

## A Review on Sustainable Eating and Eco-Friendly Diets

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**Received** : 25.08.2020; **Revised** : 15.09.2020; **Accepted** : 14.10.2020

### ABSTRACT

The world population is expected to be thousand crores by 2050, and it's now a matter of hot debate that how global food system is going to meet future requirements of food. There is the biggest challenge to make it sure that every person will have access to enough as well as nutritive food produced in a socio-culturally and environmentally sustainable forms. The diets available now (mostly westernized diets) are also a big risk factor for the worldwide burden of disease and death. Diet-related non-communicable disease and rising obesity are increasingly prevalent, affecting most of population. Therefore, sustainable diets are proposed as a multidimensional framework to affect the need for nutritious and adequate food within the context of the varied challenges facing the earth today reducing poverty and hunger, improving environmental health, enhancing human health, and strengthening local food networks, sustainable livelihoods, and cultural heritage. This mini-review is on new advancements towards sustainable diets and their nutritional, cultural and environmental aspects.

Figure : 00

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KEY WORDS : Eco-friendly diet, Environment, Metabolic Syndrome, Nutrition, Socio-Culture, Sustainable diets, Sustainable eating.

### Introduction

The food we eat has effects on our health and the fitness. The global population would be almost thousand crores till 2050. It is now necessary to modify our way of production of foods and fishes<sup>10</sup>. Large level sensible solutions are essential to form the specified changes<sup>10</sup>.

Worldwide, we believe a small food range adversely influences our health. Seventy five percent of the food supply comes from the bulk of twelve plants and five animal species<sup>7</sup>. Among them, rice, maize and wheat make up nearly sixty percent of calories from plants in the entire human diet<sup>7</sup>. Whereas, pork accounting to thirty six percent (as the most widely eaten meat in the world) followed by poultry and beef with about thirty five and twenty two percent respectively making these three animals contributing ninety three percent of calories from animals<sup>19</sup>. This eliminates many valuable sources of nutrition and while people may get enough calories to survive, these narrow diets don't provide enough vitamins and minerals to encourage health<sup>10</sup>. However, proper dietary nutrition is the only way for diseases prevention and maintaining body-mind balance<sup>25</sup>. Along this line, recently workers<sup>27</sup>, indicated that few medical experiments evaluated direct enhancements in health outcomes related to organic food utilization. These studies showed a significant positive outcome with increased organic intake and it was associated with lowered occurrence of high BMI, infertility, birth defects,

metabolic syndrome, allergic sensitization and non-Hodgkin lymphoma<sup>27</sup>.

Therefore, imbalanced diets limiting vegetables, fruits, nuts and whole grains contents and enriched in red and processed meat are liable for the worldwide health burden<sup>8,23</sup>. Additionally, about two hundred crores individuals are obese and overweight, have nutritional deficiencies and about eighty crore are suffering from starvation due to economic poverty and less developed food systems<sup>6,23</sup>. As food preference shift towards more processed and high-value food products (that is actually low in nutrients) that persists in many areas of the world, these nutritional hazards are likely to aggravate<sup>21,23</sup>.

Likewise, the environmental impacts of the current food production are also intimidating. Agriculture alone is liable for about a quarter of all greenhouse gas emissions where it dominates about forty percent of the total earth's surface and uses about seventy percent of all the freshwater resources<sup>17,18,26</sup>. It is the single cause of the over-application of fertilizers and in some areas has led to pollution of surface water and groundwater and created dead zones in oceans<sup>3</sup>. As there are no committed improvement strategies or changes in the mandate, these environmental effects are expected to strengthen in the future when demand for foods (such as meat and dairy will increase) by increasing population<sup>20,22</sup>.

### A balanced and healthy diet that is also sustainable

Therefore, the International Conference on Nutrition

Rome Declaration states that “optimal diets, including traditional diets, meet nutrient requirements across all age groups and special nutrition needs. These diets avoid excessive intake of saturated fat, sugars and sodium, essentially eliminating trans fats, among others”<sup>4,6</sup>. The WHO also gives recommendations that diets should be composed of diversity of foods that are of sufficient quantity, of standard quality and free from pathogens<sup>30</sup>. Where sufficient quantity refers there to food eaten should have energy requirements of calories that supported the age, weight and size, sex, activity level and overall stage of life<sup>4,30</sup>. Healthy foods include fruits, whole grains, nuts and seeds, vegetables, fish and seafood, beans and legumes, omega-three fatty acids, foods rich in total poly-unsaturated fatty acids and dietary fiber<sup>4,14,30</sup>. Whereas, unhealthy foods include excessive amounts of untreated or treated meats, overly treated starches, foods containing high levels of saturated fat, and sugars<sup>4,14</sup>.

Therefore, conceptually sustainable diets have potential to create a food system that is nutrient rich and healthful for an increasing population while limiting its environmental impacts and staying within planetary boundaries<sup>2,11</sup>.

In January 2019, The New York Times elucidated an inclusive report from the EAT-Lancet Commission on Food, Planet and Health<sup>1</sup> which was prepared by 37 scientific experts from 16 countries. Their report aims to establish a global food economy that would fight chronic diseases in developed countries and provide better nutrition for developing nations, in sustainable manner. The scientists’ goal was to prepare a healthy sustainable diet to feed the expected population in future<sup>1</sup>.

Without dietary patterns change, current diets are higher in fats, oils, refined sugars and meats to be major contributors to an expected eighty percent increase in farming greenhouse gas productions and worldwide land clearing by 2050<sup>4,24</sup>. Although ecological profits from plant-based sustainable diets are alterable, these diets offer the definite potential for improvements in climate change, with modeling representing that shifting to these diets could reduce greenhouse gas emissions by thirty to fifty percent<sup>4,22,29</sup>.

Plant-based sustainable diets bound meat consumption, though the stages and kinds of animal source foods consumption can vary depending on the

precise diet (e.g. Vegetarian, Mediterranean)<sup>4</sup>. EAT-Lancet Commission recommended healthy reference diet which includes a low to moderate amount of poultry, seafood and little to no red meat<sup>4,29</sup>. Adopting healthy, sustainable plant-based diets will prevent about twenty percent reduction in (~ten million) deaths per year<sup>29</sup>. Computer modelling of various sustainable healthy plant-based diets such as Mediterranean, pescatarian, and vegetarian show reductions in type II diabetes and cancer incidence rates by sixteen to forty one percent and seven to thirteen percent respectively, including reduced death from coronary heart disease by twenty to twenty six percent<sup>4,24</sup>. Replacing animal-based foods with plant-based substitutes may also be more possible in high to middle income countries<sup>22</sup>.

Sustainable diets that are ideal for both humans and the wild draw attention for food boundaries for food production and it will consist of an ideal caloric consumption and consist of variety of plant foods, lower animal source foods, unsaturated fats, and small portions of refined grains, processed foods and sugars<sup>29</sup>. Other conclusion for healthy sustainable diets is to make it affordable, safe and nutritional adequate for sociocultural well being<sup>4,12</sup>.

## Conclusion

The alteration from unhealthy diets towards healthy, sustainable diets is progressively in need to face climate change<sup>4</sup>. The sustainable practice will lead to preservation of the environment which provide existence to humans and nature with productive harmony, that will be helpful to fulfilling the social, economic and other requirements of present and future generations<sup>16</sup>. Therefore, various policies interventions at government level are needed. The three pillars of health, environmental sustainability, and equity must be combined to take action by different stakeholders across the world<sup>4,9</sup>. Strategies are also needed to take steps on economic fiscal level, trade and industry level and some specific interventions in education system<sup>4,13</sup>. These approaches must be acceptable to the cultural, social and economic context and balance the trilateral goals of health, sustainability and equity<sup>4,13,15</sup>. This is the need of the hour to increase awareness for organic production and stopping the use of chemicals in farming that is harming the living beings. The nature must be supported by good green practices for sustainable development.

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