- Torraco, RJ 2004, Challenges and Choices for Theoretical Research in Human Resource Development', *Human Resource Development Quarterly*, vol. 15, No. 2, pp 171-188, ©2004 Wiley Periodicals, Inc.

# **Environment issues in a small pocket of rural India: An investigatory action research towards easing lives and environment care**

**Chetna Rajput<sup>1</sup>**

**Dr. Rajeev Johari<sup>2</sup>**

## **Introduction**

Rising human population and increasing consumption of natural resources happen to be the cause for every environmental issue of modern world. Environment comprises of the physical and biotic habitat in which we breathe. Environmental problems on the one hand influence us negatively on the other man and his environment unfriendly deeds directly and indirectly impact ecology and environment. Environmentally responsible vision and work order assumes significance if we really care to protect earth today for a better tomorrow. Creating a favorable aura of environment conscious citizens across regions through formal and informal sensitization programs is the pressing need of time. Awareness and education measures need to touch upon offering cost effective means towards containing pollution of soil, water, air in consonance with harmful impacts of day to day technological developments and progress that necessitate continuous stock taking of strategies for ensuring maximum effectiveness and resourceful reach with the high end goal of overall empowerment of community in particular and society in general. Environment education and climate change is a broad subject that should cater to ecological, political, natural, technological and sociological facets of mans relationship with environment eliciting workable simple solutions towards prevention of environmental hazards in rural pockets, urban pockets and fragile natural habitats.

Environment, cleanliness and security are issues of topical significance in contemporary times not just in urban but in rural settings too. In this context the problems plaguing villages and its state of helplessness needs to highlighted and brought to the notice of policy makers. Even the government has not focused satisfactorily on the changing climate framework and problems arising due to them in day to day lives of people. Somehow environmental issues and their solutions have not garnered the kind of attention they should have, making living in society and

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villages difficult and hazardous. It is important to hunt for practical cost effective measures and solutions to environment related problems, with collaboration of government and private institutions. As a matter of fact, the problem can be solved by the government through the implementation of any scheme or project already in force at a theoretical level. When it comes to actual practice though, efforts seem negligible. However, purifying the environment cannot be an objective seen in isolation. If we focus on this problem with a comprehensive approach at the right time, a lot can be achieved. Applying a Recycle Environment Employment and Revenue or REER model that connects the youth and influential people of the village and translating the ensuing problems into an opportunity of source of income can to a great extent overcome all the major and minor emanations of the problem origin that is climate change. This all encompassing perspective can usher in the progress and development of the village besides making the environment better which without question is a subject to be worried about both from the point of view of the present as well as the future generations.

### **Statement of the Problem**

District Baghpatin Uttar Pradesh has many villages like Titrouda, Gwalikhera, Tera around 245 villages in all. The population is 1163991 approximately. Titrouda has a population of around 5000. People in most of these villages face one issue daily, that is of lack of facilities for garbage recycling because of which lot of secondary problems emerge like that of illness, waterlogging of roads, decreasing pond surface among a few major ones. This also leads to regular fights between the villagers on a daily basis. Because of water logging, the road condition deteriorates easily causing wastage of government money and tax payers money. Indian villages have had their own drainage system which because of increasing plastic use usually gets destroyed and is rendered useless. The ever rising garbage pile has shrunk the roads connecting five villages in the district making commuting a taxing exercise.

It is mooted that if we put in some right efforts we can help these villages and to a large extent resolve this issue saving the government and taxpayer's money also. The question is how can we address this problem? One feasible solution is to make it possible to collect the garbage from the villagers and segregate it into two types of recyclable waste like plastics and green waste that can be used for making organic fertilizer. This is not one village's issue. It is the issue for all the villages

in question because not much attention has been paid to the problem which unfortunately has larger repercussion for our environment. Through this exercise income can be generated by selling the organic fertilizers to the farmers at cheap prices. It can tackle the villagers' unemployment problem to some extent besides generating some revenue also. Success can be achieved if the local leaders like the village Pradhan are involved while formulating the design of the model. The recycled plastic too can be used for earning income.

For such a resourceful environment sensitive project assessing the mood of the community assumes significance. To fulfill the same a survey of villagers forms an integral step towards a holistic understanding of the prevailing physical background, readiness for change and willingness to contribute. In light of this a survey was conducted on the villagers of the district.

## **Research Methodology**

### **Source of Data**

All data was collected by doing a face to face interview with the villagers. They were asked questions about their knowledge and garbage management issues faced.

A complete set of structured Questionnaire was prepared and administered for one to one interview with the villagers.

### **Sample size**

Primary data from 80 respondents was taken for the purpose of investigation.

### **Research instrument**

Considering the nature of the study as well as for obtaining authentic information from the respondents, data was collected through a primary source with help of structured questionnaire.

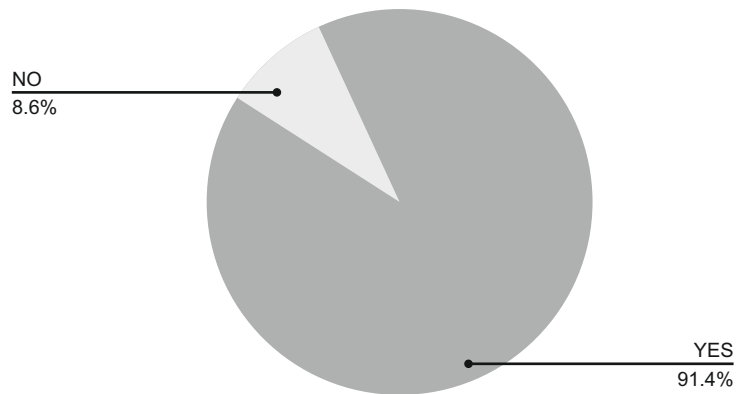
For doing the analysis pie chart was applied.

## Analysis

1. Is polythene pile a major issue in your village?

Yes: 91.4%

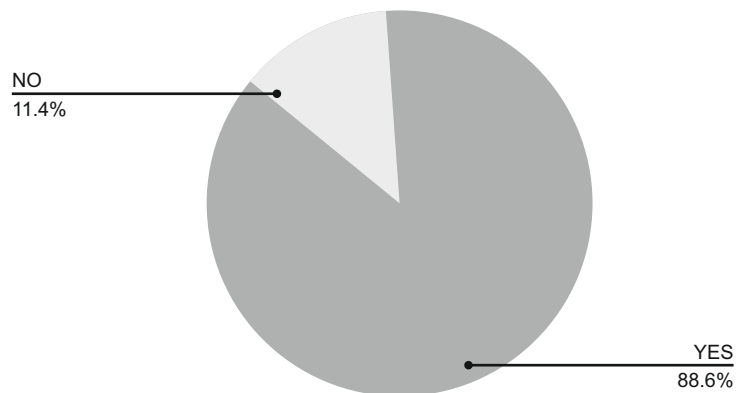
No: 8.6%



2. Has polythene mess eaten up the ponds in the village?

Yes: 88.6%

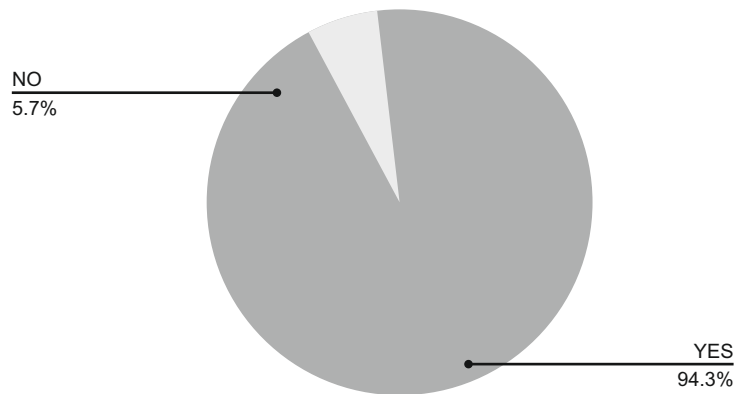
No: 11.4%



3. Has dumping garbage in the village pond over the years led to a big problem?

Yes: 94.3%

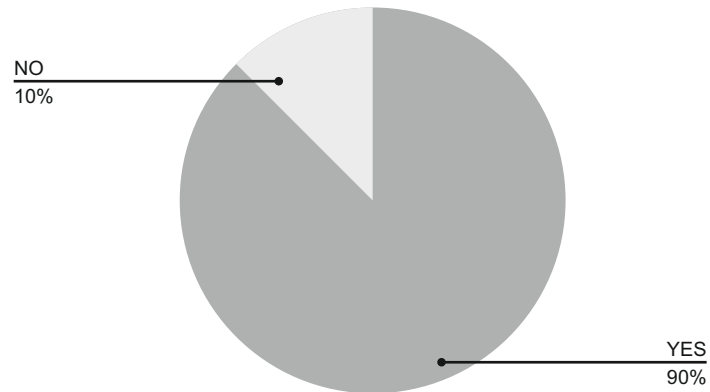
No: 5.7%



4. Is improper waste management the cause of filth and ill health in the village?

Yes: 90%

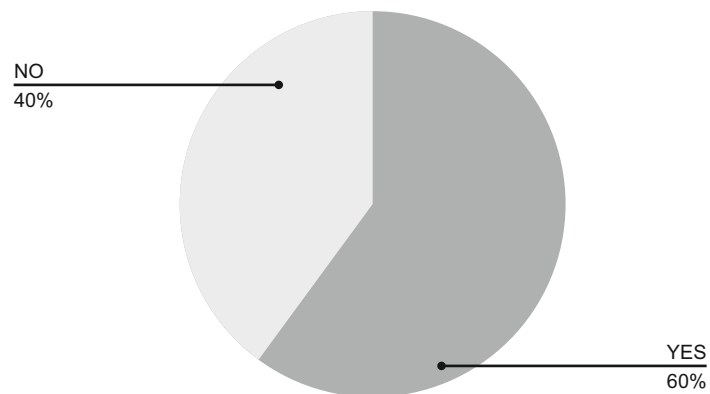
No: 10%



5. Is according to you right to burn polythene?

Yes: 40%

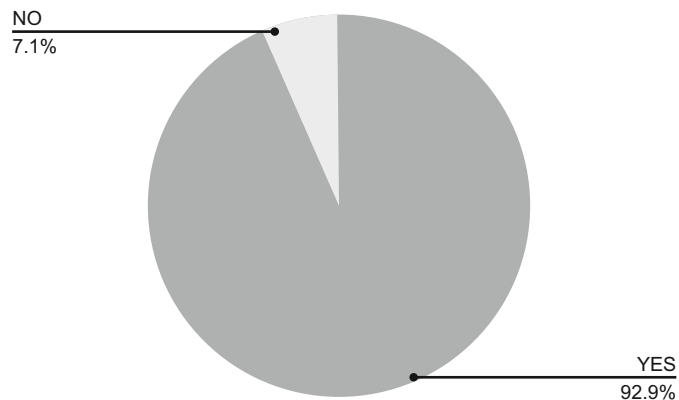
No: 60%



6. Is lack of cleanliness in the village lanes due to polythene mess?

Yes: 92.9%

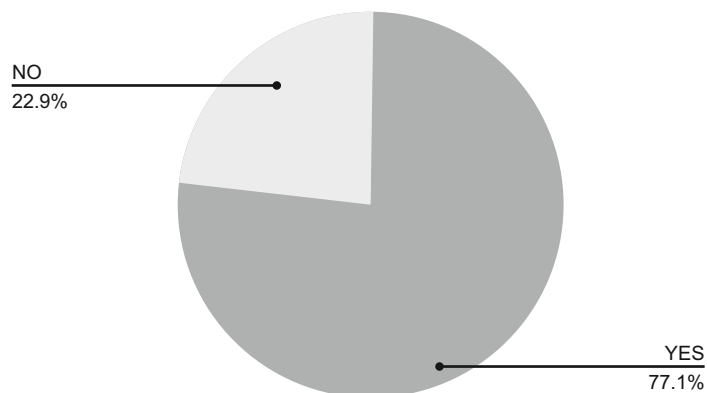
No: 7.1%



7. Should polythene be collected and properly disposed?

Yes: 77.1%

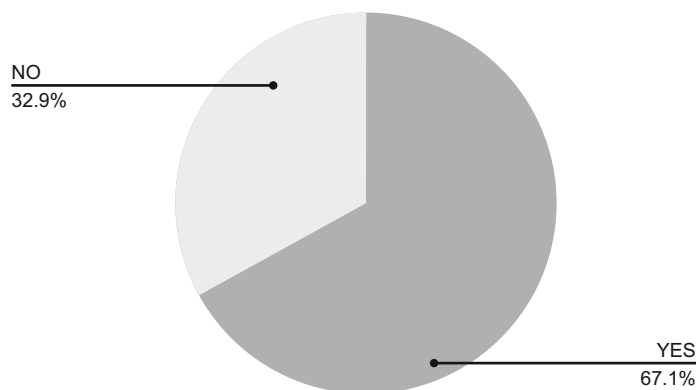
No: 22.9%



8. Is garbage the reason behind frequent rifts among vilagers?

Yes: 67.1%

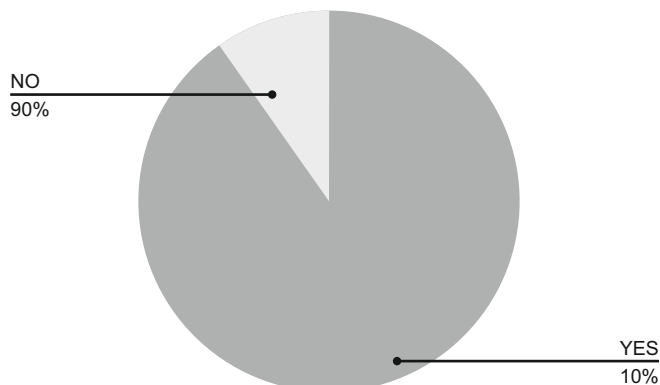
No: 32.9%



9. Is this problem a representative of most Indian villages despite the thrust on Swaccha Bharat Abhiyan?

Yes: 90%

No: 10%

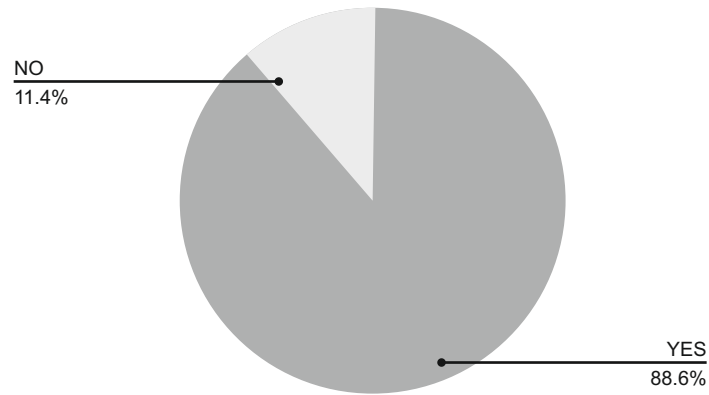




10. Is lack of polythene waste management the reason behind water logging problems?

Yes: 88.6%

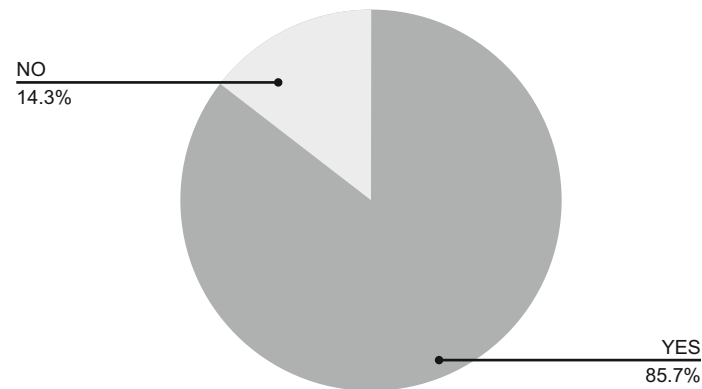
No: 11.4%



11. Is this polythene induced water logging responsible for the pathetic condition of roads in the village?

Yes: 85.7%

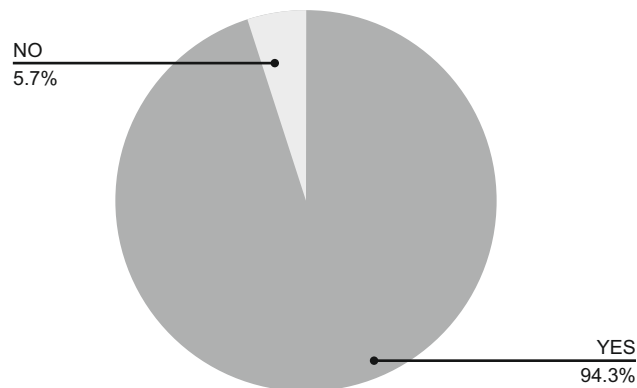
No: 14.3%



12. Do you think these problems can be managed?

Yes: 94.3

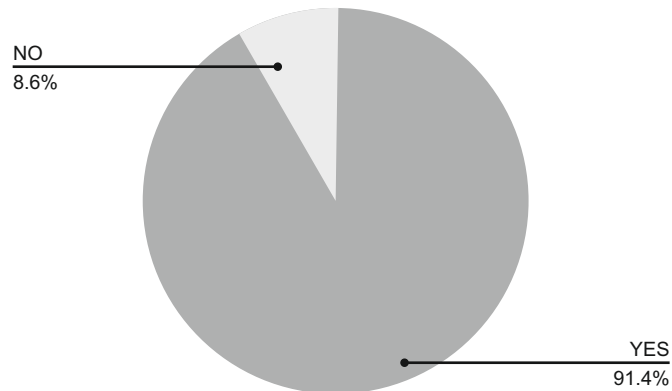
No: 5.7%



13. Do you look forward to development in the village?

Yes: 91.4%

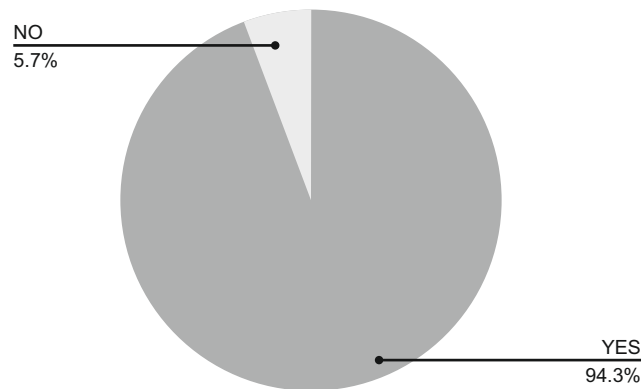
No: 8.6%



14. Are you interested in becoming a partner in your village's progress?

Yes: 94.3%

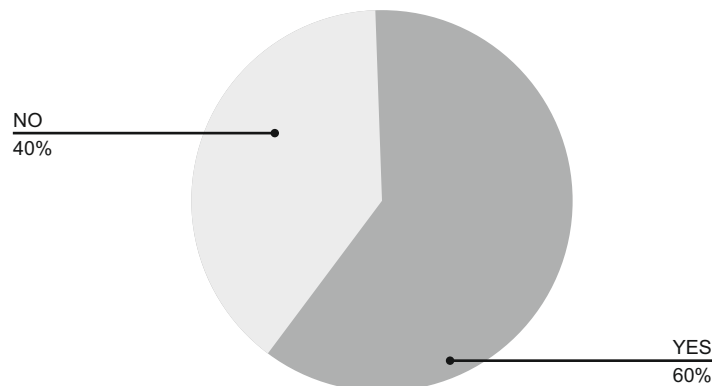
No: 5.7%



15. Is the state of the village with improper drainage and lack of waste management a cause for environmental concern?

Yes: 60%

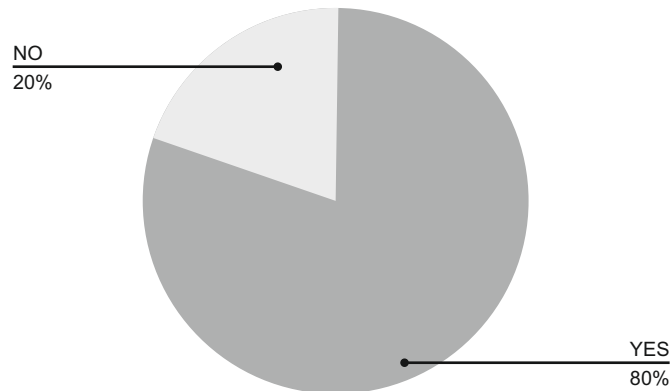
No: 40%



16. Do you consider your living standard to be an integral part of village development?

Yes: 80%

No: 20%



### The Action Plan

Villagers will be involved in voluntary labor contribution for cleaning and segregating the waste piling up on road. This will to a large extent take care of the harmful gases emanating from the untreated waste and resolution of the drainage issues. The green waste will be recycled for organic manuring which again can be sold to agriculturists. The plastic elements would be recycled in the treatment plant which will be installed with the support of local administration by the initiative of the Gram Pradhans application through relevant schemes already in force though only on paper. The recycled plastic would be sold in the market and the revenue generated would be distributed as wages to the honorary villager workers. This small effort by the local community is expected to draw attention of civic authorities to the plight of the villages involved. With consensus a piece of common land can be earmarked as secured landfill with containment measures like liners and leachate collection system to prevent spreading of filth to air, water and soil of areas surrounding it.

### Conclusion

The survey rightly hints at the awareness of the villagers involved to the environment issues as a part of their daily lives and their eagerness to make their village clean and environment friendly and facilitate revenue creation as an added incentive through their dedicated collective inputs subject to the humble support from the administration. The findings reveal that since the menace is impacting day to day lives of villagers in terms of health, social discords, transport difficulties between villages, air pollution, water contamination they are prepared to put in their best foot forward with some expert guidance and combat the problem at their own level. The community approach for sanitation and containing of hazards in the local environment should pressurize the local government for the much needed attention.

# Environmental and Sustainable Energy Ecosystem

**Akanksha Sahu<sup>1</sup>**

**Dr. Indraneel Mandal<sup>2</sup>**

## **Abstract**

The primary objective for deploying sustainable energy in India is to advance economic development, improve energy security, improve access to energy, and mitigate climate change. Sustainable development is possible by use of sustainable energy and by ensuring access to affordable, reliable, sustainable, and modern energy for citizens. Strong government support and the increasingly conducive economic situation have pushed India to be one of the top leaders in the world's most attractive renewable energy market. The government has designed policies, programs, and a liberal environment to attract foreign investment to ramp up the country in renewable energy market at a rapid rate. It is anticipated that the sustainable energy sector can create a large number of domestic jobs over the years. This paper aims to present significant achievements, prospects, projections as well as challenges and investment employment opportunities due to the development of renewable energy in India. The recommendations based on the review outcomes are expected to provide useful information for policymakers, innovators, researchers, industries, associated stakeholders and departments, , and scientists.

## **Introduction**

Environmental pollution is of considerable concern throughout the world. As demand for petroleum increases and the price of fuel also rises, renewable forms of energy are becoming more attractive. The increasing energy demands in the world today due to expanded development efforts and increasing in population, have led to concerns over the limited energy resources. The demand focused attention on a sustainable energy supply implies optimised use of energy, minimised pollution and reduction of fossil fuel energy consumption. Sustainable energy is often referred to as “alternative energy” because it is the better option compared to traditional fossil fuels like coal and oil. Sustainable energy is a significant and focal aspect of

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sustainability and environment, an important consideration for human development and activity. Because of the broad and growing nature of energy use, there are various environmental impacts associated with energy systems; energy is significant to living standards and economic development. Various conditions are necessary to attain or shift toward sustainable energy, including obtaining sustainable energy resources, employing advantageous energy carriers, boosting the efficiency of energy systems, mitigating lifetime environmental impacts of energy systems, and addressing nontechnical aspects of sustainable energy, such as living standards and lifestyles, economics and affordability, and societal acceptability and equity. It describes sustainability, energy and its utilisation, sustainable energy methods and technologies. The necessary conditions for sustainable energy are examined in detail. Sustainable energy is the need of the century and energy storage will play a characteristic role in integration and operation of future microgrids and smart grid networks. Energy storage can definitely aid in addressing the issues of integrating intermittent renewable power and in improving the utilization and efficiency of such hybrid systems.

## **ECOSYSTEM**

An ecosystem is a geographic area where plants, animals and other organisms, as well as weather and landscape, work together to form a bubble of life. Ecosystems contain biotic or living parts as well as abiotic factors, or non-living parts. Biotic factors include rocks, temperature and humidity.

The whole surface of earth consists of a series of connected ecosystems. Ecosystems are often connected in a larger biome. Biomes are large sections of land, sea or atmosphere.

### **Importance of ecosystem services:**

- **Boundless benefits**

Nature and money are often on competing terms, so to make a more level playing field, environmental economists have tried to bridge this gap by placing a monetary value on the benefits nature provides.

Valuing nature in a way that can speak to decision makers, may help promote conservation efforts in the future. It brings nature back into the cost-benefit discussion in a way that can be easily understood.

- **The foundation for sustainable development**

Ecosystem services help measure the true cost of industrial development. Companies have started to use ecosystem services in conservation offset planning, where they can buy and sell credits to offset a development or set aside land to meet a specific offset. Sustainable development supports the maintenance of a healthy economy while also protecting the ecological process for future generations.

- **Essential for our survival**

As a society, we depend on healthy ecosystems to do many things, to purify the air so we can breathe properly, sequester carbon for climate regulation, cycle nutrients so we have access to clean drinking water without costly infrastructure, and pollinate our crops so we do not go hungry. As the world's population continues to grow, so too does our dependence on healthy ecosystems to provide the necessities essential for our survival.

## **ENERGY**

Energy is a pervasive human need, as basic as food or shelter to human existence. World energy use has grown dramatically since the rise of civilization tempt humans from their long hunter-gatherer existence to more energy intensive lifestyles in settlements. Energy use has progressed from providing only basic individual needs such as cooking and heating to satisfying our requirements of permanent housing, farming and animal husbandry, transportation, and ultimately manufacturing, city-building, entertainment, information processing and communication. Our present lifestyle is enabled by readily available inexpensive fossil energy, concentrated by nature over tens or hundreds of millions of years into convenient, high energy density deposits of fossil fuels that are easily recovered from mines or wells in the earth's crust.

Four main types of alternative energy sources are harnessed from natural processes such as water, wind, and sunlight. They are the most sustainable forms of energy.

### **1. Solar Energy**

Sunlight is one of the main renewable sources of energy we know of today. To harness solar energy, a number of technologies are used to help convert it into heat, electricity, or light.

- Photovoltaic systems are used to convert sunlight into electricity.
- Solar water heating systems are used to heat buildings.
- Mirrored dishes help to boil water in conventional steam systems for generating electricity.

In commercial buildings, solar energy is used to promote processes such as heating, cooling, and ventilation. Homeowners can also take advantage of solar power by installing solar systems that help heat water, run appliances, and light their premises.

In India, solar energy is a fast developing industry. The country's installed capacity for solar was 59.302 GWac as of 31 August 2022.

India ranked fourth globally in 2021.

India has established nearly 42 solar parks to make land available to the promoters of solar plants.

## **2. Wind Energy**

Wind can be indirectly considered part of the solar power because it comes from uneven heating and cooling of the atmosphere. It is also caused by regular rotation of the earth. To harness wind power, green power companies use a wind turbine that rotates generators to generate electricity.

Today, there are many commercial grade wind-power generating systems designed to meet the energy requirements of different users. For example, a single wind turbine can be used to generate electricity for individual homes and small enterprises.

To generate electricity on a large scale from wind power, companies and governments have to invest in large scale wind farms. These are multiple turbines installed in areas with strong winds for generating optimal electricity that is injected into national grids or used in a specific region. As of 31 July 2022, the total installed wind power capacity was 40.893GW.

India has become fourth largest installed wind power capacity in the world.



### **3. Geothermal Energy**

Geothermal energy is harnessed using heat generated from deep inside the earth. The heat is sourced from heated rocks near the surface or steams of hot water from miles below the surface.

The energy is harvested using geothermal power plants. These plants use the high pressure and temperature steam to run generators that produce electricity. On a smaller scale, geothermal energy can be used to heat manufacturing plants and offices.

### **4. Hydropower**

This is not a new invention. Initially, water energy was harnessed via waterwheels that used to run machines such as flour mills and sawmills. Today, the kinetic energy of flowing water is converted to electricity using special turbines.

In many cases, the water is held in a reservoir such as a dam and directed to run the turbines for generating hydroelectricity. Some of the top hydro systems in the world include the Three Gorges Dam in Hubei that generates 22,500 MW and Grand Coulee Dam in the US that emits 6,809 MW.

Snowy Hydro in Australia consists of 9 major power stations, 33 turbines and a total generating capacity of 4100 megawatts (MW). They produce on average 4500 gigawatt-hours of clean renewable electricity each year in order to meet peak power demand. The government has recently approved a significant expansion of the scheme for increasing this output by 50 per cent.

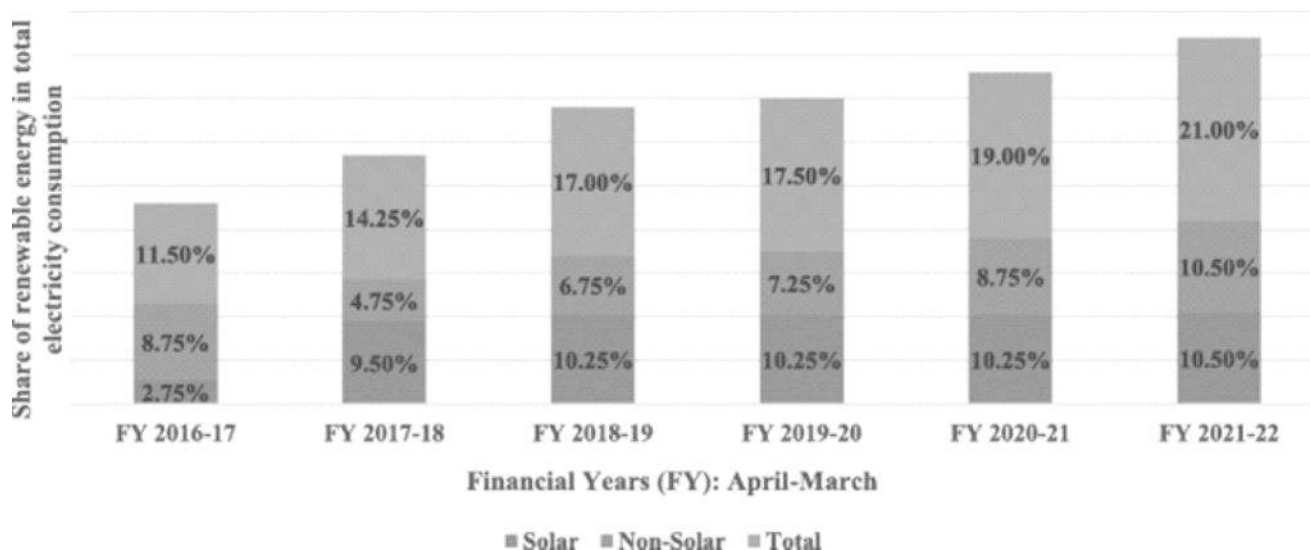
In the fiscal year 2019-2020, India's hydroelectric power potential is estimated at 148700 MW at 60% load factor. In total it generated 156TWh with an average capacity factor of 38.71% in year 2019-20.

### **5. Other Sustainable Energy Sources**

Other top sustainable energy sources that you can use include ocean thermal energy harnessed from the sun's heat on the surface of the water, and mechanical energy from wave movement in the ocean.

Bio-energy is another sustainable source of energy that is derived from biomass for generating heat and electricity. Although bio-energy generates carbon dioxide just like fossil fuels, it is

considered a cleaner option because vegetation planted to supply more biomass helps to remove an equal amount of carbon dioxide from the air. This helps to keep the environmental impact neutral.



The above diagram show an increase in consumption of electricity in the years 2016-17, 2017-18, 2018-19, 2019-20, 2020-21 and 2021-22. The data also show that what percentage of electricity was consumed along with the types of electricity. Generally it shows solar and non-solar energy. In the financial year 2016-17, solar energy consumed by the population is 2.75% whereas non-solar energy consumption is 8.75%, the total consumption being 11.50%. In financial year 2017-18, the solar energy consumed by the population is 9.50% whereas non-solar energy consumption is 4.75% with the total consumption being 14.25%. The percentage of solar energy increased in the financial year 2017-18 while the percentage of non-solar energy saw a decrease. In next financial year 2018-19 the total consumption of energy increased and the consumption of solar and non-solar energy's percentage also get increased.

The financial year 2019-20 show less fluctuations. In financial year 2020-21, the total percentage of consumption was 19% where solar energy made up 10.25% while non-solar energy contributes 8.75%. Thus the consumption of solar energy is more than that of non-solar energy. However in the financial year 2021-22 the total consumption percentage is 21% with the solar energy consumption at 10.50% and non-solar consumption at 10.50%. In other words, the consumption of total energy as well as non-solar energy also increased as compared to financial year 2020-21.

## Objectives

The aim of sustainable development is to balance our economic, environmental and social needs, allowing prosperity for present and future generations. Sustainable development consists of a long-term, integrated approach to developing and achieving a healthy community by jointly addressing economic, environmental, and social issues, whilst avoiding the over consumption of key natural resources.

Sustainable development encourages us to conserve and enhance our resource base, by gradually changing the ways in which we develop and use technologies. Countries must be allowed to meet their basic needs of employment, food, energy, water and sanitation. If this is to be done in a sustainable manner, then there is a definite need for a sustainable level of population. Economic growth should be supported and developing nations should be allowed a growth of equal quality as afforded to the developed nations.

Securing economic development, social equity and justice, and environmental protection is the goal of sustainable development. Although these three factors can work in harmony, they are often found to conflict with one another. During the latter half of the 20th century economic development for a better standard of living has been instrumental in damaging the environment. We are now in a position whereby we are consuming more resources than ever, and polluting the Earth with waste products. More recently, society has grown to realise that we cannot live in a healthy society or economy with so much poverty and environmental degradation. Economic growth will remain the basis for human development, but it must change and become less environmentally destructive. The challenge of sustainable development is to put this understanding into practice, changing our unsustainable ways into more sustainable ones.

The UK Government has recognised four objectives for sustainable development. These include social progress and equality, environmental protection, conservation of natural resources and stable economic growth. Everybody has the right to a healthy, clean and safe environment. This can be achieved by reducing pollution, poverty, poor housing and unemployment. No one, in this age, or in the future should be treated unfairly. Global environmental threats, such as climate change and poor air quality must be reduced to protect human and environmental health. The use of non-renewable resources such as fossil fuels should not be stopped overnight, but they must be used efficiently and the development of alternatives should be encouraged to help phase them out. Everybody has the right to a good standard of living, with better job opportunities. Economic

prosperity is required if our country is to develop and our businesses must therefore offer a high standard of products that consumers throughout the world want, equipped with suitable skills and education within a framework to support them.

### **Need For Sustainable Energy**

Wood, timber and waste products were the only major energy sources, during ancient time. In short, biomass was the only way to get energy. Then there was technological development and fossil fuels like coal, oil and natural gas were discovered. Fossil fuels proved a boon to mankind as they were widely available and could be harnessed easily.

When countries across the globe started extensively using these fossil fuels, it led to the degradation of the environment. Coal and oil are two of the major sources that produce a large amount of carbon dioxide in the air. This led to an increase in global warming.

In addition the price of these fuels were raised by a few countries increasing in air pollution, which forced scientists to look out for some alternative or renewable energy sources.

There is also a problem with fashion with its negative environment impact as fast growing cotton generally requires the use of industrial, toxic chemicals (pesticides and fertilisers) that often cause soil pollution and depletion along with water eutrophication.

On the other hand, there's a lot of textile waste and many clothes are made of synthetic fibres which, while being washed, escape to the ocean as microplastics. In this way, if a company makes clothes with resistant materials, uses sustainably produced cotton, applies circular economy principles across its value chain and uses less toxic chemicals, it is being responsible with the environment. This would be an example of sustainability within the fashion industry.

At such a time sustainable energy came into the picture as it could meet our today's increasing demand for energy and also provide us with an option to make use of them in the future also.

## **BENEFITS**

### **Fight Against Climate Change**

Globally increase in fossil fuel- based road transport, industrial activity, and power generation contribute to elevated levels of air pollution. Renewable energy emits no or low air pollutants. That's better for our health.

### **Inexhaustible Source of Energy**

These resources have the benefit of being abundant, available in some capacity nearly everywhere, and they cause little, if any, environmental damage. Sun, wind and thermal energy, they derived energy that store in the earth's crust are examples.

### **Reduces Energy Dependence on Fossil Fuels**

Evolving energy markets had geopolitical uncertainty have moved energy security and energy infrastructure resilience to the forefront of many national energy strategies.

### **Increasingly Competitive**

Renewables are now the most cost- competitive source of power in many parts of the world, and renewable power accounted for more than half of all capacity additions in the global power sector since the last decade.

### **Creates Jobs Developing Local Community**

The largest part of renewable energy investments is spent on materials and workmanship to build and maintain the facilities, rather than on costly energy imports.

## **RESULT**

Sustainable energy is the need of the century and energy storage will play a characteristic role in integration and operation of future microgrids and smart grid networks. Energy storage can definitely aid in addressing the issues of integrating intermittent renewable power and in improving the utilisation and efficiency of such hybrid systems. The need and the application areas of storage in hybrid renewable systems are explained in brief in this chapter. The chapter also entails the various types of storage systems and their probabilistic market areas. Some of the most prominent path breaking case studies for significant storage applications are also included in this chapter. The chapter concludes by identifying the technical challenges facing the deployment of storage systems globally.

Sustainable energy management is a new concept, idea, and approach that requires many changes in the traditional way of understanding and interpreting energy management at all levels. Sustainable energy management integrates many features of the environment and cannot therefore be interpreted as a concept adopted and defined once and for all, but must be

constantly modified and adjusted in accordance with changes in the three areas that define it, and in accordance with the specific country or region where it has been applied. Basically, the concept of sustainable energy management is defined by the following parameters:

- Management, i.e., accepted theories, existing experience, state regulations, company orientation, the requirements of all stakeholders, degree of education, awareness, and commitment as well as general orientation towards socially responsible business;
- Energy industry, legislation, existing energy resources, new energy resources, energy efficiency level, the level of technology development, production and consumption levels, system stability, connectivity with other systems, and the degree of self-sufficiency; and
- Sustainable development, i.e., acceptance of the concept at the state level, the ratification of international agreements, the parameters of priorities.

### **India's Demand for Energy is Growing Rapidly**

India is the third largest energy-consuming country in the world. It has become one of the largest sources of energy demand.

In the country, per capita electricity consumption across the 28 states and eight union territories is still around a third of the world average consumption. The yearly growth rate of consumption is 1.18% and represents almost 17.74% of world population.

The country is expected to have more the 1.512 billion, 1.605 billion and 1.658 billion people by the end of 2030, 2040 and 2050, respectively.

In 2020 the total Indian electricity demand has begun to expand again because of Covid-19 and the resultant restrictions.

## **POLICIES**

### **Indian Electricity Act of 2003**

The Electricity Law was promulgated in 2003 to integrate laws related to energy production, transmission, and distribution across the nation. With the promulgation, the power industry will be promoted, power will be distributed to all regions, including rural areas, and electricity prices will

be rationalized. According to the bill, the central government may negotiate with state governments regarding power generation policies. The electricity price policy was created with the implementation of the "Electricity Law." Additionally, the Electricity Law aims to privatize the power generation, distribution, and transmission sectors. In this bill, tariff subsidies (FIT) and renewable energy purchase obligations (RPO) were introduced.

### **National Electricity Policy of 2005**

The national power policy was revised in 2005 to provide all families in India with high-quality and reliable power that meets required standards at lower prices and with higher efficiency. The goal of this policy is to encourage private participation in the power sector through the implementation of a national-level open access transmission system. To improve the efficiency of the distribution network, the policy ensures that supervisory control and data acquisition (SCADA) and data management systems are used. This policy is expected to undergo a revision in 2005 with the aim of providing every Indian family with reliable, high-quality electricity that meets the required standards at lower prices with higher efficiency

### **National Tariff Policy of 2006**

The Indian government launched the National Electricity Price Policy in 2006 to increase the financial viability of the electric power industry by attracting potential investors (Rathore, 2018). The goal of this policy is to increase competition by providing electricity to all consumers at a reasonable and reasonable unit price, Efficiency, and operational quality. According to the plan, tariffs will be implemented nationwide for many years, and availability-based tariffs have been introduced at the state level. The allocation of renewable energy procurement licenses is carried out through competitive bidding. The policy requires the National Electricity Regulatory Commission to determine the minimum percentage of energy purchased from renewable sources, considering the availability of such resources in the region and its impact on retail electricity prices.

### **Integrated Energy Policy of 2006**

Despite offering overall policy guidelines for action, this integrated policy document recommended a particular focus on renewable energy development and identified specific targets for capacity expansion. National Action Plan for Climate Change (NAPCC) 2008 The



government of India developed a mission model action plan for sustainable growth under NAPCC to address climate change. Its first task is to strengthen solar energy development. It also recommends setting the RPO at 5% of the total grid purchases and increasing it by 1% every year.

### **Sustainable Energy Systems of the Future**

The future energy systems must necessarily match the so-called energy triangle and deliver on all the three dimensions:

- (1) providing safe, secure, and reliable energy while delivering access to all energy consumers,
- (2) supplying energy at affordable prices, and
- (3) assuring sustainable development.

Over the past decades, the energy systems that evolved in different sectors have greatly achieved the goal of enabling substantial economic growth. However, due to some reasons, the aforementioned triangle is out of balance in different places around the world. For about 1.1 billion people—14% of the global population—do not have access to electricity according to. Many more suffer from poor quality energy supply. In several places across the globe (such as sub-Saharan Africa and developing Asia), affordability is still an unresolved issue. More importantly, the environmental impact in most countries is beyond what we can sustain, especially as world population heads towards a projected nine billion people. The goal is, however, to create sustainable energy future by installing intelligent, cost-effective, and efficient systems with the lowest ecological footprints. In the future, integrated models, which take end-use energy efficiency, renewable energy harvesting, and SDGs into account, may be in a favorable position to better link the weak and strong sustainable development paradigms for decision-making processes. By including important and relevant bottom-up indicators in a well-defined structure, integrated models are deemed to explore scenarios for boosting social and economic development and energy access and security as well as mitigating negative environmental and health impacts. In this way, today's energy systems can be expected to transform to sustainable energy systems which are carbon neutral, efficient, accessible, affordable, and secure.ar for 10 years.

The government of India has announced a renewable capacity target of 450 GW by 2030 (excluding large hydropower), a sharp increase from a total installed renewable electricity capacity of 80 GW in 2019.

One unexpected benefit of the Covid-19 pandemic was that the gap between the shares of renewables and coal-fired power in India's electricity generation narrowed more than ever before. Renewables rose from 17% just before the pandemic to almost 24% and coal-fired power declined from 76% to 66%. This reflects the government's commitment to decarbonise power generation through renewables, notably using priority dispatch scheme.

The government has introduced a range of new policy measures to further improve energy efficiency, which will create jobs as well as lower emissions. These policies could reduce energy intensity by over 30% by 2030 compared with 2018. They would improve energy efficiency by 3.3% a year, aligning India with target 7.3 of the Sustainable Development Goals (“By 2030, double the global rate of improvement in energy efficiency”).

## **Conclusion**

It is very important to make this transition sustainably, with a proper plan for dealing with economic challenges, land constraints, technical difficulties and waste management issues. Technological advances are also necessary for meeting the targets. With the correct policy implementation and proper financial schemes, energy generation can accelerate the development process in India. The Indian government should create future policies contributing towards more energy production together with regulations for recycling. In addition to that, the power storage facilities should be created for increased solar power integration in the grid without disturbing its overall stability. Hence the way forward is to identify current problems that the energy market faces and draft the future policies measures for combating these issues with sustainable solutions. The contribution of renewable energy has increased exponentially in the previous couple decades. India's policies play a significant part in that. The current energy market is dominated by coal and India imports around 30% of its coal requirements. However the future trends look promising and the country will be able to produce all of its power requirement within the next decade. Solar energy will play a significant role in adhering to this trend. The reference models predict that India can become energy sufficient in the time domain 2025 to 2030 by eliminating its coal import requirement. This energy deficit will be contained by the increasing

share of renewables in India. In order to facilitate this transition, significant action is required in policies, economics and technology.

## **References**

- 'Steven Popav' in sustainable energy management, 2019.
- 'Appiah-otto' impact of economic policy uncertainty on renewable energy growth, 2021.
- 'Alan Owen, Leuserine Garniati' in storing energy, 2016
- 'Arvizu, D. et al.' (2012) Renewable Energy Sources and Climate Change Mitigation
- Special Report of the Intergovernmental Panel on Climate Change.
- Green Energy and Sustainable Development (Deadline: 31 October 2022)

# Beat the Bait: A Case Study on Phishing Attack

Geeta Baliyan<sup>1</sup>

## Abstract

Every year, cybercriminals become savvier with their phishing attacks and have tried-and-tested methods to deceive and steal from innocent victims. With this, this case study aims to remind all Internet users, especially people who work from home, about the posing threats when browsing or clicking suspicious links, to give warning to those who work in their own homes about the posing threat of keyloggers, and to provide sufficient knowledge to those who confidently work in their home about the threats of phishing. Research results show that the work from home employees understands the importance of knowing phishing attacks and keyloggers. It is crucial to do a security check-up of personal computers occasionally. Initially, in the researcher's pre-test, only 35% of the respondents strongly agreed that understanding phishing is necessary. However, after demonstrating how keyloggers work and how it may impact their systems, the initial 35% rose to 60%. Only 10% of the respondents think knowing phishing and keyloggers will not make their pc safer nor impact their work from home jobs.

## Keywords

**keylogger, phishing, cybercriminals, ransomware, malicious links**

## Introduction

According to a recent report published by The Indian Computer Emergency Response Team (CERT-IN) report, 32% of all data breaches involved phishing in one way or another. In addition, 90% of confirmed phishing email attacks occurred in environments that used Secure Email Gateways (SEGs). Phishing has developed into various highly sophisticated methods since its inception in 1987. As digital technologies advance, this assault will continue to discover new methods to exploit security vulnerabilities.

Every year, cybercriminals become savvier with their phishing attacks and have tried-and-tested methods to deceive and steal from innocent victims. Because phishing attacks come in many

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different forms, differentiating one from a valid email, voice mail, text message, or information request can be difficult. Some links do not need any input from their victims. Once the victim clicks the link and allows it to execute what it intended to do entirely, without any sign, the victim's data is already in the hands of the hackers. This way does not only apply to phishing. It can also cause forced installation of ransomware to the victim's computer.

This case study aims to remind all Internet users, especially people who work from home, about the posing threats when browsing or clicking suspicious links. Hackers may see the current lockdown situation as their perfect time to collect more data because users are on the internet, unsuspecting people may already be victims without knowing that they are. More so, it aims to make people understand that some emails may look legitimate, but it may include malicious links with keyloggers. The researchers will conduct a survey in which we will be using a keylogger tool and it will attach it through a link and send it through email. In this manner, it will assess the current condition of the target and identify security issues.

### **Objective of the study**

- To delivery cautious information to those who work in their own homes about the posing threat of keyloggers.
- To determine the knowledge level of those who confidently work in their home about the threats of phishing.

### **Scope and Limitation**

The scope and limitation of the study will focus on Work-from-home (WFH) workers. The study will have 15-30 participants, regardless of their type of occupation and age. The limitation is that only Keyloggers that are attached to emails will be used to test the awareness of the participant on the risks of malicious links and file attachments. The applications that will be used on the study will be ensured to be non-harmful for both the participant and researcher. Some of the keyloggers used may be flagged by antivirus software to be infected, but the keyloggers are tested and guaranteed to be safe.

### **Review of Related Literature and Studies**

This section presents the related literature and studies after the thorough and in-depth search done by the researchers. Those that were included in this section helps to further the

investigation and study that the researchers have done. This chapter shows how phishing and keylogging are making a huge negative impact on those who are not knowledgeable about cyber-attacks.

### **Don't click: towards an-effective anti-phishing training (A comparative literature reviews)**

With different business industries, it is said that emails play a vital role in communication channels. On the other hand, it promotes the act of phishing actively. According to the study conducted, it is mentioned that age can be a one of the determinants of those people who may be victims of phishing. Furthermore, in order for them to minimize their employees from becoming a victim, the business will conduct an anti- phishing training and the employees will agree with the said activity (Jampen et al. 2020).

### **A Systematic Literature Review on Phishing and Anti- Phishing Techniques**

Using social engineering and technology, phishing technique and attack made end users aggressive in getting restricted and sensitive data. It is said that phishing is the most recorded threat in terms of the internet known in the whole world. With that, users are extremely bothered about the existence of new phishing attackers because as time passes by, they come up with more unique and creative styles in doing the said attack. Moreover, people who do not have enough knowledge about phishing are mostly the victims of it. Usually, phishing attackers send emails that are a scam to different internet users to access their private information (Arshad et al. 2021).

### **Phishing Email Detection Using Natural Language Processing Techniques**

Due to the increase of internet users, security problems are also rising. Phishing attacks happen mainly for the reason to have the user's personal information as well as the private accounts of an individual. Since Covid-19 happened, attackers thought of making creative ways of attracting different internet users just like the use of different articles involving the topic regarding the pandemic. The articles or different links provided by the attackers seem to appear legitimate and reliable but, in the end, sensitive information is given to the people who are doing phishing techniques (Salloum et al. 2021).

### **A Literature Survey of Phishing Attack Technique**

The target of most phishing attackers are those people who are unaware and do not have sufficient knowledge about the said attack. It is mentioned that internet users who are usually

knowledgeable about phishing or scams are not really the common victims of phishing. The main goal or purpose of phishing is to gather sensitive and personal information from other people through the means of websites, links or different articles that are usually attractive to internet users. In addition, attackers value this information to steal data or money that will be beneficial to them (Pratik and Devale 2016).

### **Study on Cybersecurity Challenges of Working from Home during COVID-19 Pandemic**

Workforces over the country considering work from home during the Covid-19 pandemic, massively alarmed the knowledge and use of IT infrastructure. With regards the preparedness of every employer, it is doubtful if they can be reliable in terms of cybersecurity. Moreover, cybercriminals take this opportunity to attack different users who are unprepared as well as those users who do not have enough knowledge about phishing or other cyber- attack. In addition to that, social engineering is also known as the cyber-attacks which are performed with those people who are referred to as the weakest link (Sebastian, G. 2021).

### **Let's Go Phishing: A Phishing Awareness Campaign Using Smishing, Email Phishing, and Social Media Phishing Tools**

The goal of this study is to figure out how many users are more vulnerable to phishing assaults. The researchers will perform the study using an open source phishing toolkit, sending phishing links to various people via email, SMS, and social media to see how many users clicked on or ignored the link. The phishing campaign is carried out by constructing a fake online shop website on which targeted users can register for a chance to win a raffle using scarcity and urgency as motivator strategies. A survey for targeted users who clicked the phishing link will be conducted, followed by a post-survey for all targeted users, regardless of whether they accessed or ignored the phishing campaign (Blancaflor et al. 2021).

## **3. Methodology**

Personal experience, human people, books, journals, and nature are all possible sources of information. A study can result in new knowledge being added to the corpus of knowledge. Research is the only way to make progress in a field. In research, many methods such as study, experiment, observation, analysis, comparison, and reasoning are employed (Ogidiaka et al. 2017). This portion discusses the research method used in the study. It also includes the selection of the respondents that participated in the research and the instruments that were used to gather data. It further discusses the statistical analysis from the responses of the participants. This chapter presents what keyloggers were used and experienced in the study.



## Research Design

This study made use of a pre-experimental design. It was primarily concerned with determining the efficacy of two variables' interrelationships at the same time. To ensure the reliability and trustworthiness of synthesis positive sampling was used by the researchers to choose respondents since it is the greatest fit for the study's survey.

## Research Instrument

The researchers conducted a survey through the help of the Zoom meeting application where the respondents and researchers could properly discuss the purpose of the research. The researchers also used Google Docs as a platform to conduct surveys for the respondents. As the host of the meeting finished discussing and showing the keylogger application. Respondents were given a survey questionnaire to collect data that will then be used to justify the study's objective.

## Data Gathering

The twenty respondents of the study were tasked to answer a questionnaire survey pre-test then have undergone a Zoom batch meeting where they were oriented about how a keylogger works. After being oriented, they were sent an email with a keylogger attached, with their authorization, and it is to experience firsthand how it works running on their own computers. The keylogger used was named "Actual- Keylogger", after experiencing how keyloggers function, the respondents answered the rest of the questionnaire survey to gather their feedback about their awareness and experiences in malicious online baits and keyloggers.

## Conceptual Framework

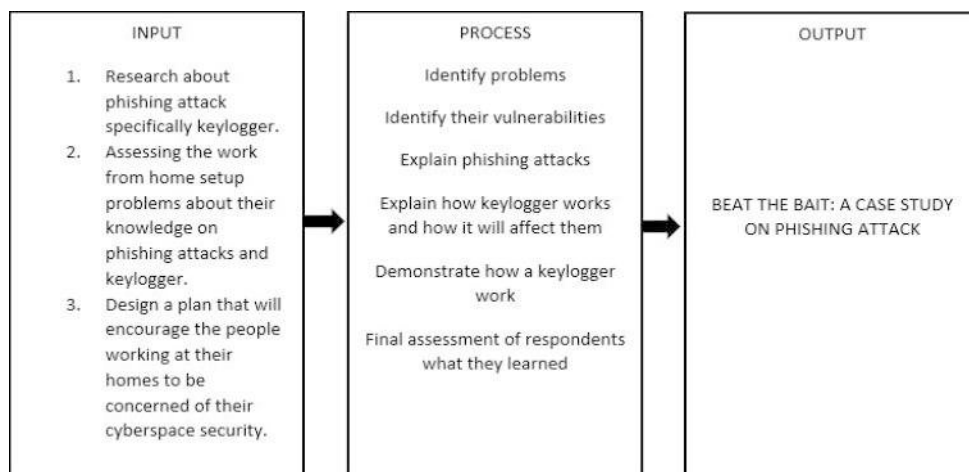


Figure-1 Conceptual Framework

The activities transcribed in this study is shown in the conceptual framework, see figure 1. Research and assessments on phishing tools, identifying issues in these kinds of attacks were conducted. Demonstrating how a keylogger works were also observed in this study.

## 1. Results and Key findings

**Table 1. Respondents on Understanding phishing is a necessity**

<b>1. Understanding phishing is a necessity</b>		
<b>Answer</b>	<b>Frequency</b>	<b>Percentage</b>
Strongly Agree	7	35 %
Agree	11	55 %
Neutral	2	10 %
Disagree	0	0 %

As shown in table 1, most of the respondents strongly agree about checking your personal computers' security occasionally. Some of them are still on the neutral side.

**Table 2. Respondents view about the safety of clicking links indiscriminately**

<b>2. It is safe to click random links and ads that offer too good to be true deals and giveaways.</b>		
<b>ANSWER</b>	<b>FREQUENCY</b>	<b>PERCENTAGE</b>
Strongly Agree	2	10 %
Agree	1	5 %
Neutral	2	10 %
Disagree	5	25 %
Strongly Disagree	10	50 %
<b>TOTAL</b>	<b>20</b>	<b>100</b>

Presented in table 2 shows that half of the respondents strongly disagree on clicking links indiscriminately, a fourth of them disagree, totaling 75% of the respondents. The rest is on the neutral side, and some say that it is safe to do so.

**Table 3. View of the respondents on verification of links that they are accessing**

<b>3. Knowing how to verify if a website is legit, is a must.</b>		
<b>ANSWER</b>	<b>FREQUENCY</b>	<b>PERCENTAGE</b>
Strongly Agree	9	45%
Agree	5	25%
Neutral	4	20%
Disagree	2	10%
Strongly Disagree	0	0%
<b>TOTAL</b>	<b>20</b>	<b>100</b>

As shown in table 3, almost half of the respondents strongly agree that verifying that a link or a website is legitimate first before accessing it is essential. A quarter of the respondents agree with it, the rest are neutral, and only 2 of them disagree.

**Table 4. Perspective of respondents on vulnerability of work from home personnel compared to those who are working onsite**

<b>4. Working from home makes oneself vulnerable to phishing attacks compared to working onsite</b>		
<b>ANSWER</b>	<b>FREQUENCY</b>	<b>PERCENTAGE</b>
Strongly Agree	6	30%
Agree	5	25%
Neutral	6	30%
Disagree	3	15%
Strongly Disagree	0	0%
<b>TOTAL</b>	<b>20</b>	<b>100</b>

As shown in table 4, 30% of the respondents strongly agree that they are more vulnerable than those working on site. They were backed with 25% of the respondents, which also agree with it, totaling 55%. The other 30% belongs to the neutral, which shows that they are either not sure or

just on the neutral side. The rest disagrees that they are more vulnerable than those who are working on site.

**Table 5. View of respondents on the usage of personal computer in a work from home setup**

<b>5. Using personal computer can make you more vulnerable to phishing attack</b>		
<b>ANSWER</b>	<b>FREQUENCY</b>	<b>PERCENTAGE</b>
Strongly Agree	5	25%
Agree	5	25%
Neutral	6	30%
Disagree	4	20%
Strongly Disagree	0	0%
<b>TOTAL</b>	20	100

As shown in table 5, most of the respondents are with the neutral side which totals to 30% of them. In this section, respondents are almost equally distributed to strongly agree, agree and disagree. It shows that respondents have different perspectives about using personal computers for their work from home setup.

**Table 6. Respondent's view checking the security of your pc occasionally for the risks of having keyloggers in it**

<b>6. The risk of having a keylogger in your system is a good enough reason to check your personal computer's security once a while.</b>		
<b>ANSWER</b>	<b>FREQUENCY</b>	<b>PERCENTAGE</b>
Strongly Agree	11	55%
Agree	7	35%
Neutral	2	10%
Disagree	0	0%
Strongly Disagree	0	0%
Total	20	100

Most of the respondents strongly agree and agree about the checking of your personal computers' security occasionally, see table 6. Some of them are still on the neutral side.

**Table 7. Respondents' post-test's reaction to understanding phishing is a necessity**

<b>7. Understanding Phishing Is A Necessity</b>		
<b>ANSWER</b>	<b>FREQUENCY</b>	<b>PERCENTAGE</b>
Strongly Agree	12	60 %
Agree	6	30 %
Neutral	2	10 %
Disagree	0	0 %
Strongly Disagree	0	0 %
<b>TOTAL</b>	<b>20</b>	<b>100</b>

As shown in table 7, the percentage of the respondents that chose strongly agree with shows to be higher than the pre- test. With its percentage of 60% strongly agree and 30% agreeing with the total of 90% which leaves to the neutral side of 10% still.

Based on the survey results, most of the responses agree that the work from home employees understands the importance of knowing phishing attacks and keyloggers. It is crucial to do a security check-up of personal computers occasionally. Initially, in the researcher's pre-test, only 35% of the respondents strongly agreed that understanding phishing is necessary. However, after demonstrating how keyloggers work and how it may impact their systems, the initial 35% rose to 60%. Only 10% of the respondents think knowing phishing and keyloggers will not make their pc safer nor impact their work from home jobs.

**Conclusion and Recommendation**

Phishing is one of the ways hackers can collect data from their victims. One of the tools hackers can use to collect their victim's data is a keylogger. The potential threat of this application can put someone's privacy in danger, such as exposing their password and other security codes. Keylogger is just a simple tool to exploit victims' data, and there are still many ways hackers can gather unsuspecting victims' data that can put someone's life in danger

The study contributed to the understanding and knowledge of the respondents and there were factors that are highly suggested for future awareness and use. The recommendations are as follows:

- To the people who are working from home, it is recommended that they should find ways to look up if the link that they are logging in or clicking is legitimate.
- To all computer users, it is recommended to check their personal computer's security even occasionally
- To all people who have the potential of using any computer, it is recommended to have sufficient knowledge about phishing attacks as well as the ways on how to avoid being a victim of any fraudulent attacks on the internet.

## References

- Arshad, Ayesha and Ur Rehman, Attique and Javaid, Sabeen and Ali, Tahir and Sheikh, Javed and Azeem, Muhammad, A Systematic Literature Review on Phishing and Anti-Phishing Techniques. 2021
- Blancaflor, E., Alfonso, A., Banganay, K., Dela Cruz, G., Fernandez, K., and Santos S., Let's Go Phishing: A Phishing Awareness Campaign Using Smishing, Email Phishing, and Social Media Phishing Tools.
- Proceedings of the International Conference on Industrial Engineering and Operations Management Harbin, China, July 9-11, 2021. Available:
- <http://www.ieomsociety.org/china2021/papers/108.pdf>. 2021.
- Jampen, D., Gür, G., Sutter, T. et al. , Don't click: towards an effective anti-phishing training. A comparative literature review. Hum. Cent. Comput. Inf. Sci. 10, 33, August 2020.
- Ogidiaka, Emoghene and Ogwueleka, Francisca, Information Gathering Methods and Tools: A Comparative Study, 2017.
- Pratik Patil and Prof. P.R. Devale , A Literature Survey of Phishing Attack Technique. Available: <https://www.ijarcce.com/upload/2016/april-16/IJARCCE%2050.pdf>, April 2016.
- Glorin Sebastian, A Descriptive Study on Cybersecurity Challenges of Working from Home during COVID-19 Pandemic and a Proposed 8 step WFH Cyber- attack Mitigation Plan, February 2021.
- Said Salloum, et al., Phishing Email Detection Using Natural Language Processing Techniques: A Literature Survey, 2021.
- Terranova Worldwide Corporation. 19 examples of common PHISHING Emails: Terranova security. Available: <https://terrnovasecurity.com/top-examples-of-phishing-emails/>, May 2021.

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