

#### The official newsletter of 🍂 ANULOM Technologies Pvt. Ltd. Pune

# **CC** Editorial...

#### Dear Readers,

Welcome once again to this Newsletter with yet another different topic on Soil Conservation. We hope you would appreciate this subject also. Please give us your feedback on this Newsletter.

You may also contribute an Article for this Newsletter and we will be glad to publish the same with your name.

Regards,

— Editor

# DUSSEHRA



MAY THE AUSPICIOUS OCCASION OF DUSSEHRA BRING YOU AND YOUR FAMILY HAPPINESS, PEACE AND PROSPERITY.

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Soil conservation is the prevention of loss of the topmost layer of the soil from erosion or prevention of reduced fertility caused by over usage, acidification, salinization or other chemical soil contamination.

Slash-and-burn and other unsustainable methods of subsistence farming are practiced in some lesser developed areas. A consequence of deforestation is typically large-scale erosion, loss of soil nutrients and sometimes total desertification. Techniques for improved soil conservation include crop rotation, cover crops, conservation tillage and planted windbreaks, affect both erosion and fertility.

When plants die, they decay and become part of the soil. Code 330 defines standard methods recommended by the U.S. Natural Resources Conservation Service. Farmers have practiced soil conservation for millennia. In Europe, policies such as the Common Agricultural Policy are targeting the application of best management practices such as reduced tillage, winter cover crops, plant residues and grass margins in order to better address soil conservation. Political and economic action is further required to solve the erosion problem. A simple governance hurdle concerns how we value the land and this can be changed by cultural adaptation. Soil carbon is a carbon sink, playing a role in climate change mitigation.

### Methods :

#### **Contour ploughing**

Contour ploughing orients furrows following the contour lines of the farmed area. Furrows move left and right to maintain a constant altitude, which reduces runoff. Contour ploughing was practiced by the ancient Phoenicians for slopes between two and ten percent. Contour ploughing can increase crop yields from 10 to 50 percent, partially because of greater soil retention.

#### **Terrace farming**

Terracing is the practice of creating nearly level areas in a hillside area. The terraces form a series of steps each at a higher level than the previous. Terraces are protected from erosion by other soil barriers. Terraced farming is more common on small farms. This involves creating a series of flat terraced levels on a sloping field.

#### Keyline design

Keyline design is the enhancement of contour farming, where the total watershed properties are considered in forming the contour lines. Tree, shrubs and ground-cover are effective perimeter treatment for soil erosion prevention, by impeding surface flows. A special form of this perimeter or inter-row treatment is the use of a "grass way" that both channels and dissipates runoff through surface friction, impeding surface runoff and encouraging infiltration of the slowed surface water.

#### Windbreaks

Windbreaks are sufficiently dense rows of trees at the windward exposure of an agricultural field subject to wind erosion. Evergreen species provide year-round protection; however, as long as foliage is present in the seasons of bare soil surfaces, the effect of deciduous trees may be adequate.

#### Cover crops/crop rotation

Cover crops such as nitrogen-fixing legumes, white turnips, radishes and other species are rotated with cash crops to blanket the soil year-round and act as green manure that replenishes nitrogen and other critical nutrients. Cover crops also help to suppress weeds.

#### Soil-conservation farming

Soil-conservation farming involves no-till farming, "green manures" and other soil-enhancing practices which make it hard for the soils to be equalized. Such farming methods attempt to mimic the biology of barren lands. They can revive damaged soil, minimize erosion, encourage plant growth, eliminate the use of nitrogen fertilizer or fungicide, produce aboveaverage yields, and protect crops during droughts or flooding. The result is less labour and lower costs that increase farmers' profits. No-till farming and cover crops act as sinks for nitrogen and other nutrients. This increases the amount of soil organic matter.

Repeated ploughing/tilling degrades soil, killing its beneficial fungi and earthworms. Once damaged, soil may take multiple seasons to fully recover, even in optimal circumstances.

Critics argue that no-till and related methods are impractical and too expensive for many growers, partly because it requires new equipment. They cite advantages for conventional tilling depending on the geography, crops, and soil conditions. Some farmers have contended that no-till complicates pest control, delays planting and that post-harvest residues, especially for corn, are hard to manage.

#### Reducing the use of pesticides

The use of pesticides can contaminate the soil, and nearby vegetation and water sources for a long time. They affect soil structure and (biotic and abiotic) composition. Differentiated taxation schemes are among the options investigated in the academic literature to reducing their use.

Alternatives to pesticides are available and include methods of cultivation, use of biological pest controls (such as pheromones and microbial pesticides), genetic engineering (mostly of crops), and methods of interfering with insect breeding. Application of composted yard waste has also been used as a way of controlling pests. These methods are becoming increasingly popular and often are safer than traditional chemical pesticides. In addition, EPA is registering reduced-risk pesticides in increasing numbers.

#### Salinity management

Salinity in soil is caused by irrigating with salty water. Water then evaporates from the soil leaving the salt behind. Salt breaks down the soil structure, causing infertility and reduced growth.

The ions responsible for salination are: sodium, potassium, calcium, magnesium and chlorine. Salinity is estimated to affect about one third of the earth's arable land. Soil salinity adversely affects crop metabolism and erosion usually follows.

Salinity occurs on drylands from overirrigation and in areas with shallow saline water tables. Overirrigation deposits salts in upper soil layers as a byproduct of soil infiltration; irrigation merely increases the rate of salt deposition. The best-known case of shallow saline water table capillary action occurred in Egypt after the 1970 construction of the Aswan Dam. The change in the groundwater level led to high salt concentrations in the water table. The continuous high level of the water table led to soil salination. Use of humic acids may prevent excess salination, especially given excessive irrigation. Humic acids can fix both anions and cations and eliminate them from root zones.

Planting species that can tolerate saline conditions can be used to lower water tables and thus reduce the rate of capillary and evaporative enrichment of surface salts. Salt-tolerant plants include saltbush, a plant found in much of North America and in the Mediterranean regions of Europe.

#### Soil organisms

When worms excrete faeces in the form of casts, a balanced selection of minerals and plant nutrients is made into a form accessible for root uptake. Earthworm casts are five times richer in available nitrogen, seven times richer in available phosphates and eleven times richer in available potash than the surrounding upper 150 millimetres (5.9 in) of soil. The weight of casts produced may be greater than 4.5 kg per worm per year. By burrowing, the earthworm improves soil porosity, creating channels that enhance the processes of aeration and drainage. Other



important soil organisms include nematodes, mycorrhiza and bacteria. A quarter of all the animal species live underground.

Degraded soil requires synthetic fertilizer to produce high yields. Lacking structure increases erosion and carries nitrogen and other pollutants into rivers and streams. Each one percent increase in soil organic matter helps soil hold 20,000 gallons more water per acre.

#### Mineralization

To allow plants full realization of their phytonutrient potential, active mineralization of the soil is sometimes undertaken. This can involve adding crushed rock or chemical soil supplements. In either case the purpose is to combat mineral depletion. A broad range of minerals can be used, including common substances such as phosphorus and more exotic substances such as zinc and selenium. Extensive research examines the phase transitions of minerals in soil with aqueous contact.

Flooding can bring significant sediments to an alluvial plain. While this effect may not be desirable if floods endanger life or if the sediment originates from productive land, this process of addition to a floodplain is a natural process that can rejuvenate soil chemistry through mineralization.

Soil conservation is important because soil is crucial for many aspects of human life as it provides food by agriculture, filters air and water and helps to decompose biological waste into nutrients for new plant life.

World Soil Day is celebrated annually on December 5th. The day aims to raise awareness of the importance of healthy soil and the need to manage soil resources sustainably.





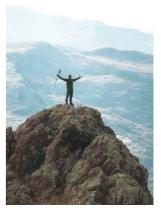
### Life ends when you stop dreaming...

आयुष्याचे प्रयोजन काय हा प्रश्न खूप अवघड आहे. कारण कितीही आयुष्य मिळाले तरी हा प्रश्न बहुतेकजण आपल्यासमोर येऊच देत नाहीत. किंवा हा प्रश्न त्यांच्यासमोर येतच नाही इतके त्यांचे आयुष्य निर्विकारपणे, रूटीन पद्धतीने, पण सुरळीत चालू असते. एका विचारवंताने 'Life ends when you stop dreaming...' असे म्हटल्यामुळे कितीजण स्वप्ने पाहतात हा प्रश्न माझ्यासमोर आला.

झोपेत असताना स्वप्न पडणे निराळे आणि जागेपणी स्वप्ने पाहणे निराळे. या दोन्हींमध्ये जमीन-अस्मानाचा फरक आहे. झोपेत स्वप्न पडणे ही नैसर्गिक बाब आहे. त्यासाठी काही विचार करावा लागत नाही. एकजण म्हणाला की त्याला एकच स्वप्न नेहमी पडते की तो परिक्षेला बसणार आहे आणि त्याचा अभ्यास झालेला नाही. हे स्वप्न पडल्यावर तो घामाघुम होऊन जागा होत असे!

जागेपणी स्वप्न पाहणे म्हणजे मोठ्या ध्येयाची कास धरणे. ते नुसते मनात न बाळगता त्याच्या प्राप्तीसाठी अविरत कष्ट करायची तयारी असणे, नियोजन करणे, कौशल्य मिळवणे, सर्व बाजूंनी

विचार करणे इ. थोडक्यात, उद्दिष्ट साध्य करण्यासाठी जे-जे काही करावे लागेल, अगदी आकाश-पाताळ एक करावे लगले तरी त्यासाठी अविरत मेहनत घेणे - या सर्व गोष्टी करणे. हे सर्व करणारे कितीजण आहेत? आपल्या माहितीप्रमाणे एक टक्का तरी लोक आहेत का? आधी स्वप्न पाहणे सोडा, स्वत:कडे पहायला तरी किती जणांना जमते? यासाठी किती



जण वेळ काढतात? किती जणांना त्याची जाणीव तरी आहे का? 'आला क्षण, गेला क्षण' ही अवस्था आहे. इथे एक मुद्धा सांगायचा राहिला - तो म्हणजे स्वप्न पाहणे म्हणजे स्वप्नाळू असणे नव्हे. स्वप्नाळू माणसे त्यांच्याच नादात असतात. ती माणसे व्यवहारी असतीलच असे नाही. स्वप्नाळू माणसे त्यांच्याच जगात असतात. त्यांना इतरांशी देणे-घेणे नसते.

मुख्य मुद्दा राहिलाच - Life ends when you stop dreaming... हे वाक्य high sounding वाटले तरी Low aim is crime... हे ही विसरून चालणार नाही. प्रयत्नांती परमेश्वर - So why not start dreaming...?

> डायरेक्टर, अनुलोम टेक्नोलॉजीज प्रा. लि. मोबाइल : ९५५२३८४९३१

- डॉ. अरविंद नवरे



## कायद्याच्या चौकटीत...

## फ्लॅटचे व्यवहार कसे होतात?

शहरात जुने वाडे असतात किंवा शहराबाहेर मोकळे प्लॉट असतात. अशा मालमत्तेच्या मालकांशी बिल्डर विकसन करार करतात आणि ते मालमत्ता ताब्यात घेतात. तेथे इमारती बांधून त्यातील फ्लॅट ग्राहकांना विकले जातात. बऱ्याच वेळा बिल्डर स्वतःच प्रमोटर म्हणून काम पाहतो. आणि फ्लॅटधारकांची सोसायटी किंवा अपार्टमेंट धारकांची असोसिएशन स्थापन करतो. नंतर जमिनीचा ताबा, सोसायटी किंवा असोसिएशन यांच्याकडे सुपूर्त केला जातो.

त्यासाठी मूळ जमीन मालक, बिल्डर आणि सोसायटी (किंवा असोसिएशन) यांच्यात द्विपक्षीय करार केला जातो. या कराराद्वारे जमिनीचा ताबा मूळ जमीन मालकाकडून सोसायटीकडे येतो. केवळ ताबाच नव्हे तर कायदेशीर मालकी हक्कसुद्धा. मालकी हक्क बदलण्याच्या या प्रक्रियेला 'कन्व्हेअन्स' म्हणतात. हे झाल्याशिवाय फ्लॅटधारक आपल्या जागेचा पूर्णांशाने मालक होऊ शकत नाही.

FEEDBACK FROM OUR SATISFIED CUSTOMERS...

Had a good experience and prompt support from Anulom team and executive Sujata.

- YASHODHAN MUJUMDAR

Exceptional service from Sarika! Her Notice of Intimation processing services on Anulom have been top-notch. She has consistently demonstrated:

- PRATHAM

Prompt processing and timely delivery, Attention to detail and accuracy, Clear communication and updates, Professionalism, and courtesy.

Very quick and efficient service provided. Thanks to Aaarti for smooth completion of process of intimation. — SANYOG CHAVAN

The Anulom Team - Monali, Tejasvi and associates have done a very good job coordinating the draft agreement, biometric verification, and police intimation — MADHU GOPINATH

Shambhu came for biometrics. Very well done and quickly. Thank you.

**OCTOBER 2024** 

- THOMAS MATHEW

कारण प्लॅट आपल्या मालकीचा पण जमीन दुसऱ्याची अशी स्थिती होते. म्हणून 'कन्व्हेअन्स डीड' करणे आवश्यक असते. हा करार (डीड) रजिस्टर करावा लागतो.

या कराराच्या आधी बिल्डर जेव्हा फ्लॅट विकतो तेव्हा बिल्डर आणि फ्लॅट घेणारे यांच्यात विक्रीचा करार होणे कायद्याने आवश्यक असते. तसेच, हाही करार नोंदवावा (रजिस्टर) लागतो. या करारात फ्लॅट संबंधीचा सर्व तपशील असतो.

फ्लॅट विकत घेताना ग्राहकाने बिल्डर आणि मूळ जमीन मालक यांच्यातील विकसन करार नीट तपासून पहावा. जमिनीची मालकी नेमकी याच मालकाकडे आहे ना आणि त्याने बिल्डरला कोणते हक्क दिले आहेत, हे पाहणे आवश्यक असते.

> (क्रमशः) - ॲड. अविनाश चाफेकर मोबाइल : ९८५०९३५९११



Very Good service, Special thanks to Miss Sarika for her well-informed service and good communication skills. — VISHAL PATE

Really good service by Anulom representatives -Trupti, Tejashree and Priya. It was easy to reach out to them for changes. Overall complicated tasks of creating agreement and doing biometric was simplified with their help.

#### - ROHIT MAHALE



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Designed by Amogh Arts, Pune, for and on behalf of Anulom Technologies Pvt. Ltd;

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The editor does not necessarily agree with the opinions published in the Articles in this magazine.