

# Cannabis Sativa

## Economics and Sustainability

### INCB Civil Society Hearing: The Use of Cannabis for Non-Medical Purposes

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*I can't hide the excitement triggered by the opportunity to discuss one of the topics I am mostly passionate about at the first Civil Society Hearing of the INCB.*

*My name is Elena and I am representing Students for Sensible Drug Policy (SSDP) today, an international grassroots organization that I got involved with last year, because I immediately associated myself and my future goals with their philosophy and professional identity. As young adults looking for conscious careers in diverse occupational fields, we are united by the desire to work for a more just and sensible future in terms of drug policy, which currently hinder the prospects for our generation as well as innovation and progress in this domain.*

*Within the next 10 minutes we will explore the interconnections between Cannabis Sativa, ranking amongst the very oldest of domesticated and economic plants, its socio-ecological value and economic importance.*

*To be able to grasp the complexity of understanding the millennial history of this plant, we will dive deep into examining its roots and origin.*

*Cannabis has been cultivated for millennia due to the toolbox of useful natural compounds it offers.*

#### **Genus: Taxonomy & Characteristics**

*It is a herb, which belongs to the Cannabaceae family of flowering plants. This family includes also twining herbs such as hops and trees like hackberries. The taxonomy of Cannabis is still surrounded by controversy. Up to now, the plant has been classified either as a monotypic genus, Cannabis sativa or a polytypic genus including up to three species: Cannabis sativa, Cannabis indica and Cannabis ruderalis.*

*Cannabis characterizes as a dioecious plant, which means that unisexual male or female flowers develop on separate plants, although an occasional occurrence of monoecious examples is possible. For reproduction it relies on air currents to carry the pollen grains from male to female plants, which means it is anemophilous (wind-pollinated). The most suitable soils for Cannabis growth are sandy and loamy alluvial (e.g. river valleys).*

*Various names refer to the same species. To secure exactness I would like to cite definitions from the book “Cannabis: Evolution and Ethnobotany”: “The word hemp originally, and still, refers to Cannabis sativa, a tall Eurasian herb that is widely cultivated for its tough bark fiber ... Today, “true hemp” or “common hemp” refers to Cannabis, or more specifically European Cannabis sativa or narrow-leaf hemp. Biological taxonomists have placed all marijuana, or true hemp plants, in genus Cannabis.”*

### **Geographical Origin**

*Today the regions in Central Asia, the foothills of the Himalayan and Hindu Kush Mountains and parts of East Asia are considered as possible indigenous areas for the Cannabis genus. It is most likely that these regions have played a significant role regarding Cannabis evolution and primary domestication. The “Father of Taxonomy”, Carl Linnaeus, believed Cannabis sativa was native to India.*

*An exact geographical origin can be hardly determined, because of two reasons: the range of Cannabis shifted repeatedly during glacial-interglacial cycles over hundreds of thousands of years and no sufficient evidence in this part of the world regarding its indigenous lands has been provided due to lack of research there.*

*Yet, scientists differentiate between three species of Cannabis: truly wild, cultivated and spontaneously growing in areas associated with humans.*

### **Economic Value**

*At a closer look, we see Cannabis can be used in 50,000 products. The logic behind is that the longer a plant has been utilized, the more use-cases of it become known. The utilization of the entire plant creates its high economic value.*

*As an agricultural crop it offers reliable and durable raw materials for various industries, enabling local production across all continents without harming the environment. The price of hemp products is comparable to current pricing and can be even reduced through economies of scale. From textiles, to cosmetics and personal hygiene products, medical treatment, building materials, super foods, energy, cars, paper – all of them can be made with hemp. For instance, the BMW Group is using hemp to replace plastic in car construction.*

*Though, only a reconsideration concerning the liberalization of international and national hemp legislations can help lift the stigma. Some regulations induce significant competitive disadvantages in Europe vs. North America or Asia. In general, strict Cannabis policies have completely impaired the advancement of Cannabis genotypes, whereas other plant resources like timber and cotton have been granted multiple opportunities for improvement.*

### **Environmental Impact**

*The polarization of hemsps’ legal status stretches from making it illegal not to grow hemp in parts of the world in the early 1600s to a dramatic law change and prohibition sustaining for the past three quarters of a century.*

*Nevertheless, due to its ability to reduce soil toxicity, industrial hemp has been sown in the region of Chernobyl around the abandoned nuclear power plant in Pripjat, Ukraine in the last two decades.*

*It stores more carbon dioxide per hectare than any forest or commercial crop and is therefore ideal for reducing carbon emissions induced by anthropogenic activities. Hemp is a fast-growing crop and reaches heights up to 4 meters in 100 days. In comparison, a tree needs 25 years to get an industrial value. All products made from hemp are biodegradable and recyclable. These properties have crucial importance for the progress of the Circular Economy.*

## **Sustainable Usage**

*By carefully examining the Global Sustainable Development Goals, we can ascertain a correlation between Cannabis Sativa and its relevance for the health and well-being of our society. Hemp's broad implementation scale enables us to address 10 out of 17 goals, marked with a heart symbol on this slide (1 No Poverty, 2 No Hunger, 3 Good Health, 7 Renewable Energy, 8 Good Jobs and Economic Growth, 9 Innovation and Infrastructure, 10 Reduced Inequalities, 11 Sustainable Cities and Communities, 13 Climate Action, 15 Life on Land).*

*For instance, let's look at number 11 & 13 – Sustainable Cities and Communities and Climate Action: the woody chips, a residue from hemp stalks, is used for manufacturing healthy and sustainable building products with excellent thermal insulation properties and a life span of hundreds of years. The building industry is one of the major environmental polluters worldwide. Hemp empowers us with the ability to tackle this issue and optimize building performances by reducing the dependency on fossil fuel energy sources.*

## **Current Challenges**

*As a researcher and last year civil engineering student, who is looking to start an environmentally conscious business, I would like to stress on factors, which hinder the global utilization of Cannabis Sativa.*

*The controversial legal status prevents the development of research in its fields of application on a global scale. The negative public bias driven by fear is not based on scientific evidence and yet fuels the spread of misinformation.*

*The neglect of this useful plant in several industries fosters the further exploitation of our precious Earth and keeps on exhausting non-renewable natural resources.*

## **Innovation**

*This is exactly why my colleague Bojan and I devote a lot of time and energy to find the legal way to act for the bright future of the building sector. One year ago, we launched Hempstatic – project introducing an economic vision for a sustainable business solution, which can be as quickly adopted in the developing countries as in the industrialized nations.*

*We design hemp-based building blocks to help construction companies reduce their carbon footprint and increase the energy efficiency of buildings. Our mission is to establish a crossover-effect between an eco-friendly building industry and hemp farmers.*

## **Conclusion**

*To connect urban development with rural regions we need strong partners on our side. I would like to make an appeal to all of you, because you and I have the knowledge and power to re-think Cannabis regulations and grow a sustainable future with joint forces.*

*Thank you!*