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HEMP-A MAGICAL FIBRE LOST IN THE HORIZONS OF INDIA SINCE 1985

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Abstract: India is known for its rich agro-ecological diversity and it is the home for the cultivation of variety of crops such as food crops, cash crops, plantation crops and horticultural crops. Hemp, one of the incredible cash crops has lost its omnipresence in India since the enactment of Narcotic and Psychotropic Substances Act, 1985. This marvelous plant has copious number of uses and it can be used in textile industries, cosmetics, medicine, food, preserving the environment, biofuels and production of construction materials. During the 19th century, the crop has been misconstrued and shrugged off for long years that it has high intoxicating effects paving a way for criminal offences such as drug trafficking, human trafficking and various other organized crimes. Due to the taboo status attached to the plant, the resources and benefits from hemp plant remains untapped since 1985 which would make India to miss the opportunity of being the part of worldwide hemp renaissance. With its immeasurable advantages, hemp plant if used effectively would provide numerous benefits to the people thereby enhancing the Human Development Index (HDI) which in turn would contribute to the economic upswing. The author in this paper tries to throw light on the benefits of hemp and the goodness it brings to India if hemp is legalized here.

Index Terms - hemp, narcotic, psychotropic, legalization, benefits.

I. INTRODUCTION

Agriculture is the backbone of Indian Economy as 80% of the rural population depends upon agriculture for their livelihood. The Green Revolution introduced in 1960 have contributed much to the entrenchment of agricultural sector. According to the National Statistical Office, Ministry of Statistics and Programme implementation on 31st May, 2021 the share of agriculture and its allied sector in Gross Value Added to the country during the year 2020-2021 is 20.2% to the total economy^[1]. Though India is an agricultural country, the contribution of agriculture to India 's GDP doesn't outweigh the service sector. The service industry being the largest sector of India contributes to about 53.89% of total India's GDP which is higher when compared to the agricultural sector. Cotton, jute, hemp and natural silk are the four major fibre crops of India. Though the crops like cotton, natural silk and jute are grown in many parts of India, a magical fibre hemp has been lost in the horizons of India since 1985 after the enactment of the Narcotic and Psychotropic Substances Act (NDPS), 1985. The geographical area of India has been gifted with a rich fertile soil and a good climatic condition for the growth of hemp plant. But due to its illegalization, India imports raw hemp from Europe, North America and China for the manufacture of hemp products^[2]. It has been shown from the statistical data provided by OEC that in 2019 China and India is the top exporter and top importer of true hemp yarn in the world respectively^[3].

II. DEFINITION OF HEMP UNDER NDPS ACT

Cannabis(hemp) has been defined as

- (a) charas which is a separated resin obtained from the cannabis plant in whatever form, whether crude or purified, and includes concentrated preparation and resin known as hashish oil or liquid hashish;
- (b) ganja which is the flowering or fruiting tops of the cannabis plant (excluding the seeds and leaves when not accompanied by the tops); and
- (c) any mixture, with or without any neutral material, in any of the above forms of cannabis or any drink prepared from it^[4];

III. TRAJECTORY OF HEMP ILLEGALIZATION IN INDIA

The wonder crop cannabis has been grown in India since time immemorial. During the passage of time, cannabis plant has created a multidimensional problem in 19th century. As cannabis grows wild in many parts of India, its use has become ambivalent during the colonial rule of British. While some regarded it has amazing medicinal properties on the other hand, they regarded that it caused intoxicating effects. Around 1870, the British became perturbed about the fatalistic consequences of ganja consumption enacted the Opium Act 1857 and the Opium Act, 1878.

In 1894, the British Indian government conducted an expansive study of cannabis in India. The report's findings are as follows:

“Viewing the subject generally, it may be added that the moderate use of these drugs is the rule, and that the excessive use is comparatively exceptional. The moderate use practically produces no ill effects. In all but the most exceptional cases, the injury from habitual moderate use is not appreciable. The excessive use may certainly be accepted as very injurious, though it must be admitted that in many excessive consumers the injury is not clearly marked. The injury done by the excessive use is, however, confined almost exclusively to the consumer himself; the effect on society is rarely appreciable^[5].”

Though the report has placed cannabis in a positive position, its effective use has led to negative impacts causing intoxication leading to immorality, violence, suicide, human trafficking, drug trafficking and organized crimes. So, a step further to reduce the use of contraband goods, India participated in the 2nd International Opium Conference met at Geneva and adopted the Dangerous Drug Convention which is referred to as the Geneva Convention. Being a signatory to the Convention and to suppress the contraband traffic and abuse of dangerous drugs such as opium, hemp and cocoa leaf, India enacted the Dangerous Drugs Act, 1930. But the Act was not sufficient and was not able to tackle the misuse of drugs in a holistic manner. So in 1950, the Opium and Revenue laws (Extension Of Application) Act, 1950 was enacted which extended the Opium Act, 1857; the Opium Act, 1878 and the Dangerous Drugs Act, 1930 uniformly to all parts of India except the State of Jammu Kashmir.

Then India participated in the United Nation Conference on the adoption of a Single Convention on Narcotic drugs, 1961 met at UN headquarters from 24th January to 25th March 1961. This convention aims to combat drug abuse by coordinated international action^[6]. Then India took part in the United Nation Conference on the adoption of the Convention on Psychotropic Substances, 1971 met at Vienna from 11th January to 21st February 1971. This Convention aimed at tackling drug abuse all over the world^[7].

In order to give effect to the International Conventions on narcotic drugs and psychotropic substances, India enacted a substantive legislation called Narcotic and Psychotropic Substances Act, 1985. A step forward to obtrude drug trafficking in Narcotic and Psychotropic Substances, India took part in the United Nation Convention against Illicit Traffic in Narcotic drugs and Psychotropic Substances, 1988^[8].

III. PROHIBITION OF HEMP UNDER NDPS ACT

NDPS Act, 1985 was enacted to consolidate and amend the law relating to narcotic drugs and to make stringent provisions for the control and regulation of operations relating to narcotic drugs & psychotropic substances. The Act explicitly prohibits cultivation of coca plant, opium, poppy and cannabis plant and prohibits production, manufacture, possession, sale, purchase, transportation, warehousing, use, consumption, import inter-State, export inter-State, import into India, export from India or transshipment of any narcotic drug or psychotropic substance except for medical or scientific purposes^[9]. So cultivation of hemp for industrial purposes is prohibited by the Act. Whoever cultivates any cannabis plant is punishable with rigorous imprisonment for a term which may extend to ten years, and shall also be liable to fine which may extend to one lakh rupees^[10]. Whoever produces, manufactures, possesses, sells, purchases, transports, imports inter-State, exports inter-State or uses cannabis, shall be punishable

1. with rigorous imprisonment for a term which may extend to one year, or with fine which may extend to ten thousand rupees, or with both if it involves a small quantity^[11];
2. with rigorous imprisonment for a term which may extend to ten years, or with fine which may extend to one lakh rupees if it involves a quantity lesser than commercial quantity but greater than small quantity^[12];
3. with rigorous imprisonment for a term which shall not be less than ten years but which may extend to twenty years and shall also be liable to fine which shall not be less than one lakh rupees but which may extend to two lakh rupees if it involves a commercial quantity^[13].

The Act provides power to the State Government that the State Government may by rules permit and regulate the cultivation of any cannabis plant, production, manufacture, possession, transport, import inter-State, export inter-State, sale, purchase, consumption or use of cannabis^[14]. The Act empowers the State Government may by order provide the limits within which licenses may be given for the cultivation of cannabis plant and it requires that the cultivated produce of such plant shall be delivered by the cultivators to the officers of the State Government authorized for this purpose^[15]. The Act also provide that the cultivators licensed by the prescribed authority of the State Government shall be authorized to engage in cultivation of any cannabis plant^[16].

Uttarakhand was the first State in India to utilize the power given to the State Government under Sec 10 of NDPS Act, 1985. The State legalized cultivation of industrial hemp in July 2018. The Indian Industrial Hemp Association (IIHA) was the first to obtain license to cultivate hemp in Uttarakhand for commercial purposes^[17].

IV. GOODNESS OF HEMP

4.1 In Environment

The cultivation of hemp plant helps in promoting a sustainable and eco-friendly farming by reducing carbon content in the atmosphere. Researches have shown that the cultivation of one hectare of industrial hemp would act as a carbon warrior by absorbing 22 tons of CO₂ per hectare^[18]. Another peculiar feature of hemp cultivation is that it transforms land into a carbon sink by a process called bio sequestration. It is the process by which biochar, a charcoal produced from hemp after harvesting is mixed with the soil. This process would return carbon to the soil rather than letting out to the atmosphere^[19]. As carbon being the chief energy source for plants, high concentration of carbon in the soil would nourish the plant and helps in its growth.

4.2 Water Conservation

India stands 17th among the world's extremely water stressed countries^[20]. UNICEF report states that around 2/3rd of 718 districts in India suffer from water depletion. Cotton is the third most commercial crop in India. A study estimated that the total consumptive water uses in India for the cultivation of cotton amounts to 25.5% of the global consumption^[21]. It takes about 9 months to grow while hemp grows only in 3 to 4 months^[22]. Cotton, a commonly used fibre in textile industry requires 1500 gallons of water for every pound of the product. Hemp, an amazingly versatile plant which if cultivated would require less amount of water than required for cotton cultivation^[23].

4.3 Nutrition

The parts of the hemp plant such as its seed and leaves are of high nutritional value. Hemp seed has a pleasant nutty taste. It is rich in amino acids, minerals, fibres, vitamins and fatty acids. The major constituents of hemp seed include easily digestible protein (20–25%), polyunsaturated fatty acid (PUFA), abundant lipids (25–35%), carbohydrates (20–30%), linoleic acid (LA; omega-6) and alpha-linolenic acid (ALA; omega-3)^[24]. Hemp Sprouts are a valuable source of antioxidants^[25]. Hemp Proteins are recognized as an essential source of nutritional value^[26].

4.4 Construction

The hemp plant which is known for its versatility and durability is used in the construction of buildings. For aesthetic appearances, hemp concretes are available in different colours^[27]. It locks CO₂ in the building^[28] and a unrendered 30cm hemp concrete allows a storage of about 36.08Kg of CO₂ per m²^[29]. Hemp fibres are used for the production of hemp insulation mats. A peculiar feature of these insulation mats are: pollutant free, harmless to health, good sound insulation and cold protection. Hemp fibres are also used for filling of joints/cavities during windows /door installations^[30]. Hemp fibres on being blended with eucalyptus oil are used for making bedding for horse stable and bedding for small animals such as pigs and birds^[31].

4.5 Medicine

The benefits of hemp in medicine are as follows

The Tuberculosis, Nutrition Study in Czechoslovakia^[32] in 1955 have reported the benefits of hemp in medicine. Researches demonstrated that seeds from hemp have been used in tuberculosis therapy. They reported that hemp seeds are also used in teeth treatment and preservation stomatology^[33]. Extracts from cannabis plants are used to cure brain cancer^[34]. Some parts of the plant are used to treat cancer tumours along with radio therapy treatment which could make the tumours to disappear^[35]. The Central Council for Research in Ayurvedic Studies under AYUSH Ministry has suggested cannabis as a restorative drug for cancer treatment. They reported that it can treat variety of diseases such as cancer, HIV/AIDS, seizures, epilepsy, glaucoma, severe chronic pain, severe nausea, extreme weight loss and weakness (wasting syndrome), severe muscle spasms and multiple sclerosis^[36].

4.6 Employment

The United States of America federally legalized commercial production of hemp by enacting the Agricultural Improvement Marketing Act, 2018. After its legalization nationwide in US in 2018, the booming industry of hemp has increased employment opportunities to large number of people. There was a hike in number of Canadian jobs and the companies in Canada welcomed many foreign employees with glad hands^[37]. The industry which has 1.1 billion turnovers in 2018 in US estimated to double by \$2.6 billion in 2022^[38]. The hemp industry provided 64000 jobs i.e., 44% increase in California and Florida in 2018 and according to Cannabis Information Hub, the hemp industry employed 211,000 full time workers in US in 2019^[39].

V. AUTHOR'S DISCUSSION ON THE CONSTITUTIONALITY OF HEMP IN INDIA

The Preamble of the Indian Constitution secures socio economic justice to the people of India. Right to life is enshrined under Art 21 of the Indian Constitution. This right includes within its ambit multifarious rights. The author suggests that the cultivation of hemp would foster and protect the rights given under Art 21 of the Indian Constitution i.e. Right to health, right to clean environment and right to livelihood.

5.1 Right to Clean Environment

One of the Principles enshrined in Stockholm Declaration, 1972 states that the natural resources of the earth including air, water, land, flora and fauna must be safeguarded for the benefit of present and future generations through appropriate careful planning and management^[40]. The United Nation Conference on Environment and Development set out 27 principles for environmental development^[41]. The World Commission on Environment and Development known as the Brundtland Commission provided guiding principles for the protection of the environment and sustainable development^[42]. Art 48A places obligation on the State to protect and improve the environment^[43].

Right to clean environment has been articulated in a variety of cases such as *M. C. Mehta v Union of India*^[44], *Rural Litigation Entitlement Kendra v Union of India*^[45], *Tarun Bhagat Sangh v Union of India*^[46], *T. N Godavarman Thirumalpad v UOI*^[47], *T. K. Koolwal v State of Rajasthan*^[48], *P. A. Jacob v The Superintendent of Police*^[49], *Indian Council for Enviro Legal Action v Union of India*, *Subash Kumar v State of Bihar*^[50], *Murli. S. Deora v Union of India*^[51], *Consumer Education & Research Forum v UOI*^[52] and *Sachidananda Pandey v State of West Bengal*^[53].

5.2 Right to Livelihood

Art 39(a) of the Indian Constitution states that everyone shall have the right to adequate means of livelihood. Right to livelihood has been upheld in cases such *Olga Tellis v Bombay Municipal Corporation*^[54] and *M. J. Sivani v State of Karnataka*^[55].

5.3 Right to Health

The Constitution of the World health organization states that the enjoyment of the highest attainable standard of health is one of the fundamental rights of every human being^[56]. The Preamble of the Constitution of WHO articulates health as the state of complete physical, mental and social well-being and not merely the absence of disease or infirmity^[57]. UDHR states that everyone has the right to a standard of living adequate for the health and well-being of himself and of his family^[58]. International Covenant on Economic, Social and Cultural Rights states that the State Parties to the present Covenant recognize the right of everyone to the enjoyment of the highest attainable standard of physical and mental health.

Art 47 places obligation on the State to raise the standard of nutrition, standard of living and to improve public health^[59]. Right to health has been produced in a number of cases such as *Ratlam Municipal Council v. Varichand*^[60], *Javed & Ors v. State of Haryana*^[61], *Tapan Kumar v. FCI*^[62], *Vincent v. UOI*^[63], *Virender Gaur and others v. State of Haryana and Ors*^[64], *Kirloskar Brothers Ltd. v. Employees' State Insurance Corporation*^[65], *Francis Coralie Mullin vs The Administrator, Union Territory of*

Delhi^[66], Bandhua Mokthi Morcha v. Union Of India^[67], Paschim Bangh Keth Mazoor Samithy v. State of West Bengal^[68], Consumer Education and Research Centre V. Union of India ^[69] and CESC Ltd. v. Subash Chandra Bose^[70].

VI. DISCUSSIONS ON THE GOODNESS OF HEMP IN INDIA

The following discussions and suggestions by the author would show how far hemp legalization is the foremost need in India.

The carbon footprints have been increasing at an alarming rate in India. Carbon dioxide (CO₂) emission in India was 2.88 gigatonne in 2021 and as per the projections of Centre for Environmental Science, CO₂ emission would be expected to reach 4.48Gt in 2030^[71]. To hamper this situation, the Government of India is committed towards reducing its total projected carbon emissions by 1 billion tons and it aims to achieve a target of net zero carbon emission by 2070^[72]. The author suggests that the hemp's magic of being a carbon warrior and a carbon sink would reduce carbon concentration in the atmosphere thereby contributing a little towards achieving the target committed by India. The author further suggests that cultivation of hemp would achieve the goals enshrined in the doctrines of sustainable development, doctrine of intergenerational equity and precautionary principle.

Morris Beegle the Cofounder and President of WAFBA (We Are for Best Alternative) says that hemp the most organic fibre can do all things which the cotton fibre could do^[73]. The author suggests that as hemp can be used as an alternative to cotton in textile industry, cultivation of hemp would subsidize the need for huge amount of water needed for the cultivation of cotton thereby helping in the conservation of water.

According to the United Nation Environment Program, construction globally amounts to 40% of the total energy^[74]. The author suggests that hemp fibres being eco-friendly when used as an alternative to cement and mortar in construction would conserve energy and resources.

Alcohol and cigarettes are injurious to life. WHO report says that every year almost 1 lakh deaths occur in accident on Indian roads due to alcohol abuse^[75]. As per the report by National Crime Record Bureau, Chennai has recorded the highest number of drunk and drive deaths in India in the year 2020^[76]. According to the World Health Organization, Tobacco in cigarettes causes many diseases such as chronic disease, cancer, lung disease, heart disease and stroke. India accounts for nearly 1.35 million deaths every year due to tobacco^[77]. In spite of many disadvantages of tobacco and alcohol, India is the third largest market in the world for alcoholic beverages exporting its liquor to other markets^[78] and it is the second largest producer of tobacco in the world^[79]. The Indian alcohol market is growing at a CAGR of 8.8% and it is expected to reach 16.8 billion litres of consumption by the year 2022. The popularity of wine and vodka is increasing at a remarkable CAGR of 21.8% and 22.8% respectively. India, the largest consumer of whiskey in the world constitutes about 60% of the IMFL market^[80]. Agricultural and Processed Food Products and Export Development Authority under the Ministry of Commerce and Industry, Government of India has reported that the country has exported 2,47,455.66 MT of alcoholic products to the world for the worth of INR2386.91 Crores during the year 2020-21^[81]. The author suggests that on comparing with alcohol and tobacco, hemp which has a THC (tetrahydrocannabinol) less than 0.3 percent has no intoxication effects and its consumption would cause no ill effects to mankind.

According to the Global Social Mobility Report, India would take 7 generations to reach the mean income without a solid supportive action^[82]. The Central Government's Ministry of Textiles suggested that hemp if legalized in India would create a hemp textile market at an estimated value of about INR 240 million^[83]. According to the National Hemp Association in 2015, hemp products are sold at \$573 million in US. After the legalization of industrial hemp in US, National Hemp Association prepared a summary report stating that it would have a total economic impact of about \$32 billion by 2030 and it would aid in the repatriation of more than 66000 American jobs by 2030. The report added that it would result in over \$9 billion economic output in rural areas^[84]. The author suggests that legalization of industrial hemp in India would pave way for the creation of new jobs such as accountants, agriculturists, IT professionals, advocates, insurance experts, entrepreneurs, compliance officers, researchers, experts, lab technicians, CEOs, retailers and various employees to be employed in an industry. So, the huge surge in hemp cultivation would fuel the innovation which would create new market opportunities thereby boosting the livelihood of people and economy of India. Covid -19 had made our economy standstill since 2020. As hemp is the major cash crop, the author suggests that legalizing hemp cultivation would add to the State's exchequer which would revive back our Covid hit economy.

The author puts forward that the power given to the State government under Sec 10 of NDPS Act, 1985 has not been effectively used. Hemp has a rainbow of uses but the author regrets to say that Government is color blind to make use of such amazing plant due to the stigma attached to it. The author suggests that the State Governments shall frame a sound regulatory framework for the cultivation of hemp.

The definition provided for hemp^[85] under NDPS Act is vague and needs better interpretation. The Agricultural Marketing Act, 1946 of US has defined hemp as the plant *Cannabis sativa L.* and any part of that plant, including the seeds and all derivatives, extracts, cannabinoids, isomers, acids, salts, and salts of isomers, whether growing or not, with a delta-9 tetrahydrocannabinol concentration of not more than 0.3 percent on a dry weight basis. But Indian legislation has failed to differentiate between cannabis and hemp. There is a huge difference between cannabis and hemp as hemp has a THC less than 0.3 percent and has fewer intoxicating effects when compared to cannabis. The author recommends that the Indian policy makers shall make amendments in NDPS Act to differentiate between cannabis and hemp and to liberalize the use of hemp which has been lumped in with a pot in NDPS Act for long years.

The author as a whole concludes that as larger public interest is served, it is a need for an hour to frame a robust policy for legalizing cultivation of hemp in India.

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