
An Overview of the Agroecosystem and their Management

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ABSTRACT: *Agroecosystems are natural habitats that have been transformed for the processing of food and fiber, and agroecosystem management combines economic, ecological, and social principles to address problems and identify opportunities. This paper gives all details about agroecosystem and its Management like meaning of agro ecosystem, meaning of management and primary function of management process. This paper gives also focuses on agroecosystems management and challenges to agroecosystems management. By using sustainable agroecosystems management: Economics, Society emphasizes Integrating Ecology, and the continue centrality of ecosystems perspectives, and need for integrates social considerations ecological, and economic in agroecosystems science and managements. Truly Inter -disciplinary in Scopes with contribution from distinguish leader in field of sustainable agricultures.*

KEYWORDS: *Agroecosystem, Agriculture, Ecosystem, Environment, Management.*

1. INTRODUCTION

Basic units of analysis in agro-ecology is the agroecosystem, which loosely define as functionally and spatially cohesive units of agricultural activity that include both nonliving and living component and their interactions[1]. Agroecosystem can viewed as subsets of conventional ecosystems. As names implies, at cores of agroecosystem lie the human activities of agriculture. However, agroecosystem not restrict to immediate sites of agricultural activities (e.g. Farm), but somewhat includes region that impacted by that activity, usually from changes to complexity of specie assemblages and energy flows, and to net nutrient balances. To begin, some distinctions are required, such as the distinction between agroecosystems and agricultural technology systems (Figure 1). Agroecosystem is a bounded region that contains a complex of water, air, plants soil, microorganisms animals, and all else that has been adapted for agricultural production. Agroecosystem can be whatever size you want it to be. It may be single field, small family farms, or agricultural landscapes of a village, country and city[2].

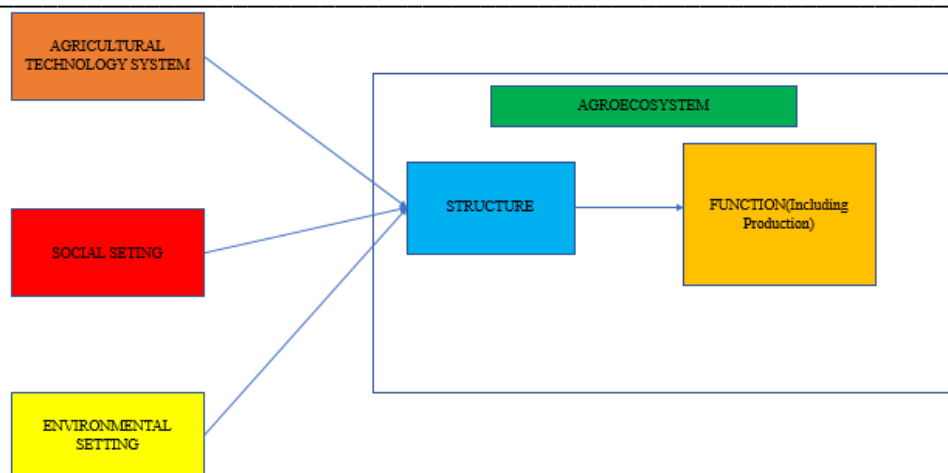


Figure 1: Basic Definition for Agroecosystems Assessment.

Traditionally agroecosystem, particular a manage intensively, is characterize as have a simpler specie simpler energy and composition and nutrient flows than "natural" ecosystem. Likewise agroecosystem is often associate with elevate nutrient inputs, much of that exits farm lead to eutrophication of connect ecosystems indirectly engage in agriculture. Agricultural landscapes occupy approximately 41% of world’s surface lands, as well as agriculture is world’s most widespread method of land managements. Agriculture's primary objectives are the production of fruit, fiber, and fuel[3].

Agriculture play a unique role in both demand and supply for different environmental resources as a balanced ecosystem. Power, disclosing the human well-reliance being's on these services Agricultural environments, as seen in Figure. 1, need and offer a range of ecosystem resources, but they also provide disservices. The ecosystem service architecture recently been mentioned in literature, implying the need to improved control of convergence of public and private aspects[4].

This approach allow for economic valuations of ecosystem resources as well as the integration of multiple value domains. The ES concept reflects on both of the indirect and direct advantages that agroecosystems bring to citizens as applied to agriculture. Ecosystem resources can be divided into four categories, according to the Millennium Ecosystem Assessment: – provisioning ecosystem resources (energy outputs or material), – controlling ES (biophysical process delivering benefit), – supporting ecosystem resources (process required for provide different ecosystem service), and cultural ecosystem resources (spiritual benefits, aesthetic, recreational)[5].

There are many issues that plague rural growth. The inextricable and pervasive relation between agriculture and the environment causes one collection of issues. For agricultural development, we depend on the climate, soil, water, sunlight, and biological organisms. However, in the agricultural production process. Pesticides, fertilizers, equipment, and specially bred plants and animals are among the modern man-made components we add. This engage with the world in a number of ways, sometimes negatively, and often to the point that natural resources vital to agriculture are damaged or lost.

A recently provided data which is a clear example of the ramifications of technical innovation on the environment (Figure 2). At first glance, the switch from tractor to buffalo control in Sri

Lankan villages appears to be a simple trade-off between more timely planting and labor savings on the one hand, and the supply of milk and manure on the other. Buffalo wallows, on the other hand, are synonymous with buffaloes and have a surprising range of advantages[6].

They serve as a haven for fish during the dry season, before returning to the rice fields during the rainy season. Some fish are captured and consumed by farmers and the landless, supplying valuable nutrition, while others consume the malaria-carrying mosquito larvae. The thickets are home to snakes that kill rats that eat food, as well as lizards that eat the crabs that destroy the ricebunrls. The villagers use the wallows to prepare coconut fronds for thatching as well. If the wallows vanish, so do these advantages.

Furthermore, the detrimental effects could not end there. If pesticides are used to destroy rats, crabs, or mosquito larvae, contamination or pesticide resistance can arise. Similarly if tiles are substituted for the thatch this may hasten forest destruction since firewood is required to fire the tiles. To begin some definitions are important, includes the distinctions between agroecosystem and agricultural technology systems (Figure 2). Agroecosystem is bounded region that contains a complex of plants, water, animals, oil, air, ls, microorganisms, and everything's else that has been adapted for agricultural productions. Agroecosystem can any size you want it to be. It may be a single field, a small family farms, or agricultural landscapes of village, province or country.

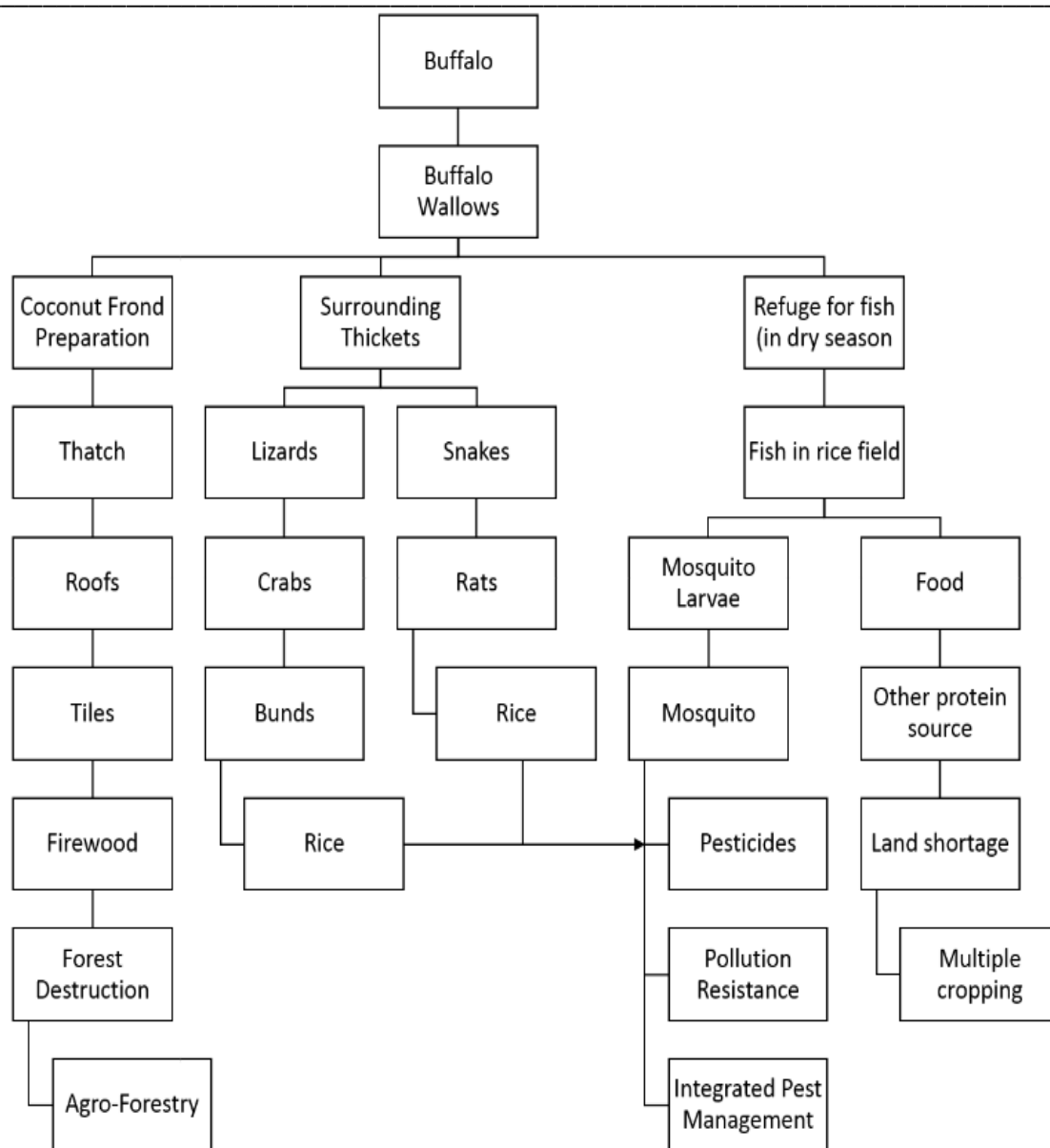


Figure 2: Example of the Ramifications of Technical Innovation on the Environment i.e. the Rice field as an Agro ecosystem.

To make the ecosystem an agroecosystem, a variety of major changes are required. The borders of the system are better defined, at least in biological and physical-chemical terms. Connections with other networks become less transparent and permeable. The connections are reduced and canalised. The removal of numerous existing fauna and flora and the lack of certain natural physiochemical systems also simplifies the method. The advent of human administration and operation complicates the system, however.

Management refers to the organisation and management of activities to achieve goals. Examples of administrative activities are the definition of corporate strategies and organisation of personnel action to achieve objectives through limited capital use [2]. As shown in Figure 3, Managers have four main roles in the management process: organisation, planning, management and control. It is important to note that management is not a straight line necessarily. Since it is hard to prepare for any challenge facing an organisation, preparation and progress during every phase do not necessarily start before the

organisation's goals are achieved. Corrections and revisions are made when unexpected incidents occur throughout the management process. Managers are making the necessary improvements and maintaining the unity and dignity of the process [3].

1.1.Planning:

The planning includes identifying and deciding on activities and services needed to achieve the organization's success expectations. Management decides what the future of the organisation should be and how it is prepared. The long-term strategy has an impact on the entire company. The links between where a company is and how it wants to go are a strategic strategy. Tactical schedules are used to transform development plans into specific activities that organisations across the enterprise can undertake. The tactical scheme sets out what needs to be done, who can and how much it costs.

ThyssenKrupp has agreed to become a service lift and manufacturing company due to increased competition from Chinese steels. The management of the company set itself the objective of generating the bulk of its sales out of the lift business. The management team has therefore formulated tactics for the building of alliances or the procurement of elevator companies. The group developed ways to create new human capital and acquire external resources for content. The company had to sell its steel-related assets to finance the new programme. This is an example of a long-term strategic strategy that can take years and many changes are needed. However, it starts with the definition of a goal and a preliminary roadmap for it.

1.2.2. Organizing:

Once plans have been formed, it is necessary to choose how they can be better implemented. The purpose of organization means that the organization must be configured (by departments, matrix teams, job responsibilities, etc.). It involves the transfer of power and responsibility to various agencies, the allocation of funds across the organization and the organization of organizations and individuals.

The management needed to find out how two distinct transactions could be financed in order to achieve the long-term objectives of ThyssenKrupp AG. In order to ensure steady resource flows, Management wanted to maintain the production of railway lifts. New expertise and tools have also been required to improve the company's lift capacities. A new corporate framework should be established to cover the entire company's operations once one has been reduced and the other has been extended.

1.3. *3. Leading:*

Nearly all achievements of an organization are the responsibility of people. Even better preparations and preparation would not work if individuals in groups are not able to help the initiative. Leaders use their understanding, character and charisma to stir people up passion and to work hard to achieve their goals. Managers need to also inspire high performance by sharing the organization's expectations, fostering commitment to a common mission, building common convictions and community and promoting high performance. Managers can use reward and penalty to persuade workers to support their plans and priorities Leaders encourage people to believe in their plans and adhere to them. While leadership and management skills are not synonymous, they coexist with the most successful people.

It is hard to keep employees motivated if strategies require drastic changes, such as reduction and layoffs. Many people are immune from nature. People really would hesitate to change whether they lose their jobs or their status. The ThyssenKrupp trade unions vocally opposed the move of the company from steel to lift manufacture. While the people responsible for new business functions were ecstatic about the preparations, the people responsible for steel production felt lost and demotivated. Management would have taken care to seek the approval of the union in order to see the new future of the company.

1.4. 4. Controlling:

A well-known military adage says that no war strategy survives contact with the enemy. That means that things do not go as planned when it is time to put the timetable into practice when planning is required. There will be unexpected incidents. The process of seeing and reacting to what really happens is controlled. Controls include monitoring operations, assessing efficiency, aligning results with expectations and, where necessary, making adjustments and changes. This is usually referred to as a feedback loop as shown in the example of a product creation feedback loop.



Figure 3: Primary Function of Management Process: Planning, Controlling, Organizing, and Leading.

1.5. Agroecosystem Managements

Management of agroecosystems integrates environmental, social and economic values to address challenges and opportunities for discovery [4]. Diversifications have several advantages in the agroecosystem, including buildings Over time, safety operational control (SOC), the reduction in insects and pests and diseases could lead to better crop productivity and increased ecological service [5]. Management of agroecosystems combines fiscal, ecological and social values to address problems and to discover prospects. It takes everything from the land at your feet to the farm and neighbourhoods of your neighbours and the road from farm to market to customer.

1.6. Challenges To Agroecosystem Management

The development of population and other demographic changes over time may have different effects on habitats. Greater residents would use more energy and make ecosystem systems more strained as a consequence of population and urban spread. Increasing populations require more habitable and arable land, leading often to natural habitats and ultimately to the collapse of the ecosystem. There has been an enormous negative relationship between food agriculture, safety, environment and the ecosystem resource.

If the global population of soil, water and other services continue to increase with GDP (Gross Domestic Product and consumption). Poor people in a fragile ecosystem can face food insecurity as a result of degradation, particularly because the livelihoods depend heavily on agricultural activities. A relatively new approach to degradation of natural-resource basis quality is the idea of diversifying or multifunctional agroecosystems. Agricultural development has now developed from only a technological issue to a more dynamic social, cultural, political and economic issue[7].

2. LITERATURE REVIEW

Safia Médiène et.al Studies to improve the control and nutrition of pesticides while reducing petrochemical use of agro-ecosystems through increased biotic interactions and reduced petrochemicals use [8].

Studies by Lorenzo Brill et al. Biogeochemical simulation models are useful to explain the contributions made by farm system to GHGs and carbon sequestration sources or sink status. Biogeochemical simulations However, as forecasts from different models show considerable uncertainty, there is a problem with the proliferation of the simulation methods produced in recent decades. In the conclusions of various modelling studies differences in biogeochemical and physical processes embedded in carbon (C) and nitric cycle equations and their relationships are often blamed[9].

Anastasija Novikova Examines the payment of agroecosystem facilities in the Baltic Country by the Water Treatment Plant (WTP) (Lithuania). Lithuania implemented environmental agriculture schemes after its accession to the European Union to enable farmers to develop agroecosystem services[10].

Safia Médiène et al. investigate a philosophical and analytical paradigm in which decision variables such as agricultural composition and agro-group agency are taken into account to study agro-ecosystem resilience. This approach serves to compare two Latin American farming societies that emphasise the need to change and not react to unsustainable power systems.

3. DISCUSSION

There were several researchers who investigated and analysed the agro-ecosystem and its management but did not explain on several issues such as agro-ecosystem definitions, management definitions, management challenges for agro-ecosystems etc. The article contains all the details concerning the management and functionality of the agrarian ecosystem, including the meaning and the interaction of nonliving and living inputs of the agro-ecological research units, as well as the functional and spatial coherence of agricultural activities.

4. CONCLUSION

The article contains all the details concerning the management and functionality of the agrarian ecosystem, including the meaning and the interaction of nonliving and living inputs of the agro-ecological research units, as well as the functional and spatial coherence of agricultural activities. The organizational strategy and staff action organizations to achieve this goal by using limited capital, are examples of administrative activities) (Planning, Controlling, Organizing, and leading). This paper also provides information on the management of agroecosystems and challenges for agroecosystems. Society emphasizes integrative ecology and a central focus for ecosystem prospects by using sustainable agroecosystems management. Social consideration is integrated into ecological and economic science and management of agroecosystems. Truly interdisciplinary in the field of sustainable agriculture with a contribution of distinguished leaders.

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