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Agricultural Ethics

Paul A. Adekunte[1], Matthew N. O. Sadiku[2], Janet O. Sadiku[3]

[1]International Institute of Professional Security, Lagos, Nigeria
[2]Roy G. Perry College of Engineering, Prairie View A&M University, Prairie View, TX, USA
[3]Juliana King University, Houston, TX, USA

ABSTRACT

Agricultural ethics is a branch of applied ethics that deals with moral issues and values associated with agricultural practices, food production, rural development, and environmental sustainability. Agricultural ethics combines ethical theory with agricultural science, economics, sociology, and ecology in finding solutions to some complex questions surrounding how food is grown, processed, and distributed. In this paper, we attempt to dive into the complexities around agricultural ethics and its benefits to humanity.

KEYWORDS: *Agricultural ethics, environmental sustainability, food production, rural development, farm animals, genetic modification (GM), food security and justice, farmer rights, labor ethics, eco-centrism, food supply chain, human suffering*

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INTRODUCTION

Ethics is said to refer to the moral principles and values that guide human behavior and decision-making. In the context of agriculture, as shown in Figures 1 and 2, ethics involves considering the impact of farming practices on various stakeholders, including animals, the environment, farmers, and the consumers.

A lot of problems confront agriculture globally, some of which are hunger, undernutrition (causing blindness and marasmus), and overnutrition such as obesity. Moreover, there are the problems of inequality of access to arable land, good food, water pollution, global warming, and suffering of billions of animals, as shown in Figure 3, threat to livelihoods of poor farmers due to geopolitical powerful companies or countries, intellectual property rights causing unequal access to seeds – increasing the gap between poor and rich farmers. These ethical problems presuppose notions of justice, human rights, dignity of people, and quality of food and livelihood [1].

Agricultural ethics in known to encompass various issues such as farm structure, food security and safety, animal welfare (ethics and rights), global trade, sustainability, agricultural biotechnology, trust in science, research ethics and environmental impact, as shown in Figure 4. It also involves understanding the relationships between farmers, consumers, animals, and the environment.

The scope of agricultural ethics ranges from macro issues at national and global levels to human ecology (i. e. human relationship with the environment). Ecocentrism lays emphasis on the interconnectedness of all elements within an ecosystem (i.e. both living and non-living things) [2-4].

HISTORICAL BACKGROUND

The roots of agricultural ethics dates back to early agrarian societies and has evolved significantly with technological, social and economic transformations.

1. Ancient and Traditional Agrarian Societies:

- Ancient Civilizations (e.g., Mesopotamia, Egypt, China): Ancient Egypt, Mesopotamia, and China practiced agriculture with a strong connection to religion and natural cycles. Farming was seen as a moral duty to sustain life and uphold cosmic balance.

- Aristotle (4th century BCE) showed the importance of living according to nature, extending this to agriculture and animal husbandry, but with the belief that animals were primarily for human use.
- In early Judeo-Christian traditions, humans were regarded as stewards of the Earth (Genesis 2: 15), which laid the foundational ethical principle of responsibility in land and resource management [5], as shown in Figure 5.

2. Agrarianism and Enlightenment Thought: During the 18th and 19th centuries, Enlightenment thinkers began to connect moral progress with land cultivation and agricultural improvement.
- In the United States, Thomas Jefferson idealized the yeoman farmer as a model citizen, fostering the notion of moral virtue through self-sustaining agriculture (agrarianism).
- Romanticism emphasized harmony with nature, thereby influencing ethical perspectives on land and rural life [6, 7].

3. Industrialization and Technological Shifts (19th-20th century): The Industrial Revolution brought mechanization, synthetic fertilizers, and chemical pesticides, as shown in Figure 6, leading to increased productivity but also raised new ethical concerns, such as:
- Soil depletion, pollution, and animal confinement.
- Ethical questions about the environmental sustainability of industrial agriculture and its social impacts on rural communities and smallholders; the environmental harm caused by the indiscriminate use of DDT used by soldiers during World War ll as documented by Carson [8, 9].

4. Environmental Movement and Rise of Bioethics (1960s-1980s): The environmental movement of the 1960s-1970s broadened agricultural ethics to include ecological integrity and biodiversity.
- Rachel Carson's Silent Spring (1962) catalyzed ethical critique of chemical pesticide use.
- The emergent field of bioethics extended ethical reflection to biotechnology and genetic engineering in crops and livestock [10].

5. Contemporary Agricultural Ethics (1990s-Present): Modern agricultural ethics is interdisciplinary and global, covering:
- Sustainability – Long-term viability of food systems.
- Animal welfare – Ethical treatment of farm animals.
- Food justice – Fair access to food and equitable labor practices.
- Biotechnology – Debates over Genetically Modified Organisms (GMOs), gene editing, and patenting life forms.
- Climate change – Agriculture's role in emissions and adaptation strategies [11-13].

CAUSES OF AGRICULTURAL ETHICS

The causes of agricultural ethics are multifaceted and complex, which are due to many factors, among which are [14-16]:

- Consumer awareness and demand: The increasing concern of consumers about food production methods, animal welfare, and the impact on the environment brought about the scrutiny of agricultural practices.
- Environmental degradation: Intensive agriculture seriously impacts the environment negatively by causing soil degradation, water pollution, and the loss of biodiversity, leading to ethical concerns.
- Animal welfare concerns: Causing ethical concerns were the ways farm animals are treated such as factory farming, confinement, and slaughter practices.
- Food safety and security: Ensuring access to safe and nutritious food, most especially for vulnerable populations is also a pressing ethical concern.
- Globalization and trade: Globalization of food systems is a concern about fair trade, labor practices, and as well as the impact of agricultural production on local communities.
- Technological advancements: Development of new technologies, such as genetic modification and precision agriculture, has raised ethical concerns about their potential impact on the environment, human health, and social structures.
- Social justice and equity: Issues like fair labor practices, equitable access to resources, and the impact of agricultural policies on marginalized communities are concerns for ethical considerations.

TYPES OF AGRICULTURE

The different types of agriculture are:

1. Subsistence agriculture: This focuses on the production of food for local consumption, often involving the use of traditional methods [17].
2. Commercial agriculture: This is the production of crops and livestock for sale, and most often it is by the use of modern technology and large-scale farming practices [18].

3. Intensive agriculture: It maximizes output from a small land area using high inputs like fertilizers, labor, and technology [19].
4. Extensive agriculture: This uses small inputs of labor, fertilizers, and capital relative to the area. Productivity is low per hectare but it covers large areas, e. g., sheep ranching in Australia, and wheat farming in Canada [20].
5. Organic agriculture: The emphasis here is the use of natural methods, thereby avoiding the use of synthetic fertilizers and pesticides [21].
6. Industrial agriculture: This is large-scale, high-input farming focused on maximizing output and efficiency [22].
7. Nomadic herding: This is a type of livestock farming where herders move with their animals in search of pasture and water. It is very common in arid and semi-arid regions (e.g., the Sahel, Central Asia) [23].
8. Mixed farming: This is the integration of crop cultivation and livestock rearing on the same farm [24].
9. Plantation agriculture: It entails the large-scale production of a single crop in tropical or subtropical regions, often for export [25].
10. Aquaculture: This is the farming of aquatic organisms such as fish, crustaceans, and plants. The various types are freshwater, brackish water, and marine aquaculture [26].
11. Sustainable agriculture: Priority is placed on environmental stewardship, social responsibility, and economic viability [17, 24].

BENEFITS OF AGRICULTURAL ETHICS

Some of the benefits of agricultural ethics are:

1. Environmental sustainability: Ethical agricultural practices promote conservation of natural resources, soil health, and biodiversity. The benefits are the reduction of environmental degradation, encourages sustainable land use, reduces pollution, and mitigates climate change [9, 25].
2. Improved animal welfare: Ethical frameworks emphasize humane treatment of animals, animals are raised in conditions that respect their well-being, reducing cruelty and improving quality of products [26, 27].
3. Fair labor practices: Agricultural ethics is in support of fair wages, safe working conditions, and rights for farm laborers. This helps to improve livelihoods, health, and the dignity of agricultural workers [28, 29].
4. Food security and justice: It seeks equitable access to food and fair distribution of agricultural resources. This will help reduce hunger and inequality, ensuring that all people have access to healthy and affordable food [30, 31].
5. Consumer trust and transparency: Ethical agricultural practices foster honesty in food labeling and production processes. This enhances increased consumer confidence and supports informed decision-making [32, 33].
6. Promotes innovation for public good: Ethical considerations serve as a push for innovation toward more socially responsible goals. Encourages the development of sustainable technologies and practices that benefit society at large [34].

CHALLENGES TO AGRICULTURAL ETHICS

Some of the barriers or key challenges to agricultural ethics include:

1. Environmental degradation/Environmental sustainability: Modern agricultural practices lead to deforestation, soil degradation, biodiversity loss, and water pollution. Ethical concerns are as a result of the long-term damage to ecosystems and the sustainability of food production [9, 35].
2. Animal welfare: The well-being of animals are often compromised by industrial farming practices, hence raising ethical concerns about cruelty, confinement, and genetic modification [26, 36].
3. Equity and food justice: Ethical issues often arise due to the unequal access to land, food, water, and resources, most specifically in marginalized and developing communities. Smallholder farmers are often disadvantaged [37, 38].
4. Corporate control and biotechnology: The concentration of power among agribusiness corporations raises ethical questions about monopoly, seed patenting, and genetically modified organisms (GMOs) [39, 40], as shown in Figures 7 and 8.
5. Labor rights and exploitation: In many agricultural sectors, seasonal workers and migrants often face poor working conditions, low wages, and lack of legal protection [41, 42].
6. Climate change: Agriculture both contributes to and is affected by climate change. Ethical questions involve responsibility for emissions,

adaptation strategies, and intergenerational justice [43, 44].

7. Technological dependence: Heavy reliance on technology, data, and AI in agriculture may lead to a loss of traditional knowledge, ethical misuse of data, and rural exclusion [45].
8. Fairness and equity: Need to promote equitable access to resources, markets, and benefits for all farmers, regardless of scale or location.
9. Cultural sensitivity and respect for traditions: Developing agricultural technologies that respect local customs and traditional knowledge systems.
10. Balancing profit and principles: This is to ensure reconciling economic viability with social responsibility and environmental stewardship in agricultural practices [46-48].

SOLUTIONS TO CHALLENGES FACING AGRICULTURAL ETHICS

Solutions to the challenges facing agricultural ethics would include the followings [14, 49-51]:

1. The promotion of sustainable practices such as:
   - Sustainable farming: Adoption of regenerative agricultural practices that restore soil health, conserve water and protect biodiversity, as shown in Figures 9, 10 and 11. The Food and Agricultural Organization (FAO) is a specialized agency of the United Nations dedicated to improving food security, nutrition, and sustainable agriculture globally, as shown in Figure 12.
   - Organic standards: Adherence to USDA organic certification requirements by eliminating synthetic pesticides, fertilizers, hormones, and antibiotics.
2. Improving animal welfare:
   - Humane treatment: Welfare-friendly practices should be implemented, such as free-range systems and humane slaughter methods.
   - Precision livestock farming: Automated monitoring systems are used to enhance animal welfare and reduce stress.
3. Enhancing food safety and quality:
   - Quality control: Establish systematic quality checks throughout the production cycle, as well as soil testing, water analysis, and product sampling.
   - Record-Keeping: Comprehensive record –keeping systems to help track farming operations from seed to harvest.
4. Supporting fair labor practices:
   - Fair trade certification: To ensure fair prices for producers, promote environmental sustainability, and respect workers' rights.
   - Profit-sharing models: Implementing profit-sharing models with farm workers to incentivize productivity and improve labor conditions.
5. Fostering community engagement:
   - Community-supported agriculture (CSA): Local communities needed be engaged via CSA models, where consumers subscribe to the harvest of a local farm.
   - Education and advocacy: Educate consumers about the importance of ethical choices and advocate for policy changes that help to promote sustainable agriculture.
6. Leveraging technology:
   - Precision agriculture: Making use of technologies like GPS-guided tractors and drones to reduce resource waste and to minimize environmental impact.
   - Blockchain technology: Use of blockchain tech to ensure secure and verifiable records of food provenance and production practices.

CONCLUSION

The Sustainable Development Goals (SDGs) as a set of 17 interconnected goals was adopted by the United Nations in 2015 to promote prosperity, protect the planet, and ensure peace and justice for all by 2030. These goals are designed to address global challenges like poverty, hunger, inequality, climate change, and lack of access to basic services – which are based on three essential pillars: economic development, social development, and environmental protection.

It would be observed that SDGs and agricultural ethics are closely related in the areas of: zero hunger, responsible consumption and production, climate action, life on earth, sustainable agriculture, animal welfare, environmental protection, and social responsibility. More information on Agricultural Ethics can be found in the books in [52-55] and the following related journals:

- Journal of Agricultural and Environmental Ethics
- Agriculture and Human Values
- Journal of Applied Animal Welfare Science
- The International Library of Environmental, Agricultural and Food Ethics
- Animal Welfare

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Figure 1. Agriculture

Source:https://www.google.com/search?sca_esv=9faf4b2dd5f8b9e4&sxsrf=AE3TifMFikJX9ETk3bXBVWvgNWdJmI6TIQ:1752350381741&q=images+on+agricultural+ethics+by+wikipedia&udm=2&fbs=AIIjpHxU7SXXniUZfeShr2fp4giZ1Y6MJ25_tmWITc7uy4KIemkjk18Cn72Gp24fGkjjh6xu8MoiqvsCxZdBI8HKbd8Y9WeikhKZYSqCb4kDZREAuPjIotmLU88K6Eaw5b87p4fzVFbqFAS4BKVEHSVkftyEkAR7Ex2p5kG7gcR9_41iR4_zsxLwYrO2ZyrMzsk6wAjsHWKXzdD7fwtIUbip32LhlKA&sa=X&ved=2ahUKEwjG_JnwjbiOAxVwSEEAHdwCPWoQtKgLKAF6BAgUEAE&biw=1036&bih=539&dpr=1#vhid=iuDsiVKzDrM7aM&vssid=mosaic

Figure 2. Industrial agriculture

Source:https://www.google.com/search?sca_esv=9faf4b2dd5f8b9e4&sxsrf=AE3TifOiW4C41sZv1_Im9beCKvp0S6iHoA:1752351868357&q=images+on+agricultural+ethics+by+wikipedia&udm=2&fbs=AIIjpHxU7SXXniUZfeShr2fp4giZ1Y6MJ25_tmWITc7uy4KIemkjk18Cn72Gp24fGkjjh6xu8MoiqvsCxZdBI8HKbd8Y9WeikhKZYSqCb4kDZREAuPjIotmLU88K6Eaw5b87p4fzVFbqFAS4BKVEHSVkftyEkAR7Ex2p5kG7gcR9_41iR4_zsxLwYrO2ZyrMzsk6wAjsHWKXzdD7fwtIUbip32LhlKA&sa=X&ved=2ahUKEwjB9om1k7iOAxVTW0EAHQUrH20QtKgLKAF6BAgSEAE&biw=1036&bih=539&dpr=1#vhid=OlpB65jwq6pJ6M&vssid=mosaic

Figure 3. Livestock

Source:https://www.google.com/search?sca_esv=63c2fe5e06952359&sxsrf=AE3TifMnQAc4MfJPP_zWDIFbdNNHh2Zig:1752373487562&q=images+on+agricultural+ethics+by+wikipedia&udm=2&fbs=AIIjpHxU7SXXniUZfeShr2fp4giZ1Y6MJ25_tmWITc7uy4KIemkjk18Cn72Gp24fGkjjh6xu8MoiqvsCxZdBI8HKbd8Y9WeikhKZYSqCb4kDZREAuPjIotmLU88K6Eaw5b87p4fzVFbqFAS4BKVEHSVkftyEkAR7Ex2p5kG7gcR9_41iR4_zsxLwYrO2ZyrMzsk6wAjsHWKXzdD7fwtIUbip32LhlKA&sa=X&ved=2ahUKEwjVwfX547iOAxU5UkEAHQpmDEwQtKgLKAF6BAgTEAE&biw=1036&bih=584&dpr=1#vhid=vHHUqJB5WQagpM&vssid=mosaic

Figure 4. Agricultural communication

Source:https://www.google.com/search?sca_esv=9faf4b2dd5f8b9e4&sxsrf=AE3TifOiW4C41sZv1_Im9beCKvp0S6iHoA:1752351868357&q=images+on+agricultural+ethics+by+wikipedia&udm=2&fbs=AIIjpHxU7SXXniUZfeShr2fp4giZ1Y6MJ25_tmWITc7uy4KIemkjk18Cn72Gp24fGkjjh6xu8MoiqvsCxZdBI8HKbd8Y9WeikhKZYSqCb4kDZREAuPjIotmLU88K6Eaw5b87p4fzVFbqFAS4BKVEHSVkftyEkAR7Ex2p5kG7gcR9_41iR4_zsxLwYrO2ZyrMzsk6wAjsHWKXzdD7fwtIUbip32LhlKA&sa=X&ved=2ahUKEwjB9om1k7iOAxVTW0EAHQUrH20QtKgLKAF6BAgSEAE&biw=1036&bih=539&dpr=1#vhid=aD6DD7ciOS1kPM&vssid=mosaic

Figure 5. History of agriculture

Source:https://www.google.com/search?sca_esv=63c2fe5e06952359&sxsrf=AE3TifMnQAc4MfJPP_zWDIFbdNNHh2Zig:1752373487562&q=images+on+agricultural+ethics+by+wikipedia&udm=2&fbs=AIIjpHxU7SXXniUZfeShr2fp4giZ1Y6MJ25_tmWITc7uy4KIemkjk18Cn72Gp24fGkjjh6xu8MoiqvsCxZdBI8HKbd8Y9WeikhKZYSqCb4kDZREAuPjIotmLU88K6Eaw5b87p4fzVFbqFAS4BKVEHSVkftyEkAR7Ex2p5kG7gcR9_41iR4_zsxLwYrO2ZyrMzsk6wAjsHWKXzdD7fwtIUbip32LhlKA&sa=X&ved=2ahUKEwjVwfX547iOAxU5UkEAHQpmDEwQtKgLKAF6BAgTEAE&biw=1036&bih=584&dpr=1#vhid=Srt34umq4bc0RM&vssid=mosai

Figure 6. Health effects of pesticides

Source:https://www.google.com/search?sca_esv=63c2fe5e06952359&sxsrf=AE3TifMnQAc4MfJPP_zWDIFbdNNHh2Zig:1752373487562&q=images+on+agricultural+ethics+by+wikipedia&udm=2&fbs=AIIjpHxU7SXXniUZfeShr2fp4giZ1Y6MJ25_tmWITc7uy4KIemkjk18Cn72Gp24fGkjjh6xu8MoiqvsCxZdBI8HKbd8Y9WeikhKZYSqCb4kDZREAuPjIotmLU88K6Eaw5b87p4fzVFbqFAS4BKVEHSVkftyEkAR7Ex2p5kG7gcR9_41iR4_zsxLwYrO2ZyrMzsk6wAjsHWKXzdD7fwtIUbip32LhlKA&sa=X&ved=2ahUKEwjVwfX547iOAxU5UkEAHQpmDEwQtKgLKAF6BAgTEAE&biw=1036&bih=584&dpr=1#vhid=QMgNToyEwqsCqM&vssid=mosaic

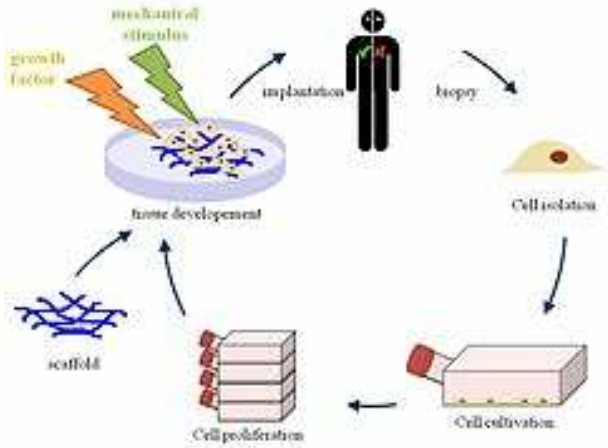

Figure 7. Biotechnology

Source:https://www.google.com/search?q=images+on+agricultural+biotechnology+by+wikipedia&sca_esv=63c2fe5e06952359&udm=2&biw=1036&bih=584&sxsrf=AE3TifNGUnvj0QhcKqCUFRTexsV4P3lAgg%3A1752373507996&ei=AxlzaOvMPICDhbIP2cTx2QM&ved=0ahUKEwir2tSD5LiOAxWAQUEAHVliPDsQ4dUDCBE&oq=images+on+agricultural+biotechnology+by+wikipedia&gs_lp=EgNpbWciMWltYWdlcyBvbiBhZ3JpY3VsdHVyYWwgYmlvdGVjaG5vbG9neSBieSB3aWtpcGVkaWFIh9cBUKwZWOmtAXABeACQAQCYAbgDoAHiJqoBCjAuMy4xMS40LjG4AQzIAQD4AQGYAgGgAgzCAgcQIxgnGMkCmAMAiAYBkgcBMaAH1wayBwC4BwDCBwMyLTHIBwY&sclient=img#vhid=ptN0UB8Dwq8OLM&vssid=mosaic

Figure 8. Agricultural biotechnology

Source:https://www.google.com/search?q=images+on+agricultural+biotechnology+by+wikipedia&sca_esv=63c2fe5e06952359&udm=2&biw=1036&bih=584&sxsrf=AE3TifNGUnvj0QhcKqCUFRTexsV4P3lAgg%3A1752373507996&ei=AxlzaOvMPICDhbIP2cTx2QM&ved=0ahUKEwir2tSD5LiOAxWAQUEAHVliPDsQ4dUDCBE&oq=images+on+agricultural+biotechnology+by+wikipedia&gs_lp=EgNpbWciMWltYWdlcyBvbiBhZ3JpY3VsdHVyYWwgYmlvdGVjaG5vbG9neSBieSB3aWtpcGVkaWFIh9cBUKwZWOmtAXABeACQAQCYAbgDoAHiJqoBCjAuMy4xMS40LjG4AQzIAQD4AQGYAgG

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Figure 9. Agroecology in Latin America

Source:https://www.google.com/search?q=images+on+agroecology+by+wikipedia&sca_esv=63c2fe5e06952359&udm=2&biw=1036&bih=584&sxsrf=AE3TifPs7TCNrZuxwVTVAKwhDOwr5ttyPw%3A1752375457736&ei=oSBzaMLZLJGchbIP4p_AiAk&ved=0ahUKEwiCrql67iOAxURTkEAHeIPEJEQ4dUDCBE&oq=images+on+agroecology+by+wikipedia&gs_lp=EgNpbWciImltYWdlcyBvbiBhZ3JvZWNvbG9neSBieSB3aWtpcGVkaWFI5ZQCUKIUWLPfAXABeACQAQGYAfoCoAG0OaoBCDAuNS4yMi40uAEMyAEAAEBmAIBoAIOwgIHECMYJxjJApgDAIgGAZIHATGgB_MKsgcAuAcAwgcDMy0xyAcJ&sclient=img#vhid=J60TZukiWDyE1M&vssid=mosaic

Figure 10. Regenerative agriculture

Source:https://www.google.com/search?q=images+on+agroecology+by+wikipedia&sca_esv=63c2fe5e06952359&udm=2&biw=1036&bih=584&sxsrf=AE3TifPs7TCNrZuxwVTVAKwhDOwr5ttyPw%3A1752375457736&ei=oSBzaMLZLJGchbIP4p_AiAk&ved=0ahUKEwiCrql67iOAxURTkEAHeIPEJEQ4dUDCBE&oq=images+on+agroecology+by+wikipedia&gs_lp=EgNpbWciImltYWdlcyBvbiBhZ3JvZWNvbG9neSBieSB3aWtpcGVkaWFI5ZQCUKIUWLPfAXABeACQAQGYAfoCoAG0OaoBCDAuNS4yMi40uAEMyAEAAEBmAIBoAIOwgIHECMYJxjJApgDAIgGAZIHATGgB_MKsgcAuAcAwgcDMy0xyAcJ&sclient=img#vhid=yz1bNEDfsrNjZM&vssid=mosaic

Figure 11. Permaculture

Source:https://www.google.com/search?q=images+on+permaculture+by+wikipedia&sca_esv=63c2fe5e06952359&udm=2&biw=1036&bih=584&sxsrf=AE3TifP9v7SbYGwy7Itwuyar7Z3uWdyUUw%3A1752377900616&ei=LCpzaNCkJbOHhbIPgqrKcA&ved=0ahUKEwjQ6pyy9LiOAxWzQ0EAHQKVEg4Q4dUDCBE&oq=images+on+permaculture+by+wikipedia&gs_lp=EgNpbWciI2ltYWdlcyBvbiBwZXJtYWN1bHR1cmUgYnkgd2lraXBlZGlhSABQAFgAcAB4AJABAJgBAKABAKoBALgBDMgBAJgCAKACAJgDAJIHAKAHALIHALgHAMIHAMgHAA&sclient=img#vhid=utIqEF9TsPx-bM&vssid=mosaic

Figure 12. Sustainable development goals

Source:https://www.google.com/search?sca_esv=20a3364d895c8ae1&sxsrf=AE3TifPkiZcAXsaNbeSuvPuGZ6wKzg9Hig:1752475328873&q=images+on+sustainable+development+goals&udm=2&fbs=AIIjpHxU7SXXniUZfeShr2fp4giZ1Y6MJ25_tmWITc7uy4KIeoJTKjrFjVxydQWqI2NcOhYPURIv2wPgv_w_sE_0Sc6QqqU7k8cSQndc5mTXCIWHa5yWh8UZLeaMB2TzsL707pcnajOVzuG8nS7sxlcHlHT7piY8EJN1nt_1OxpO4jRCM7y46MmzzMDHqGNST6xFea_Jb9OOjWE_EbrmKsB62WJGHF5nA&sa=X&ved=2ahUKEwim5NGr37uOAxVQkEAHV2GHdQQtKgLKAF6BAgVEAE&biw=1036&bih=539&dpr=1#vhid=VlbT8oDnzC_IbM&vssid=mosaic