- Developing and deploying new low-carbon and zero-carbon technologies:. Currently, research is being conducted in battery technology, new materials for solar cells, harnessing energy from novel sources like bacteria and algae, and other innovative areas which could provide important breakthroughs.

- Ensuring sustainable development: Rich countries must help poor countries to move to low-carbon development pathways and also help them adapt to active climate change.

Conclusions. Global Warming has become one of the most serious problems of humanity. Currently, scientists and governments are debating the extent and severity of surface temperature increases, the possible effects of warming on the lives of people and economies, the need to take measures to reduce CO emissions into the atmosphere and eliminate its consequences.

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MODERN CONCEPTS OF SOIL CONSERVATION

Approaches to soil conservation are in constant evolution and improvement. This article summarizes some of the modern approaches, ranging from no tillage to conservation agriculture (CA) to sustainable land management (SLM). These approaches are not separate, but components of a continuum of conservation approaches applicable at different levels and different scales. No tillage is important at the detailed, farm level, while CA and SLM are important at the farming systems and corporate levels. The successes achieved with no tillage in Argentina (also Brazil, Paraguay, Uruguay, Mexico, Canada, Australia, and others) illustrate how these concepts relate to each other [1].

Introduction. Soil is a central component of terrestrial ecosystems, and a fundamental constituent in sustaining life on earth. The degradation of soil represents a loss in ecosystem services and a loss of natural capital assets. The health of terrestrial ecosystems, defined as ecosystem integrity, depends on the ecosystem components and the synergy of processes among them. Land degradation reduces the soil's short and long term production capacity, and these are serious concerns considering the food production requirements of growing global populations and a global GDP which is expected to triple by 2050.

Modern concepts of soil conservation

No tillage. Under no-tillage, soil disturbance is virtually eliminated. Only a tiny slot (or a small hole in hand held planters) is made during the planting operation so that the seed (and eventually starter fertilizers) can be placed in intimate contact with the soil, promoting germination. Only the grains are harvested, while the rest of the plant (plant material other than grains) are left on the surface. Gradually, an organic mulch is developed on the soil surface, which is eventually converted to stable soil organic matter. The increase in organic matter results from the combination of eliminating soil disturbance, reducing oxidation of soil organic materials (stubble), increased biomass production from improved crop yields, and greater diversity of organic materials from increased rotation and cover crops, and reduced erosion. Commonly, surface soil temperatures are slightly depressed, while soil water holding capacity is increased. These conditions are particularly important in the tropical and semi-tropical areas. No tillage can be practised on both large and small farming systems.

No tillage also promotes the environmental integrity of the soil systems and the maintenance of environmental services, enhances sequestration of atmospheric carbon, and contributes to mitigation of climate change. Soil carbon sinks are enriched, due to higher yields and increased biomass, as well as by reducing organic carbon losses from soil erosion. Also, fuel use and tractor hours are reduced by up to 75%, with further reductions in greenhouse gas emissions. Other environmental benefits include reduced siltation, eutrophication and pesticide contamination of rivers and dams.

Conservation Agriculture. In deference to other approaches, CA does not promote a specific technology but rather a series of principles and general practices to achieve conservation objectives. CA is not a prescription or a standard technology, but an approach based on concepts of minimal soil disturbance, permanent soil cover, and crop rotation or association. This is in recognition of the fact that global agriculture is practiced in many

different ecosystems, and technologies have to be carefully tailored to these to be successful. In this regard, CA is similar to the concepts of sustainable land management. Application of traditional knowledge of soil husbandry gained from generations of successful farmers, and the implementation by farmers of complementary, synergetic soil husbandry practices, enhance the capacity of farmers to innovate and adjust to evolving conditions and ensure the sustainability of the farming system.

The principles of CA:

•Maintaining permanent soil cover and promoting minimal mechanical disturbance of soil through no tillage system.

•Promoting a healthy «living soil» through crop rotations, cover crops, and the use of integrated pest management technologies.

•Promoting the application of fertilizers, pesticides, herbicides, and fungicides in balance with nutrient losses due to crop production. This principle is based on feeding the soil rather than fertilizing the crop.

•Promoting precision placement of crop inputs to reduce input costs, optimize efficiency of operations, and prevent environmental damage.

•Promoting legume fallows (including herbaceous and tree fallows where suitable), as well as promoting composting and the use of manures and other organic soil amendments.

•Promoting value added production for food, fiber, fruit, energy and medicine for all purposes. Value added production implies producing for the market.

Recognition of the different levels of soil conservation does not imply promotion of a specific technology but rather a process of their application and adoption. Local farmer knowledge, innovative farmers and farmer associations are all necessary elements in adoption of the principles [2].

Conclusions. Soil is an integral component of natural and converted ecosystems (cropland, pasturelands, woodlands) ,and an important part of the natural mosaic of land uses on the earth's terrestrial surface. Agro-ecosystems and other managed ecosystems experience different pressures, energy flows, and dynamics than natural systems, and these have to be better understood, not only in terms of capital return (yield), but also as a consequence of human interventions on natural systems.

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ТЕРИТОРІАЛЬНИЙ ПІДХІД ДО ВИЗНАЧЕННЯ ЯКОСТІ ЖИТТЯ НАСЕЛЕННЯ

Сучасні регіони країни – це система взаємопов'язаних між собою різноманітних компонентів, що мають певні властивості, характеризуються інтегрованою єдністю, яка впливає на формування потенціалу регіону. Об'єктом управління регіону є економічна система, гармонійне поєднання виробничих підсистем, сконцентрованих на локальній території, де відбувається ефективне рішення соціально-економічних проблем і створюються якісні умови життя для населення.

"Якість життя" є комплексним поняттям, яке повинне враховувати різноманітні аспекти людського життя. На цій основі можна виділити природне, соціальне, економічне та суспільно-політичне середовище [5]. Стан якості життя населення можна аналізувати за допомогою комбінації певних різноманітних показників, враховуючи середовище людської життєдіяльності.

Сучасна концепція дослідження параметрів якості життя населення визначається змінами, як об'єктивних, так й суб'єктивних значень у вигляді інтегрованих показників якості життя. Нами проведено дослідження економічного й соціального середовища в регіонах країни, згідно національної матриці індикаторів якості життя [5]. Показники, які характеризують стан якості життя населення регіонів, ми об'єднали у чотири блоки:

1 блок – якість населення: коефіцієнт народжуваності; коефіцієнт смертності; динаміка фізичного здоров'я населення; коефіцієнт навантаження на працездатне населення; навантаження на одну вакансію; нестійкість сім'ї;